AECOM

Prepared for:
UTC Aerospace Systems
Rockford, IL

Prepared by:
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60339110
December 2015

# Third Quarter 2015 GMZ Monitoring and System Performance Report

UTC Aerospace Systems Plants 1/2 Facility
Area 9/10 Remedial Action
Southeast Rockford Groundwater Contamination Superfund Site
2421 11th Street
Rockford, IL 61104
ILD 981000417

US EPA RECORDS CENTER REGION 5
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# Letter of Transmittal

| | | | |
|---|---|---|---|
| Attention: | Mr. Timothy Drexler (USEPA)<br>Mr. Brian Conrath (IEPA) | Date: | December 11, 2015 |
| | UTC Aerospace Systems<br>Plants 1/2 Facility<br>Area 9/10 Remedial Action<br>Southeast Rockford<br>Groundwater Contamination<br>Superfund Site<br>2421 11th Street<br>Rockford, Illinois 61104 | | |
| Project reference: | ILD981000417 | Project number: | 60339110 |

**We are sending you the following:**

| Number of originals: | Number of copies: | Description: |
|---|---|---|
| 1 | 1 | Third Quarter 2015 GMZ Monitoring and System Performance Report |

Enclosed please find the Third Quarter 2015 GMZ Monitoring and System Performance Report for UTC Aerospace Systems Plants 1/2 Facility, Area 9/10 Remedial Action, Southeast Rockford Groundwater Contamination Superfund Site, Rockford, Illinois.

Thank You.

Peter Hollatz, P.E.

cc: Mr. Scott Moyer, United Technologies Corporation (cd only)
Ms. Diane Bellantoni, UTC Aerospace Systems (cd only)
Mr. Jon Alberg, AECOM
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December 11, 2015

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**Subject: Third Quarter 2015 GMZ Monitoring and System Performance Report**
**UTC Aerospace Systems Plants 1/2 Facility**
**Area 9/10 Remedial Action**
**Southeast Rockford Groundwater Contamination Superfund Site**
**2421 11th Street**
**Rockford, Illinois 61104**
**ILD981000417**
**AECOM Project No. 60339110**

Dear Messrs. Drexler and Conrath:

This Quarterly Groundwater Management Zone (GMZ) Monitoring and System Performance Report has been prepared by AECOM Technical Services Inc. (AECOM) on behalf of UTC Aerospace Systems (UTAS, fka Hamilton Sundstrand or HS). In accordance with the approved March 2007 Operation, Maintenance, and Monitoring Plan (OM&M Plan) and the United States Environmental Protection Agency (EPA) letter dated April 15, 2011 providing approval for combining project reporting documents, this report contains a summary of the following: 1) GMZ groundwater monitoring data; 2) the Phase 1 and Phase 2 air sparge/soil vapor extraction (AS/SVE) system performance data; 3) the Phase 1 and Phase 2 AS/SVE system process air analytical data; 4) GMZ wells that contain contaminants of concern (COCs) above Preliminary Remediation Goals (PRGs); and 5) Quarterly Progress Report for Fourth Quarter 2015.

As approved in the April 15, 2011 letter from Timothy Drexler, interpretation of collected groundwater quality and system performance data will be included in the Annual GMZ Monitoring and System Performance Report submitted in March of the subsequent year. This quarterly report provides the current environmental data including: tables and figures summarizing the results of third quarter 2015 GMZ monitoring and AS/SVE system performance data, supporting field data sheets and laboratory analytical reports, and the Quarterly Progress Report covering the period from September 1, 2015, to November 30, 2015.

The objective of AS/SVE system operation is to treat leachate-impacted groundwater at the UTAS Plants 1/2 (Site) property. The implemented remedy was specifically targeted to address an area of the Site where COCs were originally present in leachate/groundwater at concentrations that were two or more orders of magnitude greater than their PRGs. Though the treatment area was not fully defined when the 2002 Record of Decision (ROD) for Operable Unit 3 (OU3) was issued, the entire Site was identified/defined in the ROD as a "source location" within the larger established "Source Area 9/10" (Area 9/10) based on data collected prior to the ROD[1]. The ROD further required that the Site remedy include the establishment of a GMZ for this "source location" (the Site) whose lateral limits were consequently defined as the Site property boundaries. Two Site GMZs, GMZ 1 (Site property north of railroad tracks) and GMZ 2 (Site property south of railroad tracks), were approved by the Illinois EPA in 2008. Monitoring wells within the Site GMZs are routinely sampled, and the groundwater analytical results are compared to OU3 PRGs to evaluate the effectiveness of the remedy.

During the third quarter 2015 reporting period, the following six GMZ well locations along the Site boundary contained COCs at concentrations above PRGs:

| GMZ Monitoring Well ID | COC[1] Concentrations > PRG (Increase (+) or Decrease (-) from Previous Quarter) |
|---|---|
| GMZ01 | PCE (+) |
| SMW04 | cis-1,2-DCE (-); PCE (+); VC (-) |
| SMW08 | cis-1,2-DCE (+); PCE (+) |
| SMW19 | TCE (-) |
| PMW01 | PCE (+) |
| PMW02 | PCE (-) |

[1] Trichloroethene (TCE), cis-1,2-Dichloroethene (cis-1,2-DCE), Tetrachloroethene (PCE), Vinyl Chloride (VC)

The above-noted decreases/increases in concentrations represent a relative change in COC concentrations (above the PRG) between the two most recent quarters of data. Such changes should not be viewed as an indication of a trend without further statistical evaluation.

While PRGs are used to assess on-going remedy effectiveness at the Site, the continued operation of the AS/SVE remedy will be dependent on the attainment of Alternate Cleanup Levels (ACLs) at the downgradient Site GMZ boundary. COC ACLs have not yet been established/approved for the Site, but the ACLs will represent the maximum allowable concentration at the Site boundary that will not result in a COC exceedance of a PRG at the Area 9/10 boundary downgradient of the Site.

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[1] See EPA Superfund Record of Decision Southeast Rockford Ground Water Contamination, 2002. EPA/ROD/R05-02/077 2002.

Achieving ACLs at the downgradient Site boundary will demonstrate that the Site is protective of human or environmental receptors at the downgradient Area 9/10 boundary, and that continued active remediation is no longer warranted. The downgradient Area 9/10 boundary is located at Harrison Avenue to the south and 6th Street to the west.

The formulation of ACLs is consistent with the attainment of the OU3 ROD Remedial Action Objective (RAO) for groundwater specified in the ROD[2] and the objectives analysis/Remedial Action Process Flow Diagram (RAPFD) developed and approved for use by the EPA and Illinois EPA at the Site. The RAPFD, and the conditions for the performance of an objectives analysis and use of ACLs at the Site, are provided in the Statement of Work attached to the UTAS (fka Hamilton Sundstrand) facility Consent Decree[3] and included in subsequent approved Remedial Design documents for the Site.

Please contact either of the undersigned with any questions you may have on the information provided.

Prepared by:

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cc: Mr. Scott R. Moyer, P.G. – United Technologies Corporation
Ms. Diane Bellantoni – United Technologies Corporation
Project File

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[2] The OU3 ROD RAO for groundwater media is to: "Prevent the further migration of contamination from the source area that would result in degradation of site-wide groundwater or surface water to levels in excess of state or federal standards, or that pose a threat to human health or the environment."

[3] See the Statement of Work in Appendix C of the Consent Decree between Hamilton Sundstrand Corporation and the United States Environmental Protection Agency (Civil Action Number 08 C 50129), Section II.D.2, *Implementation of Remedial Action and Attainment of Performance Standards* (pages 9 and 10).

Attachments:

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**Appendices**


| | |
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# Tables

# Table 1
## Fourth Quarter 2014 to Third Quarter 2015 Cumulative Groundwater Elevations
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

| Well ID | Top of Casing Elevation (ft) | Depth to Groundwater (ft BTOC) | Groundwater Elevaion (ft AMSL) | Depth to Groundwater (ft BTOC) | Groundwater Elevaion (ft AMSL) | Depth to Groundwater (ft BTOC) | Groundwater Elevaion (ft AMSL) | Depth to Groundwater (ft BTOC) | Groundwater Elevaion (ft AMSL) |
|---|---|---|---|---|---|---|---|---|---|
| | | 12/8/2014 | | 2/16/2015 | | 5/11/2015 | | 8/4/2015 | |
| MW07FGA | 727.49 | 28.78 | 698.71 | 29.17 | 698.32 | 29.47 | 698.02 | 29.33 | 698.16 |
| MW203 | 728.58 | 29.62 | 698.96 | 29.96 | 698.62 | 30.30 | 698.28 | 30.12 | 698.46 |
| SMW01 | 729.71 | 31.64 | 698.07 | 32.00 | 697.71 | 32.26 | 697.45 | 32.08 | 697.63 |
| SMW02 | 726.77 | 28.11 | 698.66 | 28.54 | 698.23 | 28.77 | 698.00 | 28.59 | 698.18 |
| SMW04 | 728.51 | 30.75 | 697.76 | 31.15 | 697.36 | 31.41 | 697.10 | 31.22 | 697.29 |
| SMW08 | 728.81 | 30.97 | 697.84 | 31.34 | 697.47 | 31.64 | 697.17 | 31.42 | 697.39 |
| SMW19 | 728.49 | 29.79 | 698.70 | 30.12 | 698.37 | 30.44 | 698.05 | 30.31 | 698.18 |
| SMW20 | 727.69 | 29.94 | 697.75 | 30.26 | 697.43 | 30.52 | 697.17 | 30.41 | 697.28 |
| SMW21 | 727.25 | 29.30 | 697.95 | 29.71 | 697.54 | 30.02 | 697.23 | 29.88 | 697.37 |
| GMZ01 | 731.41 | 33.56 | 697.85 | 33.95 | 697.46 | 34.19 | 697.22 | 34.02 | 697.39 |
| GMZ02 | 728.76 | 31.06 | 697.70 | 31.47 | 697.29 | 31.69 | 697.07 | 31.56 | 697.20 |
| GMZ03 | 728.22 | 30.47 | 697.75 | 29.91 | 698.31 | 31.08 | 697.14 | 30.95 | 697.27 |
| GMZ04 | 726.84 | 28.73 | 698.11 | 29.18 | 697.66 | 29.41 | 697.43 | 29.27 | 697.57 |
| BGW01 | 728.19 | 29.65 | 698.54 | 30.01 | 698.18 | 30.29 | 697.90 | 30.08 | 698.11 |
| BGW02 | 728.81 | 30.01 | 698.80 | 30.46 | 698.35 | 30.77 | 698.04 | 30.57 | 698.24 |
| BGW03 | 728.96 | 30.12 | 698.84 | 30.48 | 698.48 | 30.79 | 698.17 | 30.66 | 698.30 |
| RAMW01 | 728.91 | 31.13 | 697.78 | 31.54 | 697.37 | 31.75 | 697.16 | 31.60 | 697.31 |
| RAMW02 | 728.90 | 31.00 | 697.90 | 31.40 | 697.50 | 31.64 | 697.26 | 31.48 | 697.42 |
| RAMW03 | 728.71 | 30.80 | 697.91 | 31.18 | 697.53 | 31.45 | 697.26 | 31.29 | 697.42 |
| RAMW04 | 728.80 | 30.63 | 698.17 | 31.04 | 697.76 | 31.32 | 697.48 | 31.14 | 697.66 |
| RAMW05 | 727.65 | 29.50 | 698.15 | 29.94 | 697.71 | 30.20 | 697.45 | 30.02 | 697.63 |
| RAMW06 | 727.64 | 29.53 | 698.11 | 30.01 | 697.63 | 30.22 | 697.42 | 30.07 | 697.57 |
| RAMW07 | 732.20 | 34.00 | 698.20 | 34.41 | 697.79 | 34.68 | 697.52 | 34.53 | 697.67 |
| RAMW08 | 728.45 | 30.14 | 698.31 | 30.54 | 697.91 | 30.83 | 697.62 | 30.64 | 697.81 |
| PMW01 | 728.88 | 31.26 | 697.62 | 31.64 | 697.24 | 31.79 | 697.09 | 31.71 | 697.17 |
| PMW02 | 728.88 | 31.20 | 697.68 | 31.58 | 697.30 | 31.78 | 697.10 | 31.64 | 697.24 |
| Ave. GW Elev. (ft AMSL) | | | 698.15 | | 697.79 | | 697.49 | | 697.65 |

**Notes:**
NM = Not monitored
ft = feet
ft BTOC = feet below top of casing
ft AMSL = feet above mean sea level
All site well top of casing elevations re-surveyed on May 24, 2011.
RAMW04 riser was lowered due to ice damage that occurred during the 2013 winter. Well was resurveyed on July 1, 2013.

# Table 2
## Fourth Quarter 2014 to Third Quarter 2015 Groundwater Analytical Results - GMZ Wells
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

| Well | Sample ID | Sample Date | Sample Type | Trichloroethene (TCE) | Methylene Chloride (Dichloromethane) | 1,1-Dichloroethene | 1,1-Dichloroethane | 1,2-Dichloroethane | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1,1-Trichloroethane | 1,1,2-Trichloroethane | Ethylbenzene | Tetrachloroethene (PCE) | Toluene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preliminary Remediation Goals (PRG)[A] | 0.005[c,A] | 0.005[c,A] | 0.007[b,c,A] | 0.7[A] | 0.005[c,A] | 0.07[c,A] | 0.1[c,A] | 0.2[b,c,A] | 0.005[c,A] | 0.7[c,A] | 0.005[c,A] | 1.0[c,A] | 0.002[c,A] |
| | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| GMZ01 | HS SER-GMZ01-120814 | 8-Dec-14 | | **0.0014** | 0.0020 U | 0.0010 U | **0.0075** | 0.0010 U | **0.0044** | 0.0010 U | **0.0034** | 0.0010 U | 0.0010 U | **0.0126[A]** | 0.0010 U | 0.0010 U |
| | HS SER-GMZ01-021715 | 17-Feb-15 | | **0.0012** | 0.0020 U | 0.0010 U | **0.0065** | 0.0010 U | **0.0020** | 0.0010 U | **0.0042** | 0.0010 U | 0.0010 U | **0.0044** | 0.0010 U | 0.0010 U |
| | HS SER-GMZ01-051115 | 11-May-15 | | **0.0019** | 0.0020 U | 0.0010 U | **0.0088** | 0.0010 U | **0.0022** | 0.0010 U | **0.0063** | 0.0010 U | 0.0010 U | **0.0157[A]** | 0.0010 U | 0.0010 U |
| | HS SER-GMZ01-080415 | 4-Aug-15 | | **0.0018** | 0.0020 U | 0.0010 U | **0.0066** | 0.0010 U | **0.0037** | 0.0010 U | **0.0064** | 0.0010 U | 0.0010 U | **0.0183[A]** | 0.0010 U | 0.0010 U |
| GMZ02 | HS SER-GMZ02-120914 | 9-Dec-14 | | 0.00037 J | 0.0020 U | 0.0010 U | **0.0016** | 0.0010 U | 0.00073 J | 0.0010 U | **0.0065** | 0.0010 U | 0.0010 U | 0.00064 J | 0.0010 U | 0.0010 U |
| | HS SER-GMZ02-021915 | 19-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0028** | 0.0010 U | 0.00074 J | 0.0010 U | **0.0039** | 0.0010 U | 0.0010 U | 0.00038 J | 0.0010 U | 0.0010 U |
| | HS SER-GMZ02-051315 | 13-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0018** | 0.0010 U | 0.00042 J | 0.0010 U | **0.0041** | 0.0010 U | 0.0010 U | 0.00057 J | 0.0010 U | 0.0010 U |
| | HS SER-GMZ-080515 | 5-Aug-15 | | 0.00040 J | 0.0020 U | 0.0010 U | **0.0016** | 0.0010 U | 0.00057 J | 0.0010 U | **0.0030** | 0.0010 U | 0.0010 U | 0.00043 J | 0.0010 U | 0.0010 U |
| GMZ03 | HS SER-GMZ03-120914 | 9-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00098 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-DUP01-120914 | 9-Dec-14 | Field Duplicate | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00093 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-GMZ03-021815 | 18-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.00037 J | 0.0010 U | 0.0010 U | 0.0010 U | **0.0010** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-GMZ03-021815 | 18-Feb-15 | Field Duplicate | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00090 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-GMZ03-051315 | 13-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.00076 J | 0.0010 U | 0.00050 J | 0.0010 U | 0.00090 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-DUP01-051315 | 13-May-15 | Field Duplicate | 0.0010 U | 0.0020 U | 0.0010 U | 0.00078 J | 0.0010 U | 0.00055 J | 0.0010 U | 0.00089 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-GMZ03-080515 | 5-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.00028 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.00035 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-DUP01-080515 | 5-Aug-15 | Field Duplicate | 0.0010 U | 0.0020 U | 0.0010 U | 0.00026 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.00036 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| GMZ04 | HS SER-GMZ04-121014 | 10-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00065 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-GMZ04-021815 | 18-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.00038 J | 0.0010 U | **0.0023** | 0.0010 U | **0.0036** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-GMZ04-051215 | 12-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0024** | 0.0010 U | **0.0030** | 0.0010 U | **0.0113** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-GMZ04-080515 | 5-Aug-15 | | **0.0026** | 0.0020 U | 0.00093 J | **0.0011** | 0.0010 U | **0.0035** | 0.0010 U | **0.0536** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| MW07FGA | HS SER-MW07FGA-120914 | 9-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00043 J | 0.0010 U | 0.0010 U | **0.0012** | 0.0010 U | 0.0010 U |
| | HS SER-MW07FGA-021715 | 17-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00044 J | 0.0010 U | 0.0010 U | 0.00076 J | 0.0010 U | 0.0010 U |
| | HS SER-MW07FGA-051215 | 12-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00046 J | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U |
| | HS SER-MW07FGA-080515 | 5-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U |
| MW203 | HS SER-MW203-120914 | 9-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0044** | 0.0010 U | 0.0010 U |
| | HS SER-MW203-021815 | 18-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0036** | 0.0010 U | 0.0010 U |
| | HS SER-MW203-051115 | 11-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0038** | 0.0010 U | 0.0010 U |
| | HS SER-MW203-080415 | 4-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0037** | 0.0010 U | 0.0010 U |
| SMW01 | HS SER-SMW01-120914 | 9-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0012** | 0.0010 U | 0.0010 U | **0.0012** | 0.0010 U | 0.0010 U |
| | HS SER-SMW01-021715 | 17-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00078 J | 0.0010 U | 0.0010 U | 0.00097 J | 0.0010 U | 0.0010 U |
| | HS SER-SMW01-051215 | 12-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0013** | 0.0010 U | 0.0010 U | **0.0013** | 0.0010 U | 0.0010 U |
| | HS SER-SMW01-080415 | 4-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0013** | 0.0010 U | 0.0010 U | **0.0013** | 0.0010 U | 0.0010 U |
| SMW02 | HS SER-SMW02-120914 | 9-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0030** | 0.0010 U | **0.0026** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00042 J | 0.0010 U | 0.0010 U |
| | HS SER-SMW02-021715 | 17-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0032** | 0.0010 U | **0.0031** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00040 J | 0.0010 U | 0.0010 U |
| | HS SER-SMW02-051215 | 12-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0033** | 0.0010 U | 0.00098 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00074 J | 0.0010 U | 0.0010 U |
| | HS SER-SMW02-080415 | 4-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0011** | 0.0010 U | **0.0014** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00061 J | 0.0010 U | 0.0010 U |
| SMW04 | HS SER-SMW04-120914 | 9-Dec-14 | | **0.0111[A]** | 0.0020 U | **0.0012** | **0.0118** | 0.0010 U | **0.1200[A]** | 0.00073 J | **0.0057** | 0.0010 U | 0.0010 U | **0.0185[A]** | 0.0010 U | **0.0351[A]** |
| | HS SER-SMW04-021915 | 19-Feb-15 | | **0.0032** | 0.0020 U | 0.00084 J | **0.0113** | 0.0010 U | **0.0579** | 0.0010 U | 0.00090 J | 0.0010 U | 0.0010 U | **0.0073[A]** | 0.0010 U | **0.0233[A]** |
| | HSSER-SMW04-051315 | 13-May-15 | | **0.0042** | 0.0020 U | 0.00098 J | **0.0143** | 0.0010 U | **0.132[A]** | 0.00085 J | 0.00034 J | 0.0010 U | 0.0010 U | **0.0050** | 0.0010 U | **0.0692[A]** |
| | HS SER-SMW04-080615 | 6-Aug-15 | | **0.0023** | 0.0020 U | 0.0010 U | **0.0121** | 0.0010 U | **0.0756[A]** | 0.0010 U | **0.0031** | 0.0010 U | 0.0010 U | **0.009[A]** | 0.0010 U | **0.0163[A]** |

See next page for notes.

# Table 2
## Fourth Quarter 2014 to Third Quarter 2015 Groundwater Analytical Results - GMZ Wells
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

| Well | Sample ID | Sample Date | Sample Type | Trichloroethene (TCE) | Methylene Chloride (Dichloromethane) | 1,1-Dichloroethene | 1,1-Dichloroethane | 1,2-Dichloroethane | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1,1-Trichloroethane | 1,1,2-Trichloroethane | Ethylbenzene | Tetrachloroethene (PCE) | Toluene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Preliminary Remediation Goals (PRG)[A] | 0.005[c,A] | 0.005[c,A] | 0.007[b,c,A] | 0.7[A] | 0.005[c,A] | 0.07[c,A] | 0.1[c,A] | 0.2[b,c,A] | 0.005[c,A] | 0.7[c,A] | 0.005[c,A] | 1.0[c,A] | 0.002[c,A] |
| | | | | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| SMW08 | HS SER-SMW08-120814 | 8-Dec-14 | | **0.0039** | 0.0020 U | 0.0010 U | **0.0165** | 0.0010 U | **0.123[A]** | 0.00088 J | **0.0067** | 0.0010 U | 0.0010 U | **0.0227[A]** | 0.0010 U | 0.0010 U |
| | HS SER-SMW08-021715 | 17-Feb-15 | | **0.0042** | 0.0020 U | 0.0010 U | **0.0103** | 0.0010 U | **0.125[A]** | 0.00085 J | **0.0016** | 0.0010 U | 0.0010 U | **0.0092[A]** | 0.0010 U | 0.0010 U |
| | HS SER-SMW08-051115 | 11-May-15 | | **0.0021** | 0.0020 U | 0.0010 U | **0.0084** | 0.0010 U | **0.0040** | 0.0010 U | **0.0097** | 0.0010 U | 0.0010 U | **0.0199[A]** | 0.0010 U | 0.0010 U |
| | HS SER-SMW08-080415 | 4-Aug-15 | | **0.0021** | 0.0020 U | **0.0011** | **0.0165** | 0.0010 U | **0.140[A]** | **0.0013** | **0.0040** | 0.0010 U | 0.0010 U | **0.0243[A]** | 0.0010 U | 0.0010 U |
| SMW19 | HS SER-SMW19-121014 | 10-Dec-14 | | **0.0194[A]** | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0010** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U |
| | HS SER-SMW19-021915 | 19-Feb-15 | | **0.0177[A]** | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0019** | 0.0010 U | 0.00041 J | 0.0010 U | 0.0010 U | 0.00091 J | 0.0010 U | 0.0010 U |
| | HS SER-SMW19-051215 | 12-May-15 | | **0.0145[A]** | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.00034 J | 0.0010 U | 0.0010 U | **0.0010** | 0.0010 U | 0.0010 U |
| | HS SER-SMW19-080515 | 5-Aug-15 | | **0.0106[A]** | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0007 J | 0.0010 U | 0.00034 J | 0.0010 U | 0.0010 U | 0.00086 J | 0.0010 U | 0.0010 U |
| SMW20 | HS SER-SMW20-121014 | 10-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-SMW20-021815 | 18-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-SMW20-051215 | 12-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00043 J | 0.0010 U | 0.00027 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-SMW20-080515 | 5-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| SMW21 | HS SER-SMW21-121014 | 10-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00036 J | 0.0010 U | **0.0031** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-SMW21-021815 | 18-Feb-15 | | 0.00037 J | 0.0020 U | 0.0010 U | 0.00047 J | 0.0010 U | **0.0028** | 0.0010 U | **0.0156** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-SMW21-051215 | 12-May-15 | | 0.00022 J | 0.0020 U | 0.00069 J | 0.00098 J | 0.0010 U | **0.0054** | 0.0010 U | **0.0315** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-SMW21-080515 | 5-Aug-15 | | 0.00084 J | 0.0020 U | 0.0010 U | 0.00025 J | 0.0010 U | 0.00099 J | 0.0010 U | **0.0100** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| PMW01 | HS SER-PMW01-120914 | 9-Dec-14 | | **0.0012** | 0.0020 U | 0.00054 J | **0.0057** | 0.0010 U | 0.00063 J | 0.0010 U | **0.0259** | 0.0010 U | 0.0010 U | **0.0177[A]** | 0.0010 U | 0.0010 U |
| | HS SER-PMW01-021815 | 18-Feb-15 | | **0.0011** | 0.0020 U | 0.0010 U | **0.0052** | 0.0010 U | 0.00070 J | 0.0010 U | **0.0202** | 0.0010 U | 0.0010 U | **0.0185[A]** | 0.0010 U | 0.0010 U |
| | HS SER-PMW01-051315 | 13-May-15 | | **0.0014** | 0.0020 U | **0.0010** | **0.0088** | 0.0010 U | **0.0016** | 0.0010 U | **0.0394** | 0.0010 U | 0.0010 U | **0.0178[A]** | 0.0010 U | 0.0010 U |
| | HS SER-PMW01-080615 | 6-Aug-15 | | **0.0013** | 0.0020 U | **0.0018** | **0.0086** | 0.0010 U | **0.0011** | 0.0010 U | **0.0547** | 0.0010 U | 0.0010 U | **0.0192[A]** | 0.0010 U | 0.0010 U |
| PMW02 | HS SER-PMW02-120914 | 9-Dec-14 | | **0.0028** | 0.0020 U | 0.00060 J | **0.0074** | 0.0010 U | **0.0096** | 0.0010 U | **0.0056** | 0.0010 U | 0.0010 U | **0.0144[A]** | 0.0010 U | **0.0012** |
| | HS SER-PMW02-021815 | 18-Feb-15 | | **0.0020** | 0.0020 U | 0.0010 U | **0.0036** | 0.0010 U | **0.0011** | 0.0010 U | **0.0162** | 0.0010 U | 0.0010 U | **0.0210[A]** | 0.0010 U | 0.0010 U |
| | HS SER-PMW02-051315 | 13-May-15 | | **0.0010** | 0.0020 U | 0.0010 U | **0.0054** | 0.0010 U | **0.0055** | 0.0010 U | **0.0036** | 0.0010 U | 0.0010 U | **0.0149[A]** | 0.0010 U | **0.0021[A]** |
| | HS SER-PMW02-080615 | 6-Aug-15 | | **0.0018** | 0.0020 U | 0.0010 U | **0.0069** | 0.0010 U | **0.0043** | 0.0010 U | **0.0042** | 0.0010 U | 0.0010 U | **0.0088[A]** | 0.0010 U | **0.0016** |

**Notes:**

| | |
|---|---|
| PRG | Preliminary Remediation Goals (PRGs) from the Record of Decision (ROD) |
| A | Class 1 - Groundwater Remediation Objectives |
| 6.5[A] | Concentration exceeds the indicated standard. |
| **15.2** | Concentration was detected but did not exceed applicable standards. |
| 0.03 U | The analyte was not detected above the laboratory estimated quantitation limit. |
| ***0.50 U*** | Laboratory estimated quantitation limit exceeded standard. |
| n/v | No standard/guideline value. |
| - | Parameter not analyzed / not available. |
| mg/L | milligrams per liter |
| b,c | Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change. Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater. |
| c | Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater. |
| * | LCS or LCSD exceeds the control limits |
| B | The analyte was detected in the method, field and/or trip blank. |
| H | Sample was prepped or analyzed beyond the specified holding time |
| J | Indicates estimated value. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. |

# Table 3
## Fourth Quarter 2014 to Third Quarter 2015 Groundwater Analytical Results - Performance Wells
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

| | | | | Trichloroethene (TCE) | Methylene Chloride (Dichloromethane) | 1,1-Dichloroethene | 1,1-Dichloroethane | 1,2-Dichloroethane | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1,1-Trichloroethane | 1,1,2-Trichloroethane | Ethylbenzene | Tetrachloroethene (PCE) | Toluene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Preliminary Remediation Goals (PRG)[A]** | 0.005[c,A] | 0.005[c,A] | 0.007[b,c,A] | 0.7[A] | 0.005[c,A] | 0.07[c,A] | 0.1[c,A] | 0.2[b,c,A] | 0.005[c,A] | 0.7[c,A] | 0.005[c,A] | 1.0[c,A] | 0.002[c,A] |
| **Well** | **Sample ID** | **Sample Date** | **Sample Type** | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| RAMW01 | HS SER-RAMW01-121014 | 10-Dec-14 | | **0.0011** | 0.0020 U | 0.0010 U | **0.0043** | 0.0010 U | 0.00057 J | 0.0010 U | **0.0042** | 0.0010 U | 0.0010 U | **0.0073[A]** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW01-021715 | 17-Feb-15 | | 0.00095 J | 0.0020 U | 0.0010 U | **0.0040** | 0.0010 U | 0.00055 J | 0.0010 U | **0.0029** | 0.0010 U | 0.0010 U | **0.0049** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW01-051415 | 14-May-15 | | **0.0010** | 0.0020 U | 0.0010 U | **0.0030** | 0.0010 U | **0.0010** | 0.0010 U | **0.0029** | 0.0010 U | 0.0010 U | **0.0047** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW01-080615 | 6-Aug-15 | | **0.0012** | 0.0020 U | 0.0010 U | **0.0037** | 0.0010 U | 0.00070 J | 0.0010 U | **0.0039** | 0.00022 J | 0.0010 U | **0.0052[A]** | 0.0010 U | 0.0010 U |
| RAMW02 | HS SER-RAMW02-121014 | 10-Dec-14 | | 0.00063 J | 0.0020 U | 0.0010 U | **0.0033** | 0.0010 U | 0.00033 J | 0.0010 U | **0.0044** | 0.0010 U | 0.0010 U | **0.0035** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW02-021715 | 17-Feb-15 | | 0.00055 J | 0.0020 U | 0.0010 U | **0.0037** | 0.0010 U | 0.0010 U | 0.0010 U | **0.0031** | 0.0010 U | 0.0010 U | **0.0027** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW02-051415 | 14-May-15 | | 0.00028 J | 0.0020 U | 0.0010 U | **0.0072** | 0.0010 U | 0.0010 U | 0.0010 U | **0.0020** | 0.0010 U | 0.0010 U | **0.0020** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW02-080615 | 6-Aug-15 | | 0.00041 J | 0.0020 U | 0.0010 U | **0.0029** | 0.0010 U | 0.0010 U | 0.0010 U | **0.0032** | 0.0010 U | 0.0010 U | **0.0025** | 0.0010 U | 0.0010 U |
| RAMW03 | HS SER-RAMW03-121014 | 10-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00042 J | 0.0010 U | 0.0010 U | 0.00054 J | 0.0010 U | 0.0010 U |
| | HS SER-DUP02-121014 | 10-Dec-14 | Field Duplicate | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00040 J | 0.0010 U | 0.0010 U | 0.00053 J | 0.0010 U | 0.0010 U |
| | HS SER-RAMW03-021715 | 17-Feb-15 | | 0.00051 J | 0.0020 U | 0.0010 U | 0.00062 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.00098 J | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U |
| | HS SER-DUP02-021715 | 17-Feb-15 | Field Duplicate | 0.00040 J | 0.0020 U | 0.0010 U | 0.00064 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.00091 J | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW03-051415 | 14-May-15 | | 0.00043 J | 0.0020 U | 0.0010 U | 0.00034 J | 0.0010 U | 0.00085 J | 0.0010 U | 0.00044 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-DUP02-051415 | 14-May-15 | Field Duplicate | 0.00036 J | 0.0020 U | 0.0010 U | 0.00035 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.00043 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW03-080615 | 6-Aug-15 | | 0.00043 J | 0.0020 U | 0.0010 U | 0.00039 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.00043 J | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U |
| | HS SER-DUP02-080615 | 6-Aug-15 | Field Duplicate | 0.00044 J | 0.0020 U | 0.0010 U | 0.00041 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.00041 J | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U |
| RAMW04 | HS SER-RAMW04-121014 | 10-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00034 J | 0.0010 U | 0.0010 U | 0.00040 J | 0.0010 U | 0.0010 U |
| | HS SER-RAMW04-021715 | 17-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.00046 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.00045 J | 0.0010 U | 0.0010 U | 0.00042 J | 0.0010 U | 0.0010 U |
| | HS SER-RAMW04-051415 | 14-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.00027 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0004 J | 0.0010 U | 0.0010 U |
| | HS SER -RAMW04-080715 | 7-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00039 J | 0.0010 U | 0.0010 U | 0.00043 J | 0.0010 U | 0.0010 U |
| RAMW05 | HS SER-RAMW05-121014 | 10-Dec-14 | | **0.0035** | 0.0020 U | **0.0022** | 0.00097 J | 0.0010 U | **0.0036** | 0.0010 U | **0.0547** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW05-021715 | 17-Feb-15 | | **0.0043** | 0.0020 U | **0.0025** | **0.0034** | 0.0010 U | **0.0097** | 0.0010 U | **0.161** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW05-051415 | 14-May-15 | | **0.0014** | 0.0020 U | 0.00095 J | 0.00046 J | 0.0010 U | **0.0012** | 0.0010 U | **0.0222** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW05-080715 | 7-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.00052 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| RAMW06 | HS SER-RAMW06-120914 | 9-Dec-14 | | **0.0010** | 0.0020 U | **0.0087[A]** | **0.0047** | 0.0010 U | **0.0067** | 0.0010 U | **0.1790** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW06-021815 | 18-Feb-15 | | **0.0033** | 0.0020 U | **0.0074[A]** | **0.0039** | 0.0010 U | **0.0217** | 0.0010 U | **0.387[A]** | 0.0010 U | 0.0010 U | 0.00043 J | 0.0010 U | 0.0010 U |
| | HS SER-RAMW06-051315 | 13-May-15 | | **0.0019** | 0.0020 U | **0.0060** | **0.0032** | 0.0010 U | **0.0032** | 0.0010 U | **0.145** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW06-080715 | 7-Aug-15 | | 0.00061 J | 0.0020 U | **0.0056** | **0.0026** | 0.0010 U | **0.0068** | 0.0010 U | **0.0596** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| RAMW07 | HS SER-RAMW07-120914 | 9-Dec-14 | | **0.0043** | 0.0020 U | **0.0056** | **0.0027** | 0.0010 U | **0.0025** | 0.0010 U | **0.1300** | 0.0010 U | 0.0010 U | **0.0011** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW07-021815 | 18-Feb-15 | | **0.0029** | 0.0020 U | **0.0040** | **0.0091** | 0.0010 U | **0.0053** | 0.0010 U | **0.149** | 0.0010 U | 0.0010 U | **0.0012** | 0.0010 U | 0.0010 U |
| | HS SER-RAMW07-051315 | 13-May-15 | | 0.0016 J | 0.010 U | **0.0516[A]** | **0.0584** | 0.0050 U | **0.0705[A]** | 0.0050 U | **1.040[A]** | 0.0050 U | 0.0041 J | 0.0032 J | 0.0050 U | 0.0050 U |
| | HS SER-RAMW07-080715 | 7-Aug-15 | | **0.0015** | 0.0020 U | **0.0069** | **0.0072** | 0.0010 U | **0.0016** | 0.0010 U | **0.0762** | 0.0010 U | 0.0010 U | **0.0015** | 0.0010 U | 0.0010 U |

See next page for notes.

# Table 3
## Fourth Quarter 2014 to Third Quarter 2015 Groundwater Analytical Results - Performance Wells
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

| | | | | Trichloroethene (TCE) | Methylene Chloride (Dichloromethane) | 1,1-Dichloroethene | 1,1-Dichloroethane | 1,2-Dichloroethane | cis-1,2-Dichloroethene | trans-1,2-Dichloroethene | 1,1,1-Trichloroethane | 1,1,2-Trichloroethane | Ethylbenzene | Tetrachloroethene (PCE) | Toluene | Vinyl chloride |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **Preliminary Remediation Goals (PRG)[A]** | $0.005_{c}^{A}$ | $0.005_{c}^{A}$ | $0.007_{b,c}^{A}$ | $0.7^{A}$ | $0.005_{c}^{A}$ | $0.07_{c}^{A}$ | $0.1_{c}^{A}$ | $0.2_{b,c}^{A}$ | $0.005_{c}^{A}$ | $0.7_{c}^{A}$ | $0.005_{c}^{A}$ | $1.0_{c}^{A}$ | $0.002_{c}^{A}$ |
| **Well** | **Sample ID** | **Sample Date** | **Sample Type** | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L | mg/L |
| RAMW08 | HS SER-RAMW08-120914 | 9-Dec-14 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0014** | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW08-021815 | 18-Feb-15 | | 0.0010 U | 0.0020 U | 0.0010 U | **0.0018** | 0.0010 U | 0.0010 U | 0.0010 U | 0.00039 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW08-051315 | 13-May-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.0009 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |
| | HS SER-RAMW08-080615 | 6-Aug-15 | | 0.0010 U | 0.0020 U | 0.0010 U | 0.00025 J | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U | 0.0010 U |

**Notes:**

| | |
|---|---|
| PRG | Preliminary Remediation Goals (PRGs) from the Record of Decision (ROD) |
| A | Class 1 - Groundwater Remediation Objectives |
| **6.5[A]** | Concentration exceeds the indicated standard at specified well; however, compliance with the standard is only applicable to GMZ wells. |
| **15.2** | Concentration was detected but did not exceed applicable standards. |
| ***0.50 U*** | Laboratory estimated quantitation limit exceeded standard. |
| 0.03 U | The analyte was not detected above the laboratory estimated quantitation limit. |
| mg/L | milligrams per liter |
| n/v | No standard/guideline value. |
| - | Parameter not analyzed / not available. |

| | |
|---|---|
| b,c | Oral Reference Dose and/or Reference Concentration under review by USEPA. Listed values subject to change. Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater. |
| c | Value listed is also the Groundwater Quality Standard for this chemical pursuant to 35 Ill.Adm.Code 620.410 for Class I Groundwater or 35 Ill.Adm.Code 620.420 for Class II Groundwater. |
| B | The analyte was detected in the method, field and/or trip blank. |
| J | Indicates estimated value. |
| NJ | The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration. |

considered during evaluation of this data.

# Table 4.1
## Cell 1 - Phase 1 SVE System Effluent Data
## December 2009 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

CELL 1 SVE EFFLUENT

| Date | Sample Type | SVE Run Time (hr) | Cell 1 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | | Tetrachloroethene | | Trichloroethene | | Vinyl chloride | | Methylene Chloride | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 12/10/2009 | | 159 | 53 | 140 | 13000 | 3.76E-02 | 140 U | 0.00E+00 | 45000 | 9.67E-02 | 140 U | 0.00E+00 | 910 | 1.91E-03 | 18000 | 3.79E-02 | 140 U | 0.00E+00 | 940 | 3.38E-03 | 260 | 7.41E-04 | 8100 | 1.10E-02 | 140 U | 0.00E+00 |
| 12/22/2009 | | 372 | 124 | 140 | 980 | 2.84E-03 | 26 U | 0.00E+00 | 11000 | 2.36E-02 | 26 U | 0.00E+00 | 130 | 2.74E-04 | 7300 | 1.54E-02 | 26 U | 0.00E+00 | 390 | 1.40E-03 | 41 | 1.17E-04 | 470 | 6.38E-04 | 26 U | 0.00E+00 |
| 2/24/2010 | | 1893 | 631 | 150 | 640 | 1.99E-03 | 6.0 U | 0.00E+00 | 1900 | 4.37E-03 | 6.0 U | 0.00E+00 | 28 | 6.31E-05 | 630 | 1.42E-03 | 6.0 U | 0.00E+00 | 150 | 5.78E-04 | 24 | 7.33E-05 | 33 | 4.80E-05 | 6.0 U | 0.00E+00 |
| 3/15/2010 | | 2345 | 782 | 140 | 1100 | 3.19E-03 | 8.4 U | 0.00E+00 | 2800 | 6.01E-03 | 8.4 U | 0.00E+00 | 37 | 7.79E-05 | 1300 | 2.74E-03 | 8.4 U | 0.00E+00 | 180 | 6.48E-04 | 30 | 8.56E-05 | 32 | 4.34E-05 | 8.4 U | 0.00E+00 |
| 4/14/2010 | | 2804 | 935 | 150 | 1400 | 4.34E-03 | 12 U | 0.00E+00 | 4100 | 9.44E-03 | 12 U | 0.00E+00 | 31 | 6.99E-05 | 1400 | 3.16E-03 | 12 U | 0.00E+00 | 790 | 3.05E-03 | 86 | 2.63E-04 | 91 | 1.32E-04 | 12 U | 0.00E+00 |
| 5/13/2010 | | 3495 | 1165 | 140 | 590 | 1.71E-03 | 7.0 U | 0.00E+00 | 2600 | 5.58E-03 | 7.0 U | 0.00E+00 | 13 | 2.74E-05 | 1100 | 2.31E-03 | 7.0 U | 0.00E+00 | 300 | 1.08E-03 | 32 | 9.13E-05 | 10 | 1.36E-05 | 7.0 U | 0.00E+00 |
| 6/21/2010 | | 4430 | 1477 | 108 | 710 | 1.59E-03 | 8.6 U | 0.00E+00 | 2600 | 4.31E-03 | 8.6 U | 0.00E+00 | 16 J | 2.60E-05 | 570 | 9.25E-04 | 8.6 U | 0.00E+00 | 290 | 8.05E-04 | 30 | 6.60E-05 | 8.6 U | 0.00E+00 | 8.6 UJ | 0.00E+00 |
| 7/21/2010 | | 5058 | 1686 | 140 | 480 | 1.39E-03 | 7.0 U | 0.00E+00 | 2800 | 5.58E-03 | 7.0 U | 0.00E+00 | 10 | 2.10E-05 | 630 | 1.33E-03 | 7.0 U | 0.00E+00 | 710 | 2.56E-03 | 42 | 1.20E-04 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 |
| 8/23/2010 | | 5784 | 1928 | 0 | 370 | 0.00E+00 | 8.2 U | 0.00E+00 | 2400 | 0.00E+00 | 8.2 U | 0.00E+00 | 8.2 U | 0.00E+00 | 540 | 0.00E+00 | 8.2 U | 0.00E+00 | 500 | 0.00E+00 | 48 | 0.00E+00 | 8.2 U | 0.00E+00 | 8.2 U | 0.00E+00 |
| 9/23/2010 | | 6523 | 2174 | 145 | 480 | 1.44E-03 | 7.2 U | 0.00E+00 | 2000 | 4.45E-03 | 7.2 U | 0.00E+00 | 7.2 U | 0.00E+00 | 250 | 5.45E-04 | 7.2 U | 0.00E+00 | 380 | 1.42E-03 | 31 | 9.16E-05 | 7.2 U | 0.00E+00 | 7.2 U | 0.00E+00 |
| 10/22/2010 | | 7219 | 2406 | 140 | 390 | 1.13E-03 | 5.0 U | 0.00E+00 | 1600 | 3.44E-03 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 | 160 | 3.37E-04 | 5.0 U | 0.00E+00 | 240 | 8.64E-04 | 21 | 5.99E-05 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 |
| 10/22/2010 | Dup | 7219 | 2406 | 140 | 2600 | 7.53E-03 | 10 U | 0.00E+00 | 960 | 2.06E-03 | 10 U | 0.00E+00 | 120 | 2.53E-04 | 490 | 1.03E-03 | 10 U | 0.00E+00 | 140 | 5.04E-04 | 49 | 1.40E-04 | 10 U | 0.00E+00 | 10 U | 0.00E+00 |
| 11/15/2010 | | 7794 | 2598 | 140 | 420 | 1.22E-03 | 4.3 U | 0.00E+00 | 1700 | 3.65E-03 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 140 | 2.95E-04 | 4.3 U | 0.00E+00 | 140 | 5.04E-04 | 16 | 4.59E-05 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 |
| 12/22/2010 | | 8508 | 2777 | 150 | 600 | 1.86E-03 | 4.2 U | 0.00E+00 | 1600 | 3.68E-03 | 4.2 U | 0.00E+00 | 8.5 | 1.92E-05 | 510 | 1.15E-03 | 4.2 U | 0.00E+00 | 75 | 2.89E-04 | 11 | 3.36E-05 | 4.2 U | 0.00E+00 | 4.2 U | 0.00E+00 |
| 1/24/2011 | | 9302 | 2975 | 170 | 380 | 1.27E-03 | 5.2 U | 0.00E+00 | 1700 | 4.43E-03 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 | 140 | 3.58E-04 | 5.2 U | 0.00E+00 | 45 | 1.97E-04 | 8.6 | 2.98E-05 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 |
| 2/25/2011 | | 10071 | 3167 | 165 | 280 | 9.56E-04 | 4.0 U | 0.00E+00 | 1600 | 4.05E-03 | 4.0 U | 0.00E+00 | 4.5 | 1.12E-05 | 120 | 2.98E-04 | 4.0 U | 0.00E+00 | 34 | 1.44E-04 | 7.4 | 2.49E-05 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 |
| 3/18/2011 | | 10573 | 3293 | 165 | 200 | 6.83E-04 | 6.3 U | 0.00E+00 | 1900 | 4.81E-03 | 6.3 U | 0.00E+00 | 6.3 U | 0.00E+00 | 130 | 3.22E-04 | 6.3 U | 0.00E+00 | 32 | 1.36E-04 | 6.4 | 2.15E-05 | 6.3 U | 0.00E+00 | 6.3 U | 0.00E+00 |
| 4/15/2011 | | 11241 | 3460 | 160 | 180 J,B | 5.96E-04 | 4.5 U | 0.00E+00 | 1700 | 4.17E-03 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 110 | 2.65E-04 | 4.5 U | 0.00E+00 | 43 | 1.77E-04 | 8.6 | 2.80E-05 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 |
| 5/19/2011 | | 12061 | 3665 | 160 | 110 | 3.64E-04 | 4.3 U | 0.00E+00 | 1100 | 2.70E-03 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 85 | 2.04E-04 | 4.3 U | 0.00E+00 | 55 | 2.26E-04 | 8 | 2.61E-05 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 |
| 6/16/2011 | | 12722 | 3830 | 170 | 150 | 5.27E-04 | 2.3 U | 0.00E+00 | 730 | 1.90E-03 | 2.3 U | 0.00E+00 | 2.8 | 7.15E-06 | 63 | 1.61E-04 | 2.3 U | 0.00E+00 | 110 | 4.81E-04 | 12 | 4.16E-05 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 |
| 7/15/2011 | | 13417 | 4472 | 170 | 140 | 4.92E-04 | 1.2 U | 0.00E+00 | 390 | 1.02E-03 | 1.2 U | 0.00E+00 | 2.2 | 5.62E-06 | 47 | 1.20E-04 | 1.2 | 3.07E-06 | 170 | 7.43E-04 | 14 | 4.85E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 8/22/2011 | | 14324 | 4775 | 170 | 150 | 5.27E-04 | 1.1 U | 0.00E+00 | 210 | 5.48E-04 | 1.1 U | 0.00E+00 | 2.1 | 5.37E-06 | 36 | 9.20E-05 | 1.1 U | 0.00E+00 | 180 | 7.87E-04 | 16 | 5.54E-05 | 1.1 U | 0.00E+00 | 2.3 UJ,B | 0.00E+00 |
| 9/15/2011 | | 14905 | 4968 | 170 | 130 | 4.57E-04 | 1.1 U | 0.00E+00 | 130 | 3.39E-04 | 1.1 U | 0.00E+00 | 1.5 | 3.83E-06 | 40 | 1.02E-04 | 1.1 U | 0.00E+00 | 180 | 7.87E-04 | 14 | 4.85E-05 | 1.5 | 2.47E-06 | 1.1 U | 0.00E+00 |
| 10/14/2011 | | 15598 | 5199 | 160 | 65 | 2.15E-04 | 0.74 U | 0.00E+00 | 100 | 2.45E-04 | 0.74 U | 0.00E+00 | 1.4 | 3.37E-06 | 43 | 1.03E-04 | 0.86 | 2.07E-06 | 130 | 5.35E-04 | 9.8 | 3.19E-05 | 3.5 | 5.43E-06 | 1.3 | 2.74E-06 |
| 11/21/2011 | | 16510 | 5503 | 170 | 49 J,B | 1.72E-04 | 0.74 U | 0.00E+00 | 68 | | 0.74 U | 0.00E+00 | 2.9 | 7.41E-06 | 28 | 7.15E-05 | 1.1 | 2.81E-06 | 61 | 2.67E-04 | 7.3 | 2.53E-05 | 1 | 1.65E-06 | 7.4 U | 0.00E+00 |
| 12/14/2011 | | 17010 | 5670 | 170 | 53 | 1.86E-04 | 0.78 U | 0.00E+00 | 45 | 1.17E-04 | 0.78 U | 0.00E+00 | 2.7 | 6.90E-06 | 18 | 4.60E-05 | 0.78 U | 0.00E+00 | 57 | 2.49E-04 | 5.8 | 2.01E-05 | 0.78 U | 0.00E+00 | 7.8 U | 0.00E+00 |
| 1/19/2012 | | 17923 | 5974 | 170 | 51 | 1.79E-04 | 0.79 U | 0.00E+00 | 41 | 1.07E-04 | 0.79 U | 0.00E+00 | 1 | 2.56E-06 | 12 | 3.07E-05 | 0.79 U | 0.00E+00 | 39 | 1.70E-04 | 5 | 1.73E-05 | 0.79 U | 0.00E+00 | 1.9 | 4.25E-06 |
| 2/15/2012 | | 18566 | 6189 | 170 | 46 | 1.62E-04 | 0.78 U | 0.00E+00 | 30 | 7.82E-05 | 0.78 U | 0.00E+00 | 9.4 | 2.40E-05 | 10 | 2.56E-05 | 0.78 U | 0.00E+00 | 37 | 1.62E-04 | 4.3 | 1.49E-05 | 0.89 | 1.47E-06 | 0.78 U | 0.00E+00 |
| 3/15/2012 | | 19262 | 6421 | 170 | 38 J,B | 1.34E-04 | 0.71 U | 0.00E+00 | 34 | 8.87E-05 | 0.71 U | 0.00E+00 | 0.8 | 2.04E-06 | 7.8 | 1.99E-05 | 0.71 U | 0.00E+00 | 32 | 1.40E-04 | 3.9 | 1.35E-05 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 |
| 4/19/2012 | | 20102 | 6701 | 160 | 55 | 1.82E-04 | 0.76 U | 0.00E+00 | 38 | 9.33E-05 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 7.4 | 1.78E-05 | 0.76 U | 0.00E+00 | 58 | 2.39E-04 | 5.7 | 1.86E-05 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 |
| 5/18/2012 | | 20748 | 6916 | 160 | 51 | 1.69E-04 | 0.76 U | 0.00E+00 | 36 | 8.84E-05 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 7.1 | 1.71E-05 | 0.76 U | 0.00E+00 | 77 | 3.17E-04 | 6.1 | 1.99E-05 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 21282 | 7094 | 160 | 120 | 3.97E-04 | 1.3 U | 0.00E+00 | 51 | 1.25E-04 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 8.3 | 2.00E-05 | 1.3 U | 0.00E+00 | 350 | 1.44E-03 | 15 | 4.89E-05 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 |
| 9/17/2012 | | 21952 | 7317 | 160 | 190 | 6.29E-04 | 1.1 U | 0.00E+00 | 77 | 1.89E-04 | 1.1 U | 0.00E+00 | 2 | 4.81E-06 | 9.8 | 2.38E-05 | 1.1 U | 0.00E+00 | 270 | 1.11E-03 | 25 | 8.15E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 21959 | 7320 | 160 | 160 | 5.29E-04 | 1.0 U | 0.00E+00 | 56 | 1.37E-04 | 1.0 U | 0.00E+00 | 7.2 | 1.73E-05 | 9.1 | 2.19E-05 | 1.0 U | 0.00E+00 | 220 | 9.05E-04 | 18 | 5.87E-05 | 1.0 U | 0.00E+00 | 10 U | 0.00E+00 |
| 12/14/2012 | | 22554 | 7518 | 170 | 140 | 4.92E-04 | 1.2 U | 0.00E+00 | 99 | 2.58E-04 | 1.2 U | 0.00E+00 | 3.5 | 8.94E-06 | 7.4 | 1.89E-05 | 1.2 U | 0.00E+00 | 87 | 3.80E-04 | 13 | 4.50E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 22556 | 7518 | 160 | 110 | 3.64E-04 | 0.99 U | 0.00E+00 | 83 | 2.04E-04 | 0.99 U | 0.00E+00 | 0.99 U | 1.73E-05 | 5.6 | 1.35E-05 | 0.99 U | 0.00E+00 | 62 | 2.55E-04 | 6.7 | 2.18E-05 | 0.99 U | 0.00E+00 | 9.9 U | 0.00E+00 |
| 4/11/2013 | | 23581 | 7723 | 160 | 85 | 2.81E-04 | 1.2 U | 0.00E+00 | 54 | 1.33E-04 | 1.2 U | 0.00E+00 | 3.8 | 1.26E-05 | 7.4 | 1.78E-05 | 1.2 U | 0.00E+00 | 38 | 1.56E-04 | 8.2 | 2.67E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 23583 | 7724 | 160 | 71 | 2.35E-04 | 1.1 U | 0.00E+00 | 55 | 1.35E-04 | 1.1 U | 0.00E+00 | 1.7 | 5.63E-06 | 6 | 1.44E-05 | 1.1 U | 0.00E+00 | 37 | 1.52E-04 | 6.1 | 1.99E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 |
| 7/15/2013 | | 25160 | 8039 | 160 | 190 | 6.29E-04 | 1.2 U | 0.00E+00 | 79 | 1.94E-04 | 1.2 U | 0.00E+00 | 4.7 | 1.56E-05 | 11 | 2.65E-05 | 1.2 U | 0.00E+00 | 190 | 7.82E-04 | 23 | 7.50E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 25162 | 8040 | 160 | 180 | 5.96E-04 | 1.3 U | 0.00E+00 | 67 | 1.64E-04 | 1.3 U | 0.00E+00 | 1.6 | 3.85E-06 | 9.3 | 2.24E-05 | 1.3 U | 0.00E+00 | 270 | 1.11E-03 | 21 | 6.84E-05 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 |
| 11/18/2013 | | 26825 | 8372 | 160 | 120 | 3.97E-04 | 1.1 U | 0.00E+00 | 35 | 8.59E-05 | 1.1 U | 0.00E+00 | 3.2 | 7.70E-06 | 7.3 | 1.76E-05 | 1.1 U | 0.00E+00 | 81 | 3.33E-04 | 12 | 3.91E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 28218 | 8651 | 160 | 100 | 3.31E-04 | 1.1 U | 0.00E+00 | 30 | 7.36E-05 | 1.1 U | 0.00E+00 | 1.3 | 3.13E-06 | 4.7 | 1.13E-05 | 1.1 U | 0.00E+00 | 69 | 2.84E-04 | 9.1 | 2.97E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 |
| 3/14/2014 | | 29432 | 8894 | 160 | 78 | 2.58E-04 | 1.1 U | 0.00E+00 | 34 | 8.35E-05 | 1.1 U | 0.00E+00 | 3.8 | 9.14E-06 | 6.1 | 1.47E-05 | 1.1 U | 0.00E+00 | 30 | 1.23E-04 | 7 | 2.28E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 29914 | 8990 | 160 | 95 | 3.14E-04 | 1.2 U | 0.00E+00 | 32 | 7.86E-05 | 1.2 U | 0.00E+00 | 1.9 | 4.57E-06 | 6 | 1.44E-05 | 1.2 U | 0.00E+00 | 55 | 2.26E-04 | 6.8 | 2.22E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 |
| 7/23/2014 | | 31567 | 9321 | 160 | 160 | 5.29E-04 | 1.2 U | 0.00E+00 | 41 | 1.01E-04 | 1.2 U | 0.00E+00 | 3.6 | 8.66E-06 | 9.3 | 2.24E-05 | 1.2 U | 0.00E+00 | 170 | 6.99E-04 | 18 | 5.87E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 32432 | 9494 | 160 | 480 | 1.59E-03 | 2.2 U | 0.00E+00 | 11 | 2.70E-05 | 2.2 U | 0.00E+00 | 4 | 9.62E-06 | 8.7 | 2.09E-05 | 2.2 U | 0.00E+00 | 14 | 5.76E-05 | 13 | 4.24E-05 | 2.2 U | 0.00E+00 | 22 U | 0.00E+00 |
| 11/14/2014 | | 33847 | 9777 | 160 | 60 | 1.99E-04 | 1.1 U | 0.00E+00 | 14 | 3.44E-05 | 1.1 U | 0.00E+00 | 1.6 | 3.85E-06 | 3.6 | 8.66E-06 | 1.1 U | 0.00E+00 | 50 | 2.06E-04 | 6.9 | 2.25E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 33855 | 9778 | 160 | 86 | 2.85E-04 | 1.1 U | 0.00E+00 | 20 | 4.91E-05 | 1.1 U | 0.00E+00 | 1.1 | 2.65E-06 | 4.0 | 9.62E-06 | 1.1 U | 0.00E+00 | 55 | 2.26E-04 | 8.2 | 2.67E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 |
| 1/9/2015 | Dup | - | - | 160 | 84 | 2.78E-04 | 1.2 U | 0.00E+00 | 20 | 4.91E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 | 1.11E-05 | 1.2 U | 0.00E+00 | 80 | 3.29E-04 | 8.6 | 2.80E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 |
| 3/13/2015 | | 35189 | 10045 | 160 | 58 | 1.92E-04 | 1.3 U | 0.00E+00 | 17 | 4.17E-05 | 1.3 U | 0.00E+00 | 2.4 | 5.77E-06 | 3.6 | 8.66E-06 | 1.3 U | 0.00E+00 | 32 | 1.32E-04 | 5.8 | 1.89E-05 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 35194 | 10046 | 160 | 63 | 2.08E-04 | 2.3 U | 0.00E+00 | 15 | 3.68E-05 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.7 | 6.49E-06 | 2.3 U | 0.00E+00 | 67 | 2.76E-04 | 7.1 | 2.31E-05 | 2.3 U | 0.00E+00 | 23 U | 0.00E+00 |
| 7/16/2015 | | 36877 | 10343 | 160 | 110 | 3.64E-04 | 1.1 U | 0.00E+00 | 32 | 7.86E-05 | 1.1 U | 0.00E+00 | 3.1 | 7.45E-06 | 6.7 | 1.61E-05 | 1.1 U | 0.00E+00 | 170 | 6.99E-04 | 19 | 6.19E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 36880 | 10343 | 160 | 150 | 4.96E-04 | 1.4 U | 0.00E+00 | 29 | 7.12E-05 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 5.6 | 1.35E-05 | 1.4 U | 0.00E+00 | 250 | 1.03E-03 | 20 | 6.52E-05 | 1.4 U | 0.00E+00 | 14 U | 0.00E+00 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)
SCFM standard cubic feet per minute
J Indicates estimated value.
B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

# Table 4.1
## Cell 1 - Phase 1 SVE System Effluent Data
## December 2009 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

**CELL 1 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 1 Run Time (hr) | SVE Flow Rate (scfm) | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | | Toluene | | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| 12/10/2009 | | 159 | 53 | 140 | 140 U | 0.00E+00 | 140 U | 0.00E+00 | 17000 | 2.38E-02 | 140 U | 0.00E+00 | 560 | 1.12E-03 | 250 | 5.76E-04 | 1800 | 4.15E-03 | 470 | 1.08E-03 | 3800 | 4.76E-03 | 140 U | 0.00E+00 | 2.25E-01 | 11.91 |
| 12/22/2009 | | 372 | 124 | 140 | 26 U | 0.00E+00 | 26 U | 0.00E+00 | 1700 | 2.38E-03 | 26 U | 0.00E+00 | 32 | 6.40E-05 | 26 U | 0.00E+00 | 26 U | 0.00E+00 | 26 U | 0.00E+00 | 100 U | 0.00E+00 | 26 U | 0.00E+00 | 4.67E-02 | 15.23 |
| 2/24/2010 | | 1893 | 631 | 150 | 6.0 U | 0.00E+00 | 6.0 U | 0.00E+00 | 130 | 1.95E-04 | 19 | 3.45E-05 | 6.0 U | 0.00E+00 | 6.0 U | 0.00E+00 | 6.0 U | 0.00E+00 | 6.0 U | 0.00E+00 | 98 | 1.32E-04 | 370 | 6.20E-04 | 9.52E-03 | 20.06 |
| 3/15/2010 | | 2345 | 782 | 140 | 8.4 U | 0.00E+00 | 8.4 U | 0.00E+00 | 170 | 2.38E-04 | 8.4 U | 0.00E+00 | 8.4 U | 0.00E+00 | 8.4 U | 0.00E+00 | 8.4 U | 0.00E+00 | 8.4 U | 0.00E+00 | 34 U | 0.00E+00 | 8.4 U | 0.00E+00 | 1.30E-02 | 22.02 |
| 4/14/2010 | | 2804 | 935 | 150 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 320 | 4.80E-04 | 14 | 2.54E-05 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 50 U | 0.00E+00 | 12 U | 0.00E+00 | 2.10E-02 | 25.22 |
| 5/13/2010 | | 3495 | 1165 | 140 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 100 | 1.40E-04 | 12 | 2.03E-05 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 26 U | 0.00E+00 | 7.0 U | 0.00E+00 | 1.10E-02 | 27.75 |
| 6/21/2010 | | 4430 | 1477 | 108 | 8.6 U | 0.00E+00 | 8.6 U | 0.00E+00 | 87 J | 9.40E-05 | 10 | 1.31E-05 | 8.6 U | 0.00E+00 | 8.6 U | 0.00E+00 | 8.6 U | 0.00E+00 | 8.6 U | 0.00E+00 | 34 J | 3.31E-05 | 8.6 U | 0.00E+00 | 7.86E-03 | 30.20 |
| 7/21/2010 | | 5058 | 1686 | 140 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 60 | 8.40E-05 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 7.0 U | 0.00E+00 | 28 U | 0.00E+00 | 7.0 U | 0.00E+00 | 1.11E-02 | 32.52 |
| 8/23/2010 | | 5784 | 1928 | 0 | 8.2 U | 0.00E+00 | 8.2 U | 0.00E+00 | 38 | 0.00E+00 | 24 | 0.00E+00 | 8.2 U | 0.00E+00 | 8.2 U | 0.00E+00 | 8.2 U | 0.00E+00 | 8.2 U | 0.00E+00 | 53 | 0.00E+00 | 8.2 U | 0.00E+00 | 0.00E+00 | 32.52 |
| 9/23/2010 | | 6523 | 2174 | 145 | 7.2 U | 0.00E+00 | 7.2 U | 0.00E+00 | 15 | 2.18E-05 | 17 | 2.99E-05 | 7.2 U | 0.00E+00 | 7.2 U | 0.00E+00 | 7.2 U | 0.00E+00 | 7.2 U | 0.00E+00 | 29 U | 0.00E+00 | 7.2 U | 0.00E+00 | 7.99E-03 | 34.49 |
| 10/22/2010 | | 7219 | 2406 | 140 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 | 11 | 1.54E-05 | 7.1 | 1.20E-05 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 | 45 | 5.67E-05 | 5.0 U | 0.00E+00 | 5.91E-03 | 35.86 |
| 10/22/2010 | Dup | 7219 | 2406 | 140 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 41 U | 0.00E+00 | 10 U | 0.00E+00 | 1.15E-02 | 37.16 |
| 11/15/2010 | | 7794 | 2598 | 140 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 12 | 1.68E-05 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 17 U | 0.00E+00 | 4.3 U | 0.00E+00 | 5.73E-03 | 36.96 |
| 12/22/2010 | | 8508 | 2777 | 150 | 4.2 U | 0.00E+00 | 4.2 U | 0.00E+00 | 10 | 1.50E-05 | 5.3 | 9.63E-06 | 4.2 U | 0.00E+00 | 4.2 U | 0.00E+00 | 4.2 U | 0.00E+00 | 4.2 U | 0.00E+00 | 16 NJ | 2.16E-05 | 4.2 U | 0.00E+00 | 7.08E-03 | 38.22 |
| 1/24/2011 | | 9302 | 2975 | 170 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 | 5.2 U | 0.00E+00 | 21 U | 0.00E+00 | 5.2 U | 0.00E+00 | 6.28E-03 | 39.47 |
| 2/25/2011 | | 10071 | 3167 | 165 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 16 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 5.48E-03 | 40.53 |
| 3/18/2011 | | 10573 | 3293 | 165 | 6.3 U | 0.00E+00 | 6.3 U | 0.00E+00 | 25 U | 0.00E+00 | 6.3 U | 0.00E+00 | 6.3 U | 0.00E+00 | 6.3 U | 0.00E+00 | 6.3 U | 0.00E+00 | 6.3 U | 0.00E+00 | 25 U | 0.00E+00 | 25 U | 0.00E+00 | 5.97E-03 | 41.27 |
| 4/15/2011 | | 11241 | 3460 | 160 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 18 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 18 U | 0.00E+00 | 18 U | 0.00E+00 | 5.24E-03 | 42.15 |
| 5/19/2011 | | 12061 | 3865 | 160 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 17 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 17 U | 0.00E+00 | 17 U | 0.00E+00 | 3.52E-03 | 42.87 |
| 6/16/2011 | | 12722 | 3830 | 170 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 9.2 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 9.2 U | 0.00E+00 | 9.2 U | 0.00E+00 | 3.12E-03 | 43.39 |
| 7/15/2011 | | 13417 | 4472 | 170 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.5 | 3.09E-06 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 7.4 | 1.13E-05 | 4.6 U | 0.00E+00 | 2.44E-03 | 44.96 |
| 8/22/2011 | | 14324 | 4775 | 170 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 6.7 | 1.38E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 44 J,B | 6.74E-05 | 4.5 U | 0.00E+00 | 2.10E-03 | 45.59 |
| 9/15/2011 | | 14905 | 4968 | 170 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 5.6 | 8.57E-06 | 4.5 U | 0.00E+00 | 1.75E-03 | 45.93 |
| 10/14/2011 | | 15598 | 5199 | 160 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 3.0 U | 0.00E+00 | 0.74 U | 0.00E+00 | 1.8 | 4.11E-06 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 18 | 2.59E-05 | 3.0 U | 0.00E+00 | 1.17E-03 | 46.20 |
| 11/21/2011 | | 16510 | 5503 | 170 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 3.0 U | 0.00E+00 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 14 | 2.14E-05 | 3.0 U | 0.00E+00 | 5.69E-04 | 46.37 |
| 12/14/2011 | | 17010 | 5670 | 170 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 3.1 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 7.8 UJ | 0.00E+00 | 3.1 U | 0.00E+00 | 6.26E-04 | 46.48 |
| 1/19/2012 | | 17923 | 5974 | 170 | 0.79 U | 0.00E+00 | 0.79 U | 0.00E+00 | 3.2 U | 0.00E+00 | 0.79 U | 0.00E+00 | 0.79 U | 0.00E+00 | 0.79 U | 0.00E+00 | 0.79 U | 0.00E+00 | 0.79 U | 0.00E+00 | 3.2 | 4.90E-06 | 3.2 U | 0.00E+00 | 5.16E-04 | 46.63 |
| 2/15/2012 | | 18566 | 6189 | 170 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 3.1 U | 0.00E+00 | 1.2 | 2.47E-06 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 20 | 3.08E-05 | 3.1 U | 0.00E+00 | 5.01E-04 | 46.74 |
| 3/15/2012 | | 19262 | 6421 | 170 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 2.8 U | 0.00E+00 | 0.71 U | 0.00E+00 | 1.8 | 4.37E-06 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 2.8 U | 0.00E+00 | 2.8 U | 0.00E+00 | 4.02E-04 | 46.84 |
| 4/19/2012 | | 20102 | 6701 | 160 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 3.0 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 5.50E-04 | 46.99 |
| 5/16/2012 | | 20748 | 6916 | 160 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 3.0 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 6.11E-04 | 47.12 |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 21282 | 7094 | 160 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 5.2 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 | 5.2 U | 0.00E+00 | 2.03E-03 | 47.48 |
| 9/17/2012 | | 21952 | 7317 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.3 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.3 U | 0.00E+00 | 2.04E-03 | 47.94 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 21959 | 7320 | 160 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 4.1 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 10 U | 0.00E+00 | 4.1 U | 0.00E+00 | 1.67E-03 | 47.94 |
| 12/14/2012 | | 22554 | 7518 | 170 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.8 U | 0.00E+00 | 2.1 | 4.32E-06 | 7 | 1.70E-05 | 1.2 U | 0.00E+00 | 1.5 | 4.20E-06 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.23E-03 | 48.19 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 22556 | 7518 | 160 | 0.99 U | 0.00E+00 | 0.99 U | 0.00E+00 | 4.0 U | 0.00E+00 | 0.99 U | 0.00E+00 | 0.99 U | 0.00E+00 | 0.99 U | 0.00E+00 | 0.99 U | 0.00E+00 | 0.99 U | 0.00E+00 | 9.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 8.75E-04 | 48.19 |
| 4/11/2013 | | 23581 | 7723 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.4 | 3.20E-06 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.6 U | 0.00E+00 | 6.30E-04 | 48.32 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 23583 | 7724 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.7 | 3.89E-06 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 5.66E-04 | 48.32 |
| 7/15/2013 | | 25160 | 8039 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.72E-03 | 48.86 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 25162 | 8040 | 160 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 5.1 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 | 5.1 U | 0.00E+00 | 1.97E-03 | 48.86 |
| 11/18/2013 | | 26825 | 8372 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 8.81E-04 | 49.15 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 28218 | 8851 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 7.32E-04 | 49.36 |
| 3/14/2014 | | 29432 | 8894 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.4 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.4 U | 0.00E+00 | 5.12E-04 | 49.48 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 29914 | 8990 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.8 U | 0.00E+00 | 6.60E-04 | 49.54 |
| 7/23/2014 | | 31567 | 9321 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.42E-03 | 50.01 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 32432 | 9494 | 160 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 9.0 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 22 U | 0.00E+00 | 9.0 U | 0.00E+00 | 1.75E-03 | 50.32 |
| 11/14/2014 | | 33847 | 9777 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.6 U | 0.00E+00 | 4.74E-04 | 50.45 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 33855 | 9778 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 5.99E-04 | 50.45 |
| 1/9/2015 | Dup | - | - | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 6.95E-04 | - |
| 3/13/2015 | | 35189 | 10045 | 160 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 5.2 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 | 5.2 U | 0.00E+00 | 3.99E-04 | 50.56 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 35194 | 10046 | 160 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 9.2 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 23 U | 0.00E+00 | 9.2 U | 0.00E+00 | 5.51E-04 | 50.56 |
| 7/16/2015 | | 36677 | 10343 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.23E-03 | 50.92 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 38680 | 10343 | 160 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 5.5 U | 0.00E+00 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 2.2 | 5.79E-06 | 3.4 | 8.95E-06 | 1.4 U | 0.00E+00 | 14 U | 0.00E+00 | 5.5 U | 0.00E+00 | 1.89E-03 | 50.92 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)
SCFM standard cubic feet per minute
J Indicates estimated value.
B The analyte was detected in the method, field and/or trip blank

When a duplicate sample was collected, the original sample results are used in the mass calculations.

# Table 4.2
# Cell 2 - Phase 1 SVE System Effluent Data
# December 2009 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 2 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 2 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | | Tetrachloroethene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 12/11/2009 | | 178 | 59 | 150 | 40000 | 1.24E-01 | 86 U | 0.00E+00 | 21000 | 4.83E-02 | 86 U | 0.00E+00 | 4500 | 1.01E-02 | 25000 | 5.64E-02 | 86 U | 0.00E+00 | 1500 | 5.78E-03 |
| 12/15/2009 | | 205 | 68 | 140 | 27000 | 7.82E-02 | 110 U | 0.00E+00 | 14000 | 3.01E-02 | 110 U | 0.00E+00 | 3100 | 6.52E-03 | 16000 | 3.37E-02 | 110 U | 0.00E+00 | 950 | 3.42E-03 |
| 12/29/2009 | | 539 | 180 | 140 | 24000 | 6.95E-02 | 100 U | 0.00E+00 | 9100 | 1.95E-02 | 100 U | 0.00E+00 | 2100 | 4.42E-03 | 9200 | 1.94E-02 | 100 U | 0.00E+00 | 1000 | 3.60E-03 |
| 1/13/2010 | | 903 | 301 | 150 | 9100 | 2.82E-02 | 35 U | 0.00E+00 | 3700 | 8.52E-03 | 35 U | 0.00E+00 | 880 | 1.98E-03 | 3200 | 7.21E-03 | 35 U | 0.00E+00 | 610 | 2.35E-03 |
| 1/27/2010 | | 1224 | 408 | 150 | 13000 | 4.03E-02 | 40 U | 0.00E+00 | 4300 | 9.90E-03 | 40 U | 0.00E+00 | 1100 | 2.48E-03 | 3900 | 8.79E-03 | 40 U | 0.00E+00 | 600 | 2.31E-03 |
| 1/27/2010 | Dup | 1224 | 408 | 150 | 14000 | 4.34E-02 | 40 U | 0.00E+00 | 4800 | 1.10E-02 | 40 U | 0.00E+00 | 1200 | 2.71E-03 | 4400 | 9.92E-03 | 40 U | 0.00E+00 | 630 | 2.43E-03 |
| 2/24/2010 | | 1893 | 631 | 150 | 8000 | 2.48E-02 | 22 U | 0.00E+00 | 3000 | 6.90E-03 | 22 U | 0.00E+00 | 520 | 1.17E-03 | 2300 | 5.19E-03 | 22 U | 0.00E+00 | 200 | 7.71E-04 |
| 3/15/2010 | | 2345 | 782 | 140 | 17000 | 4.92E-02 | 48 U | 0.00E+00 | 8000 | 1.72E-02 | 48 U | 0.00E+00 | 1100 | 2.31E-03 | 6300 | 1.33E-02 | 48 U | 0.00E+00 | 860 | 3.10E-03 |
| 4/14/2010 | | 2804 | 935 | 150 | 8400 | 2.61E-02 | 23 U | 0.00E+00 | 2200 | 5.06E-03 | 23 U | 0.00E+00 | 480 | 1.08E-03 | 2000 | 4.51E-03 | 23 U | 0.00E+00 | 1300 | 5.01E-03 |
| 5/13/2010 | | 3495 | 1165 | 140 | 8000 | 2.32E-02 | 11 U | 0.00E+00 | 3100 | 6.66E-03 | 11 U | 0.00E+00 | 480 | 1.01E-03 | 2800 | 5.89E-03 | 11 U | 0.00E+00 | 380 | 1.37E-03 |
| 6/21/2010 | | 4430 | 1477 | 108 | 5800 | 1.30E-02 | 23 U | 0.00E+00 | 3000 J | 4.97E-03 | 23 U | 0.00E+00 | 360 J | 5.84E-04 | 2100 | 3.41E-03 | 23 U | 0.00E+00 | 300 | 8.33E-04 |
| 7/21/2010 | | 5058 | 1686 | 140 | 4500 | 1.30E-02 | 14 U | 0.00E+00 | 1600 | 3.44E-03 | 14 U | 0.00E+00 | 280 | 5.89E-04 | 1200 | 2.53E-03 | 14 U | 0.00E+00 | 260 | 9.36E-04 |
| 8/23/2010 | | 5784 | 1928 | 0 | 7100 | 0.00E+00 | 20 U | 0.00E+00 | 2700 | 0.00E+00 | 20 U | 0.00E+00 | 290 | 0.00E+00 | 1400 | 0.00E+00 | 20 U | 0.00E+00 | 620 | 0.00E+00 |
| 9/23/2010 | | 6523 | 2174 | 145 | 4300 | 1.29E-02 | 12 U | 0.00E+00 | 1600 | 3.56E-03 | 12 U | 0.00E+00 | 270 | 5.88E-04 | 940 | 2.05E-03 | 12 U | 0.00E+00 | 290 | 1.08E-03 |
| 10/22/2010 | | 7219 | 2406 | 140 | 2500 | 7.24E-03 | 10 U | 0.00E+00 | 890 | 1.91E-03 | 10 U | 0.00E+00 | 110 | 2.31E-04 | 470 | 9.89E-04 | 10 U | 0.00E+00 | 180 | 6.48E-04 |
| 11/15/2010 | | 7794 | 2598 | 140 | 3200 | 9.27E-03 | 11 U | 0.00E+00 | 1100 | 2.36E-03 | 11 U | 0.00E+00 | 130 | 2.74E-04 | 440 | 9.26E-04 | 11 U | 0.00E+00 | 120 | 4.32E-04 |
| 12/22/2010 | | 8508 | 2955 | 150 | 4000 | 1.24E-02 | 14 U | 0.00E+00 | 1500 | 3.45E-03 | 14 U | 0.00E+00 | 240 | 5.41E-04 | 730 | 1.65E-03 | 14 U | 0.00E+00 | 72 | 2.78E-04 |
| 1/24/2011 | | 9302 | 3352 | 170 | 780 | 2.74E-03 | 2.7 U | 0.00E+00 | 800 | 2.09E-03 | 2.7 U | 0.00E+00 | 22 | 5.62E-05 | 390 | 9.96E-04 | 2.7 U | 0.00E+00 | 26 | 1.14E-04 |
| 2/25/2011 | | 10071 | 3737 | 165 | 1500 | 5.12E-03 | 4.0 U | 0.00E+00 | 1100 | 2.78E-03 | 4.0 U | 0.00E+00 | 44 | 1.09E-04 | 560 | 1.39E-03 | 4.0 U | 0.00E+00 | 32 | 1.36E-04 |
| 3/18/2011 | | 10573 | 3988 | 165 | 370 | 1.26E-03 | 1.0 U | 0.00E+00 | 160 | 4.05E-04 | 1.0 U | 0.00E+00 | 11 | 2.73E-05 | 62 | 1.54E-04 | 1.0 U | 0.00E+00 | 19 | 8.06E-05 |
| 4/15/2011 | | 11241 | 4322 | 160 | 300 J,B | 9.93E-04 | 1.0 U | 0.00E+00 | 95 | 2.33E-04 | 1.0 U | 0.00E+00 | 12 | 2.89E-05 | 41 | 9.86E-05 | 1.0 U | 0.00E+00 | 20 | 8.23E-05 |
| 5/19/2011 | | 12061 | 4732 | 160 | 93 | 3.08E-04 | 1.1 U | 0.00E+00 | 39 | 9.57E-05 | 1.1 U | 0.00E+00 | 3.5 | 8.42E-06 | 21 | 5.05E-05 | 1.1 U | 0.00E+00 | 14 | 5.76E-05 |
| 6/16/2011 | | 12722 | 5062 | 170 | 99 | 3.48E-04 | 1.2 U | 0.00E+00 | 48 | 1.25E-04 | 1.2 U | 0.00E+00 | 2.4 | 6.13E-06 | 21 | 5.37E-05 | 1.2 U | 0.00E+00 | 30 | 1.31E-04 |
| 7/15/2011 | | 13417 | 4472 | 170 | 77 | 2.71E-04 | 1.2 U | 0.00E+00 | 25 | 6.52E-05 | 1.2 U | 0.00E+00 | 1.7 | 4.34E-06 | 18 | 4.60E-05 | 1.2 U | 0.00E+00 | 30 | 1.31E-04 |
| 8/22/2011 | | 14324 | 4775 | 170 | 78 | 2.74E-04 | 1.2 U | 0.00E+00 | 31 | 8.09E-05 | 1.2 U | 0.00E+00 | 1.2 | 3.07E-06 | 17 | 4.34E-05 | 1.2 U | 0.00E+00 | 54 | 2.36E-04 |
| 9/15/2011 | | 14905 | 4968 | 170 | 69 | 2.43E-04 | 1.1 U | 0.00E+00 | 20 | 5.22E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 12 | 3.07E-05 | 1.1 U | 0.00E+00 | 32 | 1.40E-04 |
| 10/14/2011 | | 15598 | 5199 | 160 | 43 | 1.42E-04 | 0.82 U | 0.00E+00 | 12 | 2.95E-05 | 0.82 U | 0.00E+00 | 0.82 U | 0.00E+00 | 6.3 | 1.52E-05 | 0.82 U | 0.00E+00 | 8.4 | 3.46E-05 |
| 11/21/2011 | | 16510 | 5503 | 170 | 28 J,B | 9.85E-05 | 1.6 U | 0.00E+00 | 7.7 | 2.01E-05 | 1.6 U | 0.00E+00 | 1.6 U | 0.00E+00 | 4.1 | 1.05E-05 | 1.6 U | 0.00E+00 | 7 | 3.06E-05 |
| 12/14/2011 | | 17010 | 5670 | 170 | 26 | 9.14E-05 | 0.76 U | 0.00E+00 | 5.2 | 1.36E-05 | 0.76 U | 0.00E+00 | 2.4 | 6.13E-06 | 4.2 | 1.07E-05 | 0.76 U | 0.00E+00 | 6.9 | 3.02E-05 |
| 1/19/2012 | | 17923 | 5974 | 170 | 25 | 8.79E-05 | 0.74 U | 0.00E+00 | 6.9 | 1.80E-05 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 3 | 7.67E-06 | 0.74 U | 0.00E+00 | 4.4 | 1.92E-05 |
| 2/15/2012 | | 18566 | 6189 | 170 | 31 | 1.09E-04 | 0.73 U | 0.00E+00 | 7.6 | 1.98E-05 | 0.73 U | 0.00E+00 | 1.9 | 4.85E-06 | 3.5 | 8.94E-06 | 0.73 U | 0.00E+00 | 4.8 | 2.10E-05 |
| 3/15/2012 | | 19262 | 6421 | 170 | 29 J,B | 1.02E-04 | 0.71 U | 0.00E+00 | 8.1 | 2.11E-05 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 3.7 | 9.45E-06 | 0.71 U | 0.00E+00 | 3.9 | 1.70E-05 |
| 4/19/2012 | | 20102 | 6701 | 160 | 31 | 1.03E-04 | 0.76 U | 0.00E+00 | 11 | 2.70E-05 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 4.6 | 1.11E-05 | 0.76 U | 0.00E+00 | 8.2 | 3.37E-05 |
| 5/16/2012 | | 20748 | 6916 | 160 | 28 | 9.27E-05 | 0.78 U | 0.00E+00 | 11 | 2.70E-05 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 5 | 1.20E-05 | 0.78 U | 0.00E+00 | 11 | 4.53E-05 |

# Table 4.2
## Cell 2 - Phase 1 SVE System Effluent Data
## December 2009 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

**CELL 2 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 2 Run Time (hr) | SVE Flow Rate (scfm) | Trichloroethene | | Vinyl chloride | | Methylene Chloride | | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | | Toluene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 12/11/2009 | | 178 | 59 | 150 | 330 | 1.01E-03 | 4400 | 6.40E-03 | 86 U | 0.00E+00 | 86 U | 0.00E+00 | 86 U | 0.00E+00 | 210 | 3.15E-04 | 86 U | 0.00E+00 | 200 | 4.29E-04 |
| 12/15/2009 | | 205 | 68 | 140 | 240 | 6.84E-04 | 3500 | 4.75E-03 | 110 U | 0.00E+00 | 110 U | 0.00E+00 | 110 U | 0.00E+00 | 370 | 5.18E-04 | 110 U | 0.00E+00 | 140 | 2.80E-04 |
| 12/29/2009 | | 539 | 180 | 140 | 240 | 6.84E-04 | 1500 | 2.03E-03 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 120 | 1.68E-04 | 100 U | 0.00E+00 | 100 U | 0.00E+00 |
| 1/13/2010 | | 903 | 301 | 150 | 130 | 3.97E-04 | 250 | 3.63E-04 | 35 U | 0.00E+00 | 35 U | 0.00E+00 | 35 U | 0.00E+00 | 170 | 2.55E-04 | 35 U | 0.00E+00 | 35 U | 0.00E+00 |
| 1/27/2010 | | 1224 | 408 | 150 | 150 | 4.58E-04 | 200 | 2.91E-04 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 120 | 1.80E-04 | 40 U | 0.00E+00 | 40 U | 0.00E+00 |
| 1/27/2010 | Dup | 1224 | 408 | 150 | 180 | 5.50E-04 | 240 | 3.49E-04 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 130 | 1.95E-04 | 40 U | 0.00E+00 | 40 U | 0.00E+00 |
| 2/24/2010 | | 1893 | 631 | 150 | 98 | 2.99E-04 | 73 | 1.06E-04 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 38 | 5.70E-05 | 22 U | 0.00E+00 | 22 U | 0.00E+00 |
| 3/15/2010 | | 2345 | 782 | 140 | 210 | 5.99E-04 | 62 | 8.41E-05 | 48 U | 0.00E+00 | 48 U | 0.00E+00 | 48 U | 0.00E+00 | 180 | 2.52E-04 | 48 U | 0.00E+00 | 48 U | 0.00E+00 |
| 4/14/2010 | | 2804 | 935 | 150 | 190 | 5.81E-04 | 69 | 1.00E-04 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 23 U | 0.00E+00 |
| 5/13/2010 | | 3495 | 1165 | 140 | 78 | 2.22E-04 | 42 | 5.70E-05 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 20 | 2.80E-05 | 11 U | 0.00E+00 | 11 U | 0.00E+00 |
| 6/21/2010 | | 4430 | 1477 | 108 | 88 | 1.94E-04 | 23 U | 0.00E+00 | 23 UJ | 0.00E+00 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 33 J | 3.56E-05 | 23 U | 0.00E+00 | 23 U | 0.00E+00 |
| 7/21/2010 | | 5058 | 1686 | 140 | 80 | 2.28E-04 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 |
| 8/23/2010 | | 5784 | 1928 | 0 | 150 | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 21 | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 |
| 9/23/2010 | | 6523 | 2174 | 145 | 74 | 2.19E-04 | 12 | 1.69E-05 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 |
| 10/22/2010 | | 7219 | 2406 | 140 | 42 | 1.20E-04 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 |
| 11/15/2010 | | 7794 | 2598 | 140 | 35 | 9.98E-05 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 |
| 12/22/2010 | | 8508 | 2955 | 150 | 27 | 8.25E-05 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 |
| 1/24/2011 | | 9302 | 3352 | 170 | 9 | 3.12E-05 | 2.7 U | 0.00E+00 | 2.7 U | 0.00E+00 | 2.7 U | 0.00E+00 | 2.7 U | 0.00E+00 | 2.7 U | 0.00E+00 | 2.7 U | 0.00E+00 | 3.1 | 7.53E-06 |
| 2/25/2011 | | 10071 | 3737 | 165 | 15 | 5.04E-05 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 16 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 |
| 3/18/2011 | | 10573 | 3988 | 165 | 7.3 | 2.45E-05 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 |
| 4/15/2011 | | 11241 | 4322 | 160 | 8.5 | 2.77E-05 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 4.1 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 |
| 5/19/2011 | | 12061 | 4732 | 160 | 11 | 3.59E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 8.1 | 1.57E-05 | 1.1 U | 0.00E+00 |
| 6/16/2011 | | 12722 | 5062 | 170 | 15 | 5.19E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.9 | 3.91E-06 | 1.2 U | 0.00E+00 |
| 7/15/2011 | | 13417 | 4472 | 170 | 21 | 7.27E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 5.3 | 1.09E-05 | 1.2 U | 0.00E+00 |
| 8/22/2011 | | 14324 | 4775 | 170 | 22 | 7.62E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.6 | 3.29E-06 | 1.2 U | 0.00E+00 |
| 9/15/2011 | | 14905 | 4968 | 170 | 18 | 6.23E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.6 | 9.47E-06 | 1.1 U | 0.00E+00 |
| 10/14/2011 | | 15598 | 5199 | 160 | 9.1 | 2.97E-05 | 0.82 U | 0.00E+00 | 0.82 U | 0.00E+00 | 0.82 U | 0.00E+00 | 0.82 U | 0.00E+00 | 3.3 U | 0.00E+00 | 0.82 U | 0.00E+00 | 0.82 U | 0.00E+00 |
| 11/21/2011 | | 16510 | 5503 | 170 | 5.1 | 1.77E-05 | 1.6 U | 0.00E+00 | 1.6 UJ | 0.00E+00 | 1.6 U | 0.00E+00 | 1.6 U | 0.00E+00 | 6.4 U | 0.00E+00 | 1.6 U | 0.00E+00 | 1.6 U | 0.00E+00 |
| 12/14/2011 | | 17010 | 5670 | 170 | 3.4 | 1.18E-05 | 0.76 U | 0.00E+00 | 7.6 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 3.0 U | 0.00E+00 | 0.78 | 1.61E-06 | 0.76 U | 0.00E+00 |
| 1/19/2012 | | 17923 | 5974 | 170 | 2.9 | 1.00E-05 | 0.74 U | 0.00E+00 | 1.9 | 4.25E-06 | 0.74 U | 0.00E+00 | 0.74 U | 0.00E+00 | 3.0 U | 0.00E+00 | 0.74 U | 0.00E+00 | 1 | 2.43E-06 |
| 2/15/2012 | | 18566 | 6189 | 170 | 2.2 | 7.62E-06 | 0.73 U | 0.00E+00 | 0.73 U | 0.00E+00 | 0.73 U | 0.00E+00 | 0.73 U | 0.00E+00 | 2.9 U | 0.00E+00 | 0.73 U | 0.00E+00 | 0.73 U | 0.00E+00 |
| 3/15/2012 | | 19262 | 6421 | 170 | 2.4 | 8.31E-06 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 2.8 U | 0.00E+00 | 0.71 U | 0.00E+00 | 1.6 | 3.89E-06 |
| 4/19/2012 | | 20102 | 6701 | 160 | 4.3 | 1.40E-05 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 3.0 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 |
| 5/16/2012 | | 20748 | 6916 | 160 | 5.3 | 1.73E-05 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 3.1 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 |

# Table 4.2
# Cell 2 - Phase 1 SVE System Effluent Data
# December 2009 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 2 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 2 Run Time (hr) | SVE Flow Rate (scfm) | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| 12/11/2009 | | 178 | 59 | 150 | 86 U | 0.00E+00 | 240 | 5.93E-04 | 110 | 2.72E-04 | 340 U | 0.00E+00 | 86 U | 0.00E+00 | 2.54E-01 | 15.05 |
| 12/15/2009 | | 205 | 68 | 140 | 110 U | 0.00E+00 | 230 | 5.30E-04 | 110 U | 0.00E+00 | 430 U | 0.00E+00 | 110 U | 0.00E+00 | 1.59E-01 | 16.48 |
| 12/29/2009 | | 539 | 180 | 140 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 420 U | 0.00E+00 | 100 U | 0.00E+00 | 1.19E-01 | 29.76 |
| 1/13/2010 | | 903 | 301 | 150 | 35 U | 0.00E+00 | 35 U | 0.00E+00 | 35 U | 0.00E+00 | 140 U | 0.00E+00 | 35 U | 0.00E+00 | 4.93E-02 | 35.75 |
| 1/27/2010 | | 1224 | 408 | 150 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 160 U | 0.00E+00 | 40 U | 0.00E+00 | 6.47E-02 | 42.68 |
| 1/27/2010 | Dup | 1224 | 408 | 150 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 160 U | 0.00E+00 | 40 U | 0.00E+00 | 7.06E-02 | 43.31 |
| 2/24/2010 | | 1893 | 631 | 150 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 87 U | 0.00E+00 | 22 U | 0.00E+00 | 3.93E-02 | 51.44 |
| 3/15/2010 | | 2345 | 782 | 140 | 48 U | 0.00E+00 | 48 U | 0.00E+00 | 48 U | 0.00E+00 | 190 U | 0.00E+00 | 48 U | 0.00E+00 | 8.60E-02 | 64.40 |
| 4/14/2010 | | 2804 | 935 | 150 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 92 U | 0.00E+00 | 23 U | 0.00E+00 | 4.24E-02 | 70.89 |
| 5/13/2010 | | 3495 | 1165 | 140 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 43 U | 0.00E+00 | 11 U | 0.00E+00 | 3.84E-02 | 79.74 |
| 6/21/2010 | | 4430 | 1477 | 108 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 23 U | 0.00E+00 | 92 U | 0.00E+00 | 23 U | 0.00E+00 | 2.30E-02 | 86.90 |
| 7/21/2010 | | 5058 | 1686 | 140 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 58 U | 0.00E+00 | 14 U | 0.00E+00 | 2.07E-02 | 91.24 |
| 8/23/2010 | | 5784 | 1928 | 0 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 81 U | 0.00E+00 | 20 U | 0.00E+00 | 0.00E+00 | 91.24 |
| 9/23/2010 | | 6523 | 2174 | 145 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 47 U | 0.00E+00 | 12 U | 0.00E+00 | 2.04E-02 | 96.27 |
| 10/22/2010 | | 7219 | 2406 | 140 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 10 U | 0.00E+00 | 42 U | 0.00E+00 | 10 U | 0.00E+00 | 1.11E-02 | 98.85 |
| 11/15/2010 | | 7794 | 2598 | 140 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 44 U | 0.00E+00 | 11 U | 0.00E+00 | 1.34E-02 | 101.41 |
| 12/22/2010 | | 8508 | 2955 | 150 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 56 U | 0.00E+00 | 14 U | 0.00E+00 | 1.84E-02 | 107.99 |
| 1/24/2011 | | 9302 | 3352 | 170 | 2.7 U | 0.00E+00 | 2.7 U | 0.00E+00 | 2.7 U | 0.00E+00 | 11 U | 0.00E+00 | 11 | 2.09E-05 | 6.06E-03 | 110.39 |
| 2/25/2011 | | 10071 | 3737 | 165 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 9.59E-03 | 114.08 |
| 3/18/2011 | | 10573 | 3988 | 165 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 15 | 2.23E-05 | 4.0 U | 0.00E+00 | 1.98E-03 | 114.57 |
| 4/15/2011 | | 11241 | 4322 | 160 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 8.2 J,B | 1.18E-05 | 4.1 U | 0.00E+00 | 1.48E-03 | 115.07 |
| 5/19/2011 | | 12061 | 4732 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 | 1.58E-05 | 4.5 U | 0.00E+00 | 5.87E-04 | 115.31 |
| 6/16/2011 | | 12722 | 5062 | 170 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 19 | 2.91E-05 | 4.7 U | 0.00E+00 | 7.49E-04 | 115.55 |
| 7/15/2011 | | 13417 | 4472 | 170 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 19 | 2.91E-05 | 4.6 U | 0.00E+00 | 6.30E-04 | 115.18 |
| 8/22/2011 | | 14324 | 4775 | 170 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 6.8 J,B | 1.04E-05 | 4.7 U | 0.00E+00 | 7.28E-04 | 115.40 |
| 9/15/2011 | | 14905 | 4968 | 170 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 | 1.68E-05 | 4.5 U | 0.00E+00 | 5.54E-04 | 115.51 |
| 10/14/2011 | | 15598 | 5199 | 160 | 0.82 U | 0.00E+00 | 0.82 U | 0.00E+00 | 0.82 U | 0.00E+00 | 5 | 7.20E-06 | 3.3 U | 0.00E+00 | 2.58E-04 | 115.57 |
| 11/21/2011 | | 16510 | 5503 | 170 | 1.6 U | 0.00E+00 | 1.6 U | 0.00E+00 | 1.6 U | 0.00E+00 | 6.4 UJ | 0.00E+00 | 6.4 U | 0.00E+00 | 1.77E-04 | 115.62 |
| 12/14/2011 | | 17010 | 5670 | 170 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 7.6 UJ | 0.00E+00 | 3.0 U | 0.00E+00 | 1.65E-04 | 115.65 |
| 1/19/2012 | | 17923 | 5974 | 170 | 0.79 | 2.21E-06 | 1.5 | 4.20E-06 | 1.1 | 3.08E-06 | 14 | 2.14E-05 | 3.0 U | 0.00E+00 | 1.80E-04 | 115.71 |
| 2/15/2012 | | 18566 | 6189 | 170 | 0.73 U | 0.00E+00 | 0.73 U | 0.00E+00 | 0.73 U | 0.00E+00 | 7.9 | 1.21E-05 | 2.9 U | 0.00E+00 | 1.83E-04 | 115.74 |
| 3/15/2012 | | 19262 | 6421 | 170 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 0.71 U | 0.00E+00 | 8.9 | 1.36E-05 | 2.8 U | 0.00E+00 | 1.75E-04 | 115.79 |
| 4/19/2012 | | 20102 | 6701 | 160 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 0.76 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 1.88E-04 | 115.84 |
| 5/16/2012 | | 20748 | 6916 | 160 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 0.78 U | 0.00E+00 | 3.1 U | 0.00E+00 | 3.1 U | 0.00E+00 | 1.94E-04 | 115.88 |

# Table 4.2
## Cell 2 - Phase 1 SVE System Effluent Data
## December 2009 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

**CELL 2 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 2 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | | Tetrachloroethene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 21282 | 7094 | 160 | 370 | 1.22E-03 | 1.3 U | 0.00E+00 | 160 | 3.93E-04 | 1.3 U | 0.00E+00 | 4.5 | 1.08E-05 | 11 | 2.65E-05 | 1.3 U | 0.00E+00 | 16 | 6.58E-05 |
| 9/17/2012 | | 21952 | 7317 | 160 | 180 | 5.96E-04 | 1.1 U | 0.00E+00 | 36 | 8.84E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 10 | 2.40E-05 | 1.1 U | 0.00E+00 | 20 | 8.23E-05 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 21959 | 7320 | 160 | 430 | 1.42E-03 | 1.1 U | 0.00E+00 | 140 | 3.44E-04 | 1.1 U | 0.00E+00 | 12 | 2.89E-05 | 13 | 3.13E-05 | 1.1 U | 0.00E+00 | 41 | 1.69E-04 |
| 12/14/2012 | | 22554 | 7518 | 170 | 610 | 2.14E-03 | 1.9 U | 0.00E+00 | 11 | 2.87E-05 | 1.9 U | 0.00E+00 | 12 | 3.07E-05 | 4 | 1.02E-05 | 1.9 U | 0.00E+00 | 5.3 | 2.32E-05 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 22556 | 7518 | 160 | 1.9 | 6.29E-06 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 4/11/2013 | | 23581 | 7723 | 160 | 140 | 4.63E-04 | 1.2 U | 0.00E+00 | 10 | 2.45E-05 | 1.2 U | 0.00E+00 | 4 | 9.62E-06 | 3.3 | 7.94E-06 | 1.2 U | 0.00E+00 | 5.4 | 2.22E-05 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 23583 | 7724 | 160 | 210 | 6.95E-04 | 1.1 U | 0.00E+00 | 62 | 1.52E-04 | 1.2 U | 0.00E+00 | 3.9 | 9.38E-06 | 5.4 | 1.30E-05 | 1.1 U | 0.00E+00 | 6.4 | 2.63E-05 |
| 7/15/2013 | | 25160 | 8039 | 160 | 160 | 5.29E-04 | 1.1 U | 0.00E+00 | 20 | 4.91E-05 | 1.1 U | 0.00E+00 | 3.7 | 8.90E-06 | 3.7 | 8.90E-06 | 1.1 U | 0.00E+00 | 21 | 8.64E-05 |
| 7/15/2013 | Dup | 25160 | 8039 | 160 | 160 | 5.29E-04 | 1.2 U | 0.00E+00 | 20 | 4.91E-05 | 1.2 U | 0.00E+00 | 3.2 | 7.70E-06 | 3.5 | 8.42E-06 | 1.2 U | 0.00E+00 | 17 | 6.99E-05 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 25162 | 8040 | 160 | 380 | 1.26E-03 | 2.0 U | 0.00E+00 | 110 | 2.70E-04 | 2.0 U | 0.00E+00 | 3.4 | 8.18E-06 | 7 | 1.68E-05 | 2.0 U | 0.00E+00 | 49 | 2.02E-04 |
| 11/18/2013 | | 26825 | 8372 | 160 | 44 | 1.46E-04 | 1.1 U | 0.00E+00 | 11 | 2.70E-05 | 1.1 U | 0.00E+00 | 1.3 | 3.13E-06 | 2.3 | 5.53E-06 | 1.1 U | 0.00E+00 | 14 | 5.76E-05 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 28218 | 8651 | 160 | 160 | 5.29E-04 | 1.2 U | 0.00E+00 | 55 | 1.35E-04 | 1.2 U | 0.00E+00 | 3.3 | 7.94E-06 | 2.9 | 6.97E-06 | 1.2 U | 0.00E+00 | 7.2 | 2.96E-05 |
| 3/14/2014 | | 29432 | 8894 | 160 | 16 | 5.29E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.9 | 4.57E-06 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 3/14/2014 | Dup | 29432 | 8894 | 160 | 19 | 6.29E-05 | 1.2 U | 0.00E+00 | 1.6 | 3.93E-06 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.8 | 4.33E-06 | 1.2 U | 0.00E+00 | 1.7 | 6.99E-06 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 29914 | 8990 | 160 | 240 | 7.94E-04 | 1.1 U | 0.00E+00 | 99 | 2.43E-04 | 1.1 U | 0.00E+00 | 4.8 | 1.15E-05 | 7.8 | 1.88E-05 | 1.1 U | 0.00E+00 | 14 | 5.76E-05 |
| 7/23/2014 | | 31567 | 9321 | 160 | 89 | 2.95E-04 | 1.2 U | 0.00E+00 | 20 | 4.91E-05 | 1.2 U | 0.00E+00 | 1.8 | 4.33E-06 | 3.7 | 8.90E-06 | 1.2 U | 0.00E+00 | 11 | 4.52E-05 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 32432 | 9494 | 160 | 310 | 1.03E-03 | 2.1 U | 0.00E+00 | 120 | 2.95E-04 | 2.1 U | 0.00E+00 | 3.9 | 9.38E-06 | 6 | 1.44E-05 | 2.1 U | 0.00E+00 | 19 | 7.82E-05 |
| 11/14/2014 | | 33847 | 9777 | 160 | 42 | 1.39E-04 | 1.1 U | 0.00E+00 | 7.8 | 1.91E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.6 | 3.85E-06 | 1.1 U | 0.00E+00 | 11 | 4.52E-05 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 33855 | 9778 | 160 | 210 | 6.95E-04 | 1.2 U | 0.00E+00 | 69 | 1.69E-04 | 1.2 U | 0.00E+00 | 3.7 | 8.90E-06 | 3.4 | 8.18E-06 | 1.2 U | 0.00E+00 | 8.2 | 3.37E-05 |
| 3/13/2015 | | 35189 | 10045 | 160 | 18 | 5.96E-05 | 1.3 U | 0.00E+00 | 5.4 | 1.33E-05 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 3.5 | 1.44E-05 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 35194 | 10046 | 160 | 240 | 7.94E-04 | 1.2 U | 0.00E+00 | 76 | 1.87E-04 | 1.2 U | 0.00E+00 | 3.0 | 7.21E-06 | 3.5 | 8.42E-06 | 1.2 U | 0.00E+00 | 8.2 | 3.37E-05 |
| 7/16/2015 | | 36677 | 10343 | 160 | 64 | 2.12E-04 | 1.2 U | 0.00E+00 | 17 | 4.17E-05 | 1.2 U | 0.00E+00 | 1.7 | 4.09E-06 | 4.2 | 1.01E-05 | 1.2 U | 0.00E+00 | 8.6 | 3.54E-05 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 36680 | 10343 | 160 | 450 | 1.49E-03 | 1.1 U | 0.00E+00 | 210 | 5.16E-04 | 1.1 U | 0.00E+00 | 3.4 | 8.18E-06 | 9.6 | 2.31E-05 | 1.1 U | 0.00E+00 | 28 | 1.15E-04 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | molecular weight (values from the U.S. National Library of Medicine) |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

# Table 4.2
# Cell 2 - Phase 1 SVE System Effluent Data
# December 2009 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 2 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 2 Run Time (hr) | SVE Flow Rate (scfm) | Trichloroethene | | Vinyl chloride | | Methylene Chloride | | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | | Toluene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 21282 | 7094 | 160 | 12 | 3.91E-05 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 5.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 |
| 9/17/2012 | | 21952 | 7317 | 160 | 29 | 9.45E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.3 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 21959 | 7320 | 160 | 26 | 8.47E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 12/14/2012 | | 22554 | 7518 | 170 | 17 | 5.89E-05 | 1.9 U | 0.00E+00 | 19 U | 0.00E+00 | 1.9 U | 0.00E+00 | 1.9 U | 0.00E+00 | 7.4 U | 0.00E+00 | 1.9 U | 0.00E+00 | 1.9 U | 0.00E+00 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 22556 | 7518 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 5 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 4/11/2013 | | 23581 | 7723 | 160 | 8 | 2.61E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 23583 | 7724 | 160 | 9.5 | 3.10E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 18 | 2.88E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 7/15/2013 | | 25160 | 8039 | 160 | 24 | 7.82E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 7/15/2013 | Dup | 25160 | 8039 | 160 | 24 | 7.82E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 25162 | 8040 | 160 | 31 | 1.01E-04 | 2.0 U | 0.00E+00 | 20 U | 0.00E+00 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 8.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 |
| 11/18/2013 | | 26825 | 8372 | 160 | 8.4 | 2.74E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 28218 | 8651 | 160 | 7.2 | 2.35E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.9 | 1.12E-05 |
| 3/14/2014 | | 29432 | 8894 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.9 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 3/14/2014 | Dup | 29432 | 8894 | 160 | 1.5 | 4.89E-06 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 5.0 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 29914 | 8990 | 160 | 6.6 | 2.15E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 16 | 2.56E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 7/23/2014 | | 31567 | 9321 | 160 | 19 | 6.19E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 32432 | 9494 | 160 | 26 | 8.47E-05 | 2.1 U | 0.00E+00 | 21 U | 0.00E+00 | 2.1 U | 0.00E+00 | 2.1 U | 0.00E+00 | 8.3 U | 0.00E+00 | 3.5 | 6.78E-06 | 2.1 U | 0.00E+00 |
| 11/14/2014 | | 33847 | 9777 | 160 | 7.3 | 2.38E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 33855 | 9778 | 160 | 9.3 | 3.03E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 3/13/2015 | | 35189 | 10045 | 160 | 3.0 | 9.78E-06 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 5.0 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 35194 | 10046 | 160 | 5.4 | 1.76E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 7.0 | 1.12E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 7/16/2015 | | 36677 | 10343 | 160 | 18.0 | 5.87E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 36680 | 10343 | 160 | 30 | 9.78E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |

**Notes:**

*Mass removal rate = (flow rate in scfm)(concentration in* ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | molecular weight (values from the U.S. National Library of Medicine) |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

# Table 4.2
# Cell 2 - Phase 1 SVE System Effluent Data
# December 2009 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 2 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 2 Run Time (hr) | SVE Flow Rate (scfm) | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 21282 | 7094 | 160 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 21 | 3.03E-05 | 5.3 U | 0.00E+00 | 1.79E-03 | 116.20 |
| 9/17/2012 | | 21952 | 7317 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.3 U | 0.00E+00 | 8.85E-04 | 116.40 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 21959 | 7320 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 2.08E-03 | 116.40 |
| 12/14/2012 | | 22554 | 7518 | 170 | 1.9 U | 0.00E+00 | 1.9 U | 0.00E+00 | 1.9 U | 0.00E+00 | 19 U | 0.00E+00 | 7.4 U | 0.00E+00 | 2.30E-03 | 116.86 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 22556 | 7518 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 5 U | 0.00E+00 | 6.29E-06 | 116.86 |
| 4/11/2013 | | 23581 | 7723 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 5.54E-04 | 116.97 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 23583 | 7724 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 9.56E-04 | 116.97 |
| 7/15/2013 | | 25160 | 8039 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.6 U | 0.00E+00 | 7.61E-04 | 117.21 |
| 7/15/2013 | Dup | 25160 | 8039 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 7.43E-04 | - |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 25162 | 8040 | 160 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 20 U | 0.00E+00 | 8.0 U | 0.00E+00 | 1.86E-03 | 117.21 |
| 11/18/2013 | | 26825 | 8372 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.6 U | 0.00E+00 | 2.66E-04 | 117.30 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 28218 | 8651 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 7.44E-04 | 117.51 |
| 3/14/2014 | | 29432 | 8894 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 5.75E-05 | 117.52 |
| 3/14/2014 | Dup | 29432 | 8894 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 5.0 U | 0.00E+00 | 8.30E-05 | - |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 29914 | 8990 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 25 | 3.60E-05 | 11 U | 0.00E+00 | 1.21E-03 | 117.64 |
| 7/23/2014 | | 31567 | 9321 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.6 U | 0.00E+00 | 4.64E-04 | 117.79 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 32432 | 9494 | 160 | 2.1 U | 0.00E+00 | 2.1 U | 0.00E+00 | 2.1 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 1.51E-03 | 118.05 |
| 11/14/2014 | | 33847 | 9777 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.6 U | 0.00E+00 | 2.31E-04 | 118.12 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 33855 | 9778 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.8 U | 0.00E+00 | 9.45E-04 | 118.12 |
| 3/13/2015 | | 35189 | 10045 | 160 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 | 5.0 U | 0.00E+00 | 9.70E-05 | 118.15 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 35194 | 10046 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.06E-03 | 118.15 |
| 7/16/2015 | | 36677 | 10343 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.6 U | 0.00E+00 | 3.62E-04 | 118.25 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 36680 | 10343 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 2.25E-03 | 118.26 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | molecular weight (values from the U.S. National Library of Medicine) |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

# Table 4.3
## Cell 3 - Phase 1 SVE System Effluent Data
## December 2009 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

**CELL 3 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 3 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | | Tetrachloroethene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 12/14/2009 | | 181 | 60 | 140 | 94000 | 2.72E-01 | 270 U | 0.00E+00 | 1100 | 2.36E-03 | 270 U | 0.00E+00 | 2300 | 4.84E-03 | 8100 | 1.70E-02 | 270 U | 0.00E+00 | 750 | 2.70E-03 |
| 12/16/2009 | | 229 | 76 | 150 | 46000 | 1.43E-01 | 110 U | 0.00E+00 | 710 | 1.63E-03 | 110 U | 0.00E+00 | 1100 | 2.48E-03 | 5500 | 1.24E-02 | 110 U | 0.00E+00 | 400 | 1.54E-03 |
| 1/5/2010 | | 707 | 236 | 140 | 42000 | 1.22E-01 | 150 U | 0.00E+00 | 290 | 6.23E-04 | 150 U | 0.00E+00 | 980 | 2.06E-03 | 1500 | 3.16E-03 | 150 U | 0.00E+00 | 240 | 8.64E-04 |
| 1/21/2010 | | 1084 | 361 | 150 | 15000 | 4.65E-02 | 42 U | 0.00E+00 | 260 | 5.98E-04 | 42 U | 0.00E+00 | 280 | 6.31E-04 | 1600 | 3.61E-03 | 42 U | 0.00E+00 | 170 | 6.56E-04 |
| 1/21/2010 | Dup | 1084 | 361 | 150 | 16000 | 4.96E-02 | 43 U | 0.00E+00 | 280 | 6.44E-04 | 43 U | 0.00E+00 | 290 | 6.54E-04 | 1700 | 3.83E-03 | 43 U | 0.00E+00 | 170 | 6.56E-04 |
| 2/24/2010 | | 1893 | 631 | 150 | 11000 | 3.41E-02 | 28 U | 0.00E+00 | 240 | 5.52E-04 | 28 U | 0.00E+00 | 280 | 6.31E-04 | 1100 | 2.48E-03 | 28 U | 0.00E+00 | 140 | 5.40E-04 |
| 3/15/2010 | | 2345 | 782 | 140 | 20000 | 5.79E-02 | 21 U | 0.00E+00 | 400 | 8.59E-04 | 21 U | 0.00E+00 | 510 | 1.07E-03 | 1900 | 4.00E-03 | 21 U | 0.00E+00 | 280 | 1.01E-03 |
| 4/14/2010 | | 2804 | 935 | 150 | 31000 | 9.62E-02 | 100 U | 0.00E+00 | 380 | 8.75E-04 | 100 U | 0.00E+00 | 1100 | 2.48E-03 | 1200 | 2.71E-03 | 100 U | 0.00E+00 | 820 | 3.16E-03 |
| 5/13/2010 | | 3495 | 1165 | 140 | 8300 | 2.40E-02 | 12 U | 0.00E+00 | 220 | 4.73E-04 | 12 U | 0.00E+00 | 190 | 4.00E-04 | 960 | 2.02E-03 | 12 U | 0.00E+00 | 200 | 7.20E-04 |
| 6/21/2010 | | 4430 | 1477 | 108 | 7200 | 1.61E-02 | 21 U | 0.00E+00 | 220 | 3.65E-04 | 21 U | 0.00E+00 | 150 | 2.43E-04 | 660 | 1.07E-03 | 21 U | 0.00E+00 | 160 | 4.44E-04 |
| 7/21/2010 | | 5058 | 1686 | 140 | 6100 | 1.77E-02 | 20 U | 0.00E+00 | 120 | 2.58E-04 | 20 U | 0.00E+00 | 130 | 2.74E-04 | 460 | 9.68E-04 | 20 U | 0.00E+00 | 120 | 4.32E-04 |
| 8/23/2010 | | 5784 | 1928 | 0 | 8000 | 0.00E+00 | 20 U | 0.00E+00 | 200 | 0.00E+00 | 20 U | 0.00E+00 | 120 | 0.00E+00 | 490 | 0.00E+00 | 20 U | 0.00E+00 | 220 | 0.00E+00 |
| 9/23/2010 | | 6523 | 2174 | 145 | 6600 | 1.98E-02 | 11 U | 0.00E+00 | 140 | 3.11E-04 | 11 U | 0.00E+00 | 140 | 3.05E-04 | 440 | 9.59E-04 | 11 U | 0.00E+00 | 160 | 5.96E-04 |
| 10/22/2010 | | 7219 | 2406 | 140 | 3700 | 1.07E-02 | 14 U | 0.00E+00 | 91 | 1.95E-04 | 14 U | 0.00E+00 | 66 | 1.39E-04 | 210 | 4.42E-04 | 14 U | 0.00E+00 | 110 | 3.96E-04 |
| 11/15/2010 | | 7794 | 2598 | 140 | 4600 | 1.33E-02 | 15 U | 0.00E+00 | 120 | 2.58E-04 | 15 U | 0.00E+00 | 64 | 1.35E-04 | 170 | 3.58E-04 | 15 U | 0.00E+00 | 88 | 3.17E-04 |
| 12/22/2010 | | 8508 | 2777 | 150 | 5600 | 1.74E-02 | 20 U | 0.00E+00 | 150 | 3.45E-04 | 20 U | 0.00E+00 | 120 | 2.71E-04 | 330 | 7.44E-04 | 20 U | 0.00E+00 | 56 | 2.16E-04 |
| 1/24/2011 | | 9302 | 2975 | 170 | 2200 | 7.74E-03 | 8.3 U | 0.00E+00 | 130 | 3.39E-04 | 8.3 U | 0.00E+00 | 27 | 6.90E-05 | 200 | 5.11E-04 | 8.3 U | 0.00E+00 | 35 | 1.53E-04 |
| 2/25/2011 | | 10071 | 3167 | 165 | 1300 | 4.44E-03 | 4.0 U | 0.00E+00 | 45 | 1.14E-04 | 4.0 U | 0.00E+00 | 25 | 6.20E-05 | 72 | 1.79E-04 | 4.0 U | 0.00E+00 | 28 | 1.19E-04 |
| 3/18/2011 | | 10573 | 3293 | 165 | 360 | 1.23E-03 | 1.3 U | 0.00E+00 | 24 | 6.08E-05 | 1.3 U | 0.00E+00 | 5.4 | 1.34E-05 | 35 | 8.68E-05 | 1.3 U | 0.00E+00 | 13 | 5.51E-05 |
| 4/15/2011 | | 11241 | 3460 | 160 | 160 J,B | 5.29E-04 | 1.0 U | 0.00E+00 | 17 | 4.17E-05 | 1.0 U | 0.00E+00 | 2.8 | 6.73E-06 | 28 | 6.73E-05 | 1.0 U | 0.00E+00 | 15 | 6.17E-05 |
| 5/19/2011 | | 12061 | 3665 | 160 | 64 | 2.12E-04 | 1.2 U | 0.00E+00 | 10 | 2.45E-05 | 1.2 U | 0.00E+00 | 1.4 | 3.37E-06 | 12 | 2.89E-05 | 1.2 U | 0.00E+00 | 9.6 | 3.95E-05 |
| 6/16/2011 | | 12722 | 3830 | 170 | 160 | 5.63E-04 | 1.2 U | 0.00E+00 | 280 | 7.30E-04 | 1.2 U | 0.00E+00 | 2.5 | 6.39E-06 | 34 | 8.69E-05 | 1.2 U | 0.00E+00 | 61 | 2.67E-04 |
| 7/15/2011 | | 13417 | 4472 | 170 | 190 | 6.68E-04 | 1.2 U | 0.00E+00 | 8.3 | 2.16E-05 | 1.2 U | 0.00E+00 | 2.8 | 7.15E-06 | 23 | 5.88E-05 | 1.2 U | 0.00E+00 | 22 | 9.62E-05 |
| 8/22/2011 | | 14324 | 4775 | 170 | 1600 | 5.63E-03 | 4.3 U | 0.00E+00 | 19 | 4.96E-05 | 4.3 U | 0.00E+00 | 21 | 5.37E-05 | 130 | 3.32E-04 | 4.3 U | 0.00E+00 | 39 | 1.70E-04 |
| 9/15/2011 | | 14905 | 4968 | 170 | 800 | 2.81E-03 | 3.7 U | 0.00E+00 | 9.5 | 2.48E-05 | 3.7 U | 0.00E+00 | 12 | 3.07E-05 | 62 | 1.58E-04 | 3.7 U | 0.00E+00 | 24 | 1.05E-04 |
| 10/14/2011 | | 15598 | 5199 | 160 | 750 | 2.48E-03 | 3.0 U | 0.00E+00 | 10 | 2.45E-05 | 3.0 U | 0.00E+00 | 13 | 3.13E-05 | 37 | 8.90E-05 | 3.0 U | 0.00E+00 | 15 | 6.17E-05 |
| 11/21/2011 | | 16510 | 5503 | 170 | 380 | 1.34E-03 | 1.4 U | 0.00E+00 | 6.6 | 1.72E-05 | 1.4 U | 0.00E+00 | 5.6 | 1.43E-05 | 24 | 6.13E-05 | 1.4 U | 0.00E+00 | 7.9 | 3.45E-05 |
| 12/14/2011 | | 17010 | 5670 | 170 | 830 | 2.92E-03 | 3.5 U | 0.00E+00 | 8.7 | 2.27E-05 | 3.5 U | 0.00E+00 | 70 | 1.79E-04 | 33 | 8.43E-05 | 3.5 U | 0.00E+00 | 6.9 | 3.02E-05 |
| 1/19/2012 | | 17923 | 5974 | 170 | 800 | 2.81E-03 | 3.0 U | 0.00E+00 | 12 | 3.13E-05 | 3.0 U | 0.00E+00 | 13 | 3.32E-05 | 33 | 8.43E-05 | 3.0 U | 0.00E+00 | 6.4 | 2.80E-05 |
| 2/15/2012 | | 18566 | 6189 | 170 | 1600 | 5.63E-03 | 4.5 U | 0.00E+00 | 22 | 5.74E-05 | 4.5 U | 0.00E+00 | 260 | 6.64E-04 | 95 | 2.43E-04 | 4.5 U | 0.00E+00 | 6.7 | 2.93E-05 |
| 3/15/2012 | | 19262 | 6421 | 170 | 1600 | 5.63E-03 | 5.1 U | 0.00E+00 | 28 | 7.30E-05 | 5.1 U | 0.00E+00 | 22 | 5.62E-05 | 59 | 1.51E-04 | 5.1 U | 0.00E+00 | 7.3 | 3.19E-05 |
| 4/19/2012 | | 20102 | 6701 | 160 | 580 | 1.92E-03 | 1.8 U | 0.00E+00 | 14 | 3.44E-05 | 1.8 U | 0.00E+00 | 5.8 | 1.39E-05 | 23 | 5.53E-05 | 1.8 U | 0.00E+00 | 11 | 4.53E-05 |
| 5/16/2012 | | 20748 | 6916 | 160 | 300 | 9.93E-04 | 0.80 U | 0.00E+00 | 9.3 | 2.28E-05 | 0.80 U | 0.00E+00 | 3.7 | 8.90E-06 | 21 | 5.05E-05 | 0.80 U | 0.00E+00 | 7.5 | 3.09E-05 |

See notes on last page.

# Table 4.3
# Cell 3 - Phase 1 SVE System Effluent Data
# December 2009 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 3 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 3 Run Time (hr) | SVE Flow Rate (scfm) | Trichloroethene | | Vinyl chloride | | Methylene Chloride | | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | | Toluene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 12/14/2009 | | 181 | 60 | 140 | 1000 | 2.85E-03 | 270 U | 0.00E+00 | 270 U | 0.00E+00 | 270 U | 0.00E+00 | 270 U | 0.00E+00 | 270 U | 0.00E+00 | 270 U | 0.00E+00 | 270 U | 0.00E+00 |
| 12/16/2009 | | 229 | 76 | 150 | 550 | 1.68E-03 | 110 U | 0.00E+00 | 110 U | 0.00E+00 | 110 U | 0.00E+00 | 110 U | 0.00E+00 | 110 U | 0.00E+00 | 110 U | 0.00E+00 | 110 U | 0.00E+00 |
| 1/5/2010 | | 707 | 236 | 140 | 250 | 7.13E-04 | 150 U | 0.00E+00 | 220 | 4.06E-04 | 150 U | 0.00E+00 | 150 U | 0.00E+00 | 150 U | 0.00E+00 | 150 U | 0.00E+00 | 150 U | 0.00E+00 |
| 1/21/2010 | | 1084 | 361 | 150 | 140 | 4.28E-04 | 42 U | 0.00E+00 | 42 U | 0.00E+00 | 42 U | 0.00E+00 | 42 U | 0.00E+00 | 42 U | 0.00E+00 | 42 U | 0.00E+00 | 42 U | 0.00E+00 |
| 1/21/2010 | Dup | 1084 | 361 | 150 | 140 | 4.28E-04 | 43 U | 0.00E+00 | 43 U | 0.00E+00 | 43 U | 0.00E+00 | 43 U | 0.00E+00 | 43 U | 0.00E+00 | 43 U | 0.00E+00 | 43 U | 0.00E+00 |
| 2/24/2010 | | 1893 | 631 | 150 | 66 | 2.02E-04 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 |
| 3/15/2010 | | 2345 | 782 | 140 | 120 | 3.42E-04 | 51 | 6.92E-05 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 |
| 4/14/2010 | | 2804 | 935 | 150 | 190 | 5.81E-04 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 |
| 5/13/2010 | | 3495 | 1165 | 140 | 43 | 1.23E-04 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 |
| 6/21/2010 | | 4430 | 1477 | 108 | 55 | 1.21E-04 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 |
| 7/21/2010 | | 5058 | 1686 | 140 | 44 | 1.25E-04 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 |
| 8/23/2010 | | 5784 | 1928 | 0 | 66 | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 |
| 9/23/2010 | | 6523 | 2174 | 145 | 50 | 1.48E-04 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 |
| 10/22/2010 | | 7219 | 2406 | 140 | 31 | 8.84E-05 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 |
| 11/15/2010 | | 7794 | 2598 | 140 | 29 | 8.27E-05 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 |
| 12/22/2010 | | 8508 | 2777 | 150 | 21 | 6.42E-05 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 |
| 1/24/2011 | | 9302 | 2975 | 170 | 17 | 5.89E-05 | 8.3 U | 0.00E+00 | 8.3 U | 0.00E+00 | 8.3 U | 0.00E+00 | 8.3 U | 0.00E+00 | 8.3 U | 0.00E+00 | 8.3 U | 0.00E+00 | 8.3 U | 0.00E+00 |
| 2/25/2011 | | 10071 | 3167 | 165 | 16 | 5.38E-05 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 16 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 |
| 3/18/2011 | | 10573 | 3293 | 165 | 5.9 | 1.98E-05 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 5.4 U | 0.00E+00 | 1.9 | 3.80E-06 | 1.3 U | 0.00E+00 |
| 4/15/2011 | | 11241 | 3460 | 160 | 7.7 | 2.51E-05 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 4.1 U | 0.00E+00 | 2.6 | 5.04E-06 | 1.0 U | 0.00E+00 |
| 5/19/2011 | | 12061 | 3665 | 160 | 6.9 | 2.25E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.9 | 3.68E-06 | 1.2 U | 0.00E+00 |
| 6/16/2011 | | 12722 | 3830 | 170 | 9.8 | 3.39E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.6 | 3.29E-06 | 1.2 U | 0.00E+00 |
| 7/15/2011 | | 13417 | 4472 | 170 | 9.3 | 3.22E-05 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 8/22/2011 | | 14324 | 4775 | 170 | 21 | 7.27E-05 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 17 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 |
| 9/15/2011 | | 14905 | 4968 | 170 | 14 | 4.85E-05 | 3.7 U | 0.00E+00 | 3.7 U | 0.00E+00 | 3.7 U | 0.00E+00 | 3.7 U | 0.00E+00 | 15 U | 0.00E+00 | 4.1 | 8.44E-06 | 3.7 U | 0.00E+00 |
| 10/14/2011 | | 15598 | 5199 | 160 | 13 | 4.24E-05 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 12 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 |
| 11/21/2011 | | 16510 | 5503 | 170 | 9.2 | 3.19E-05 | 1.4 U | 0.00E+00 | 1.4 UJ | 0.00E+00 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 5.5 U | 0.00E+00 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 |
| 12/14/2011 | | 17010 | 5670 | 170 | 22 | 7.62E-05 | 3.5 U | 0.00E+00 | 35 U | 0.00E+00 | 3.5 U | 0.00E+00 | 3.5 U | 0.00E+00 | 14 U | 0.00E+00 | 3.5 U | 0.00E+00 | 3.5 U | 0.00E+00 |
| 1/19/2012 | | 17923 | 5974 | 170 | 12 | 4.16E-05 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 12 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 |
| 2/15/2012 | | 18566 | 6189 | 170 | 24 | 8.31E-05 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 18 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 |
| 3/15/2012 | | 19262 | 6421 | 170 | 30 | 1.04E-04 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 | 20 U | 0.00E+00 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 |
| 4/19/2012 | | 20102 | 6701 | 160 | 19 | 6.19E-05 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 7.3 U | 0.00E+00 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 |
| 5/16/2012 | | 20748 | 6916 | 160 | 18 | 5.87E-05 | 0.80 U | 0.00E+00 | 0.80 U | 0.00E+00 | 0.80 U | 0.00E+00 | 0.80 U | 0.00E+00 | 3.2 U | 0.00E+00 | 0.80 U | 0.00E+00 | 0.80 U | 0.00E+00 |

See notes on last page.

# Table 4.3
# Cell 3 - Phase 1 SVE System Effluent Data
# December 2009 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

CELL 3 SVE EFFLUENT

| Date | Sample Type | SVE Run Time (hr) | Cell 3 Run Time (hr) | SVE Flow Rate (scfm) | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| 12/14/2009 | | 181 | 60 | 140 | 270 U | 0.00E+00 | 1600 | 3.69E-03 | 510 | 1.18E-03 | 1100 U | 0.00E+00 | 270 U | 0.00E+00 | 3.07E-01 | 18.51 |
| 12/16/2009 | | 229 | 76 | 150 | 110 U | 0.00E+00 | 540 | 1.33E-03 | 240 | 5.93E-04 | 590 | 7.97E-04 | 110 U | 0.00E+00 | 1.65E-01 | 21.16 |
| 1/5/2010 | | 707 | 236 | 140 | 150 U | 0.00E+00 | 150 U | 0.00E+00 | 150 U | 0.00E+00 | 590 U | 0.00E+00 | 150 U | 0.00E+00 | 1.29E-01 | 41.78 |
| 1/21/2010 | | 1084 | 361 | 150 | 42 U | 0.00E+00 | 42 U | 0.00E+00 | 42 U | 0.00E+00 | 170 U | 0.00E+00 | 42 U | 0.00E+00 | 5.25E-02 | 48.37 |
| 1/21/2010 | Dup | 1084 | 361 | 150 | 43 U | 0.00E+00 | 43 U | 0.00E+00 | 43 U | 0.00E+00 | 170 U | 0.00E+00 | 43 U | 0.00E+00 | 5.59E-02 | 48.80 |
| 2/24/2010 | | 1893 | 631 | 150 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 110 U | 0.00E+00 | 28 U | 0.00E+00 | 3.85E-02 | 58.76 |
| 3/15/2010 | | 2345 | 782 | 140 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 83 U | 0.00E+00 | 21 U | 0.00E+00 | 6.53E-02 | 68.60 |
| 4/14/2010 | | 2804 | 935 | 150 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 420 U | 0.00E+00 | 100 U | 0.00E+00 | 1.06E-01 | 84.81 |
| 5/13/2010 | | 3495 | 1165 | 140 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 48 U | 0.00E+00 | 12 U | 0.00E+00 | 2.78E-02 | 91.21 |
| 6/21/2010 | | 4430 | 1477 | 108 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 21 U | 0.00E+00 | 83 U | 0.00E+00 | 21 U | 0.00E+00 | 1.83E-02 | 96.92 |
| 7/21/2010 | | 5058 | 1686 | 140 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 79 U | 0.00E+00 | 20 U | 0.00E+00 | 1.97E-02 | 101.05 |
| 8/23/2010 | | 5784 | 1928 | 0 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 81 U | 0.00E+00 | 20 U | 0.00E+00 | 0.00E+00 | 101.05 |
| 9/23/2010 | | 6523 | 2174 | 145 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 43 U | 0.00E+00 | 11 U | 0.00E+00 | 2.21E-02 | 106.49 |
| 10/22/2010 | | 7219 | 2406 | 140 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 14 U | 0.00E+00 | 55 U | 0.00E+00 | 14 U | 0.00E+00 | 1.20E-02 | 109.27 |
| 11/15/2010 | | 7794 | 2598 | 140 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 59 U | 0.00E+00 | 15 U | 0.00E+00 | 1.45E-02 | 112.05 |
| 12/22/2010 | | 8508 | 2777 | 150 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 82 U | 0.00E+00 | 20 U | 0.00E+00 | 1.90E-02 | 115.44 |
| 1/24/2011 | | 9302 | 2975 | 170 | 8.3 U | 0.00E+00 | 8.3 U | 0.00E+00 | 8.3 U | 0.00E+00 | 33 U | 0.00E+00 | 8.3 U | 0.00E+00 | 8.87E-03 | 117.20 |
| 2/25/2011 | | 10071 | 3167 | 165 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 4.0 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 4.96E-03 | 118.15 |
| 3/18/2011 | | 10573 | 3293 | 165 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 10 | 1.49E-05 | 5.4 U | 0.00E+00 | 1.48E-03 | 118.34 |
| 4/15/2011 | | 11241 | 3460 | 160 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 1.0 U | 0.00E+00 | 7.3 J,B | 1.05E-05 | 4.1 U | 0.00E+00 | 7.48E-04 | 118.47 |
| 5/19/2011 | | 12061 | 3665 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.8 U | 0.00E+00 | 4.8 U | 0.00E+00 | 3.34E-04 | 118.53 |
| 6/16/2011 | | 12722 | 3830 | 170 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 6.8 | 1.04E-05 | 4.7 U | 0.00E+00 | 1.70E-03 | 118.81 |
| 7/15/2011 | | 13417 | 4472 | 170 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 7.7 | 1.18E-05 | 4.8 U | 0.00E+00 | 8.96E-04 | 119.39 |
| 8/22/2011 | | 14324 | 4775 | 170 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 4.3 U | 0.00E+00 | 17 U | 0.00E+00 | 17 U | 0.00E+00 | 6.30E-03 | 121.30 |
| 9/15/2011 | | 14905 | 4968 | 170 | 3.7 U | 0.00E+00 | 3.7 U | 0.00E+00 | 3.7 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 3.19E-03 | 121.91 |
| 10/14/2011 | | 15598 | 5199 | 160 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 2.73E-03 | 122.54 |
| 11/21/2011 | | 16510 | 5503 | 170 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 5.5 UJ | 0.00E+00 | 5.5 U | 0.00E+00 | 1.50E-03 | 123.00 |
| 12/14/2011 | | 17010 | 5670 | 170 | 3.5 U | 0.00E+00 | 3.5 U | 0.00E+00 | 3.5 U | 0.00E+00 | 380 J | 5.82E-04 | 58 | 1.10E-04 | 4.00E-03 | 123.67 |
| 1/19/2012 | | 17923 | 5974 | 170 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 3.03E-03 | 124.59 |
| 2/15/2012 | | 18566 | 6189 | 170 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 18 U | 0.00E+00 | 18 U | 0.00E+00 | 6.70E-03 | 126.03 |
| 3/15/2012 | | 19262 | 6421 | 170 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 6.04E-03 | 127.43 |
| 4/19/2012 | | 20102 | 6701 | 160 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 7.3 U | 0.00E+00 | 7.3 U | 0.00E+00 | 2.13E-03 | 128.02 |
| 5/16/2012 | | 20748 | 6916 | 160 | 0.80 U | 0.00E+00 | 0.80 U | 0.00E+00 | 0.80 U | 0.00E+00 | 3.2 U | 0.00E+00 | 3.2 U | 0.00E+00 | 1.16E-03 | 128.27 |

See notes on last page.

# Table 4.3
# Cell 3 - Phase 1 SVE System Effluent Data
# December 2009 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 3 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 3 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | | Tetrachloroethene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 21282 | 7094 | 160 | 1200 | 3.97E-03 | 4.7 U | 0.00E+00 | 20 | 4.91E-05 | 4.7 U | 0.00E+00 | 17 | 4.09E-05 | 8.4 | 2.02E-05 | 4.7 U | 0.00E+00 | 26 | 1.07E-04 |
| 9/17/2012 | | 21952 | 7317 | 160 | 5000 | 1.65E-02 | 16 U | 0.00E+00 | 38 | 9.33E-05 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 130 | 3.13E-04 | 16 U | 0.00E+00 | 100 | 4.11E-04 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 21959 | 7320 | 160 | 640 | 2.12E-03 | 2.1 U | 0.00E+00 | 130 | 3.19E-04 | 2.1 U | 0.00E+00 | 22 | 5.29E-05 | 18 | 4.33E-05 | 2.1 U | 0.00E+00 | 18 | 7.40E-05 |
| 12/14/2012 | | 22554 | 7518 | 170 | 1100 | 3.87E-03 | 4.6 U | 0.00E+00 | 17 J | 4.43E-05 | 4.6 U | 0.00E+00 | 15 | 3.83E-05 | 70 J | 1.79E-04 | 4.6 U | 0.00E+00 | 7.1 J | 3.10E-05 |
| 12/14/2012 | Dup | 22554 | 7518 | 170 | 1100 J | 3.87E-03 | 4.5 U | 0.00E+00 | 25 J | 6.52E-05 | 4.5 U | 0.00E+00 | 17 J | 4.34E-05 | 36 J | 9.20E-05 | 4.5 U | 0.00E+00 | 49 J | 2.14E-04 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 22556 | 7519 | 160 | 640 | 2.12E-03 | 2.4 U | 0.00E+00 | 12 | 2.95E-05 | 2.4 U | 0.00E+00 | 8 | 1.92E-05 | 23 | 5.53E-05 | 2.4 U | 0.00E+00 | 15 | 6.17E-05 |
| 4/11/2013 | | 23581 | 8134 | 160 | 180 | 5.96E-04 | 1.2 U | 0.00E+00 | 7 | 1.72E-05 | 1.2 U | 0.00E+00 | 2.8 | 6.73E-06 | 28 | 6.73E-05 | 1.2 U | 0.00E+00 | 4.6 | 1.89E-05 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 23583 | 8135 | 160 | 200 | 6.62E-04 | 1.1 U | 0.00E+00 | 5.5 | 1.35E-05 | 1.1 U | 0.00E+00 | 3.3 | 7.94E-06 | 22 | 5.29E-05 | 1.1 U | 0.00E+00 | 4.4 | 1.81E-05 |
| 7/15/2013 | | 25160 | 9082 | 160 | 64 | 2.12E-04 | 1.2 U | 0.00E+00 | 3.6 | 8.84E-06 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.9 | 4.57E-06 | 1.2 U | 0.00E+00 | 14 | 5.76E-05 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 25162 | 9083 | 160 | 390 | 1.29E-03 | 1.7 U | 0.00E+00 | 5.6 | 1.37E-05 | 1.7 U | 0.00E+00 | 3 | 9.93E-06 | 2 | 4.81E-06 | 1.7 U | 0.00E+00 | 21 | 8.64E-05 |
| 11/18/2013 | | 26825 | 10081 | 160 | 350 | 1.16E-03 | 1.2 U | 0.00E+00 | 8.2 | 2.01E-05 | 1.2 U | 0.00E+00 | 6.6 | 2.18E-05 | 45 | 1.08E-04 | 1.2 U | 0.00E+00 | 5.7 | 2.34E-05 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 28218 | 10916 | 160 | 240 | 7.94E-04 | 1.2 U | 0.00E+00 | 5 | 1.23E-05 | 1.2 U | 0.00E+00 | 4.1 | 1.36E-05 | 16 | 3.85E-05 | 1.2 U | 0.00E+00 | 18 | 7.40E-05 |
| 3/14/2014 | | 29432 | 11645 | 160 | 72 | 2.38E-04 | 1.2 U | 0.00E+00 | 8.7 | 2.14E-05 | 1.2 U | 0.00E+00 | 2.4 | 7.94E-06 | 6.4 | 1.54E-05 | 1.2 U | 0.00E+00 | 9.5 | 3.91E-05 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 29914 | 11934 | 160 | 770 | 2.55E-03 | 2.3 U | 0.00E+00 | 15 | 3.68E-05 | 2.3 U | 0.00E+00 | 12 | 3.97E-05 | 86 | 2.07E-04 | 2.3 U | 0.00E+00 | 6.9 | 2.84E-05 |
| 7/23/2014 | | 31567 | 12926 | 160 | 130 | 4.30E-04 | 1.4 U | 0.00E+00 | 5 | 1.23E-05 | 1.4 U | 0.00E+00 | 1.4 | 4.63E-06 | 10 | 2.40E-05 | 1.4 U | 0.00E+00 | 10 | 4.11E-05 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 32432 | 13099 | 160 | 390 | 1.29E-03 | 2.4 U | 0.00E+00 | 15 | 3.68E-05 | 2.4 U | 0.00E+00 | 3 | 7.21E-06 | 8.4 | 2.02E-05 | 2.4 U | 0.00E+00 | 17 | 6.99E-05 |
| 11/14/2014 | | 33847 | 13948 | 160 | 180 | 5.96E-04 | 1.2 U | 0.00E+00 | 5.2 | 1.28E-05 | 1.2 U | 0.00E+00 | 3 | 9.93E-06 | 25 | 6.01E-05 | 1.2 U | 0.00E+00 | 18 | 7.40E-05 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 33855 | 13949 | 160 | 220 | 7.28E-04 | 1.1 U | 0.00E+00 | 4.7 | 1.15E-05 | 1.1 U | 0.00E+00 | 2.2 | 5.29E-06 | 18 | 4.33E-05 | 1.1 U | 0.00E+00 | 11 | 4.52E-05 |
| 3/13/2015 | | 35189 | 14750 | 160 | 200 | 6.62E-04 | 1.2 U | 0.00E+00 | 4.4 | 1.08E-05 | 1.2 U | 0.00E+00 | 3.1 | 1.03E-05 | 14 | 3.37E-05 | 1.2 U | 0.00E+00 | 4.2 | 1.73E-05 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 35194 | 14751 | 160 | 300 | 9.93E-04 | 1.2 U | 0.00E+00 | 5.6 | 1.37E-05 | 1.2 U | 0.00E+00 | 3.1 | 7.45E-06 | 10 | 2.40E-05 | 1.2 U | 0.00E+00 | 8.1 | 3.33E-05 |
| 7/16/2015 | | 36677 | 15641 | 160 | 180 | 5.96E-04 | 1.2 U | 0.00E+00 | 6.5 | 1.60E-05 | 1.2 U | 0.00E+00 | 2.3 | 7.61E-06 | 19 | 4.57E-05 | 1.2 U | 0.00E+00 | 6 | 2.47E-05 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 36680 | 15641 | 160 | 530 | 1.75E-03 | 2.3 U | 0.00E+00 | 11 | 2.70E-05 | 2.3 U | 0.00E+00 | 2.6 | 6.25E-06 | 10 | 2.40E-05 | 2.3 U | 0.00E+00 | 18 | 7.40E-05 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | Molecular weight (values from the U.S. National Library of Medicine) |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.3
# Cell 3 - Phase 1 SVE System Effluent Data
# December 2009 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 3 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 3 Run Time (hr) | SVE Flow Rate (scfm) | Trichloroethene | | Vinyl chloride | | Methylene Chloride | | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | | Toluene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 21282 | 7094 | 160 | 25 | 8.15E-05 | 4.7 U | 0.00E+00 | 47 U | 0.00E+00 | 4.7 U | 0.00E+00 | 4.7 U | 0.00E+00 | 19 U | 0.00E+00 | 4.7 U | 0.00E+00 | 4.7 U | 0.00E+00 |
| 9/17/2012 | | 21952 | 7317 | 160 | 180 | 5.87E-04 | 16 U | 0.00E+00 | 160 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 65 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 21959 | 7320 | 160 | 39 | 1.27E-04 | 2.1 U | 0.00E+00 | 21 U | 0.00E+00 | 2.1 U | 0.00E+00 | 2.1 U | 0.00E+00 | 8.5 U | 0.00E+00 | 2.1 U | 0.00E+00 | 2.1 U | 0.00E+00 |
| 12/14/2012 | | 22554 | 7518 | 170 | 90 J | 3.12E-04 | 4.6 U | 0.00E+00 | 46 U | 0.00E+00 | 4.6 U | 0.00E+00 | 4.6 U | 0.00E+00 | 18 U | 0.00E+00 | 4.6 U | 0.00E+00 | 4.6 U | 0.00E+00 |
| 12/14/2012 | Dup | 22554 | 7518 | 170 | 52 J | 1.80E-04 | 4.5 U | 0.00E+00 | 45 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 18 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 22556 | 7519 | 160 | 36 | 1.17E-04 | 2.4 U | 0.00E+00 | 24 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 9.5 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 |
| 4/11/2013 | | 23581 | 8134 | 160 | 15 | 4.89E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 23583 | 8135 | 160 | 13 | 4.24E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.3 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 7/15/2013 | | 25160 | 9082 | 160 | 10 | 3.26E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 25162 | 9083 | 160 | 12 | 3.91E-05 | 1.7 U | 0.00E+00 | 17 U | 0.00E+00 | 1.7 U | 0.00E+00 | 1.7 U | 0.00E+00 | 6.8 U | 0.00E+00 | 1.7 U | 0.00E+00 | 1.7 U | 0.00E+00 |
| 11/18/2013 | | 26825 | 10081 | 160 | 14 | 4.56E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 28218 | 10916 | 160 | 7.6 | 2.48E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 3/14/2014 | | 29432 | 11645 | 160 | 8.1 | 2.64E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.9 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 29914 | 11934 | 160 | 20 | 6.52E-05 | 2.3 U | 0.00E+00 | 23 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 9.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 |
| 7/23/2014 | | 31567 | 12926 | 160 | 9 | 2.93E-05 | 1.4 U | 0.00E+00 | 14 U | 0.00E+00 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 5.6 U | 0.00E+00 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 32432 | 13099 | 160 | 14 | 4.56E-05 | 2.4 U | 0.00E+00 | 24 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 9.5 U | 0.00E+00 | 3 | 5.81E-06 | 2.4 U | 0.00E+00 |
| 11/14/2014 | | 33847 | 13948 | 160 | 6.2 | 2.02E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 33855 | 13949 | 160 | 6 | 1.96E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.3 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 3/13/2015 | | 35189 | 14750 | 160 | 14 | 4.56E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 35194 | 14751 | 160 | 10 | 3.26E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 7/16/2015 | | 36677 | 15641 | 160 | 12 | 3.91E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.9 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 36680 | 15641 | 160 | 14 | 4.56E-05 | 2.3 U | 0.00E+00 | 23 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 9.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | Molecular weight (values from the U.S. National Library of Medicine) |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.3
## Cell 3 - Phase 1 SVE System Effluent Data
## December 2009 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

**CELL 3 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 3 Run Time (hr) | SVE Flow Rate (scfm) | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 21282 | 7094 | 160 | 4.7 U | 0.00E+00 | 4.7 U | 0.00E+00 | 4.7 U | 0.00E+00 | 47 U | 0.00E+00 | 19 U | 0.00E+00 | 4.27E-03 | 129.03 |
| 9/17/2012 | | 21952 | 7317 | 160 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 160 U | 0.00E+00 | 65 U | 0.00E+00 | 1.80E-02 | 133.04 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 21959 | 7320 | 160 | 2.1 U | 0.00E+00 | 2.1 U | 0.00E+00 | 2.1 U | 0.00E+00 | 21 U | 0.00E+00 | 8.5 U | 0.00E+00 | 2.73E-03 | 133.05 |
| 12/14/2012 | | 22554 | 7518 | 170 | 4.6 U | 0.00E+00 | 4.6 U | 0.00E+00 | 4.6 U | 0.00E+00 | 46 U | 0.00E+00 | 18 U | 0.00E+00 | 4.47E-03 | 133.94 |
| 12/14/2012 | Dup | 22554 | 7518 | 170 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 45 U | 0.00E+00 | 18 U | 0.00E+00 | 4.46E-03 | - |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 22556 | 7519 | 160 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 24 U | 0.00E+00 | 9.5 U | 0.00E+00 | 2.40E-03 | 133.94 |
| 4/11/2013 | | 23581 | 8134 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 7.55E-04 | 134.40 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 23583 | 8135 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.3 U | 0.00E+00 | 7.97E-04 | 134.40 |
| 7/15/2013 | | 25160 | 9082 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 3.15E-04 | 134.70 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 25162 | 9083 | 160 | 1.7 U | 0.00E+00 | 1.7 U | 0.00E+00 | 1.7 U | 0.00E+00 | 17 U | 0.00E+00 | 6.8 U | 0.00E+00 | 1.44E-03 | 134.70 |
| 11/18/2013 | | 26825 | 10081 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.38E-03 | 136.08 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 28218 | 10916 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.6 U | 0.00E+00 | 9.57E-04 | 136.88 |
| 3/14/2014 | | 29432 | 11645 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.9 U | 0.00E+00 | 3.48E-04 | 137.13 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 29914 | 11934 | 160 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 23 U | 0.00E+00 | 9.3 U | 0.00E+00 | 2.92E-03 | 137.98 |
| 7/23/2014 | | 31567 | 12926 | 160 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 1.4 U | 0.00E+00 | 14 U | 0.00E+00 | 5.6 U | 0.00E+00 | 5.42E-04 | 138.52 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 32432 | 13099 | 160 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 24 U | 0.00E+00 | 9.5 U | 0.00E+00 | 1.48E-03 | 138.77 |
| 11/14/2014 | | 33847 | 13948 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 | 1.73E-05 | 4.6 U | 0.00E+00 | 7.90E-04 | 139.44 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 33855 | 13949 | 160 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.3 U | 0.00E+00 | 8.53E-04 | 139.44 |
| 3/13/2015 | | 35189 | 14750 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.6 U | 0.00E+00 | 7.79E-04 | 140.07 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 35194 | 14751 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.10E-03 | 140.07 |
| 7/16/2015 | | 36677 | 15641 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.9 U | 0.00E+00 | 7.29E-04 | 140.72 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 36680 | 15641 | 160 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 23 U | 0.00E+00 | 9.3 U | 0.00E+00 | 1.93E-03 | 140.72 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | Molecular weight (values from the U.S. National Library of Medicine) |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.4
## Cell 4 - Phase 2 SVE System Effluent Data
## March 2011 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

CELL 4 SVE EFFLUENT

| Date | Sample Type | SVE Run Time (hr) | Cell 4 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 3/11/2011 | | 222 | 222 | 500 | 150000 | 1.55E+00 | 600 U | 0.00E+00 | 1800 | 1.38E-02 | 600 U | 0.00E+00 | 860 | 6.46E-03 | 1400 | 1.05E-02 | 600 U | 0.00E+00 |
| 3/18/2011 | | 366 | 366 | 500 | 41000 | 4.24E-01 | 150 U | 0.00E+00 | 1000 | 7.67E-03 | 150 U | 0.00E+00 | 250 | 1.88E-03 | 460 | 3.46E-03 | 150 U | 0.00E+00 |
| 3/18/2011 | Dup | 366 | 366 | 500 | 40000 | 4.14E-01 | 130 U | 0.00E+00 | 1000 | 7.67E-03 | 130 U | 0.00E+00 | 300 | 2.25E-03 | 480 | 3.61E-03 | 130 U | 0.00E+00 |
| 3/25/2011 | | 463 | 463 | 500 | 22000 | 2.28E-01 | 62 U | 0.00E+00 | 980 | 7.52E-03 | 62 U | 0.00E+00 | 87 | 6.54E-04 | 290 | 2.18E-03 | 62 U | 0.00E+00 |
| 3/30/2011 | | 558 | 558 | 500 | 25000 | 2.59E-01 | 68 U | 0.00E+00 | 820 | 6.29E-03 | 68 U | 0.00E+00 | 190 | 1.43E-03 | 290 | 2.18E-03 | 68 U | 0.00E+00 |
| 4/8/2011 | | 764 | 764 | 500 | 22000 | 2.28E-01 | 80 U | 0.00E+00 | 1000 | 7.67E-03 | 80 U | 0.00E+00 | 170 | 1.28E-03 | 340 | 2.56E-03 | 80 U | 0.00E+00 |
| 4/15/2011 | | 924 | 924 | 500 | 18000 | 1.86E-01 | 84 U | 0.00E+00 | 930 | 7.13E-03 | 84 U | 0.00E+00 | 110 | 8.27E-04 | 280 | 2.10E-03 | 84 U | 0.00E+00 |
| 4/15/2011 | Dup | 924 | 924 | 500 | 16000 J | 1.65E-01 | 60 U | 0.00E+00 | 820 J | 6.29E-03 | 60 U | 0.00E+00 | 60 UJ | 0.00E+00 | 260 J | 1.95E-03 | 60 U | 0.00E+00 |
| 5/19/2011 | | 1685 | 1685 | 500 | 11000 | 1.14E-01 | 11 U | 0.00E+00 | 640 | 4.91E-03 | 11 U | 0.00E+00 | 100 | 7.52E-04 | 190 | 1.43E-03 | 11 U | 0.00E+00 |
| 6/16/2011 | | 2191 | 2191 | 420 | 10000 | 8.69E-02 | 11 U | 0.00E+00 | 530 | 3.42E-03 | 11 U | 0.00E+00 | 110 J | 6.94E-04 | 160 | 1.01E-03 | 11 U | 0.00E+00 |
| 6/16/2011 | Dup | 2191 | 2191 | 420 | 9600 | 8.34E-02 | 11 U | 0.00E+00 | 510 | 3.29E-03 | 11 U | 0.00E+00 | 110 J | 6.94E-04 | 160 | 1.01E-03 | 11 U | 0.00E+00 |
| 7/15/2011 | | 2750 | 2750 | 420 | 7600 | 6.60E-02 | 24 U | 0.00E+00 | 290 | 1.87E-03 | 24 U | 0.00E+00 | 58 | 3.66E-04 | 79 | 4.99E-04 | 24 U | 0.00E+00 |
| 8/22/2011 | | 3133 | 3133 | 420 | 9000 | 7.82E-02 | 27 U | 0.00E+00 | 410 | 2.64E-03 | 27 U | 0.00E+00 | 92 | 5.81E-04 | 160 | 1.01E-03 | 27 U | 0.00E+00 |
| 8/22/2011 | Dup | 3133 | 3133 | 420 | 9000 | 7.82E-02 | 22 U | 0.00E+00 | 400 | 2.58E-03 | 22 U | 0.00E+00 | 80 | 5.05E-04 | 150 | 9.47E-04 | 22 U | 0.00E+00 |
| 9/15/2011 | | 3630 | 3630 | 420 | 7000 | 6.08E-02 | 22 U | 0.00E+00 | 250 | 1.61E-03 | 22 U | 0.00E+00 | 55 | 3.47E-04 | 97 | 6.12E-04 | 22 U | 0.00E+00 |
| 10/14/2011 | | 4226 | 4226 | 420 | 4400 | 3.82E-02 | 19 U | 0.00E+00 | 180 | 1.16E-03 | 19 U | 0.00E+00 | 59 | 3.72E-04 | 60 | 3.79E-04 | 19 U | 0.00E+00 |
| 11/21/2011 | | 5019 | 5019 | 380 | 3700 | 2.91E-02 | 16 U | 0.00E+00 | 170 | 9.91E-04 | 16 U | 0.00E+00 | 320 | 1.83E-03 | 63 | 3.60E-04 | 16 U | 0.00E+00 |
| 12/14/2011 | | 5343 | 5343 | 260 | 4000 | 2.15E-02 | 19 U | 0.00E+00 | 140 | 5.58E-04 | 19 U | 0.00E+00 | 300 | 1.17E-03 | 55 | 2.15E-04 | 19 U | 0.00E+00 |
| 1/19/2012 | | 5993 | 5993 | 0 | 5200 | 0.00E+00 | 24 U | 0.00E+00 | 160 | 0.00E+00 | 24 U | 0.00E+00 | 58 | 0.00E+00 | 38 | 0.00E+00 | 24 U | 0.00E+00 |
| 2/15/2012 | | 6368 | 6368 | 260 | 4200 | 2.26E-02 | 19 U | 0.00E+00 | 100 | 3.99E-04 | 19 U | 0.00E+00 | 700 | 2.74E-03 | 53 | 2.07E-04 | 19 U | 0.00E+00 |
| 3/15/2012 | | 6946 | 6946 | 350 | 4000 | 2.90E-02 | 15 U | 0.00E+00 | 120 | 6.44E-04 | 15 U | 0.00E+00 | 38 | 2.00E-04 | 38 | 2.00E-04 | 15 U | 0.00E+00 |
| 4/19/2012 | | 7629 | 7629 | 380 | 5200 | 4.09E-02 | 16 U | 0.00E+00 | 160 | 9.33E-04 | 16 U | 0.00E+00 | 42 | 2.40E-04 | 43 | 2.46E-04 | 16 U | 0.00E+00 |
| 5/16/2012 | | 8143 | 8143 | 420 | 4100 | 3.56E-02 | 15 U | 0.00E+00 | 110 | 7.09E-04 | 15 U | 0.00E+00 | 43 | 2.71E-04 | 40 | 2.53E-04 | 15 U | 0.00E+00 |

See notes on last page.

# Table 4.4
## Cell 4 - Phase 2 SVE System Effluent Data
## March 2011 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

CELL 4 SVE EFFLUENT

| Date | Sample Type | SVE Run Time (hr) | Cell 4 Run Time (hr) | SVE Flow Rate (scfm) | Tetrachloroethene | | Trichloroethene | | Vinyl chloride | | Methylene Chloride | | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 3/11/2011 | | 222 | 222 | 500 | 7200 | 9.26E-02 | 3900 | 3.97E-02 | 600 U | 0.00E+00 | 600 U | 0.00E+00 | 600 U | 0.00E+00 | 600 U | 0.00E+00 | 2400 U | 0.00E+00 | 600 U | 0.00E+00 |
| 3/18/2011 | | 366 | 366 | 500 | 2900 | 3.73E-02 | 1600 | 1.63E-02 | 150 U | 0.00E+00 | 150 U | 0.00E+00 | 150 U | 0.00E+00 | 150 U | 0.00E+00 | 750 J | 3.75E-03 | 150 U | 0.00E+00 |
| 3/18/2011 | Dup | 366 | 366 | 500 | 3000 | 3.86E-02 | 1600 | 1.63E-02 | 130 UJ | 0.00E+00 | 130 U | 0.00E+00 | 130 U | 0.00E+00 | 130 U | 0.00E+00 | 1100 J | 5.50E-03 | 130 U | 0.00E+00 |
| 3/25/2011 | | 463 | 463 | 500 | 3200 | 4.11E-02 | 970 | 9.88E-03 | 62 U | 0.00E+00 | 61 NJ | 4.02E-04 | 62 U | 0.00E+00 | 62 U | 0.00E+00 | 610 | 3.05E-03 | 62 U | 0.00E+00 |
| 3/30/2011 | | 558 | 558 | 500 | 2500 | 3.21E-02 | 1000 | 1.02E-02 | 68 U | 0.00E+00 | 68 U | 0.00E+00 | 68 U | 0.00E+00 | 68 U | 0.00E+00 | 470 | 2.35E-03 | 68 U | 0.00E+00 |
| 4/8/2011 | | 764 | 764 | 500 | 2400 | 3.09E-02 | 1000 | 1.02E-02 | 80 U | 0.00E+00 | 80 U | 0.00E+00 | 80 U | 0.00E+00 | 80 U | 0.00E+00 | 430 | 2.15E-03 | 80 U | 0.00E+00 |
| 4/15/2011 | | 924 | 924 | 500 | 1700 | 2.19E-02 | 920 | 9.37E-03 | 84 U | 0.00E+00 | 84 U | 0.00E+00 | 84 U | 0.00E+00 | 84 U | 0.00E+00 | 340 U | 0.00E+00 | 84 U | 0.00E+00 |
| 4/15/2011 | Dup | 924 | 924 | 500 | 1500 J | 1.93E-02 | 830 J | 8.45E-03 | 60 U | 0.00E+00 | 60 U | 0.00E+00 | 60 U | 0.00E+00 | 60 U | 0.00E+00 | 260 J | 1.30E-03 | 60 U | 0.00E+00 |
| 5/19/2011 | | 1685 | 1685 | 500 | 1400 | 1.80E-02 | 530 | 5.40E-03 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 67 | 3.35E-04 | 26 | 1.57E-04 |
| 6/16/2011 | | 2191 | 2191 | 420 | 1000 | 1.08E-02 | 410 | 3.51E-03 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 46 U | 0.00E+00 | 14 | 7.12E-05 |
| 6/16/2011 | Dup | 2191 | 2191 | 420 | 960 | 1.04E-02 | 400 | 3.42E-03 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 45 U | 0.00E+00 | 12 | 6.10E-05 |
| 7/15/2011 | | 2750 | 2750 | 420 | 570 | 6.16E-03 | 250 | 2.14E-03 | 24 U | 0.00E+00 | 28 | 1.55E-04 | 24 U | 0.00E+00 | 24 U | 0.00E+00 | 95 U | 0.00E+00 | 24 U | 0.00E+00 |
| 8/22/2011 | | 3133 | 3133 | 420 | 920 | 9.93E-03 | 380 | 3.25E-03 | 27 U | 0.00E+00 | 27 U | 0.00E+00 | 27 U | 0.00E+00 | 27 U | 0.00E+00 | 110 U | 0.00E+00 | 27 U | 0.00E+00 |
| 8/22/2011 | Dup | 3133 | 3133 | 420 | 940 | 1.02E-02 | 360 | 3.08E-03 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 90 U | 0.00E+00 | 22 U | 0.00E+00 |
| 9/15/2011 | | 3630 | 3630 | 420 | 660 | 7.13E-03 | 270 | 2.31E-03 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 22 U | 0.00E+00 | 90 U | 0.00E+00 | 22 U | 0.00E+00 |
| 10/14/2011 | | 4226 | 4226 | 420 | 390 | 4.21E-03 | 180 | 1.54E-03 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 77 U | 0.00E+00 | 19 U | 0.00E+00 |
| 11/21/2011 | | 5019 | 5019 | 380 | 360 | 3.52E-03 | 180 | 1.39E-03 | 16 U | 0.00E+00 | 160 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 63 U | 0.00E+00 | 16 U | 0.00E+00 |
| 12/14/2011 | | 5343 | 5343 | 260 | 360 | 2.41E-03 | 160 | 8.47E-04 | 19 U | 0.00E+00 | 190 U | 0.00E+00 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 74 U | 0.00E+00 | 19 U | 0.00E+00 |
| 1/19/2012 | | 5993 | 5993 | 0 | 320 | 0.00E+00 | 180 | 0.00E+00 | 24 U | 0.00E+00 | 24 U | 0.00E+00 | 24 U | 0.00E+00 | 24 U | 0.00E+00 | 97 U | 0.00E+00 | 24 U | 0.00E+00 |
| 2/15/2012 | | 6368 | 6368 | 260 | 280 | 1.87E-03 | 150 | 7.94E-04 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 78 U | 0.00E+00 | 19 U | 0.00E+00 |
| 3/15/2012 | | 6946 | 6946 | 350 | 240 | 2.16E-03 | 140 | 9.98E-04 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 58 U | 0.00E+00 | 15 U | 0.00E+00 |
| 4/19/2012 | | 7629 | 7629 | 380 | 400 | 3.91E-03 | 180 | 1.39E-03 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 62 U | 0.00E+00 | 16 U | 0.00E+00 |
| 5/16/2012 | | 8143 | 8143 | 420 | 320 | 3.46E-03 | 150 | 1.28E-03 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 61 U | 0.00E+00 | 15 U | 0.00E+00 |

See notes on last page.

# Table 4.4
# Cell 4 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

CELL 4 SVE EFFLUENT

| Date | Sample Type | SVE Run Time (hr) | Cell 4 Run Time (hr) | SVE Flow Rate (scfm) | Toluene | | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| 3/11/2011 | | 222 | 222 | 500 | 600 U | 0.00E+00 | 600 U | 0.00E+00 | 710 | 5.84E-03 | 600 U | 0.00E+00 | 2400 U | 0.00E+00 | 2400 U | 0.00E+00 | 1.72E+00 | 381.87 |
| 3/18/2011 | | 366 | 366 | 500 | 620 J | 4.43E-03 | 150 U | 0.00E+00 | 240 | 1.98E-03 | 200 | 1.65E-03 | 1500 J | 6.75E-03 | 590 U | 0.00E+00 | 5.09E-01 | 453.50 |
| 3/18/2011 | Dup | 366 | 366 | 500 | 380 J | 2.71E-03 | 130 U | 0.00E+00 | 250 | 2.06E-03 | 240 | 1.98E-03 | 690 J | 3.11E-03 | 540 U | 0.00E+00 | 4.97E-01 | 453.50 |
| 3/25/2011 | | 463 | 463 | 500 | 140 | 1.00E-03 | 62 U | 0.00E+00 | 78 | 6.42E-04 | 67 | 5.51E-04 | 250 U | 0.00E+00 | 250 U | 0.00E+00 | 2.95E-01 | 482.07 |
| 3/30/2011 | | 558 | 558 | 500 | 190 | 1.36E-03 | 68 U | 0.00E+00 | 250 | 2.06E-03 | 140 | 1.15E-03 | 270 U | 0.00E+00 | 270 U | 0.00E+00 | 3.18E-01 | 512.25 |
| 4/8/2011 | | 764 | 764 | 500 | 200 | 1.43E-03 | 120 | 9.88E-04 | 560 | 4.61E-03 | 260 | 2.14E-03 | 320 U | 0.00E+00 | 320 U | 0.00E+00 | 2.91E-01 | 572.27 |
| 4/15/2011 | | 924 | 924 | 500 | 170 | 1.21E-03 | 110 | 9.05E-04 | 540 | 4.44E-03 | 260 | 2.14E-03 | 340 U | 0.00E+00 | 340 U | 0.00E+00 | 2.36E-01 | 610.05 |
| 4/15/2011 | Dup | 924 | 924 | 500 | 140 J | 1.00E-03 | 99 J | 8.15E-04 | 540 J | 4.44E-03 | 230 J | 1.89E-03 | 240 J,B | 1.08E-03 | 240 U | 0.00E+00 | 2.12E-01 | 610.05 |
| 5/19/2011 | | 1685 | 1685 | 500 | 100 | 7.14E-04 | 140 | 1.15E-03 | 920 | 7.57E-03 | 420 | 3.46E-03 | 81 | 3.65E-04 | 43 U | 0.00E+00 | 1.58E-01 | 730.28 |
| 6/16/2011 | | 2191 | 2191 | 420 | 51 | 3.06E-04 | 83 | 5.74E-04 | 600 | 4.15E-03 | 280 | 1.94E-03 | 46 J,B | 1.74E-04 | 46 U | 0.00E+00 | 1.14E-01 | 753.86 |
| 6/16/2011 | Dup | 2191 | 2191 | 420 | 53 | 3.18E-04 | 78 | 5.39E-04 | 580 | 4.01E-03 | 270 | 1.87E-03 | 69 J,B | 2.61E-04 | 45 U | 0.00E+00 | 1.09E-01 | 785.55 |
| 7/15/2011 | | 2750 | 2750 | 420 | 28 | 1.68E-04 | 41 | 2.83E-04 | 270 | 1.87E-03 | 120 | 8.30E-04 | 180 | 6.81E-04 | 95 U | 0.00E+00 | 8.10E-02 | 830.85 |
| 8/22/2011 | | 3133 | 3133 | 420 | 35 J | 2.10E-04 | 59 J | 4.08E-04 | 340 | 2.35E-03 | 140 | 9.68E-04 | 110 U | 0.00E+00 | 110 U | 0.00E+00 | 9.95E-02 | 868.97 |
| 8/22/2011 | Dup | 3133 | 3133 | 420 | 22 UJ | 0.00E+00 | 30 J | 2.07E-04 | 310 | 2.14E-03 | 130 | 8.99E-04 | 90 U | 0.00E+00 | 90 U | 0.00E+00 | 9.87E-02 | 868.65 |
| 9/15/2011 | | 3630 | 3630 | 420 | 22 U | 0.00E+00 | 31 | 2.14E-04 | 340 | 2.35E-03 | 130 | 8.99E-04 | 90 U | 0.00E+00 | 90 U | 0.00E+00 | 7.63E-02 | 906.88 |
| 10/14/2011 | | 4226 | 4226 | 420 | 38 | 2.28E-04 | 19 U | 0.00E+00 | 170 | 1.18E-03 | 70 | 4.84E-04 | 77 U | 0.00E+00 | 77 U | 0.00E+00 | 4.78E-02 | 935.35 |
| 11/21/2011 | | 5019 | 5019 | 380 | 16 U | 0.00E+00 | 17 | 1.06E-04 | 220 | 1.38E-03 | 100 | 6.25E-04 | 160 U | 0.00E+00 | 63 U | 0.00E+00 | 3.93E-02 | 966.50 |
| 12/14/2011 | | 5343 | 5343 | 260 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 76 | 3.25E-04 | 55 | 2.35E-04 | 190 UJ | 0.00E+00 | 74 U | 0.00E+00 | 2.73E-02 | 975.34 |
| 1/19/2012 | | 5993 | 5993 | 0 | 36 | 0.00E+00 | 24 U | 0.00E+00 | 78 | 0.00E+00 | 50 | 0.00E+00 | 97 U | 0.00E+00 | 97 U | 0.00E+00 | 0.00E+00 | 975.34 |
| 2/15/2012 | | 6368 | 6368 | 260 | 19 U | 0.00E+00 | 19 U | 0.00E+00 | 58 | 2.48E-04 | 40 | 1.71E-04 | 300 | 7.02E-04 | 78 U | 0.00E+00 | 2.97E-02 | 986.48 |
| 3/15/2012 | | 6946 | 6946 | 350 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 44 | 2.53E-04 | 31 | 1.79E-04 | 58 U | 0.00E+00 | 58 U | 0.00E+00 | 3.36E-02 | 1005.89 |
| 4/19/2012 | | 7629 | 7629 | 380 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 48 | 3.00E-04 | 33 | 2.06E-04 | 62 U | 0.00E+00 | 62 U | 0.00E+00 | 4.81E-02 | 1038.74 |
| 5/16/2012 | | 8143 | 8143 | 420 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 28 | 1.94E-04 | 23 | 1.59E-04 | 61 U | 0.00E+00 | 61 U | 0.00E+00 | 4.19E-02 | 1060.30 |

See notes on last page.

# Table 4.4
# Cell 4 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 4 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 4 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 8546 | 8546 | 420 | 5000 | 4.34E-02 | 16 U | 0.00E+00 | 98 | 6.32E-04 | 16 U | 0.00E+00 | 66 | 4.17E-04 | 27 | 1.70E-04 | 16 U | 0.00E+00 |
| 9/17/2012 | | 9033 | 9033 | 470 | 3700 | 3.60E-02 | 15 U | 0.00E+00 | 140 | 1.01E-03 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 26 | 1.84E-04 | 15 U | 0.00E+00 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 9037 | 9037 | 420 | 4900 J | 4.26E-02 | 28 U | 0.00E+00 | 74 J | 4.77E-04 | 28 U | 0.00E+00 | 110 J | 6.94E-04 | 29 J | 1.83E-04 | 28 U | 0.00E+00 |
| 11/15/2012 | Dup | 9037 | 9037 | 420 | 8700 | 7.56E-02 | 24 U | 0.00E+00 | 200 J | 1.29E-03 | 24 U | 0.00E+00 | 220 | 1.39E-03 | 360 J | 2.27E-03 | 24 U | 0.00E+00 |
| 12/14/2012 | | 9439 | 9439 | 150 | 500 | 1.55E-03 | 1.9 U | 0.00E+00 | 14 | 3.22E-05 | 1.9 U | 0.00E+00 | 6.8 | 1.53E-05 | 18 | 4.06E-05 | 1.9 U | 0.00E+00 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 9439 | 9439 | 0 | 520 | 0.00E+00 | 2.2 U | 0.00E+00 | 23 | 0.00E+00 | 2.2 U | 0.00E+00 | 5.7 | 0.00E+00 | 28 | 0.00E+00 | 2.2 U | 0.00E+00 |
| 4/11/2013 | | 9876 | 9876 | 340 | 430 | 3.02E-03 | 1.8 U | 0.00E+00 | 26 | 1.36E-04 | 1.8 U | 0.00E+00 | 7.1 | 3.63E-05 | 28 | 1.43E-04 | 1.8 U | 0.00E+00 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 9882 | 9882 | 340 | 270 | 1.90E-03 | 1.1 U | 0.00E+00 | 23 | 1.20E-04 | 1.1 U | 0.00E+00 | 3.4 | 1.74E-05 | 30 | 1.53E-04 | 1.1 U | 0.00E+00 |
| 7/15/2013 | | 10907 | 10907 | 340 | 100 | 7.03E-04 | 1.1 U | 0.00E+00 | 13 | 6.78E-05 | 1.1 U | 0.00E+00 | 1.7 | 8.69E-06 | 14 | 7.15E-05 | 1.1 U | 0.00E+00 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 10914 | 10914 | 340 | 170 | 1.20E-03 | 1.2 U | 0.00E+00 | 17 | 8.87E-05 | 1.2 U | 0.00E+00 | 2.2 | 1.12E-05 | 27 | 1.38E-04 | 1.2 | 6.13E-06 |
| 11/18/2013 | | 11992 | 11992 | 260 | 330 | 1.77E-03 | 1.1 U | 0.00E+00 | 7.9 | 3.15E-05 | 1.1 U | 0.00E+00 | 5.2 | 2.03E-05 | 14 | 5.47E-05 | 1.1 U | 0.00E+00 |
| Pulse -off period November 18, 2013 to March 14, 2014 | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 11997 | 11997 | 320 | 200 | 1.32E-03 | 1.2 U | 0.00E+00 | 5.5 | 2.70E-05 | 1.2 U | 0.00E+00 | 3.3 | 1.59E-05 | 9.6 | 4.62E-05 | 1.2 U | 0.00E+00 |
| 3/14/2014 | | 12980 | 12980 | 180 | 430 | 1.60E-03 | 2.6 U | 0.00E+00 | 6.2 | 1.71E-05 | 2.6 U | 0.00E+00 | 8.2 | 2.22E-05 | 18 | 4.87E-05 | 2.6 U | 0.00E+00 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 12986 | 12986 | 180 | 470 | 1.75E-03 | 1.1 U | 0.00E+00 | 10 | 2.76E-05 | 1.1 U | 0.00E+00 | 6.9 | 1.87E-05 | 22 | 5.95E-05 | 1.1 U | 0.00E+00 |
| 7/23/2014 | | 14627 | 14627 | 300 | 14 | 8.69E-05 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.6 | 0.00E+00 | 1.3 U | 0.00E+00 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 14634 | 14628 | 320 | 150 | 9.93E-04 | 1.2 U | 0.00E+00 | 9 | 4.42E-05 | 1.2 U | 0.00E+00 | 1.7 | 8.18E-06 | 15 | 7.21E-05 | 1.2 U | 0.00E+00 |
| 11/14/2014 | | 16008 | 16008 | 320 | 220 | 1.46E-03 | 0.96 U | 0.00E+00 | 5 | 2.45E-05 | 0.96 U | 0.00E+00 | 3.6 | 1.73E-05 | 8.9 | 4.28E-05 | 0.96 U | 0.00E+00 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 16015 | 16015 | 260 | 150 | 8.07E-04 | 1.1 U | 0.00E+00 | 4.1 | 1.64E-05 | 1.1 U | 0.00E+00 | 2.2 | 8.60E-06 | 7.4 | 2.89E-05 | 1.1 U | 0.00E+00 |
| 3/13/2015 | | 17178 | 17178 | 220 | 190 | 8.65E-04 | 1.2 U | 0.00E+00 | 4.9 | 1.65E-05 | 1.2 U | 0.00E+00 | 3.1 | 1.03E-05 | 5.5 | 1.82E-05 | 1.2 U | 0.00E+00 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 17186 | 17186 | 320 | 180 | 1.19E-03 | 2.6 U | 0.00E+00 | 4.3 | 2.11E-05 | 2.6 U | 0.00E+00 | 2.8 | 1.35E-05 | 5.2 | 2.50E-05 | 2.6 U | 0.00E+00 |
| 7/16/2015 | | 18436 | 18436 | 310 | 270 | 1.73E-03 | 1.2 U | 0.00E+00 | 7.7 | 3.66E-05 | 1.2 U | 0.00E+00 | 4 | 1.86E-05 | 13 | 6.06E-05 | 1.2 U | 0.00E+00 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 18439 | 18439 | 300 | 200 | 1.24E-03 | 1.1 U | 0.00E+00 | 6.3 | 2.90E-05 | 1.1 U | 0.00E+00 | 2.1 | 9.47E-06 | 11 | 4.96E-05 | 1.1 U | 0.00E+00 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | molecular weight (values from the U.S. National Library |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.4
# Cell 4 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 4 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 4 Run Time (hr) | SVE Flow Rate (scfm) | Tetrachloroethene | | Trichloroethene | | Vinyl chloride | | Methylene Chloride | | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 8546 | 8546 | 420 | 490 | 5.29E-03 | 180 | 1.54E-03 | 16 U | 0.00E+00 | 160 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 63 U | 0.00E+00 | 16 U | 0.00E+00 |
| 9/17/2012 | | 9033 | 9033 | 470 | 410 | 4.95E-03 | 220 | 2.11E-03 | 15 U | 0.00E+00 | 150 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 61 U | 0.00E+00 | 15 U | 0.00E+00 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 9037 | 9037 | 420 | 260 J | 2.81E-03 | 150 J | 1.28E-03 | 28 U | 0.00E+00 | 280 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 110 U | 0.00E+00 | 28 U | 0.00E+00 |
| 11/15/2012 | Dup | 9037 | 9037 | 420 | 1200 J | 1.30E-02 | 390 J | 3.34E-03 | 24 U | 0.00E+00 | 240 U | 0.00E+00 | 24 U | 0.00E+00 | 24 U | 0.00E+00 | 94 U | 0.00E+00 | 24 U | 0.00E+00 |
| 12/14/2012 | | 9439 | 9439 | 150 | 62 | 2.39E-04 | 28 | 8.56E-05 | 1.9 U | 0.00E+00 | 19 U | 0.00E+00 | 1.9 U | 0.00E+00 | 1.9 U | 0.00E+00 | 7.5 U | 0.00E+00 | 1.9 U | 0.00E+00 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 9439 | 9439 | 0 | 130 | 0.00E+00 | 27 | 0.00E+00 | 2.2 U | 0.00E+00 | 22 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 8.7 U | 0.00E+00 | 2.2 U | 0.00E+00 |
| 4/11/2013 | | 9876 | 9876 | 340 | 98 | 8.57E-04 | 25 | 1.73E-04 | 1.8 U | 0.00E+00 | 18 U | 0.00E+00 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 7.1 U | 0.00E+00 | 1.8 U | 0.00E+00 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 9882 | 9882 | 340 | 120 | 1.05E-03 | 23 | 1.59E-04 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 7/15/2013 | | 10907 | 10907 | 340 | 180 | 1.57E-03 | 30 | 2.08E-04 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 10914 | 10914 | 340 | 350 | 3.06E-03 | 50 | 3.46E-04 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 11/18/2013 | | 11992 | 11992 | 260 | 50 | 3.34E-04 | 13 | 6.89E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.4 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| Pulse -off period November 18, 2013 to March 14, 2014 | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 11997 | 11997 | 320 | 51 | 4.20E-04 | 11 | 7.17E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| 3/14/2014 | | 12980 | 12980 | 180 | 7.8 | 3.61E-05 | 14 | 5.13E-05 | 2.6 U | 0.00E+00 | 26 U | 0.00E+00 | 2.6 U | 0.00E+00 | 2.6 U | 0.00E+00 | 10 U | 0.00E+00 | 2.6 U | 0.00E+00 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 12986 | 12986 | 180 | 38 | 1.76E-04 | 17 | 6.23E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 7/23/2014 | | 14627 | 14627 | 300 | 15 | 1.16E-04 | 2.4 | 1.47E-05 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 5.2 U | 0.00E+00 | 1.3 U | 0.00E+00 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 14634 | 14628 | 320 | 200 | 1.65E-03 | 39 | 2.54E-04 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.9 U | 0.00E+00 | 2 | 7.75E-06 |
| 11/14/2014 | | 16008 | 16008 | 320 | 69 | 5.68E-04 | 12 | 7.82E-05 | 0.96 U | 0.00E+00 | 9.6 U | 0.00E+00 | 0.96 U | 0.00E+00 | 0.96 U | 0.00E+00 | 3.8 U | 0.00E+00 | 0.96 U | 0.00E+00 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 16015 | 16015 | 260 | 50 | 3.34E-04 | 11 | 5.83E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.4 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 3/13/2015 | | 17178 | 17178 | 220 | 27 | 1.53E-04 | 6.9 | 3.09E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 17186 | 17186 | 320 | 45 | 3.70E-04 | 9.8 | 6.39E-05 | 2.6 U | 0.00E+00 | 26 U | 0.00E+00 | 2.6 U | 0.00E+00 | 2.6 U | 0.00E+00 | 10 U | 0.00E+00 | 2.6 U | 0.00E+00 |
| 7/16/2015 | | 18436 | 18436 | 310 | 130 | 1.04E-03 | 27 | 1.71E-04 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.9 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 18439 | 18439 | 300 | 200 | 1.54E-03 | 36 | 2.20E-04 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.3 U | 0.00E+00 | 1.1 U | 0.00E+00 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | molecular weight (values from the U.S. National Library |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.4
# Cell 4 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

CELL 4 SVE EFFLUENT

| Date | Sample Type | SVE Run Time (hr) | Cell 4 Run Time (hr) | SVE Flow Rate (scfm) | Toluene | | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 8546 | 8546 | 420 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 160 U | 0.00E+00 | 63 U | 0.00E+00 | 5.15E-02 | 1081.05 |
| 9/17/2012 | | 9033 | 9033 | 470 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 150 U | 0.00E+00 | 61 U | 0.00E+00 | 4.42E-02 | 1102.58 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 9037 | 9037 | 420 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 28 U | 0.00E+00 | 280 U | 0.00E+00 | 110 U | 0.00E+00 | 4.80E-02 | 1102.78 |
| 11/15/2012 | Dup | 9037 | 9037 | 420 | 24 U | 0.00E+00 | 24 U | 0.00E+00 | 24 U | 0.00E+00 | 24 U | 0.00E+00 | 240 U | 0.00E+00 | 94 U | 0.00E+00 | 9.68E-02 | 1102.97 |
| 12/14/2012 | | 9439 | 9439 | 150 | 1.9 U | 0.00E+00 | 1.9 U | 0.00E+00 | 1.9 U | 0.00E+00 | 1.9 U | 0.00E+00 | 19 U | 0.00E+00 | 7.5 U | 0.00E+00 | 1.96E-03 | 1103.57 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 9439 | 9439 | 0 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 22 U | 0.00E+00 | 8.7 U | 0.00E+00 | 0.00E+00 | 1103.57 |
| 4/11/2013 | | 9876 | 9876 | 340 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 1.8 U | 0.00E+00 | 18 U | 0.00E+00 | 7.1 U | 0.00E+00 | 4.37E-03 | 1105.48 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 9882 | 9882 | 340 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 3.40E-03 | 1105.50 |
| 7/15/2013 | | 10907 | 10907 | 340 | 19 | 9.23E-05 | 1.2 | 6.72E-06 | 2.2 | 1.23E-05 | 1.1 U | 0.00E+00 | 24 | 7.35E-05 | 4.9 | 1.86E-05 | 2.84E-03 | 1108.40 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 10914 | 10914 | 340 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 14 | 4.29E-05 | 4.6 U | 0.00E+00 | 4.89E-03 | 1108.44 |
| 11/18/2013 | | 11992 | 11992 | 260 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.4 U | 0.00E+00 | 2.28E-03 | 1110.90 |
| Pulse -off period November 18, 2013 to March 14, 2014 | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 11997 | 11997 | 320 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.90E-03 | 1110.91 |
| 3/14/2014 | | 12980 | 12980 | 180 | 2.6 U | 0.00E+00 | 2.6 U | 0.00E+00 | 2.6 U | 0.00E+00 | 2.6 U | 0.00E+00 | 26 U | 0.00E+00 | 10 U | 0.00E+00 | 1.78E-03 | 1112.65 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 12986 | 12986 | 180 | 3.9 | 1.00E-05 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.6 U | 0.00E+00 | 2.10E-03 | 1112.67 |
| 7/23/2014 | | 14627 | 14627 | 300 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 1.3 U | 0.00E+00 | 13 U | 0.00E+00 | 5.2 U | 0.00E+00 | 2.17E-04 | 1113.02 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 14634 | 14628 | 320 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 21 | 6.05E-05 | 4.9 U | 0.00E+00 | 3.09E-03 | 1113.03 |
| 11/14/2014 | | 16008 | 16008 | 320 | 0.96 U | 0.00E+00 | 0.96 U | 0.00E+00 | 0.96 U | 0.00E+00 | 0.96 U | 0.00E+00 | 9.6 U | 0.00E+00 | 3.8 U | 0.00E+00 | 2.19E-03 | 1116.04 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 16015 | 16015 | 260 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.4 U | 0.00E+00 | 1.25E-03 | 1116.05 |
| 3/13/2015 | | 17178 | 17178 | 220 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.8 U | 0.00E+00 | 1.09E-03 | 1117.32 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 17186 | 17186 | 320 | 2.6 U | 0.00E+00 | 2.6 U | 0.00E+00 | 2.6 U | 0.00E+00 | 2.6 U | 0.00E+00 | 26 U | 0.00E+00 | 10 U | 0.00E+00 | 1.68E-03 | 1117.34 |
| 7/16/2015 | | 18436 | 18436 | 310 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.9 U | 0.00E+00 | 3.05E-03 | 1121.16 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 18439 | 18439 | 300 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.3 U | 0.00E+00 | 3.09E-03 | 1121.16 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | molecular weight (values from the U.S. National Library |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.5
# Cell 5 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 5 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 5 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | | Tetrachloroethene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 3/11/2011 | | 218 | 218 | 360 | 28000 | 2.08E-01 | 100 U | 0.00E+00 | 2400 | 1.33E-02 | 100 U | 0.00E+00 | 740 | 4.00E-03 | 10000 | 5.41E-02 | 100 U | 0.00E+00 | 5900 | 5.46E-02 |
| 3/18/2011 | | 362 | 362 | 360 | 13000 | 9.68E-02 | 52 U | 0.00E+00 | 1100 | 6.08E-03 | 52 U | 0.00E+00 | 280 | 1.52E-03 | 4800 | 2.60E-02 | 52 U | 0.00E+00 | 6800 | 6.29E-02 |
| 3/25/2011 | | 459 | 459 | 360 | 8900 | 6.63E-02 | 30 U | 0.00E+00 | 650 | 3.59E-03 | 30 U | 0.00E+00 | 200 | 1.08E-03 | 2600 | 1.41E-02 | 30 U | 0.00E+00 | 5400 | 5.00E-02 |
| 3/30/2011 | | 553 | 553 | 360 | 4600 | 3.43E-02 | 13 U | 0.00E+00 | 310 | 1.71E-03 | 13 U | 0.00E+00 | 100 | 5.41E-04 | 1300 | 7.03E-03 | 13 U | 0.00E+00 | 4000 | 3.70E-02 |
| 4/8/2011 | | 759 | 759 | 360 | 4600 | 3.43E-02 | 20 U | 0.00E+00 | 330 | 1.82E-03 | 20 U | 0.00E+00 | 95 | 5.14E-04 | 1100 | 5.95E-03 | 20 U | 0.00E+00 | 5700 | 5.28E-02 |
| 4/15/2011 | | 920 | 920 | 360 | 4600 | 3.43E-02 | 20 U | 0.00E+00 | 370 | 2.04E-03 | 20 U | 0.00E+00 | 69 | 3.73E-04 | 980 | 5.30E-03 | 20 U | 0.00E+00 | 4600 | 4.26E-02 |
| 5/19/2011 | | 1681 | 1681 | 330 | 2800 | 1.91E-02 | 12 U | 0.00E+00 | 250 | 1.27E-03 | 12 U | 0.00E+00 | 34 | 1.69E-04 | 730 | 3.62E-03 | 12 U | 0.00E+00 | 7800 | 6.62E-02 |
| 6/16/2011 | | 2187 | 2187 | 300 | 1800 | 1.12E-02 | 7.8 U | 0.00E+00 | 170 | 7.82E-04 | 7.8 U | 0.00E+00 | 23 J | 1.04E-04 | 520 | 2.34E-03 | 7.8 U | 0.00E+00 | 2400 | 1.85E-02 |
| 7/15/2011 | | 2745 | 2745 | 220 | 2400 | 1.09E-02 | 7.6 U | 0.00E+00 | 180 | 6.08E-04 | 7.6 U | 0.00E+00 | 27 | 8.93E-05 | 840 | 2.78E-03 | 7.6 U | 0.00E+00 | 2700 | 1.53E-02 |
| 8/22/2011 | | 3129 | 3129 | 260 | 1700 | 9.14E-03 | 5.0 U | 0.00E+00 | 150 | 5.98E-04 | 5.0 U | 0.00E+00 | 21 | 8.21E-05 | 690 | 2.70E-03 | 5.0 U | 0.00E+00 | 2000 | 1.34E-02 |
| 9/15/2011 | | 3626 | 3626 | 220 | 1400 | 6.37E-03 | 4.5 U | 0.00E+00 | 69 | 2.33E-04 | 4.5 U | 0.00E+00 | 22 | 7.27E-05 | 380 | 1.26E-03 | 4.5 U | 0.00E+00 | 1100 | 6.22E-03 |
| 10/14/2011 | | 4222 | 4222 | 220 | 980 | 4.46E-03 | 3.9 U | 0.00E+00 | 57 | 1.92E-04 | 3.9 U | 0.00E+00 | 19 | 6.28E-05 | 310 | 1.03E-03 | 3.9 U | 0.00E+00 | 760 | 4.30E-03 |
| 11/21/2011 | | 5015 | 5015 | 200 | 690 | 2.85E-03 | 3.2 U | 0.00E+00 | 55 | 1.69E-04 | 3.2 U | 0.00E+00 | 45 | 1.35E-04 | 290 | 8.72E-04 | 3.2 U | 0.00E+00 | 380 | 1.95E-03 |
| 11/21/2011 | Dup | 5015 | 5015 | 200 | 700 | 2.90E-03 | 3.1 U | 0.00E+00 | 57 | 1.75E-04 | 3.1 U | 0.00E+00 | 59 | 1.77E-04 | 300 | 9.02E-04 | 3.1 U | 0.00E+00 | 390 | 2.01E-03 |
| 12/14/2011 | | 5339 | 5339 | 200 | 890 | 3.68E-03 | 3.2 U | 0.00E+00 | 62 | 1.90E-04 | 3.2 U | 0.00E+00 | 64 | 1.92E-04 | 270 | 8.12E-04 | 3.2 U | 0.00E+00 | 350 | 1.80E-03 |
| 1/19/2012 | | 5958 | 5958 | 0 | 540 | 0.00E+00 | 2.8 U | 0.00E+00 | 17 | 0.00E+00 | 2.8 U | 0.00E+00 | 9.9 | 0.00E+00 | 69 | 0.00E+00 | 2.8 U | 0.00E+00 | 78 | 0.00E+00 |
| 2/15/2012 | | 6364 | 6364 | 0 | 990 | 0.00E+00 | 4.1 U | 0.00E+00 | 24 | 0.00E+00 | 4.1 U | 0.00E+00 | 100 | 0.00E+00 | 230 | 0.00E+00 | 4.1 U | 0.00E+00 | 150 | 0.00E+00 |
| 3/15/2012 | | 6942 | 6942 | 0 | 1100 | 0.00E+00 | 3.8 U | 0.00E+00 | 43 | 0.00E+00 | 3.8 U | 0.00E+00 | 20 | 0.00E+00 | 220 | 0.00E+00 | 3.8 U | 0.00E+00 | 140 | 0.00E+00 |
| 4/19/2012 | | 7625 | 7625 | 80 | 650 | 1.08E-03 | 2.4 U | 0.00E+00 | 28 | 3.44E-05 | 2.4 U | 0.00E+00 | 8.1 | 9.74E-06 | 130 | 1.56E-04 | 2.4 U | 0.00E+00 | 100 | 2.06E-04 |
| 5/16/2012 | | 8138 | 8138 | 200 | 650 | 2.69E-03 | 2.0 U | 0.00E+00 | 28 | 8.59E-05 | 2.0 U | 0.00E+00 | 8.9 | 2.68E-05 | 110 | 3.31E-04 | 2.0 U | 0.00E+00 | 130 | 6.68E-04 |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 8541 | 8541 | 360 | 710 | 3.23E-03 | 2.5 U | 0.00E+00 | 44 | 1.49E-04 | 2.5 U | 0.00E+00 | 11 | 3.64E-05 | 110 | 3.64E-04 | 2.5 U | 0.00E+00 | 540 | 3.05E-03 |
| 9/17/2012 | | 9029 | 9029 | 360 | 2000 | 8.27E-03 | 8.0 U | 0.00E+00 | 29 | 8.90E-05 | 8.0 U | 0.00E+00 | 19 | 5.71E-05 | 42 | 1.26E-04 | 8.0 U | 0.00E+00 | 190 | 9.77E-04 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 9033 | 9033 | 220 | 1200 | 5.46E-03 | 4.4 U | 0.00E+00 | 19 | 6.41E-05 | 4.4 U | 0.00E+00 | 33 | 1.09E-04 | 8 | 2.65E-05 | 4.4 U | 0.00E+00 | 55 | 3.11E-04 |
| 12/14/2012 | | 9436 | 9436 | 200 | 1200 | 4.96E-03 | 4.8 U | 0.00E+00 | 35 | 1.07E-04 | 4.8 U | 0.00E+00 | 16 | 4.81E-05 | 37 | 1.11E-04 | 4.8 U | 0.00E+00 | 61 | 3.14E-04 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 9511 | 9511 | 440 | 70 | 6.37E-04 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 |
| 4/11/2013 | | 9952 | 9952 | 420 | 1600 | 1.39E-02 | 8 | 6.95E-05 | 160 | 1.03E-03 | 5.1 U | 0.00E+00 | 20 | 1.26E-04 | 88 | 5.56E-04 | 5.1 U | 0.00E+00 | 320 | 3.46E-03 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 9958 | 9958 | 420 | 1200 | 1.04E-02 | 5.4 U | 0.00E+00 | 86 | 5.54E-04 | 5.4 U | 0.00E+00 | 12 | 7.57E-05 | 45 | 2.84E-04 | 5.4 U | 0.00E+00 | 220 | 2.38E-03 |
| 7/15/2013 | | 10984 | 10984 | 360 | 1600 | 1.19E-02 | 12 | 8.93E-05 | 100 | 5.52E-04 | 4.7 U | 0.00E+00 | 25 | 1.35E-04 | 38 | 2.06E-04 | 4.7 U | 0.00E+00 | 310 | 2.87E-03 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 10991 | 10991 | 380 | 810 | 6.37E-03 | 4 U | 0.00E+00 | 30 | 1.75E-04 | 4 U | 0.00E+00 | 6.3 | 3.60E-05 | 16 | 9.14E-05 | 4 U | 0.00E+00 | 170 | 1.66E-03 |
| 11/18/2013 | | 12069 | 12069 | 380 | 1600 | 1.26E-02 | 7.6 U | 0.00E+00 | 87 | 5.07E-04 | 7.6 U | 0.00E+00 | 23 | 1.31E-04 | 50 | 2.86E-04 | 7.6 U | 0.00E+00 | 180 | 1.76E-03 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 12074 | 12074 | 380 | 950 | 7.47E-03 | 3.5 U | 0.00E+00 | 24 | 1.40E-04 | 3.5 U | 0.00E+00 | 10 | 5.71E-05 | 23 | 1.31E-04 | 3.5 U | 0.00E+00 | 82 | 8.01E-04 |
| 3/14/2014 | | 13057 | 13057 | 380 | 1400 | 1.10E-02 | 7.8 U | 0.00E+00 | 32 | 1.87E-04 | 7.8 U | 0.00E+00 | 24 | 1.37E-04 | 88 | 5.03E-04 | 7.8 U | 0.00E+00 | 30 | 2.93E-04 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 13063 | 13063 | 300 | 1000 | 6.20E-03 | 3.0 U | 0.00E+00 | 20 | 9.21E-05 | 3.0 U | 0.00E+00 | 14 | 6.31E-05 | 65 | 2.93E-04 | 3.0 U | 0.00E+00 | 71 | 5.48E-04 |
| 7/23/2014 | | 14714 | 14714 | 100 | 670 | 1.39E-03 | 2.2 U | 0.00E+00 | 19 | 2.92E-05 | 2.2 U | 0.00E+00 | 9.6 | 1.44E-05 | 12 | 1.80E-05 | 2.2 U | 0.00E+00 | 47 | 1.21E-04 |

See notes on last page.

# Table 4.5
# Cell 5 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 5 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 5 Run Time (hr) | SVE Flow Rate (scfm) | Trichloroethene | | Vinyl chloride | | Methylene Chloride | | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | | Toluene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| 3/11/2011 | | 218 | 218 | 360 | 1400 | 1.03E-02 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 420 U | 0.00E+00 | 100 U | 0.00E+00 | 350 | 1.80E-03 |
| 3/18/2011 | | 362 | 362 | 360 | 1100 | 8.07E-03 | 52 U | 0.00E+00 | 52 U | 0.00E+00 | 52 U | 0.00E+00 | 52 U | 0.00E+00 | 210 U | 0.00E+00 | 52 U | 0.00E+00 | 120 JB | 6.17E-04 |
| 3/25/2011 | | 459 | 459 | 360 | 760 | 5.57E-03 | 30 U | 0.00E+00 | 33 | 1.56E-04 | 30 U | 0.00E+00 | 30 U | 0.00E+00 | 120 U | 0.00E+00 | 30 U | 0.00E+00 | 73 | 3.75E-04 |
| 3/30/2011 | | 553 | 553 | 360 | 420 | 3.08E-03 | 13 U | 0.00E+00 | 13 U | 0.00E+00 | 13 U | 0.00E+00 | 13 U | 0.00E+00 | 51 U | 0.00E+00 | 13 U | 0.00E+00 | 37 | 1.90E-04 |
| 4/8/2011 | | 759 | 759 | 360 | 560 | 4.11E-03 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 81 U | 0.00E+00 | 20 U | 0.00E+00 | 57 | 2.93E-04 |
| 4/15/2011 | | 920 | 920 | 360 | 560 | 4.11E-03 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 20 U | 0.00E+00 | 81 U | 0.00E+00 | 20 U | 0.00E+00 | 85 | 4.37E-04 |
| 5/19/2011 | | 1681 | 1681 | 330 | 360 | 2.42E-03 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 47 U | 0.00E+00 | 12 U | 0.00E+00 | 120 | 5.66E-04 |
| 6/16/2011 | | 2187 | 2187 | 300 | 180 | 1.10E-03 | 7.8 U | 0.00E+00 | 7.8 U | 0.00E+00 | 7.8 U | 0.00E+00 | 7.8 U | 0.00E+00 | 31 U | 0.00E+00 | 12 | 4.36E-05 | 7.8 U | 0.00E+00 |
| 7/15/2011 | | 2745 | 2745 | 220 | 280 | 1.25E-03 | 7.6 U | 0.00E+00 | 20 | 5.79E-05 | 7.6 U | 0.00E+00 | 7.6 U | 0.00E+00 | 30 U | 0.00E+00 | 7.6 U | 0.00E+00 | 49 | 1.54E-04 |
| 8/22/2011 | | 3129 | 3129 | 260 | 160 | 8.47E-04 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 | 5.0 U | 0.00E+00 | 20 U | 0.00E+00 | 7.6 | 2.39E-05 | 5.0 U | 0.00E+00 |
| 9/15/2011 | | 3626 | 3626 | 220 | 83 | 3.72E-04 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 4.5 U | 0.00E+00 | 18 U | 0.00E+00 | 5 | 1.33E-05 | 4.5 U | 0.00E+00 |
| 10/14/2011 | | 4222 | 4222 | 220 | 50 | 2.24E-04 | 3.9 U | 0.00E+00 | 3.9 U | 0.00E+00 | 3.9 U | 0.00E+00 | 3.9 U | 0.00E+00 | 16 U | 0.00E+00 | 3.9 U | 0.00E+00 | 3.9 U | 0.00E+00 |
| 11/21/2011 | | 5015 | 5015 | 200 | 27 | 1.10E-04 | 3.2 U | 0.00E+00 | 32 U | 0.00E+00 | 3.2 U | 0.00E+00 | 3.2 U | 0.00E+00 | 13 U | 0.00E+00 | 3.2 U | 0.00E+00 | 3.2 U | 0.00E+00 |
| 11/21/2011 | Dup | 5015 | 5015 | 200 | 28 | 1.14E-04 | 3.1 U | 0.00E+00 | 31 U | 0.00E+00 | 3.1 U | 0.00E+00 | 3.1 U | 0.00E+00 | 12 U | 0.00E+00 | 3.1 U | 0.00E+00 | 3.1 U | 0.00E+00 |
| 12/14/2011 | | 5339 | 5339 | 200 | 24 | 9.78E-05 | 3.2 U | 0.00E+00 | 32 U | 0.00E+00 | 3.2 U | 0.00E+00 | 3.2 U | 0.00E+00 | 13 U | 0.00E+00 | 3.2 U | 0.00E+00 | 3.2 U | 0.00E+00 |
| 1/19/2012 | | 5958 | 5958 | 0 | 10 | 0.00E+00 | 2.8 U | 0.00E+00 | 2.8 U | 0.00E+00 | 2.8 U | 0.00E+00 | 2.8 U | 0.00E+00 | 11 U | 0.00E+00 | 2.8 U | 0.00E+00 | 2.8 U | 0.00E+00 |
| 2/15/2012 | | 6364 | 6364 | 0 | 19 | 0.00E+00 | 4.1 U | 0.00E+00 | 4.1 U | 0.00E+00 | 4.1 U | 0.00E+00 | 4.1 U | 0.00E+00 | 16 U | 0.00E+00 | 4.1 U | 0.00E+00 | 4.1 U | 0.00E+00 |
| 3/15/2012 | | 6942 | 6942 | 0 | 25 | 0.00E+00 | 3.8 U | 0.00E+00 | 3.8 U | 0.00E+00 | 3.8 U | 0.00E+00 | 3.8 U | 0.00E+00 | 15 U | 0.00E+00 | 3.8 U | 0.00E+00 | 3.8 U | 0.00E+00 |
| 4/19/2012 | | 7625 | 7625 | 80 | 19 | 3.10E-05 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 9.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 |
| 5/16/2012 | | 8138 | 8138 | 200 | 24 | 9.78E-05 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 7.9 U | 0.00E+00 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 8541 | 8541 | 360 | 64 | 2.87E-04 | 2.5 U | 0.00E+00 | 25 U | 0.00E+00 | 2.5 U | 0.00E+00 | 2.5 U | 0.00E+00 | 9.9 U | 0.00E+00 | 2.5 U | 0.00E+00 | 2.5 U | 0.00E+00 |
| 9/17/2012 | | 9029 | 9029 | 360 | 71 | 2.89E-04 | 8.0 U | 0.00E+00 | 80 U | 0.00E+00 | 8.0 U | 0.00E+00 | 8.0 U | 0.00E+00 | 32 U | 0.00E+00 | 8.0 U | 0.00E+00 | 8.0 U | 0.00E+00 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 9033 | 9033 | 220 | 39 | 1.75E-04 | 4.4 U | 0.00E+00 | 44 U | 0.00E+00 | 4.4 U | 0.00E+00 | 4.4 U | 0.00E+00 | 18 U | 0.00E+00 | 4.4 U | 0.00E+00 | 4.4 U | 0.00E+00 |
| 12/14/2012 | | 9436 | 9436 | 200 | 60 | 2.44E-04 | 4.8 U | 0.00E+00 | 48 U | 0.00E+00 | 4.8 U | 0.00E+00 | 4.8 U | 0.00E+00 | 19 U | 0.00E+00 | 4.8 U | 0.00E+00 | 4.8 U | 0.00E+00 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 9511 | 9511 | 440 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 68 U | 0.00E+00 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 27 U | 0.00E+00 | 12 | 6.39E-05 | 6.8 U | 0.00E+00 |
| 4/11/2013 | | 9952 | 9952 | 420 | 110 | 9.41E-04 | 5.1 U | 0.00E+00 | 51 U | 0.00E+00 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 | 20 U | 0.00E+00 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 9958 | 9958 | 420 | 79 | 6.76E-04 | 5.4 U | 0.00E+00 | 54 U | 0.00E+00 | 5.4 U | 0.00E+00 | 5.4 U | 0.00E+00 | 22 U | 0.00E+00 | 5.4 U | 0.00E+00 | 5.4 U | 0.00E+00 |
| 7/15/2013 | | 10984 | 10984 | 360 | 100 | 7.33E-04 | 4.7 U | 0.00E+00 | 47 U | 0.00E+00 | 4.7 U | 0.00E+00 | 4.7 U | 0.00E+00 | 19 U | 0.00E+00 | 4.7 U | 0.00E+00 | 4.7 U | 0.00E+00 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 10991 | 10991 | 380 | 62 | 4.80E-04 | 4 U | 0.00E+00 | 40 U | 0.00E+00 | 4 U | 0.00E+00 | 4 U | 0.00E+00 | 16 U | 0.00E+00 | 4 U | 0.00E+00 | 4 U | 0.00E+00 |
| 11/18/2013 | | 12069 | 12069 | 380 | 71 | 5.50E-04 | 7.6 U | 0.00E+00 | 76 U | 0.00E+00 | 7.6 U | 0.00E+00 | 7.6 U | 0.00E+00 | 31 U | 0.00E+00 | 7.6 U | 0.00E+00 | 7.6 U | 0.00E+00 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 12074 | 12074 | 380 | 37 | 2.86E-04 | 3.5 U | 0.00E+00 | 35 U | 0.00E+00 | 3.5 U | 0.00E+00 | 3.5 U | 0.00E+00 | 14 U | 0.00E+00 | 3.5 U | 0.00E+00 | 3.5 U | 0.00E+00 |
| 3/14/2014 | | 13057 | 13057 | 380 | 41 | 3.17E-04 | 7.8 U | 0.00E+00 | 78 U | 0.00E+00 | 7.8 U | 0.00E+00 | 7.8 U | 0.00E+00 | 31 U | 0.00E+00 | 7.8 U | 0.00E+00 | 7.8 U | 0.00E+00 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 13063 | 13063 | 300 | 33 | 2.02E-04 | 3.0 U | 0.00E+00 | 30 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 12 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 |
| 7/23/2014 | | 14714 | 14714 | 100 | 14 | 2.85E-05 | 2.2 U | 0.00E+00 | 22 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 9.0 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 |

See notes on last page.

# Table 4.5
# Cell 5 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 5 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 5 Run Time (hr) | SVE Flow Rate (scfm) | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| 3/11/2011 | | 218 | 218 | 360 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 100 U | 0.00E+00 | 420 U | 0.00E+00 | 420 U | 0.00E+00 | 3.47E-01 | 75.54 |
| 3/18/2011 | | 362 | 362 | 360 | 52 U | 0.00E+00 | 59 | 3.50E-04 | 110 | 6.52E-04 | 210 U | 0.00E+00 | 210 U | 0.00E+00 | 2.03E-01 | 104.77 |
| 3/25/2011 | | 459 | 459 | 360 | 30 U | 0.00E+00 | 30 U | 0.00E+00 | 47 | 2.79E-04 | 130 | 4.21E-04 | 120 U | 0.00E+00 | 1.42E-01 | 118.53 |
| 3/30/2011 | | 553 | 553 | 360 | 16 | 9.48E-05 | 23 | 1.36E-04 | 46 | 2.73E-04 | 99 | 3.21E-04 | 51 U | 0.00E+00 | 8.47E-02 | 126.48 |
| 4/8/2011 | | 759 | 759 | 360 | 38 | 2.25E-04 | 84 | 4.98E-04 | 120 | 7.11E-04 | 81 U | 0.00E+00 | 81 U | 0.00E+00 | 1.01E-01 | 147.32 |
| 4/15/2011 | | 920 | 920 | 360 | 45 | 2.67E-04 | 160 | 9.48E-04 | 140 | 8.30E-04 | 180 J,B | 5.83E-04 | 81 U | 0.00E+00 | 9.17E-02 | 162.08 |
| 5/19/2011 | | 1681 | 1681 | 330 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 12 U | 0.00E+00 | 360 | 1.07E-03 | 47 U | 0.00E+00 | 9.44E-02 | 233.92 |
| 6/16/2011 | | 2187 | 2187 | 300 | 15 | 7.41E-05 | 54 | 2.67E-04 | 64 | 3.16E-04 | 69 J,B | 1.86E-04 | 31 U | 0.00E+00 | 3.49E-02 | 251.58 |
| 7/15/2011 | | 2745 | 2745 | 220 | 13 | 4.71E-05 | 120 | 4.35E-04 | 140 | 5.07E-04 | 94 | 1.86E-04 | 30 U | 0.00E+00 | 3.23E-02 | 269.61 |
| 8/22/2011 | | 3129 | 3129 | 260 | 5.9 | 2.52E-05 | 19 | 8.13E-05 | 29 | 1.24E-04 | 62 J,B | 1.45E-04 | 20 U | 0.00E+00 | 2.71E-02 | 280.03 |
| 9/15/2011 | | 3626 | 3626 | 220 | 4.5 U | 0.00E+00 | 14 | 5.07E-05 | 17 | 6.16E-05 | 49 | 9.71E-05 | 18 U | 0.00E+00 | 1.47E-02 | 287.36 |
| 10/14/2011 | | 4222 | 4222 | 220 | 3.9 U | 0.00E+00 | 7.1 | 2.57E-05 | 10 | 3.62E-05 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 1.03E-02 | 293.51 |
| 11/21/2011 | | 5015 | 5015 | 200 | 3.2 U | 0.00E+00 | 4.5 | 1.48E-05 | 6.1 | 2.01E-05 | 36 | 6.48E-05 | 13 U | 0.00E+00 | 6.19E-03 | 298.43 |
| 11/21/2011 | Dup | 5015 | 5015 | 200 | 3.1 U | 0.00E+00 | 4.2 | 1.38E-05 | 6.2 | 2.04E-05 | 31 U | 0.00E+00 | 12 U | 0.00E+00 | 6.30E-03 | 298.51 |
| 12/14/2011 | | 5339 | 5339 | 200 | 3.2 U | 0.00E+00 | 3.2 U | 0.00E+00 | 3.2 U | 0.00E+00 | 32 UJ | 0.00E+00 | 13 U | 0.00E+00 | 6.77E-03 | 300.62 |
| 1/19/2012 | | 5958 | 5958 | 0 | 2.8 U | 0.00E+00 | 2.8 U | 0.00E+00 | 2.8 U | 0.00E+00 | 11 U | 0.00E+00 | 11 U | 0.00E+00 | 0.00E+00 | 300.62 |
| 2/15/2012 | | 6364 | 6364 | 0 | 4.1 U | 0.00E+00 | 4.1 U | 0.00E+00 | 4.1 U | 0.00E+00 | 16 U | 0.00E+00 | 16 U | 0.00E+00 | 0.00E+00 | 300.62 |
| 3/15/2012 | | 6942 | 6942 | 0 | 3.8 U | 0.00E+00 | 3.8 U | 0.00E+00 | 3.8 U | 0.00E+00 | 15 U | 0.00E+00 | 15 U | 0.00E+00 | 0.00E+00 | 300.62 |
| 4/19/2012 | | 7625 | 7625 | 80 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 9.4 U | 0.00E+00 | 9.4 U | 0.00E+00 | 1.51E-03 | 301.65 |
| 5/16/2012 | | 8138 | 8138 | 200 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 2.0 U | 0.00E+00 | 7.9 U | 0.00E+00 | 7.9 U | 0.00E+00 | 3.90E-03 | 303.65 |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | |
| 8/14/2012 | | 8541 | 8541 | 360 | 2.5 U | 0.00E+00 | 2.5 U | 0.00E+00 | 2.5 U | 0.00E+00 | 25 U | 0.00E+00 | 9.9 U | 0.00E+00 | 7.12E-03 | 306.52 |
| 9/17/2012 | | 9029 | 9029 | 360 | 8.0 U | 0.00E+00 | 8.0 U | 0.00E+00 | 8.0 U | 0.00E+00 | 80 U | 0.00E+00 | 32 U | 0.00E+00 | 9.81E-03 | 311.31 |
| Pulse -off period September 17, 2012 to November 15, 2012 | | | | | | | | | | | | | | | | |
| 11/15/2012 | | 9033 | 9033 | 220 | 4.4 U | 0.00E+00 | 4.4 U | 0.00E+00 | 4.4 U | 0.00E+00 | 44 U | 0.00E+00 | 18 U | 0.00E+00 | 6.15E-03 | 311.34 |
| 12/14/2012 | | 9436 | 9436 | 200 | 4.8 U | 0.00E+00 | 4.8 U | 0.00E+00 | 4.8 U | 0.00E+00 | 48 U | 0.00E+00 | 19 U | 0.00E+00 | 5.79E-03 | 313.67 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | |
| 2/26/2013 | | 9511 | 9511 | 440 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 6.8 U | 0.00E+00 | 68 U | 0.00E+00 | 27 U | 0.00E+00 | 7.01E-04 | 313.72 |
| 4/11/2013 | | 9952 | 9952 | 420 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 | 5.1 U | 0.00E+00 | 51 U | 0.00E+00 | 20 U | 0.00E+00 | 2.01E-02 | 322.58 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | |
| 5/10/2013 | | 9958 | 9958 | 420 | 5.4 U | 0.00E+00 | 5.4 U | 0.00E+00 | 5.4 U | 0.00E+00 | 54 U | 0.00E+00 | 22 U | 0.00E+00 | 1.44E-02 | 322.66 |
| 7/15/2013 | | 10984 | 10984 | 360 | 4.7 U | 0.00E+00 | 4.7 U | 0.00E+00 | 4.7 U | 0.00E+00 | 47 U | 0.00E+00 | 19 U | 0.00E+00 | 1.65E-02 | 339.59 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | |
| 9/9/2013 | | 10991 | 10991 | 380 | 4 U | 0.00E+00 | 4 U | 0.00E+00 | 4 U | 0.00E+00 | 40 U | 0.00E+00 | 40 U | 0.00E+00 | 8.81E-03 | 339.65 |
| 11/18/2013 | | 12069 | 12069 | 380 | 7.6 U | 0.00E+00 | 7.6 U | 0.00E+00 | 7.6 U | 0.00E+00 | 76 U | 0.00E+00 | 31 U | 0.00E+00 | 1.58E-02 | 356.69 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | |
| 1/15/2014 | | 12074 | 12074 | 380 | 3.5 U | 0.00E+00 | 3.5 U | 0.00E+00 | 3.5 U | 0.00E+00 | 35 U | 0.00E+00 | 14 U | 0.00E+00 | 8.88E-03 | 356.73 |
| 3/14/2014 | | 13057 | 13057 | 380 | 7.8 U | 0.00E+00 | 7.8 U | 0.00E+00 | 7.8 U | 0.00E+00 | 78 U | 0.00E+00 | 31 U | 0.00E+00 | 1.24E-02 | 368.96 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | |
| 5/15/2014 | | 13063 | 13063 | 300 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 3.0 U | 0.00E+00 | 30 U | 0.00E+00 | 12 U | 0.00E+00 | 7.40E-03 | 369.01 |
| 7/23/2014 | | 14714 | 14714 | 100 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 2.2 U | 0.00E+00 | 22 U | 0.00E+00 | 9.0 U | 0.00E+00 | 1.60E-03 | 371.61 |

See notes on last page.

# Table 4.5
# Cell 5 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 5 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 5 Run Time (hr) | SVE Flow Rate (scfm) | 1,1,1-Trichloroethane | | 1,1,2-Trichloroethane | | 1,1-Dichloroethane | | 1,2-Dichloroethane | | 1,1-Dichloroethene | | cis-1,2-Dichloroethene | | trans-1,2-Dichloroethene | | Tetrachloroethene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 14721 | 14715 | 120 | 470 | 1.17E-03 | 2.3 U | 0.00E+00 | 10 | 1.84E-05 | 2.3 U | 0.00E+00 | 4.8 | 8.66E-06 | 6.9 | 1.24E-05 | 2.3 U | 0.00E+00 | 79 | 2.44E-04 |
| 11/14/2014 | | 16095 | 16095 | 290 | 660 | 3.96E-03 | 2.4 U | 0.00E+00 | 15 | 6.67E-05 | 2.4 U | 0.00E+00 | 8.5 | 3.70E-05 | 19 | 8.28E-05 | 2.4 U | 0.00E+00 | 32 | 2.39E-04 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 16102 | 16102 | 180 | 360 | 1.34E-03 | 1.1 U | 0.00E+00 | 4.6 | 1.27E-05 | 1.1 U | 0.00E+00 | 4.0 | 1.08E-05 | 7.2 | 1.95E-05 | 1.1 U | 0.00E+00 | 12 | 5.55E-05 |
| 3/13/2015 | | 17322 | 17322 | 260 | 660 | 3.55E-03 | 2.4 U | 0.00E+00 | 22 | 8.78E-05 | 2.4 U | 0.00E+00 | 8.0 | 3.13E-05 | 16 | 6.25E-05 | 2.4 U | 0.00E+00 | 29 | 1.94E-04 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 17329 | 17329 | 260 | 360 | 1.94E-03 | 1.1 U | 0.00E+00 | 7.3 | 2.91E-05 | 1.1 U | 0.00E+00 | 2.5 | 9.77E-06 | 5.9 | 2.31E-05 | 1.1 U | 0.00E+00 | 31 | 2.07E-04 |
| 7/16/2015 | | 18578 | 18578 | 180 | 260 | 9.68E-04 | 1.2 U | 0.00E+00 | 22 | 6.08E-05 | 1.2 U | 0.00E+00 | 3.5 | 9.47E-06 | 12 | 3.25E-05 | 1.2 U | 0.00E+00 | 54 | 2.50E-04 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 18580 | 18580 | 160 | 150 | 4.96E-04 | 1.2 U | 0.00E+00 | 4.2 | 1.03E-05 | 1.2 U | 0.00E+00 | 1.2 | 2.89E-06 | 2.4 | 5.77E-06 | 1.2 U | 0.00E+00 | 47 | 1.93E-04 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

MW molecular weight (values from the U.S. National Library of Medicine)

SCFM standard cubic feet per minute

J Indicates estimated value.

B The analyte was detected in the method, field and/or trip blank.

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.5
# Cell 5 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 5 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 5 Run Time (hr) | SVE Flow Rate (scfm) | Trichloroethene | | Vinyl chloride | | Methylene Chloride | | Carbon Tetrachloride | | Chloroform | | Chloroethane | | Benzene | | Toluene | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 14721 | 14715 | 120 | 22 | 5.38E-05 | 2.3 U | 0.00E+00 | 23 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 9.4 U | 0.00E+00 | 6.4 | 9.30E-06 | 2.3 U | 0.00E+00 |
| 11/14/2014 | | 16095 | 16095 | 290 | 11 | 6.50E-05 | 2.4 U | 0.00E+00 | 24 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 9.7 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 16102 | 16102 | 180 | 4.9 | 1.80E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 |
| 3/13/2015 | | 17322 | 17322 | 260 | 12 | 6.36E-05 | 2.4 U | 0.00E+00 | 24 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 9.5 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 17329 | 17329 | 260 | 8.2 | 4.34E-05 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 4.5 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.4 | 5.20E-06 |
| 7/16/2015 | | 18578 | 18578 | 180 | 14 | 5.13E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 18580 | 18580 | 160 | 11 | 3.59E-05 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 4.9 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 |

**Notes:**

*Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)*

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | molecular weight (values from the U.S. National Library of Medicine) |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.5
# Cell 5 - Phase 2 SVE System Effluent Data
# March 2011 - September 2015
# UTC Aerospace Systems
# Plants 1/2 Facility
# Rockford, Illinois

**CELL 5 SVE EFFLUENT**

| Date | Sample Type | SVE Run Time (hr) | Cell 5 Run Time (hr) | SVE Flow Rate (scfm) | Ethylbenzene | | m&p-Xylenes | | o-Xylenes | | Acetone | | Methyl Ethyl Ketone (MEK) | | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | Conc (ppbv) | Mass Removal Rate (lb/hr) | | |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | |
| 9/16/2014 | | 14721 | 14715 | 120 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 2.3 U | 0.00E+00 | 32 | 3.46E-05 | 9.4 U | 0.00E+00 | 1.55E-03 | 371.61 |
| 11/14/2014 | | 16095 | 16095 | 290 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.8 | 1.34E-05 | 24 U | 0.00E+00 | 9.7 U | 0.00E+00 | 4.46E-03 | 377.77 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | |
| 1/9/2015 | | 16102 | 16102 | 180 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.6 U | 0.00E+00 | 1.46E-03 | 377.78 |
| 3/13/2015 | | 17322 | 17322 | 260 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 2.4 U | 0.00E+00 | 24 U | 0.00E+00 | 9.5 U | 0.00E+00 | 3.99E-03 | 382.64 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | |
| 5/15/2015 | | 17329 | 17329 | 260 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 1.1 U | 0.00E+00 | 11 U | 0.00E+00 | 4.5 U | 0.00E+00 | 2.25E-03 | 382.66 |
| 7/16/2015 | | 18578 | 18578 | 180 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.7 U | 0.00E+00 | 1.37E-03 | 384.37 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | |
| 9/22/2015 | | 18580 | 18580 | 160 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 1.2 U | 0.00E+00 | 12 U | 0.00E+00 | 4.9 U | 0.00E+00 | 7.45E-04 | 384.37 |

**Notes:**

Mass removal rate = (flow rate in scfm)(concentration in ppmv)(60)(MW) / (387*1000000)

"U" indicates non-detection at the specified reporting limit; for ND compounds, zero is used in mass removal calculations.

| | |
|---|---|
| MW | molecular weight (values from the U.S. National Library of Medicine) |
| SCFM | standard cubic feet per minute |
| J | Indicates estimated value. |
| B | The analyte was detected in the method, field and/or trip blank. |

When a duplicate sample was collected, the original sample results are used in the mass calculations.

See notes on last page.

# Table 4.6
## Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
## December 2009 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

| Date | Cell 1 | | | Cell 2 | | | Cell 3 | | | Cell 4 | | | Cell 5 | | | Total Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | |
| 12/3/2009 | 0 | | | | | | SYSTEM STARTUP | | | | | | | | | 0.00 |
| 12/10/2009 | 53 | 0.22 | 11.91 | | | | | | | | | | | | | 11.91 |
| 12/11/2009 | | | | 59 | 0.25 | 15.05 | | | | | | | | | | 26.97 |
| 12/14/2009 | | | | | | | 60 | 0.31 | 18.51 | | | | | | | 45.48 |
| 12/15/2009 | | | | 68 | 0.16 | 16.48 | | | | | | | | | | 46.91 |
| 12/16/2009 | | | | | | | 76 | 0.17 | 21.16 | | | | | | | 49.55 |
| 12/22/2009 | 124 | 0.05 | 15.23 | | | | | | | | | | | | | 52.86 |
| 12/29/2009 | | | | 180 | 0.12 | 29.76 | | | | | | | | | | 66.15 |
| 1/5/2010 | | | | | | | 236 | 0.13 | 41.78 | | | | | | | 86.77 |
| 1/13/2010 | | | | 301 | 0.05 | 35.75 | | | | | | | | | | 92.75 |
| 1/21/2010 | | | | | | | 361 | 0.05 | 48.37 | | | | | | | 99.35 |
| 1/27/2010 | | | | 408 | 0.06 | 42.68 | | | | | | | | | | 106.27 |
| 2/24/2010 | 631 | 0.01 | 20.06 | 631 | 0.04 | 51.44 | 631 | 0.04 | 58.76 | | | | | | | 130.26 |
| 3/15/2010 | 782 | 0.01 | 22.02 | 782 | 0.09 | 64.40 | 782 | 0.07 | 68.60 | | | | | | | 155.02 |
| 4/14/2010 | 935 | 0.02 | 25.22 | 935 | 0.04 | 70.89 | 935 | 0.11 | 84.81 | | | | | | | 180.92 |
| 5/13/2010 | 1165 | 0.01 | 27.75 | 1165 | 0.04 | 79.74 | 1165 | 0.03 | 91.21 | | | | | | | 198.69 |
| 6/21/2010 | 1477 | 0.01 | 30.20 | 1477 | 0.02 | 86.90 | 1477 | 0.02 | 96.92 | | | | | | | 214.02 |
| 7/21/2010 | 1686 | 0.01 | 32.52 | 1686 | 0.02 | 91.24 | 1686 | 0.02 | 101.05 | | | | | | | 224.81 |
| 8/23/2010 | 1928 | 0.00 | 32.52 | 1928 | 0.00 | 91.24 | 1928 | 0.00 | 101.05 | | | | | | | 224.81 |
| 9/23/2010 | 2174 | 0.01 | 34.49 | 2174 | 0.02 | 96.27 | 2174 | 0.02 | 106.49 | | | | | | | 237.25 |
| 10/22/2010 | 2406 | 0.01 | 35.86 | 2406 | 0.01 | 98.85 | 2406 | 0.01 | 109.27 | | | | | | | 243.98 |
| 11/15/2010 | 2598 | 0.01 | 36.96 | 2598 | 0.01 | 101.41 | 2598 | 0.01 | 112.05 | | | | | | | 250.42 |
| 12/22/2010 | 2777 | 0.01 | 38.22 | 2955 | 0.02 | 107.99 | 2777 | 0.02 | 115.44 | | | | | | | 261.65 |
| 1/24/2011 | 2975 | 0.01 | 39.47 | 3352 | 0.01 | 110.39 | 2975 | 0.01 | 117.20 | | | | | | | 267.06 |
| 2/25/2011 | 3167 | 0.01 | 40.53 | 3737 | 0.01 | 114.08 | 3167 | 0.00 | 118.15 | | | | | | | 272.76 |
| 3/11/2011 | | | | | | | | | | 222 | 1.72 | 381.87 | 218 | 0.35 | 75.54 | 730.17 |
| 3/18/2011 | 3293 | 0.01 | 41.27 | 3988 | 0.00 | 114.57 | 3293 | 0.00 | 118.34 | 366 | 0.51 | 453.50 | 362 | 0.20 | 104.77 | 832.46 |
| 3/25/2011 | | | | | | | | | | 463 | 0.29 | 482.07 | 459 | 0.14 | 118.53 | 874.78 |
| 3/30/2011 | | | | | | | | | | 558 | 0.32 | 512.25 | 553 | 0.08 | 126.48 | 912.92 |
| 4/8/2011 | | | | | | | | | | 764 | 0.29 | 572.27 | 759 | 0.10 | 147.32 | 993.77 |
| 4/15/2011 | 3460 | 0.01 | 42.15 | 4322 | 0.00 | 115.07 | 3460 | 0.00 | 118.47 | 924 | 0.24 | 610.05 | 920 | 0.09 | 162.08 | 1047.81 |
| 5/19/2011 | 3665 | 0.00 | 42.87 | 4732 | 0.00 | 115.31 | 3665 | 0.00 | 118.53 | 1685 | 0.16 | 730.28 | 1681 | 0.09 | 233.92 | 1240.92 |
| 6/16/2011 | 3830 | 0.00 | 43.39 | 5062 | 0.00 | 115.55 | 3830 | 0.00 | 118.81 | 2191 | 0.11 | 753.86 | 2187 | 0.03 | 251.58 | 1283.20 |
| 7/15/2011 | 4472 | 0.00 | 44.96 | 4472 | 0.00 | 115.18 | 4472 | 0.00 | 119.39 | 2750 | 0.08 | 830.85 | 2745 | 0.03 | 269.61 | 1380.36 |
| 8/22/2011 | 4775 | 0.00 | 45.59 | 4775 | 0.00 | 115.40 | 4775 | 0.01 | 121.30 | 3133 | 0.10 | 868.97 | 3129 | 0.03 | 280.03 | 1431.44 |
| 9/15/2011 | 4968 | 0.00 | 45.93 | 4968 | 0.00 | 115.51 | 4968 | 0.00 | 121.91 | 3630 | 0.08 | 906.88 | 3626 | 0.01 | 287.36 | 1477.64 |
| 10/14/2011 | 5199 | 0.00 | 46.20 | 5199 | 0.00 | 115.57 | 5199 | 0.00 | 122.54 | 4226 | 0.05 | 935.35 | 4222 | 0.01 | 293.51 | 1513.18 |
| 11/21/2011 | 5503 | 0.00 | 46.43 | 5503 | 0.00 | 115.62 | 5503 | 0.00 | 123.00 | 5019 | 0.04 | 966.50 | 5015 | 0.01 | 298.43 | 1549.98 |
| 12/14/2011 | 5670 | 0.00 | 46.53 | 5670 | 0.00 | 115.65 | 5670 | 0.00 | 123.67 | 5343 | 0.03 | 975.34 | 5339 | 0.01 | 300.62 | 1561.80 |
| 1/19/2012 | 5974 | 0.00 | 46.69 | 5974 | 0.00 | 115.71 | 5974 | 0.00 | 124.59 | 5993 | 0.00 | 975.34 | 5958 | 0.00 | 300.62 | 1562.94 |
| 2/15/2012 | 6189 | 0.00 | 46.80 | 6189 | 0.00 | 115.74 | 6189 | 0.01 | 126.03 | 6368 | 0.03 | 986.48 | 6364 | 0.00 | 300.62 | 1575.67 |
| 3/15/2012 | 6421 | 0.00 | 46.89 | 6421 | 0.00 | 115.79 | 6421 | 0.01 | 127.43 | 6946 | 0.03 | 1005.89 | 6942 | 0.00 | 300.62 | 1596.62 |
| 4/19/2012 | 6701 | 0.00 | 47.04 | 6701 | 0.00 | 115.84 | 6701 | 0.00 | 128.02 | 7629 | 0.05 | 1038.74 | 7625 | 0.00 | 301.65 | 1631.30 |
| 5/16/2012 | 6916 | 0.00 | 47.18 | 6916 | 0.00 | 115.88 | 6916 | 0.00 | 128.27 | 8143 | 0.04 | 1060.30 | 8138 | 0.00 | 303.65 | 1655.28 |

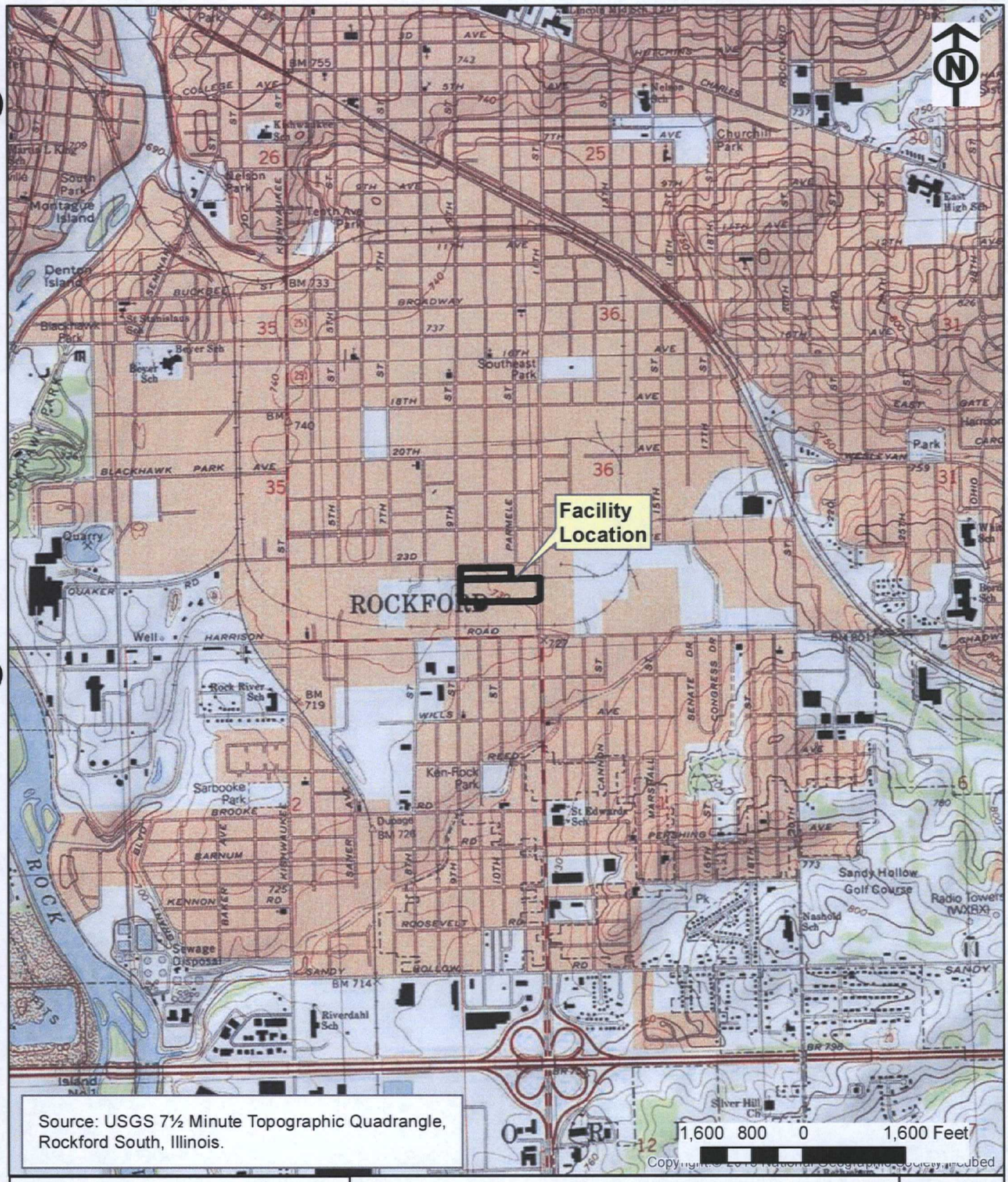
# Table 4.6
## Mass Removal - Phase 1 and Phase 2 AS/SVE Systems
## December 2009 - September 2015
## UTC Aerospace Systems
## Plants 1/2 Facility
## Rockford, Illinois

| Date | Cell 1 | | | Cell 2 | | | Cell 3 | | | Cell 4 | | | Cell 5 | | | Total Cumulative Mass Removal (lb) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | Run Time (hr) | Mass Removal Rate (lb/hr) | Cumulative Mass Removal (lb) | |
| Pulse -off period June 1, 2012 to August 14, 2012 | | | | | | | | | | | | | | | | |
| 8/14/2012 | 7094 | 0.00 | 47.54 | 7094 | 0.00 | 116.20 | 7094 | 0.00 | 129.03 | 8546 | 0.05 | 1081.05 | 8541 | 0.01 | 306.52 | 1680.34 |
| 9/17/2012 | 7317 | 0.00 | 47.99 | 7317 | 0.00 | 116.40 | 7317 | 0.02 | 133.04 | 9033 | 0.04 | 1102.58 | 9029 | 0.01 | 311.31 | 1711.33 |
| Pulse -off period September 17, 2012 to November 14, 2012 | | | | | | | | | | | | | | | | |
| 11/15/2012 | 7320 | 0.00 | 48.00 | 7320 | 0.00 | 116.40 | 7320 | 0.00 | 133.05 | 9037 | 0.05 | 1102.78 | 9033 | 0.01 | 311.34 | 1711.56 |
| 12/14/2012 | 7518 | 0.00 | 48.24 | 7518 | 0.00 | 116.86 | 7518 | 0.00 | 133.94 | 9439 | 0.00 | 1103.57 | 9436 | 0.01 | 313.67 | 1716.27 |
| Pulse -off period December 14, 2012 to February 26, 2013 | | | | | | | | | | | | | | | | |
| 2/26/2013 | 7518 | 0.00 | 48.19 | 7518 | 0.00 | 116.86 | 7519 | 0.00 | 133.94 | 9439 | 0.00 | 1103.57 | 9511 | 0.00 | 313.72 | 1716.32 |
| 4/11/2013 | 7723 | 0.00 | 48.32 | 7723 | 0.00 | 116.97 | 8134 | 0.00 | 134.40 | 9876 | 0.00 | 1105.48 | 9952 | 0.02 | 322.58 | 1727.74 |
| Pulse -off period April 11, 2013 to May 10, 2013 | | | | | | | | | | | | | | | | |
| 5/10/2013 | 7724 | 0.00 | 48.32 | 7724 | 0.00 | 116.97 | 8135 | 0.00 | 134.40 | 9882 | 0.00 | 1105.50 | 9958 | 0.01 | 322.66 | 1727.85 |
| 7/15/2013 | 8039 | 0.00 | 48.86 | 8039 | 0.00 | 117.21 | 9082 | 0.00 | 134.70 | 10907 | 0.00 | 1108.40 | 10984 | 0.02 | 339.59 | 1748.76 |
| Pulse -off period July 15, 2013 to September 9, 2013 | | | | | | | | | | | | | | | | |
| 9/9/2013 | 8040 | 0.00 | 48.86 | 8040 | 0.00 | 117.21 | 9083 | 0.00 | 134.70 | 10914 | 0.00 | 1108.44 | 10991 | 0.01 | 339.65 | 1748.86 |
| 11/18/2013 | 8372 | 0.00 | 49.15 | 8372 | 0.00 | 117.30 | 10081 | 0.00 | 136.08 | 11992 | 0.00 | 1110.90 | 12069 | 0.02 | 356.69 | 1770.12 |
| Pulse -off period November 18, 2013 to January 15, 2014 | | | | | | | | | | | | | | | | |
| 1/15/2014 | 8651 | 0.00 | 49.36 | 8651 | 0.00 | 117.51 | 10916 | 0.00 | 136.88 | 11997 | 0.00 | 1110.91 | 12074 | 0.01 | 356.73 | 1771.39 |
| 3/14/2014 | 8894 | 0.00 | 49.48 | 8894 | 0.00 | 117.52 | 11645 | 0.00 | 137.13 | 12980 | 0.00 | 1112.65 | 13057 | 0.01 | 368.96 | 1785.75 |
| Pulse -off period March 14, 2014 to May 15, 2014 | | | | | | | | | | | | | | | | |
| 5/15/2014 | 8990 | 0.00 | 49.54 | 8990 | 0.00 | 117.64 | 11934 | 0.00 | 137.98 | 12986 | 0.00 | 1112.67 | 13063 | 0.01 | 369.01 | 1786.83 |
| 7/23/2014 | 9321 | 0.00 | 50.01 | 9321 | 0.00 | 117.79 | 12926 | 0.00 | 138.52 | 14627 | 0.00 | 1113.02 | 14714 | 0.00 | 371.61 | 1790.95 |
| Pulse -off period July 23, 2014 to September 16, 2014 | | | | | | | | | | | | | | | | |
| 9/16/2014 | 9494 | 0.00 | 50.32 | 9494 | 0.00 | 118.05 | 13099 | 0.00 | 138.77 | 14628 | 0.00 | 1113.03 | 14715 | 0.00 | 371.61 | 1791.78 |
| 11/14/2014 | 9777 | 0.00 | 50.45 | 9777 | 0.00 | 118.12 | 13948 | 0.00 | 139.44 | 16008 | 0.00 | 1116.04 | 16095 | 0.00 | 377.77 | 1801.82 |
| Pulse -off period November 14, 2014 to January 9, 2015 | | | | | | | | | | | | | | | | |
| 1/9/2015 | 9778 | 0.00 | 50.45 | 9778 | 0.00 | 118.12 | 13949 | 0.00 | 139.44 | 16015 | 0.00 | 1116.05 | 16102 | 0.00 | 377.78 | 1801.84 |
| 3/13/2015 | 10045 | 0.00 | 50.56 | 10045 | 0.00 | 118.15 | 14750 | 0.00 | 140.07 | 17178 | 0.00 | 1117.32 | 17322 | 0.00 | 382.64 | 1808.74 |
| Pulse -off period March 13, 2015 to May 15, 2015 | | | | | | | | | | | | | | | | |
| 5/15/2015 | 10046 | 0.00 | 50.56 | 10046 | 0.00 | 118.15 | 14751 | 0.00 | 140.07 | 17186 | 0.00 | 1117.34 | 17329 | 0.00 | 382.66 | 1808.77 |
| 7/16/2015 | 10343 | 0.00 | 50.92 | 10343 | 0.00 | 118.25 | 15641 | 0.00 | 140.72 | 18436 | 0.00 | 1121.16 | 18578 | 0.00 | 384.37 | 1815.42 |
| Pulse -off period July 16, 2015 to September 22, 2015 | | | | | | | | | | | | | | | | |
| 9/22/2015 | 10343 | 0.00 | 50.92 | 10343 | 0.00 | 118.26 | 15641 | 0.00 | 140.72 | 18439 | 0.00 | 1121.16 | 18580 | 0.00 | 384.37 | 1815.43 |

# FIGURES

# FIGURES

# Figures




AECOM

AECOM
4320 WINFIELD ROAD
WARRENVILLE, ILLINOIS 60555
PHONE: (630) 829-2464
FAX: (630) 657-6305
WEB: HTTP://WWW.AECOM.COM

**Facility Location Map**
Area 9/10 Remedial Action
Southeast Rockford Groundwater
Contamination Superfund Site
Rockford, IL

| FIGURE NUMBER | |
|---|---|
| 1 | |

| DRAWN BY: | DATE: | PROJECT NUMBER: | SHEET NUMBER: |
|---|---|---|---|
| JG | 10/30/15 | 60339110. 4214 | 1 of 1 |

Path: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q3 2015\GIS\Site Location Map.mxd

AECOM

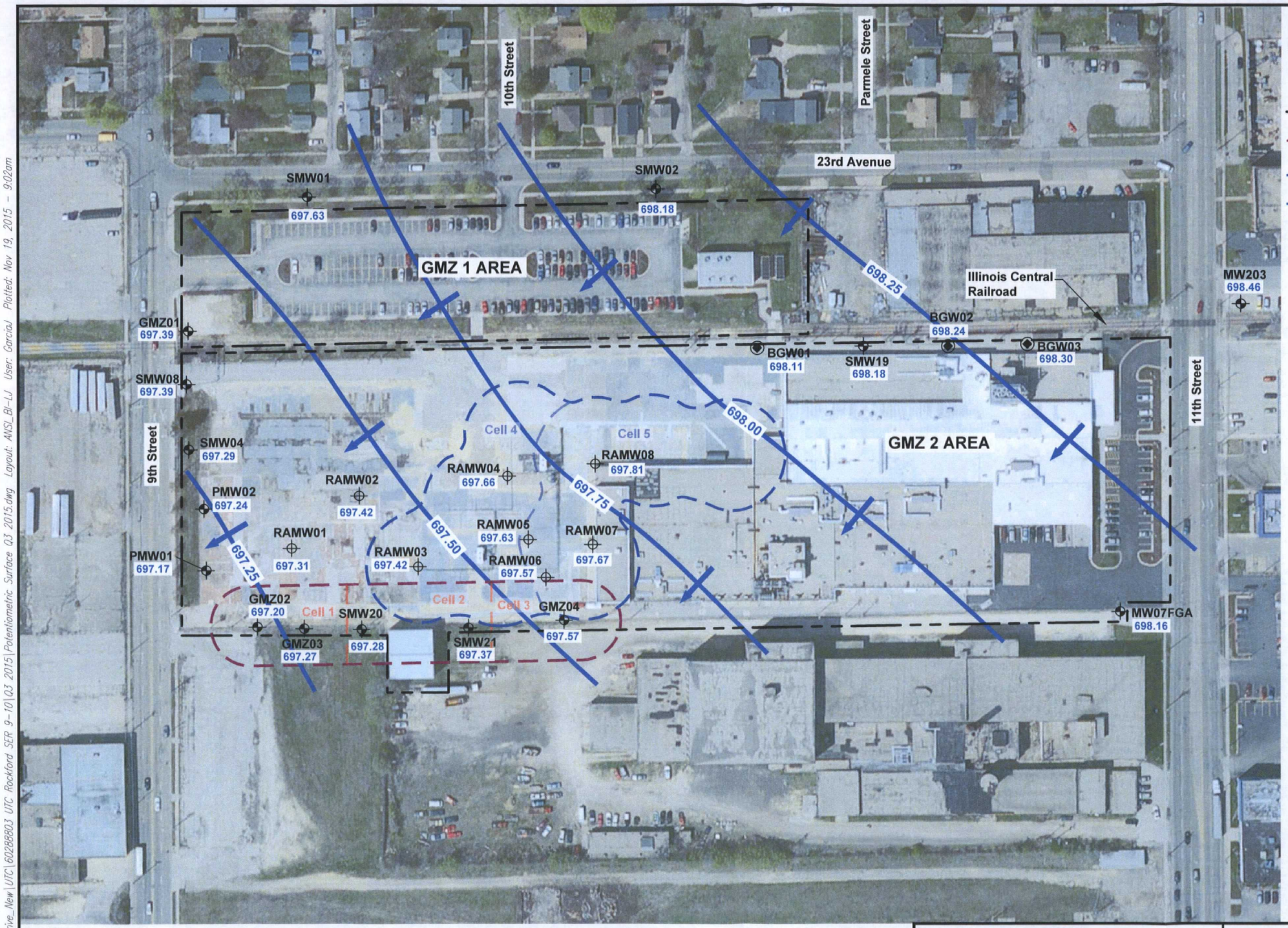
AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60339110. 4214

DATE: 10/30/15 | DRWN: JG

GMZ / PERFORMANCE WELL NETWORK

FIGURE 2

File: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q3 2015\Well Network.dwg Layout: ANSL_BI-LJ User: Garciaj Plotted: Oct 30, 2015 - 3:11pm




AECOM

AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS
PROJECT NO. 60339110. 4214

DATE: 10/30/15 | DRWN: JG

THIRD QUARTER 2015
POTENTIOMETRIC SURFACE MAP

FIGURE 3

File: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q3 2015\Potentiometric Surface Q3 2015.dwg Layout: ANSI_BI-LJ User: Garciaj Plotted: Nov 19, 2015 - 9:02am

| GMZ01 | |
|---|---|
| Date | PCE |
| 8-Dec-14 | 0.0126 |
| 17-Feb-15 | <PRG |
| 11-May-15 | 0.0157 |
| 4-Aug-15 | 0.0183 |

| SMW08 | | |
|---|---|---|
| Date | cis-1,2-DCE | PCE |
| 8-Dec-14 | 0.1230 | 0.0227 |
| 17-Feb-15 | 0.1250 | 0.0092 |
| 11-May-15 | <PRG | 0.0199 |
| 4-Aug-15 | 0.1400 | 0.0243 |

| SMW04 | | | | |
|---|---|---|---|---|
| Date | TCE | cis-1,2-DCE | PCE | Vinyl chloride |
| 9-Dec-14 | 0.0111 | 0.1200 | 0.0185 | 0.0351 |
| 19-Feb-15 | <PRG | <PRG | 0.0073 | 0.0233 |
| 13-May-15 | <PRG | 0.1320 | <PRG | 0.0692 |
| 6-Aug-15 | <PRG | 0.0756 | 0.0090 | 0.0163 |

| SMW19 | |
|---|---|
| Date | TCE |
| 10-Dec-14 | 0.0194 |
| 19-Feb-15 | 0.0177 |
| 12-May-15 | 0.0145 |
| 5-Aug-15 | 0.0106 |

| PMW02 | | |
|---|---|---|
| Date | PCE | Vinyl chloride |
| 9-Dec-14 | 0.0144 | <PRG |
| 18-Feb-15 | 0.0210 | <PRG |
| 13-May-15 | 0.0149 | 0.0021 |
| 6-Aug-15 | 0.0088 | <PRG |

| PMW01 | |
|---|---|
| Date | PCE |
| 9-Dec-14 | 0.0177 |
| 18-Feb-15 | 0.0185 |
| 13-May-15 | 0.0178 |
| 6-Aug-15 | 0.0192 |

LEGEND:

GMZ Monitoring Well

Site and GMZ Boundary

NOTES:

1. Values are listed only for those wells in which a Volatile Organic Compound (VOC) was identified above the Preliminary Remediation Goal (PRG) for the previous four events.

2. mg/L milligrams per liter

| Preliminary Remediation Goals (PRG) | |
|---|---|
| Trichloroethene (TCE) | 0.005 mg/L |
| cis-1,2-Dichloroethene (cis-1,2-DCE) | 0.07 mg/L |
| Tetrachloroethene (PCE) | 0.005 mg/L |
| Vinyl chloride | 0.002 mg/L |

N

65 0 130

1"=130'

AECOM

AREA 9/10 REMEDIAL ACTION
ROCKFORD, ILLINOIS

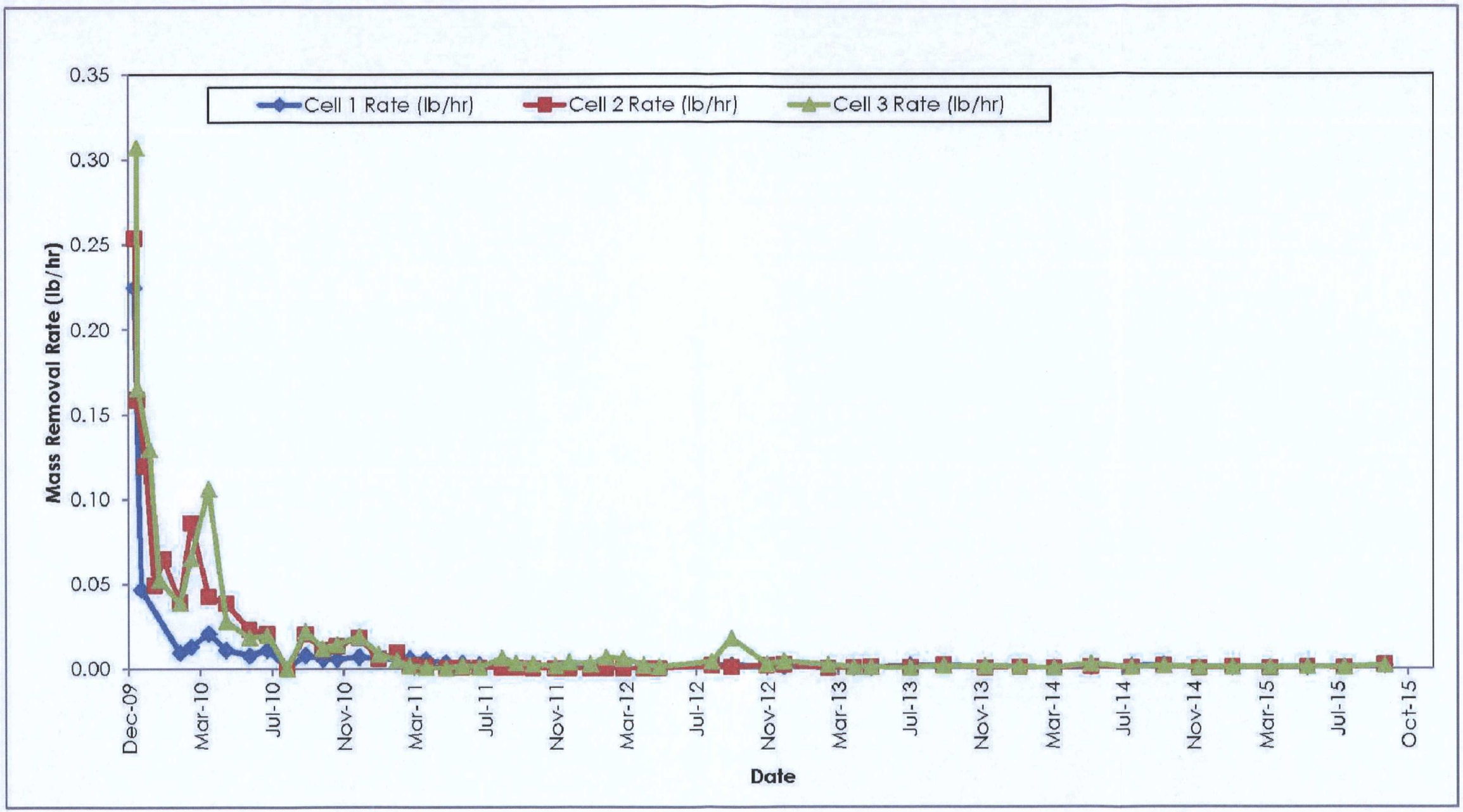
PROJECT NO. 60339110. 4214

DATE: 10/30/15 | DRWN: JG

THIRD QUARTER 2015 ROLLING
12 MONTH GMZ WELL GROUNDWATER
ANALYTICAL RESULTS EXCEEDING THE PRG
THIRD QUARTER 2015

FIGURE 4

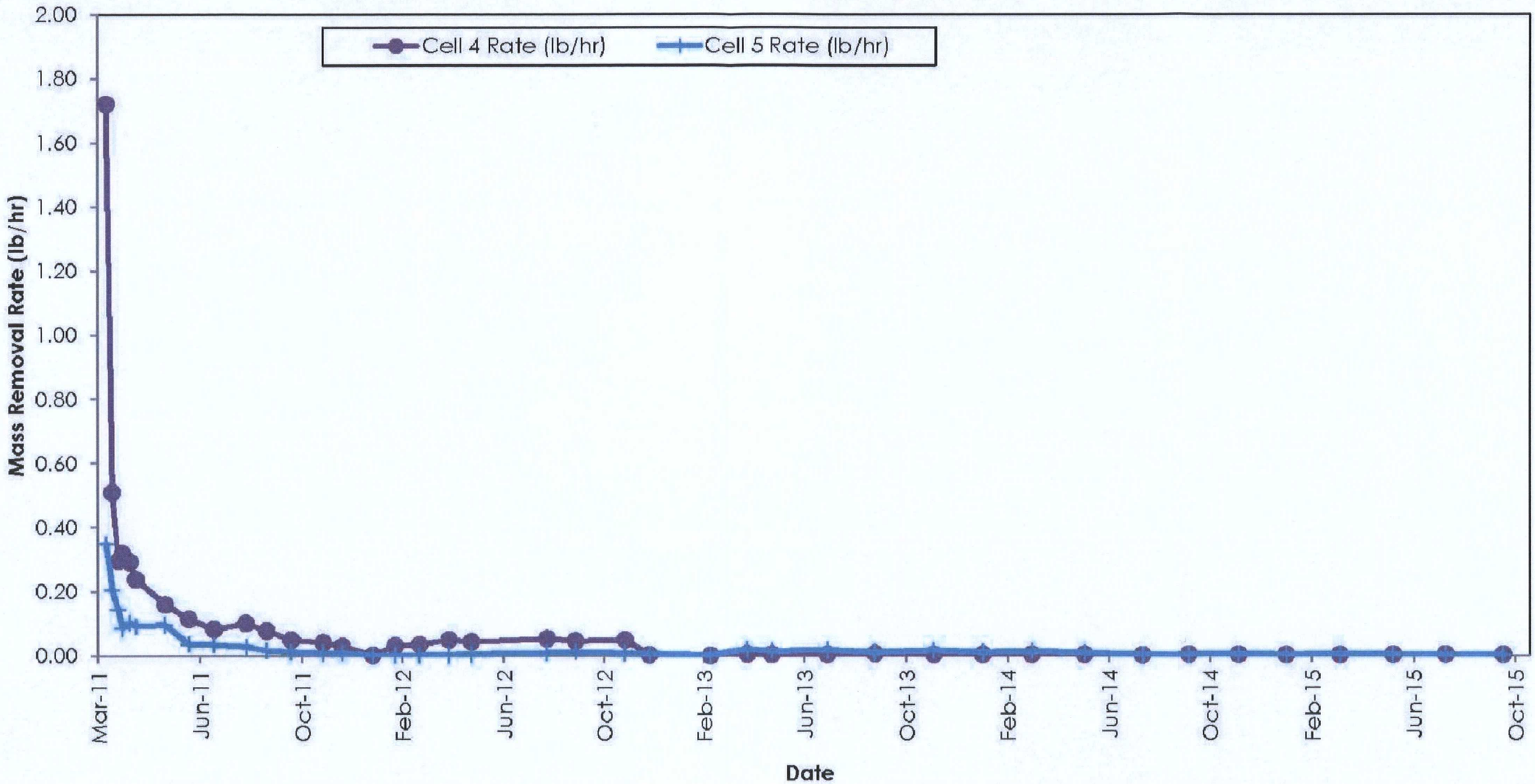
File: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q3 2015\VOC Analytical Results.dwg Layout: ANSI_B1-LJ User: Garcia1 Plotted: Nov 19, 2015 - 10:47am




AECOM

| AREA 9/10 REMEDIAL ACTION<br>ROCKFORD, ILLINOIS<br>PROJECT NO. 60339110. 4214 | | | AVERAGE VOC MASS REMOVAL RATE<br>VS TIME PHASE 1 AS/SVE SYSTEM |
|---|---|---|---|
| DATE: 10/30/15 | DRWN: JG | | FIGURE 7 |

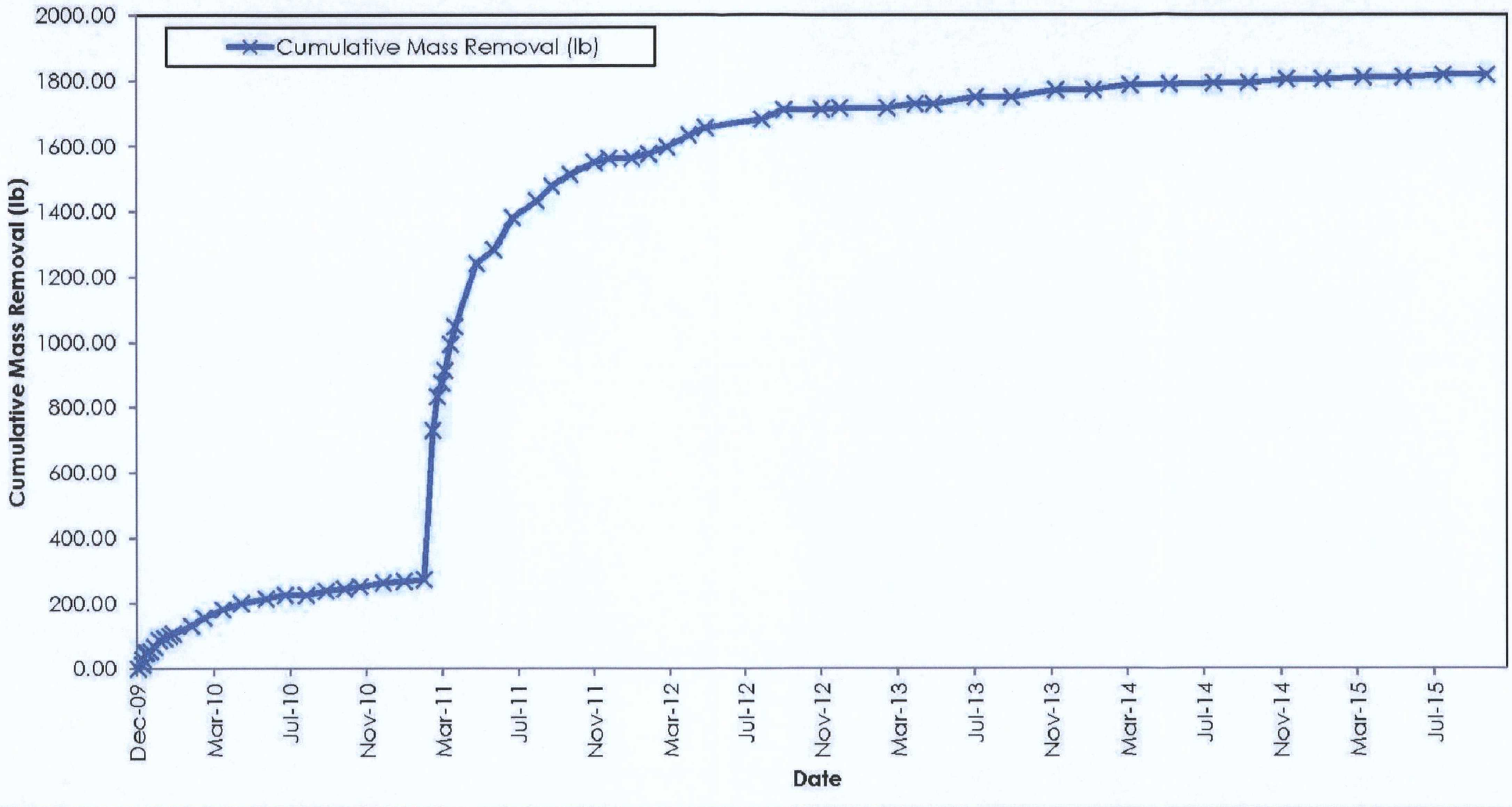
File: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\03 2015\VOC vs Time Phase 1.dwg Layout: ANSI_B\-LJ User: GarciaJ Plotted: Nov 03, 2015 - 9:43am




AECOM

| AREA 9/10 REMEDIAL ACTION<br>ROCKFORD, ILLINOIS<br>PROJECT NO. 60339110. 4214 | AVERAGE VOC MASS REMOVAL RATE<br>VS TIME PHASE 2 AS/SVE SYSTEM |
|---|---|
| DATE: 10/30/15 DRWN: JG | FIGURE 8 |

File: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q3 2015\VOC vs Time Phase 2.dwg Layout: ANSI_B1-LJ User: GarciaJ Plotted: Nov 03, 2015 - 9:45am




AECOM

| AREA 9/10 REMEDIAL ACTION<br>ROCKFORD, ILLINOIS<br>PROJECT NO. 60339110. 4214 | CUMULATIVE MASS REMOVAL<br>PHASE 1/ PHASE 2 AS/SVE SYSTEM |
|---|---|
| DATE: 10/30/15 DRWN: JG | FIGURE 9 |

File: U:\Cad_Drive_New\UTC\60288803 UTC Rockford SER 9-10\Q3 2015\Cumulative Phase 1 & 2.dwg Layout: ANSI_B(-L) User: Garcial Plotted: Nov 03, 2015 - 9:47am

A

A

# Appendix A

# Third Quarter 2015 GMZ and Performance Monitoring Well Analytical Data

New Jersey
ACCUTEST
LABORATORIES

Reissue #1
08/26/15

# Technical Report for

## United Technologies Corporation

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

60339110 PO#59048ACM

Accutest Job Number: JC1106

Sampling Dates: 08/04/15 - 08/06/15

Report to:

AECOM, INC.
27755 Diehl Road Suite 100
Warrenville, IL 60555
peter.hollatz@aecom.com

ATTN: Peter Hollatz

Total number of pages in report: **276**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Nancy Cole
Laboratory Director

Client Service contact: Marie Meidhof 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TN, TX, VA, WV, DoD ELAP (L-A-B L2248)

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ACCUTEST LABORATORIES

August 26, 2015

Mr. Peter Hollatz
AECOM
27755 Diehl Road, Suite 100
Warrenville, IL 60555

**RE: Accutest job JC1106 - Reissue**

Dear Mr. Hollatz,

The final report for Accutest job number JC1106 has been edited to reflect changes to your data package. These edits have been incorporated into the revised report which is attached.

The field ID for JC1106-9 has been revised to match the sample chain-of-custody. This report incorporates these revision.

Our apologies for any inconvenience the above issue may have caused you. Please contact me at 732-355-4552 if I may be of further assistance in this matter, or if you have any further questions regarding this data report.

Sincerely,

**Accutest Laboratories**

**Marie Meidhof**
**Project Manager**

New Jersey ♦ Building B ♦ 2235 Route 130 ♦ Dayton, NJ 08810 ♦ tel 732.329.0200 ♦ fax:732.329.3499 ♦ http://www.accutest.com

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# Sample Summary

United Technologies Corporation

**Job No:** JC1106

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM

| Sample Number | Collected Date | Time By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|
| JC1106-1 | 08/04/15 | 12:20 AH | 08/08/15 | AQ | Ground Water | HSSER-SMW08-080415 |
| JC1106-2 | 08/04/15 | 13:35 AH | 08/08/15 | AQ | Ground Water | HSSER-GMZ01-080415 |
| JC1106-3 | 08/04/15 | 14:25 AH | 08/08/15 | AQ | Ground Water | HSSER-SMW01-080415 |
| JC1106-4 | 08/04/15 | 15:30 AH | 08/08/15 | AQ | Ground Water | HSSER-SMW02-080415 |
| JC1106-5 | 08/04/15 | 16:55 AH | 08/08/15 | AQ | Ground Water | HSSER-MW203-080415 |
| JC1106-6 | 08/05/15 | 08:25 AH | 08/08/15 | AQ | Ground Water | HSSER-MW07FGA-080515 |
| JC1106-7 | 08/04/15 | 11:30 AH | 08/08/15 | AQ | Field Blank Water | HSSER-FBLK01-080415 |
| JC1106-8 | 08/05/15 | 09:25 AH | 08/08/15 | AQ | Ground Water | HSSER-SMW19-080515 |
| JC1106-9 | 08/05/15 | 10:55 AH | 08/08/15 | AQ | Ground Water | HSSER-GMZ04-080515 |
| JC1106-10 | 08/05/15 | 12:00 AH | 08/08/15 | AQ | Ground Water | HSSER-SMW21-080515 |
| JC1106-11 | 08/05/15 | 13:45 AH | 08/08/15 | AQ | Ground Water | HSSER-SMW20-080515 |
| JC1106-12 | 08/05/15 | 15:00 AH | 08/08/15 | AQ | Ground Water | HSSER-GMZ03-080515 |
| JC1106-13 | 08/05/15 | 16:30 AH | 08/08/15 | AQ | Ground Water | HSSER-GMZ02-080515 |

# Sample Summary
(continued)

United Technologies Corporation

**Job No:** JC1106

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM

| Sample Number | Collected Date | Time By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|
| JC1106-13D | 08/05/15 | 16:30 AH | 08/08/15 | AQ | Water Dup/MSD | HSSER-MSD01-080515 |
| JC1106-13S | 08/05/15 | 16:30 AH | 08/08/15 | AQ | Water Matrix Spike | HSSER-MS01-080515 |
| JC1106-14 | 08/05/15 | 00:00 AH | 08/08/15 | AQ | Ground Water | HSSER-DUP01-080515 |
| JC1106-15 | 08/06/15 | 08:20 AH | 08/08/15 | AQ | Ground Water | HSSER-PMW01-080615 |
| JC1106-16 | 08/06/15 | 09:25 AH | 08/08/15 | AQ | Ground Water | HSSER-PMW02-080615 |
| JC1106-17 | 08/06/15 | 08:40 AH | 08/08/15 | AQ | Equipment Blank | HSSER-EBLK01-080615 |
| JC1106-18 | 08/06/15 | 10:30 AH | 08/08/15 | AQ | Ground Water | HSSER-SMW04-080615 |
| JC1106-19 | 08/06/15 | 10:30 AH | 08/08/15 | AQ | Trip Blank Water | HSSER-TRIP01-080415 |

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# CASE NARRATIVE / CONFORMANCE SUMMARY

| | | | |
|---|---|---|---|
| **Client:** | United Technologies Corporation | **Job No** | JC1106 |
| **Site:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | **Report Date** | 8/24/2015 11:18:11 A |

On 08/08/2015, 16 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) and 1 Equipment Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 1.9 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JC1106 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

## Volatiles by GCMS By Method SW846 8260C

**Matrix:** AQ **Batch ID:** V3D4822

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC1106-13MS, JC1106-13MSD were used as the QC samples indicated.

**Matrix:** AQ **Batch ID:** V3D4823

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC1072-1MS, JC1072-1MSD were used as the QC samples indicated.

**Matrix:** AQ **Batch ID:** V3D4824

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC1106-9MS, JC1106-9MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 1,1,1-Trichloroethane are outside control limits. Outside control limits due to matrix interference.
- Matrix Spike Duplicate Recovery(s) for 1,1,1-Trichloroethane are outside control limits. Outside control limits due to matrix interference.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

# Summary of Hits



**Job Number:** JC1106
**Account:** United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Collected:** 08/04/15 thru 08/06/15

| Lab Sample ID Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **JC1106-1** | **HSSER-SMW08-080415** | | | | | |
| 1,1-Dichloroethane | | 0.0165 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| 1,1-Dichloroethene | | 0.0011 | 0.0010 | 0.00051 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.140 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| trans-1,2-Dichloroethene | | 0.0013 | 0.0010 | 0.00065 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0243 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0040 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.0021 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1106-2** | **HSSER-GMZ01-080415** | | | | | |
| 1,1-Dichloroethane | | 0.0066 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.0037 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0183 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0064 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.0018 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1106-3** | **HSSER-SMW01-080415** | | | | | |
| Tetrachloroethene | | 0.0013 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0013 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| **JC1106-4** | **HSSER-SMW02-080415** | | | | | |
| 1,1-Dichloroethane | | 0.0011 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.0014 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.00061 J | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| **JC1106-5** | **HSSER-MW203-080415** | | | | | |
| Tetrachloroethene | | 0.0037 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| **JC1106-6** | **HSSER-MW07FGA-080515** | | | | | |
| Tetrachloroethene | | 0.0011 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0011 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| **JC1106-7** | **HSSER-FBLK01-080415** | | | | | |
| Toluene | | 0.00045 J | 0.0010 | 0.00016 | mg/l | SW846 8260C |
| **JC1106-8** | **HSSER-SMW19-080515** | | | | | |
| cis-1,2-Dichloroethene | | 0.00070 J | 0.0010 | 0.00027 | mg/l | SW846 8260C |

# Summary of Hits

**Job Number:** JC1106
**Account:** United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Collected:** 08/04/15 thru 08/06/15

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Tetrachloroethene | | 0.00086 J | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.00034 J | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.0106 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1106-9** | **HSSER-GMZ04-080515** | | | | | |
| 1,1-Dichloroethane | | 0.0011 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| 1,1-Dichloroethene | | 0.00093 J | 0.0010 | 0.00051 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.0035 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0536 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.0026 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1106-10** | **HSSER-SMW21-080515** | | | | | |
| 1,1-Dichloroethane | | 0.00025 J | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.00099 J | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.010 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.00084 J | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1106-11** | **HSSER-SMW20-080515** | | | | | |
| No hits reported in this sample. | | | | | | |
| **JC1106-12** | **HSSER-GMZ03-080515** | | | | | |
| 1,1-Dichloroethane | | 0.00028 J | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.00035 J | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| **JC1106-13** | **HSSER-GMZ02-080515** | | | | | |
| 1,1-Dichloroethane | | 0.0016 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.00057 J | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.00043 J | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0030 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.00040 J | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1106-14** | **HSSER-DUP01-080515** | | | | | |
| 1,1-Dichloroethane | | 0.00026 J | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.00036 J | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| **JC1106-15** | **HSSER-PMW01-080615** | | | | | |
| 1,1-Dichloroethane | | 0.0086 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| 1,1-Dichloroethene | | 0.0018 | 0.0010 | 0.00051 | mg/l | SW846 8260C |

# Summary of Hits

**Job Number:** JC1106
**Account:** United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Collected:** 08/04/15 thru 08/06/15

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| cis-1,2-Dichloroethene | | 0.0011 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0192 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0547 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.0013 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1106-16** | **HSSER-PMW02-080615** | | | | | |
| 1,1-Dichloroethane | | 0.0069 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.0043 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0088 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0042 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.0018 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| Vinyl chloride | | 0.0016 | 0.0010 | 0.00015 | mg/l | SW846 8260C |
| **JC1106-17** | **HSSER-EBLK01-080615** | | | | | |
| Toluene | | 0.00033 J | 0.0010 | 0.00016 | mg/l | SW846 8260C |
| **JC1106-18** | **HSSER-SMW04-080615** | | | | | |
| 1,1-Dichloroethane | | 0.0121 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.0756 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0090 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0031 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.0023 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| Vinyl chloride | | 0.0163 | 0.0010 | 0.00015 | mg/l | SW846 8260C |
| **JC1106-19** | **HSSER-TRIP01-080415** | | | | | |

No hits reported in this sample.

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# Sample Results

## Report of Analysis

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-SMW08-080415 | | |
| **Lab Sample ID:** | JC1106-1 | **Date Sampled:** | 08/04/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112575.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0165 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | 0.0011 | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.140 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | 0.0013 | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0243 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0040 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.0021 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 110% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-GMZ01-080415 | | |
| **Lab Sample ID:** | JC1106-2 | **Date Sampled:** | 08/04/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112574.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0066 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.0037 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0183 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0064 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.0018 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 115% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-SMW01-080415 | | |
| **Lab Sample ID:** | JC1106-3 | **Date Sampled:** | 08/04/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112531.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0013 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0013 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 110% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 113% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-SMW02-080415 | | |
| **Lab Sample ID:** | JC1106-4 | **Date Sampled:** | 08/04/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112532.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0011 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.0014 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.00061 | 0.0010 | 0.00040 | mg/l | J |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 114% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 113% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-MW203-080415 | | |
| **Lab Sample ID:** | JC1106-5 | **Date Sampled:** | 08/04/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112523.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0037 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 114% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-MW07FGA-080515 | | |
| **Lab Sample ID:** | JC1106-6 | **Date Sampled:** | 08/05/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112530.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0011 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0011 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 111% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-FBLK01-080415 | | |
| **Lab Sample ID:** | JC1106-7 | **Date Sampled:** | 08/04/15 |
| **Matrix:** | AQ - Field Blank Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112522.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | 0.00045 | 0.0010 | 0.00016 | mg/l | J |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 111% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-SMW19-080515 | | |
| **Lab Sample ID:** | JC1106-8 | **Date Sampled:** | 08/05/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112535.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.00070 | 0.0010 | 0.00027 | mg/l | J |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.00086 | 0.0010 | 0.00040 | mg/l | J |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.00034 | 0.0010 | 0.00025 | mg/l | J |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.0106 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 113% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 115% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-GMZ04-080515 | | |
| **Lab Sample ID:** | JC1106-9 | **Date Sampled:** | 08/05/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112572.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0011 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | 0.00093 | 0.0010 | 0.00051 | mg/l | J |
| 156-59-2 | cis-1,2-Dichloroethene | 0.0035 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0536 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.0026 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 111% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 102% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | | 78-117% |

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-SMW21-080515 | | |
| **Lab Sample ID:** | JC1106-10 | **Date Sampled:** | 08/05/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112525.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.00025 | 0.0010 | 0.00017 | mg/l | J |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.00099 | 0.0010 | 0.00027 | mg/l | J |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.010 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.00084 | 0.0010 | 0.00022 | mg/l | J |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 113% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 114% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-SMW20-080515 | | |
| **Lab Sample ID:** | JC1106-11 | **Date Sampled:** | 08/05/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112538.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 114% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 113% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-GMZ03-080515 | | |
| **Lab Sample ID:** | JC1106-12 | **Date Sampled:** | 08/05/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112537.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.00028 | 0.0010 | 0.00017 | mg/l | J |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.00035 | 0.0010 | 0.00025 | mg/l | J |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 113% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 115% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-GMZ02-080515 | | |
| **Lab Sample ID:** | JC1106-13 | **Date Sampled:** | 08/05/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112524.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0016 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.00057 | 0.0010 | 0.00027 | mg/l | J |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.00043 | 0.0010 | 0.00040 | mg/l | J |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0030 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.00040 | 0.0010 | 0.00022 | mg/l | J |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 111% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 98% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-DUP01-080515 | | |
| **Lab Sample ID:** | JC1106-14 | **Date Sampled:** | 08/05/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112536.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.00026 | 0.0010 | 0.00017 | mg/l | J |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.00036 | 0.0010 | 0.00025 | mg/l | J |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 114% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 117% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-PMW01-080615 | | |
| **Lab Sample ID:** | JC1106-15 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112533.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0086 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | 0.0018 | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.0011 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0192 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0547 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.0013 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 113% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | | 78-117% |

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-PMW02-080615 | | |
| **Lab Sample ID:** | JC1106-16 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112573.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0069 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.0043 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0088 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0042 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.0018 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | 0.0016 | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 111% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-EBLK01-080615 | | |
| **Lab Sample ID:** | JC1106-17 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Equipment Blank | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112555.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4823 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | 0.00033 | 0.0010 | 0.00016 | mg/l | J |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-SMW04-080615 | | |
| **Lab Sample ID:** | JC1106-18 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112534.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0121 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.0756 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0090 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0031 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.0023 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | 0.0163 | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 111% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 98% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-TRIP01-080415 | | |
| **Lab Sample ID:** | JC1106-19 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 3D112529.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 113% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

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LABORATORIES

# Misc. Forms

## Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

ACCUTEST LABORATORIES

GW
WTB

# CHAIN OF CUSTODY

2235 Route 130, Dayton, NJ 08810
TEL 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

PAGE 1 OF 2

FED-EX Tracking # 6349406164 10
Accutest Quote #
Bottle Order Control #
Accutest Job # JC1106

**Client / Reporting Information**

Company Name: AECOM
Street Address: 27755 Diehl Rd Suite 100
City State Zip: Warrenville IL 60555
Project Contact: Peter Hollatz
E-mail: Peter.Hollatz@aecom.com
Phone #: 630-889-5386
Fax #: 630-836-1711
Sampler(s) Name(s): Allan Hollatz
Phone #: 630-836-1700

**Project Information**

Project Name: UTAS Plants 1/2 Facility
Street:
City State: Rockford IL
Project #: 60339110
Client Purchase Order #: 59048 ACM
Project Manager: Peter Hollatz

Billing Information (If different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

**Requested Analysis (see TEST CODE sheet)**: VOC

**Matrix Codes**: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

| Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | VOC | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | HSSER-SMW08-080415 | | 8-4-15 | 1220 | AH | GW | 3 | X | | | | | | | | X | V858 |
| -2 | HSSER-GM301-080415 | | ↓ | 1335 | | | 3 | X | | | | | | | | X | |
| -3 | HSSER-SMW01-080415 | | | 1425 | | | 3 | X | | | | | | | | X | |
| -4 | HSSER-SMW02-080415 | | | 1530 | | | 3 | X | | | | | | | | X | |
| -5 | HSSER-MW203-080415 | | ↓ | 1655 | | | 3 | X | | | | | | | | X | |
| -6 | HSSER-MW07FGA-080515 | | 8-5-15 | 0825 | | | 3 | X | | | | | | | | X | |
| -7 | HSSER-FBLK01-080415 | | 8-4-15 | 1130 | | | 3 | X | | | | | | | | X | |
| -8 | HSSER-SMW19-080515 | | 8-5-15 | 0925 | | | 3 | X | | | | | | | | X | |
| -9 | HSSER-SMGM204-080515 | | 8-5-15 | 1055 | | | 3 | X | | | | | | | | X | |
| -10 | HSSER-SMW21-080515 | | 8-5-15 | 1200 | | | 3 | X | | | | | | | | X | |
| -11 | HSSER-SMW20-080515 | | 8-5-15 | 1345 | | | 3 | X | | | | | | | | X | |
| -12 | HSSER-GM203-080515 | | 8-5-15 | 1500 | | | 3 | X | | | | | | | | X | |

**Turnaround Time (Business days)**

- Approved By (Accutest PM) / Date
- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Labtrak

**Data Deliverable Information**

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NJ Data of Known Quality Protocol Reporting
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

**Comments / Special Instructions**

* List 13 VOC
Level IV Data
* VOA @ VIAL D.L. 8/8/15

INITIAL ASSESSMENT 3A Dom
LABEL VERIFICATION JA

Sample Custody must be documented below each time samples change possession, including courier delivery.

| Relinquished by Sampler | Date Time | Received By | Relinquished By | Date Time | Received By |
|---|---|---|---|---|---|
| 1 Allan Hollatz | 8-7-15 1500 | 1 FX | 2 FX | 8/8/15 10:00 | 2 |
| 3 | | 3 | 4 | | 4 |
| 5 | | 5 | | | |

Custody Seal # ☐ Intact ☐ Not intact
Preserved where applicable ☐
On Ice ☑
Cooler Temp. 2.2°C

5.1

JC1106: Chain of Custody
Page 1 of 3

ACCUTEST LABORATORIES

GW
WTB

# CHAIN OF CUSTODY



2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # 6349 4061 6410
Bottle Order Control #
Accutest Quote #
Accutest Job # JC1106

**Client / Reporting Information**

Company Name: AECOM
Street Address: 27755 Diehl Rd Suite 700
City: Warrenville State: IL Zip: 60555
Project Contact: Peter Hollatz E-mail: Peter.Hollatz@aecom.com
Phone #: 630-839-5366 Fax #: 630-836-1714
Sampler(s) Name(s): Allan Hollatz Phone #: 630-836-1700

**Project Information**

Project Name: UTAS Plants 1/2 Facility
Street:
City: Rockford State: IL
Project #: 60339110
Client Purchase Order #: 59048 ACM
Project Manager: Peter Hollatz

Billing Information (If different from Report to)
Company Name:
Street Address:
City: State: Zip:
Attention:

**Requested Analysis (see TEST CODE sheet)**

| Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | VOC * | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HSSER-GMZ02-080515 | | 8-5-15 | 1630 | AH | GW | 3 | X | | | | | | | | X | |
| -13 | HSSER-MJ01-080515 | | 8-5-15 | 1630 | | | 3 | X | | | | | | | | X | V858 |
| | HSSER-MSD01-080515 | | 8-5-15 | 1630 | | | 3 | X | | | | | | | | X | |
| -14 | HSSER-DUP01-080515 | | 8-5-15 | 0000 | | | 3 | X | | | | | | | | X | |
| -15 | HSSER-PMW01-080615 | X | 8-6-15 | 0820 | | | 3 | X | | | | | | | | X | |
| -16 | HSSER-PMW02-080615 | | 8-6-15 | 0925 | | | 3 | X | | | | | | | | X | |
| -17 | HSSER-EBLK01-080615 | | 8-6-15 | 0840 | | | 3 | X | | | | | | | | X | |
| -18 | HSSER-SMW04-080615 | | 8-6-15 | 1030 | | | 3 | X | | | | | | | | X | |
| -19 | HSSER-TRIP01-080415 | | 8-4-15 | — | | | 2 | X | | | | | | | | X | |

**Matrix Codes**

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
SED - Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB - Field Blank
EB - Equipment Blank
RB - Rinse Blank
TB - Trip Blank

**Turnaround Time (Business days)**

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Approved By (Accutest PM) / Date:

Emergency & Rush T/A data available VIA Lablink

**Data Deliverable Information**

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NJ Data of Known Quality Protocol Reporting
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

**Comments / Special Instructions**

* List of 13 VOC
Level 1L Data
* VOA QC VIAL DG 8/8/15

Sample Custody must be documented below each time samples change possession, including courier delivery.

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 Allan Hollatz | 8-7-15 1800 | 1 FX | 2 FX | 8/8/15 10:00 | 2 [signature] |
| 3 | | 3 | 4 | | 4 |
| 5 | | 5 | Custody Seal # ☐ Intact ☐ Not intact | Preserved where applicable ☐ | On Ice ☐ Cooler Temp 22°C -ip |

5.1

JC1106: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** JC1106 **Client:** **Project:**

**Date / Time Received:** 8/8/2015 10:00:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (1.9);

| Cooler Security | Y | or N | | Y | or N |
|---|---|---|---|---|---|
| 1. Custody Seals Present: | ☑ | ☐ | 3. COC Present: | ☑ | ☐ |
| 2. Custody Seals Intact: | ☑ | ☐ | 4. Smpl Dates/Time OK | ☑ | ☐ |

| Cooler Temperature | Y | or N |
|---|---|---|
| 1. Temp criteria achieved: | ☑ | ☐ |
| 2. Cooler temp verification: | IR Gun | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

| Quality Control Preservation | Y | or N | N/A |
|---|---|---|---|
| 1. Trip Blank present / cooler: | ☑ | ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ | ☐ | ☐ |
| 3. Samples preserved properly: | ☑ | ☐ | |
| 4. VOCs headspace free: | ☑ | ☐ | ☐ |

| Sample Integrity - Documentation | Y | or N |
|---|---|---|
| 1. Sample labels present on bottles: | ☑ | ☐ |
| 2. Container labeling complete: | ☑ | ☐ |
| 3. Sample container label / COC agree: | ☑ | ☐ |

| Sample Integrity - Condition | Y | or N |
|---|---|---|
| 1. Sample recvd within HT: | ☑ | ☐ |
| 2. All containers accounted for: | ☑ | ☐ |
| 3. Condition of sample: | Intact | |

| Sample Integrity - Instructions | Y | or N | N/A |
|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | ☐ | |
| 4. Compositing instructions clear: | ☐ | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | ☐ | ☑ |

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732 329.3499

Dayton, New Jersey
www/accutest.com

5.1

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**JC1106: Chain of Custody**
**Page 3 of 3**

# Internal Sample Tracking Chronicle

United Technologies Corporation

**Job No:** JC1106

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM

5.2

5

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JC1106-1 | Collected: 04-AUG-15 12:20 By: AH | | Received: 08-AUG-15 By: DG | | | |
| HSSER-SMW08-080415 | | | | | | |
| JC1106-1 | SW846 8260C | 12-AUG-15 14:48 | XC | | | V8260SL |
| JC1106-2 | Collected: 04-AUG-15 13:35 By: AH | | Received: 08-AUG-15 By: DG | | | |
| HSSER-GMZ01-080415 | | | | | | |
| JC1106-2 | SW846 8260C | 12-AUG-15 14:21 | XC | | | V8260SL |
| JC1106-3 | Collected: 04-AUG-15 14:25 By: AH | | Received: 08-AUG-15 By: DG | | | |
| HSSER-SMW01-080415 | | | | | | |
| JC1106-3 | SW846 8260C | 11-AUG-15 18:18 | XC | | | V8260SL |
| JC1106-4 | Collected: 04-AUG-15 15:30 By: AH | | Received: 08-AUG-15 By: DG | | | |
| HSSER-SMW02-080415 | | | | | | |
| JC1106-4 | SW846 8260C | 11-AUG-15 18:45 | XC | | | V8260SL |
| JC1106-5 | Collected: 04-AUG-15 16:55 By: AH | | Received: 08-AUG-15 By: DG | | | |
| HSSER-MW203-080415 | | | | | | |
| JC1106-5 | SW846 8260C | 11-AUG-15 14:36 | XC | | | V8260SL |
| JC1106-6 | Collected: 05-AUG-15 08:25 By: AH | | Received: 08-AUG-15 By: DG | | | |
| HSSER-MW07FGA-080515 | | | | | | |
| JC1106-6 | SW846 8260C | 11-AUG-15 17:51 | XC | | | V8260SL |
| JC1106-7 | Collected: 04-AUG-15 11:30 By: AH | | Received: 08-AUG-15 By: DG | | | |
| HSSER-FBLK01-080415 | | | | | | |
| JC1106-7 | SW846 8260C | 11-AUG-15 14:09 | XC | | | V8260SL |
| JC1106-8 | Collected: 05-AUG-15 09:25 By: AH | | Received: 08-AUG-15 By: DG | | | |
| HSSER-SMW19-080515 | | | | | | |
| JC1106-8 | SW846 8260C | 11-AUG-15 20:07 | XC | | | V8260SL |

# Internal Sample Tracking Chronicle

United Technologies Corporation

**Job No:** JC1106

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM



| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JC1106-9 Collected: 05-AUG-15 10:55 By: AH Received: 08-AUG-15 By: DG HSSER-GMZ04-080515 | | | | | | |
| JC1106-9 | SW846 8260C | 12-AUG-15 13:27 | XC | | | V8260SL |
| JC1106-10 Collected: 05-AUG-15 12:00 By: AH Received: 08-AUG-15 By: DG HSSER-SMW21-080515 | | | | | | |
| JC1106-10 | SW846 8260C | 11-AUG-15 15:30 | XC | | | V8260SL |
| JC1106-11 Collected: 05-AUG-15 13:45 By: AH Received: 08-AUG-15 By: DG HSSER-SMW20-080515 | | | | | | |
| JC1106-11 | SW846 8260C | 11-AUG-15 21:28 | XC | | | V8260SL |
| JC1106-12 Collected: 05-AUG-15 15:00 By: AH Received: 08-AUG-15 By: DG HSSER-GMZ03-080515 | | | | | | |
| JC1106-12 | SW846 8260C | 11-AUG-15 21:01 | XC | | | V8260SL |
| JC1106-13 Collected: 05-AUG-15 16:30 By: AH Received: 08-AUG-15 By: DG HSSER-GMZ02-080515 | | | | | | |
| JC1106-13 | SW846 8260C | 11-AUG-15 15:03 | XC | | | V8260SL |
| JC1106-14 Collected: 05-AUG-15 00:00 By: AH Received: 08-AUG-15 By: DG HSSER-DUP01-080515 | | | | | | |
| JC1106-14 | SW846 8260C | 11-AUG-15 20:34 | XC | | | V8260SL |
| JC1106-15 Collected: 06-AUG-15 08:20 By: AH Received: 08-AUG-15 By: DG HSSER-PMW01-080615 | | | | | | |
| JC1106-15 | SW846 8260C | 11-AUG-15 19:13 | XC | | | V8260SL |
| JC1106-16 Collected: 06-AUG-15 09:25 By: AH Received: 08-AUG-15 By: DG HSSER-PMW02-080615 | | | | | | |
| JC1106-16 | SW846 8260C | 12-AUG-15 13:54 | XC | | | V8260SL |

# Internal Sample Tracking Chronicle

United Technologies Corporation

**Job No:** JC1106

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM

5.2 5

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JC1106-17 Collected: 06-AUG-15 08:40 By: AH Received: 08-AUG-15 By: DG HSSER-EBLK01-080615 | | | | | | |
| JC1106-17 | SW846 8260C | 12-AUG-15 05:07 | XC | | | V8260SL |
| JC1106-18 Collected: 06-AUG-15 10:30 By: AH Received: 08-AUG-15 By: DG HSSER-SMW04-080615 | | | | | | |
| JC1106-18 | SW846 8260C | 11-AUG-15 19:40 | XC | | | V8260SL |
| JC1106-19 Collected: 06-AUG-15 10:30 By: AH Received: 08-AUG-15 By: DG HSSER-TRIP01-080415 | | | | | | |
| JC1106-19 | SW846 8260C | 11-AUG-15 17:24 | XC | | | V8260SL |

# Accutest Internal Chain of Custody



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Received:** 08/08/15

5.3

| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JC1106-1.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-1.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-1.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-1.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-1.2 | Secured Storage | Ximena Collado | 08/12/15 11:56 | Retrieve from Storage |
| JC1106-1.2 | Ximena Collado | GCMS3D | 08/12/15 11:56 | Load on Instrument |
| JC1106-1.2 | GCMS3D | Ximena Collado | 08/13/15 09:49 | Unload from Instrument |
| JC1106-1.2 | Ximena Collado | Secured Storage | 08/13/15 09:49 | Return to Storage |
| JC1106-2.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-2.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-2.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-2.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-2.2 | Secured Storage | Ximena Collado | 08/12/15 11:56 | Retrieve from Storage |
| JC1106-2.2 | Ximena Collado | GCMS3D | 08/12/15 11:56 | Load on Instrument |
| JC1106-2.2 | GCMS3D | Ximena Collado | 08/13/15 09:49 | Unload from Instrument |
| JC1106-2.2 | Ximena Collado | Secured Storage | 08/13/15 09:49 | Return to Storage |
| JC1106-3.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-3.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-3.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-3.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-4.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-4.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-4.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-4.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-5.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-5.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-5.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-5.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-6.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-6.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-6.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-6.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-7.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-7.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-7.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-7.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |

# Accutest Internal Chain of Custody



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Received:** 08/08/15

5.3

| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JC1106-8.2 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-8.2 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-8.2 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-8.2 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-9.1 | Secured Storage | Ximena Collado | 08/12/15 11:56 | Retrieve from Storage |
| JC1106-9.1 | Ximena Collado | GCMS3D | 08/12/15 11:56 | Load on Instrument |
| JC1106-9.1 | GCMS3D | Ximena Collado | 08/13/15 09:49 | Unload from Instrument |
| JC1106-9.1 | Ximena Collado | Secured Storage | 08/13/15 09:49 | Return to Storage |
| JC1106-9.2 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-9.2 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-9.2 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-9.2 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-9.2 | Secured Storage | Ximena Collado | 08/12/15 16:36 | Retrieve from Storage |
| JC1106-9.2 | Ximena Collado | GCMS3D | 08/12/15 16:36 | Load on Instrument |
| JC1106-9.2 | GCMS3D | Ximena Collado | 08/13/15 09:49 | Unload from Instrument |
| JC1106-9.2 | Ximena Collado | Secured Storage | 08/13/15 09:49 | Return to Storage |
| JC1106-10.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-10.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-10.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-10.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-11.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-11.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-11.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-11.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-12.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-12.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-12.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-12.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-13.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-13.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-13.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-13.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-13.6 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-13.6 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-13.6 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-13.6 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |

# Accutest Internal Chain of Custody



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Received:** 08/08/15

| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JC1106-13.7 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-13.7 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-13.7 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-13.7 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-14.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-14.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-14.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-14.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-15.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-15.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-15.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-15.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-16.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-16.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-16.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-16.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-16.2 | Secured Storage | Ximena Collado | 08/12/15 11:56 | Retrieve from Storage |
| JC1106-16.2 | Ximena Collado | GCMS3D | 08/12/15 11:56 | Load on Instrument |
| JC1106-16.2 | GCMS3D | Ximena Collado | 08/13/15 09:49 | Unload from Instrument |
| JC1106-16.2 | Ximena Collado | Secured Storage | 08/13/15 09:49 | Return to Storage |
| JC1106-17.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-17.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-17.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-17.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-18.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-18.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-18.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-18.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |
| JC1106-19.1 | Secured Storage | Ximena Collado | 08/11/15 13:05 | Retrieve from Storage |
| JC1106-19.1 | Ximena Collado | GCMS3D | 08/11/15 13:05 | Load on Instrument |
| JC1106-19.1 | GCMS3D | Ximena Collado | 08/12/15 09:30 | Unload from Instrument |
| JC1106-19.1 | Ximena Collado | Secured Storage | 08/12/15 09:30 | Return to Storage |

5.3 (5)

New Jersey ACCUTEST LABORATORIES

# GC/MS Volatiles

## QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

# Method Blank Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V3D4822-MB | 3D112519.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-3, JC1106-4, JC1106-5, JC1106-6, JC1106-7, JC1106-8, JC1106-10, JC1106-11, JC1106-12, JC1106-13, JC1106-14, JC1106-15, JC1106-18, JC1106-19

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.18 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.51 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.27 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.65 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.73 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.40 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.16 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.21 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.22 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.15 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | 73-122% |
| 2037-26-5 | Toluene-D8 | 102% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | 78-117% |

# Method Blank Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V3D4823-MB | 3D112544.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4823 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-17

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.18 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.51 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.27 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.65 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.73 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.40 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.16 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.21 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.22 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.15 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 112% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 114% | 73-122% |
| 2037-26-5 | Toluene-D8 | 102% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | 78-117% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

# Method Blank Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V3D4824-MB | 3D112569.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-1, JC1106-2, JC1106-9, JC1106-16

6.1.3

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.18 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.51 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.27 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.65 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.73 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.40 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.16 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.21 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.22 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.15 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 114% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 110% | 73-122% |
| 2037-26-5 | Toluene-D8 | 101% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | 78-117% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

# Method Blank Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V3D4823-MB2 | 3D112565.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4823 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1072-1MS, JC1072-1MSD



| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.18 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.51 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.27 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.65 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.73 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.40 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.16 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.21 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.22 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.15 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 113% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 112% | 73-122% |
| 2037-26-5 | Toluene-D8 | 102% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | 78-117% |

# Blank Spike Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V3D4822-BS | 3D112520.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-3, JC1106-4, JC1106-5, JC1106-6, JC1106-7, JC1106-8, JC1106-10, JC1106-11, JC1106-12, JC1106-13, JC1106-14, JC1106-15, JC1106-18, JC1106-19

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 50 | 59.5 | 119 | 80-125 |
| 107-06-2 | 1,2-Dichloroethane | 50 | 56.0 | 112 | 78-131 |
| 75-35-4 | 1,1-Dichloroethene | 50 | 55.7 | 111 | 73-127 |
| 156-59-2 | cis-1,2-Dichloroethene | 50 | 52.4 | 105 | 77-118 |
| 156-60-5 | trans-1,2-Dichloroethene | 50 | 55.9 | 112 | 75-118 |
| 100-41-4 | Ethylbenzene | 50 | 52.3 | 105 | 80-118 |
| 75-09-2 | Methylene chloride | 50 | 57.0 | 114 | 75-122 |
| 127-18-4 | Tetrachloroethene | 50 | 50.8 | 102 | 69-138 |
| 108-88-3 | Toluene | 50 | 56.9 | 114 | 80-122 |
| 71-55-6 | 1,1,1-Trichloroethane | 50 | 60.4 | 121 | 80-131 |
| 79-00-5 | 1,1,2-Trichloroethane | 50 | 55.6 | 111 | 78-122 |
| 79-01-6 | Trichloroethene | 50 | 54.9 | 110 | 83-122 |
| 75-01-4 | Vinyl chloride | 50 | 53.8 | 108 | 57-138 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 110% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 108% | 73-122% |
| 2037-26-5 | Toluene-D8 | 103% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 99% | 78-117% |

* = Outside of Control Limits.

6.2.1

# Blank Spike Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V3D4823-BS | 3D112545.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4823 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-17

6.2.2 ⑨

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 50 | 56.5 | 113 | 80-125 |
| 107-06-2 | 1,2-Dichloroethane | 50 | 55.6 | 111 | 78-131 |
| 75-35-4 | 1,1-Dichloroethene | 50 | 53.0 | 106 | 73-127 |
| 156-59-2 | cis-1,2-Dichloroethene | 50 | 49.0 | 98 | 77-118 |
| 156-60-5 | trans-1,2-Dichloroethene | 50 | 53.1 | 106 | 75-118 |
| 100-41-4 | Ethylbenzene | 50 | 50.6 | 101 | 80-118 |
| 75-09-2 | Methylene chloride | 50 | 53.5 | 107 | 75-122 |
| 127-18-4 | Tetrachloroethene | 50 | 52.7 | 105 | 69-138 |
| 108-88-3 | Toluene | 50 | 55.7 | 111 | 80-122 |
| 71-55-6 | 1,1,1-Trichloroethane | 50 | 58.1 | 116 | 80-131 |
| 79-00-5 | 1,1,2-Trichloroethane | 50 | 54.3 | 109 | 78-122 |
| 79-01-6 | Trichloroethene | 50 | 53.2 | 106 | 83-122 |
| 75-01-4 | Vinyl chloride | 50 | 60.2 | 120 | 57-138 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 108% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 105% | 73-122% |
| 2037-26-5 | Toluene-D8 | 104% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 102% | 78-117% |

* = Outside of Control Limits.

# Blank Spike Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V3D4824-BS | 3D112570.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-1, JC1106-2, JC1106-9, JC1106-16

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 50 | 55.3 | 111 | 80-125 |
| 107-06-2 | 1,2-Dichloroethane | 50 | 53.6 | 107 | 78-131 |
| 75-35-4 | 1,1-Dichloroethene | 50 | 52.5 | 105 | 73-127 |
| 156-59-2 | cis-1,2-Dichloroethene | 50 | 49.1 | 98 | 77-118 |
| 156-60-5 | trans-1,2-Dichloroethene | 50 | 52.4 | 105 | 75-118 |
| 100-41-4 | Ethylbenzene | 50 | 49.3 | 99 | 80-118 |
| 75-09-2 | Methylene chloride | 50 | 53.2 | 106 | 75-122 |
| 127-18-4 | Tetrachloroethene | 50 | 48.7 | 97 | 69-138 |
| 108-88-3 | Toluene | 50 | 53.9 | 108 | 80-122 |
| 71-55-6 | 1,1,1-Trichloroethane | 50 | 56.1 | 112 | 80-131 |
| 79-00-5 | 1,1,2-Trichloroethane | 50 | 51.9 | 104 | 78-122 |
| 79-01-6 | Trichloroethene | 50 | 51.9 | 104 | 83-122 |
| 75-01-4 | Vinyl chloride | 50 | 55.2 | 110 | 57-138 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 110% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 107% | 73-122% |
| 2037-26-5 | Toluene-D8 | 103% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 101% | 78-117% |

* = Outside of Control Limits.

6.2.3

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| JC1106-13MS | 3D112526.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| JC1106-13MSD | 3D112527.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |
| JC1106-13 | 3D112524.D | 1 | 08/11/15 | XC | n/a | n/a | V3D4822 |



**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-3, JC1106-4, JC1106-5, JC1106-6, JC1106-7, JC1106-8, JC1106-10, JC1106-11, JC1106-12, JC1106-13, JC1106-14, JC1106-15, JC1106-18, JC1106-19

| CAS No. | Compound | JC1106-13 ug/l | Q | Spike ug/l | MS ug/l | MS % | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 1.6 | | 50 | 60.8 | 118 | 50 | 57.4 | 112 | 6 | 60-129/13 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 50 | 59.2 | 118 | 50 | 58.2 | 116 | 2 | 72-133/12 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 50 | 54.2 | 108 | 50 | 50.2 | 100 | 8 | 40-137/17 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.57 | J | 50 | 55.5 | 110 | 50 | 52.6 | 104 | 5 | 57-128/13 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 50 | 57.0 | 114 | 50 | 54.1 | 108 | 5 | 53-128/15 |
| 100-41-4 | Ethylbenzene | ND | | 50 | 53.8 | 108 | 50 | 52.4 | 105 | 3 | 38-139/12 |
| 75-09-2 | Methylene chloride | ND | | 50 | 59.3 | 119 | 50 | 56.5 | 113 | 5 | 63-128/13 |
| 127-18-4 | Tetrachloroethene | 0.43 | J | 50 | 49.2 | 98 | 50 | 48.3 | 96 | 2 | 43-145/15 |
| 108-88-3 | Toluene | ND | | 50 | 58.1 | 116 | 50 | 55.9 | 112 | 4 | 51-136/13 |
| 71-55-6 | 1,1,1-Trichloroethane | 3.0 | | 50 | 59.4 | 113 | 50 | 56.1 | 106 | 6 | 51-141/16 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 50 | 59.0 | 118 | 50 | 56.4 | 113 | 5 | 71-127/12 |
| 79-01-6 | Trichloroethene | 0.40 | J | 50 | 55.2 | 110 | 50 | 53.5 | 106 | 3 | 55-136/14 |
| 75-01-4 | Vinyl chloride | ND | | 50 | 43.6 | 87 | 50 | 42.6 | 85 | 2 | 34-147/17 |

| CAS No. | Surrogate Recoveries | MS | MSD | JC1106-13 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 110% | 108% | 111% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 107% | 104% | 112% | 73-122% |
| 2037-26-5 | Toluene-D8 | 103% | 103% | 98% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | 102% | 97% | 78-117% |

* = Outside of Control Limits.

Raw Data: 3D112566.D 3D112567.D

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| JC1072-1MS | 3D112566.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4823 |
| JC1072-1MSD | 3D112567.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4823 |
| JC1072-1 | 3D112560.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4823 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-17

6.3.2

| CAS No. | Compound | JC1072-1 ug/l | Q | Spike ug/l | MS ug/l | MS % | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | | 50 | 55.1 | 110 | 50 | 55.7 | 111 | 1 | 60-129/13 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 50 | 56.2 | 112 | 50 | 58.0 | 116 | 3 | 72-133/12 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 50 | 50.6 | 101 | 50 | 50.6 | 101 | 0 | 40-137/17 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 50 | 49.7 | 99 | 50 | 50.5 | 101 | 2 | 57-128/13 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 50 | 53.0 | 106 | 50 | 53.2 | 106 | 0 | 53-128/15 |
| 100-41-4 | Ethylbenzene | ND | | 50 | 49.3 | 99 | 50 | 51.3 | 103 | 4 | 38-139/12 |
| 75-09-2 | Methylene chloride | ND | | 50 | 54.7 | 109 | 50 | 54.7 | 109 | 0 | 63-128/13 |
| 127-18-4 | Tetrachloroethene | ND | | 50 | 46.1 | 92 | 50 | 48.5 | 97 | 5 | 43-145/15 |
| 108-88-3 | Toluene | ND | | 50 | 55.3 | 111 | 50 | 56.0 | 112 | 1 | 51-136/13 |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 50 | 55.2 | 110 | 50 | 54.4 | 109 | 1 | 51-141/16 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 50 | 55.7 | 111 | 50 | 58.2 | 116 | 4 | 71-127/12 |
| 79-01-6 | Trichloroethene | ND | | 50 | 52.6 | 105 | 50 | 53.8 | 108 | 2 | 55-136/14 |
| 75-01-4 | Vinyl chloride | ND | | 50 | 54.9 | 110 | 50 | 56.2 | 112 | 2 | 34-147/17 |

| CAS No. | Surrogate Recoveries | MS | MSD | JC1072-1 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 110% | 107% | 108% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 106% | 105% | 112% | 73-122% |
| 2037-26-5 | Toluene-D8 | 105% | 103% | 100% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 100% | 99% | 95% | 78-117% |

* = Outside of Control Limits.

Raw Data: 3D112580.D 3D112581.D

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| JC1106-9MS | 3D112580.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |
| JC1106-9MSD | 3D112581.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |
| JC1106-9 | 3D112572.D | 1 | 08/12/15 | XC | n/a | n/a | V3D4824 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1106-1, JC1106-2, JC1106-9, JC1106-16

6.3.3 ⑥

| CAS No. | Compound | JC1106-9 ug/l | Q | Spike ug/l | MS ug/l | MS % | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 1.1 | | 50 | 53.7 | 105 | 50 | 52.5 | 103 | 2 | 60-129/13 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 50 | 54.0 | 108 | 50 | 53.1 | 106 | 2 | 72-133/12 |
| 75-35-4 | 1,1-Dichloroethene | 0.93 | J | 50 | 49.7 | 98 | 50 | 48.8 | 96 | 2 | 40-137/17 |
| 156-59-2 | cis-1,2-Dichloroethene | 3.5 | | 50 | 54.0 | 101 | 50 | 52.5 | 98 | 3 | 57-128/13 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 50 | 51.0 | 102 | 50 | 50.0 | 100 | 2 | 53-128/15 |
| 100-41-4 | Ethylbenzene | ND | | 50 | 50.9 | 102 | 50 | 50.5 | 101 | 1 | 38-139/12 |
| 75-09-2 | Methylene chloride | ND | | 50 | 54.1 | 108 | 50 | 53.2 | 106 | 2 | 63-128/13 |
| 127-18-4 | Tetrachloroethene | ND | | 50 | 47.0 | 94 | 50 | 47.5 | 95 | 1 | 43-145/15 |
| 108-88-3 | Toluene | ND | | 50 | 53.6 | 107 | 50 | 54.2 | 108 | 1 | 51-136/13 |
| 71-55-6 | 1,1,1-Trichloroethane | 53.6 | | 50 | 78.6 | 50* [a] | 50 | 78.5 | 50* [a] | 0 | 51-141/16 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 50 | 54.7 | 109 | 50 | 55.0 | 110 | 1 | 71-127/12 |
| 79-01-6 | Trichloroethene | 2.6 | | 50 | 52.3 | 99 | 50 | 52.2 | 99 | 0 | 55-136/14 |
| 75-01-4 | Vinyl chloride | ND | | 50 | 49.1 | 98 | 50 | 48.9 | 98 | 0 | 34-147/17 |

| CAS No. | Surrogate Recoveries | MS | MSD | JC1106-9 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 107% | 104% | 112% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 98% | 97% | 111% | 73-122% |
| 2037-26-5 | Toluene-D8 | 102% | 102% | 102% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 103% | 101% | 96% | 78-117% |

(a) Outside control limits due to matrix interference.

* = Outside of Control Limits.

# Instrument Performance Check (BFB)



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V3D4810-BFB
**Lab File ID:** 3D112234.D
**Instrument ID:** GCMS3D
**Injection Date:** 07/29/15
**Injection Time:** 19:16

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 9449 | 16.9 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 24824 | 44.4 | | Pass |
| 95 | Base peak, 100% relative abundance | 55917 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 3622 | 6.48 | | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.00 | (0.00) [a] | Pass |
| 174 | 50.0 - 120.0% of mass 95 | 55002 | 98.4 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 4400 | 7.87 | (8.00) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 53496 | 95.7 | (97.3) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 3680 | 6.58 | (6.88) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| V3D4810-IC4810 | 3D112235.D | 07/29/15 | 20:15 | 00:59 | Initial cal 0.2 |
| V3D4810-IC4810 | 3D112236.D | 07/29/15 | 20:42 | 01:26 | Initial cal 0.5 |
| V3D4810-IC4810 | 3D112237.D | 07/29/15 | 21:10 | 01:54 | Initial cal 1 |
| V3D4810-IC4810 | 3D112238.D | 07/29/15 | 21:37 | 02:21 | Initial cal 2 |
| V3D4810-IC4810 | 3D112239.D | 07/29/15 | 22:04 | 02:48 | Initial cal 5 |
| V3D4810-IC4810 | 3D112240.D | 07/29/15 | 22:31 | 03:15 | Initial cal 10 |
| V3D4810-IC4810 | 3D112241.D | 07/29/15 | 22:58 | 03:42 | Initial cal 20 |
| V3D4810-ICC4810 | 3D112242.D | 07/29/15 | 23:25 | 04:09 | Initial cal 50 |
| V3D4810-IC4810 | 3D112243.D | 07/29/15 | 23:53 | 04:37 | Initial cal 100 |
| V3D4810-IC4810 | 3D112244.D | 07/30/15 | 00:20 | 05:04 | Initial cal 200 |
| V3D4810-ICV4810 | 3D112247.D | 07/30/15 | 01:41 | 06:25 | Initial cal verification 50 |

# Instrument Performance Check (BFB)



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V3D4822-BFB **Injection Date:** 08/11/15
**Lab File ID:** 3D112515.D **Injection Time:** 09:53
**Instrument ID:** GCMS3D

6.4.2 ⓐ

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 8665 | 17.8 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 21568 | 44.2 | | Pass |
| 95 | Base peak, 100% relative abundance | 48757 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 3479 | 7.14 | | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.00 | (0.00) [a] | Pass |
| 174 | 50.0 - 120.0% of mass 95 | 49194 | 100.9 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 3521 | 7.22 | (7.16) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 47664 | 97.8 | (96.9) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 3271 | 6.71 | (6.86) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| V3D4822-CC4810 | 3D112517.D | 08/11/15 | 11:16 | 01:23 | Continuing cal 20 |
| V3D4822-MB | 3D112519.D | 08/11/15 | 12:38 | 02:45 | Method Blank |
| V3D4822-BS | 3D112520.D | 08/11/15 | 13:12 | 03:19 | Blank Spike |
| JC1106-7 | 3D112522.D | 08/11/15 | 14:09 | 04:16 | HSSER-FBLK01-080415 |
| JC1106-5 | 3D112523.D | 08/11/15 | 14:36 | 04:43 | HSSER-MW203-080415 |
| JC1106-13 | 3D112524.D | 08/11/15 | 15:03 | 05:10 | HSSER-GMZ02-080515 |
| JC1106-10 | 3D112525.D | 08/11/15 | 15:30 | 05:37 | HSSER-SMW21-080515 |
| JC1106-13MS | 3D112526.D | 08/11/15 | 16:03 | 06:10 | Matrix Spike |
| JC1106-13MSD | 3D112527.D | 08/11/15 | 16:30 | 06:37 | Matrix Spike Duplicate |
| JC1106-19 | 3D112529.D | 08/11/15 | 17:24 | 07:31 | HSSER-TRIP01-080415 |
| JC1106-6 | 3D112530.D | 08/11/15 | 17:51 | 07:58 | HSSER-MW07FGA-080515 |
| JC1106-3 | 3D112531.D | 08/11/15 | 18:18 | 08:25 | HSSER-SMW01-080415 |
| JC1106-4 | 3D112532.D | 08/11/15 | 18:45 | 08:52 | HSSER-SMW02-080415 |
| JC1106-15 | 3D112533.D | 08/11/15 | 19:13 | 09:20 | HSSER-PMW01-080615 |
| JC1106-18 | 3D112534.D | 08/11/15 | 19:40 | 09:47 | HSSER-SMW04-080615 |
| JC1106-8 | 3D112535.D | 08/11/15 | 20:07 | 10:14 | HSSER-SMW19-080515 |
| JC1106-14 | 3D112536.D | 08/11/15 | 20:34 | 10:41 | HSSER-DUP01-080515 |
| JC1106-12 | 3D112537.D | 08/11/15 | 21:01 | 11:08 | HSSER-GMZ03-080515 |
| JC1106-11 | 3D112538.D | 08/11/15 | 21:28 | 11:35 | HSSER-SMW20-080515 |

# Instrument Performance Check (BFB)



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V3D4823-BFB
**Lab File ID:** 3D112541.D
**Instrument ID:** GCMS3D
**Injection Date:** 08/11/15
**Injection Time:** 22:50

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 7142 | 16.6 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 19101 | 44.5 | | Pass |
| 95 | Base peak, 100% relative abundance | 42928 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 2834 | 6.60 | | Pass |
| 173 | Less than 2.0% of mass 174 | 632 | 1.47 | (1.36) [a] | Pass |
| 174 | 50.0 - 120.0% of mass 95 | 46456 | 108.2 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 3302 | 7.69 | (7.11) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 44520 | 103.7 | (95.8) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 2956 | 6.89 | (6.64) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| V3D4823-CC4810 | 3D112542.D | 08/11/15 | 23:17 | 00:27 | Continuing cal 50 |
| V3D4823-MB | 3D112544.D | 08/12/15 | 00:11 | 01:21 | Method Blank |
| V3D4823-BS | 3D112545.D | 08/12/15 | 00:38 | 01:48 | Blank Spike |
| ZZZZZZ | 3D112549.D | 08/12/15 | 02:26 | 03:36 | (unrelated sample) |
| ZZZZZZ | 3D112550.D | 08/12/15 | 02:53 | 04:03 | (unrelated sample) |
| ZZZZZZ | 3D112551.D | 08/12/15 | 03:20 | 04:30 | (unrelated sample) |
| ZZZZZZ | 3D112552.D | 08/12/15 | 03:47 | 04:57 | (unrelated sample) |
| ZZZZZZ | 3D112553.D | 08/12/15 | 04:13 | 05:23 | (unrelated sample) |
| JC1106-17 | 3D112555.D | 08/12/15 | 05:07 | 06:17 | HSSER-EBLK01-080615 |
| JC1072-1 | 3D112560.D | 08/12/15 | 07:22 | 08:32 | (used for QC only; not part of job JC1106) |
| ZZZZZZ | 3D112561.D | 08/12/15 | 07:49 | 08:59 | (unrelated sample) |

# Instrument Performance Check (BFB)



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | |
|---|---|---|---|
| **Sample:** | V3D4824-BFB | **Injection Date:** | 08/12/15 |
| **Lab File ID:** | 3D112562.D | **Injection Time:** | 08:16 |
| **Instrument ID:** | GCMS3D | | |

6.4.4 ⑥

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 8422 | 18.2 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 20373 | 44.1 | | Pass |
| 95 | Base peak, 100% relative abundance | 46160 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 2967 | 6.43 | | Pass |
| 173 | Less than 2.0% of mass 174 | 385 | 0.83 | (0.81) [a] | Pass |
| 174 | 50.0 - 120.0% of mass 95 | 47440 | 102.8 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 3561 | 7.71 | (7.51) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 46184 | 100.1 | (97.4) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 2874 | 6.23 | (6.22) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| V3D4824-CC4810 | 3D112563.D | 08/12/15 | 09:17 | 01:01 | Continuing cal 20 |
| V3D4823-MB2 | 3D112565.D | 08/12/15 | 10:15 | 01:59 | Method Blank |
| JC1072-1MS | 3D112566.D | 08/12/15 | 10:44 | 02:28 | Matrix Spike |
| JC1072-1MSD | 3D112567.D | 08/12/15 | 11:11 | 02:55 | Matrix Spike Duplicate |
| V3D4824-MB | 3D112569.D | 08/12/15 | 12:06 | 03:50 | Method Blank |
| V3D4824-BS | 3D112570.D | 08/12/15 | 12:33 | 04:17 | Blank Spike |
| JC1106-9 | 3D112572.D | 08/12/15 | 13:27 | 05:11 | HSSER-GMZ04-080515 |
| JC1106-16 | 3D112573.D | 08/12/15 | 13:54 | 05:38 | HSSER-PMW02-080615 |
| JC1106-2 | 3D112574.D | 08/12/15 | 14:21 | 06:05 | HSSER-GMZ01-080415 |
| JC1106-1 | 3D112575.D | 08/12/15 | 14:48 | 06:32 | HSSER-SMW08-080415 |
| ZZZZZZ | 3D112576.D | 08/12/15 | 15:15 | 06:59 | (unrelated sample) |
| ZZZZZZ | 3D112577.D | 08/12/15 | 15:42 | 07:26 | (unrelated sample) |
| ZZZZZZ | 3D112578.D | 08/12/15 | 16:10 | 07:54 | (unrelated sample) |
| ZZZZZZ | 3D112579.D | 08/12/15 | 16:37 | 08:21 | (unrelated sample) |
| JC1106-9MS | 3D112580.D | 08/12/15 | 17:04 | 08:48 | Matrix Spike |
| JC1106-9MSD | 3D112581.D | 08/12/15 | 17:31 | 09:15 | Matrix Spike Duplicate |
| ZZZZZZ | 3D112582.D | 08/12/15 | 17:58 | 09:42 | (unrelated sample) |
| ZZZZZZ | 3D112583.D | 08/12/15 | 18:25 | 10:09 | (unrelated sample) |
| ZZZZZZ | 3D112584.D | 08/12/15 | 18:52 | 10:36 | (unrelated sample) |

# Volatile Internal Standard Area Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | |
|---|---|---|---|
| **Check Std:** | V3D4822-CC4810 | **Injection Date:** | 08/11/15 |
| **Lab File ID:** | 3D112517.D | **Injection Time:** | 11:16 |
| **Instrument ID:** | GCMS3D | **Method:** | SW846 8260C |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 105534 | 7.16 | 204849 | 9.39 | 234799 | 10.31 | 194668 | 13.48 | 122430 | 15.79 |
| Upper Limit [a] | 211068 | 7.66 | 409698 | 9.89 | 469598 | 10.81 | 389336 | 13.98 | 244860 | 16.29 |
| Lower Limit [b] | 52767 | 6.66 | 102425 | 8.89 | 117400 | 9.81 | 97334 | 12.98 | 61215 | 15.29 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| V3D4822-MB | 103952 | 7.18 | 226869 | 9.39 | 264986 | 10.31 | 216656 | 13.48 | 129511 | 15.79 |
| V3D4822-BS | 107290 | 7.18 | 202270 | 9.39 | 233933 | 10.31 | 196021 | 13.48 | 124533 | 15.79 |
| JC1106-7 | 92150 | 7.17 | 192784 | 9.39 | 222789 | 10.31 | 184238 | 13.48 | 117577 | 15.79 |
| JC1106-5 | 97975 | 7.17 | 195078 | 9.39 | 228938 | 10.31 | 186093 | 13.48 | 118621 | 15.79 |
| JC1106-13 | 91266 | 7.17 | 186566 | 9.40 | 219744 | 10.31 | 177389 | 13.48 | 110292 | 15.79 |
| JC1106-10 | 87229 | 7.17 | 179050 | 9.39 | 210954 | 10.31 | 172979 | 13.48 | 107549 | 15.79 |
| JC1106-13MS | 109061 | 7.17 | 200873 | 9.39 | 227802 | 10.31 | 191425 | 13.48 | 118628 | 15.79 |
| JC1106-13MSD | 106157 | 7.18 | 209488 | 9.39 | 234394 | 10.31 | 194946 | 13.48 | 117427 | 15.79 |
| JC1106-19 | 97633 | 7.17 | 205375 | 9.40 | 241116 | 10.31 | 197855 | 13.48 | 123858 | 15.79 |
| JC1106-6 | 95232 | 7.17 | 188915 | 9.39 | 220873 | 10.31 | 182140 | 13.48 | 113662 | 15.79 |
| JC1106-3 | 93947 | 7.17 | 191420 | 9.39 | 223101 | 10.31 | 183270 | 13.48 | 111855 | 15.79 |
| JC1106-4 | 93695 | 7.17 | 187081 | 9.40 | 219575 | 10.31 | 184978 | 13.48 | 115133 | 15.79 |
| JC1106-15 | 94051 | 7.17 | 193794 | 9.39 | 228111 | 10.31 | 188105 | 13.48 | 116304 | 15.79 |
| JC1106-18 | 88719 | 7.17 | 186366 | 9.39 | 213690 | 10.31 | 175269 | 13.48 | 108187 | 15.79 |
| JC1106-8 | 99250 | 7.17 | 189230 | 9.39 | 220375 | 10.31 | 181092 | 13.48 | 111525 | 15.79 |
| JC1106-14 | 91107 | 7.17 | 183583 | 9.39 | 216133 | 10.31 | 177301 | 13.48 | 109805 | 15.79 |
| JC1106-12 | 84872 | 7.17 | 176303 | 9.39 | 208560 | 10.31 | 169036 | 13.48 | 106176 | 15.79 |
| JC1106-11 | 84171 | 7.17 | 181857 | 9.39 | 212162 | 10.31 | 174691 | 13.48 | 107285 | 15.79 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | |
|---|---|---|---|
| **Check Std:** | V3D4823-CC4810 | **Injection Date:** | 08/11/15 |
| **Lab File ID:** | 3D112542.D | **Injection Time:** | 23:17 |
| **Instrument ID:** | GCMS3D | **Method:** | SW846 8260C |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 90136 | 7.17 | 190390 | 9.39 | 217047 | 10.31 | 183008 | 13.48 | 113415 | 15.79 |
| Upper Limit [a] | 180272 | 7.67 | 380780 | 9.89 | 434094 | 10.81 | 366016 | 13.98 | 226830 | 16.29 |
| Lower Limit [b] | 45068 | 6.67 | 95195 | 8.89 | 108524 | 9.81 | 91504 | 12.98 | 56708 | 15.29 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| V3D4823-MB | 82447 | 7.16 | 171750 | 9.39 | 198901 | 10.31 | 165044 | 13.48 | 101680 | 15.79 |
| V3D4823-BS | 93840 | 7.17 | 196820 | 9.40 | 222078 | 10.31 | 188570 | 13.48 | 114311 | 15.79 |
| ZZZZZZ | 95247 | 7.17 | 198301 | 9.39 | 228803 | 10.31 | 187554 | 13.48 | 115293 | 15.79 |
| ZZZZZZ | 93410 | 7.16 | 194718 | 9.39 | 227275 | 10.31 | 186257 | 13.48 | 117632 | 15.79 |
| ZZZZZZ | 93613 | 7.16 | 194392 | 9.39 | 224971 | 10.31 | 186632 | 13.48 | 115937 | 15.79 |
| ZZZZZZ | 91157 | 7.17 | 191813 | 9.39 | 226390 | 10.31 | 185266 | 13.48 | 113424 | 15.79 |
| ZZZZZZ | 89555 | 7.17 | 186162 | 9.39 | 217020 | 10.31 | 179683 | 13.48 | 114175 | 15.79 |
| JC1106-17 | 94319 | 7.17 | 190266 | 9.39 | 224022 | 10.31 | 184821 | 13.48 | 114314 | 15.79 |
| JC1072-1 | 90352 | 7.16 | 187714 | 9.39 | 220418 | 10.31 | 181445 | 13.48 | 111052 | 15.79 |
| ZZZZZZ | 88952 | 7.17 | 180001 | 9.39 | 212568 | 10.31 | 174775 | 13.48 | 108634 | 15.79 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | |
|---|---|---|---|
| **Check Std:** | V3D4824-CC4810 | **Injection Date:** | 08/12/15 |
| **Lab File ID:** | 3D112563.D | **Injection Time:** | 09:17 |
| **Instrument ID:** | GCMS3D | **Method:** | SW846 8260C |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 97817 | 7.17 | 204794 | 9.40 | 227986 | 10.32 | 187452 | 13.48 | 110302 | 15.79 |
| Upper Limit [a] | 195634 | 7.67 | 409588 | 9.90 | 455972 | 10.82 | 374904 | 13.98 | 220604 | 16.29 |
| Lower Limit [b] | 48909 | 6.67 | 102397 | 8.90 | 113993 | 9.82 | 93726 | 12.98 | 55151 | 15.29 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| V3D4823-MB2 | 89468 | 7.18 | 182832 | 9.39 | 209972 | 10.31 | 174088 | 13.48 | 109833 | 15.79 |
| JC1072-1MS | 99162 | 7.18 | 201673 | 9.39 | 227956 | 10.31 | 197596 | 13.48 | 122225 | 15.79 |
| JC1072-1MSD | 99080 | 7.17 | 197615 | 9.39 | 223819 | 10.31 | 186124 | 13.48 | 115672 | 15.79 |
| V3D4824-MB | 95029 | 7.18 | 192060 | 9.39 | 221163 | 10.31 | 183575 | 13.48 | 114634 | 15.79 |
| V3D4824-BS | 97953 | 7.17 | 207104 | 9.39 | 238560 | 10.31 | 200201 | 13.48 | 122169 | 15.79 |
| JC1106-9 | 91436 | 7.19 | 193182 | 9.39 | 221437 | 10.31 | 184042 | 13.48 | 114924 | 15.79 |
| JC1106-16 | 88764 | 7.18 | 186964 | 9.39 | 217383 | 10.31 | 181788 | 13.48 | 113725 | 15.79 |
| JC1106-2 | 92619 | 7.17 | 180692 | 9.39 | 212538 | 10.31 | 175332 | 13.48 | 108820 | 15.79 |
| JC1106-1 | 93640 | 7.18 | 196615 | 9.39 | 224320 | 10.31 | 180779 | 13.48 | 111990 | 15.79 |
| ZZZZZZ | 103650 | 7.17 | 196401 | 9.39 | 225527 | 10.31 | 186617 | 13.48 | 114903 | 15.79 |
| ZZZZZZ | 107002 | 7.17 | 204398 | 9.39 | 232631 | 10.31 | 188859 | 13.48 | 114136 | 15.79 |
| ZZZZZZ | 154553 | 7.16 | 223480 | 9.40 | 250790 | 10.31 | 206024 | 13.48 | 124766 | 15.79 |
| ZZZZZZ | 145130 | 7.16 | 230897 | 9.39 | 261778 | 10.31 | 212455 | 13.48 | 132696 | 15.79 |
| JC1106-9MS | 118942 | 7.18 | 243673 | 9.40 | 269432 | 10.31 | 220893 | 13.48 | 129859 | 15.79 |
| JC1106-9MSD | 120440 | 7.18 | 245404 | 9.39 | 271506 | 10.31 | 223373 | 13.48 | 132733 | 15.79 |
| ZZZZZZ | 113579 | 7.18 | 239484 | 9.39 | 274644 | 10.31 | 224882 | 13.48 | 143888 | 15.79 |
| ZZZZZZ | 114948 | 7.17 | 230024 | 9.39 | 265060 | 10.31 | 216179 | 13.48 | 132533 | 15.79 |
| ZZZZZZ | 163458 | 7.16 | 211232 | 9.39 | 244674 | 10.31 | 197571 | 13.48 | 122611 | 15.79 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Surrogate Recovery Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Method:** SW846 8260C **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 | S2 | S3 | S4 |
|---|---|---|---|---|---|
| JC1106-1 | 3D112575.D | 112 | 110 | 99 | 97 |
| JC1106-2 | 3D112574.D | 112 | 115 | 100 | 95 |
| JC1106-3 | 3D112531.D | 110 | 113 | 101 | 98 |
| JC1106-4 | 3D112532.D | 114 | 113 | 101 | 97 |
| JC1106-5 | 3D112523.D | 112 | 114 | 101 | 97 |
| JC1106-6 | 3D112530.D | 111 | 112 | 100 | 96 |
| JC1106-7 | 3D112522.D | 111 | 112 | 101 | 96 |
| JC1106-8 | 3D112535.D | 113 | 115 | 101 | 97 |
| JC1106-9 | 3D112572.D | 112 | 111 | 102 | 96 |
| JC1106-10 | 3D112525.D | 113 | 114 | 99 | 97 |
| JC1106-11 | 3D112538.D | 114 | 113 | 101 | 97 |
| JC1106-12 | 3D112537.D | 113 | 115 | 99 | 97 |
| JC1106-13 | 3D112524.D | 111 | 112 | 98 | 97 |
| JC1106-14 | 3D112536.D | 114 | 117 | 101 | 97 |
| JC1106-15 | 3D112533.D | 113 | 112 | 100 | 96 |
| JC1106-16 | 3D112573.D | 111 | 112 | 100 | 95 |
| JC1106-17 | 3D112555.D | 108 | 112 | 101 | 98 |
| JC1106-18 | 3D112534.D | 111 | 112 | 100 | 98 |
| JC1106-19 | 3D112529.D | 112 | 113 | 101 | 96 |
| JC1072-1MS | 3D112566.D | 110 | 106 | 105 | 100 |
| JC1072-1MSD | 3D112567.D | 107 | 105 | 103 | 99 |
| JC1106-13MS | 3D112526.D | 110 | 107 | 103 | 100 |
| JC1106-13MSD | 3D112527.D | 108 | 104 | 103 | 102 |
| JC1106-9MS | 3D112580.D | 107 | 98 | 102 | 103 |
| JC1106-9MSD | 3D112581.D | 104 | 97 | 102 | 101 |
| V3D4822-BS | 3D112520.D | 110 | 108 | 103 | 99 |
| V3D4822-MB | 3D112519.D | 108 | 112 | 102 | 100 |
| V3D4823-BS | 3D112545.D | 108 | 105 | 104 | 102 |
| V3D4823-MB | 3D112544.D | 112 | 114 | 102 | 96 |
| V3D4824-BS | 3D112570.D | 110 | 107 | 103 | 101 |
| V3D4824-MB | 3D112569.D | 114 | 110 | 101 | 97 |
| V3D4823-MB2 | 3D112565.D | 113 | 112 | 102 | 95 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| **S1** = Dibromofluoromethane | 76-120% |
| **S2** = 1,2-Dichloroethane-D4 | 73-122% |
| **S3** = Toluene-D8 | 84-119% |
| **S4** = 4-Bromofluorobenzene | 78-117% |

Raw Data: 3D112235.D 3D112236.D 3D112237.D 3D112238.D 3D112239.D 3D112240.D 3D112241.D 3D112242.D 3D112243.D 3D112244.D

# Initial Calibration Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V3D4810-ICC4810
**Lab FileID:** 3D112242.D

6.7.1

Response Factor Report MS3D

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
Last Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

Calibration Files
5 =3D112239.D 0.5 =3D112236.D 2 =3D112238.D 50 =3D112242.D
100 =3D112243.D 1 =3D112237.D 200 =3D112244.D 20 =3D112241.D
10 =3D112240.D 0.2 =3D112235.D = =

| Compound | 5 | 0.5 | 2 | 50 | 100 | 1 | 200 | 20 | 10 | 0.2 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) I Tert Butyl Alcohol-d9 ----------ISTD---------- | | | | | | | | | | | | |
| 2) 1,4-dioxane | 0.077 | 0.076 | 0.089 | 0.088 | 0.066 | 0.084 | 0.088 | 0.079 | | | 0.081 | 9.78 |
| 3) tertiary butyl alcohol | 1.062 | 1.166 | 1.077 | 1.068 | | 1.038 | 1.109 | 1.037 | | | 1.080 | 4.19 |
| 4) I pentafluorobenzene ----------ISTD---------- | | | | | | | | | | | | |
| 5) FREON 115 | | | | | | | | | | | 0.000# | -1.00 |
| 6) FREON 152A | | | | | | | | | | | 0.000# | -1.00 |
| 7) chlorotrifluoroethene | | | | | | | | | | | 0.000# | -1.00 |
| 8) chlorodifluoromethane | 0.683 | 0.700 | 0.677 | 0.697 | | 0.696 | 0.686 | 0.613 | | | 0.679 | 4.45 |
| 9) dichlorodifluoromethane | 0.983 | 0.922 | 0.904 | 0.888 | 0.816 | 0.859 | 0.946 | 0.953 | | | 0.909 | 5.97 |
| 10) chloromethane | 0.687 | 0.843 | 0.635 | 0.679 | 0.688 | 0.671 | 0.734 | 0.649 | 0.646 | 0.993 | 0.723 | 15.54 |
| 11) vinyl chloride | 0.741 | 0.758 | 0.680 | 0.755 | 0.784 | 0.687 | 0.830 | 0.716 | 0.724 | 0.572 | 0.725 | 9.63 |
| 12) bromomethane | 0.472 | 0.564 | 0.447 | 0.449 | 0.441 | 0.501 | 0.422 | 0.451 | 0.447 | 0.489 | 0.468 | 8.78 |
| 13) chloroethane | 0.319 | 0.392 | 0.290 | 0.293 | 0.283 | 0.321 | 0.276 | 0.288 | 0.301 | | 0.307 | 11.55 |
| 14) 1,3-butadiene | | | | | | | | | | | 0.000# | -1.00 |
| 15) vinyl bromide | | | | | | | | | | | 0.000# | -1.00 |
| 16) trichlorofluoromethane | 0.808 | 0.708 | 0.737 | 0.786 | 0.774 | 0.674 | 0.768 | 0.778 | 0.772 | | 0.756 | 5.56 |
| 17) pentane | | | | | | | | | | | 0.000# | -1.00 |
| 18) ethyl ether | 0.179 | 0.180 | 0.178 | 0.179 | 0.227 | 0.181 | 0.187 | 0.182 | | | 0.187 | 8.81 |
| 19) freon 123a | | | | | | | | | | | 0.000# | -1.00 |
| 20) FREON 123 | | | | | | | | | | | 0.000# | -1.00 |
| 21) acrolein | 0.080 | 0.077 | 0.075 | 0.068 | 0.077 | 0.075 | | 0.074 | 0.074 | | 0.075 | 4.73 |
| 22) 1,1-dichloroethene | 0.587 | 0.419 | 0.602 | 0.620 | 0.600 | 0.720 | 0.605 | 0.609 | 0.593 | | 0.595 | 12.98 |
| 23) acetone | | | | | | | | | | | | |

# Initial Calibration Summary

**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V3D4810-ICC4810
**Lab FileID:** 3D112242.D

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0.120 | | 0.095 | 0.109 | | 0.109 | 0.120 | 0.120 | | | 0.112 | 9.00 |
| 24) | allyl chloride | | | | | | | | | | | | |
| | 0.182 | 0.127 | 0.180 | 0.201 | 0.190 | 0.202 | 0.191 | 0.203 | 0.187 | | 0.185 | 12.62 |
| 25) | acetonitrile | | | | | | | | | | | | |
| | 0.038 | | 0.037 | 0.035 | 0.038 | 0.041 | 0.038 | 0.037 | 0.034 | | 0.037 | 5.70 |
| 26) | acetaldehyde | | | | | | | | | | | | |
| | | | | | | | | | | | 0.000# | -1.00 |
| 27) | iodomethane | | | | | | | | | | | | |
| | 0.836 | 0.744 | 0.873 | 0.911 | 0.891 | 0.986 | 0.905 | 0.904 | 0.857 | 0.550 | 0.846 | 14.32 |
| 28) | iso-butyl alcohol | | | | | | | | | | | | |
| | 0.013 | | 0.012 | 0.012 | 0.013 | | 0.014 | 0.012 | 0.012 | | 0.012 | 6.76 |
| 29) | carbon disulfide | | | | | | | | | | | | |
| | 1.483 | 1.330 | 1.542 | 1.564 | 1.521 | 1.794 | 1.534 | 1.569 | 1.489 | 1.213 | 1.504 | 10.16 |
| 30) | methylene chloride | | | | | | | | | | | | |
| | 0.425 | 0.452 | 0.449 | 0.454 | 0.440 | 0.517 | 0.441 | 0.456 | 0.440 | 0.382 | 0.446 | 7.46 |
| 31) | methyl acetate | | | | | | | | | | | | |
| | 0.279 | | 0.250 | 0.252 | 0.256 | 0.194 | 0.270 | 0.252 | 0.237 | | 0.249 | 10.25 |
| 32) | methyl tert butyl ether | | | | | | | | | | | | |
| | 1.250 | 1.300 | 1.272 | 1.319 | 1.333 | 1.469 | 1.343 | 1.370 | 1.315 | 1.229 | 1.320 | 5.13 |
| 33) | trans-1,2-dichloroethene | | | | | | | | | | | | |
| | 0.524 | 0.507 | 0.570 | 0.561 | 0.542 | 0.656 | 0.544 | 0.569 | 0.531 | 0.423 | 0.543 | 10.74 |
| 34) | di-isopropyl ether | | | | | | | | | | | | |
| | 1.350 | 1.535 | 1.330 | 1.366 | 1.365 | 1.560 | 1.375 | 1.343 | 1.229 | 1.502 | 1.396 | 7.44 |
| 35) | ethyl tert-butyl ether | | | | | | | | | | | | |
| | 1.376 | 1.366 | 1.278 | 1.376 | 1.404 | 1.397 | 1.427 | 1.344 | 1.209 | 0.972 | 1.315 | 10.41 |
| 36) | 2-butanone | | | | | | | | | | | | |
| | 0.026 | | 0.034 | 0.039 | | 0.040 | 0.039 | 0.035 | | | 0.036 | 14.42 |
| 37) | 1,1-dichloroethane | | | | | | | | | | | | |
| | 0.636 | 0.569 | 0.637 | 0.682 | 0.667 | 0.757 | 0.668 | 0.696 | 0.658 | 0.477 | 0.645 | 11.76 |
| 38) | chloroprene | | | | | | | | | | | | |
| | 0.487 | 0.445 | 0.515 | 0.494 | 0.485 | 0.558 | 0.488 | 0.465 | 0.426 | 0.355 | 0.472 | 11.58 |
| 39) | acrylonitrile | | | | | | | | | | | | |
| | 0.125 | 0.124 | 0.117 | 0.133 | 0.139 | 0.141 | 0.142 | 0.144 | 0.137 | 0.089 | 0.129 | 12.85 |
| 40) | vinyl acetate | | | | | | | | | | | | |
| | 0.039 | | 0.050 | 0.054 | | 0.056 | 0.050 | 0.038 | | | 0.048 | 15.71 |
| 41) | ethyl acetate | | | | | | | | | | | | |
| | 0.054 | | 0.061 | 0.043 | 0.045 | | 0.045 | 0.051 | 0.044 | | 0.049 | 13.52 |
| 42) | 2,2-dichloropropane | | | | | | | | | | | | |
| | 0.625 | 0.710 | 0.656 | 0.643 | 0.643 | 0.803 | 0.634 | 0.658 | 0.634 | 0.739 | 0.675 | 8.61 |
| 43) | cis-1,2-dichloroethene | | | | | | | | | | | | |
| | 0.409 | 0.497 | 0.462 | 0.416 | 0.417 | 0.533 | 0.423 | 0.430 | 0.417 | 0.354 | 0.436 | 11.47 |
| 44) | propionitrile | | | | | | | | | | | | |
| | 0.045 | | 0.044 | 0.047 | 0.051 | 0.044 | 0.054 | 0.051 | 0.048 | | 0.048 | 7.90 |
| 45) | methyl acrylate | | | | | | | | | | | | |
| | 0.284 | | 0.249 | 0.329 | 0.350 | | 0.368 | 0.362 | 0.326 | | 0.324 | 13.39 |
| 46) | bromochloromethane | | | | | | | | | | | | |
| | 0.198 | 0.159 | 0.194 | 0.217 | 0.220 | 0.238 | 0.222 | 0.227 | 0.212 | | 0.210 | 11.12 |
| 47) | tetrahydrofuran | | | | | | | | | | | | |
| | 0.120 | | 0.156 | 0.113 | 0.116 | | 0.124 | 0.130 | 0.125 | | 0.126 | 11.22 |
| 48) | chloroform | | | | | | | | | | | | |
| | 0.586 | 0.616 | 0.636 | 0.638 | 0.630 | 0.695 | 0.641 | 0.638 | 0.595 | 0.543 | 0.622 | 6.51 |
| 49) | Tert-Butyl Formate | | | | | | | | | | | | |
| | 0.352 | 0.379 | 0.333 | 0.372 | 0.389 | 0.345 | 0.405 | 0.363 | 0.318 | | 0.362 | 7.66 |
| 50) | dibromofluoromethane (s) | | | | | | | | | | | | |
| | 0.379 | 0.385 | 0.377 | 0.386 | 0.385 | 0.386 | 0.397 | 0.381 | 0.378 | 0.376 | 0.383 | 1.65 |
| 51) | 1,2-dichloroethane-d4 (s) | | | | | | | | | | | | |
| | 0.361 | 0.361 | 0.357 | 0.350 | 0.348 | 0.357 | 0.357 | 0.353 | 0.350 | 0.356 | 0.355 | 1.29 |
| 52) | freon 113 | | | | | | | | | | | | |
| | 0.383 | | 0.367 | 0.374 | 0.362 | 0.396 | 0.349 | 0.364 | 0.334 | | 0.366 | 5.24 |
| 53) | methacrylonitrile | | | | | | | | | | | | |

```
     0.162       0.206 0.181 0.195       0.206 0.193 0.172        0.188    9.03
54)  1,1,1-trichloroethane
     0.600 0.591 0.609 0.657 0.658 0.719 0.662 0.666 0.615        0.642    6.43
55)  tert amyl alcohol
                                                                  0.000#  -1.00
56)  2,2,4-Trimethylpentane
                                                                  0.000#  -1.00
57)  tert-amyl methyl ether
     1.290 1.548 1.277 1.279 1.318 1.375 1.360 1.259 1.130 1.305  1.314    8.05

58) I   1,4-difluorobenzene   ----------------ISTD--------------------
59)  epichlorohydrin
     0.028       0.030 0.024 0.027 0.031 0.027 0.027 0.026        0.027    8.27
60)  n-butyl alcohol
     0.008       0.007 0.008 0.009 0.009 0.009 0.008 0.008        0.008#  10.11
61)  cyclohexane
     0.544       0.568 0.593 0.589 0.679 0.562 0.577 0.573        0.586    6.93
62)  carbon tetrachloride
     0.477 0.355 0.476 0.530 0.530 0.560 0.511 0.518 0.481 0.399  0.484   13.04
63)  1,1-dichloropropene
     0.355 0.236 0.346 0.386 0.387 0.396 0.385 0.389 0.361        0.360   13.77
64)  hexane  ** This compound does not meet Initial Calibration criteria
     0.338 0.313 0.360 0.322 0.308 0.381 0.293 0.304 0.290 0.306  0.322    9.18
65)  benzene
     1.113 1.136 1.187 1.193 1.201 1.278 1.210 1.207 1.155 1.070  1.175    4.98
66)  heptane
     0.193       0.195 0.181 0.179 0.194 0.171 0.178 0.170        0.183    5.52
67)  isopropyl acetate
     0.501       0.523 0.515 0.558 0.441 0.570 0.525 0.455        0.511    8.82
68)  1,2-dichloroethane
     0.331 0.292 0.340 0.363 0.364 0.369 0.364 0.374 0.361        0.351    7.37
69)  trichloroethene
     0.258 0.275 0.298 0.286 0.286 0.320 0.290 0.289 0.277 0.261  0.284    6.34
70)  ethyl acrylate
                                                                  0.000#  -1.00
71)  tert amyl ethyl ether
                                                                  0.000#  -1.00
72)  2-nitropropane
     0.110             0.097 0.105       0.102 0.114 0.095        0.104    6.98
73)  2-chloroethyl vinyl ether
     0.180       0.174 0.182 0.190 0.178 0.181 0.190 0.167        0.180    4.24
74)  methyl methacrylate
     0.355       0.319 0.413 0.444       0.445 0.440 0.395        0.402   12.17
75)  1,2-dichloropropane
     0.292 0.292 0.290 0.312 0.313 0.340 0.311 0.315 0.297        0.307    5.24
76)  methylcyclohexane
     0.573 0.391 0.585 0.594 0.581 0.618 0.568 0.552 0.502 0.350  0.531   17.07
77)  dibromomethane
     0.172 0.128 0.180 0.188 0.191 0.191 0.190 0.199 0.187        0.181   11.72
78)  bromodichloromethane
     0.351 0.369 0.354 0.387 0.388 0.417 0.396 0.392 0.371 0.313  0.374    7.80
79)  cis-1,3-dichloropropene
     0.404 0.356 0.436 0.466 0.476 0.458 0.463 0.485 0.448 0.393  0.439    9.43
80)  toluene-d8 (s)
     1.088 1.089 1.105 1.101 1.093 1.106 1.069 1.102 1.096 1.102  1.095    1.03
81)  4-methyl-2-pentanone
     0.108       0.104 0.110 0.122 0.092 0.126 0.120 0.112        0.112    9.72
82)  toluene
     0.620 0.538 0.645 0.694 0.695 0.730 0.681 0.716 0.655 0.483  0.646   12.31
83)  3-methyl-1-butanol
```

# Initial Calibration Summary

**Job Number:** JC1106 **Sample:** V3D4810-ICC4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112242.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

```
      0.008       0.008 0.008 0.008 0.010 0.009 0.008 0.008        0.008#   7.78
 84)  trans-1,3-dichloropropene
      0.372 0.351 0.362 0.416 0.429 0.429 0.414 0.431 0.403 0.293  0.390   11.52
 85)  ethyl methacrylate
      0.313       0.298 0.351 0.373 0.350 0.364 0.366 0.343        0.345    7.62
 86)  1,1,2-trichloroethane
      0.199 0.191 0.207 0.217 0.222 0.256 0.217 0.229 0.214        0.217    8.66
 87)  2-hexanone
      0.086       0.071 0.088 0.103       0.104 0.100 0.088        0.091   12.66

 88) I   chlorobenzene-d5      ----------------ISTD---------------------
 89)  tetrachloroethene
      0.388 0.371 0.415 0.441 0.432 0.478 0.436 0.460 0.411        0.426    7.94
 90)  1,3-dichloropropane
      0.450 0.423 0.494 0.495 0.503 0.495 0.503 0.517 0.485        0.485    6.08
 91)  butyl acetate
      0.187       0.173 0.205 0.222       0.234 0.202 0.184        0.201   10.82
 92)  3,3-Dimethyl-1-Butanol
      0.045 0.051 0.048 0.040 0.049 0.059 0.059 0.042 0.040        0.048   15.10
 93)  dibromochloromethane
      0.354 0.267 0.357 0.404 0.418 0.381 0.426 0.416 0.381        0.378   12.97
 94)  1,2-dibromoethane
      0.304 0.260 0.296 0.333 0.342 0.301 0.347 0.357 0.331        0.319    9.68
 95)  n-Butyl Ether
      1.412       1.485 1.514 1.511 1.670 1.499 1.558 1.452        1.513    5.10
 96)  chlorobenzene
      0.871 0.815 0.883 0.940 0.953 0.992 0.962 0.980 0.890 0.681  0.897   10.49
 97)  1,1,1,2-tetrachloroethane
      0.360 0.287 0.376 0.428 0.437 0.417 0.470 0.422 0.382        0.398   13.52
 98)  ethylbenzene
      1.442 1.493 1.498 1.566 1.581 1.747 1.590 1.612 1.489 1.340  1.536    7.15
 99)  m,p-xylene
      0.570 0.488 0.586 0.609 0.612 0.656 0.614 0.627 0.585 0.396  0.574   13.34
100)  o-xylene
      0.584 0.505 0.600 0.639 0.644 0.649 0.661 0.655 0.587 0.342  0.587   16.74
101)  styrene
      0.927 0.763 0.936 1.044 1.047 1.063 1.052 1.063 0.989        0.987   10.07
102)  Butyl Acrylate
                                                                   0.000#  -1.00
103)  bromoform
      0.275 0.239 0.271 0.309 0.327 0.280 0.339 0.324 0.294        0.295   10.94

104) I   1,4-dichlorobenzene-d ----------------ISTD---------------------
105)  isopropylbenzene
      2.411 2.181 2.464 2.679 2.795 2.847 2.726 2.678 2.474 1.835  2.509   12.42
106)  4-bromofluorobenzene (s)
      0.783 0.766 0.765 0.776 0.784 0.787 0.734 0.762 0.770 0.766  0.769    1.98
107)  bromobenzene
      0.670 0.686 0.732 0.759 0.777 0.810 0.732 0.769 0.729        0.741    5.96
108)  cyclohexanone  ** This compound does not meet Initial Calibration criteria
      0.080             0.034 0.096       0.093 0.102 0.093        0.083   30.12
            ----- Linear regression -----  Coefficient =  0.9708
              Response Ratio = -0.10526 + 0.09442 *A

109)  1,1,2,2-tetrachloroethane
      0.701 0.695 0.693 0.718 0.770 0.813 0.755 0.764 0.720 0.633  0.726    6.99
110)  trans-1,4-dichloro-2-butene
      0.167       0.137 0.158 0.173 0.153 0.171 0.171 0.155        0.161    7.72
111)  1,2,3-trichloropropane
      0.162       0.141 0.164 0.176 0.172 0.170 0.174 0.168        0.166    6.78
```

6.7.1

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# Initial Calibration Summary

**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V3D4810-ICC4810
**Lab FileID:** 3D112242.D

```
112)  n-propylbenzene
       2.696 2.328 2.834 2.877 2.973 3.167 2.773 2.928 2.756 1.986  2.732   12.45
113)  4-Ethyltoluene
                                                                    0.000#  -1.00
114)  2-chlorotoluene
       0.610 0.588 0.616 0.654 0.688 0.649 0.648 0.669 0.621        0.638    4.96
115)  4-chlorotoluene
       0.612 0.559 0.576 0.662 0.669 0.712 0.637 0.664 0.636 0.468  0.620   11.27
116)  1,3,5-trimethylbenzene
       2.069 1.885 2.090 2.272 2.399 2.383 2.357 2.276 2.110 1.510  2.135   12.87
117)  tert-butylbenzene
       1.609 1.377 1.752 1.916 2.058 1.903 2.151 1.882 1.690 1.254  1.759   16.21
118)  pentachloroethane
       0.429 0.328 0.438 0.508 0.576 0.510 0.617 0.483 0.430        0.480   17.96
119)  1,2,4-trimethylbenzene
       2.105 1.826 2.055 2.249 2.360 2.428 2.278 2.277 2.131 1.728  2.144   10.52
120)  sec-butylbenzene
       2.775 2.195 2.865 3.045 3.242 3.249 3.223 3.084 2.812 1.625  2.811   18.62
121)  1,3-dichlorobenzene
       1.321 1.235 1.347 1.462 1.486 1.526 1.472 1.508 1.405 1.008  1.377   11.56
122)  p-isopropyltoluene
       2.376 2.151 2.421 2.598 2.760 2.779 2.700 2.650 2.431 1.683  2.455   13.66
123)  1,4-dichlorobenzene
       1.402 1.334 1.415 1.498 1.515 1.749 1.521 1.538 1.477 1.324  1.477    8.29
124)  1,2-dichlorobenzene
       1.441 1.263 1.489 1.557 1.589 1.672 1.610 1.585 1.491 1.149  1.484   11.02
125)  1,4-Diethylbenzene
                                                                    0.000#  -1.00
126)  n-butylbenzene
       1.206 0.992 1.278 1.333 1.367 1.386 1.339 1.373 1.287        1.285    9.63
127)  1,2,4,5-Tetramethylbenzene
                                                                    0.000#  -1.00
128)  1,2-dibromo-3-chloropropane
       0.195       0.192 0.214 0.240 0.208 0.259 0.228 0.201        0.217   10.80
129)  1,3,5-trichlorobenzene
       1.477 1.359 1.600 1.694 1.748 1.711 1.869 1.739 1.581 0.984  1.576   16.14
130)  1,2,4-trichlorobenzene
       1.499 1.264 1.531 1.747 1.828 1.712 1.936 1.753 1.633 1.299  1.620   13.61
131)  hexachlorobutadiene
       0.761 0.556 0.826 0.793 0.859 0.898 0.933 0.811 0.781        0.802   13.46
132)  naphthalene
       3.116 2.773 3.113 3.521 3.857 3.459 4.038 3.662 3.368 3.411  3.432   10.86
133)  1,2,3-trichlorobenzene
       1.567 1.458 1.664 1.776 1.877 1.825 1.916 1.795 1.647 1.295  1.682   11.72
134)  hexachloroethane
       0.417       0.414 0.537 0.616 0.460 0.675 0.500 0.437        0.507   19.00
135)  Benzyl chloride
       1.391 1.506 1.581 1.359 1.406 1.711 1.450 1.363 1.315 1.343  1.442    8.61
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M3D4810.M         Thu Aug 06 13:51:48 2015   3D
```

6.7.1

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# Initial Calibration Verification



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V3D4810-ICV4810
**Lab FileID:** 3D112247.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\v3d4801-4810\3d112247.d Vial: 32
Acq On : 30 Jul 2015 1:41 am Operator: ximenac
Sample : ICV4810-50 Inst : MS3D
Misc : MS88759,V3D4810,5,,,,1 Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
Last Update : Thu Aug 06 11:10:54 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Tert Butyl Alcohol-d9 | 1.000 | 1.000 | 0.0 | 102 | 0.00 | 7.18 |
| 2 | | 1,4-dioxane | 0.081 | 0.089 | -9.9 | 103 | 0.00 | 11.04 |
| 3 | M | tertiary butyl alcohol | 1.080 | 1.088 | -0.7 | 103 | -0.01 | 7.29 |
| 4 | I | pentafluorobenzene | 1.000 | 1.000 | 0.0 | 97 | 0.00 | 9.39 |
| 5 | | FREON 115 | | ----------NA---------- | | | | |
| 6 | | FREON 152A | | ----------NA---------- | | | | |
| 7 | | chlorotrifluoroethene | | ----------NA---------- | | | | |
| 8 | | chlorodifluoromethane | 0.679 | 0.568 | 16.3 | 81 | 0.00 | 3.85 |
| 9 | | dichlorodifluoromethane | 0.909 | 0.674 | 25.9 | 72 | 0.00 | 3.85 |
| 10 | | chloromethane | 0.723 | 0.600 | 17.0 | 86 | 0.00 | 4.16 |
| 11 | | vinyl chloride | 0.725 | 0.661 | 8.8 | 85 | 0.00 | 4.41 |
| 12 | | bromomethane | 0.468 | 0.433 | 7.5 | 93 | 0.00 | 5.05 |
| 13 | | chloroethane | 0.307 | 0.316 | -2.9 | 104 | 0.00 | 5.21 |
| 14 | | 1,3-butadiene | | ----------NA---------- | | | | |
| 15 | | vinyl bromide | | ----------NA---------- | | | | |
| 16 | | trichlorofluoromethane | 0.756 | 0.656 | 13.2 | 81 | 0.00 | 5.68 |
| 17 | | pentane | | ----------NA---------- | | | | |
| 18 | | ethyl ether | 0.187 | 0.176 | 5.9 | 96 | 0.00 | 6.07 |
| 19 | | freon 123a | | ----------NA---------- | | | | |
| 20 | | FREON 123 | | ----------NA---------- | | | | |
| 21 | | acrolein | 0.075 | 0.076 | -1.3 | 108 | 0.00 | 6.32 |
| 22 | | 1,1-dichloroethene | 0.595 | 0.499 | 16.1 | 78 | 0.00 | 6.49 |
| 23 | | acetone | 0.112 | 0.108 | 3.6 | 110 | 0.00 | 6.54 |
| 24 | | allyl chloride | 0.185 | 0.199 | -7.6 | 96 | 0.00 | 7.02 |
| 25 | | acetonitrile | 0.037 | 0.038 | -2.7 | 104 | 0.00 | 6.97 |
| 26 | m | acetaldehyde | | ----------NA---------- | | | | |
| 27 | | iodomethane | 0.846 | 0.822 | 2.8 | 87 | 0.00 | 6.76 |
| 28 | | iso-butyl alcohol | 0.012 | 0.012 | 0.0 | 101 | 0.00 | 9.68 |
| 29 | | carbon disulfide | 1.504 | 1.353 | 10.0 | 84 | 0.00 | 6.89 |
| 30 | | methylene chloride | 0.446 | 0.429 | 3.8 | 91 | 0.00 | 7.20 |
| 31 | | methyl acetate | 0.249 | 0.258 | -3.6 | 99 | 0.00 | 7.00 |
| 32 | | methyl tert butyl ether | 1.320 | 1.295 | 1.9 | 95 | 0.00 | 7.53 |
| 33 | | trans-1,2-dichloroethene | 0.543 | 0.492 | 9.4 | 85 | 0.00 | 7.58 |
| 34 | | di-isopropyl ether | 1.396 | 1.371 | 1.8 | 97 | 0.00 | 8.12 |
| 35 | | ethyl tert-butyl ether | 1.315 | 1.405 | -6.8 | 99 | 0.00 | 8.59 |
| 36 | | 2-butanone | 0.036 | 0.037 | -2.8 | 105 | 0.00 | 8.84 |
| 37 | M | 1,1-dichloroethane | 0.645 | 0.638 | 1.1 | 91 | 0.00 | 8.14 |
| 38 | | chloroprene | 0.472 | 0.469 | 0.6 | 92 | 0.00 | 8.25 |
| 39 | | acrylonitrile | 0.129 | 0.137 | -6.2 | 99 | 0.00 | 7.52 |
| 40 | | vinyl acetate | 0.048 | 0.055 | -14.6 | 107 | 0.00 | 8.13 |
| 41 | | ethyl acetate | 0.049 | 0.047 | 4.1 | 107 | 0.00 | 8.86 |

# Initial Calibration Verification

**Job Number:** JC1106 **Sample:** V3D4810-ICV4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112247.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 42 | | 2,2-dichloropropane | 0.675 | 0.557 | 17.5 | 84 | 0.00 | 8.88 |
| 43 | | cis-1,2-dichloroethene | 0.436 | 0.391 | 10.3 | 91 | 0.00 | 8.88 |
| 44 | | propionitrile | 0.048 | 0.047 | 2.1 | 97 | 0.00 | 8.94 |
| 45 | | methyl acrylate | 0.324 | 0.335 | -3.4 | 99 | 0.00 | 8.95 |
| 46 | | bromochloromethane | 0.210 | 0.213 | -1.4 | 95 | 0.00 | 9.19 |
| 47 | | tetrahydrofuran | 0.126 | 0.120 | 4.8 | 103 | 0.00 | 9.22 |
| 48 | | chloroform | 0.622 | 0.604 | 2.9 | 92 | 0.00 | 9.24 |
| 49 | | Tert-Butyl Formate | 0.362 | 0.396 | -9.4 | 103 | 0.00 | 9.28 |
| 50 | S | dibromofluoromethane (s) | 0.383 | 0.388 | -1.3 | 97 | 0.00 | 9.44 |
| 51 | S | 1,2-dichloroethane-d4 (s) | 0.355 | 0.346 | 2.5 | 96 | 0.00 | 9.86 |
| 52 | | freon 113 | 0.366 | 0.344 | 6.0 | 89 | 0.00 | 6.45 |
| 53 | | methacrylonitrile | 0.188 | 0.191 | -1.6 | 102 | 0.00 | 9.12 |
| 54 | | 1,1,1-trichloroethane | 0.642 | 0.594 | 7.5 | 88 | 0.00 | 9.50 |
| 55 | | tert amyl alcohol | | ----------NA---------- | | | | |
| 56 | | 2,2,4-Trimethylpentane | | ----------NA---------- | | | | |
| 57 | | tert-amyl methyl ether | 1.314 | 1.315 | -0.1 | 100 | 0.00 | 9.97 |
| 58 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 96 | 0.00 | 10.31 |
| 59 | | epichlorohydrin | 0.027 | 0.028 | -3.7 | 109 | 0.00 | 11.57 |
| 60 | | n-butyl alcohol | 0.008 | 0.009# | -12.5 | 104 | 0.00 | 10.44 |
| 61 | M | cyclohexane | 0.586 | 0.512 | 12.6 | 83 | 0.00 | 9.57 |
| 62 | | carbon tetrachloride | 0.484 | 0.472 | 2.5 | 85 | 0.00 | 9.71 |
| 63 | | 1,1-dichloropropene | 0.360 | 0.351 | 2.5 | 87 | 0.00 | 9.68 |
| 64 | | hexane | 0.322 | 0.210 | 34.8# | 62 | 0.00 | 7.87 |
| 65 | M | benzene | 1.175 | 1.123 | 4.4 | 90 | 0.00 | 9.94 |
| 66 | | heptane | 0.183 | 0.163 | 10.9 | 86 | 0.00 | 10.10 |
| 67 | | isopropyl acetate | 0.511 | 0.624 | -22.1 | 116 | 0.00 | 9.86 |
| 68 | | 1,2-dichloroethane | 0.351 | 0.362 | -3.1 | 96 | 0.00 | 9.95 |
| 69 | | trichloroethene | 0.284 | 0.267 | 6.0 | 89 | 0.00 | 10.66 |
| 70 | | ethyl acrylate | | ----------NA---------- | | | | |
| 71 | | tert amyl ethyl ether | | ----------NA---------- | | | | |
| 72 | | 2-nitropropane | 0.104 | 0.108 | -3.8 | 106 | 0.00 | 11.43 |
| 73 | | 2-chloroethyl vinyl ether | 0.180 | 0.217 | -20.6 | 114 | 0.00 | 11.45 |
| 74 | | methyl methacrylate | 0.402 | 0.440 | -9.5 | 102 | 0.00 | 10.92 |
| 75 | | 1,2-dichloropropane | 0.307 | 0.308 | -0.3 | 94 | 0.00 | 10.92 |
| 76 | | methylcyclohexane | 0.531 | 0.545 | -2.6 | 88 | 0.00 | 10.87 |
| 77 | | dibromomethane | 0.181 | 0.185 | -2.2 | 95 | 0.00 | 11.08 |
| 78 | | bromodichloromethane | 0.374 | 0.379 | -1.3 | 94 | 0.00 | 11.21 |
| 79 | | cis-1,3-dichloropropene | 0.439 | 0.462 | -5.2 | 95 | 0.00 | 11.67 |
| 80 | S | toluene-d8 (s) | 1.095 | 1.102 | -0.6 | 96 | 0.00 | 11.96 |
| 81 | | 4-methyl-2-pentanone | 0.112 | 0.120 | -7.1 | 104 | 0.00 | 11.76 |
| 82 | | toluene | 0.646 | 0.638 | 1.2 | 88 | 0.00 | 12.03 |
| 83 | | 3-methyl-1-butanol | 0.008 | 0.008# | 0.0 | 104 | 0.00 | 11.79 |
| 84 | | trans-1,3-dichloropropene | 0.390 | 0.397 | -1.8 | 91 | 0.00 | 12.23 |
| 85 | | ethyl methacrylate | 0.345 | 0.348 | -0.9 | 95 | 0.00 | 12.23 |
| 86 | | 1,1,2-trichloroethane | 0.217 | 0.218 | -0.5 | 96 | 0.00 | 12.45 |
| 87 | | 2-hexanone | 0.091 | 0.096 | -5.5 | 104 | 0.00 | 12.62 |
| 88 | I | chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 97 | 0.00 | 13.48 |
| 89 | | tetrachloroethene | 0.426 | 0.445 | -4.5 | 98 | 0.00 | 12.63 |
| 90 | | 1,3-dichloropropane | 0.485 | 0.483 | 0.4 | 95 | 0.00 | 12.63 |
| 91 | | butyl acetate | 0.201 | 0.221 | -10.0 | 105 | 0.00 | 12.69 |
| 92 | | 3,3-Dimethyl-1-Butanol | 0.048 | 0.041 | 14.6 | 99 | 0.00 | 12.79 |
| 93 | | dibromochloromethane | 0.378 | 0.398 | -5.3 | 96 | 0.00 | 12.89 |
| 94 | | 1,2-dibromoethane | 0.319 | 0.331 | -3.8 | 97 | 0.00 | 13.05 |
| 95 | | n-Butyl Ether | 1.513 | 1.413 | 6.6 | 91 | 0.00 | 13.42 |
| 96 | | chlorobenzene | 0.897 | 0.916 | -2.1 | 95 | 0.00 | 13.51 |
| 97 | | 1,1,1,2-tetrachloroethane | 0.398 | 0.403 | -1.3 | 91 | 0.00 | 13.56 |
| 98 | | ethylbenzene | 1.536 | 1.457 | 5.1 | 90 | 0.00 | 13.56 |
| 99 | | m,p-xylene | 0.574 | 0.572 | 0.3 | 91 | 0.00 | 13.67 |

6.7.2

# Initial Calibration Verification

**Job Number:** JC1106 **Sample:** V3D4810-ICV4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112247.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 100 | | o-xylene | 0.587 | 0.610 | -3.9 | 93 | 0.00 | 14.08 |
| 101 | | styrene | 0.987 | 1.023 | -3.6 | 95 | 0.00 | 14.09 |
| 102 | | Butyl Acrylate | | ----------NA---------- | | | | |
| 103 | | bromoform | 0.295 | 0.323 | -9.5 | 101 | 0.00 | 14.36 |
| 104 | I | 1,4-dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 101 | 0.00 | 15.79 |
| 105 | | isopropylbenzene | 2.509 | 2.337 | 6.9 | 88 | 0.00 | 14.42 |
| 106 | S | 4-bromofluorobenzene (s) | 0.769 | 0.763 | 0.8 | 100 | 0.00 | 14.63 |
| 107 | | bromobenzene | 0.741 | 0.726 | 2.0 | 97 | 0.00 | 14.82 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 108 | | cyclohexanone | 500.000 | 487.845 | 2.4 | 243 | 0.00 | 14.59 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 109 | | 1,1,2,2-tetrachloroethane | 0.726 | 0.705 | 2.9 | 100 | 0.00 | 14.73 |
| 110 | | trans-1,4-dichloro-2-bute | 0.161 | 0.158 | 1.9 | 101 | 0.00 | 14.77 |
| 111 | | 1,2,3-trichloropropane | 0.166 | 0.164 | 1.2 | 101 | 0.00 | 14.80 |
| 112 | | n-propylbenzene | 2.732 | 2.714 | 0.7 | 96 | 0.00 | 14.83 |
| 113 | | 4-Ethyltoluene | | ----------NA---------- | | | | |
| 114 | | 2-chlorotoluene | 0.638 | 0.607 | 4.9 | 94 | 0.00 | 14.98 |
| 115 | | 4-chlorotoluene | 0.620 | 0.623 | -0.5 | 95 | 0.00 | 15.08 |
| 116 | | 1,3,5-trimethylbenzene | 2.135 | 2.034 | 4.7 | 91 | 0.00 | 14.99 |
| 117 | | tert-butylbenzene | 1.759 | 1.683 | 4.3 | 89 | 0.00 | 15.33 |
| 118 | | pentachloroethane | 0.480 | 0.402 | 16.2 | 80 | 0.00 | 15.42 |
| 119 | | 1,2,4-trimethylbenzene | 2.144 | 2.167 | -1.1 | 98 | 0.00 | 15.38 |
| 120 | | sec-butylbenzene | 2.811 | 2.657 | 5.5 | 89 | 0.00 | 15.55 |
| 121 | | 1,3-dichlorobenzene | 1.377 | 1.409 | -2.3 | 98 | 0.00 | 15.73 |
| 122 | | p-isopropyltoluene | 2.455 | 2.367 | 3.6 | 92 | 0.00 | 15.66 |
| 123 | | 1,4-dichlorobenzene | 1.477 | 1.465 | 0.8 | 99 | 0.00 | 15.81 |
| 124 | | 1,2-dichlorobenzene | 1.484 | 1.554 | -4.7 | 101 | 0.00 | 16.19 |
| 125 | | 1,4-Diethylbenzene | | ----------NA---------- | | | | |
| 126 | | n-butylbenzene | 1.285 | 1.237 | 3.7 | 94 | 0.00 | 16.07 |
| 127 | | 1,2,4,5-Tetramethylbenzen | | ----------NA---------- | | | | |
| 128 | | 1,2-dibromo-3-chloropropa | 0.217 | 0.226 | -4.1 | 107 | 0.00 | 16.93 |
| 129 | | 1,3,5-trichlorobenzene | 1.576 | 1.641 | -4.1 | 98 | 0.00 | 17.09 |
| 130 | | 1,2,4-trichlorobenzene | 1.620 | 1.699 | -4.9 | 99 | 0.00 | 17.66 |
| 131 | | hexachlorobutadiene | 0.802 | 0.717 | 10.6 | 92 | 0.00 | 17.76 |
| 132 | | naphthalene | 3.432 | 3.555 | -3.6 | 102 | 0.00 | 17.90 |
| 133 | | 1,2,3-trichlorobenzene | 1.682 | 1.724 | -2.5 | 98 | 0.00 | 18.11 |
| 134 | | hexachloroethane | 0.507 | 0.479 | 5.5 | 90 | 0.00 | 16.44 |
| 135 | | Benzyl chloride | 1.442 | 1.418 | 1.7 | 106 | 0.00 | 15.92 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3D112242.D M3D4810.M Thu Aug 06 13:51:40 2015 3D

6.7.2

Raw Data: 3D112517.D

# Continuing Calibration Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Sample:** V3D4822-CC4810
**Lab FileID:** 3D112517.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\3D112517.D  Vial: 5
Acq On : 11 Aug 2015 11:16 am  Operator: ximenac
Sample : cc4810-20  Inst : MS3D
Misc : MS89341,V3D4822,5,,,,1  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
Last Update : Thu Aug 06 11:10:54 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Tert Butyl Alcohol-d9 | 1.000 | 1.000 | 0.0 | 110 | -0.02 | 7.16 |
| 2 | | 1,4-dioxane | 0.081 | 0.093 | -14.8 | 116 | 0.00 | 11.04 |
| 3 | M | tertiary butyl alcohol | 1.080 | 1.074 | 0.6 | 106 | 0.00 | 7.30 |
| 4 | I | pentafluorobenzene | 1.000 | 1.000 | 0.0 | 100 | 0.00 | 9.39 |
| 5 | | FREON 115 | | ----------NA---------- | | | | |
| 6 | | FREON 152A | | ----------NA---------- | | | | |
| 7 | | chlorotrifluoroethene | | ----------NA---------- | | | | |
| 8 | | chlorodifluoromethane | 0.679 | 0.664 | 2.2 | 96 | 0.00 | 3.86 |
| 9 | | dichlorodifluoromethane | 0.909 | 0.742 | 18.4 | 78 | 0.01 | 3.86 |
| 10 | | chloromethane | 0.723 | 0.551 | 23.8# | 85 | 0.00 | 4.16 |
| 11 | | vinyl chloride | 0.725 | 0.630 | 13.1 | 88 | 0.00 | 4.41 |
| 12 | | bromomethane | 0.468 | 0.407 | 13.0 | 90 | 0.00 | 5.05 |
| 13 | | chloroethane | 0.307 | 0.276 | 10.1 | 95 | 0.01 | 5.22 |
| 14 | | 1,3-butadiene | | ----------NA---------- | | | | |
| 15 | | vinyl bromide | | ----------NA---------- | | | | |
| 16 | | trichlorofluoromethane | 0.756 | 0.773 | -2.2 | 99 | 0.01 | 5.68 |
| 17 | | pentane | | ----------NA---------- | | | | |
| 18 | | ethyl ether | 0.187 | 0.197 | -5.3 | 104 | 0.00 | 6.07 |
| 19 | | freon 123a | | ----------NA---------- | | | | |
| 20 | | FREON 123 | | ----------NA---------- | | | | |
| 21 | | acrolein | 0.075 | 0.071 | 5.3 | 96 | 0.00 | 6.32 |
| 22 | | 1,1-dichloroethene | 0.595 | 0.602 | -1.2 | 98 | 0.00 | 6.49 |
| 23 | | acetone | 0.112 | 0.137 | -22.3# | 113 | 0.00 | 6.54 |
| 24 | | allyl chloride | 0.185 | 0.197 | -6.5 | 97 | 0.00 | 7.02 |
| 25 | | acetonitrile | 0.037 | 0.043 | -16.2 | 115 | 0.00 | 6.98 |
| 26 | m | acetaldehyde | | ----------NA---------- | | | | |
| 27 | | iodomethane | 0.846 | 0.944 | -11.6 | 104 | 0.00 | 6.76 |
| 28 | | iso-butyl alcohol | 0.012 | 0.013 | -8.3 | 105 | 0.00 | 9.69 |
| 29 | | carbon disulfide | 1.504 | 1.599 | -6.3 | 101 | 0.00 | 6.90 |
| 30 | | methylene chloride | 0.446 | 0.492 | -10.3 | 107 | 0.00 | 7.20 |
| 31 | | methyl acetate | 0.249 | 0.276 | -10.8 | 109 | 0.00 | 6.99 |
| 32 | | methyl tert butyl ether | 1.320 | 1.387 | -5.1 | 101 | 0.00 | 7.53 |
| 33 | | trans-1,2-dichloroethene | 0.543 | 0.577 | -6.3 | 101 | 0.00 | 7.58 |
| 34 | | di-isopropyl ether | 1.396 | 1.250 | 10.5 | 93 | 0.00 | 8.12 |
| 35 | | ethyl tert-butyl ether | 1.315 | 1.276 | 3.0 | 94 | 0.00 | 8.59 |
| 36 | | 2-butanone | 0.036 | 0.037 | -2.8 | 92 | 0.00 | 8.85 |
| 37 | M | 1,1-dichloroethane | 0.645 | 0.700 | -8.5 | 100 | 0.00 | 8.14 |
| 38 | | chloroprene | 0.472 | 0.404 | 14.4 | 86 | 0.00 | 8.25 |
| 39 | | acrylonitrile | 0.129 | 0.151 | -17.1 | 105 | 0.00 | 7.53 |
| 40 | | vinyl acetate | 0.048 | 0.050 | -4.2 | 99 | 0.00 | 8.13 |
| 41 | | ethyl acetate | 0.049 | 0.044 | 10.2 | 85 | 0.00 | 8.87 |

# Continuing Calibration Summary



**Job Number:** JC1106 **Sample:** V3D4822-CC4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112517.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 42 | | 2,2-dichloropropane | 0.675 | 0.716 | -6.1 | 108 | 0.00 | 8.89 |
| 43 | | cis-1,2-dichloroethene | 0.436 | 0.421 | 3.4 | 97 | 0.00 | 8.88 |
| 44 | | propionitrile | 0.048 | 0.055 | -14.6 | 108 | 0.00 | 8.94 |
| 45 | | methyl acrylate | 0.324 | 0.358 | -10.5 | 98 | 0.00 | 8.95 |
| 46 | | bromochloromethane | 0.210 | 0.231 | -10.0 | 101 | 0.00 | 9.19 |
| 47 | | tetrahydrofuran | 0.126 | 0.122 | 3.2 | 93 | 0.00 | 9.22 |
| 48 | | chloroform | 0.622 | 0.648 | -4.2 | 101 | 0.00 | 9.24 |
| 49 | | Tert-Butyl Formate | 0.362 | 0.346 | 4.4 | 95 | 0.00 | 9.28 |
| 50 | S | dibromofluoromethane (s) | 0.383 | 0.412 | -7.6 | 108 | 0.00 | 9.44 |
| 51 | S | 1,2-dichloroethane-d4 (s) | 0.355 | 0.381 | -7.3 | 107 | 0.00 | 9.86 |
| 52 | | freon 113 | 0.366 | 0.371 | -1.4 | 101 | 0.01 | 6.46 |
| 53 | | methacrylonitrile | 0.188 | 0.184 | 2.1 | 95 | 0.00 | 9.13 |
| 54 | | 1,1,1-trichloroethane | 0.642 | 0.714 | -11.2 | 107 | 0.00 | 9.50 |
| 55 | | tert amyl alcohol | | ----------NA---------- | | | | |
| 56 | | 2,2,4-Trimethylpentane | | ----------NA---------- | | | | |
| 57 | | tert-amyl methyl ether | 1.314 | 1.243 | 5.4 | 98 | 0.00 | 9.97 |
| 58 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 101 | 0.00 | 10.31 |
| 59 | | epichlorohydrin | 0.027 | 0.026 | 3.7 | 99 | 0.00 | 11.58 |
| 60 | | n-butyl alcohol | 0.008 | 0.008# | 0.0 | 103 | 0.00 | 10.44 |
| 61 | M | cyclohexane | 0.586 | 0.582 | 0.7 | 101 | 0.00 | 9.57 |
| 62 | | carbon tetrachloride | 0.484 | 0.562 | -16.1 | 109 | 0.00 | 9.71 |
| 63 | | 1,1-dichloropropene | 0.360 | 0.370 | -2.8 | 96 | 0.00 | 9.67 |
| 64 | | hexane | 0.322 | 0.271 | 15.8 | 89 | 0.00 | 7.87 |
| 65 | M | benzene | 1.175 | 1.196 | -1.8 | 100 | 0.00 | 9.94 |
| 66 | | heptane | 0.183 | 0.172 | 6.0 | 97 | 0.00 | 10.11 |
| 67 | | isopropyl acetate | 0.511 | 0.494 | 3.3 | 95 | 0.00 | 9.86 |
| 68 | | 1,2-dichloroethane | 0.351 | 0.385 | -9.7 | 104 | 0.00 | 9.96 |
| 69 | | trichloroethene | 0.284 | 0.286 | -0.7 | 100 | 0.00 | 10.66 |
| 70 | | ethyl acrylate | | ----------NA---------- | | | | |
| 71 | | tert amyl ethyl ether | | ----------NA---------- | | | | |
| 72 | | 2-nitropropane | 0.104 | 0.100 | 3.8 | 88 | 0.01 | 11.44 |
| 73 | | 2-chloroethyl vinyl ether | 0.180 | 0.181 | -0.6 | 96 | 0.00 | 11.45 |
| 74 | | methyl methacrylate | 0.402 | 0.408 | -1.5 | 93 | 0.00 | 10.93 |
| 75 | | 1,2-dichloropropane | 0.307 | 0.316 | -2.9 | 101 | 0.00 | 10.92 |
| 76 | | methylcyclohexane | 0.531 | 0.521 | 1.9 | 95 | 0.00 | 10.88 |
| 77 | | dibromomethane | 0.181 | 0.207 | -14.4 | 105 | 0.00 | 11.08 |
| 78 | | bromodichloromethane | 0.374 | 0.398 | -6.4 | 102 | 0.00 | 11.21 |
| 79 | | cis-1,3-dichloropropene | 0.439 | 0.461 | -5.0 | 95 | 0.00 | 11.67 |
| 80 | S | toluene-d8 (s) | 1.095 | 1.102 | -0.6 | 101 | 0.00 | 11.96 |
| 81 | | 4-methyl-2-pentanone | 0.112 | 0.119 | -6.2 | 100 | 0.00 | 11.77 |
| 82 | | toluene | 0.646 | 0.678 | -5.0 | 95 | 0.00 | 12.04 |
| 83 | | 3-methyl-1-butanol | 0.008 | 0.008# | 0.0 | 102 | 0.00 | 11.79 |
| 84 | | trans-1,3-dichloropropene | 0.390 | 0.417 | -6.9 | 97 | 0.00 | 12.24 |
| 85 | | ethyl methacrylate | 0.345 | 0.314 | 9.0 | 86 | 0.00 | 12.23 |
| 86 | | 1,1,2-trichloroethane | 0.217 | 0.232 | -6.9 | 102 | 0.00 | 12.45 |
| 87 | | 2-hexanone | 0.091 | 0.085 | 6.6 | 86 | 0.00 | 12.63 |
| 88 | I | chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 102 | 0.00 | 13.48 |
| 89 | | tetrachloroethene | 0.426 | 0.429 | -0.7 | 95 | 0.00 | 12.63 |
| 90 | | 1,3-dichloropropane | 0.485 | 0.512 | -5.6 | 101 | 0.00 | 12.63 |
| 91 | | butyl acetate | 0.201 | 0.187 | 7.0 | 95 | 0.00 | 12.70 |
| 92 | | 3,3-Dimethyl-1-Butanol | 0.048 | 0.037 | 22.9# | 91 | 0.00 | 12.79 |
| 93 | | dibromochloromethane | 0.378 | 0.422 | -11.6 | 104 | 0.00 | 12.90 |
| 94 | | 1,2-dibromoethane | 0.319 | 0.345 | -8.2 | 99 | 0.00 | 13.05 |
| 95 | | n-Butyl Ether | 1.513 | 1.278 | 15.5 | 84 | 0.00 | 13.42 |
| 96 | | chlorobenzene | 0.897 | 0.948 | -5.7 | 99 | 0.00 | 13.51 |
| 97 | | 1,1,1,2-tetrachloroethane | 0.398 | 0.434 | -9.0 | 105 | 0.00 | 13.56 |
| 98 | | ethylbenzene | 1.536 | 1.509 | 1.8 | 96 | 0.00 | 13.56 |
| 99 | | m,p-xylene | 0.574 | 0.585 | -1.9 | 96 | 0.00 | 13.67 |

6.7.3

# Continuing Calibration Summary

**Job Number:** JC1106 **Sample:** V3D4822-CC4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112517.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 100 | | o-xylene | 0.587 | 0.606 | -3.2 | 95 | 0.00 | 14.09 |
| 101 | | styrene | 0.987 | 0.933 | 5.5 | 90 | 0.00 | 14.10 |
| 102 | | Butyl Acrylate | | ----------NA---------- | | | | |
| 103 | | bromoform | 0.295 | 0.329 | -11.5 | 104 | 0.00 | 14.36 |
| 104 | I | 1,4-dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 100 | 0.00 | 15.79 |
| 105 | | isopropylbenzene | 2.509 | 2.476 | 1.3 | 93 | 0.00 | 14.43 |
| 106 | S | 4-bromofluorobenzene (s) | 0.769 | 0.773 | -0.5 | 102 | 0.00 | 14.63 |
| 107 | | bromobenzene | 0.741 | 0.755 | -1.9 | 99 | 0.00 | 14.83 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 108 | | cyclohexanone | 200.000 | 259.909 | -30.0# | 95 | 0.00 | 14.59 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 109 | | 1,1,2,2-tetrachloroethane | 0.726 | 0.805 | -10.9 | 106 | 0.00 | 14.73 |
| 110 | | trans-1,4-dichloro-2-bute | 0.161 | 0.148 | 8.1 | 87 | 0.00 | 14.78 |
| 111 | | 1,2,3-trichloropropane | 0.166 | 0.195 | -17.5 | 112 | 0.00 | 14.81 |
| 112 | | n-propylbenzene | 2.732 | 2.792 | -2.2 | 96 | 0.00 | 14.84 |
| 113 | | 4-Ethyltoluene | | ----------NA---------- | | | | |
| 114 | | 2-chlorotoluene | 0.638 | 0.655 | -2.7 | 98 | 0.00 | 14.99 |
| 115 | | 4-chlorotoluene | 0.620 | 0.650 | -4.8 | 98 | 0.00 | 15.08 |
| 116 | | 1,3,5-trimethylbenzene | 2.135 | 2.215 | -3.7 | 98 | 0.00 | 14.99 |
| 117 | | tert-butylbenzene | 1.759 | 1.695 | 3.6 | 90 | 0.00 | 15.33 |
| 118 | | pentachloroethane | 0.480 | 0.518 | -7.9 | 108 | 0.00 | 15.42 |
| 119 | | 1,2,4-trimethylbenzene | 2.144 | 2.170 | -1.2 | 96 | 0.00 | 15.38 |
| 120 | | sec-butylbenzene | 2.811 | 2.862 | -1.8 | 93 | 0.00 | 15.55 |
| 121 | | 1,3-dichlorobenzene | 1.377 | 1.470 | -6.8 | 98 | 0.00 | 15.74 |
| 122 | | p-isopropyltoluene | 2.455 | 2.469 | -0.6 | 94 | 0.00 | 15.67 |
| 123 | | 1,4-dichlorobenzene | 1.477 | 1.537 | -4.1 | 100 | 0.00 | 15.82 |
| 124 | | 1,2-dichlorobenzene | 1.484 | 1.600 | -7.8 | 101 | 0.00 | 16.20 |
| 125 | | 1,4-Diethylbenzene | | ----------NA---------- | | | | |
| 126 | | n-butylbenzene | 1.285 | 1.296 | -0.9 | 95 | 0.00 | 16.07 |
| 127 | | 1,2,4,5-Tetramethylbenzen | | ----------NA---------- | | | | |
| 128 | | 1,2-dibromo-3-chloropropa | 0.217 | 0.233 | -7.4 | 103 | 0.00 | 16.93 |
| 129 | | 1,3,5-trichlorobenzene | 1.576 | 1.709 | -8.4 | 99 | 0.00 | 17.10 |
| 130 | | 1,2,4-trichlorobenzene | 1.620 | 1.789 | -10.4 | 102 | 0.00 | 17.66 |
| 131 | | hexachlorobutadiene | 0.802 | 0.806 | -0.5 | 100 | 0.00 | 17.76 |
| 132 | | naphthalene | 3.432 | 3.789 | -10.4 | 104 | 0.00 | 17.90 |
| 133 | | 1,2,3-trichlorobenzene | 1.682 | 1.893 | -12.5 | 106 | 0.00 | 18.12 |
| 134 | | hexachloroethane | 0.507 | 0.503 | 0.8 | 101 | 0.00 | 16.44 |
| 135 | | Benzyl chloride | 1.442 | 1.443 | -0.1 | 106 | 0.00 | 15.93 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3D112241.D M3D4810.M Tue Aug 11 16:10:17 2015 3D

6.7.3

# Continuing Calibration Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Sample:** V3D4823-CC4810
**Lab FileID:** 3D112542.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\3D\v3d4822\3D112542.D  Vial: 35
Acq On : 11 Aug 2015 11:17 pm  Operator: ximenac
Sample : cc4810-50  Inst : MS3D
Misc : MS89468,V3D4823,5,,,,1  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
Last Update : Thu Aug 06 11:10:54 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Tert Butyl Alcohol-d9 | 1.000 | 1.000 | 0.0 | 94 | 0.00 | 7.17 |
| 2 | | 1,4-dioxane | 0.081 | 0.096 | -18.5 | 101 | 0.00 | 11.04 |
| 3 | M | tertiary butyl alcohol | 1.080 | 1.101 | -1.9 | 96 | -0.02 | 7.28 |
| 4 | I | pentafluorobenzene | 1.000 | 1.000 | 0.0 | 89 | 0.00 | 9.39 |
| 5 | | FREON 115 | | ----------NA---------- | | | | |
| 6 | | FREON 152A | | ----------NA---------- | | | | |
| 7 | | chlorotrifluoroethene | | ----------NA---------- | | | | |
| 8 | | chlorodifluoromethane | 0.679 | 0.778 | -14.6 | 102 | 0.00 | 3.85 |
| 9 | | dichlorodifluoromethane | 0.909 | 1.047 | -15.2 | 103 | -0.01 | 3.84 |
| 10 | | chloromethane | 0.723 | 0.802 | -10.9 | 105 | 0.00 | 4.16 |
| 11 | | vinyl chloride | 0.725 | 0.922 | -27.2# | 109 | 0.00 | 4.42 |
| 12 | | bromomethane | 0.468 | 0.548 | -17.1 | 109 | 0.00 | 5.04 |
| 13 | | chloroethane | 0.307 | 0.358 | -16.6 | 109 | 0.00 | 5.21 |
| 14 | | 1,3-butadiene | | ----------NA---------- | | | | |
| 15 | | vinyl bromide | | ----------NA---------- | | | | |
| 16 | | trichlorofluoromethane | 0.756 | 0.995 | -31.6# | 113 | 0.00 | 5.67 |
| 17 | | pentane | | ----------NA---------- | | | | |
| 18 | | ethyl ether | 0.187 | 0.197 | -5.3 | 99 | 0.00 | 6.07 |
| 19 | | freon 123a | | ----------NA---------- | | | | |
| 20 | | FREON 123 | | ----------NA---------- | | | | |
| 21 | | acrolein | 0.075 | 0.075 | 0.0 | 98 | 0.00 | 6.32 |
| 22 | | 1,1-dichloroethene | 0.595 | 0.687 | -15.5 | 99 | 0.00 | 6.48 |
| 23 | | acetone | 0.112 | 0.122 | -8.9 | 114 | 0.00 | 6.54 |
| 24 | | allyl chloride | 0.185 | 0.206 | -11.4 | 91 | 0.00 | 7.01 |
| 25 | | acetonitrile | 0.037 | 0.042 | -13.5 | 106 | -0.01 | 6.97 |
| 26 | m | acetaldehyde | | ----------NA---------- | | | | |
| 27 | | iodomethane | 0.846 | 1.016 | -20.1# | 99 | 0.00 | 6.76 |
| 28 | | iso-butyl alcohol | 0.012 | 0.013 | -8.3 | 98 | 0.00 | 9.68 |
| 29 | | carbon disulfide | 1.504 | 1.800 | -19.7 | 103 | 0.00 | 6.89 |
| 30 | | methylene chloride | 0.446 | 0.513 | -15.0 | 101 | 0.00 | 7.20 |
| 31 | | methyl acetate | 0.249 | 0.278 | -11.6 | 98 | 0.00 | 6.99 |
| 32 | | methyl tert butyl ether | 1.320 | 1.440 | -9.1 | 97 | 0.00 | 7.53 |
| 33 | | trans-1,2-dichloroethene | 0.543 | 0.624 | -14.9 | 99 | 0.00 | 7.57 |
| 34 | | di-isopropyl ether | 1.396 | 1.415 | -1.4 | 92 | 0.00 | 8.12 |
| 35 | | ethyl tert-butyl ether | 1.315 | 1.423 | -8.2 | 92 | 0.00 | 8.58 |
| 36 | | 2-butanone | 0.036 | 0.038 | -5.6 | 98 | 0.00 | 8.85 |
| 37 | M | 1,1-dichloroethane | 0.645 | 0.752 | -16.6 | 98 | 0.00 | 8.14 |
| 38 | | chloroprene | 0.472 | 0.494 | -4.7 | 89 | 0.00 | 8.25 |
| 39 | | acrylonitrile | 0.129 | 0.150 | -16.3 | 100 | 0.00 | 7.52 |
| 40 | | vinyl acetate | 0.048 | 0.054 | -12.5 | 95 | 0.00 | 8.13 |
| 41 | | ethyl acetate | 0.049 | 0.045 | 8.2 | 93 | 0.00 | 8.86 |

6.7.4

# Continuing Calibration Summary

**Job Number:** JC1106 **Sample:** V3D4823-CC4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112542.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 42 | | 2,2-dichloropropane | 0.675 | 0.728 | -7.9 | 101 | 0.00 | 8.88 |
| 43 | | cis-1,2-dichloroethene | 0.436 | 0.457 | -4.8 | 98 | 0.00 | 8.88 |
| 44 | | propionitrile | 0.048 | 0.054 | -12.5 | 102 | 0.00 | 8.93 |
| 45 | | methyl acrylate | 0.324 | 0.358 | -10.5 | 97 | 0.00 | 8.94 |
| 46 | | bromochloromethane | 0.210 | 0.246 | -17.1 | 101 | 0.00 | 9.19 |
| 47 | | tetrahydrofuran | 0.126 | 0.124 | 1.6 | 97 | 0.00 | 9.23 |
| 48 | | chloroform | 0.622 | 0.712 | -14.5 | 99 | 0.00 | 9.24 |
| 49 | | Tert-Butyl Formate | 0.362 | 0.379 | -4.7 | 91 | 0.00 | 9.27 |
| 50 | S | dibromofluoromethane (s) | 0.383 | 0.417 | -8.9 | 96 | 0.00 | 9.44 |
| 51 | S | 1,2-dichloroethane-d4 (s) | 0.355 | 0.388 | -9.3 | 99 | 0.00 | 9.86 |
| 52 | | freon 113 | 0.366 | 0.453 | -23.8# | 108 | 0.00 | 6.45 |
| 53 | | methacrylonitrile | 0.188 | 0.187 | 0.5 | 92 | 0.00 | 9.12 |
| 54 | | 1,1,1-trichloroethane | 0.642 | 0.787 | -22.6# | 107 | 0.00 | 9.50 |
| 55 | | tert amyl alcohol | | ----------NA---------- | | | | |
| 56 | | 2,2,4-Trimethylpentane | | ----------NA---------- | | | | |
| 57 | | tert-amyl methyl ether | 1.314 | 1.401 | -6.6 | 98 | 0.00 | 9.97 |
| 58 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 91 | 0.00 | 10.31 |
| 59 | | epichlorohydrin | 0.027 | 0.027 | 0.0 | 103 | 0.00 | 11.57 |
| 60 | | n-butyl alcohol | 0.008 | 0.009# | -12.5 | 98 | 0.00 | 10.44 |
| 61 | M | cyclohexane | 0.586 | 0.661 | -12.8 | 102 | 0.00 | 9.57 |
| 62 | | carbon tetrachloride | 0.484 | 0.636 | -31.4# | 109 | 0.00 | 9.71 |
| 63 | | 1,1-dichloropropene | 0.360 | 0.423 | -17.5 | 100 | 0.00 | 9.67 |
| 64 | | hexane | 0.322 | 0.317 | 1.6 | 90 | 0.00 | 7.87 |
| 65 | M | benzene | 1.175 | 1.325 | -12.8 | 101 | 0.00 | 9.94 |
| 66 | | heptane | 0.183 | 0.200 | -9.3 | 101 | 0.00 | 10.11 |
| 67 | | isopropyl acetate | 0.511 | 0.537 | -5.1 | 95 | 0.00 | 9.86 |
| 68 | | 1,2-dichloroethane | 0.351 | 0.408 | -16.2 | 102 | 0.00 | 9.95 |
| 69 | | trichloroethene | 0.284 | 0.322 | -13.4 | 102 | 0.00 | 10.66 |
| 70 | | ethyl acrylate | | ----------NA---------- | | | | |
| 71 | | tert amyl ethyl ether | | ----------NA---------- | | | | |
| 72 | | 2-nitropropane | 0.104 | 0.106 | -1.9 | 100 | 0.00 | 11.44 |
| 73 | | 2-chloroethyl vinyl ether | 0.180 | 0.197 | -9.4 | 98 | 0.00 | 11.45 |
| 74 | | methyl methacrylate | 0.402 | 0.429 | -6.7 | 94 | 0.00 | 10.92 |
| 75 | | 1,2-dichloropropane | 0.307 | 0.345 | -12.4 | 101 | 0.00 | 10.92 |
| 76 | | methylcyclohexane | 0.531 | 0.654 | -23.2# | 100 | 0.00 | 10.87 |
| 77 | | dibromomethane | 0.181 | 0.222 | -22.7# | 108 | 0.00 | 11.08 |
| 78 | | bromodichloromethane | 0.374 | 0.436 | -16.6 | 103 | 0.00 | 11.21 |
| 79 | | cis-1,3-dichloropropene | 0.439 | 0.498 | -13.4 | 97 | 0.00 | 11.67 |
| 80 | S | toluene-d8 (s) | 1.095 | 1.134 | -3.6 | 94 | 0.00 | 11.96 |
| 81 | | 4-methyl-2-pentanone | 0.112 | 0.119 | -6.2 | 98 | 0.00 | 11.76 |
| 82 | | toluene | 0.646 | 0.759 | -17.5 | 100 | 0.00 | 12.03 |
| 83 | | 3-methyl-1-butanol | 0.008 | 0.009# | -12.5 | 104 | 0.00 | 11.78 |
| 84 | | trans-1,3-dichloropropene | 0.390 | 0.457 | -17.2 | 100 | 0.00 | 12.23 |
| 85 | | ethyl methacrylate | 0.345 | 0.339 | 1.7 | 88 | 0.00 | 12.23 |
| 86 | | 1,1,2-trichloroethane | 0.217 | 0.247 | -13.8 | 103 | 0.00 | 12.45 |
| 87 | | 2-hexanone | 0.091 | 0.085 | 6.6 | 88 | 0.00 | 12.62 |
| 88 | I | chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 95 | 0.00 | 13.48 |
| 89 | | tetrachloroethene | 0.426 | 0.453 | -6.3 | 97 | 0.00 | 12.62 |
| 90 | | 1,3-dichloropropane | 0.485 | 0.531 | -9.5 | 101 | 0.00 | 12.63 |
| 91 | | butyl acetate | 0.201 | 0.206 | -2.5 | 96 | 0.00 | 12.69 |
| 92 | | 3,3-Dimethyl-1-Butanol | 0.048 | 0.041 | 14.6 | 95 | 0.00 | 12.79 |
| 93 | | dibromochloromethane | 0.378 | 0.448 | -18.5 | 105 | 0.00 | 12.89 |
| 94 | | 1,2-dibromoethane | 0.319 | 0.355 | -11.3 | 101 | 0.00 | 13.05 |
| 95 | | n-Butyl Ether | 1.513 | 1.441 | 4.8 | 90 | 0.00 | 13.42 |
| 96 | | chlorobenzene | 0.897 | 1.016 | -13.3 | 102 | 0.00 | 13.51 |
| 97 | | 1,1,1,2-tetrachloroethane | 0.398 | 0.476 | -19.6 | 105 | 0.00 | 13.56 |
| 98 | | ethylbenzene | 1.536 | 1.663 | -8.3 | 101 | 0.00 | 13.56 |
| 99 | | m,p-xylene | 0.574 | 0.647 | -12.7 | 101 | 0.00 | 13.66 |

6.7.4 ⑥

# Continuing Calibration Summary

**Job Number:** JC1106 **Sample:** V3D4823-CC4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112542.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 100 | | o-xylene | 0.587 | 0.667 | -13.6 | 99 | 0.00 | 14.08 |
| 101 | | styrene | 0.987 | 1.041 | -5.5 | 94 | 0.00 | 14.09 |
| 102 | | Butyl Acrylate | | ----------NA---------- | | | | |
| 103 | | bromoform | 0.295 | 0.337 | -14.2 | 103 | 0.00 | 14.36 |
| 104 | I | 1,4-dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 93 | 0.00 | 15.79 |
| 105 | | isopropylbenzene | 2.509 | 2.882 | -14.9 | 100 | 0.00 | 14.42 |
| 106 | S | 4-bromofluorobenzene (s) | 0.769 | 0.776 | -0.9 | 93 | 0.00 | 14.63 |
| 107 | | bromobenzene | 0.741 | 0.817 | -10.3 | 100 | 0.00 | 14.82 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 108 | | cyclohexanone | 500.000 | 257.854 | 48.4# | 104 | 0.00 | 14.59 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 109 | | 1,1,2,2-tetrachloroethane | 0.726 | 0.814 | -12.1 | 105 | 0.00 | 14.73 |
| 110 | | trans-1,4-dichloro-2-bute | 0.161 | 0.134 | 16.8 | 79 | 0.00 | 14.77 |
| 111 | | 1,2,3-trichloropropane | 0.166 | 0.193 | -16.3 | 110 | 0.00 | 14.80 |
| 112 | | n-propylbenzene | 2.732 | 3.123 | -14.3 | 101 | 0.00 | 14.83 |
| 113 | | 4-Ethyltoluene | | ----------NA---------- | | | | |
| 114 | | 2-chlorotoluene | 0.638 | 0.729 | -14.3 | 104 | 0.00 | 14.98 |
| 115 | | 4-chlorotoluene | 0.620 | 0.702 | -13.2 | 98 | 0.00 | 15.08 |
| 116 | | 1,3,5-trimethylbenzene | 2.135 | 2.508 | -17.5 | 103 | 0.00 | 14.99 |
| 117 | | tert-butylbenzene | 1.759 | 2.047 | -16.4 | 99 | 0.00 | 15.33 |
| 118 | | pentachloroethane | 0.480 | 0.633 | -31.9# | 116 | 0.00 | 15.42 |
| 119 | | 1,2,4-trimethylbenzene | 2.144 | 2.451 | -14.3 | 101 | 0.00 | 15.38 |
| 120 | | sec-butylbenzene | 2.811 | 3.383 | -20.3# | 103 | 0.00 | 15.55 |
| 121 | | 1,3-dichlorobenzene | 1.377 | 1.578 | -14.6 | 100 | 0.00 | 15.73 |
| 122 | | p-isopropyltoluene | 2.455 | 2.846 | -15.9 | 102 | 0.00 | 15.66 |
| 123 | | 1,4-dichlorobenzene | 1.477 | 1.608 | -8.9 | 100 | 0.00 | 15.81 |
| 124 | | 1,2-dichlorobenzene | 1.484 | 1.694 | -14.2 | 101 | 0.00 | 16.19 |
| 125 | | 1,4-Diethylbenzene | | ----------NA---------- | | | | |
| 126 | | n-butylbenzene | 1.285 | 1.444 | -12.4 | 101 | 0.00 | 16.07 |
| 127 | | 1,2,4,5-Tetramethylbenzen | | ----------NA---------- | | | | |
| 128 | | 1,2-dibromo-3-chloropropa | 0.217 | 0.224 | -3.2 | 97 | 0.00 | 16.92 |
| 129 | | 1,3,5-trichlorobenzene | 1.576 | 1.815 | -15.2 | 100 | 0.00 | 17.09 |
| 130 | | 1,2,4-trichlorobenzene | 1.620 | 1.882 | -16.2 | 100 | 0.00 | 17.66 |
| 131 | | hexachlorobutadiene | 0.802 | 0.911 | -13.6 | 107 | 0.00 | 17.76 |
| 132 | | naphthalene | 3.432 | 3.909 | -13.9 | 103 | 0.00 | 17.90 |
| 133 | | 1,2,3-trichlorobenzene | 1.682 | 1.980 | -17.7 | 104 | 0.00 | 18.11 |
| 134 | | hexachloroethane | 0.507 | 0.612 | -20.7# | 106 | 0.00 | 16.44 |
| 135 | | Benzyl chloride | 1.442 | 1.320 | 8.5 | 90 | 0.00 | 15.92 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3D112242.D M3D4810.M Wed Aug 12 09:32:33 2015 T

6.7.4

Raw Data: 3D112563.D

# Continuing Calibration Summary



**Job Number:** JC1106
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Sample:** V3D4824-CC4810
**Lab FileID:** 3D112563.D

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\DATA\3D112563.D  Vial: 2
Acq On : 12 Aug 2015 9:17 am  Operator: ximenac
Sample : cc4810-20  Inst : MS3D
Misc : MS89457,V3D4824,5,,,,1  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
Last Update : Thu Aug 06 11:10:54 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.30min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | I | Tert Butyl Alcohol-d9 | 1.000 | 1.000 | 0.0 | 102 | 0.00 | 7.17 |
| 2 | | 1,4-dioxane | 0.081 | 0.102 | -25.9# | 118 | 0.00 | 11.04 |
| 3 | M | tertiary butyl alcohol | 1.080 | 1.037 | 4.0 | 95 | -0.01 | 7.29 |
| 4 | I | pentafluorobenzene | 1.000 | 1.000 | 0.0 | 99 | 0.01 | 9.40 |
| 5 | | FREON 115 | | ----------NA---------- | | | | |
| 6 | | FREON 152A | | ----------NA---------- | | | | |
| 7 | | chlorotrifluoroethene | | ----------NA---------- | | | | |
| 8 | | chlorodifluoromethane | 0.679 | 0.703 | -3.5 | 102 | 0.00 | 3.86 |
| 9 | | dichlorodifluoromethane | 0.909 | 1.008 | -10.9 | 106 | 0.00 | 3.85 |
| 10 | | chloromethane | 0.723 | 0.723 | 0.0 | 111 | 0.00 | 4.17 |
| 11 | | vinyl chloride | 0.725 | 0.802 | -10.6 | 111 | 0.00 | 4.41 |
| 12 | | bromomethane | 0.468 | 0.527 | -12.6 | 116 | 0.01 | 5.06 |
| 13 | | chloroethane | 0.307 | 0.340 | -10.7 | 117 | 0.02 | 5.23 |
| 14 | | 1,3-butadiene | | ----------NA---------- | | | | |
| 15 | | vinyl bromide | | ----------NA---------- | | | | |
| 16 | | trichlorofluoromethane | 0.756 | 0.923 | -22.1# | 118 | 0.01 | 5.68 |
| 17 | | pentane | | ----------NA---------- | | | | |
| 18 | | ethyl ether | 0.187 | 0.194 | -3.7 | 103 | 0.00 | 6.07 |
| 19 | | freon 123a | | ----------NA---------- | | | | |
| 20 | | FREON 123 | | ----------NA---------- | | | | |
| 21 | | acrolein | 0.075 | 0.068 | 9.3 | 92 | 0.00 | 6.33 |
| 22 | | 1,1-dichloroethene | 0.595 | 0.594 | 0.2 | 97 | 0.00 | 6.49 |
| 23 | | acetone | 0.112 | 0.123 | -9.8 | 102 | 0.00 | 6.55 |
| 24 | | allyl chloride | 0.185 | 0.187 | -1.1 | 92 | 0.00 | 7.02 |
| 25 | | acetonitrile | 0.037 | 0.039 | -5.4 | 104 | 0.00 | 6.98 |
| 26 | m | acetaldehyde | | ----------NA---------- | | | | |
| 27 | | iodomethane | 0.846 | 0.877 | -3.7 | 96 | 0.00 | 6.77 |
| 28 | | iso-butyl alcohol | 0.012 | 0.013 | -8.3 | 102 | 0.01 | 9.69 |
| 29 | | carbon disulfide | 1.504 | 1.576 | -4.8 | 100 | 0.00 | 6.90 |
| 30 | | methylene chloride | 0.446 | 0.459 | -2.9 | 100 | 0.00 | 7.21 |
| 31 | | methyl acetate | 0.249 | 0.263 | -5.6 | 104 | 0.00 | 7.01 |
| 32 | | methyl tert butyl ether | 1.320 | 1.233 | 6.6 | 90 | 0.00 | 7.54 |
| 33 | | trans-1,2-dichloroethene | 0.543 | 0.565 | -4.1 | 99 | 0.00 | 7.58 |
| 34 | | di-isopropyl ether | 1.396 | 1.219 | 12.7 | 90 | 0.00 | 8.13 |
| 35 | | ethyl tert-butyl ether | 1.315 | 1.195 | 9.1 | 88 | 0.01 | 8.59 |
| 36 | | 2-butanone | 0.036 | 0.034 | 5.6 | 87 | 0.01 | 8.86 |
| 37 | M | 1,1-dichloroethane | 0.645 | 0.702 | -8.8 | 100 | 0.01 | 8.15 |
| 38 | | chloroprene | 0.472 | 0.428 | 9.3 | 92 | 0.01 | 8.26 |
| 39 | | acrylonitrile | 0.129 | 0.142 | -10.1 | 98 | 0.00 | 7.53 |
| 40 | | vinyl acetate | 0.048 | 0.050 | -4.2 | 101 | 0.00 | 8.14 |
| 41 | | ethyl acetate | 0.049 | 0.040 | 18.4 | 77 | 0.01 | 8.87 |

6.7.5

# Continuing Calibration Summary



**Job Number:** JC1106 **Sample:** V3D4824-CC4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112563.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 42 | | 2,2-dichloropropane | 0.675 | 0.735 | -8.9 | 111 | 0.00 | 8.88 |
| 43 | | cis-1,2-dichloroethene | 0.436 | 0.414 | 5.0 | 96 | 0.01 | 8.89 |
| 44 | | propionitrile | 0.048 | 0.052 | -8.3 | 102 | 0.00 | 8.95 |
| 45 | | methyl acrylate | 0.324 | 0.334 | -3.1 | 92 | 0.01 | 8.95 |
| 46 | | bromochloromethane | 0.210 | 0.227 | -8.1 | 100 | 0.00 | 9.19 |
| 47 | | tetrahydrofuran | 0.126 | 0.118 | 6.3 | 90 | 0.00 | 9.23 |
| 48 | | chloroform | 0.622 | 0.652 | -4.8 | 102 | 0.00 | 9.25 |
| 49 | | Tert-Butyl Formate | 0.362 | 0.320 | 11.6 | 88 | 0.00 | 9.28 |
| 50 | S | dibromofluoromethane (s) | 0.383 | 0.404 | -5.5 | 105 | 0.00 | 9.45 |
| 51 | S | 1,2-dichloroethane-d4 (s) | 0.355 | 0.375 | -5.6 | 106 | 0.00 | 9.87 |
| 52 | | freon 113 | 0.366 | 0.398 | -8.7 | 109 | 0.02 | 6.47 |
| 53 | | methacrylonitrile | 0.188 | 0.175 | 6.9 | 91 | 0.01 | 9.13 |
| 54 | | 1,1,1-trichloroethane | 0.642 | 0.722 | -12.5 | 108 | 0.01 | 9.51 |
| 55 | | tert amyl alcohol | | ----------NA---------- | | | | |
| 56 | | 2,2,4-Trimethylpentane | | ----------NA---------- | | | | |
| 57 | | tert-amyl methyl ether | 1.314 | 1.165 | 11.3 | 92 | 0.00 | 9.97 |
| 58 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 98 | 0.01 | 10.32 |
| 59 | | epichlorohydrin | 0.027 | 0.027 | 0.0 | 101 | 0.00 | 11.58 |
| 60 | | n-butyl alcohol | 0.008 | 0.008# | 0.0 | 102 | 0.02 | 10.46 |
| 61 | M | cyclohexane | 0.586 | 0.630 | -7.5 | 107 | 0.00 | 9.57 |
| 62 | | carbon tetrachloride | 0.484 | 0.591 | -22.1# | 112 | 0.00 | 9.71 |
| 63 | | 1,1-dichloropropene | 0.360 | 0.398 | -10.6 | 100 | 0.00 | 9.68 |
| 64 | | hexane | 0.322 | 0.284 | 11.8 | 91 | 0.00 | 7.88 |
| 65 | M | benzene | 1.175 | 1.258 | -7.1 | 102 | 0.00 | 9.94 |
| 66 | | heptane | 0.183 | 0.175 | 4.4 | 96 | 0.00 | 10.11 |
| 67 | | isopropyl acetate | 0.511 | 0.505 | 1.2 | 94 | 0.01 | 9.87 |
| 68 | | 1,2-dichloroethane | 0.351 | 0.384 | -9.4 | 100 | 0.00 | 9.96 |
| 69 | | trichloroethene | 0.284 | 0.305 | -7.4 | 103 | 0.01 | 10.66 |
| 70 | | ethyl acrylate | | ----------NA---------- | | | | |
| 71 | | tert amyl ethyl ether | | ----------NA---------- | | | | |
| 72 | | 2-nitropropane | 0.104 | 0.102 | 1.9 | 88 | 0.02 | 11.45 |
| 73 | | 2-chloroethyl vinyl ether | 0.180 | 0.181 | -0.6 | 93 | 0.00 | 11.46 |
| 74 | | methyl methacrylate | 0.402 | 0.426 | -6.0 | 95 | 0.00 | 10.93 |
| 75 | | 1,2-dichloropropane | 0.307 | 0.334 | -8.8 | 104 | 0.01 | 10.93 |
| 76 | | methylcyclohexane | 0.531 | 0.563 | -6.0 | 100 | 0.01 | 10.89 |
| 77 | | dibromomethane | 0.181 | 0.209 | -15.5 | 103 | 0.00 | 11.08 |
| 78 | | bromodichloromethane | 0.374 | 0.406 | -8.6 | 101 | 0.00 | 11.22 |
| 79 | | cis-1,3-dichloropropene | 0.439 | 0.451 | -2.7 | 91 | 0.00 | 11.68 |
| 80 | S | toluene-d8 (s) | 1.095 | 1.126 | -2.8 | 100 | 0.00 | 11.97 |
| 81 | | 4-methyl-2-pentanone | 0.112 | 0.112 | 0.0 | 92 | 0.00 | 11.77 |
| 82 | | toluene | 0.646 | 0.709 | -9.8 | 97 | 0.01 | 12.04 |
| 83 | | 3-methyl-1-butanol | 0.008 | 0.008# | 0.0 | 96 | 0.00 | 11.79 |
| 84 | | trans-1,3-dichloropropene | 0.390 | 0.421 | -7.9 | 95 | 0.00 | 12.24 |
| 85 | | ethyl methacrylate | 0.345 | 0.292 | 15.4 | 78 | 0.01 | 12.24 |
| 86 | | 1,1,2-trichloroethane | 0.217 | 0.234 | -7.8 | 100 | 0.00 | 12.45 |
| 87 | | 2-hexanone | 0.091 | 0.078 | 14.3 | 76 | 0.01 | 12.63 |
| 88 | I | chlorobenzene-d5 | 1.000 | 1.000 | 0.0 | 99 | 0.00 | 13.48 |
| 89 | | tetrachloroethene | 0.426 | 0.427 | -0.2 | 91 | 0.00 | 12.63 |
| 90 | | 1,3-dichloropropane | 0.485 | 0.505 | -4.1 | 96 | 0.01 | 12.64 |
| 91 | | butyl acetate | 0.201 | 0.179 | 10.9 | 88 | 0.00 | 12.70 |
| 92 | | 3,3-Dimethyl-1-Butanol | 0.048 | 0.035 | 27.1# | 84 | 0.00 | 12.79 |
| 93 | | dibromochloromethane | 0.378 | 0.420 | -11.1 | 99 | 0.00 | 12.90 |
| 94 | | 1,2-dibromoethane | 0.319 | 0.343 | -7.5 | 94 | 0.00 | 13.05 |
| 95 | | n-Butyl Ether | 1.513 | 1.253 | 17.2 | 79 | 0.00 | 13.43 |
| 96 | | chlorobenzene | 0.897 | 0.973 | -8.5 | 98 | 0.00 | 13.51 |
| 97 | | 1,1,1,2-tetrachloroethane | 0.398 | 0.445 | -11.8 | 104 | 0.00 | 13.57 |
| 98 | | ethylbenzene | 1.536 | 1.549 | -0.8 | 95 | 0.00 | 13.56 |
| 99 | | m,p-xylene | 0.574 | 0.605 | -5.4 | 95 | 0.00 | 13.67 |

6.7.5

# Continuing Calibration Summary

**Job Number:** JC1106 **Sample:** V3D4824-CC4810
**Account:** UTC United Technologies Corporation **Lab FileID:** 3D112563.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 100 | | o-xylene | 0.587 | 0.603 | -2.7 | 91 | 0.00 | 14.09 |
| 101 | | styrene | 0.987 | 0.913 | 7.5 | 85 | 0.01 | 14.10 |
| 102 | | Butyl Acrylate | | ----------NA---------- | | | | |
| 103 | | bromoform | 0.295 | 0.313 | -6.1 | 95 | 0.00 | 14.36 |
| 104 | I | 1,4-dichlorobenzene-d4 | 1.000 | 1.000 | 0.0 | 90 | 0.00 | 15.79 |
| 105 | | isopropylbenzene | 2.509 | 2.658 | -5.9 | 90 | 0.00 | 14.43 |
| 106 | S | 4-bromofluorobenzene (s) | 0.769 | 0.780 | -1.4 | 93 | 0.00 | 14.63 |
| 107 | | bromobenzene | 0.741 | 0.806 | -8.8 | 95 | 0.01 | 14.83 |
| | | ---------- | True | Calc. | % Drift | ---------- | | |
| 108 | | cyclohexanone | 200.000 | 113.675 | 43.2# | 24 | 0.01 | 14.60 |
| | | ---------- | AvgRF | CCRF | % Dev | ---------- | | |
| 109 | | 1,1,2,2-tetrachloroethane | 0.726 | 0.826 | -13.8 | 98 | 0.00 | 14.73 |
| 110 | | trans-1,4-dichloro-2-bute | 0.161 | 0.134 | 16.8 | 71 | 0.01 | 14.78 |
| 111 | | 1,2,3-trichloropropane | 0.166 | 0.191 | -15.1 | 100 | 0.00 | 14.81 |
| 112 | | n-propylbenzene | 2.732 | 2.954 | -8.1 | 91 | 0.00 | 14.84 |
| 113 | | 4-Ethyltoluene | | ----------NA---------- | | | | |
| 114 | | 2-chlorotoluene | 0.638 | 0.702 | -10.0 | 95 | 0.00 | 14.99 |
| 115 | | 4-chlorotoluene | 0.620 | 0.667 | -7.6 | 91 | 0.00 | 15.08 |
| 116 | | 1,3,5-trimethylbenzene | 2.135 | 2.337 | -9.5 | 93 | 0.00 | 14.99 |
| 117 | | tert-butylbenzene | 1.759 | 1.827 | -3.9 | 88 | 0.00 | 15.34 |
| 118 | | pentachloroethane | 0.480 | 0.600 | -25.0# | 112 | 0.00 | 15.42 |
| 119 | | 1,2,4-trimethylbenzene | 2.144 | 2.270 | -5.9 | 90 | 0.00 | 15.38 |
| 120 | | sec-butylbenzene | 2.811 | 3.089 | -9.9 | 91 | 0.00 | 15.55 |
| 121 | | 1,3-dichlorobenzene | 1.377 | 1.505 | -9.3 | 90 | 0.00 | 15.73 |
| 122 | | p-isopropyltoluene | 2.455 | 2.623 | -6.8 | 90 | 0.00 | 15.67 |
| 123 | | 1,4-dichlorobenzene | 1.477 | 1.534 | -3.9 | 90 | 0.00 | 15.82 |
| 124 | | 1,2-dichlorobenzene | 1.484 | 1.598 | -7.7 | 91 | 0.00 | 16.20 |
| 125 | | 1,4-Diethylbenzene | | ----------NA---------- | | | | |
| 126 | | n-butylbenzene | 1.285 | 1.304 | -1.5 | 86 | 0.00 | 16.07 |
| 127 | | 1,2,4,5-Tetramethylbenzen | | ----------NA---------- | | | | |
| 128 | | 1,2-dibromo-3-chloropropa | 0.217 | 0.208 | 4.1 | 82 | 0.00 | 16.93 |
| 129 | | 1,3,5-trichlorobenzene | 1.576 | 1.671 | -6.0 | 87 | 0.00 | 17.10 |
| 130 | | 1,2,4-trichlorobenzene | 1.620 | 1.720 | -6.2 | 89 | 0.00 | 17.66 |
| 131 | | hexachlorobutadiene | 0.802 | 0.855 | -6.6 | 95 | 0.00 | 17.76 |
| 132 | | naphthalene | 3.432 | 3.601 | -4.9 | 89 | 0.00 | 17.90 |
| 133 | | 1,2,3-trichlorobenzene | 1.682 | 1.860 | -10.6 | 94 | 0.00 | 18.12 |
| 134 | | hexachloroethane | 0.507 | 0.556 | -9.7 | 101 | 0.00 | 16.44 |
| 135 | | Benzyl chloride | 1.442 | 1.368 | 5.1 | 91 | 0.00 | 15.93 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
3D112241.D M3D4810.M Wed Aug 12 14:29:13 2015 3D

6.7.5

New Jersey
ACCUTEST
LABORATORIES

GC/MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112575.D
Acq On : 12 Aug 2015 2:48 pm
Operator : ximenac
Sample : jc1106-1
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 13 10:35:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.183 | 65 | 93640 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 196615 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 224320 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 180779 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 111990 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 84286 | 55.95 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 111.90% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 77038 | 55.21 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 110.42% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 243477 | 49.56 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.12% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 83190 | 48.28 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.56% | | | |
| Target Compounds | | | | | | Qvalue |
| 22) 1,1-dichloroethene | 6.491 | 61 | 2534 | 1.08 | ug/L | 97 |
| 32) methyl tert butyl ether | 7.540 | 73 | 3296 | 0.63 | ug/L | 97 |
| 33) trans-1,2-dichloroethene | 7.587 | 61 | 2850 | 1.34 | ug/L | 94 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 41747 | 16.47 | ug/L | 98 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 239895 | 140.01 | ug/L | 88 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 10211 | 4.05 | ug/L | 97 |
| 65) benzene | 9.947 | 78 | 1423 | 0.27 | ug/L | 81 |
| 69) trichloroethene | 10.670 | 95 | 2628 | 2.06 | ug/L | 89 |
| 89) tetrachloroethene | 12.626 | 166 | 37409 | 24.30 | ug/L | 98 |

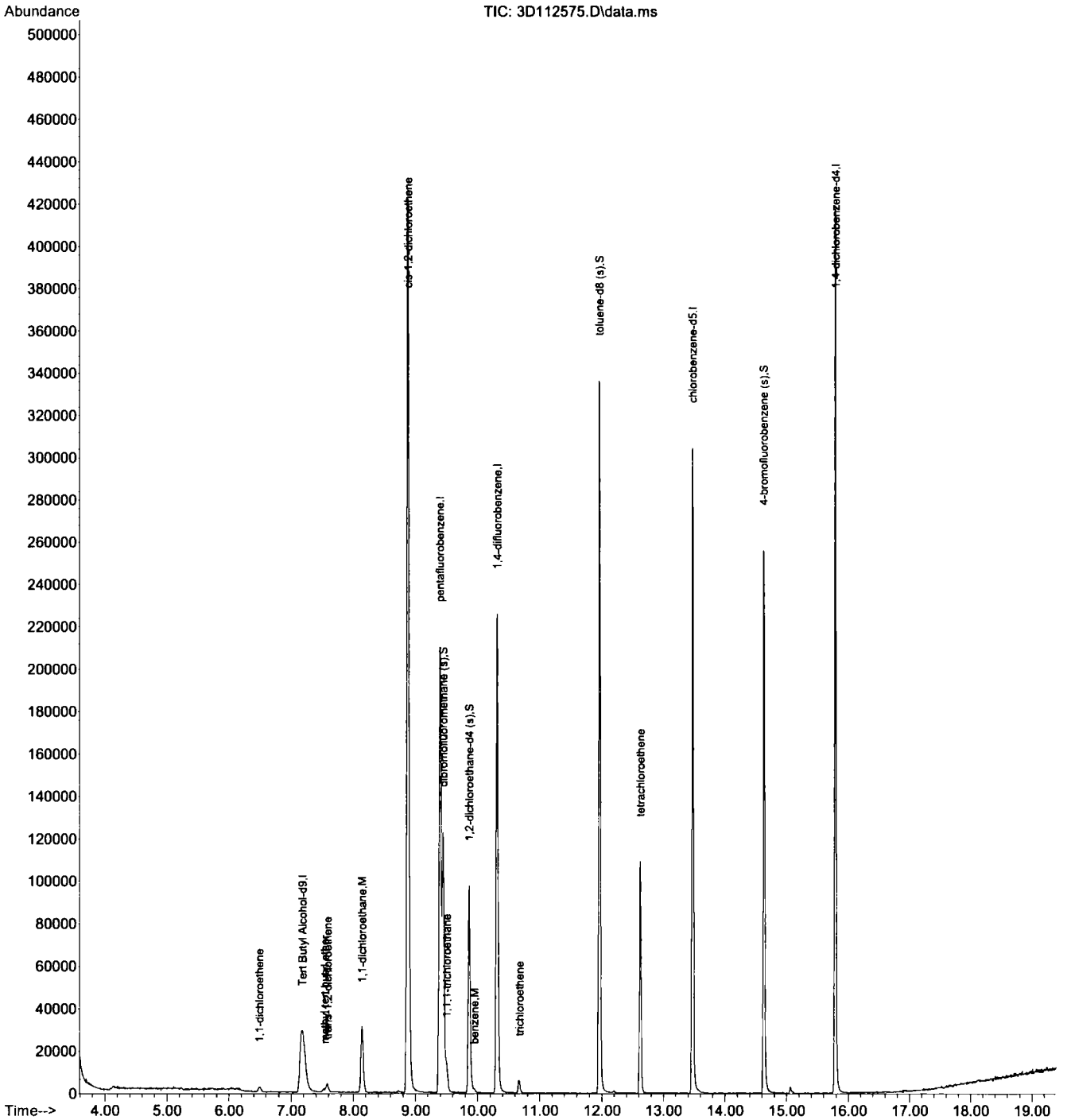
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.1

Quantitation Report (QT Reviewed)

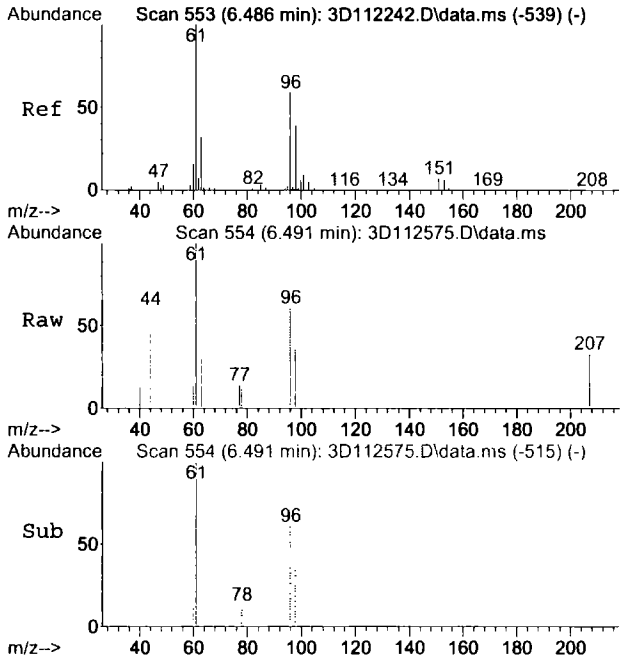
Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112575.D
Acq On : 12 Aug 2015 2:48 pm
Operator : ximenac
Sample : jc1106-1
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 13 10:35:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration





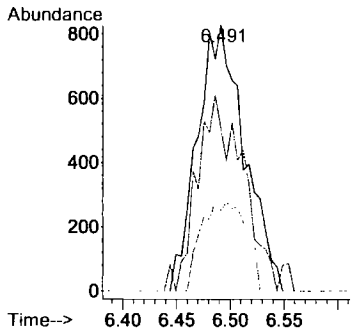

ACCUTEST LABORATORIES

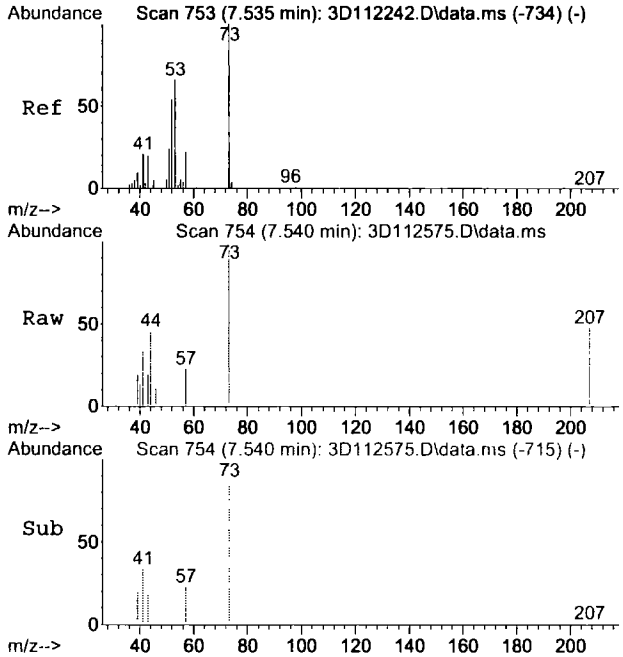



#22
1,1-dichloroethene
Concen: 1.08 ug/L
RT: 6.491 min Scan# 554
Delta R.T. 0.005 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

Tgt Ion: 61 Resp: 2534

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 61.3 | 28.7 | 88.7 |
| 63 | 30.1 | 1.8 | 61.8 |

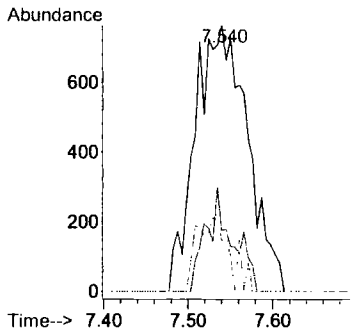


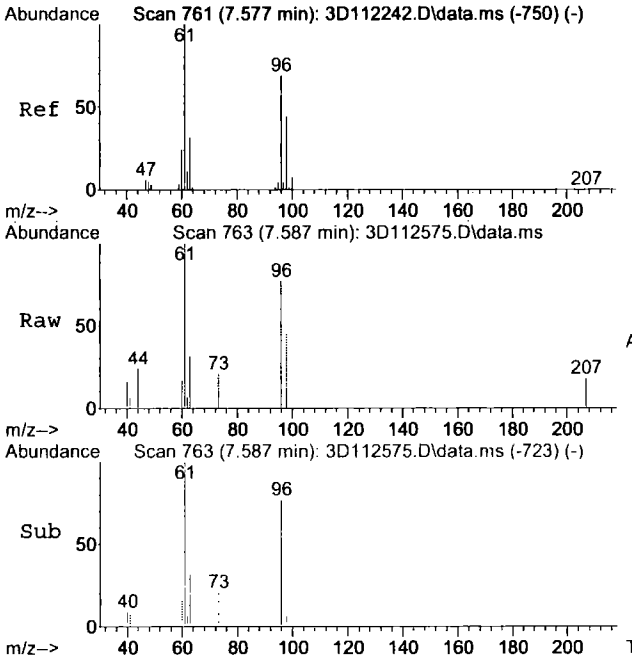

#32
methyl tert butyl ether
Concen: 0.63 ug/L
RT: 7.540 min Scan# 754
Delta R.T. 0.005 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

Tgt Ion: 73 Resp: 3296

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 23.0 | 0.0 | 51.5 |
| 43 | 19.0 | 0.0 | 49.8 |



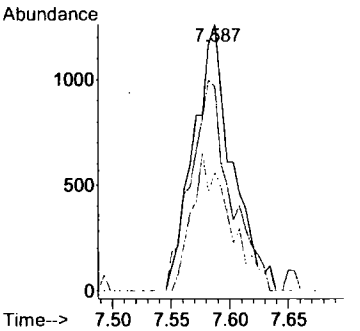

7.1.1

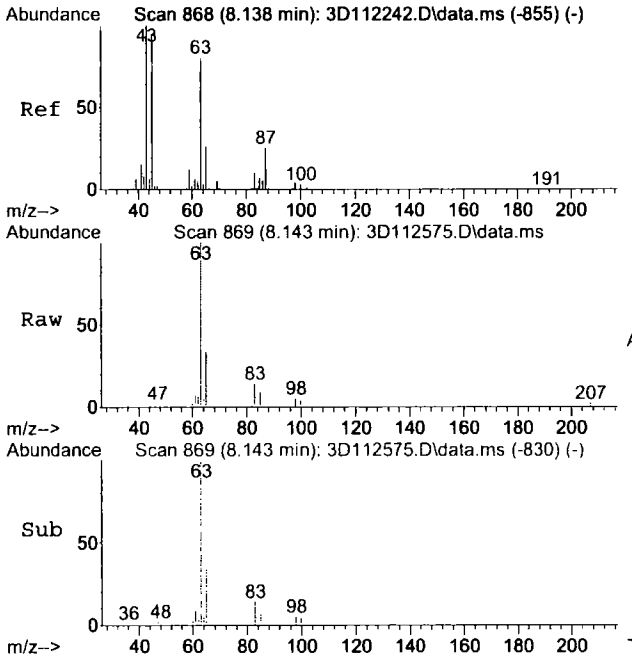



#33
trans-1,2-dichloroethene
Concen: 1.34 ug/L
RT: 7.587 min Scan# 763
Delta R.T. 0.010 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

Tgt Ion: 61 Resp: 2850

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 76.7 | 48.2 | 89.4 |
| 98 | 44.6 | 31.1 | 57.7 |

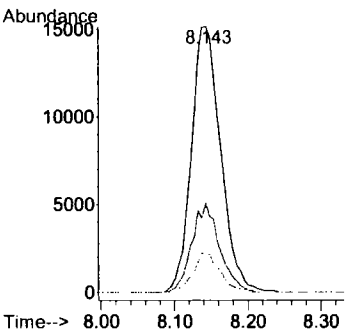



#37
1,1-dichloroethane
Concen: 16.47 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

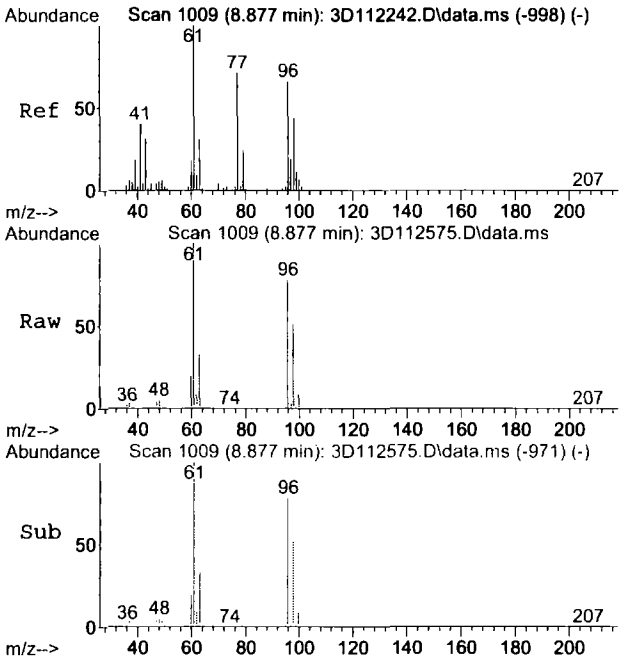
Tgt Ion: 63 Resp: 41747

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 33.6 | 2.4 | 62.4 |
| 83 | 14.0 | 0.0 | 42.8 |




7.1.1

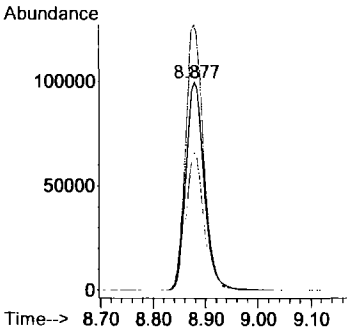
7

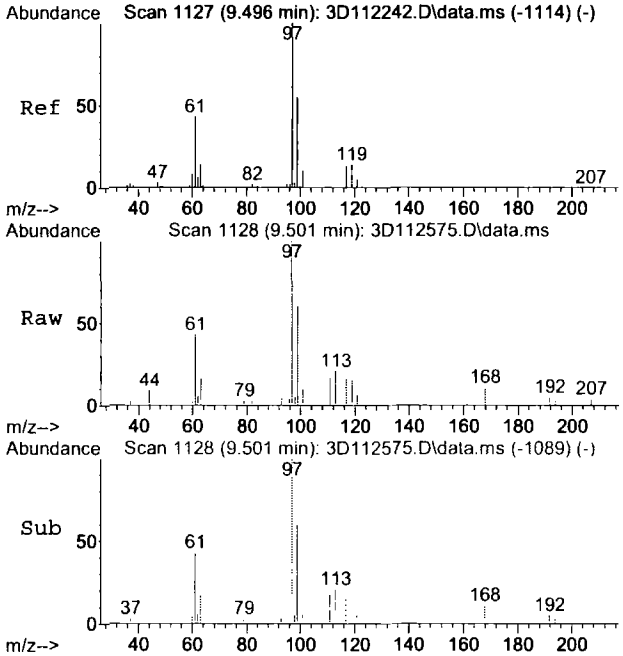



#43
cis-1,2-dichloroethene
Concen: 140.01 ug/L
RT: 8.877 min Scan# 1009
Delta R.T. -0.000 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

Tgt Ion: 96 Resp: 239895

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 128.1 | 120.5 | 180.5 |
| 98 | 66.2 | 36.4 | 96.4 |

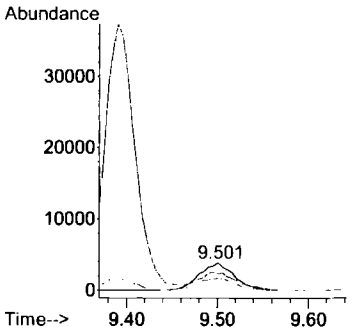



#54
1,1,1-trichloroethane
Concen: 4.05 ug/L
RT: 9.501 min Scan# 1128
Delta R.T. 0.005 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

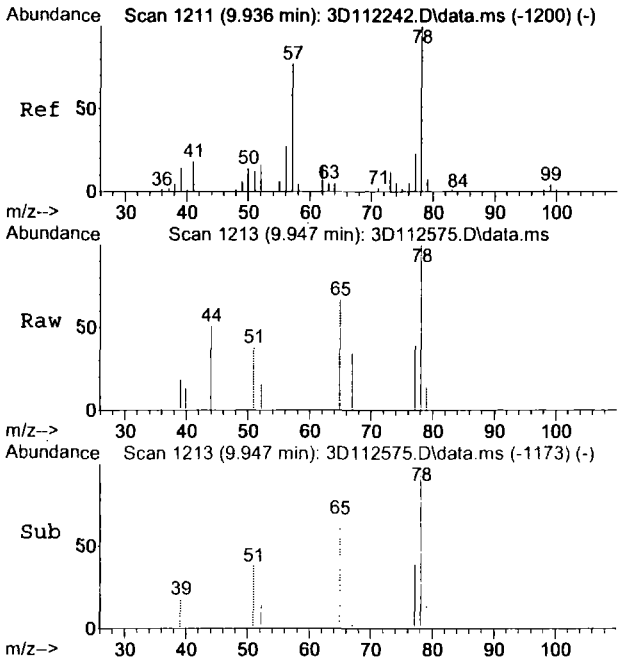
Tgt Ion: 97 Resp: 10211

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 59.5 | 33.7 | 93.7 |
| 61 | 43.0 | 13.5 | 73.5 |




7.1.1

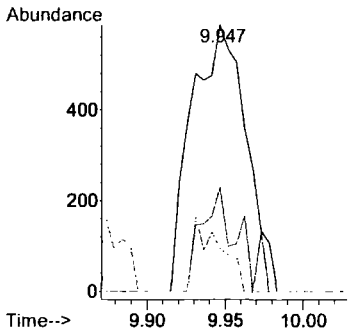
7

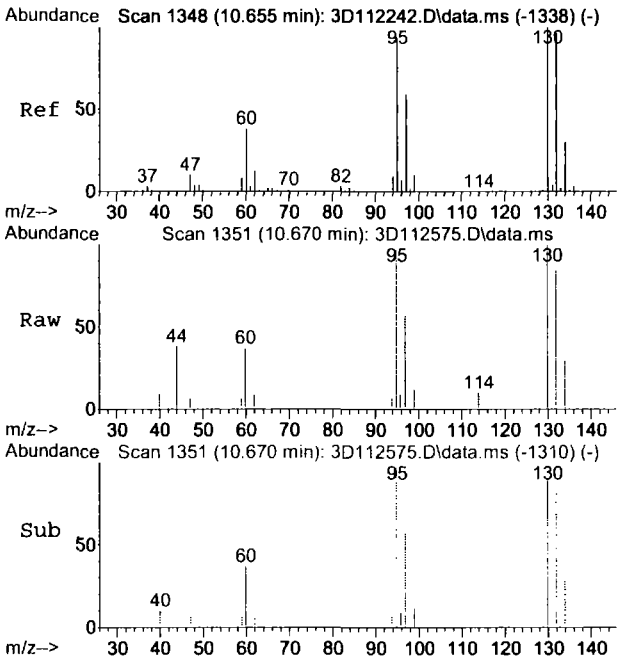



#65
benzene
Concen: 0.27 ug/L
RT: 9.947 min Scan# 1213
Delta R.T. 0.010 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

Tgt Ion: 78 Resp: 1423

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 39.1 | 0.0 | 53.3 |
| 52 | 16.2 | 0.0 | 46.2 |

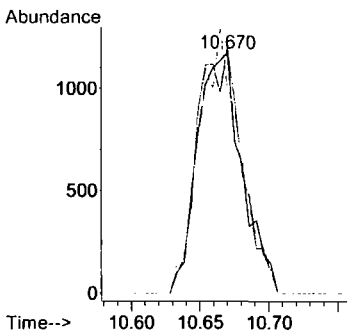



#69
trichloroethene
Concen: 2.06 ug/L
RT: 10.670 min Scan# 1351
Delta R.T. 0.016 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

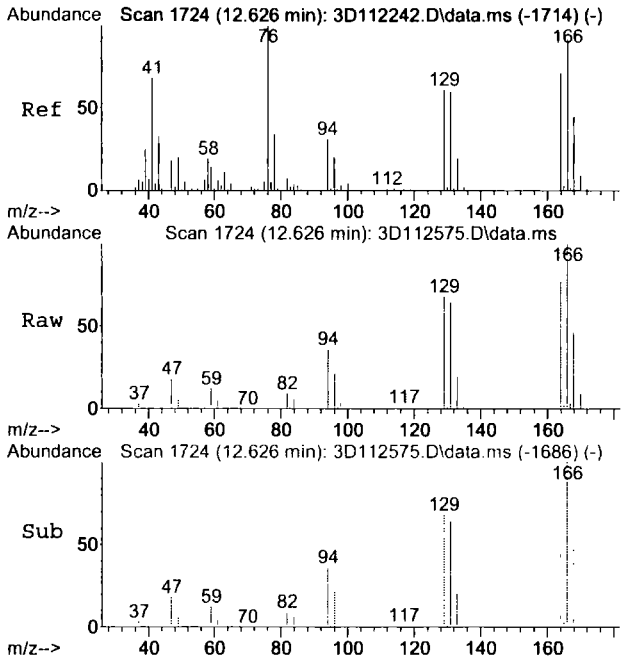
Tgt Ion: 95 Resp: 2628

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 102.0 | 77.2 | 137.2 |
| 132 | 85.4 | 72.4 | 132.4 |




7.1.1

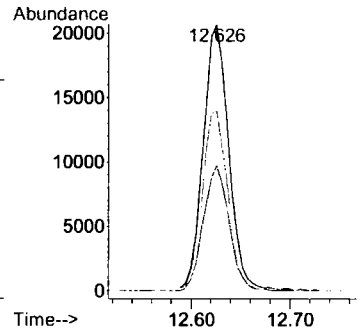
7




#89
tetrachloroethene
Concen: 24.30 ug/L
RT: 12.626 min Scan# 1724
Delta R.T. -0.000 min
Lab File: 3D112575.D
Acq: 12 Aug 2015 2:48 pm

Tgt Ion:166 Resp: 37409

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 47.0 | 19.3 | 79.3 |
| 129 | 67.7 | 36.3 | 96.3 |




7.1.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112574.D
Acq On : 12 Aug 2015 2:21 pm
Operator : ximenac
Sample : jc1106-2
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 13 09:53:50 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 92619 | 500.00 | ug/L | -0.01 |
| 4) pentafluorobenzene | 9.391 | 168 | 180692 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 212538 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 175332 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 108820 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 77640 | 56.08 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 112.16% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 73686 | 57.46 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 114.92% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 231940 | 49.83 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.66% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 79559 | 47.52 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 95.04% | | | |
| Target Compounds | | | | | | Qvalue |
| 32) methyl tert butyl ether | 7.530 | 73 | 1010 | 0.21 | ug/L | 72 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 15416 | 6.62 | ug/L | 96 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 5772 | 3.67 | ug/L | 82 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 14745 | 6.36 | ug/L | 99 |
| 69) trichloroethene | 10.660 | 95 | 2162 | 1.79 | ug/L | 79 |
| 89) tetrachloroethene | 12.626 | 166 | 27341 | 18.32 | ug/L | 96 |

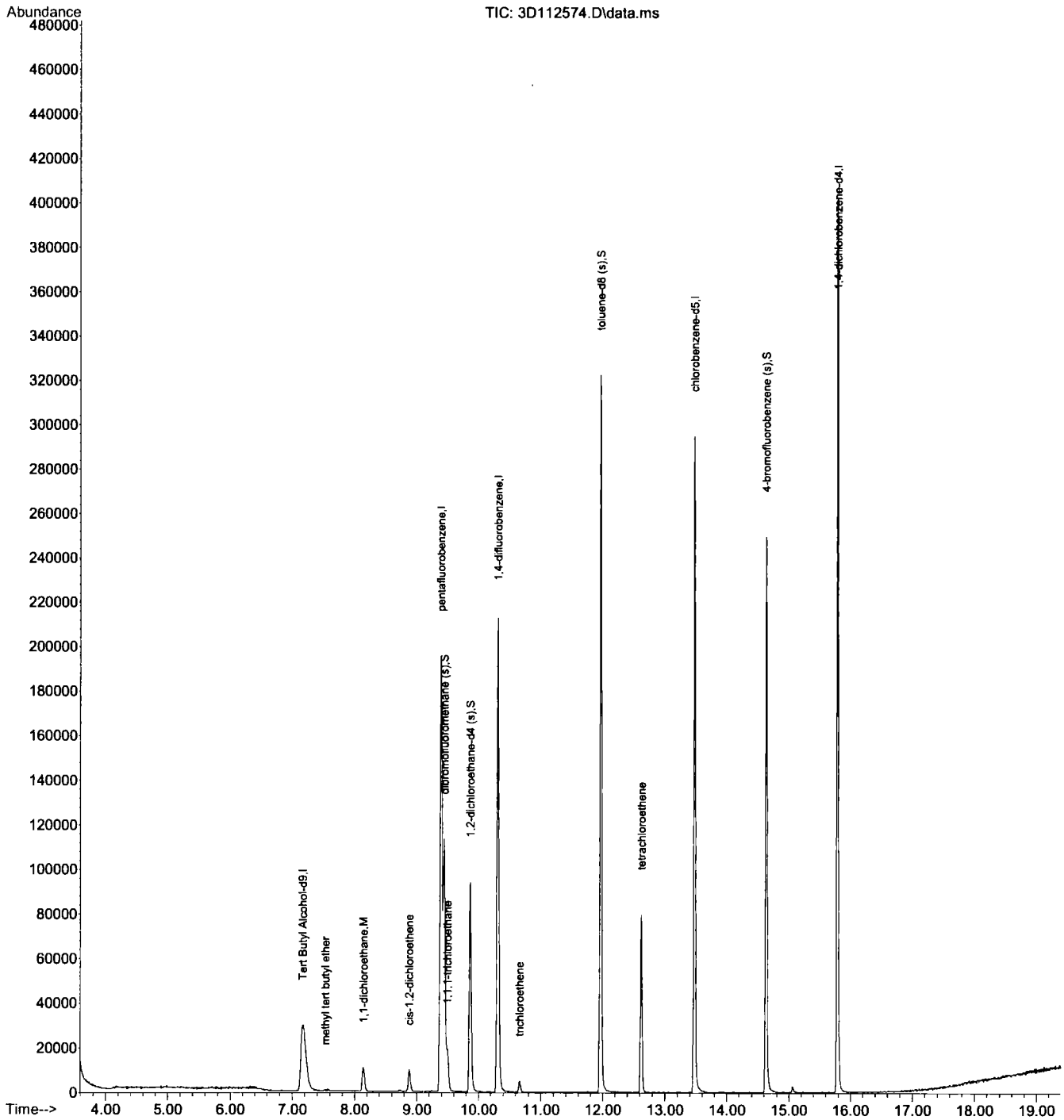
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.2 7

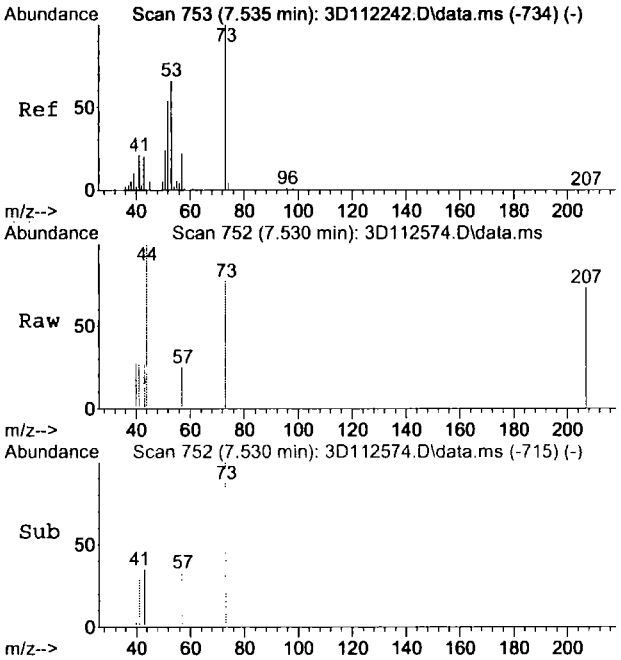
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112574.D
Acq On : 12 Aug 2015 2:21 pm
Operator : ximenac
Sample : jc1106-2
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 13 09:53:50 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



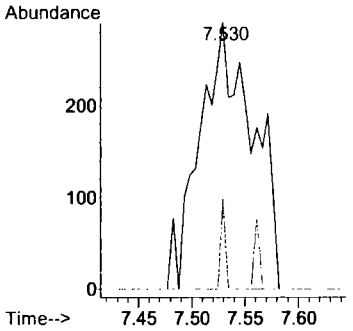

M3D4810.M Thu Aug 13 11:36:22 2015 T

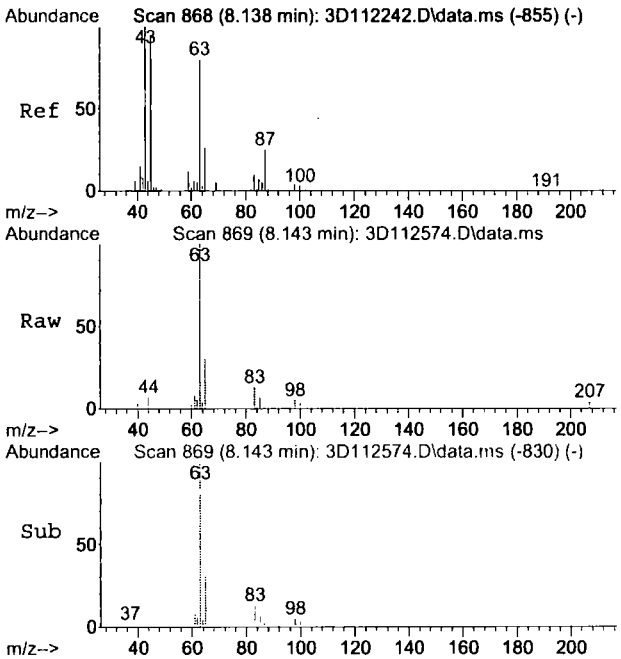



#32
methyl tert butyl ether
Concen: 0.21 ug/L
RT: 7.530 min Scan# 752
Delta R.T. -0.005 min
Lab File: 3D112574.D
Acq: 12 Aug 2015 2:21 pm

Tgt Ion: 73 Resp: 1010

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 32.8 | 0.0 | 51.5 |
| 43 | 34.8 | 0.0 | 49.8 |

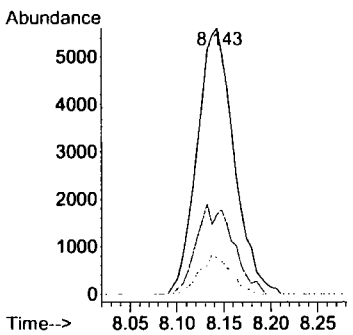


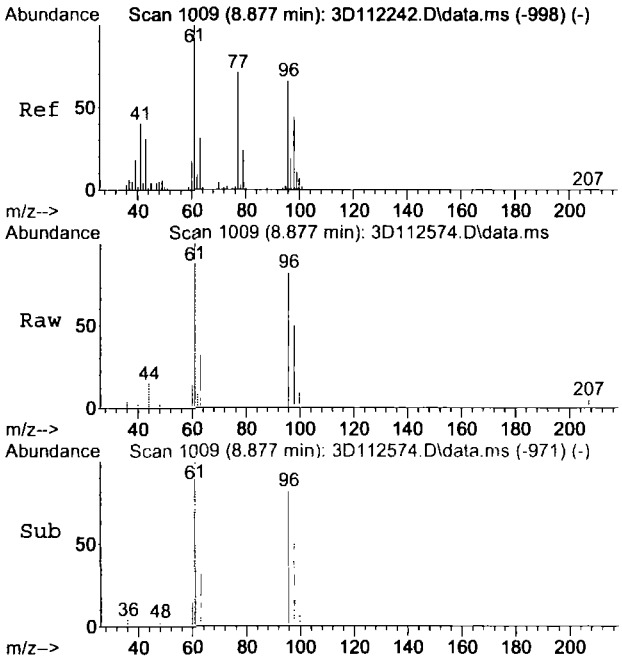

#37
1,1-dichloroethane
Concen: 6.62 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112574.D
Acq: 12 Aug 2015 2:21 pm

Tgt Ion: 63 Resp: 15416

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 30.0 | 2.4 | 62.4 |
| 83 | 13.4 | 0.0 | 42.8 |



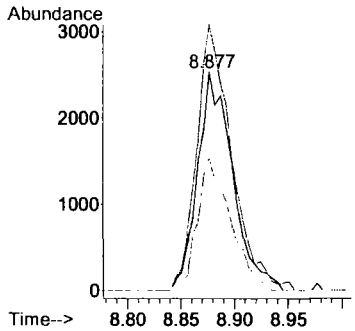

7.1.2

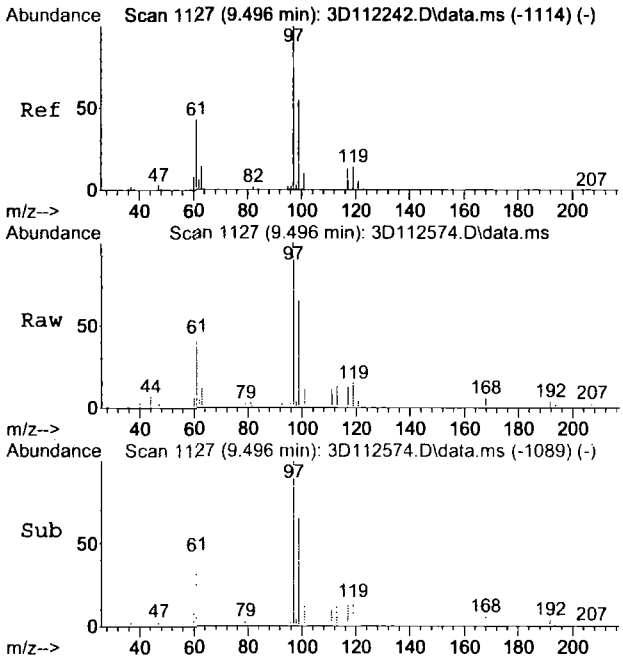



#43
cis-1,2-dichloroethene
Concen: 3.67 ug/L
RT: 8.877 min Scan# 1009
Delta R.T. -0.000 min
Lab File: 3D112574.D
Acq: 12 Aug 2015 2:21 pm

Tgt Ion: 96 Resp: 5772

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 121.8 | 120.5 | 180.5 |
| 98 | 60.9 | 36.4 | 96.4 |

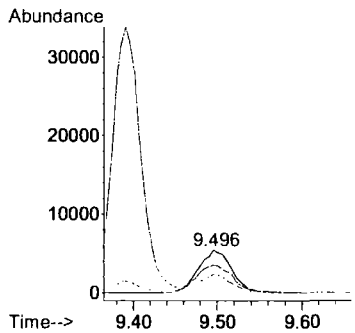


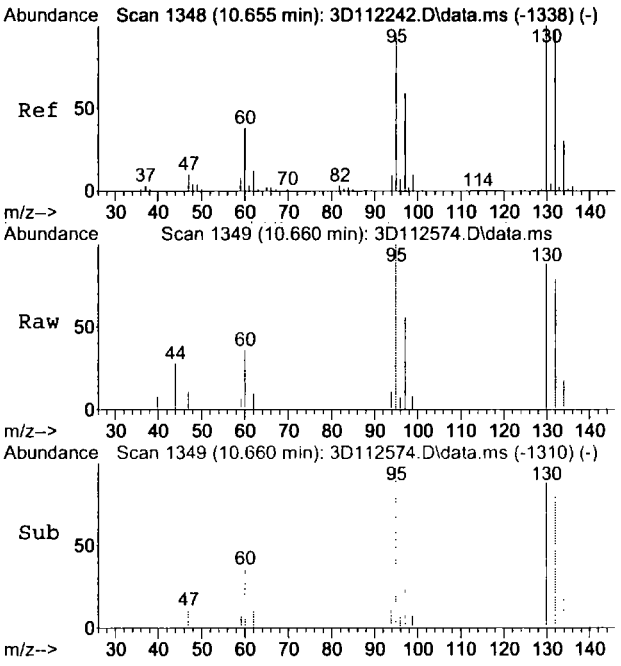

#54
1,1,1-trichloroethane
Concen: 6.36 ug/L
RT: 9.496 min Scan# 1127
Delta R.T. -0.000 min
Lab File: 3D112574.D
Acq: 12 Aug 2015 2:21 pm

Tgt Ion: 97 Resp: 14745

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 63.4 | 33.7 | 93.7 |
| 61 | 42.9 | 13.5 | 73.5 |



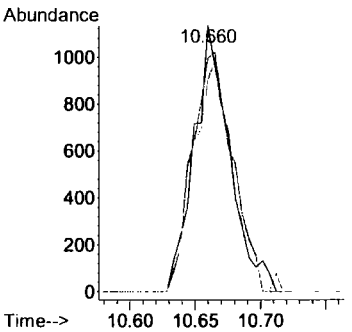

7.1.2 7

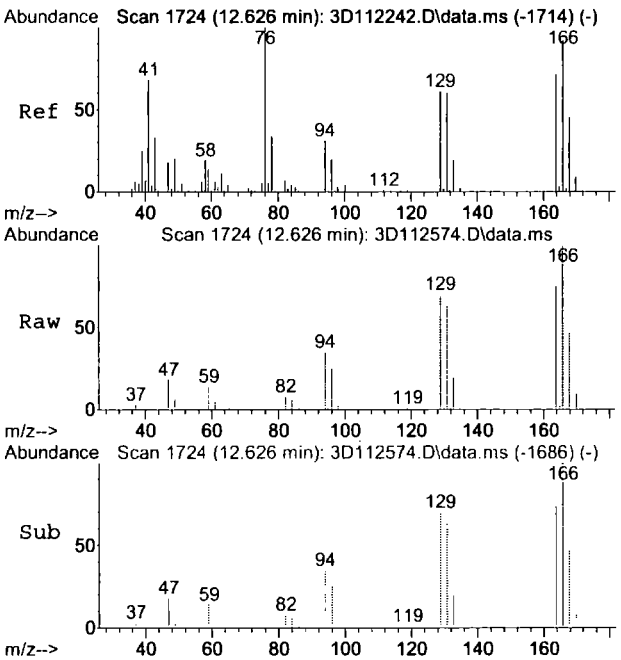



#69
trichloroethene
Concen: 1.79 ug/L
RT: 10.660 min Scan# 1349
Delta R.T. 0.005 min
Lab File: 3D112574.D
Acq: 12 Aug 2015 2:21 pm

Tgt Ion: 95 Resp: 2162

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 87.7 | 77.2 | 137.2 |
| 132 | 79.5 | 72.4 | 132.4 |

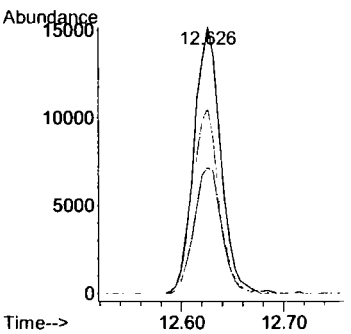



#89
tetrachloroethene
Concen: 18.32 ug/L
RT: 12.626 min Scan# 1724
Delta R.T. -0.000 min
Lab File: 3D112574.D
Acq: 12 Aug 2015 2:21 pm

Tgt Ion:166 Resp: 27341

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 47.4 | 19.3 | 79.3 |
| 129 | 69.7 | 36.3 | 96.3 |




7.1.2

7



ACCUTEST LABORATORIES
JC1106

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112531.D
Acq On : 11 Aug 2015 6:18 pm
Operator : ximenac
Sample : jc1106-3
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 12 09:28:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 93947 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 191420 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 223101 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 183270 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 111855 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 81015 | 55.24 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 110.48% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 77053 | 56.71 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 113.42% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 246220 | 50.39 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.78% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 84059 | 48.84 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 97.68% | | | |
| Target Compounds | | | | | | Qvalue |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 3314 | 1.35 | ug/L | 84 |
| 89) tetrachloroethene | 12.631 | 166 | 2096 | 1.34 | ug/L | 96 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

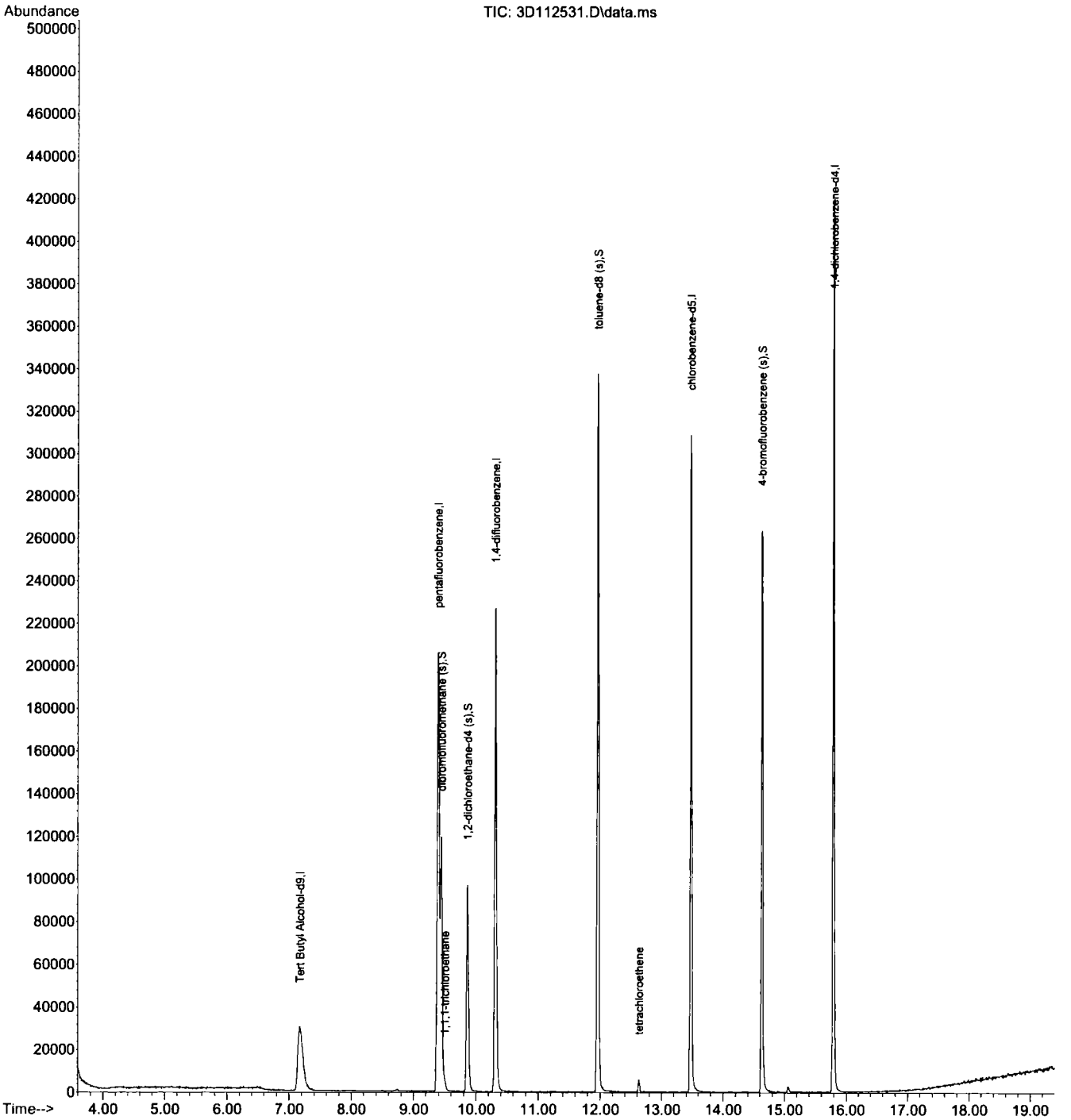
7.1.3

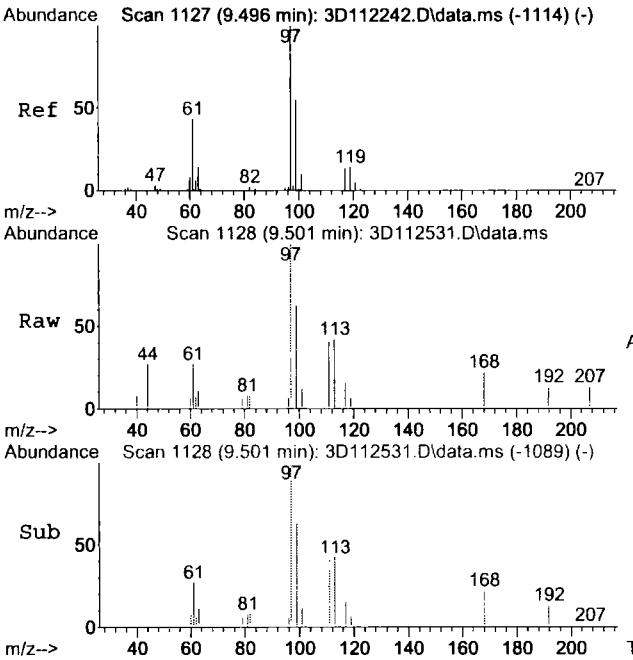
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112531.D
Acq On : 11 Aug 2015 6:18 pm
Operator : ximenac
Sample : jc1106-3
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 12 09:28:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

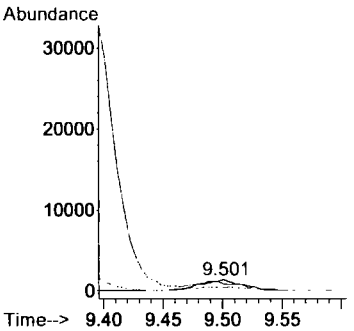


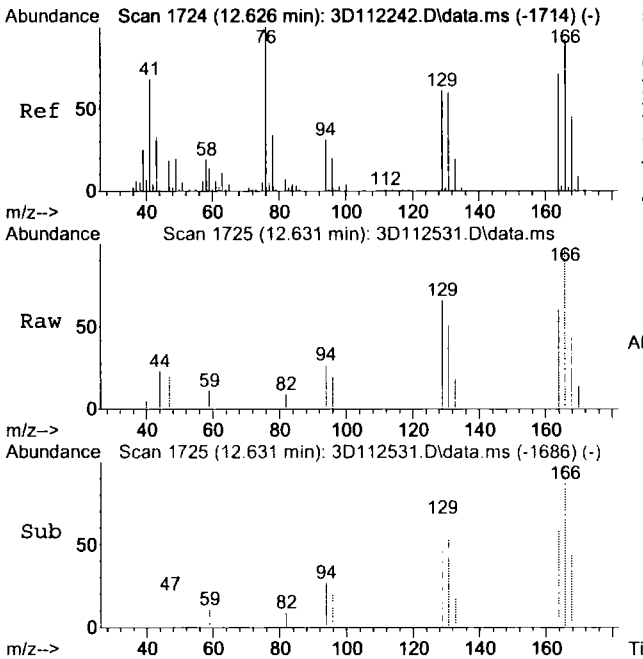



#54
1,1,1-trichloroethane
Concen: 1.35 ug/L
RT: 9.501 min Scan# 1128
Delta R.T. 0.005 min
Lab File: 3D112531.D
Acq: 11 Aug 2015 6:18 pm

Tgt Ion: 97 Resp: 3314

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 56.8 | 33.7 | 93.7 |
| 61 | 26.7 | 13.5 | 73.5 |

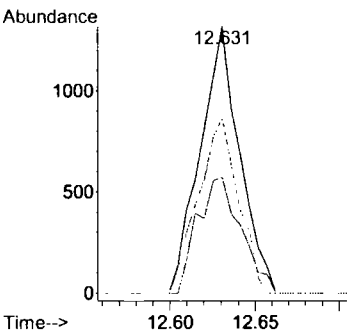



#89
tetrachloroethene
Concen: 1.34 ug/L
RT: 12.631 min Scan# 1725
Delta R.T. 0.005 min
Lab File: 3D112531.D
Acq: 11 Aug 2015 6:18 pm

Tgt Ion:166 Resp: 2096

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 43.6 | 19.3 | 79.3 |
| 129 | 65.8 | 36.3 | 96.3 |




7.1.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112532.D
Acq On : 11 Aug 2015 6:45 pm
Operator : ximenac
Sample : jc1106-4
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 12 09:29:07 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 93695 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.396 | 168 | 187081 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 219575 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 184978 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 115133 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 50) dibromofluoromethane (s) | 9.438 | 113 | 81663 | 56.97 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 113.94% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75123 | 56.58 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 113.16% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 243928 | 50.72 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 101.44% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 85636 | 48.34 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.68% | | |
| Target Compounds | | | | | Qvalue |
| 37) 1,1-dichloroethane | 8.143 | 63 | 2696 | 1.12 ug/L | 95 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 2277 | 1.40 ug/L # | 72 |
| 89) tetrachloroethene | 12.631 | 166 | 961 | 0.61 ug/L | 85 |

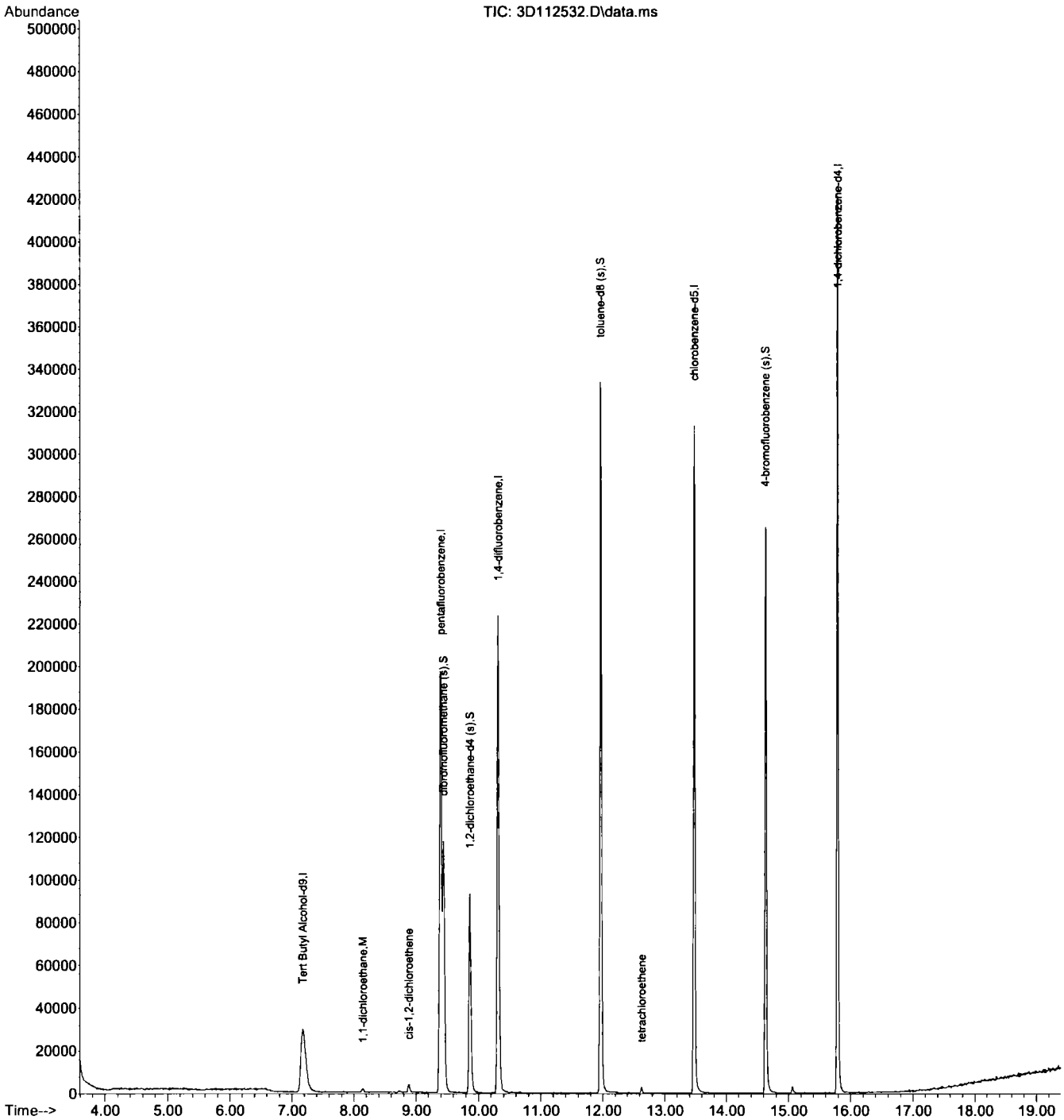
(#) = qualifier out of range (m) = manual integration (+) = signals summed

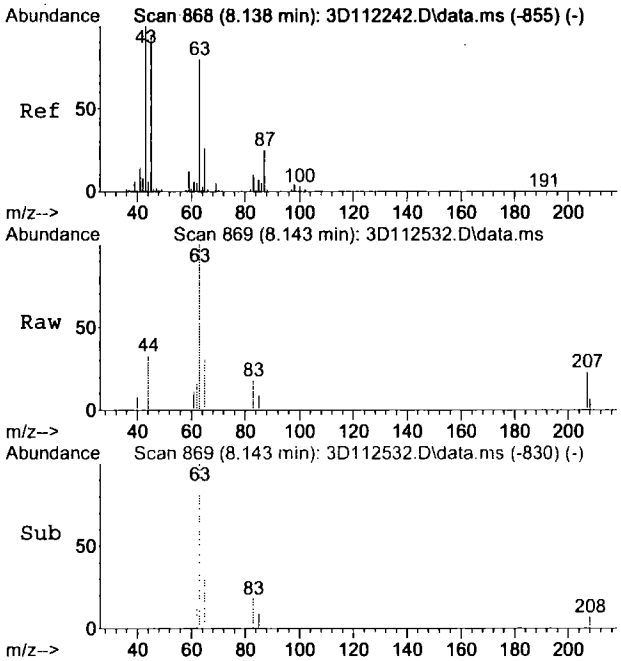
7.1.4 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112532.D
Acq On : 11 Aug 2015 6:45 pm
Operator : ximenac
Sample : jc1106-4
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 12 09:29:07 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

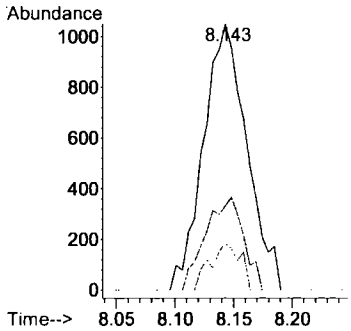


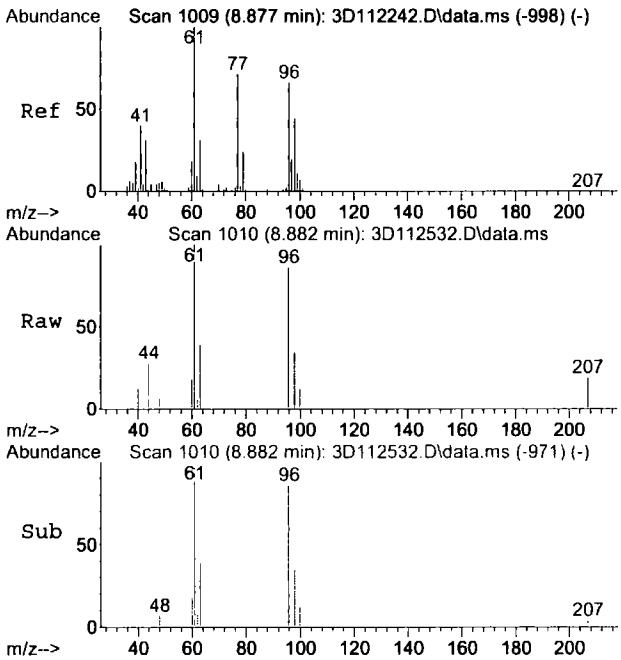



#37
1,1-dichloroethane
Concen: 1.12 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112532.D
Acq: 11 Aug 2015 6:45 pm

Tgt Ion: 63 Resp: 2696

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 31.5 | 2.4 | 62.4 |
| 83 | 17.5 | 0.0 | 42.8 |

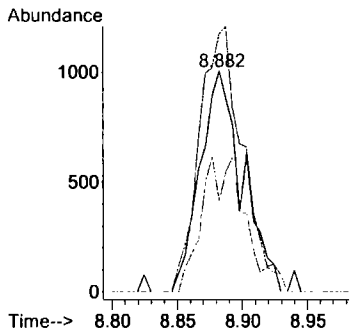



#43
cis-1,2-dichloroethene
Concen: 1.40 ug/L
RT: 8.882 min Scan# 1010
Delta R.T. 0.005 min
Lab File: 3D112532.D
Acq: 11 Aug 2015 6:45 pm

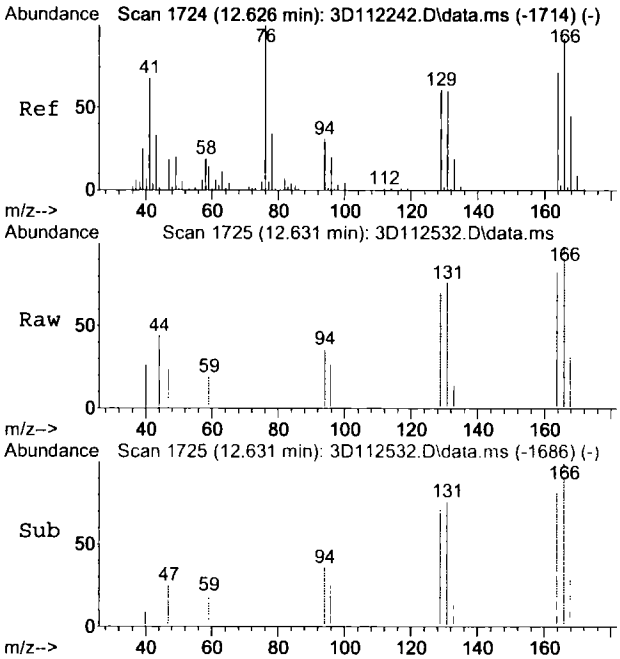
Tgt Ion: 96 Resp: 2277

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 116.8 | 120.5 | 180.5# |
| 98 | 41.0 | 36.4 | 96.4 |




7.1.4

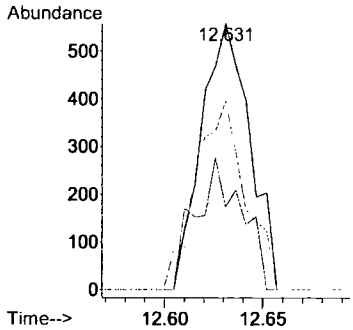
7




#89
tetrachloroethene
Concen: 0.61 ug/L
RT: 12.631 min Scan# 1725
Delta R.T. 0.005 min
Lab File: 3D112532.D
Acq: 11 Aug 2015 6:45 pm

Tgt Ion:166 Resp: 961

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 31.1 | 19.3 | 79.3 |
| 129 | 71.1 | 36.3 | 96.3 |




7.1.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112523.D
Acq On : 11 Aug 2015 2:36 pm
Operator : ximenac
Sample : jc1106-5
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 11 16:11:25 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 97975 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 195078 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 228938 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 186093 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 118621 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 83641 | 55.96 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 111.92% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 78760 | 56.88 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 113.76% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 252606 | 50.38 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.76% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 88742 | 48.62 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 97.24% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 89) tetrachloroethene | 12.626 | 166 | 5806 | 3.66 ug/L | 93 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

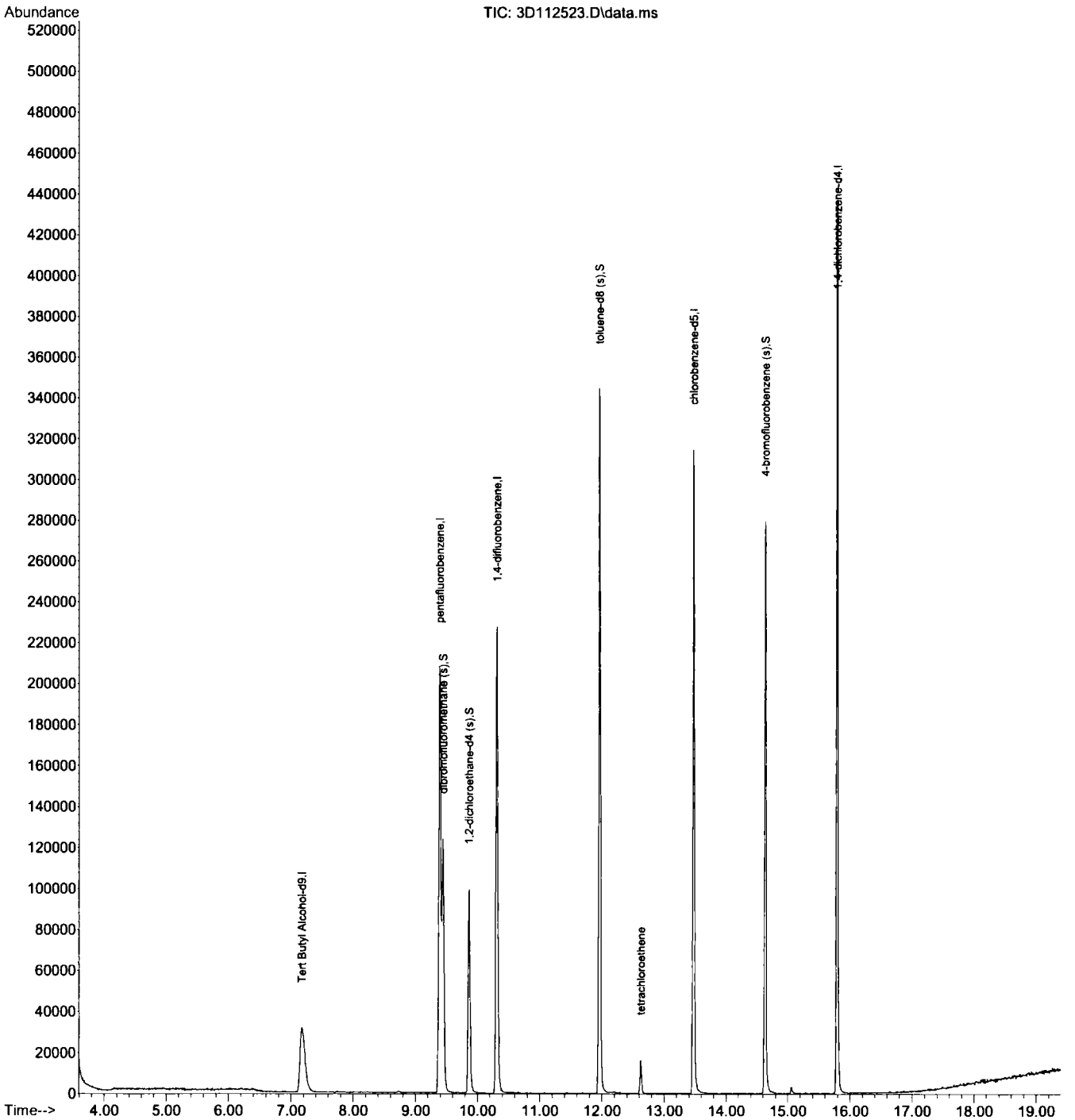
7.1.5

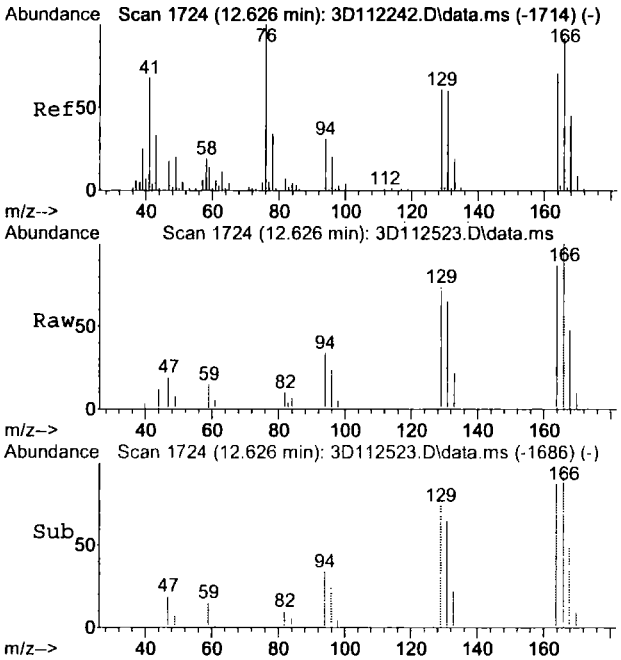
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112523.D
Acq On : 11 Aug 2015 2:36 pm
Operator : ximenac
Sample : jc1106-5
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 11 16:11:25 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

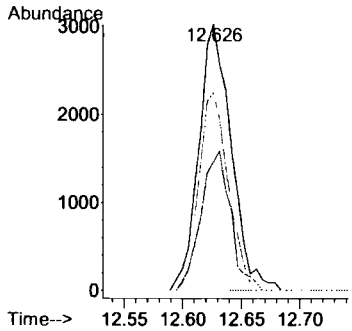





#89
tetrachloroethene
Concen: 3.66 ug/L
RT: 12.626 min Scan# 1724
Delta R.T. 0.000 min
Lab File: 3D112523.D
Acq: 11 Aug 2015 2:36 pm

Tgt Ion:166 Resp: 5806

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 48.0 | 19.3 | 79.3 |
| 129 | 74.3 | 36.3 | 96.3 |




7.1.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112530.D
Acq On : 11 Aug 2015 5:51 pm
Operator : ximenac
Sample : jc1106-6
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 12 09:28:33 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 95232 | 500.00 ug/L | -0.01 |
| 4) pentafluorobenzene | 9.391 | 168 | 188915 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 220873 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 182140 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 113662 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 80541 | 55.64 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 111.28% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75278 | 56.14 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 112.28% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 242380 | 50.11 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.22% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 83691 | 47.86 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 95.72% | | |
| Target Compounds | | | | | Qvalue |
| 54) 1,1,1-trichloroethane | 9.506 | 97 | 2611 | 1.08 ug/L | 86 |
| 89) tetrachloroethene | 12.626 | 166 | 1659 | 1.07 ug/L | 88 |

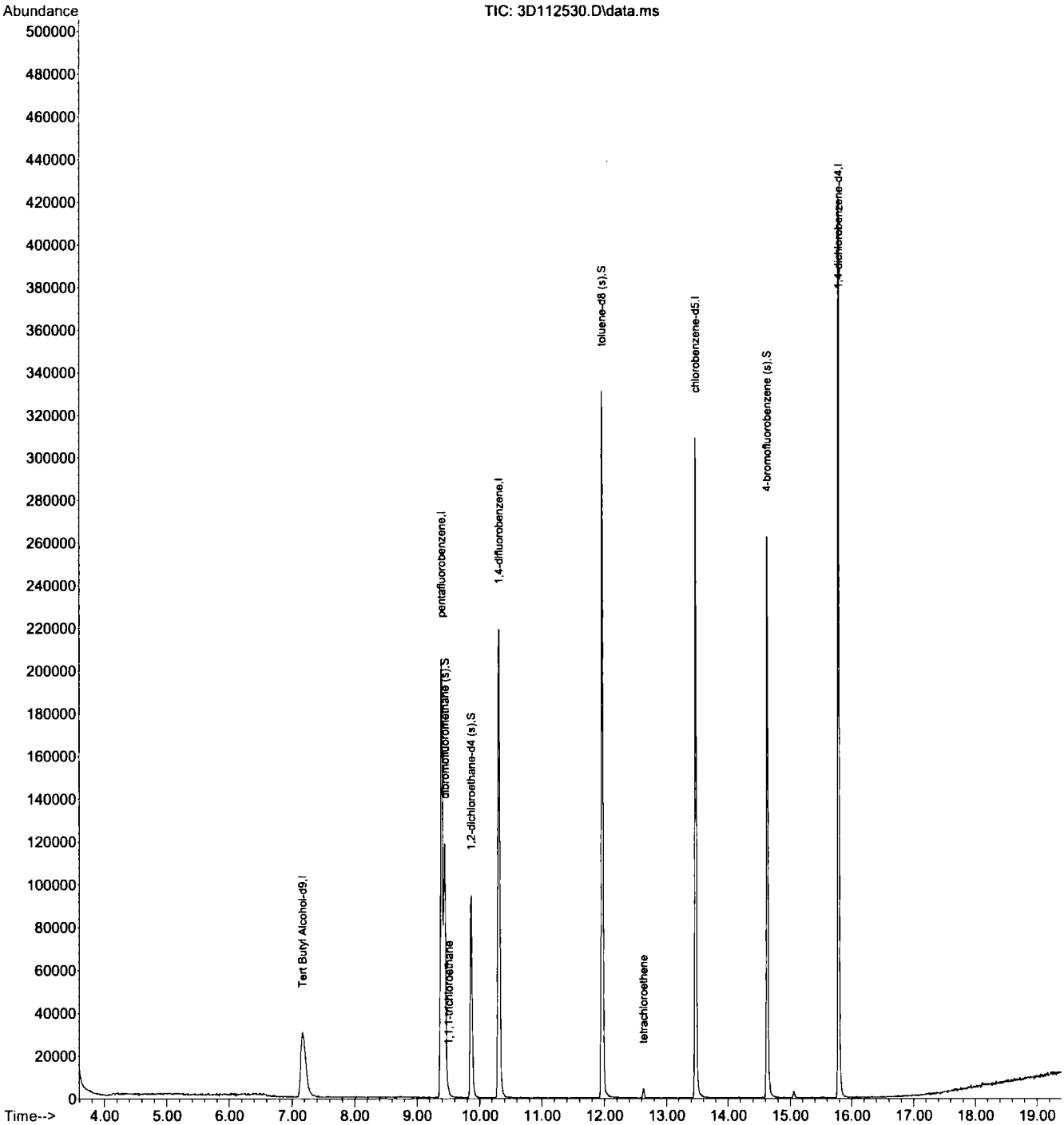
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.6

Quantitation Report (QT Reviewed)

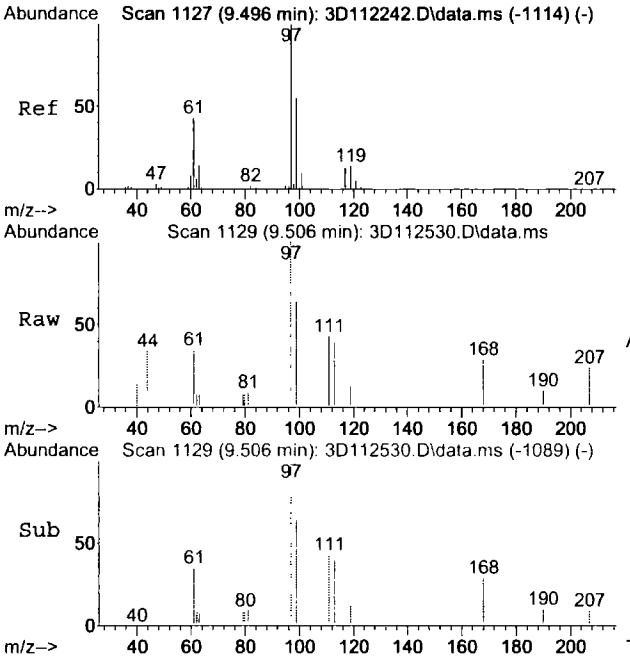
Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112530.D
Acq On : 11 Aug 2015 5:51 pm
Operator : ximenac
Sample : jc1106-6
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 12 09:28:33 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration





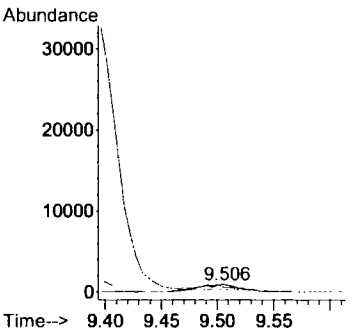

7.1.6
7

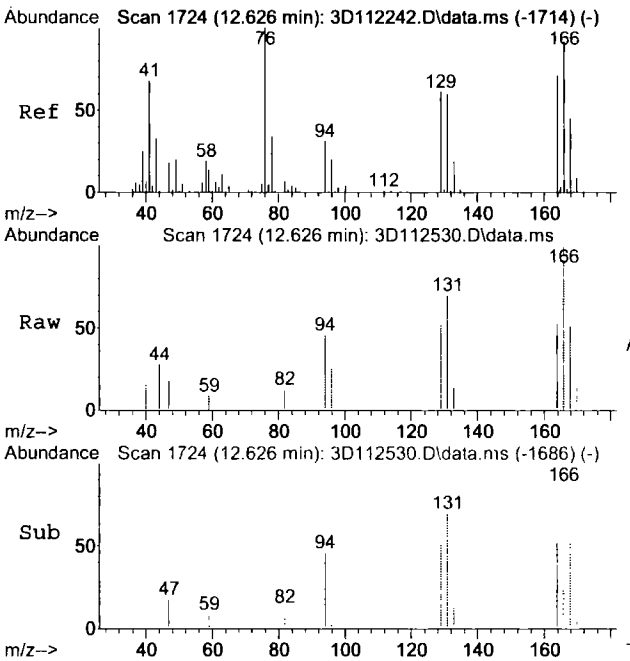



#54
1,1,1-trichloroethane
Concen: 1.08 ug/L
RT: 9.506 min Scan# 1129
Delta R.T. 0.010 min
Lab File: 3D112530.D
Acq: 11 Aug 2015 5:51 pm

Tgt Ion: 97 Resp: 2611

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 52.2 | 33.7 | 93.7 |
| 61 | 34.9 | 13.5 | 73.5 |

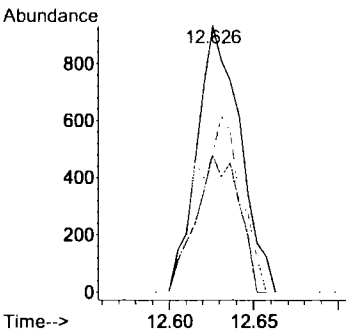



#89
tetrachloroethene
Concen: 1.07 ug/L
RT: 12.626 min Scan# 1724
Delta R.T. 0.000 min
Lab File: 3D112530.D
Acq: 11 Aug 2015 5:51 pm

Tgt Ion:166 Resp: 1659

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 51.7 | 19.3 | 79.3 |
| 129 | 52.0 | 36.3 | 96.3 |




7.1.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112522.D
Acq On : 11 Aug 2015 2:09 pm
Operator : ximenac
Sample : jc1106-7
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 11 16:11:14 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 92150 | 500.00 ug/L | -0.01 |
| 4) pentafluorobenzene | 9.391 | 168 | 192784 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 222789 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 184238 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 117577 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 82180 | 55.64 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 111.28% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.857 | 65 | 76411 | 55.84 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 111.68% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 245781 | 50.37 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.74% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 86896 | 48.04 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.08% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 82) toluene | 12.044 | 92 | 1283 | 0.45 ug/L # | 76 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

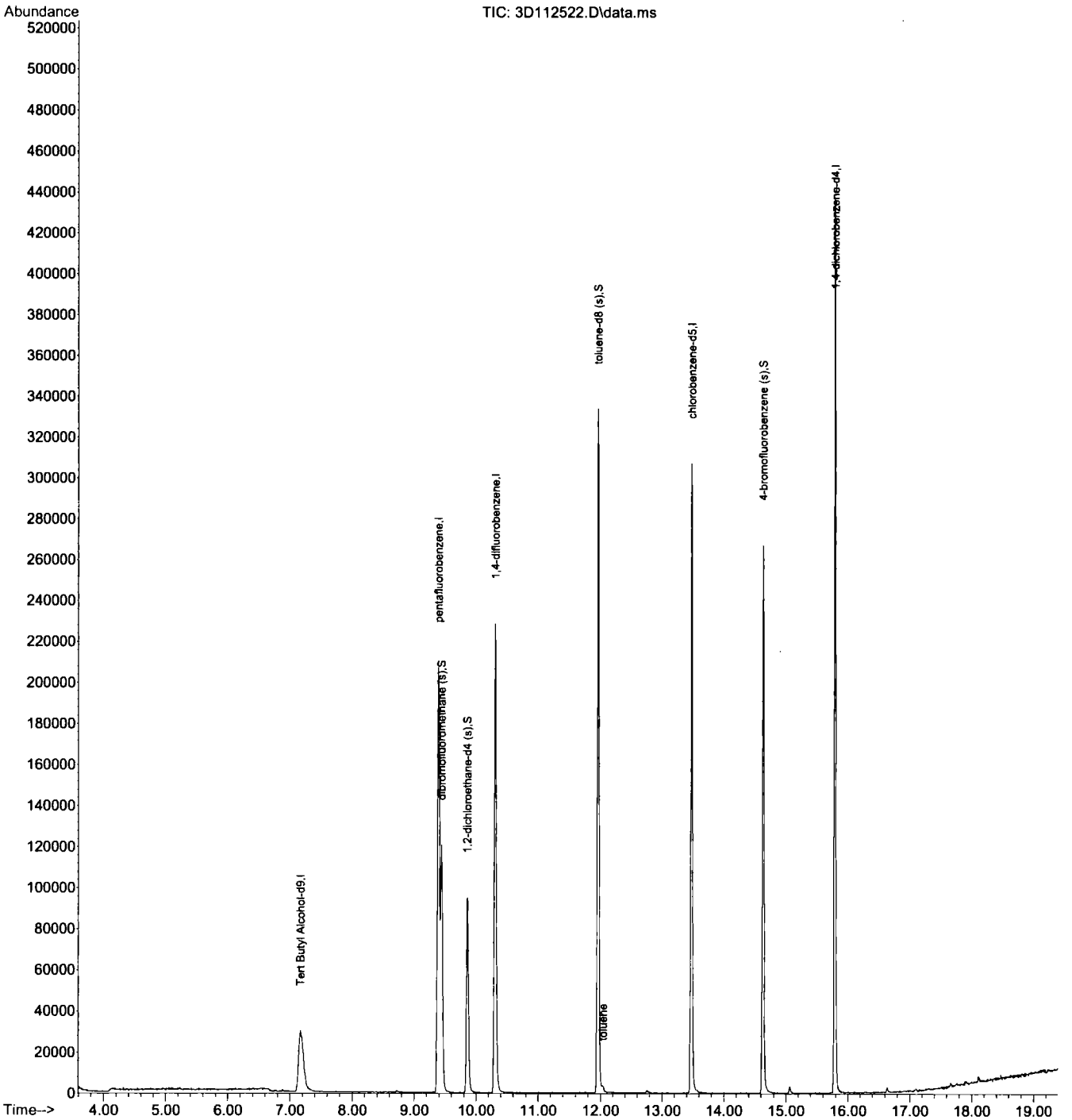
7.1.7

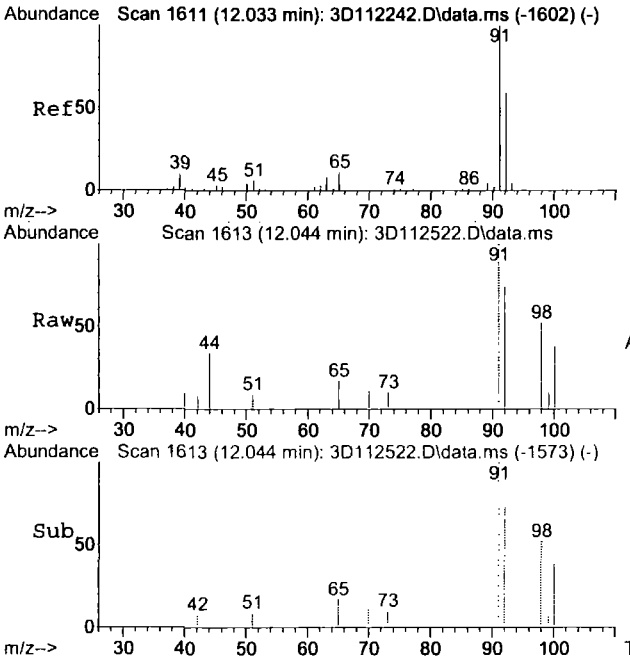
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112522.D
Acq On : 11 Aug 2015 2:09 pm
Operator : ximenac
Sample : jc1106-7
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Aug 11 16:11:14 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

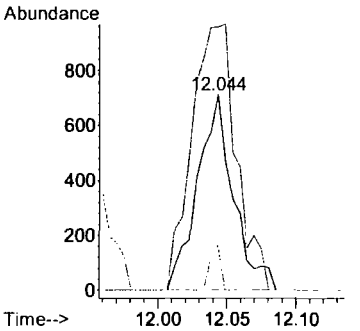





#82
toluene
Concen: 0.45 ug/L
RT: 12.044 min Scan# 1613
Delta R.T. 0.010 min
Lab File: 3D112522.D
Acq: 11 Aug 2015 2:09 pm

Tgt Ion: 92 Resp: 1283

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 134.4 | 139.0 | 199.0# |
| 65 | 23.3 | 0.0 | 48.5 |




7.1.7

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112535.D
Acq On : 11 Aug 2015 8:07 pm
Operator : ximenac
Sample : jc1106-8
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 12 09:31:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

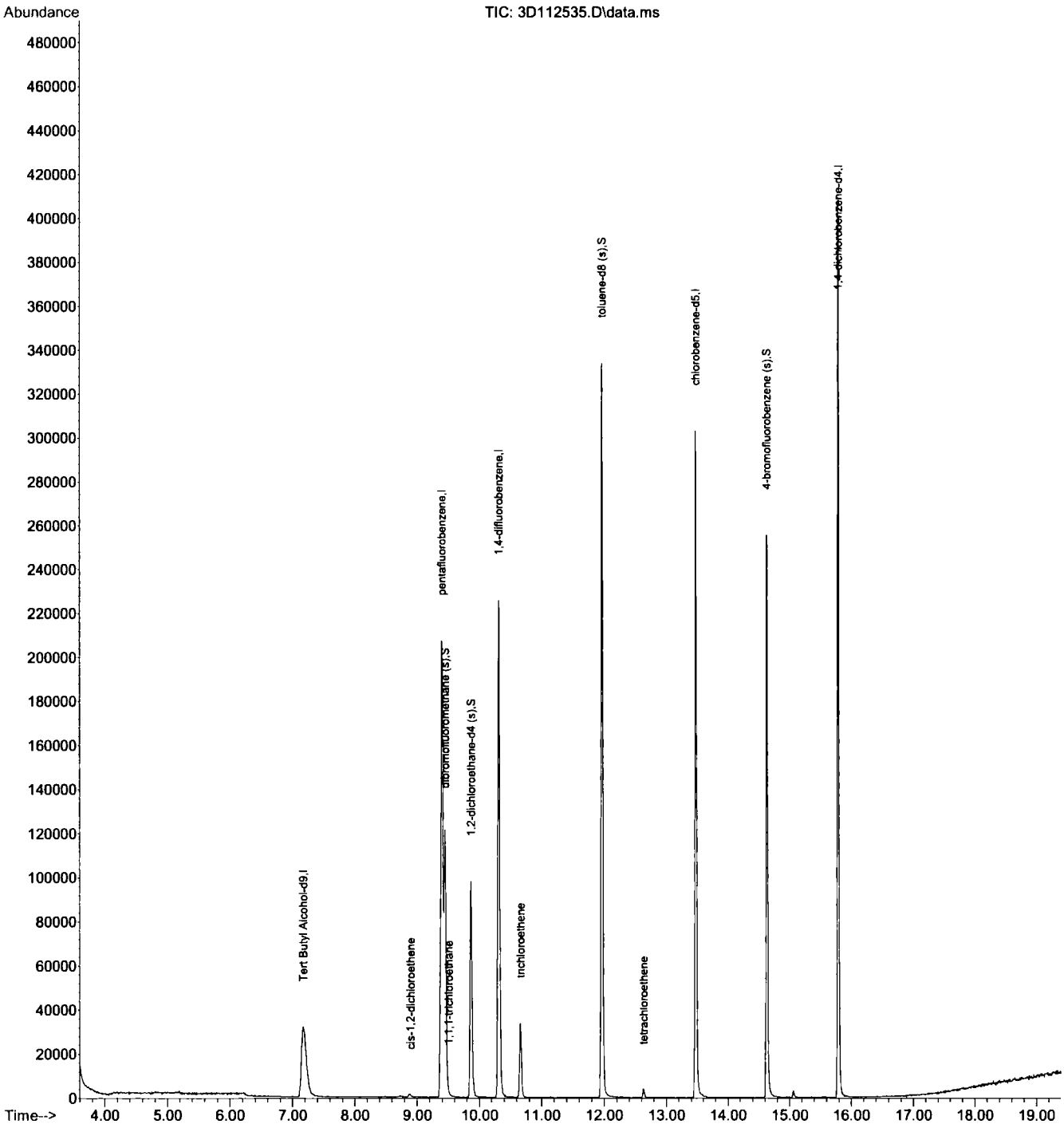
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 99250 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 189230 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 220375 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 181092 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 111525 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 82180 | 56.68 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 113.36% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 77091 | 57.40 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 114.80% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 244029 | 50.56 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 101.12% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 82877 | 48.30 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.60% | | | |
| Target Compounds | | | | | | Qvalue |
| 43) cis-1,2-dichloroethene | 8.898 | 96 | 1150 | 0.70 | ug/L # | 51 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 815 | 0.34 | ug/L | 86 |
| 69) trichloroethene | 10.660 | 95 | 13296 | 10.62 | ug/L | 94 |
| 89) tetrachloroethene | 12.631 | 166 | 1331 | 0.86 | ug/L | 86 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

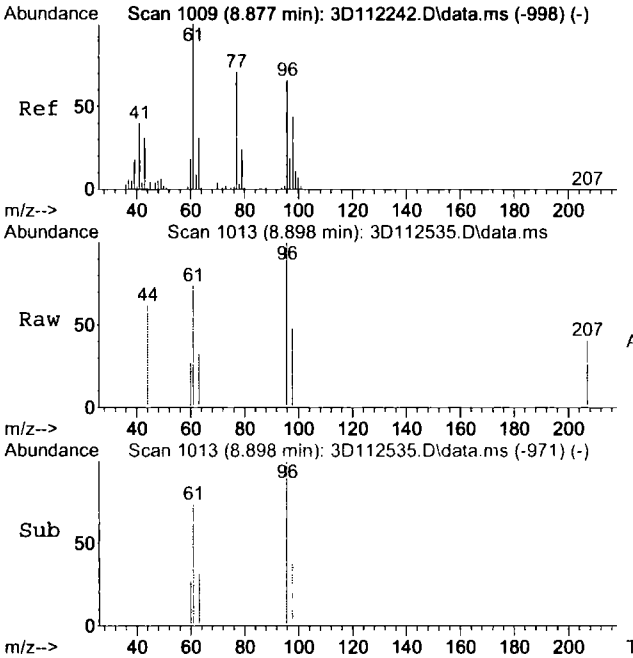
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112535.D
Acq On : 11 Aug 2015 8:07 pm
Operator : ximenac
Sample : jc1106-8
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 12 09:31:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



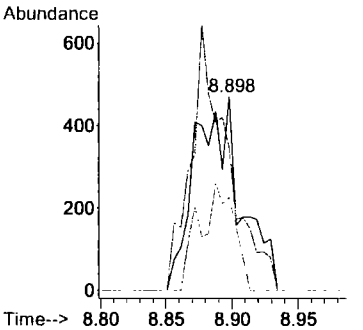

M3D4810.M Wed Aug 12 09:48:15 2015 T

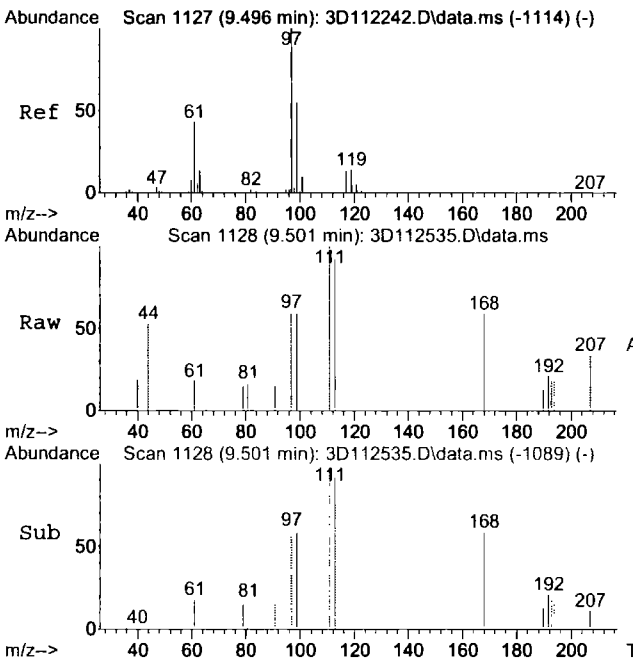



#43
cis-1,2-dichloroethene
Concen: 0.70 ug/L
RT: 8.898 min Scan# 1013
Delta R.T. 0.021 min
Lab File: 3D112535.D
Acq: 11 Aug 2015 8:07 pm

Tgt Ion: 96 Resp: 1150

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 73.9 | 120.5 | 180.5# |
| 98 | 48.0 | 36.4 | 96.4 |

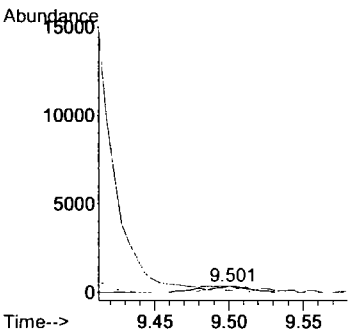



#54
1,1,1-trichloroethane
Concen: 0.34 ug/L
RT: 9.501 min Scan# 1128
Delta R.T. 0.005 min
Lab File: 3D112535.D
Acq: 11 Aug 2015 8:07 pm

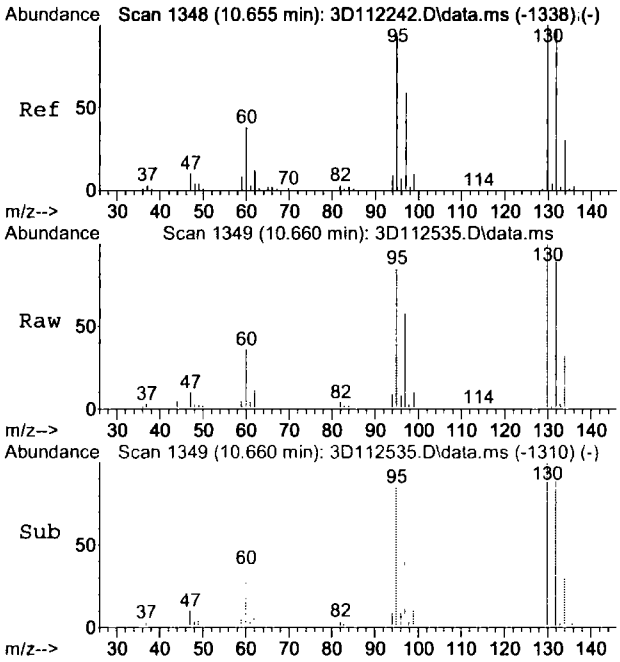
Tgt Ion: 97 Resp: 815

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 70.6 | 33.7 | 93.7 |
| 61 | 29.4 | 13.5 | 73.5 |




7.1.8

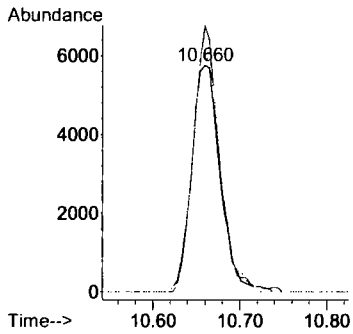
7

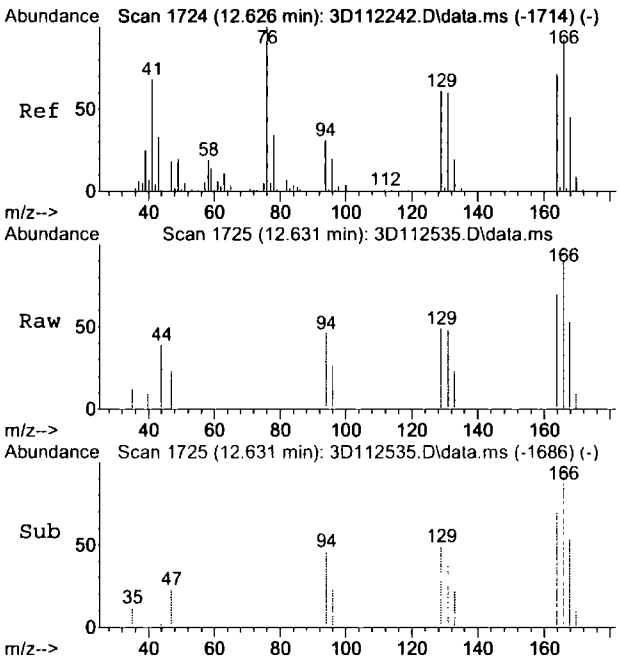



#69
trichloroethene
Concen: 10.62 ug/L
RT: 10.660 min Scan# 1349
Delta R.T. 0.005 min
Lab File: 3D112535.D
Acq: 11 Aug 2015 8:07 pm

Tgt Ion: 95 Resp: 13296

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 117.5 | 77.2 | 137.2 |
| 132 | 104.1 | 72.4 | 132.4 |

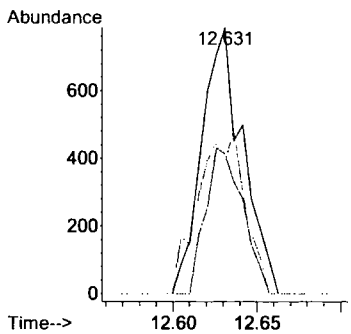



#89
tetrachloroethene
Concen: 0.86 ug/L
RT: 12.631 min Scan# 1725
Delta R.T. 0.005 min
Lab File: 3D112535.D
Acq: 11 Aug 2015 8:07 pm

Tgt Ion:166 Resp: 1331

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 52.7 | 19.3 | 79.3 |
| 129 | 49.1 | 36.3 | 96.3 |




7.1.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112572.D
Acq On : 12 Aug 2015 1:27 pm
Operator : ximenac
Sample : jc1106-9
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 12 14:31:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.189 | 65 | 91436 | 500.00 | ug/L | 0.01 |
| 4) pentafluorobenzene | 9.391 | 168 | 193182 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 221437 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 184042 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 114924 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 83193 | 56.21 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 112.42% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 76435 | 55.75 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 111.50% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 247377 | 51.01 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.02% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 85271 | 48.22 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.44% | | | |
| Target Compounds | | | | | | Qvalue |
| 22) 1,1-dichloroethene | 6.502 | 61 | 2142 | 0.93 | ug/L | 93 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 2631 | 1.06 | ug/L | 93 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 5951 | 3.53 | ug/L # | 79 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 132947 | 53.61 | ug/L | 96 |
| 69) trichloroethene | 10.660 | 95 | 3265 | 2.60 | ug/L | 90 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

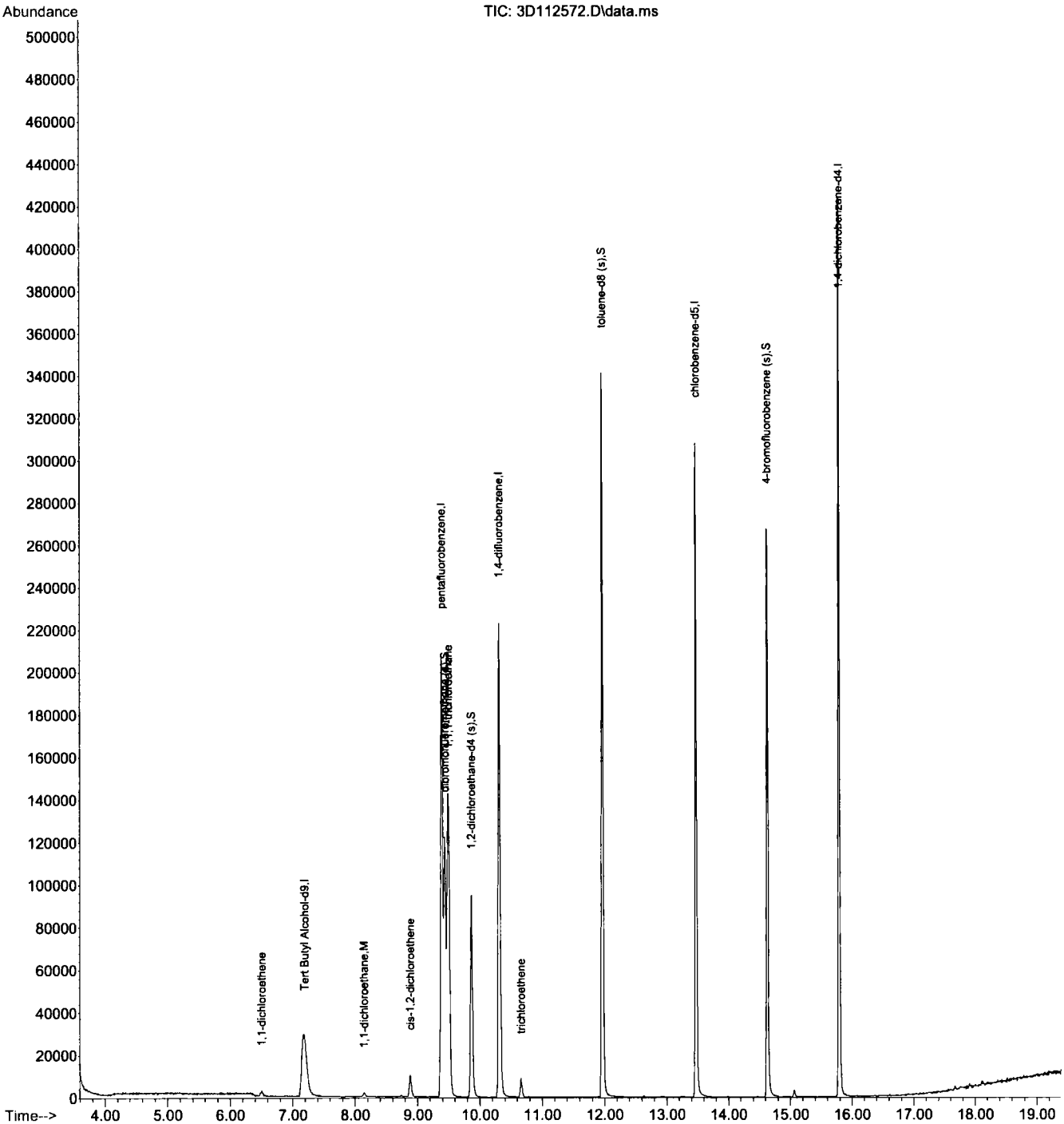
7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112572.D
Acq On : 12 Aug 2015 1:27 pm
Operator : ximenac
Sample : jc1106-9
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 11 Sample Multiplier: 1

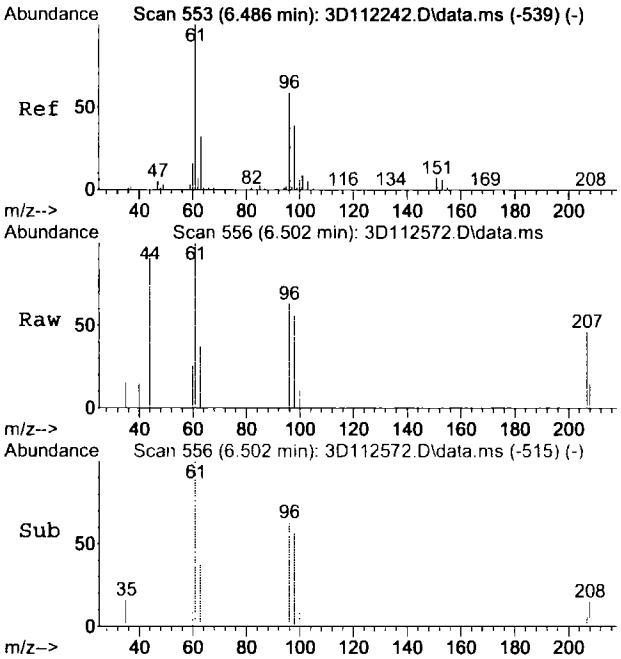
Quant Time: Aug 12 14:31:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Fri Aug 14 08:19:58 2015 T



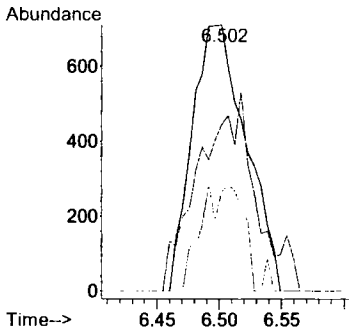
7.1.9
7

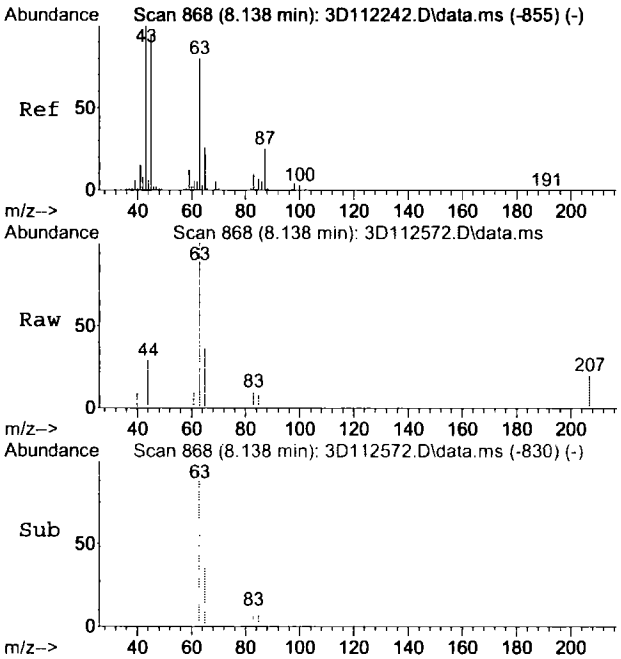



#22
1,1-dichloroethene
Concen: 0.93 ug/L
RT: 6.502 min Scan# 556
Delta R.T. 0.016 min
Lab File: 3D112572.D
Acq: 12 Aug 2015 1:27 pm

Tgt Ion: 61 Resp: 2142

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 62.6 | 28.7 | 88.7 |
| 63 | 37.4 | 1.8 | 61.8 |

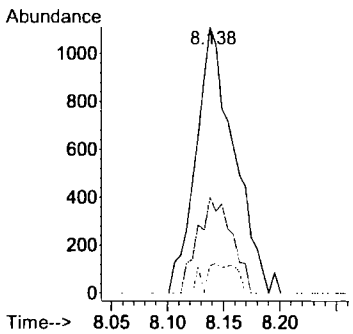


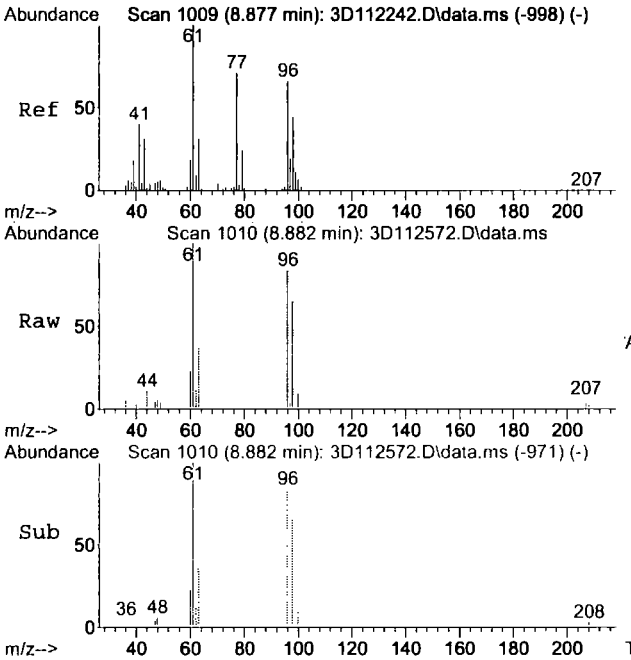




#37
1,1-dichloroethane
Concen: 1.06 ug/L
RT: 8.138 min Scan# 868
Delta R.T. 0.000 min
Lab File: 3D112572.D
Acq: 12 Aug 2015 1:27 pm

Tgt Ion: 63 Resp: 2631

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 36.3 | 2.4 | 62.4 |
| 83 | 10.4 | 0.0 | 42.8 |

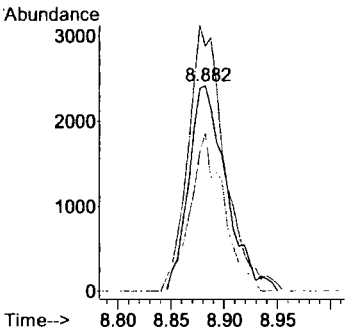


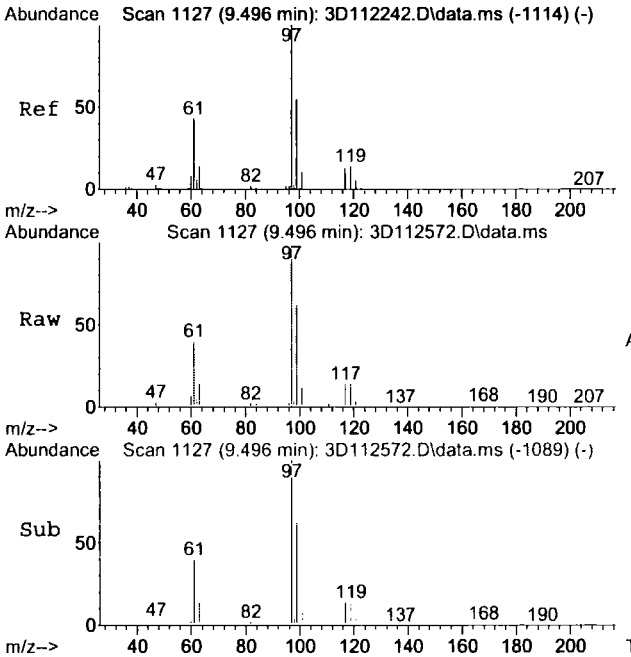



#43
cis-1,2-dichloroethene
Concen: 3.53 ug/L
RT: 8.882 min Scan# 1010
Delta R.T. 0.005 min
Lab File: 3D112572.D
Acq: 12 Aug 2015 1:27 pm

Tgt Ion: 96 Resp: 5951

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 119.1 | 120.5 | 180.5# |
| 98 | 77.0 | 36.4 | 96.4 |

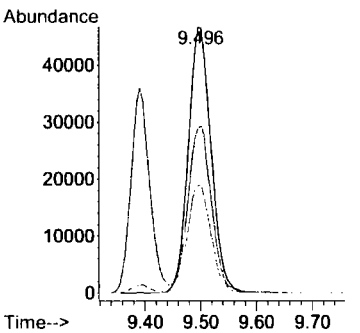



#54
1,1,1-trichloroethane
Concen: 53.61 ug/L
RT: 9.496 min Scan# 1127
Delta R.T. 0.000 min
Lab File: 3D112572.D
Acq: 12 Aug 2015 1:27 pm

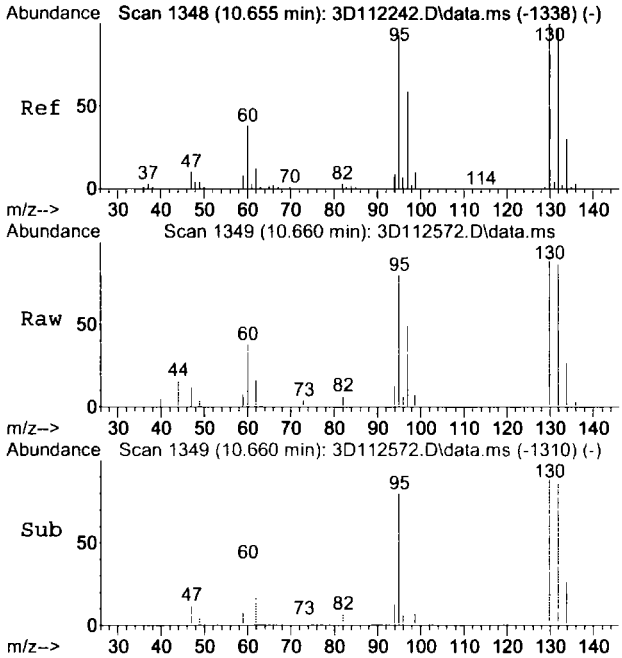
Tgt Ion: 97 Resp: 132947

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 61.6 | 33.7 | 93.7 |
| 61 | 40.3 | 13.5 | 73.5 |




7.1.9

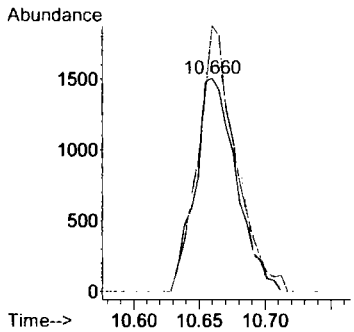
7




#69
trichloroethene
Concen: 2.60 ug/L
RT: 10.660 min Scan# 1349
Delta R.T. 0.005 min
Lab File: 3D112572.D
Acq: 12 Aug 2015 1:27 pm

Tgt Ion: 95 Resp: 3265

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 124.4 | 77.2 | 137.2 |
| 132 | 106.4 | 72.4 | 132.4 |




7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112525.D
Acq On : 11 Aug 2015 3:30 pm
Operator : ximenac
Sample : jc1106-10
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Aug 11 16:12:16 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 87229 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 179050 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.313 | 114 | 210954 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 172979 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 107549 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 77633 | 56.59 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 113.18% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 72314 | 56.90 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 113.80% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 229189 | 49.61 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.22% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 79858 | 48.26 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.52% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 22) 1,1-dichloroethene | 6.497 | 61 | 434 | 0.20 ug/L | 83 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 581 | 0.25 ug/L # | 49 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 1541 | 0.99 ug/L # | 69 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 22968 | 9.99 ug/L | 94 |
| 69) trichloroethene | 10.670 | 95 | 1004 | 0.84 ug/L | 84 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

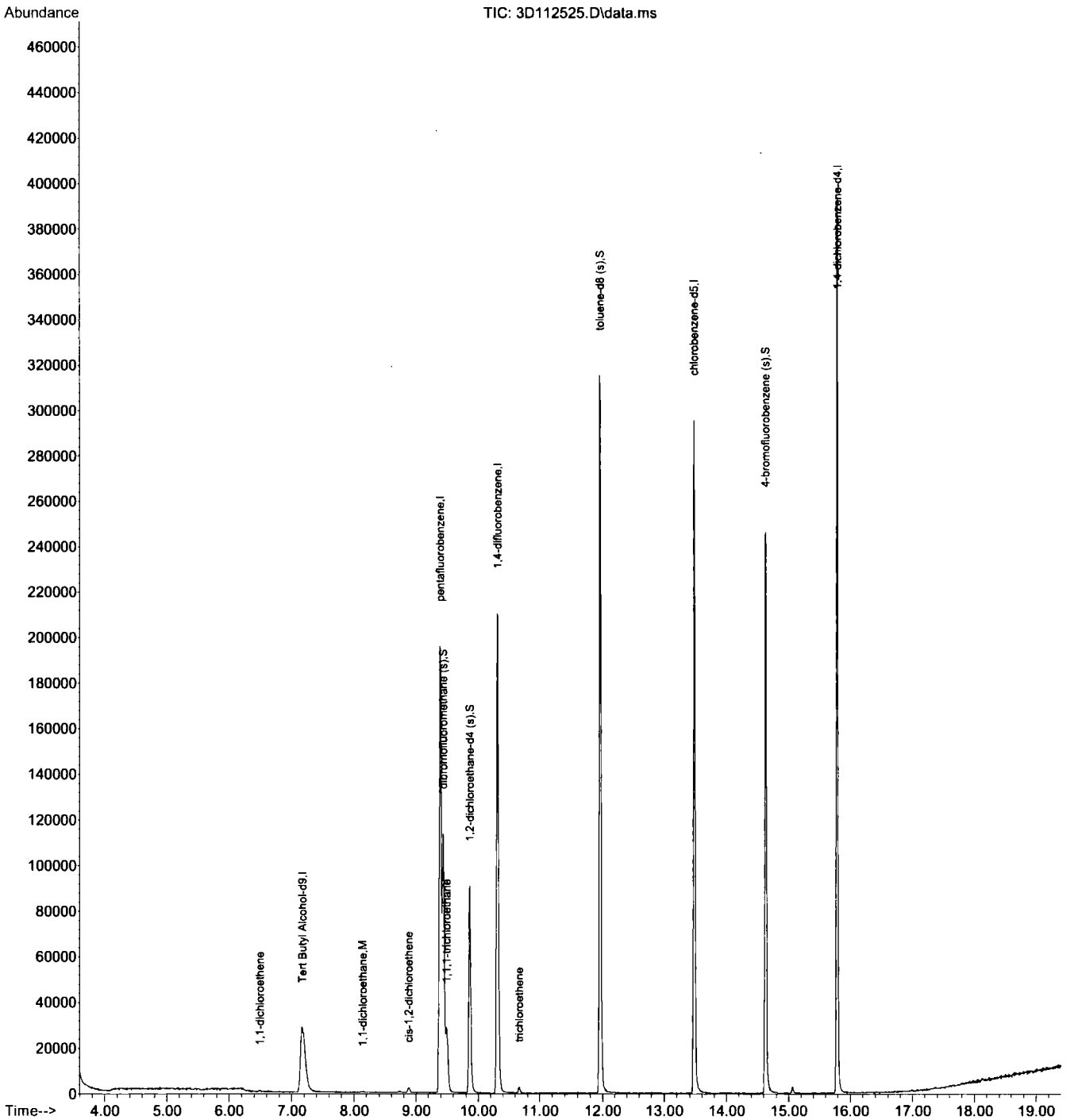
7.1.10

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112525.D
Acq On : 11 Aug 2015 3:30 pm
Operator : ximenac
Sample : jc1106-10
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 18 Sample Multiplier: 1

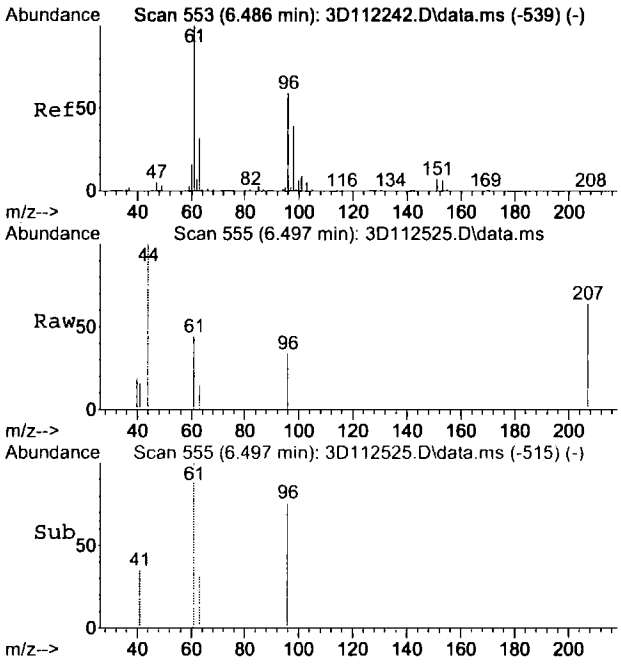
Quant Time: Aug 11 16:12:16 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Tue Aug 11 16:12:54 2015 3D



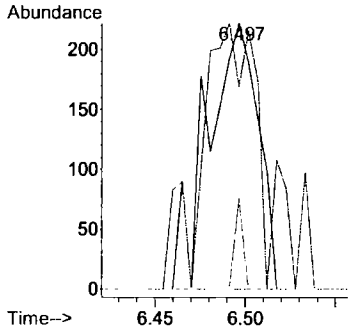
7.1.10 7

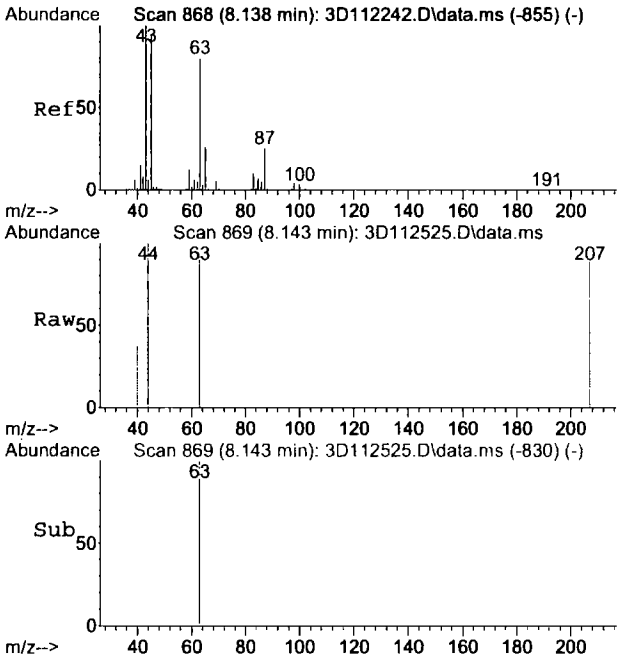



#22
1,1-dichloroethene
Concen: 0.20 ug/L
RT: 6.497 min Scan# 555
Delta R.T. 0.010 min
Lab File: 3D112525.D
Acq: 11 Aug 2015 3:30 pm

Tgt Ion: 61 Resp: 434

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 76.1 | 28.7 | 88.7 |
| 63 | 34.2 | 1.8 | 61.8 |

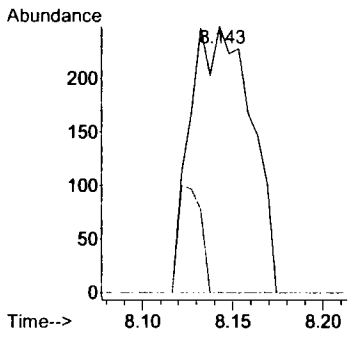



#37
1,1-dichloroethane
Concen: 0.25 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112525.D
Acq: 11 Aug 2015 3:30 pm

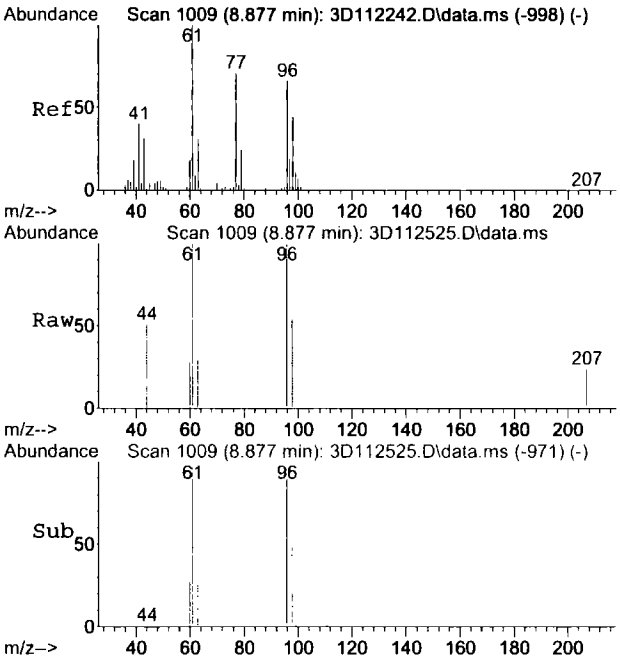
Tgt Ion: 63 Resp: 581

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 0.0 | 2.4 | 62.4# |
| 83 | 0.0 | 0.0 | 42.8 |




7.1.10

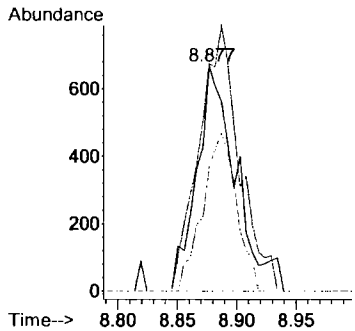
7

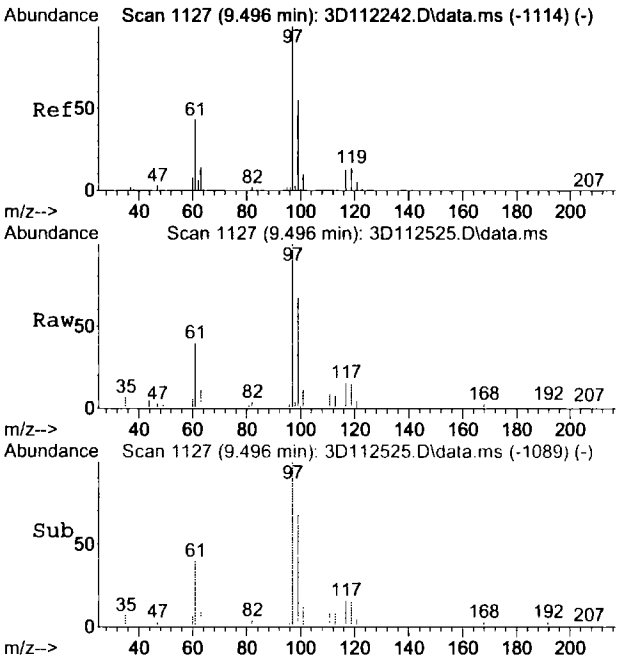



#43
cis-1,2-dichloroethene
Concen: 0.99 ug/L
RT: 8.877 min Scan# 1009
Delta R.T. -0.000 min
Lab File: 3D112525.D
Acq: 11 Aug 2015 3:30 pm

Tgt Ion: 96 Resp: 1541

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 100.9 | 120.5 | 180.5# |
| 98 | 54.9 | 36.4 | 96.4 |

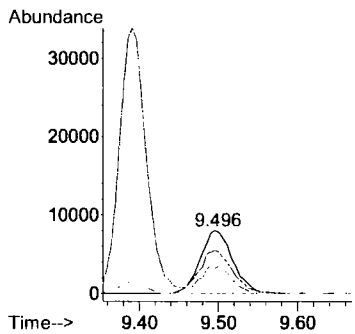


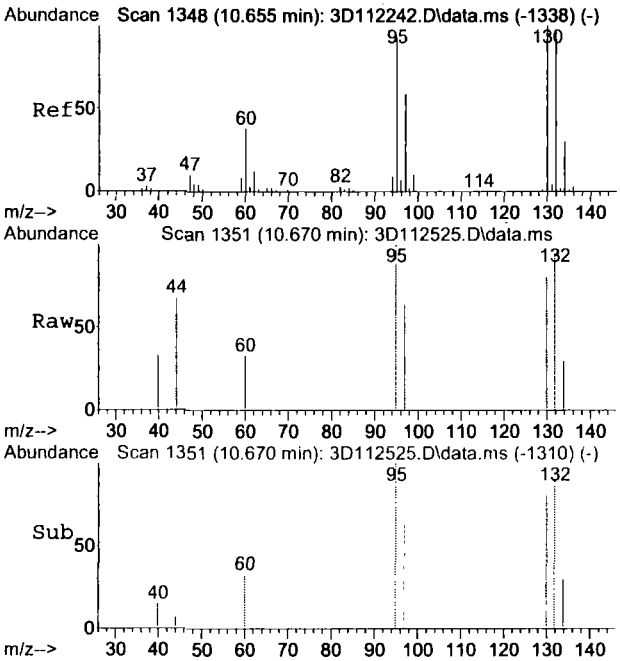




#54
1,1,1-trichloroethane
Concen: 9.99 ug/L
RT: 9.496 min Scan# 1127
Delta R.T. -0.000 min
Lab File: 3D112525.D
Acq: 11 Aug 2015 3:30 pm

Tgt Ion: 97 Resp: 22968

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 68.4 | 33.7 | 93.7 |
| 61 | 40.1 | 13.5 | 73.5 |

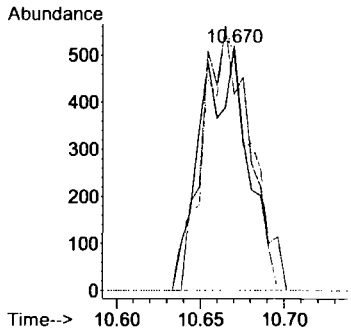





#69
trichloroethene
Concen: 0.84 ug/L
RT: 10.670 min Scan# 1351
Delta R.T. 0.015 min
Lab File: 3D112525.D
Acq: 11 Aug 2015 3:30 pm

Tgt Ion: 95 Resp: 1004

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 80.7 | 77.2 | 137.2 |
| 132 | 95.4 | 72.4 | 132.4 |




7.1.10 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112538.D
Acq On : 11 Aug 2015 9:28 pm
Operator : ximenac
Sample : jc1106-11
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Aug 12 09:31:55 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 84171 | 500.00 | ug/L | -0.01 |
| 4) pentafluorobenzene | 9.391 | 168 | 181857 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.313 | 114 | 212162 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 174691 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.792 | 152 | 107285 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.438 | 113 | 79322 | 56.93 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 113.86% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 72709 | 56.33 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 112.66% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 234906 | 50.55 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 101.10% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 80040 | 48.49 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.98% | | | |

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

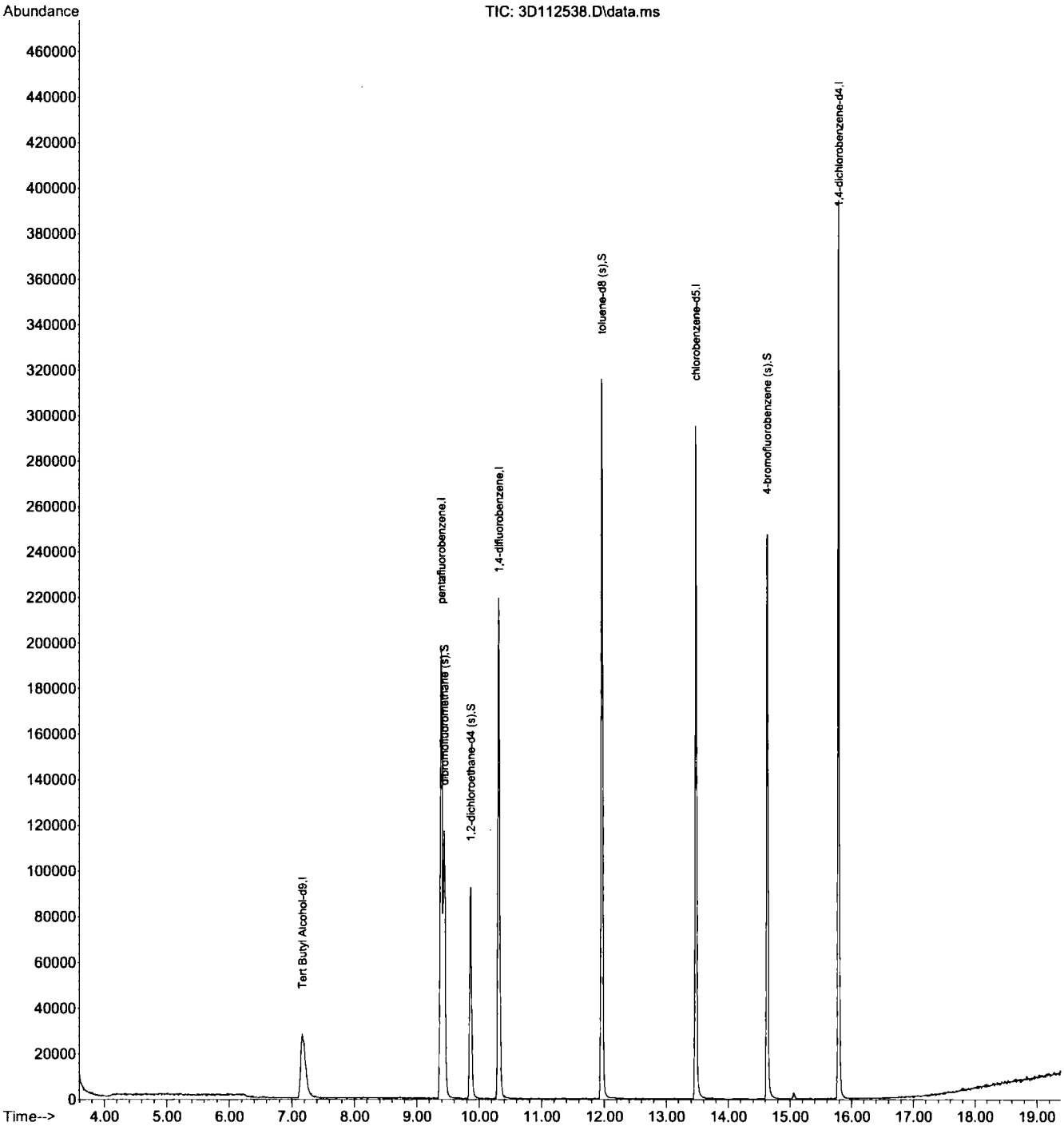
7.1.11

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112538.D
Acq On : 11 Aug 2015 9:28 pm
Operator : ximenac
Sample : jc1106-11
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 31 Sample Multiplier: 1

Quant Time: Aug 12 09:31:55 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 09:48:24 2015 T



7.1.11

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112537.D
Acq On : 11 Aug 2015 9:01 pm
Operator : ximenac
Sample : jc1106-12
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Aug 12 09:31:42 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 84872 | 500.00 | ug/L | -0.01 |
| 4) pentafluorobenzene | 9.391 | 168 | 176303 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 208560 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 169036 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 106176 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 76587 | 56.70 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 113.40% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 71854 | 57.42 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 114.84% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 226231 | 49.53 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.06% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 78825 | 48.25 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.50% | | | |
| Target Compounds | | | | | | Qvalue |
| 37) 1,1-dichloroethane | 8.143 | 63 | 626 | 0.28 | ug/L | 82 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 789 | 0.35 | ug/L # | 68 |

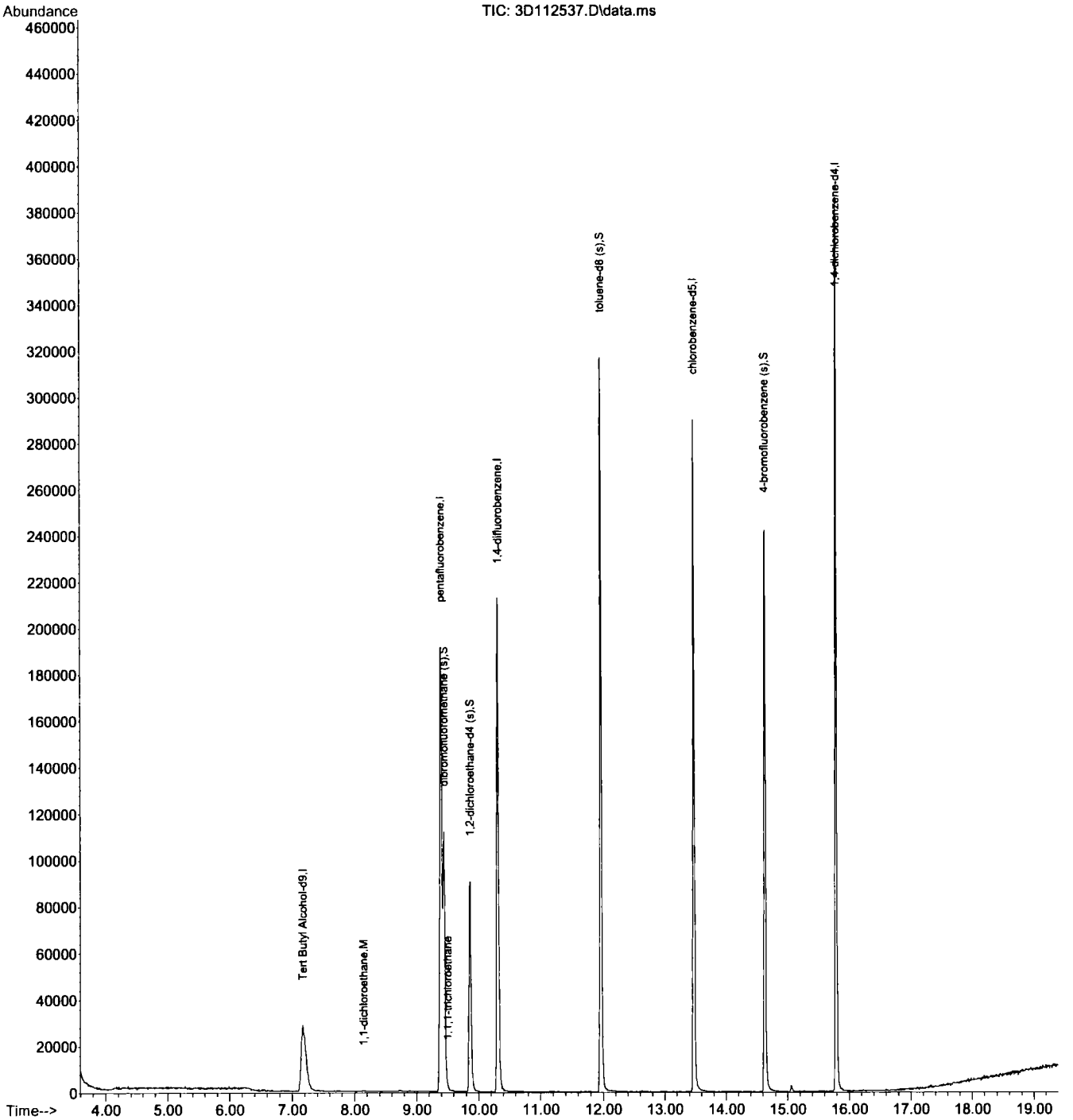
(#) = qualifier out of range (m) = manual integration (+) = signals summed

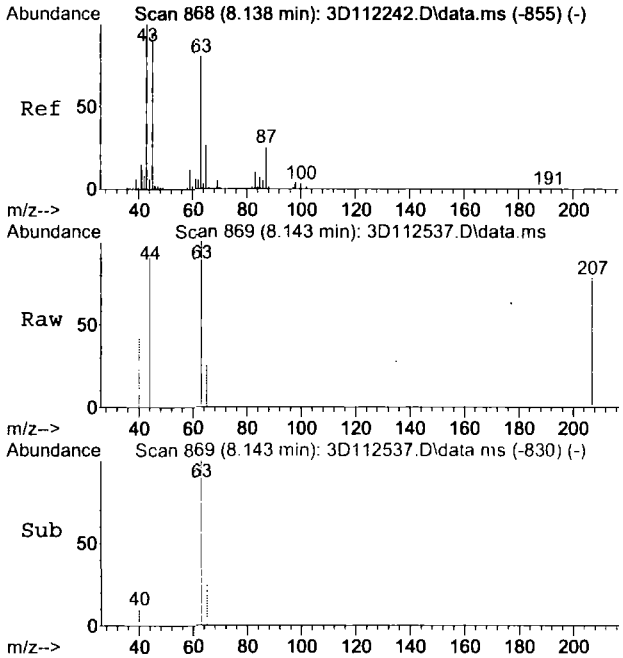
7.1.12 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112537.D
Acq On : 11 Aug 2015 9:01 pm
Operator : ximenac
Sample : jc1106-12
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Aug 12 09:31:42 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

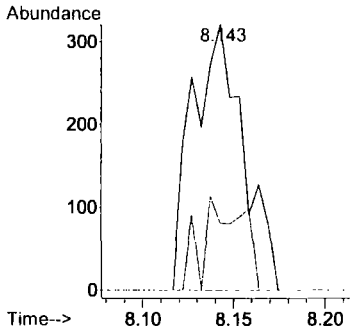


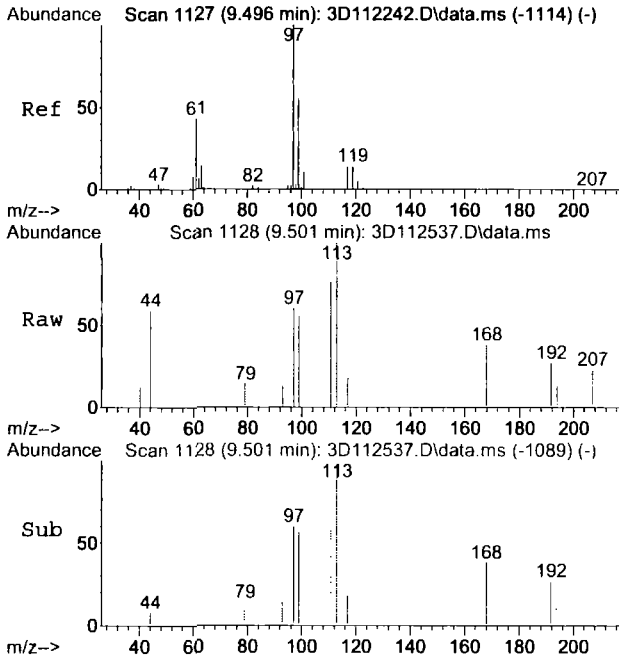



#37
1,1-dichloroethane
Concen: 0.28 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112537.D
Acq: 11 Aug 2015 9:01 pm

Tgt Ion: 63 Resp: 626

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 25.2 | 2.4 | 62.4 |
| 83 | 0.0 | 0.0 | 42.8 |

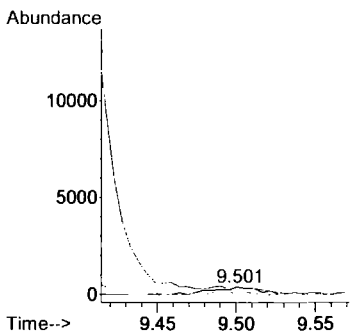



#54
1,1,1-trichloroethane
Concen: 0.35 ug/L
RT: 9.501 min Scan# 1128
Delta R.T. 0.005 min
Lab File: 3D112537.D
Acq: 11 Aug 2015 9:01 pm

Tgt Ion: 97 Resp: 789

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 69.5 | 33.7 | 93.7 |
| 61 | 0.0 | 13.5 | 73.5# |




7.1.12 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112524.D
Acq On : 11 Aug 2015 3:03 pm
Operator : ximenac
Sample : jc1106-13
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 11 16:11:51 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 91266 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.396 | 168 | 186566 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 219744 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 177389 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 110292 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 79189 | 55.40 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 110.80% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 73979 | 55.87 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 111.74% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 236581 | 49.16 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.32% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 82401 | 48.56 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 97.12% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 37) 1,1-dichloroethane | 8.143 | 63 | 3804 | 1.58 ug/L | 87 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 921 | 0.57 ug/L | 82 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 7121 | 2.97 ug/L | 98 |
| 69) trichloroethene | 10.665 | 95 | 498 | 0.40 ug/L # | 58 |
| 89) tetrachloroethene | 12.642 | 166 | 655 | 0.43 ug/L | 71 |

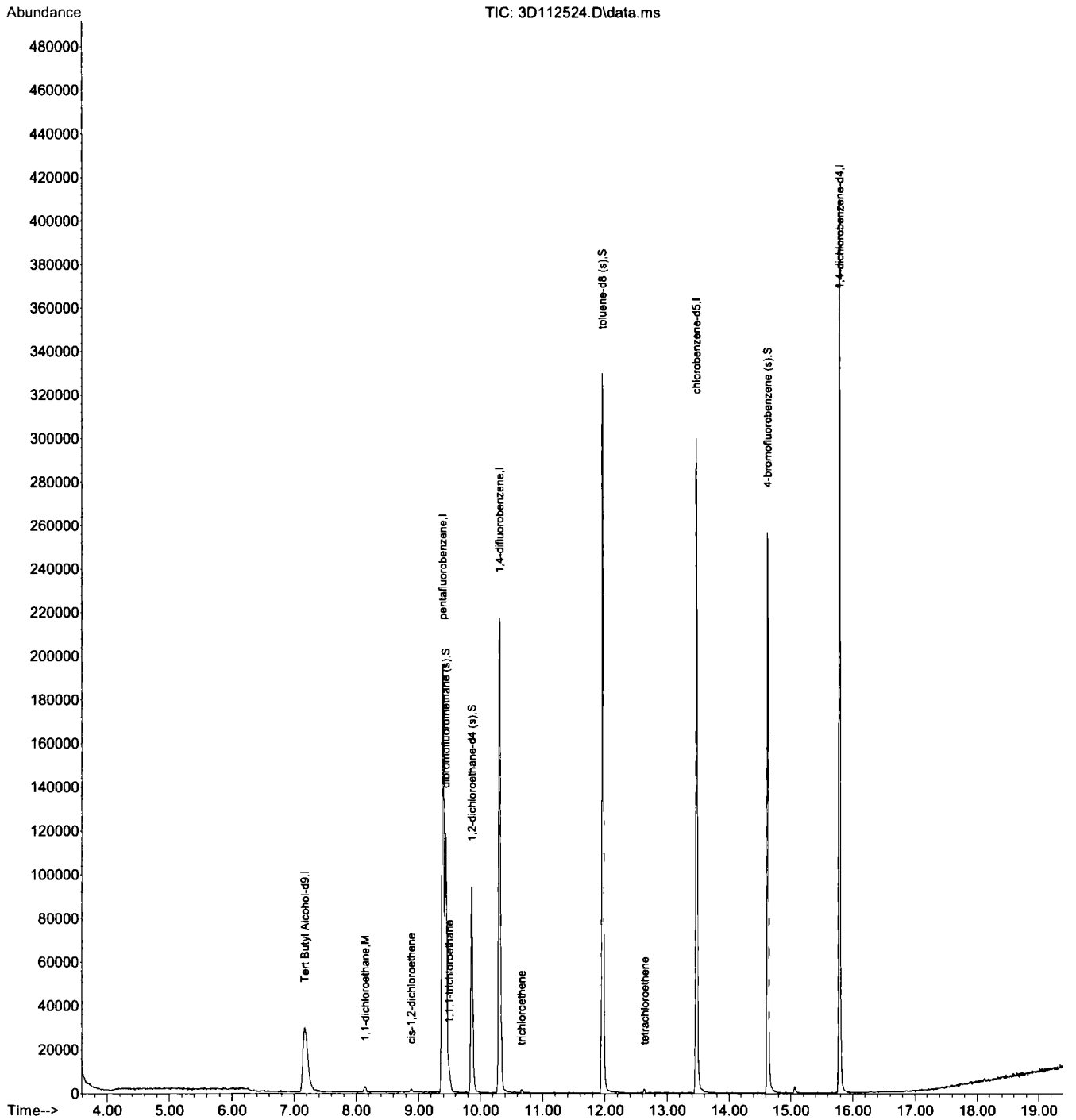
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.13 7

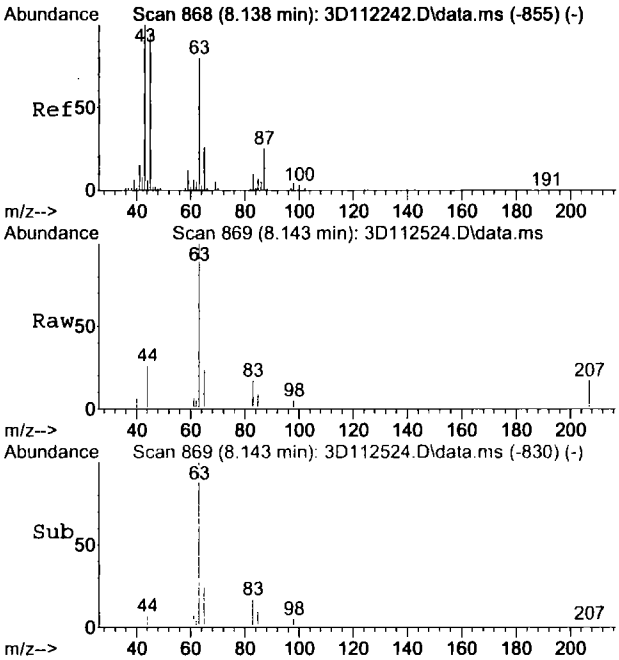
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112524.D
Acq On : 11 Aug 2015 3:03 pm
Operator : ximenac
Sample : jc1106-13
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 11 16:11:51 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



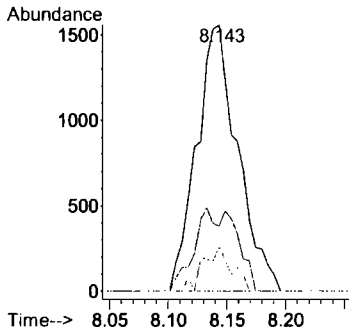

M3D4810.M Tue Aug 11 16:12:52 2015 3D

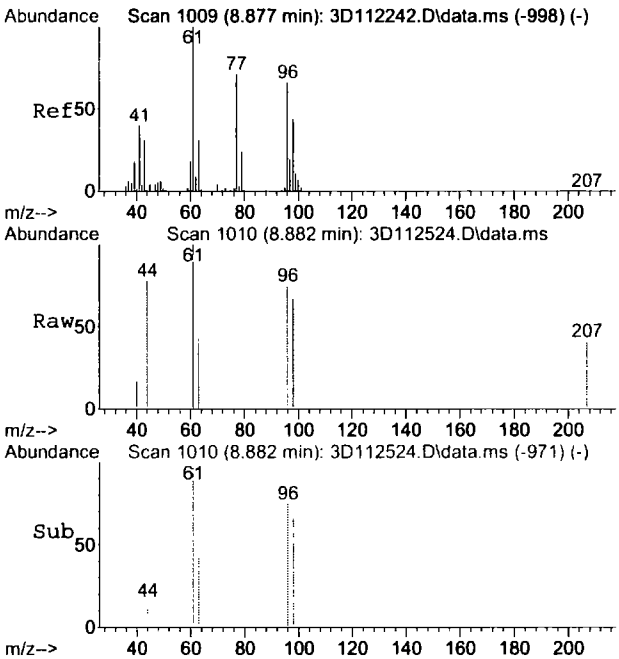



#37
1,1-dichloroethane
Concen: 1.58 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112524.D
Acq: 11 Aug 2015 3:03 pm

Tgt Ion: 63 Resp: 3804

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 24.5 | 2.4 | 62.4 |
| 83 | 16.5 | 0.0 | 42.8 |

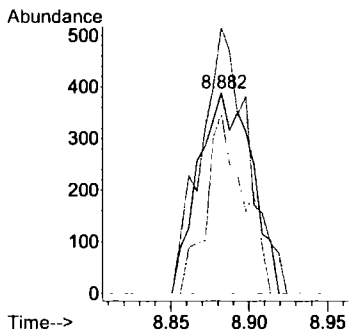


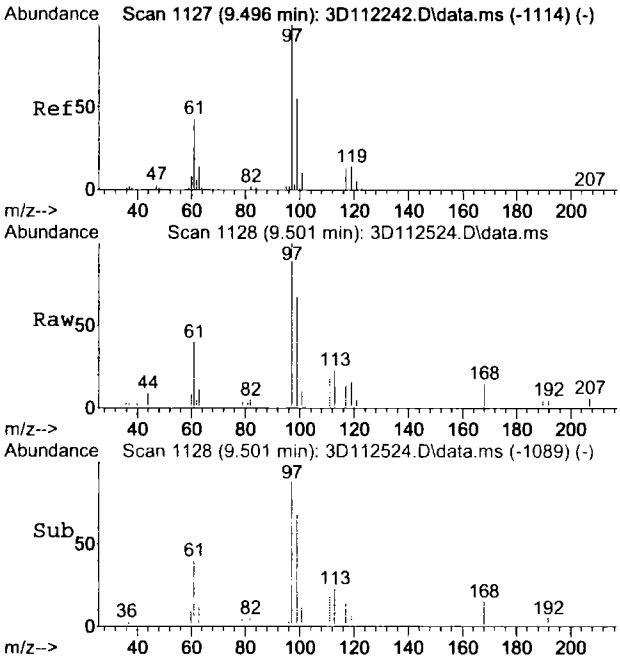

#43
cis-1,2-dichloroethene
Concen: 0.57 ug/L
RT: 8.882 min Scan# 1010
Delta R.T. 0.005 min
Lab File: 3D112524.D
Acq: 11 Aug 2015 3:03 pm

Tgt Ion: 96 Resp: 921

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 132.6 | 120.5 | 180.5 |
| 98 | 89.2 | 36.4 | 96.4 |



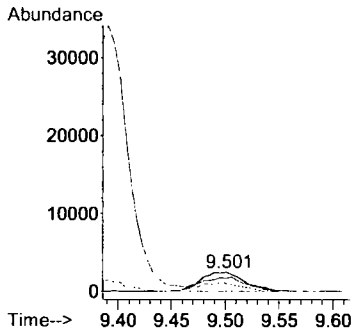

7.1.13

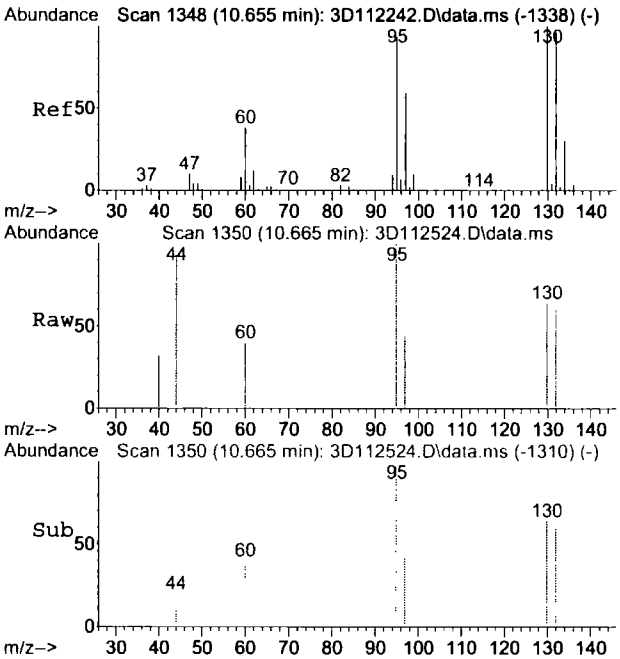



#54
1,1,1-trichloroethane
Concen: 2.97 ug/L
RT: 9.501 min Scan# 1128
Delta R.T. 0.005 min
Lab File: 3D112524.D
Acq: 11 Aug 2015 3:03 pm

Tgt Ion: 97 Resp: 7121

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 63.8 | 33.7 | 93.7 |
| 61 | 39.9 | 13.5 | 73.5 |

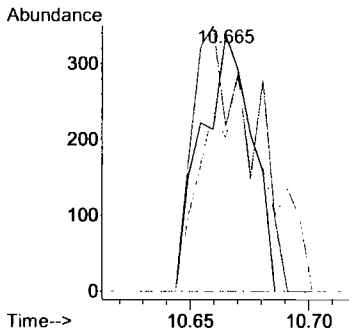


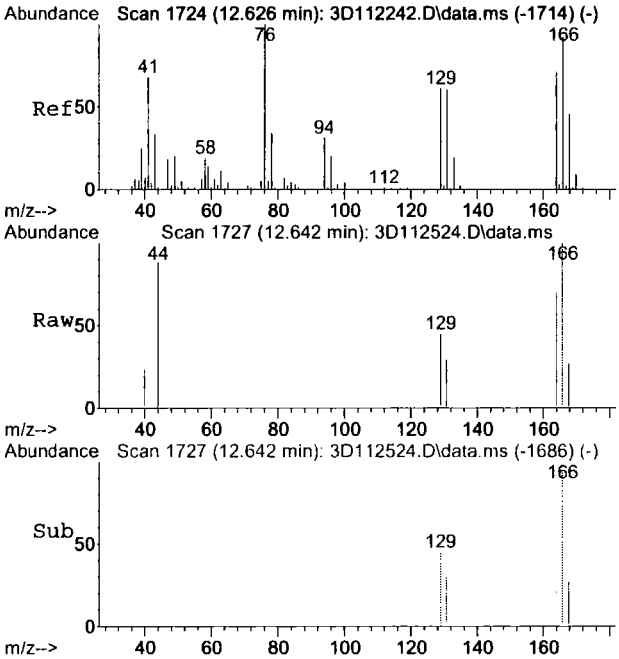

#69
trichloroethene
Concen: 0.40 ug/L
RT: 10.665 min Scan# 1350
Delta R.T. 0.010 min
Lab File: 3D112524.D
Acq: 11 Aug 2015 3:03 pm

Tgt Ion: 95 Resp: 498

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 64.5 | 77.2 | 137.2# |
| 132 | 59.8 | 72.4 | 132.4# |



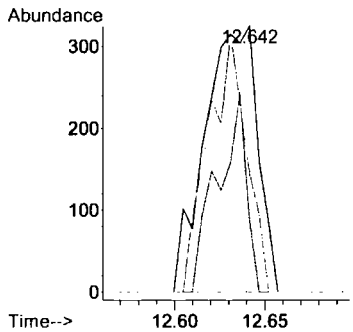

7.1.13 7




#89
tetrachloroethene
Concen: 0.43 ug/L
RT: 12.642 min Scan# 1727
Delta R.T. 0.016 min
Lab File: 3D112524.D
Acq: 11 Aug 2015 3:03 pm

Tgt Ion:166 Resp: 655

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 27.1 | 19.3 | 79.3 |
| 129 | 44.6 | 36.3 | 96.3 |




7.1.13

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112536.D
Acq On : 11 Aug 2015 8:34 pm
Operator : ximenac
Sample : jc1106-14
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 12 09:31:26 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 91107 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 183583 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 216133 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 177301 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 109805 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 80342 | 57.12 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 114.24% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75935 | 58.28 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 116.56% | | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 239928 | 50.69 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 101.38% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 81846 | 48.45 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.90% | | | |
| Target Compounds | | | | | | Qvalue |
| 37) 1,1-dichloroethane | 8.143 | 63 | 612 | 0.26 | ug/L # | 49 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 845 | 0.36 | ug/L # | 45 |

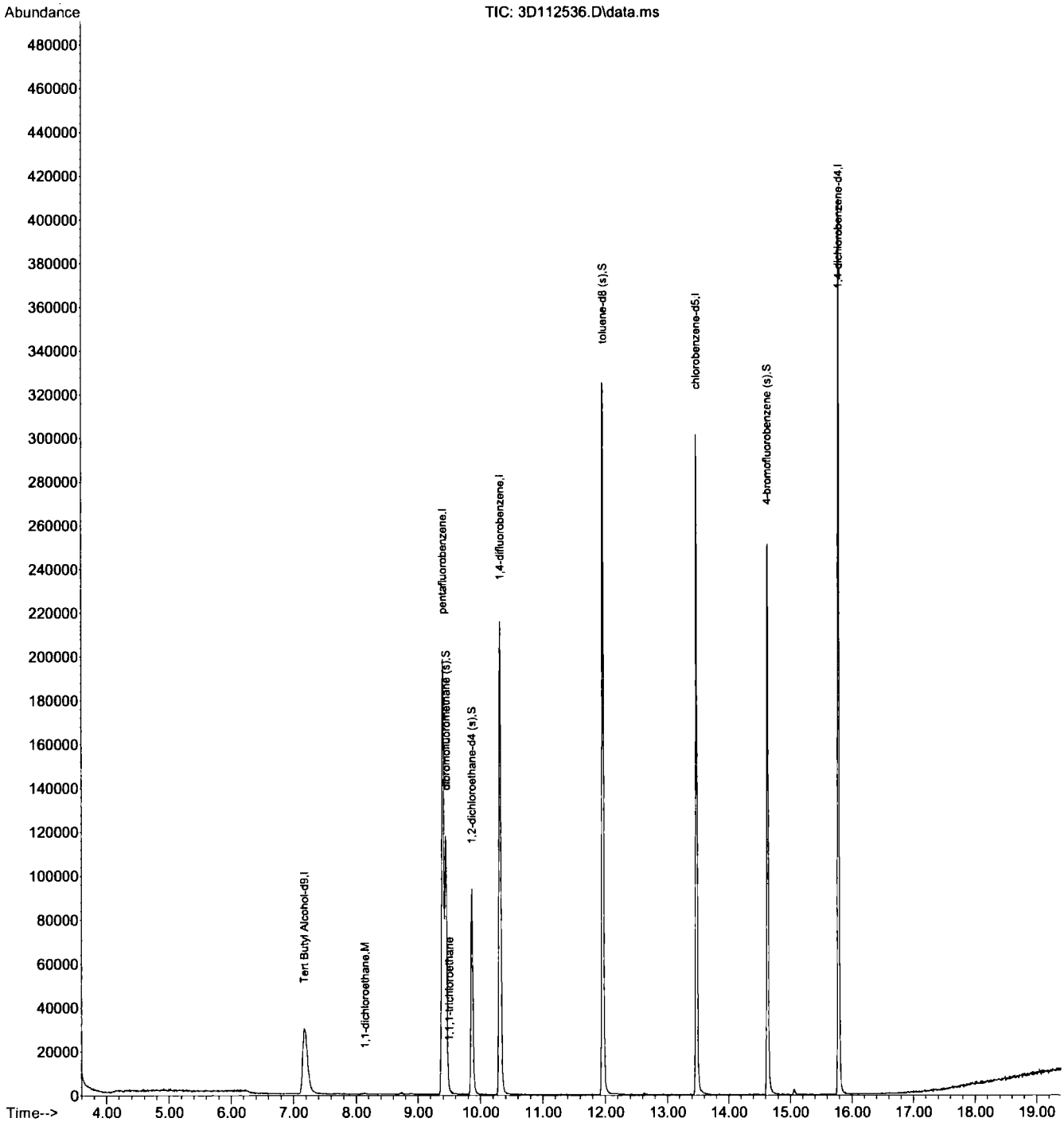
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.14 7

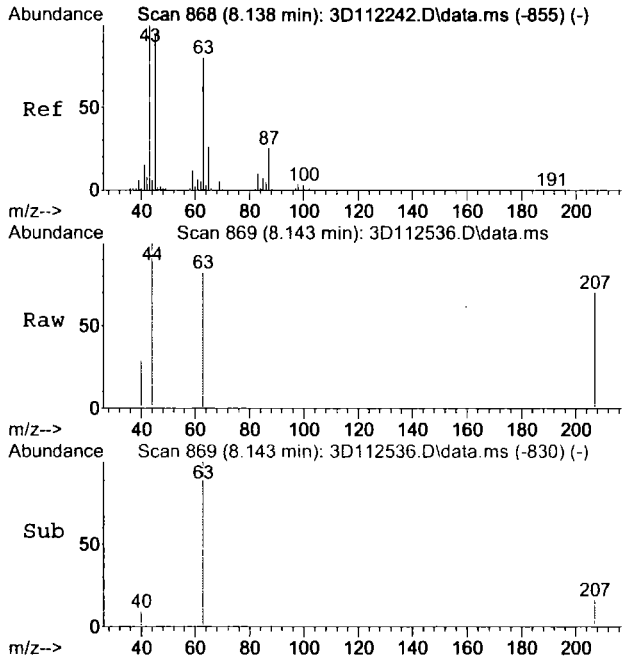
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112536.D
Acq On : 11 Aug 2015 8:34 pm
Operator : ximenac
Sample : jc1106-14
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 12 09:31:26 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



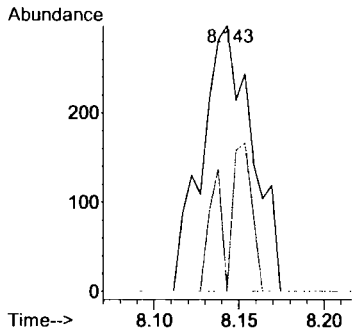

M3D4810.M Wed Aug 12 09:48:18 2015 T

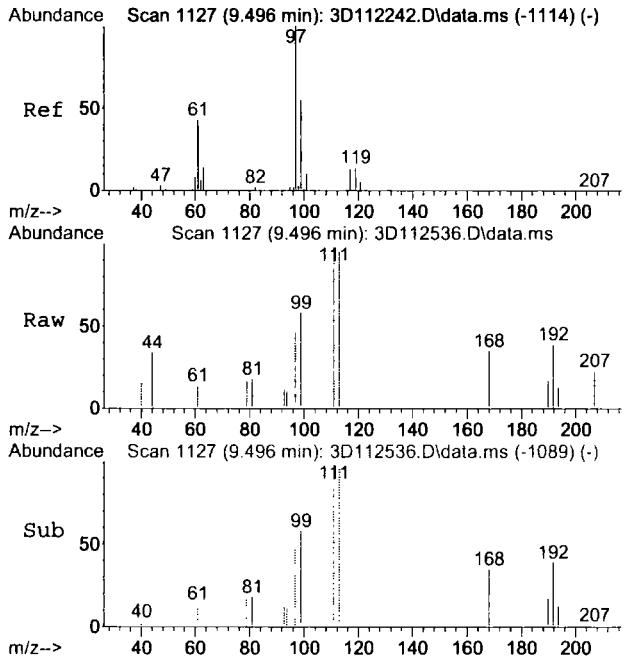



#37
1,1-dichloroethane
Concen: 0.26 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112536.D
Acq: 11 Aug 2015 8:34 pm

Tgt Ion: 63 Resp: 612

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 0.0 | 2.4 | 62.4# |
| 83 | 0.0 | 0.0 | 42.8 |

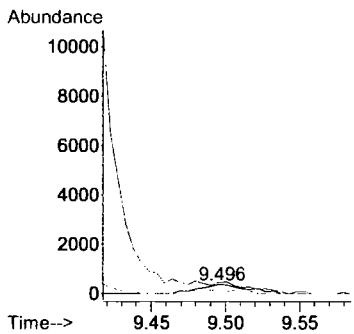



#54
1,1,1-trichloroethane
Concen: 0.36 ug/L
RT: 9.496 min Scan# 1127
Delta R.T. -0.000 min
Lab File: 3D112536.D
Acq: 11 Aug 2015 8:34 pm

Tgt Ion: 97 Resp: 845

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 124.8 | 33.7 | 93.7# |
| 61 | 30.4 | 13.5 | 73.5 |




7.1.14 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112533.D
Acq On : 11 Aug 2015 7:13 pm
Operator : ximenac
Sample : jc1106-15
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Aug 12 09:29:30 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

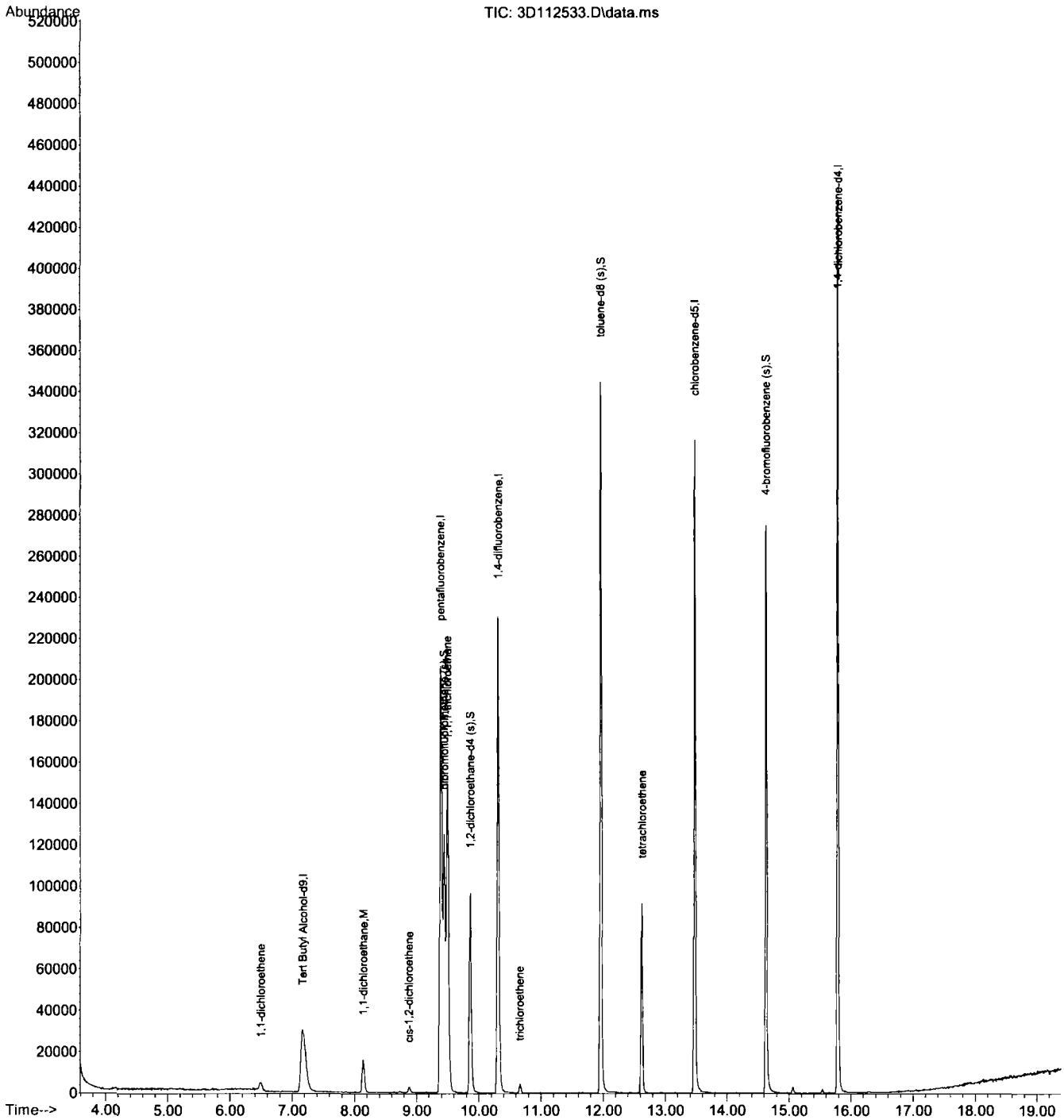
| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 94051 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 193794 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.313 | 114 | 228111 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 188105 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 116304 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 83552 | 56.27 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 112.54% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 77136 | 56.08 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 112.16% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 250629 | 50.17 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.34% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 86098 | 48.11 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.22% | | |
| Target Compounds | | | | | Qvalue |
| 22) 1,1-dichloroethene | 6.497 | 61 | 4214 | 1.83 ug/L | 98 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 21368 | 8.55 ug/L | 98 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 1855 | 1.10 ug/L | 80 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 135997 | 54.67 ug/L | 99 |
| 69) trichloroethene | 10.660 | 95 | 1664 | 1.28 ug/L | 82 |
| 89) tetrachloroethene | 12.626 | 166 | 30763 | 19.21 ug/L | 95 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112533.D
Acq On : 11 Aug 2015 7:13 pm
Operator : ximenac
Sample : jc1106-15
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

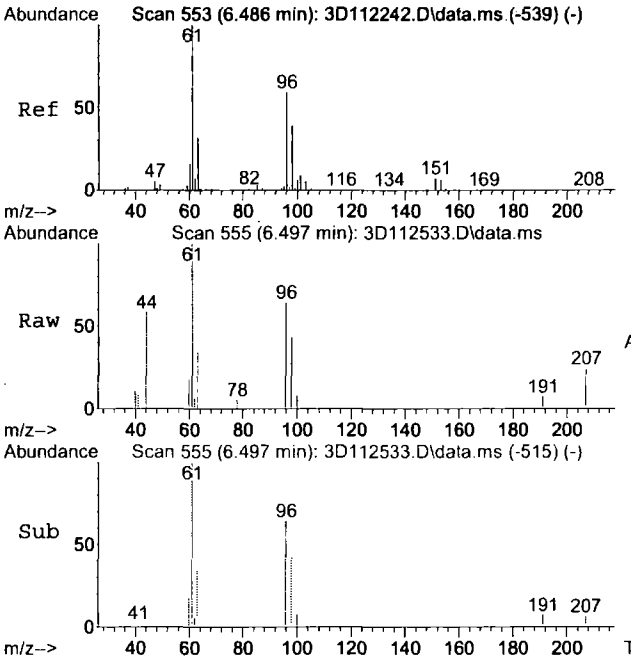
Quant Time: Aug 12 09:29:30 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 09:48:09 2015 T



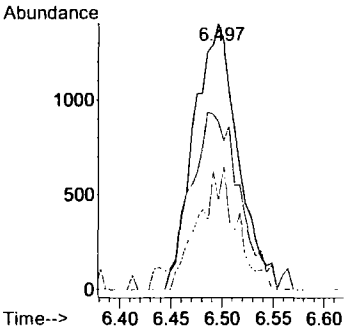
7.1.15 7

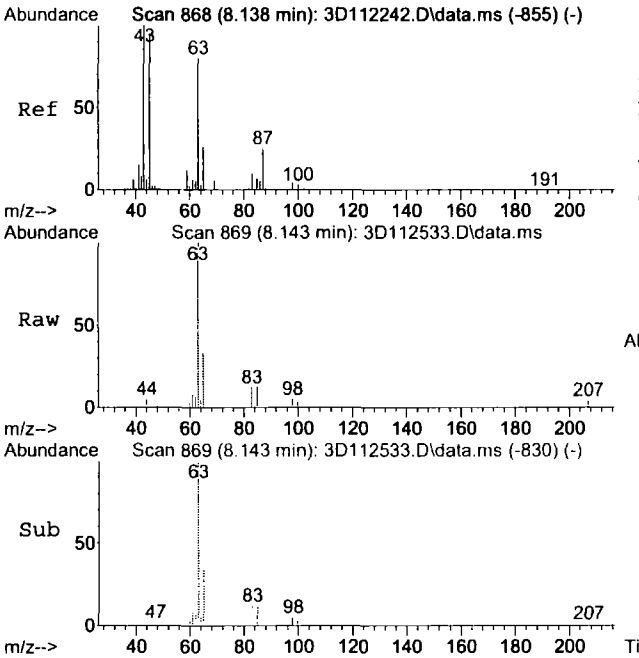



#22
1,1-dichloroethene
Concen: 1.83 ug/L
RT: 6.497 min Scan# 555
Delta R.T. 0.010 min
Lab File: 3D112533.D
Acq: 11 Aug 2015 7:13 pm

Tgt Ion: 61 Resp: 4214

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 58.2 | 28.7 | 88.7 |
| 63 | 33.6 | 1.8 | 61.8 |

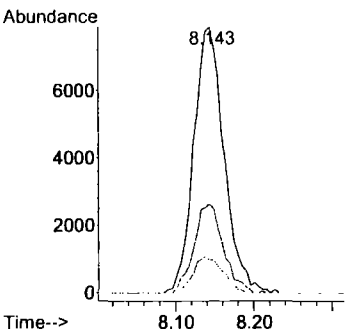



#37
1,1-dichloroethane
Concen: 8.55 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112533.D
Acq: 11 Aug 2015 7:13 pm

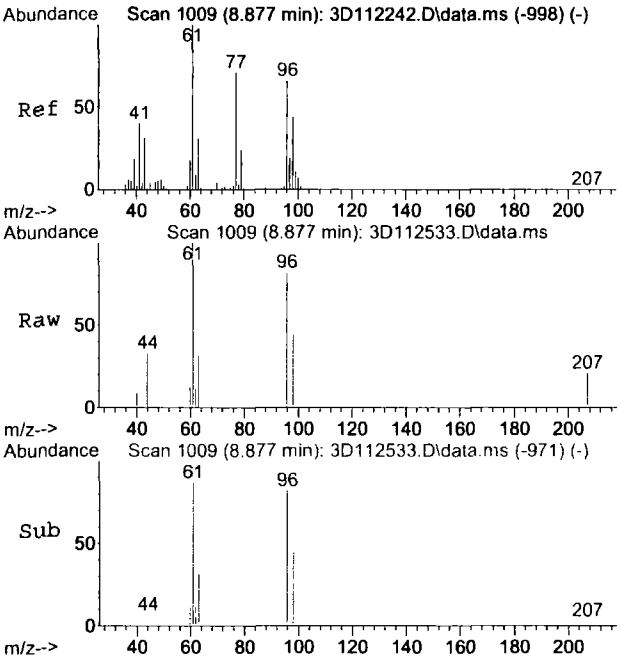
Tgt Ion: 63 Resp: 21368

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 33.6 | 2.4 | 62.4 |
| 83 | 12.5 | 0.0 | 42.8 |




7.1.15

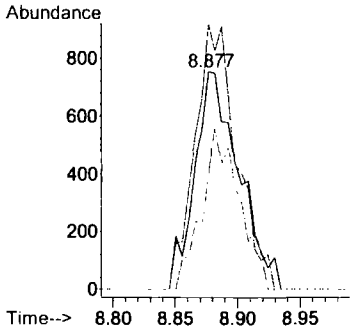
7

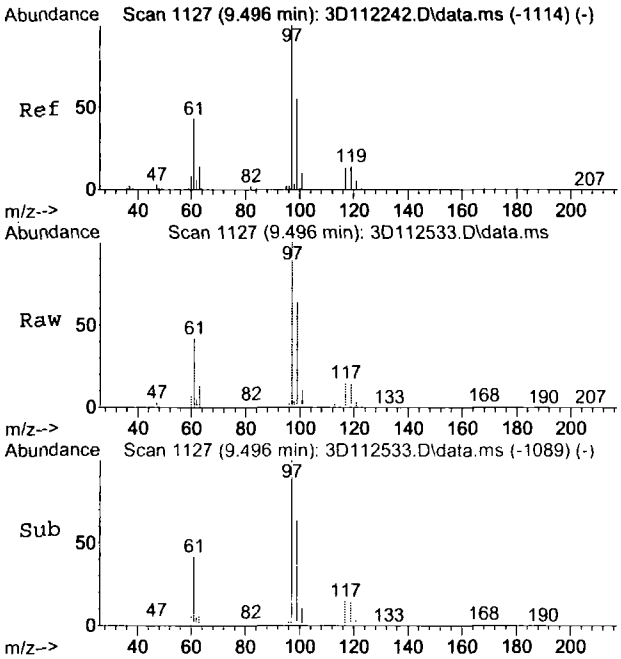



#43
cis-1,2-dichloroethene
Concen: 1.10 ug/L
RT: 8.877 min Scan# 1009
Delta R.T. -0.000 min
Lab File: 3D112533.D
Acq: 11 Aug 2015 7:13 pm

Tgt Ion: 96 Resp: 1855

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 122.0 | 120.5 | 180.5 |
| 98 | 54.4 | 36.4 | 96.4 |

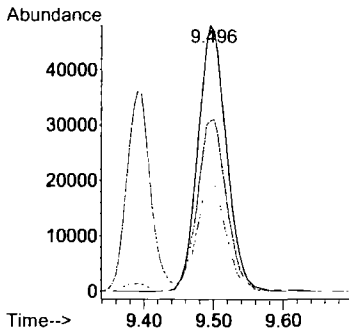


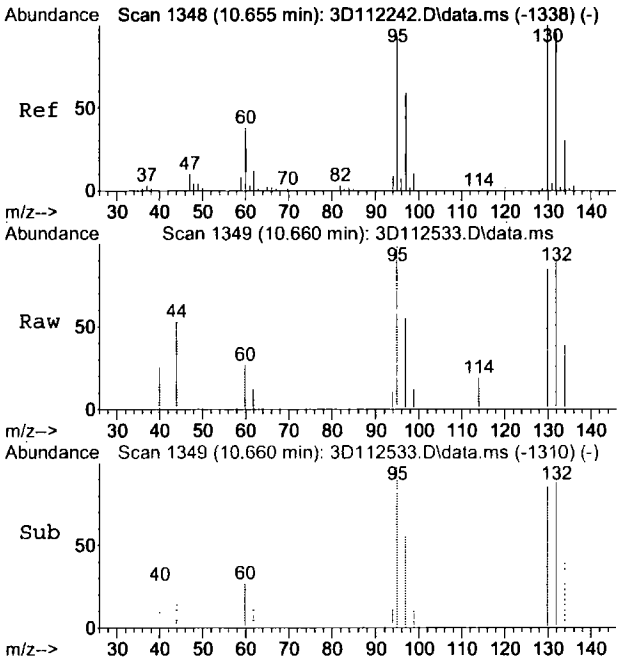

#54
1,1,1-trichloroethane
Concen: 54.67 ug/L
RT: 9.496 min Scan# 1127
Delta R.T. -0.000 min
Lab File: 3D112533.D
Acq: 11 Aug 2015 7:13 pm

Tgt Ion: 97 Resp: 135997

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 63.8 | 33.7 | 93.7 |
| 61 | 42.0 | 13.5 | 73.5 |



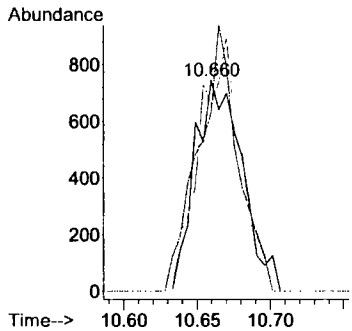

7.1.15

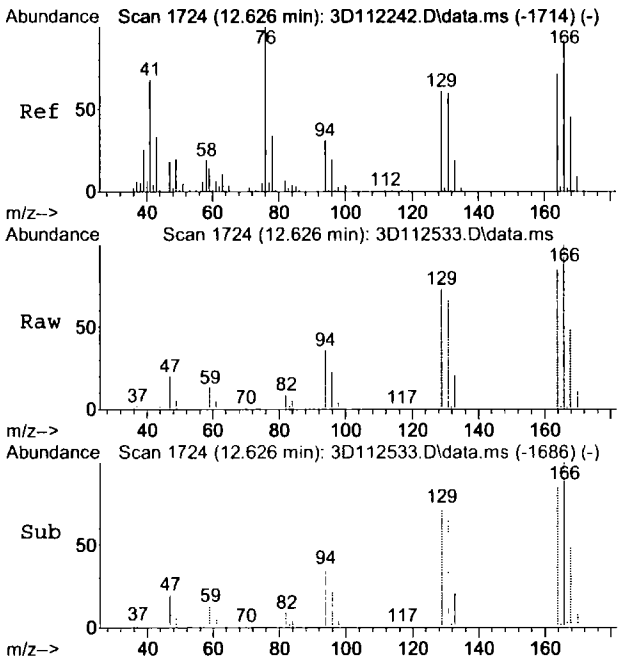



#69
trichloroethene
Concen: 1.28 ug/L
RT: 10.660 min Scan# 1349
Delta R.T. 0.005 min
Lab File: 3D112533.D
Acq: 11 Aug 2015 7:13 pm

Tgt Ion: 95 Resp: 1664

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 84.8 | 77.2 | 137.2 |
| 132 | 88.8 | 72.4 | 132.4 |

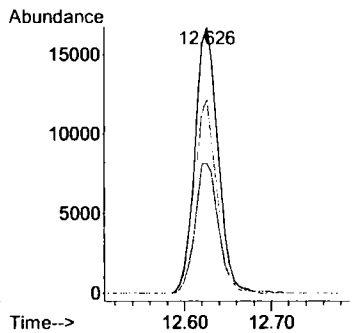



#89
tetrachloroethene
Concen: 19.21 ug/L
RT: 12.626 min Scan# 1724
Delta R.T. -0.000 min
Lab File: 3D112533.D
Acq: 11 Aug 2015 7:13 pm

Tgt Ion:166 Resp: 30763

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 48.7 | 19.3 | 79.3 |
| 129 | 72.8 | 36.3 | 96.3 |




7.1.15 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112573.D
Acq On : 12 Aug 2015 1:54 pm
Operator : ximenac
Sample : jc1106-16
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 12 14:32:28 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 88764 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 186964 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.313 | 114 | 217383 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 181788 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 113725 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 79219 | 55.30 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 110.60% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 74462 | 56.11 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 112.22% | | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 238139 | 50.02 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.04% | | | |
| 106) 4-bromofluorobenzene (s) | 14.628 | 95 | 83477 | 47.71 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 95.42% | | | |
| Target Compounds | | | | | | Qvalue |
| 11) vinyl chloride | 4.405 | 62 | 4291 | 1.58 | ug/L | 90 |
| 22) 1,1-dichloroethene | 6.497 | 61 | 475 | 0.21 | ug/L # | 60 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 16610 | 6.89 | ug/L | 97 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 7003 | 4.30 | ug/L # | 80 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 10019 | 4.17 | ug/L | 96 |
| 69) trichloroethene | 10.654 | 95 | 2269 | 1.84 | ug/L | 84 |
| 89) tetrachloroethene | 12.626 | 166 | 13672 | 8.83 | ug/L | 92 |
| 117) tert-butylbenzene | 15.331 | 119 | 1604 | 0.40 | ug/L | 80 |
| 120) sec-butylbenzene | 15.546 | 105 | 8320 | 1.30 | ug/L | 91 |

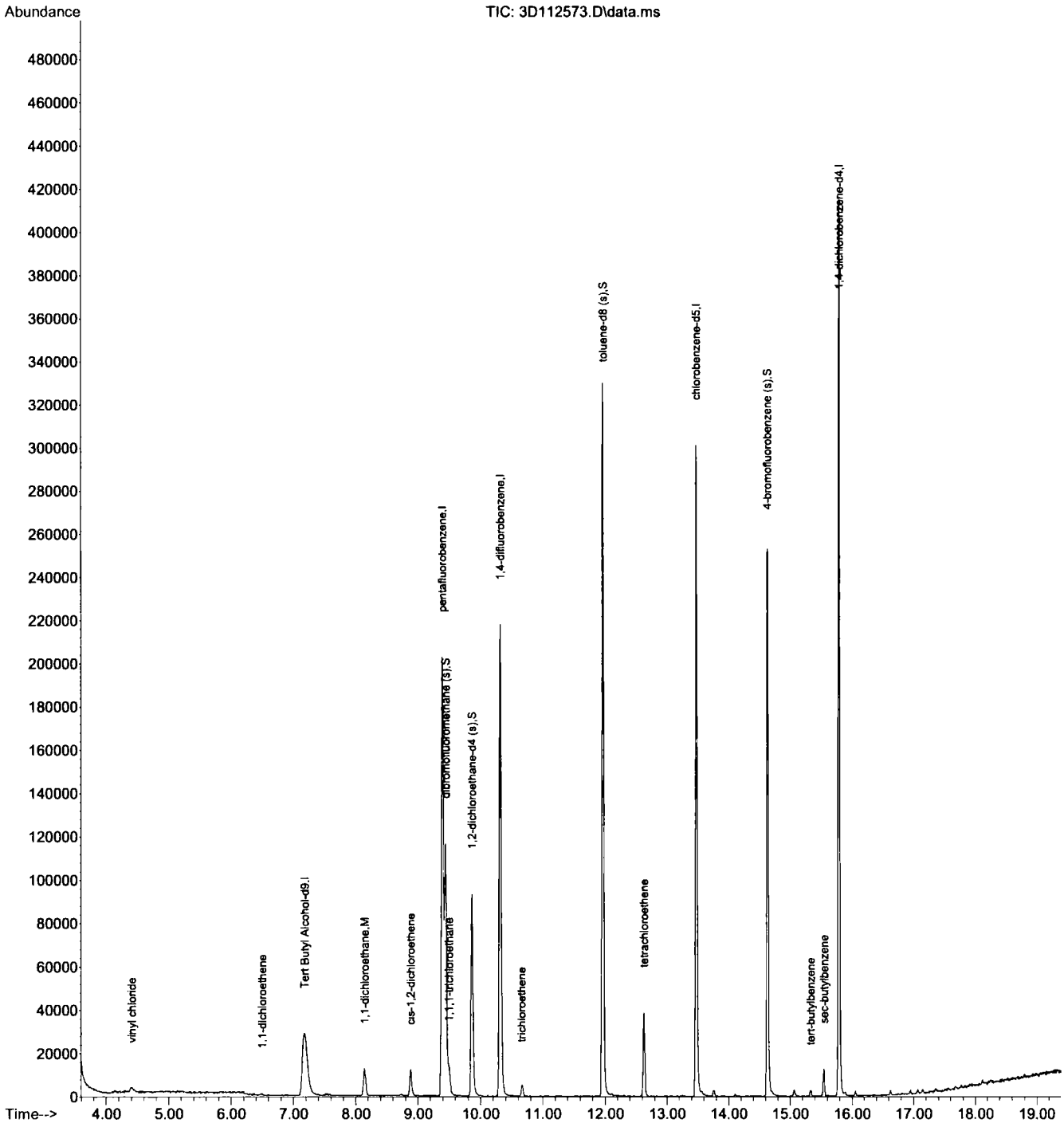
(#) = qualifier out of range (m) = manual integration (+) = signals summed

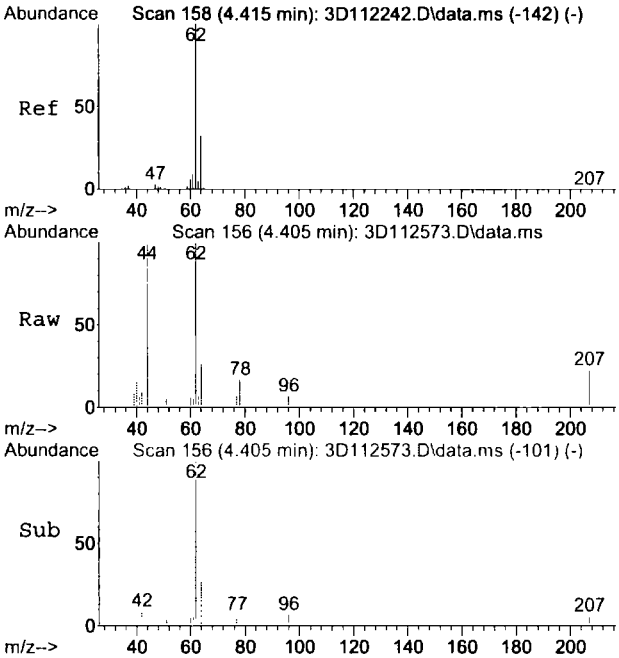
7.1.16 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112573.D
Acq On : 12 Aug 2015 1:54 pm
Operator : ximenac
Sample : jc1106-16
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 12 14:32:28 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

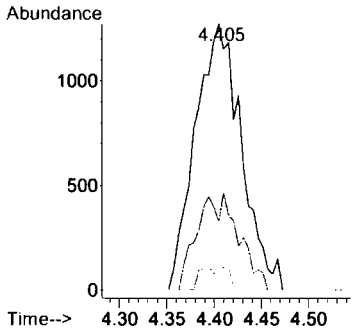


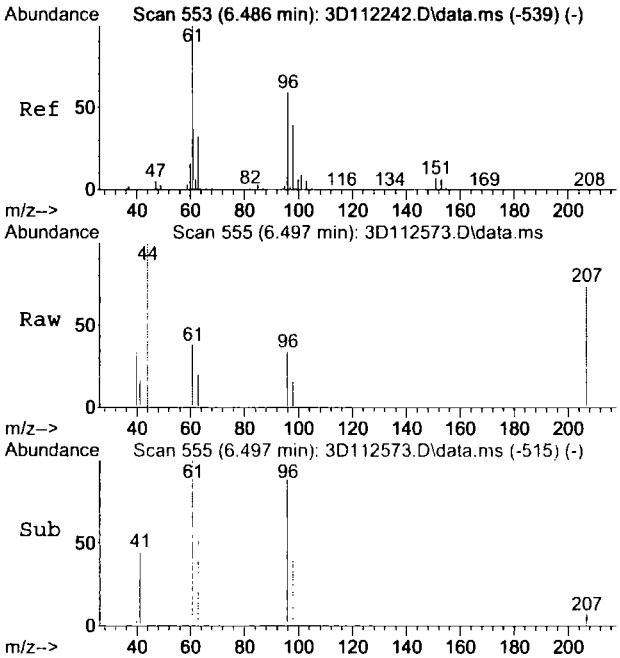



#11
vinyl chloride
Concen: 1.58 ug/L
RT: 4.405 min Scan# 156
Delta R.T. -0.011 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion: 62 Resp: 4291

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 25.6 | 1.6 | 61.6 |
| 61 | 6.1 | 0.0 | 38.9 |

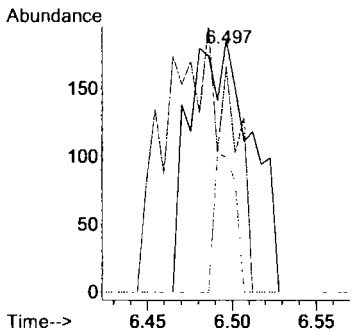


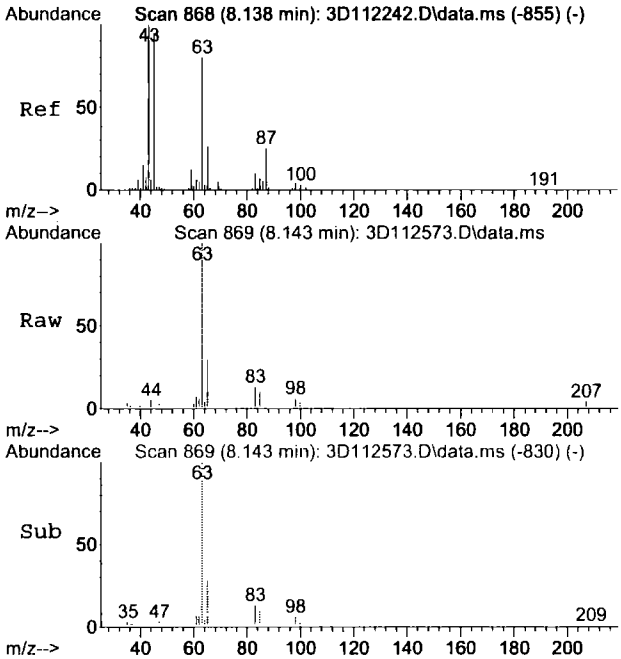

#22
1,1-dichloroethene
Concen: 0.21 ug/L
RT: 6.497 min Scan# 555
Delta R.T. 0.010 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion: 61 Resp: 475

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 89.2 | 28.7 | 88.7# |
| 63 | 53.2 | 1.8 | 61.8 |



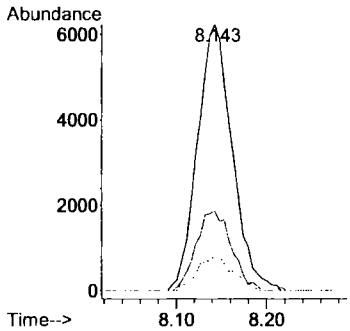

7.1.16

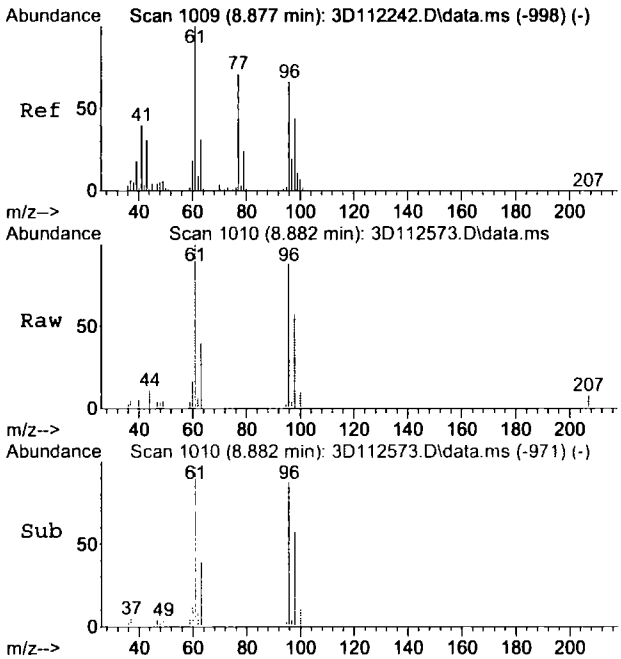



#37
1,1-dichloroethane
Concen: 6.89 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion: 63 Resp: 16610

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 30.0 | 2.4 | 62.4 |
| 83 | 13.0 | 0.0 | 42.8 |

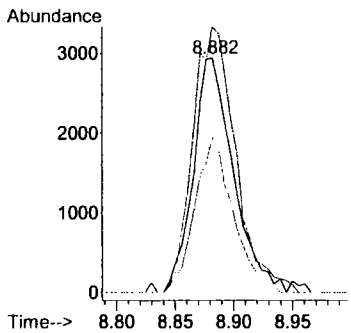



#43
cis-1,2-dichloroethene
Concen: 4.30 ug/L
RT: 8.882 min Scan# 1010
Delta R.T. 0.005 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion: 96 Resp: 7003

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 113.3 | 120.5 | 180.5# |
| 98 | 66.0 | 36.4 | 96.4 |




7.1.16

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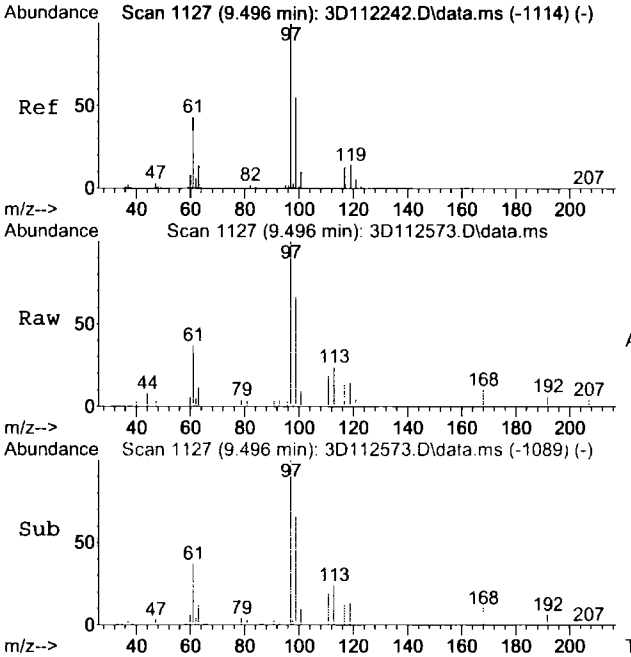
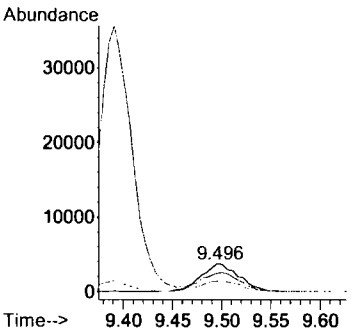
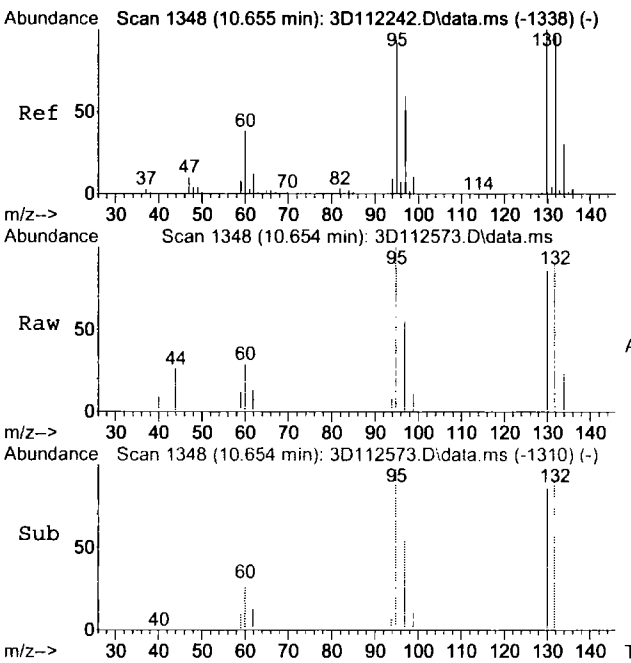



#54
1,1,1-trichloroethane
Concen: 4.17 ug/L
RT: 9.496 min Scan# 1127
Delta R.T. -0.000 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion: 97 Resp: 10019

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 63.7 | 33.7 | 93.7 |
| 61 | 37.4 | 13.5 | 73.5 |

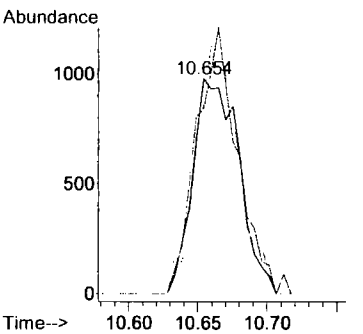


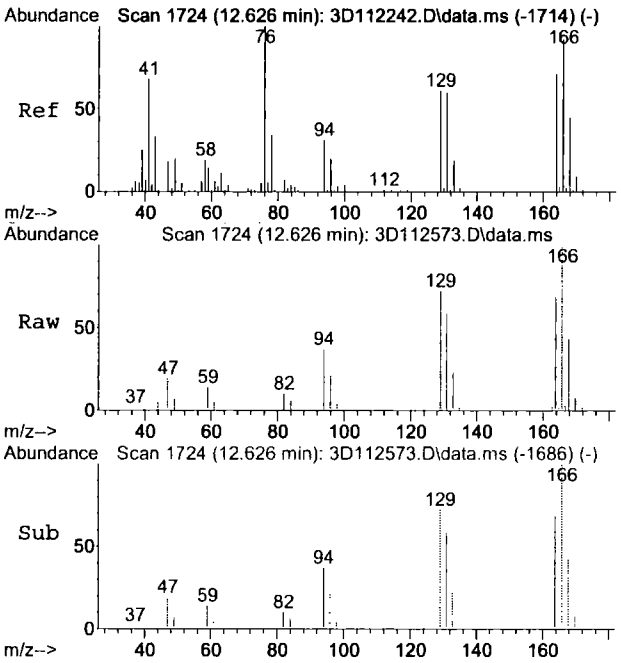

#69
trichloroethene
Concen: 1.84 ug/L
RT: 10.654 min Scan# 1348
Delta R.T. -0.000 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion: 95 Resp: 2269

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 86.3 | 77.2 | 137.2 |
| 132 | 91.2 | 72.4 | 132.4 |



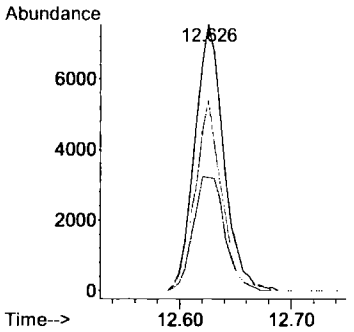

7.1.16

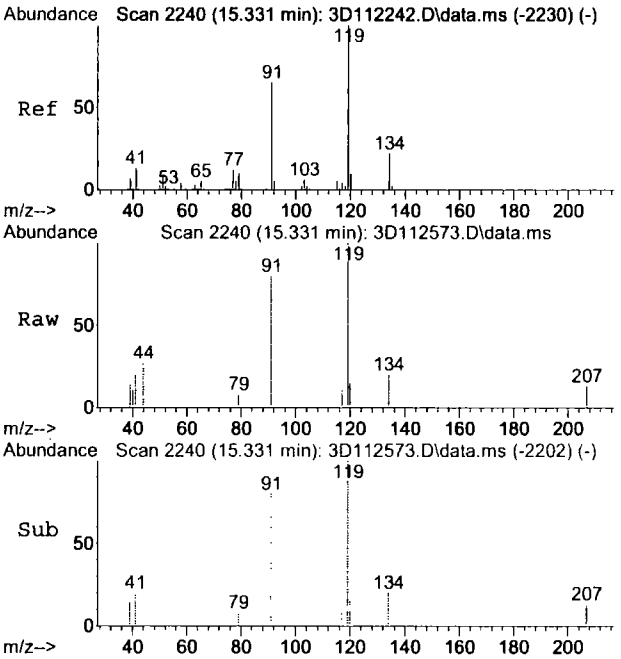



#89
tetrachloroethene
Concen: 8.83 ug/L
RT: 12.626 min Scan# 1724
Delta R.T. -0.000 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion:166 Resp: 13672

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 42.5 | 19.3 | 79.3 |
| 129 | 71.5 | 36.3 | 96.3 |

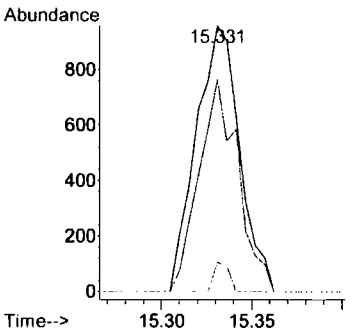



#117
tert-butylbenzene
Concen: 0.40 ug/L
RT: 15.331 min Scan# 2240
Delta R.T. -0.000 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion:119 Resp: 1604

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 91 | 80.0 | 34.6 | 94.6 |
| 117 | 11.1 | 0.0 | 33.5 |




7.1.16

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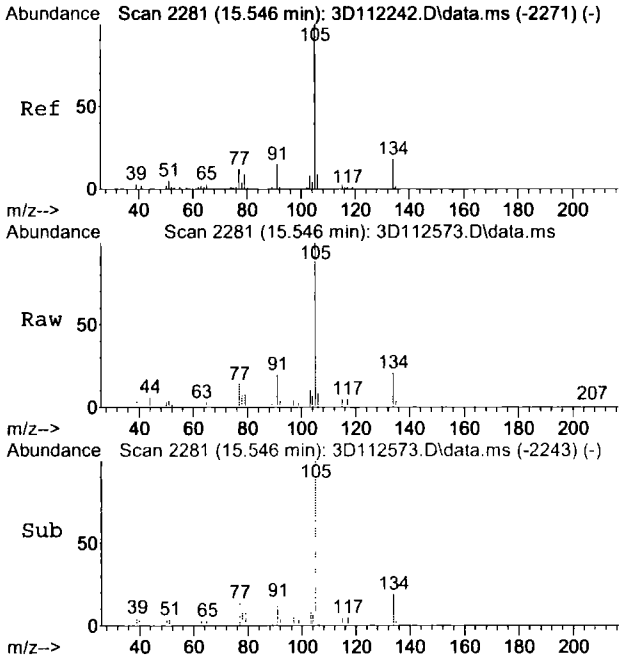
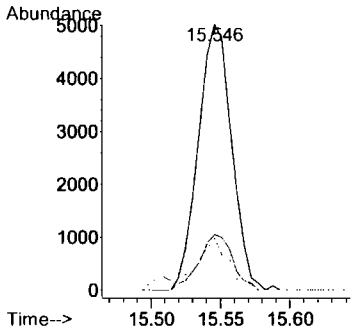



#120
sec-butylbenzene
Concen: 1.30 ug/L
RT: 15.546 min Scan# 2281
Delta R.T. -0.000 min
Lab File: 3D112573.D
Acq: 12 Aug 2015 1:54 pm

Tgt Ion:105 Resp: 8320

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 20.8 | 0.0 | 48.3 |
| 91 | 19.7 | 0.0 | 44.5 |




7.1.16

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112555.D
Acq On : 12 Aug 2015 5:07 am
Operator : ximenac
Sample : jc1106-17
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Aug 12 09:45:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 94319 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 190266 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 224022 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 184821 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 114314 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 50) dibromofluoromethane (s) | 9.438 | 113 | 78516 | 53.86 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 107.72% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75635 | 56.01 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 112.02% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 247330 | 50.41 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.82% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 86055 | 48.93 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 97.86% | | |
| Target Compounds | | | | | Qvalue |
| 82) toluene | 12.039 | 92 | 965 | 0.33 ug/L # | 79 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

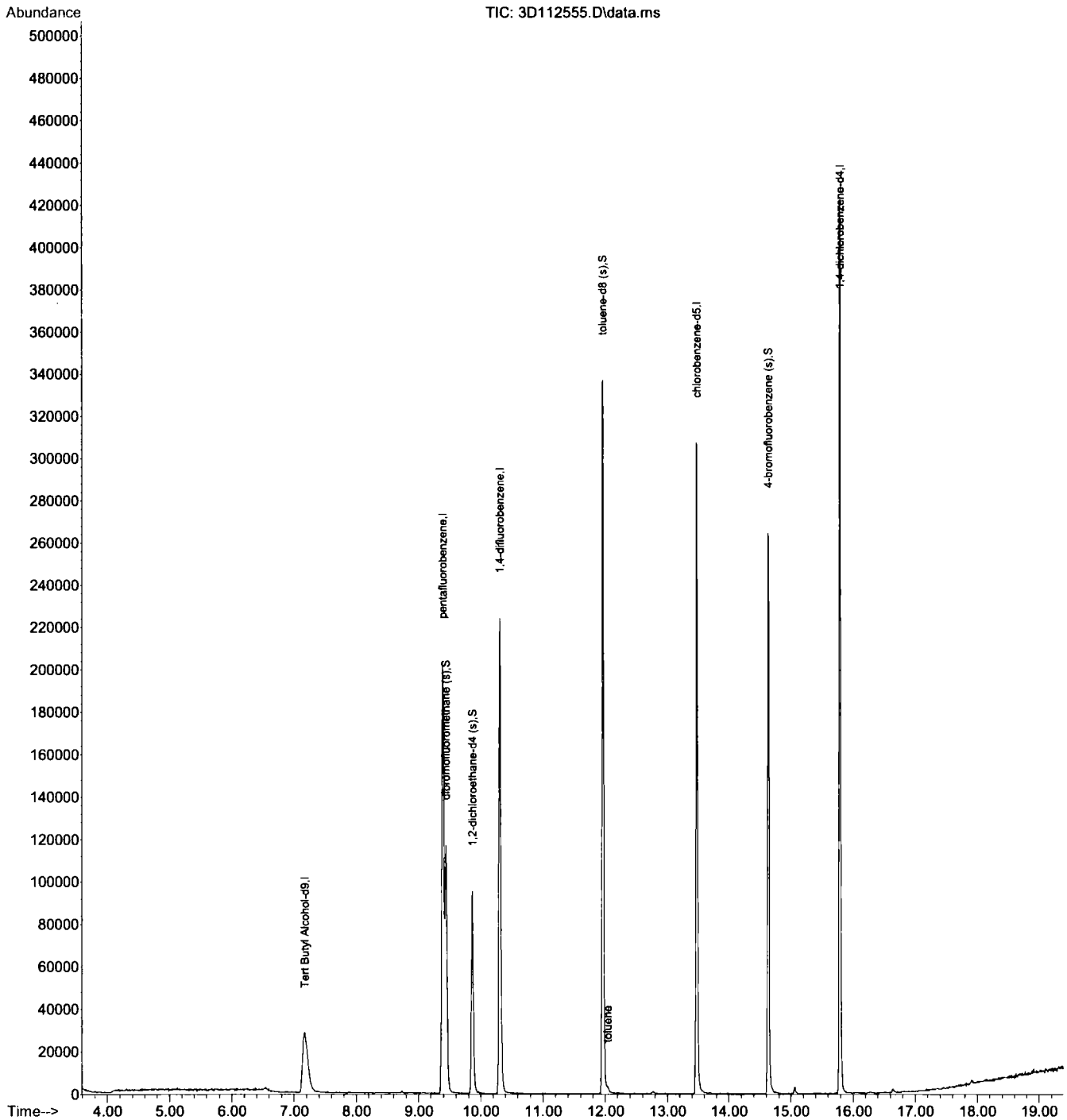
7.1.17

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112555.D
Acq On : 12 Aug 2015 5:07 am
Operator : ximenac
Sample : jc1106-17
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Aug 12 09:45:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 09:48:49 2015 T

Page: 2



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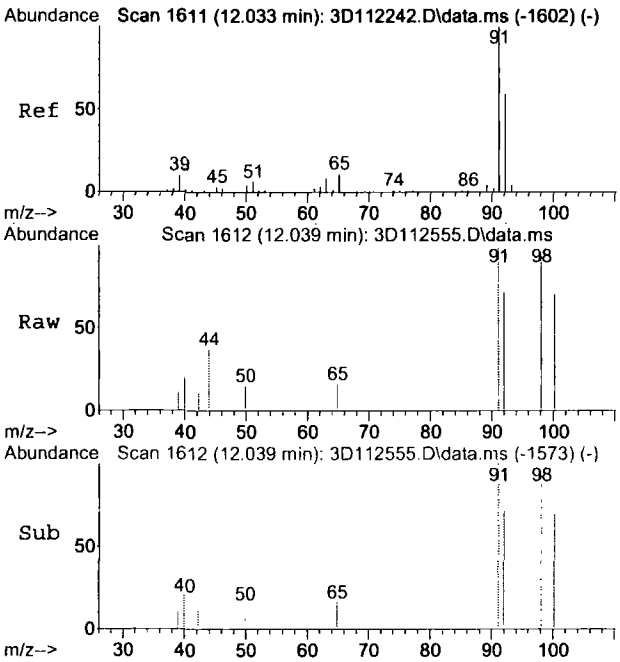
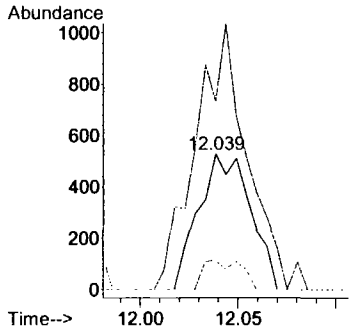



#82
toluene
Concen: 0.33 ug/L
RT: 12.039 min Scan# 1612
Delta R.T. 0.005 min
Lab File: 3D112555.D
Acq: 12 Aug 2015 5:07 am

Tgt Ion: 92 Resp: 965

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 138.4 | 139.0 | 199.0# |
| 65 | 21.8 | 0.0 | 48.5 |




7.1.17

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112534.D
Acq On : 11 Aug 2015 7:40 pm
Operator : ximenac
Sample : jc1106-18
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 12 09:30:27 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 88719 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 186366 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 213690 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 175269 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.793 | 152 | 108187 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.438 | 113 | 79434 | 55.63 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 111.26% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 73921 | 55.89 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 111.78% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 235002 | 50.21 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.42% | | | |
| 106) 4-bromofluorobenzene (s) | 14.634 | 95 | 81667 | 49.06 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 98.12% | | | |
| Target Compounds | | | | | | Qvalue |
| 11) vinyl chloride | 4.399 | 62 | 44111 | 16.33 | ug/L | 98 |
| 13) chloroethane | 5.212 | 64 | 1656 | 1.45 | ug/L | 86 |
| 22) 1,1-dichloroethene | 6.476 | 61 | 1088 | 0.49 | ug/L | 90 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 1028 | 0.51 | ug/L | 82 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 29062 | 12.09 | ug/L | 99 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 122761 | 75.58 | ug/L | 89 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 7363 | 3.08 | ug/L | 95 |
| 65) benzene | 9.941 | 78 | 1730 | 0.34 | ug/L | 89 |
| 69) trichloroethene | 10.660 | 95 | 2852 | 2.35 | ug/L | 91 |
| 89) tetrachloroethene | 12.631 | 166 | 13486 | 9.04 | ug/L | 95 |
| 105) isopropylbenzene | 14.429 | 105 | 3775 | 0.70 | ug/L | 94 |
| 117) tert-butylbenzene | 15.336 | 119 | 6012 | 1.58 | ug/L | 99 |
| 120) sec-butylbenzene | 15.546 | 105 | 42171 | 6.93 | ug/L | 98 |
| 124) 1,2-dichlorobenzene | 16.202 | 146 | 4175 | 1.30 | ug/L | 95 |

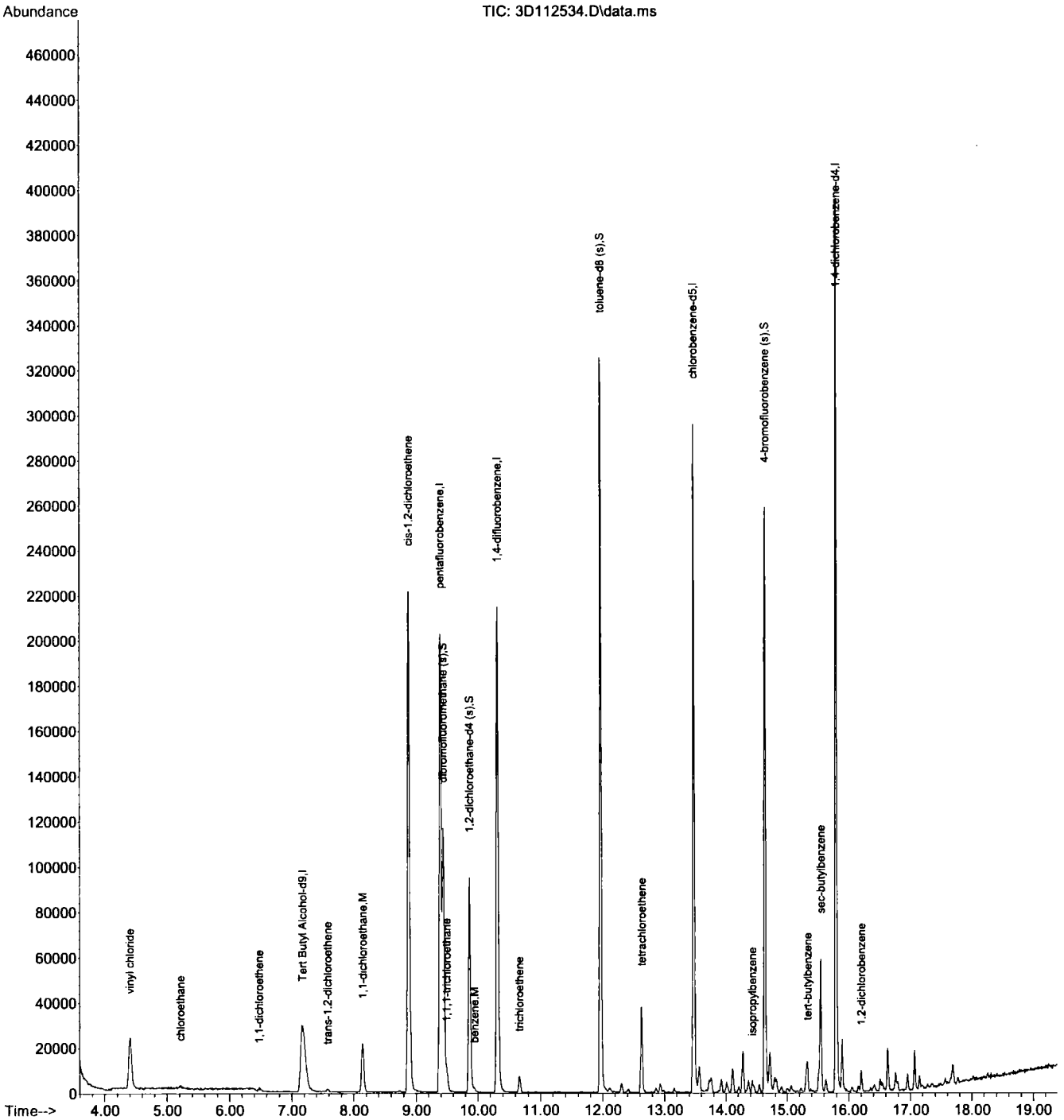
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.18

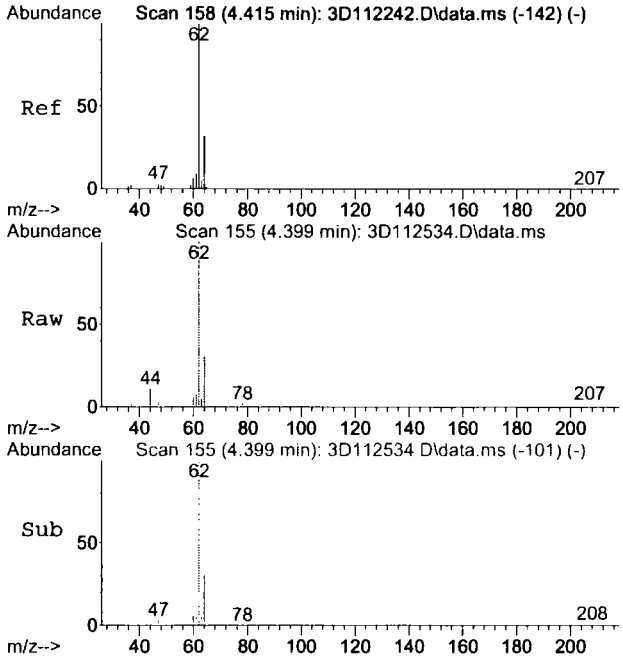
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112534.D
Acq On : 11 Aug 2015 7:40 pm
Operator : ximenac
Sample : jc1106-18
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 12 09:30:27 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



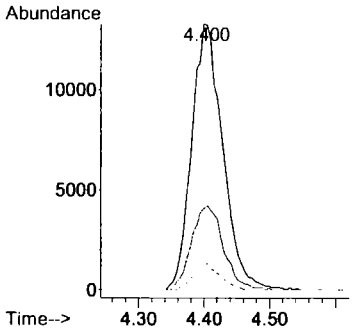

M3D4810.M Wed Aug 12 09:48:12 2015 T

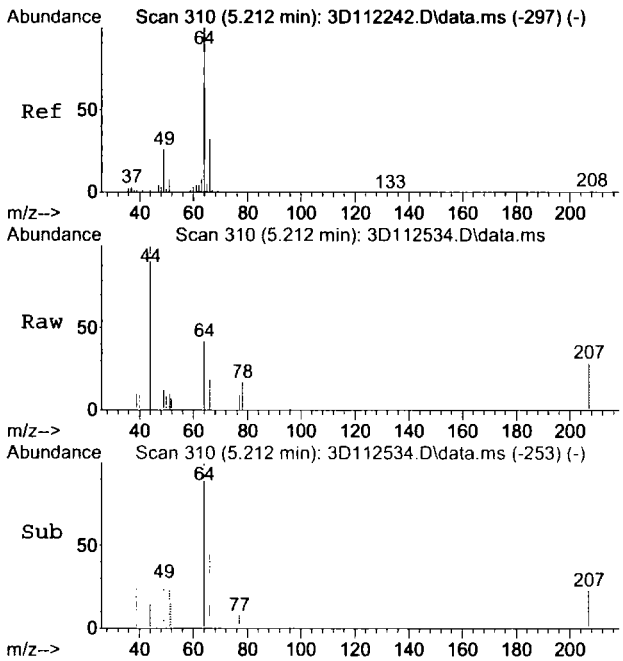



#11
vinyl chloride
Concen: 16.33 ug/L
RT: 4.399 min Scan# 155
Delta R.T. -0.016 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 62 Resp: 44111

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 30.6 | 1.6 | 61.6 |
| 61 | 7.9 | 0.0 | 38.9 |

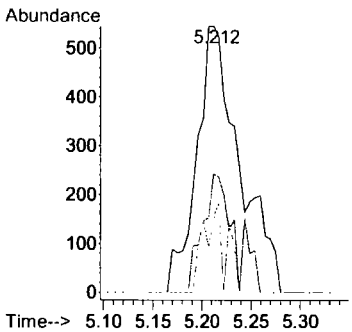



#13
chloroethane
Concen: 1.45 ug/L
RT: 5.212 min Scan# 310
Delta R.T. -0.000 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 64 Resp: 1656

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 64 | 100 | | |
| 66 | 44.6 | 1.6 | 61.6 |
| 49 | 27.5 | 0.0 | 56.0 |




7.1.18

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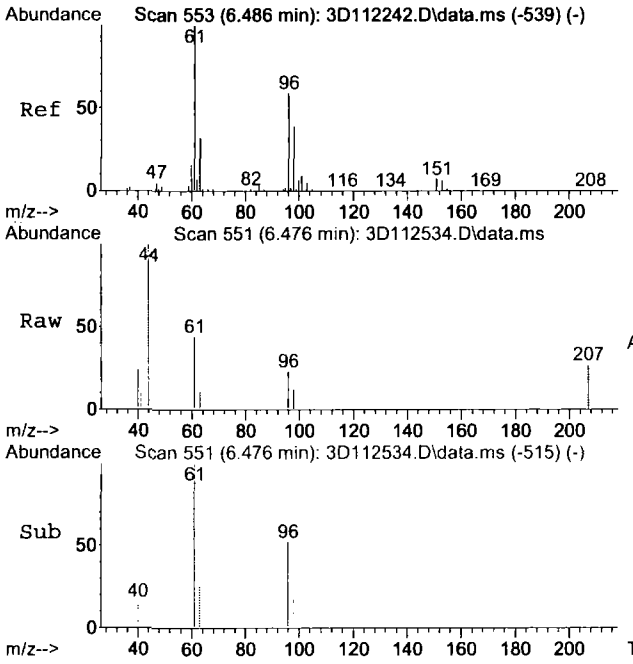
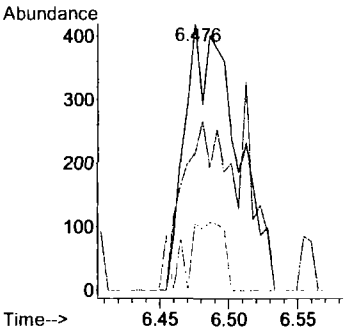
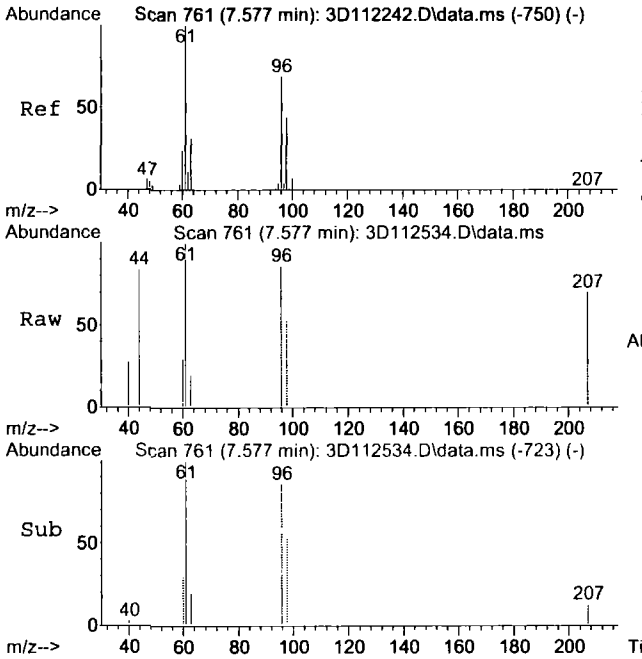



#22
1,1-dichloroethene
Concen: 0.49 ug/L
RT: 6.476 min Scan# 551
Delta R.T. -0.011 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 61 Resp: 1088

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 51.6 | 28.7 | 88.7 |
| 63 | 25.3 | 1.8 | 61.8 |

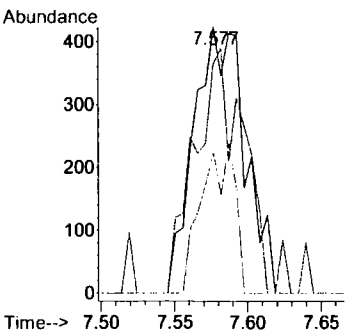


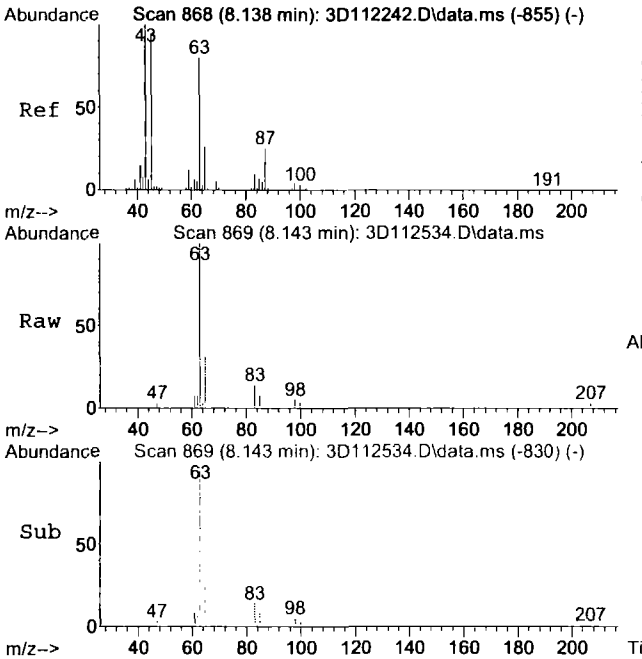

#33
trans-1,2-dichloroethene
Concen: 0.51 ug/L
RT: 7.577 min Scan# 761
Delta R.T. -0.000 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 61 Resp: 1028

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 86.3 | 48.2 | 89.4 |
| 98 | 53.0 | 31.1 | 57.7 |



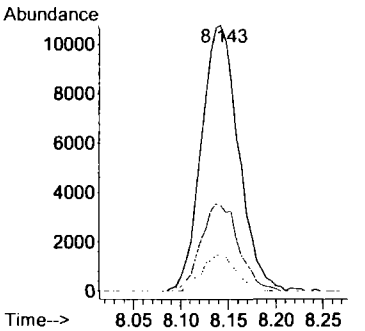

7.1.18 7

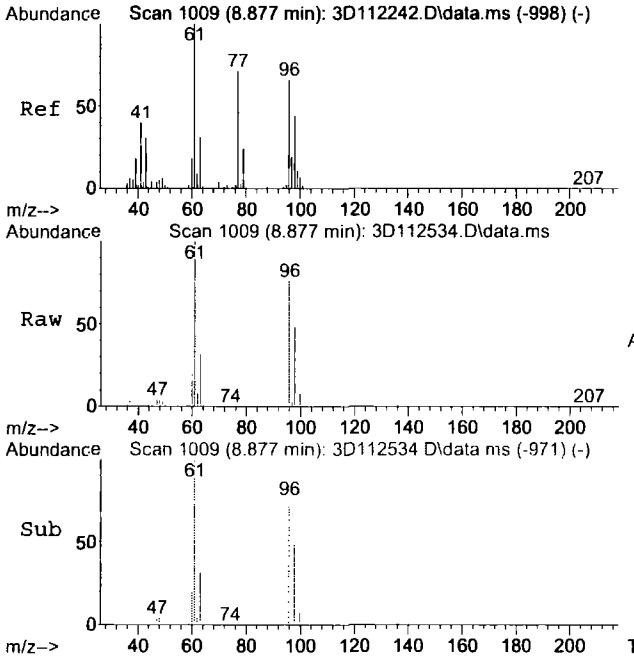



#37
1,1-dichloroethane
Concen: 12.09 ug/L
RT: 8.143 min Scan# 869
Delta R.T. 0.005 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 63 Resp: 29062

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 32.3 | 2.4 | 62.4 |
| 83 | 13.8 | 0.0 | 42.8 |

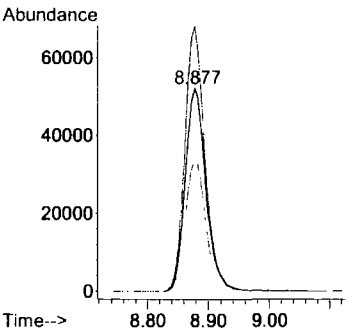


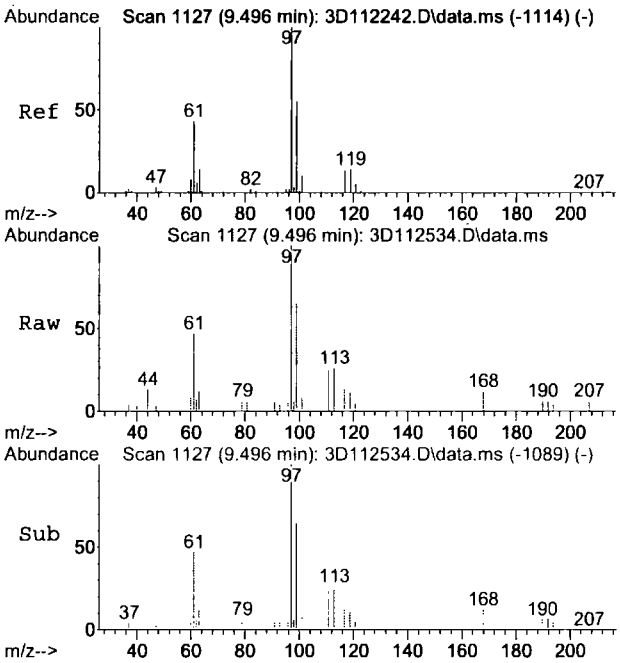

#43
cis-1,2-dichloroethene
Concen: 75.58 ug/L
RT: 8.877 min Scan# 1009
Delta R.T. -0.000 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 96 Resp: 122761

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 130.9 | 120.5 | 180.5 |
| 98 | 64.3 | 36.4 | 96.4 |



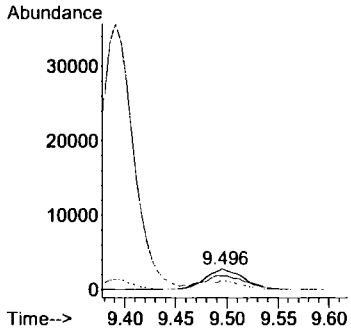

7.1.18 7

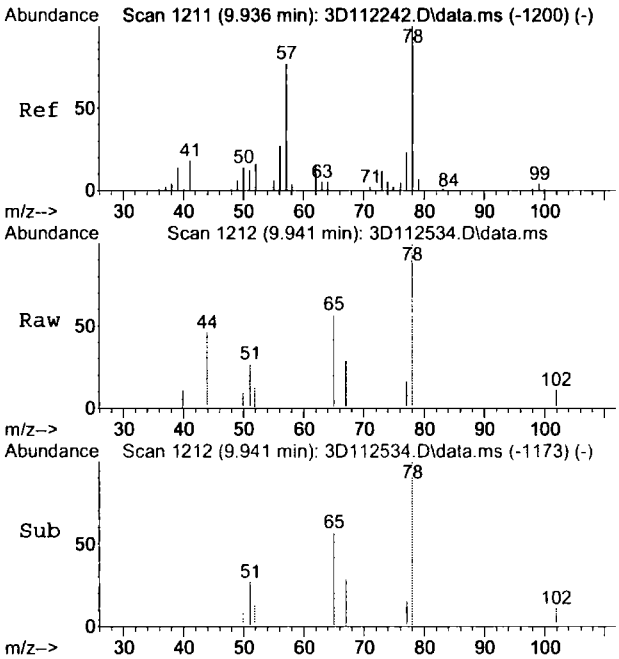



#54
1,1,1-trichloroethane
Concen: 3.08 ug/L
RT: 9.496 min Scan# 1127
Delta R.T. -0.000 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 97 Resp: 7363

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 60.1 | 33.7 | 93.7 |
| 61 | 47.4 | 13.5 | 73.5 |

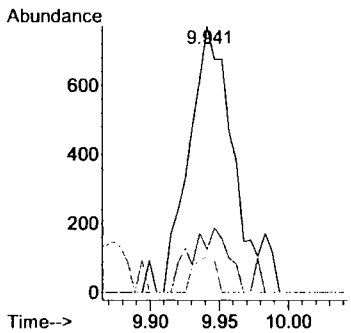


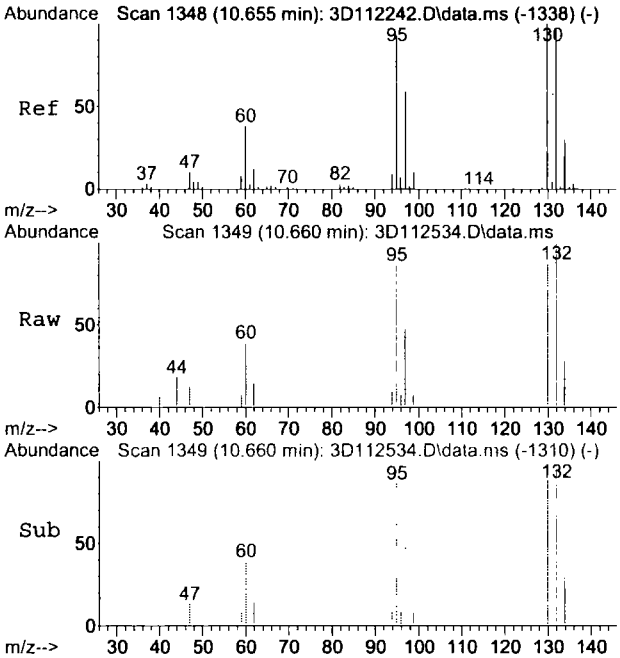

#65
benzene
Concen: 0.34 ug/L
RT: 9.941 min Scan# 1212
Delta R.T. 0.005 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 78 Resp: 1730

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 78 | 100 | | |
| 77 | 16.2 | 0.0 | 53.3 |
| 52 | 13.5 | 0.0 | 46.2 |



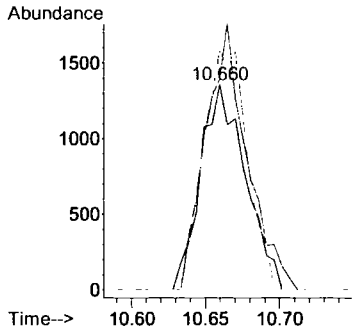

7.1.18 7

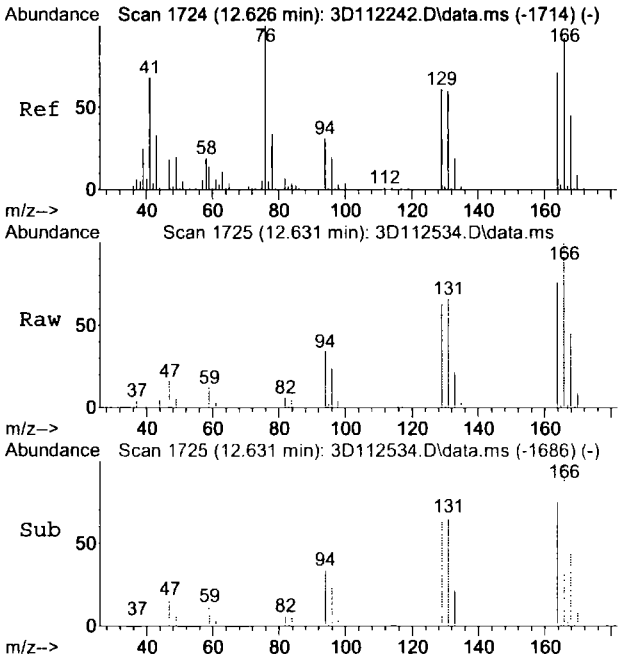



#69
trichloroethene
Concen: 2.35 ug/L
RT: 10.660 min Scan# 1349
Delta R.T. 0.005 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion: 95 Resp: 2852

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 130 | 102.6 | 77.2 | 137.2 |
| 132 | 116.6 | 72.4 | 132.4 |

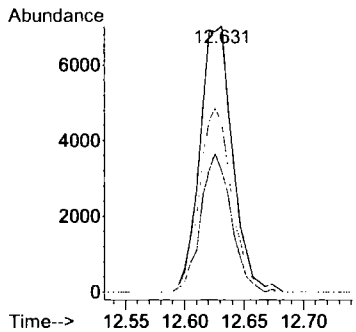


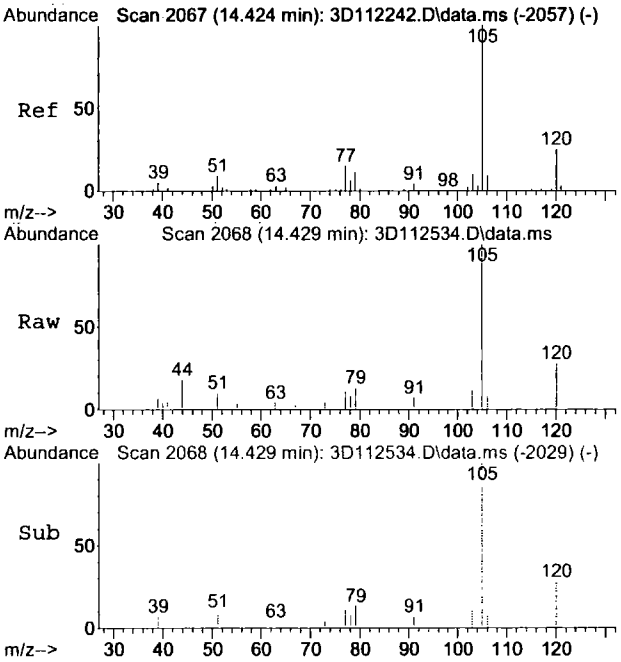

#89
tetrachloroethene
Concen: 9.04 ug/L
RT: 12.631 min Scan# 1725
Delta R.T. 0.005 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion:166 Resp: 13486

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 168 | 45.4 | 19.3 | 79.3 |
| 129 | 63.4 | 36.3 | 96.3 |



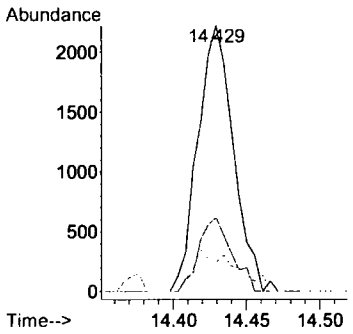

7.1.18 7

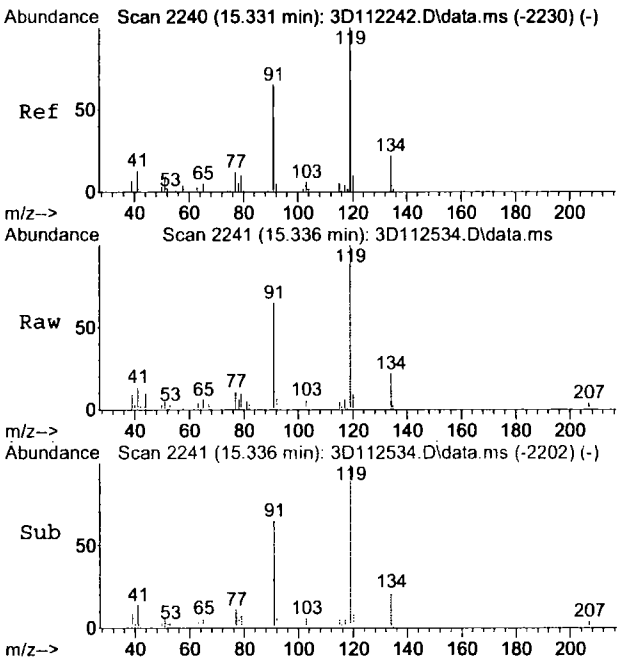



#105
isopropylbenzene
Concen: 0.70 ug/L
RT: 14.429 min Scan# 2068
Delta R.T. 0.005 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion:105 Resp: 3775

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 120 | 27.8 | 0.0 | 55.4 |
| 77 | 11.0 | 0.0 | 44.8 |

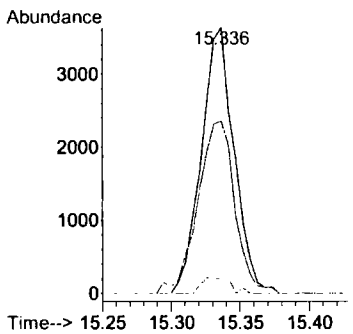



#117
tert-butylbenzene
Concen: 1.58 ug/L
RT: 15.336 min Scan# 2241
Delta R.T. 0.005 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion:119 Resp: 6012

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 119 | 100 | | |
| 91 | 64.9 | 34.6 | 94.6 |
| 117 | 5.7 | 0.0 | 33.5 |




7.1.18

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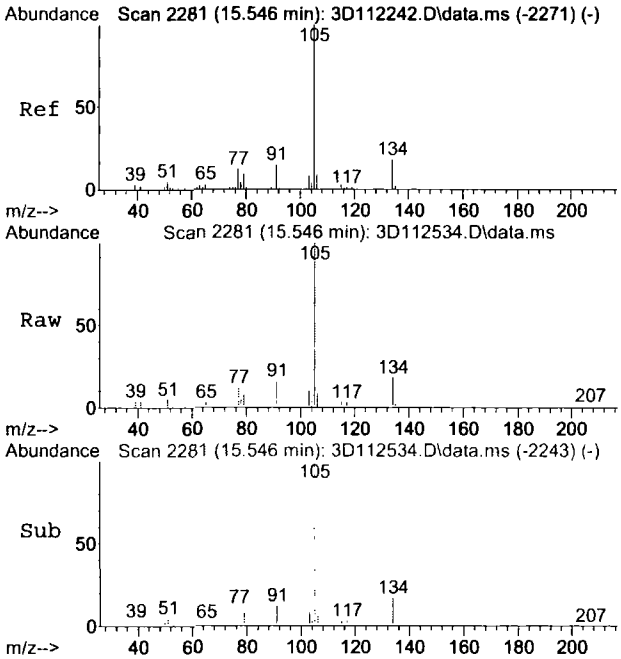
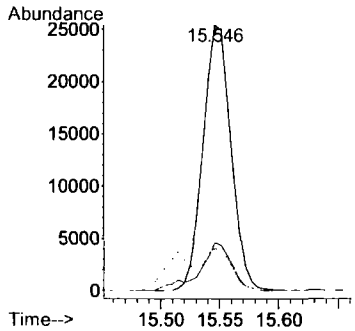
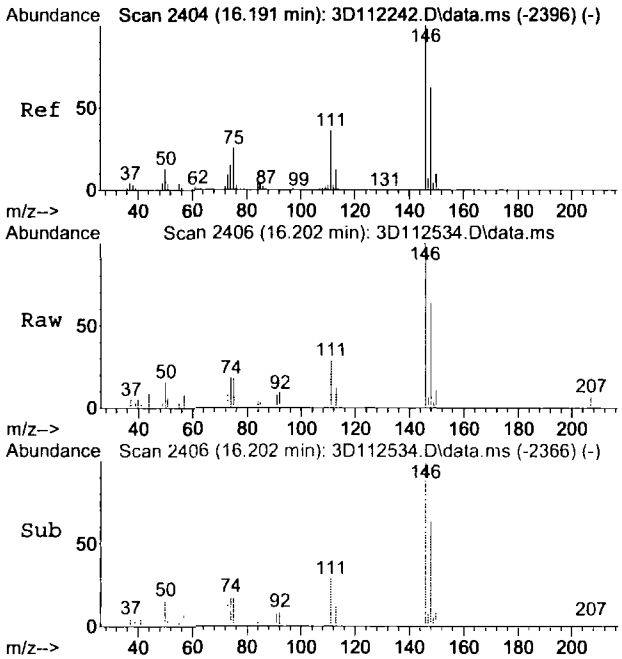



#120
sec-butylbenzene
Concen: 6.93 ug/L
RT: 15.546 min Scan# 2281
Delta R.T. -0.000 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion:105 Resp: 42171

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 105 | 100 | | |
| 134 | 18.1 | 0.0 | 48.3 |
| 91 | 16.0 | 0.0 | 44.5 |

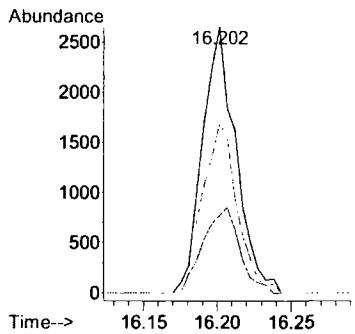



#124
1,2-dichlorobenzene
Concen: 1.30 ug/L
RT: 16.202 min Scan# 2406
Delta R.T. 0.010 min
Lab File: 3D112534.D
Acq: 11 Aug 2015 7:40 pm

Tgt Ion:146 Resp: 4175

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 29.1 | 6.4 | 66.4 |
| 148 | 63.6 | 32.5 | 92.5 |




7.1.18 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112529.D
Acq On : 11 Aug 2015 5:24 pm
Operator : ximenac
Sample : jc1106-19
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 12 09:28:12 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 97633 | 500.00 | ug/L | -0.01 |
| 4) pentafluorobenzene | 9.396 | 168 | 205375 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 241116 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 197855 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 123858 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 88077 | 55.97 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 111.94% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 82016 | 56.27 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 112.54% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 265412 | 50.26 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.52% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 91661 | 48.10 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.20% | | | |

Target Compounds Qvalue

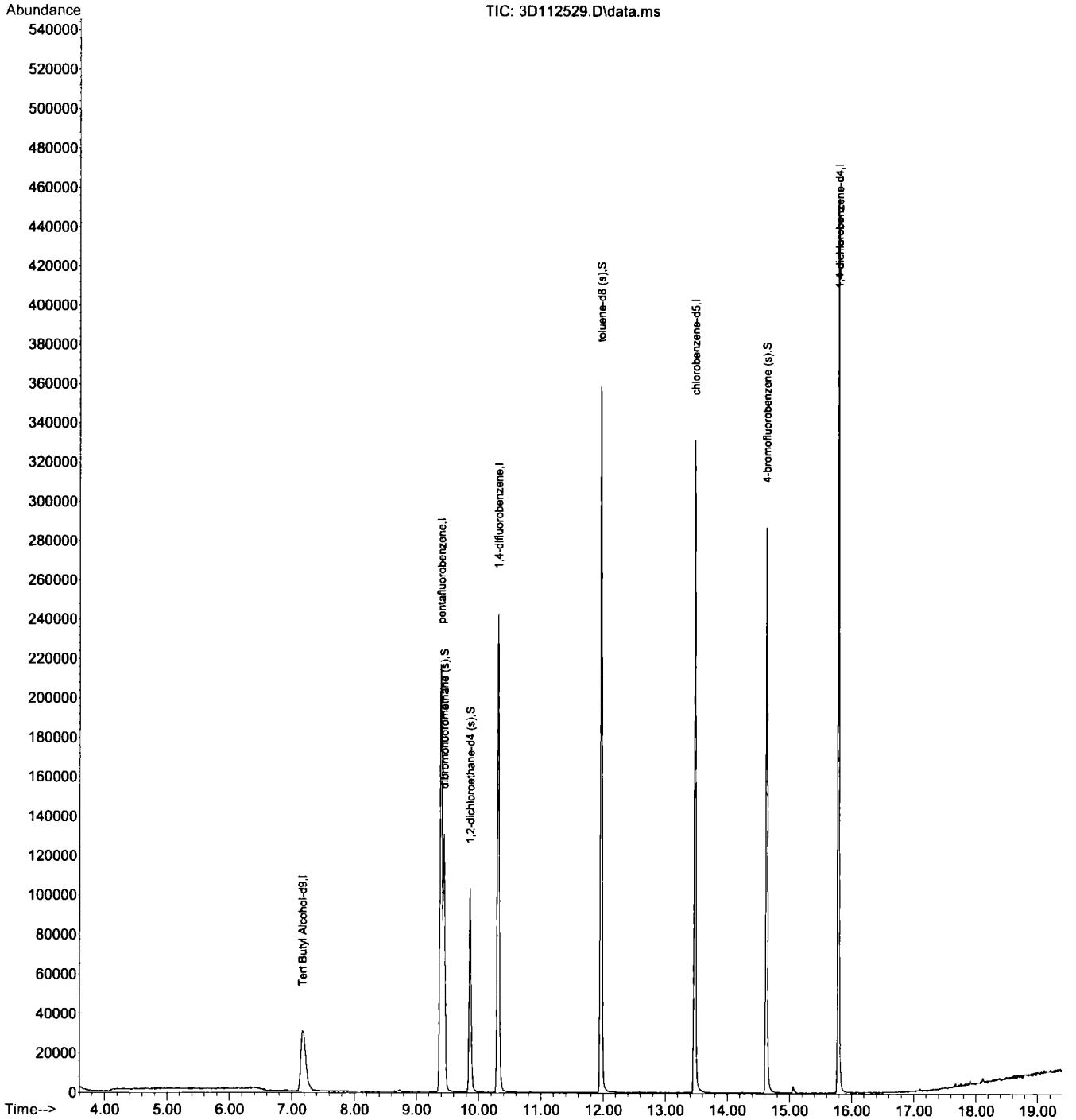
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.19 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112529.D
Acq On : 11 Aug 2015 5:24 pm
Operator : ximenac
Sample : jc1106-19
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 12 09:28:12 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 09:47:56 2015 T

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112519.D
Acq On : 11 Aug 2015 12:38 pm
Operator : ximenac
Sample : mb
Misc : MS88280,V3D4822,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 11 16:10:33 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 103952 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 226869 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 264986 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 216656 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.793 | 152 | 129511 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 93639 | 53.87 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 107.74% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 89940 | 55.86 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 111.72% | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 294612 | 50.76 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 101.52% | | |
| 106) 4-bromofluorobenzene (s) | 14.634 | 95 | 99709 | 50.04 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 100.08% | | |

Target Compounds Qvalue

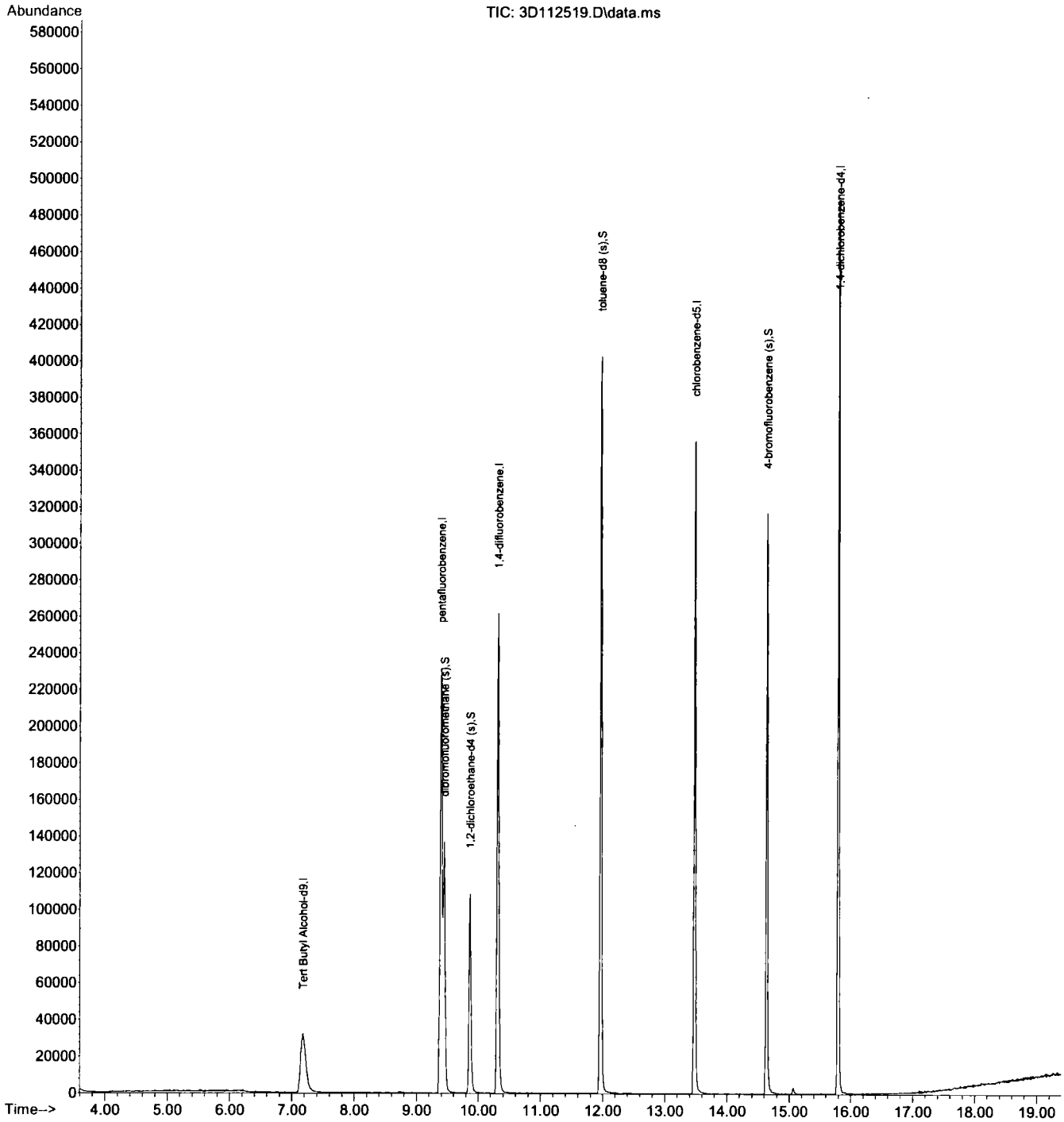
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.2.1

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112519.D
Acq On : 11 Aug 2015 12:38 pm
Operator : ximenac
Sample : mb
Misc : MS88280,V3D4822,5,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 11 16:10:33 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Tue Aug 11 16:12:34 2015 3D

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112544.D
Acq On : 12 Aug 2015 12:11 am
Operator : ximenac
Sample : mb
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Aug 12 09:40:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.163 | 65 | 82447 | 500.00 | ug/L | -0.02 |
| 4) pentafluorobenzene | 9.391 | 168 | 171750 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 198901 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 165044 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 101680 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 73569 | 55.91 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 111.82% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 69179 | 56.75 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 113.50% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 222103 | 50.99 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 101.98% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 75250 | 48.10 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.20% | | | |

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

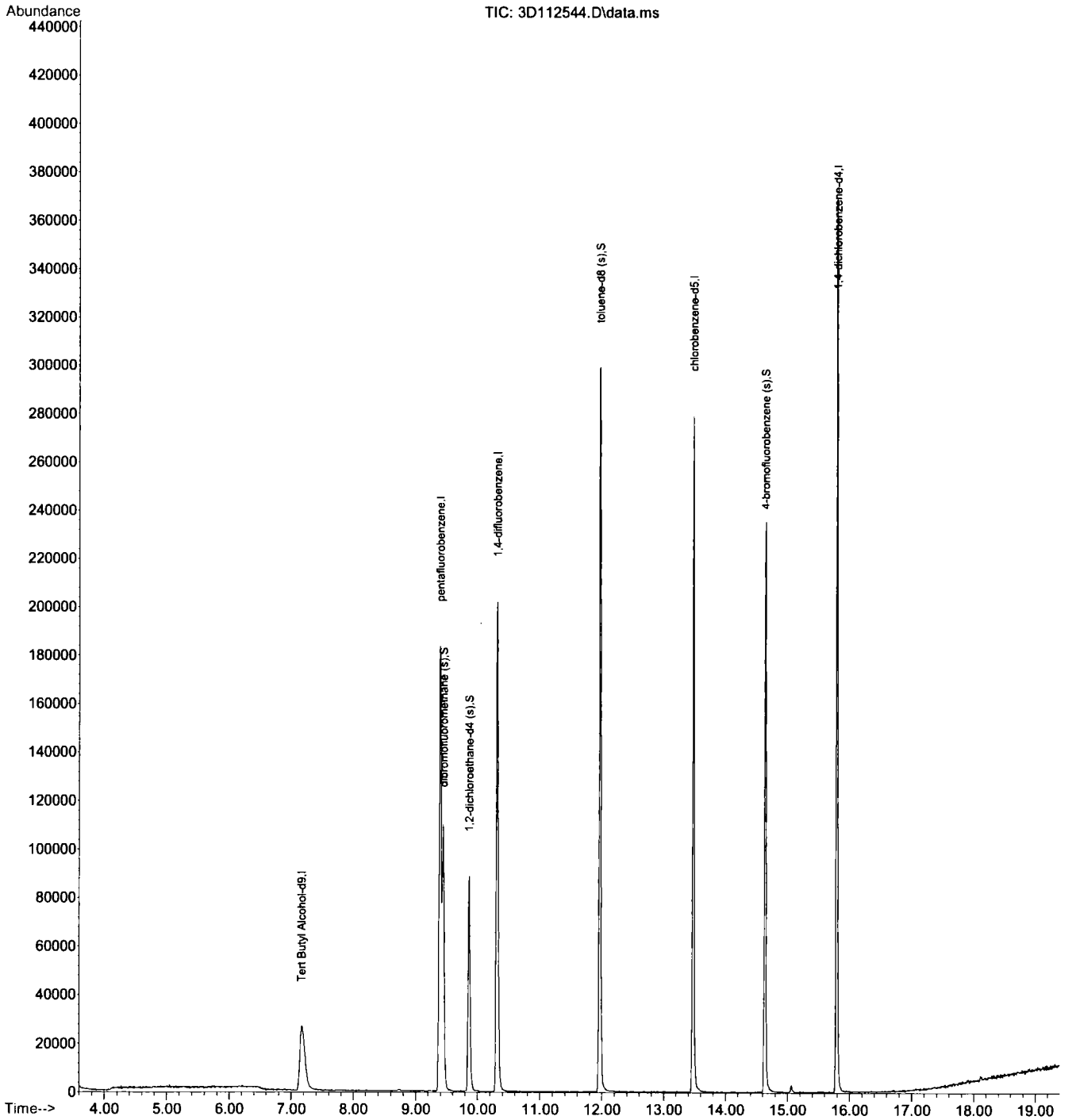
7.2.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112544.D
Acq On : 12 Aug 2015 12:11 am
Operator : ximenac
Sample : mb
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 37 Sample Multiplier: 1

Quant Time: Aug 12 09:40:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 09:47:52 2015 T



7.2.2
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112569.D
Acq On : 12 Aug 2015 12:06 pm
Operator : ximenac
Sample : mb
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 12 14:30:59 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.184 | 65 | 95029 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 192060 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 221163 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 183575 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 114634 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 83863 | 56.99 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 113.98% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75047 | 55.05 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 110.10% | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 245477 | 50.68 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 101.36% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 85262 | 48.34 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.68% | | |

| Target Compounds | Qvalue |
|---|---|

(#) = qualifier out of range (m) = manual integration (+) = signals summed

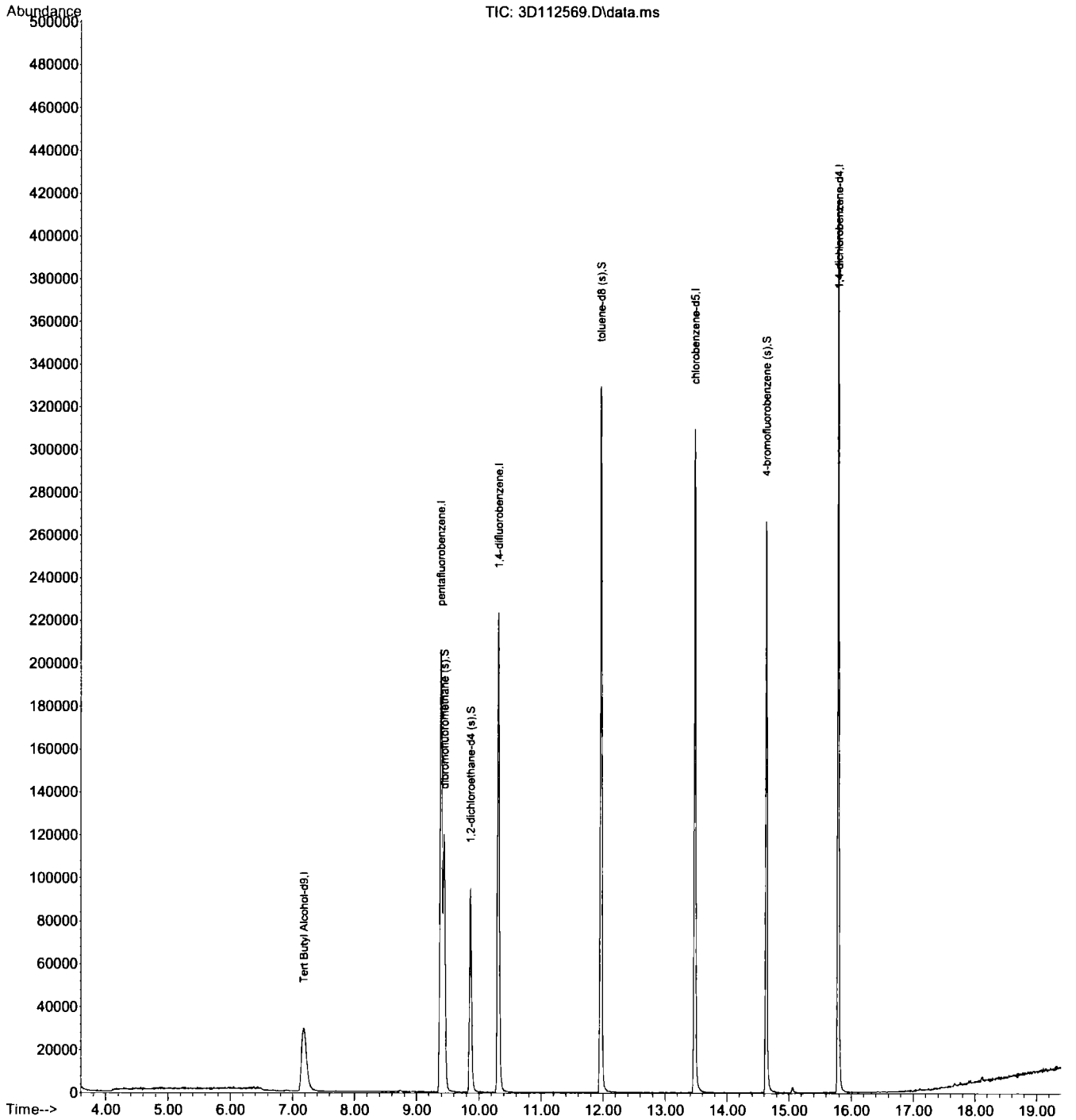
7.2.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112569.D
Acq On : 12 Aug 2015 12:06 pm
Operator : ximenac
Sample : mb
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 12 14:30:59 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 14:32:48 2015 3D



7.2.3
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112565.D
Acq On : 12 Aug 2015 10:15 am
Operator : ximenac
Sample : mb2
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 12 14:29:31 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.184 | 65 | 89468 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 182832 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 209972 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 174088 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 109833 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 78922 | 56.34 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 112.68% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 72682 | 56.01 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 112.02% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 234935 | 51.09 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.18% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 80531 | 47.66 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 95.32% | | |

| Target Compounds | Qvalue |
|---|---|

(#) = qualifier out of range (m) = manual integration (+) = signals summed

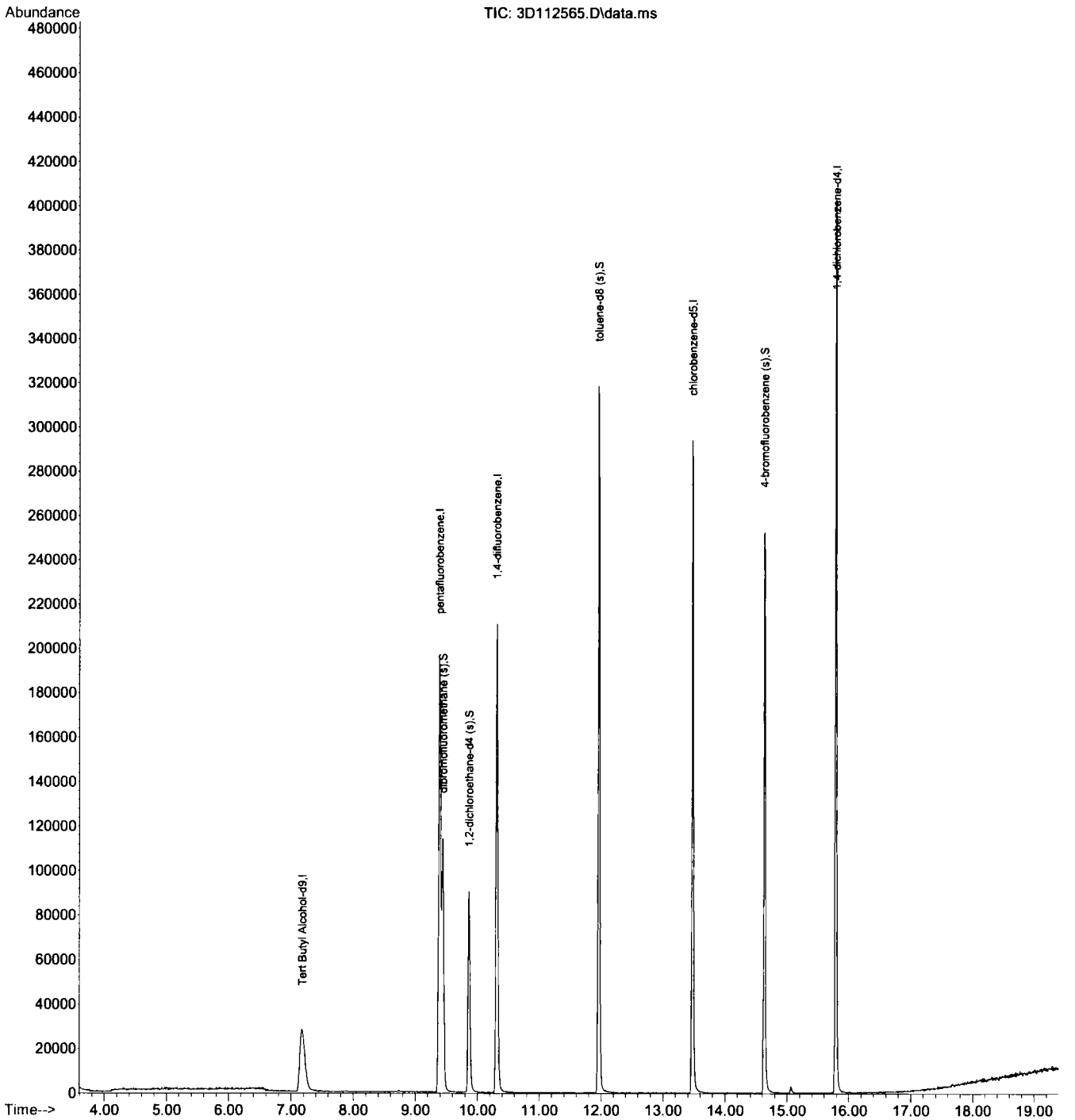
7.2.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112565.D
Acq On : 12 Aug 2015 10:15 am
Operator : ximenac
Sample : mb2
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 12 14:29:31 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 14:32:44 2015 3D

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112520.D
Acq On : 11 Aug 2015 1:12 pm
Operator : ximenac
Sample : bs
Misc : MS88280,V3D4822,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 11 16:10:50 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 107290 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 202270 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 233933 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 196021 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 124533 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.438 | 113 | 85099 | 54.91 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 109.82% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.858 | 65 | 77743 | 54.15 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 108.30% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 263114 | 51.36 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.72% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 94978 | 49.57 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 99.14% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.032 | 88 | 26388 | 1522.14 ug/L | 96 |
| 3) tertiary butyl alcohol | 7.278 | 59 | 57465 | 248.00 ug/L | 87 |
| 8) chlorodifluoromethane | 3.860 | 51 | 119080 | 43.37 ug/L | 98 |
| 9) dichlorodifluoromethane | 3.844 | 85 | 155036 | 42.17 ug/L | 99 |
| 10) chloromethane | 4.164 | 50 | 136902 | 46.83 ug/L | 98 |
| 11) vinyl chloride | 4.415 | 62 | 157814 | 53.83 ug/L | 99 |
| 12) bromomethane | 5.050 | 94 | 97837 | 51.65 ug/L | 99 |
| 13) chloroethane | 5.212 | 64 | 73255 | 58.99 ug/L | 100 |
| 16) trichlorofluoromethane | 5.679 | 101 | 167127 | 54.62 ug/L | 99 |
| 18) ethyl ether | 6.067 | 74 | 40832 | 54.03 ug/L | 96 |
| 21) acrolein | 6.319 | 56 | 161558 | 532.55 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 134027 | 55.71 ug/L | 96 |
| 23) acetone | 6.533 | 43 | 25538 | 56.35 ug/L | 90 |
| 24) allyl chloride | 7.011 | 76 | 49193 | 65.83 ug/L # | 85 |
| 25) acetonitrile | 6.969 | 40 | 85772 | 569.14 ug/L | 93 |
| 27) iodomethane | 6.759 | 142 | 202177 | 59.10 ug/L | 97 |
| 28) iso-butyl alcohol | 9.679 | 41 | 28790 | 571.72 ug/L | 94 |
| 29) carbon disulfide | 6.890 | 76 | 362498 | 59.58 ug/L | 99 |
| 30) methylene chloride | 7.199 | 84 | 102677 | 56.95 ug/L | 99 |
| 31) methyl acetate | 6.995 | 43 | 54210 | 53.84 ug/L | 98 |
| 32) methyl tert butyl ether | 7.524 | 73 | 565686 | 105.92 ug/L | 94 |
| 33) trans-1,2-dichloroethene | 7.572 | 61 | 122774 | 55.93 ug/L | 98 |
| 34) di-isopropyl ether | 8.117 | 45 | 277261 | 49.11 ug/L | 93 |
| 35) ethyl tert-butyl ether | 8.584 | 59 | 279165 | 52.48 ug/L | 98 |
| 36) 2-butanone | 8.846 | 72 | 8206 | 56.89 ug/L | 92 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 155048 | 59.45 ug/L | 98 |
| 38) chloroprene | 8.243 | 53 | 95155 | 49.85 ug/L | 97 |
| 39) acrylonitrile | 7.524 | 53 | 160542 | 307.57 ug/L | 97 |
| 40) vinyl acetate | 8.127 | 86 | 11654 | 60.15 ug/L | 77 |
| 41) ethyl acetate | 8.861 | 45 | 9049 | 45.61 ug/L # | 20 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 155410 | 56.94 ug/L | 99 |
| 43) cis-1,2-dichloroethene | 8.872 | 96 | 92333 | 52.38 ug/L | 97 |
| 44) propionitrile | 8.935 | 54 | 107314 | 551.71 ug/L | 95 |
| 45) methyl acrylate | 8.940 | 55 | 75433 | 57.53 ug/L | 99 |
| 46) bromochloromethane | 9.186 | 128 | 48665 | 57.37 ug/L | 95 |
| 47) tetrahydrofuran | 9.228 | 42 | 25558 | 50.02 ug/L | 99 |
| 48) chloroform | 9.239 | 83 | 143053 | 56.89 ug/L | 100 |
| 49) Tert-Butyl Formate | 9.276 | 59 | 79464 | 54.28 ug/L # | 96 |
| 52) freon 113 | 6.455 | 151 | 80877 | 54.60 ug/L | 99 |
| 53) methacrylonitrile | 9.118 | 41 | 39382 | 51.82 ug/L | 97 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 156762 | 60.38 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112520.D
Acq On : 11 Aug 2015 1:12 pm
Operator : ximenac
Sample : bs
Misc : MS88280,V3D4822,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 11 16:10:50 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.968 | 73 | 276395 | 51.99 ug/L | 97 |
| 59) epichlorohydrin | 11.572 | 57 | 35410 | 275.73 ug/L | 97 |
| 60) n-butyl alcohol | 10.440 | 56 | 110794 | 2900.73 ug/L | 99 |
| 61) cyclohexane | 9.569 | 84 | 137794 | 50.30 ug/L | 99 |
| 62) carbon tetrachloride | 9.700 | 117 | 143116 | 63.26 ug/L | 99 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 98363 | 58.38 ug/L | 99 |
| 64) hexane | 7.865 | 57 | 68294 | 45.38 ug/L | 99 |
| 65) benzene | 9.936 | 78 | 300665 | 54.70 ug/L | 99 |
| 66) heptane | 10.109 | 57 | 39107 | 45.74 ug/L | 96 |
| 67) isopropyl acetate | 9.858 | 43 | 143187 | 59.88 ug/L | 96 |
| 68) 1,2-dichloroethane | 9.952 | 62 | 91902 | 55.98 ug/L | 98 |
| 69) trichloroethene | 10.655 | 95 | 73027 | 54.95 ug/L | 98 |
| 72) 2-nitropropane | 11.436 | 41 | 26473 | 54.49 ug/L | 91 |
| 73) 2-chloroethyl vinyl ether | 11.446 | 63 | 253359 | 300.29 ug/L | 98 |
| 74) methyl methacrylate | 10.922 | 41 | 107868 | 57.40 ug/L | 96 |
| 75) 1,2-dichloropropane | 10.917 | 63 | 78705 | 54.78 ug/L | 92 |
| 76) methylcyclohexane | 10.875 | 83 | 130622 | 52.54 ug/L | 96 |
| 77) dibromomethane | 11.079 | 93 | 49016 | 57.99 ug/L | 92 |
| 78) bromodichloromethane | 11.210 | 83 | 98620 | 56.41 ug/L | 98 |
| 79) cis-1,3-dichloropropene | 11.666 | 75 | 115152 | 56.10 ug/L | 96 |
| 81) 4-methyl-2-pentanone | 11.766 | 58 | 29415 | 56.24 ug/L | 99 |
| 82) toluene | 12.033 | 92 | 171857 | 56.89 ug/L | 100 |
| 83) 3-methyl-1-butanol | 11.787 | 70 | 44704 | 1131.08 ug/L | 97 |
| 84) trans-1,3-dichloropropene | 12.233 | 75 | 100738 | 55.23 ug/L | 96 |
| 85) ethyl methacrylate | 12.227 | 69 | 79632 | 49.40 ug/L | 97 |
| 86) 1,1,2-trichloroethane | 12.442 | 83 | 56371 | 55.55 ug/L | 96 |
| 87) 2-hexanone | 12.621 | 58 | 22188 | 51.90 ug/L | 89 |
| 89) tetrachloroethene | 12.621 | 166 | 84824 | 50.82 ug/L | 96 |
| 90) 1,3-dichloropropane | 12.631 | 76 | 101486 | 53.36 ug/L | 97 |
| 91) butyl acetate | 12.694 | 56 | 42598 | 54.12 ug/L | 90 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 83134 | 441.89 ug/L | 98 |
| 93) dibromochloromethane | 12.893 | 129 | 86173 | 58.10 ug/L | 99 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 68520 | 54.79 ug/L | 97 |
| 95) n-Butyl Ether | 13.423 | 57 | 283536 | 47.82 ug/L | 98 |
| 96) chlorobenzene | 13.507 | 112 | 195625 | 55.65 ug/L | 100 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 90129 | 57.81 ug/L | 98 |
| 98) ethylbenzene | 13.559 | 91 | 314792 | 52.28 ug/L | 98 |
| 99) m,p-xylene | 13.664 | 106 | 250310 | 111.17 ug/L | 98 |
| 100) o-xylene | 14.083 | 106 | 130774 | 56.86 ug/L | 97 |
| 101) styrene | 14.094 | 104 | 203516 | 52.59 ug/L | 99 |
| 103) bromoform | 14.356 | 173 | 66275 | 57.27 ug/L | 99 |
| 105) isopropylbenzene | 14.424 | 105 | 344313 | 55.10 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 98388 | 53.34 ug/L | 98 |
| 108) cyclohexanone | 14.587 | 55 | 53873 | 284.81 ug/L | 97 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 97454 | 53.89 ug/L | 98 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 18920 | 47.27 ug/L | 98 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 23435 | 56.74 ug/L | 97 |
| 112) n-propylbenzene | 14.833 | 91 | 398245 | 58.53 ug/L | 99 |
| 114) 2-chlorotoluene | 14.980 | 126 | 88155 | 55.47 ug/L | 98 |
| 115) 4-chlorotoluene | 15.080 | 126 | 84081 | 54.48 ug/L | 96 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 297645 | 55.97 ug/L | 98 |
| 117) tert-butylbenzene | 15.331 | 119 | 243005 | 55.45 ug/L | 99 |
| 118) pentachloroethane | 15.410 | 167 | 76314 | 63.86 ug/L | 97 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 308226 | 57.73 ug/L | 99 |
| 120) sec-butylbenzene | 15.546 | 105 | 402481 | 57.48 ug/L | 99 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 188957 | 55.10 ug/L | 99 |
| 122) p-isopropyltoluene | 15.662 | 119 | 349193 | 57.11 ug/L | 99 |
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 197048 | 53.56 ug/L | 100 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112520.D
Acq On : 11 Aug 2015 1:12 pm
Operator : ximenac
Sample : bs
Misc : MS88280,V3D4822,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 11 16:10:50 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 205920 | 55.70 ug/L | 97 |
| 126) n-butylbenzene | 16.065 | 92 | 181028 | 56.58 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 28959 | 53.60 ug/L | 95 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 229423 | 58.44 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 230272 | 57.07 ug/L | 96 |
| 131) hexachlorobutadiene | 17.759 | 225 | 108359 | 54.25 ug/L | 99 |
| 132) naphthalene | 17.900 | 128 | 483762 | 56.60 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 240090 | 57.31 ug/L | 98 |
| 134) hexachloroethane | 16.443 | 119 | 72530 | 57.43 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 201481 | 56.09 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

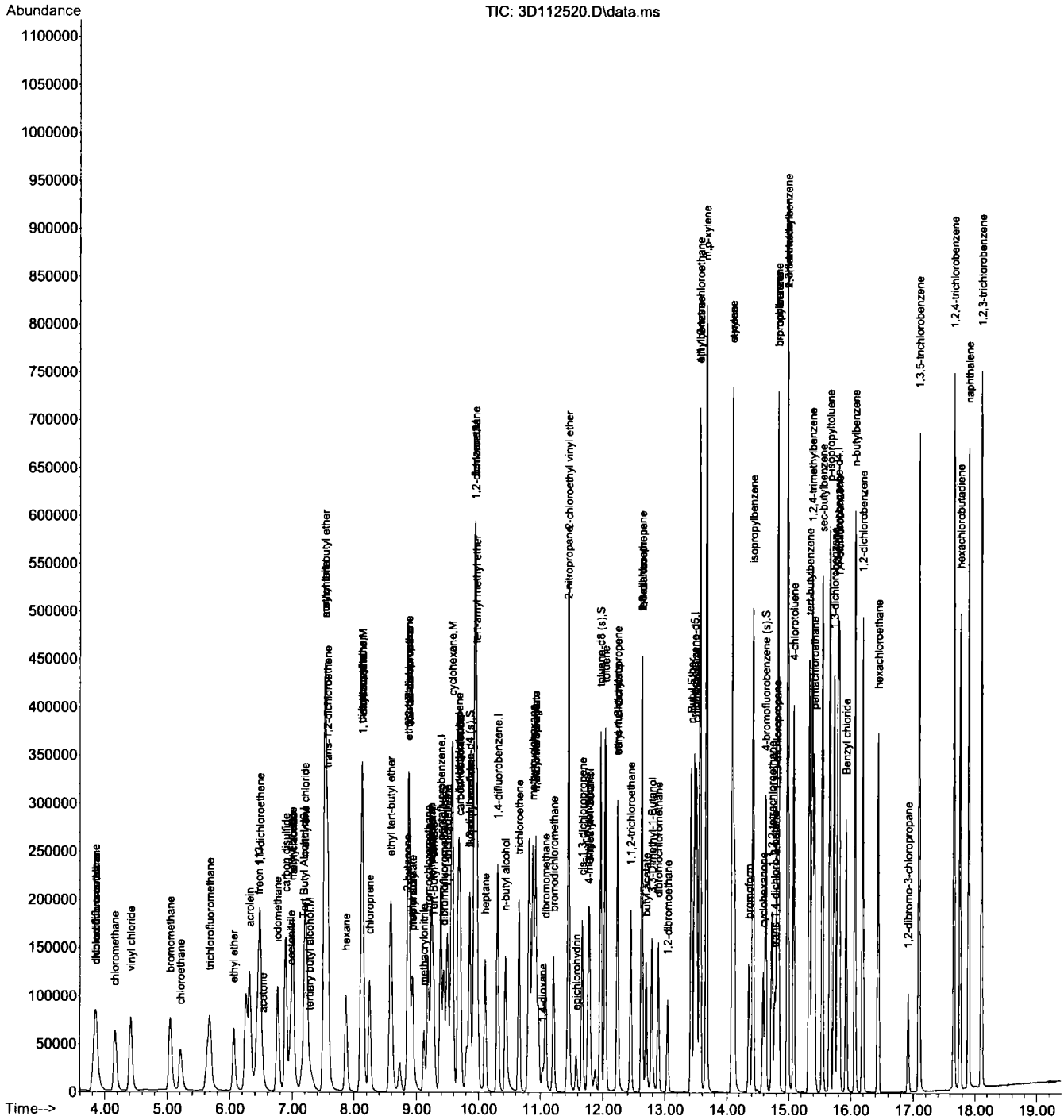
7.3.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112520.D
Acq On : 11 Aug 2015 1:12 pm
Operator : ximenac
Sample : bs
Misc : MS88280,V3D4822,5,,,,1
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Aug 11 16:10:50 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112545.D
Acq On : 12 Aug 2015 12:38 am
Operator : ximenac
Sample : bs
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 12 09:41:05 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| **Internal Standards** | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 93840 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.396 | 168 | 196820 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 222078 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 188570 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 114311 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 50) dibromofluoromethane (s) | 9.449 | 113 | 81749 | 54.21 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 108.42% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.868 | 65 | 73671 | 52.74 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 105.48% | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 253218 | 52.06 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 104.12% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 89276 | 50.76 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 101.52% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) 1,4-dioxane | 11.042 | 88 | 22454 | 1480.86 ug/L | 95 |
| 3) tertiary butyl alcohol | 7.288 | 59 | 47905 | 236.38 ug/L | 92 |
| 8) chlorodifluoromethane | 3.844 | 51 | 111846 | 41.86 ug/L | 95 |
| 9) dichlorodifluoromethane | 3.849 | 85 | 208243 | 58.21 ug/L | 100 |
| 10) chloromethane | 4.164 | 50 | 150580 | 52.94 ug/L | 98 |
| 11) vinyl chloride | 4.415 | 62 | 171832 | 60.23 ug/L | 100 |
| 12) bromomethane | 5.050 | 94 | 103954 | 56.40 ug/L | 97 |
| 13) chloroethane | 5.212 | 64 | 75325 | 62.34 ug/L | 97 |
| 16) trichlorofluoromethane | 5.674 | 101 | 179133 | 60.17 ug/L | 97 |
| 18) ethyl ether | 6.067 | 74 | 36739 | 49.96 ug/L | 95 |
| 21) acrolein | 6.318 | 56 | 150454 | 509.68 ug/L | 98 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 124138 | 53.03 ug/L | 99 |
| 23) acetone | 6.533 | 43 | 22174 | 50.28 ug/L | 87 |
| 24) allyl chloride | 7.011 | 76 | 42716 | 58.75 ug/L | 99 |
| 25) acetonitrile | 6.984 | 40 | 77590 | 529.11 ug/L | 87 |
| 27) iodomethane | 6.764 | 142 | 181805 | 54.62 ug/L | 98 |
| 28) iso-butyl alcohol | 9.690 | 41 | 24898 | 508.13 ug/L | 91 |
| 29) carbon disulfide | 6.890 | 76 | 327219 | 55.27 ug/L | 99 |
| 30) methylene chloride | 7.205 | 84 | 93869 | 53.51 ug/L | 97 |
| 31) methyl acetate | 7.000 | 43 | 47084 | 48.06 ug/L | 99 |
| 32) methyl tert butyl ether | 7.530 | 73 | 516780 | 99.44 ug/L | 94 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 113434 | 53.11 ug/L | 98 |
| 34) di-isopropyl ether | 8.127 | 45 | 253704 | 46.18 ug/L | 94 |
| 35) ethyl tert-butyl ether | 8.594 | 59 | 255067 | 49.28 ug/L | 98 |
| 36) 2-butanone | 8.851 | 72 | 7376 | 52.56 ug/L | 88 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 143347 | 56.49 ug/L | 100 |
| 38) chloroprene | 8.253 | 53 | 89192 | 48.02 ug/L | 98 |
| 39) acrylonitrile | 7.530 | 53 | 142877 | 281.30 ug/L | 96 |
| 40) vinyl acetate | 8.127 | 86 | 10693 | 56.71 ug/L | 96 |
| 41) ethyl acetate | 8.867 | 45 | 7991 | 41.39 ug/L # | 38 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 132446 | 49.87 ug/L | 98 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 83967 | 48.95 ug/L | 99 |
| 44) propionitrile | 8.945 | 54 | 95957 | 506.98 ug/L | 96 |
| 45) methyl acrylate | 8.945 | 55 | 65257 | 51.15 ug/L | 99 |
| 46) bromochloromethane | 9.192 | 128 | 44522 | 53.94 ug/L | 95 |
| 47) tetrahydrofuran | 9.234 | 42 | 22560 | 45.38 ug/L | 99 |
| 48) chloroform | 9.244 | 83 | 131556 | 53.76 ug/L | 98 |
| 49) Tert-Butyl Formate | 9.276 | 59 | 70426 | 49.44 ug/L # | 96 |
| 52) freon 113 | 6.450 | 151 | 81194 | 56.33 ug/L | 99 |
| 53) methacrylonitrile | 9.129 | 41 | 35332 | 47.78 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112545.D
Acq On : 12 Aug 2015 12:38 am
Operator : ximenac
Sample : bs
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 12 09:41:05 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 146818 | 58.11 ug/L | 99 |
| 57) tert-amyl methyl ether | 9.973 | 73 | 249752 | 48.28 ug/L | 97 |
| 59) epichlorohydrin | 11.572 | 57 | 30078 | 246.71 ug/L | 98 |
| 60) n-butyl alcohol | 10.445 | 56 | 94866 | 2616.30 ug/L | 99 |
| 61) cyclohexane | 9.574 | 84 | 130659 | 50.24 ug/L | 100 |
| 62) carbon tetrachloride | 9.705 | 117 | 135652 | 63.16 ug/L | 99 |
| 63) 1,1-dichloropropene | 9.679 | 75 | 91530 | 57.22 ug/L | 97 |
| 64) hexane | 7.870 | 57 | 62156 | 43.51 ug/L | 97 |
| 65) benzene | 9.941 | 78 | 279967 | 53.65 ug/L | 99 |
| 66) heptane | 10.109 | 57 | 36081 | 44.46 ug/L | 96 |
| 67) isopropyl acetate | 9.863 | 43 | 127029 | 55.96 ug/L | 97 |
| 68) 1,2-dichloroethane | 9.957 | 62 | 86716 | 55.64 ug/L | 99 |
| 69) trichloroethene | 10.660 | 95 | 67073 | 53.16 ug/L | 98 |
| 72) 2-nitropropane | 11.430 | 41 | 23895 | 51.80 ug/L | 96 |
| 73) 2-chloroethyl vinyl ether | 11.451 | 63 | 231880 | 289.50 ug/L | 98 |
| 74) methyl methacrylate | 10.927 | 41 | 94285 | 52.85 ug/L | 95 |
| 75) 1,2-dichloropropane | 10.922 | 63 | 74833 | 54.86 ug/L | 96 |
| 76) methylcyclohexane | 10.880 | 83 | 127691 | 54.10 ug/L | 94 |
| 77) dibromomethane | 11.084 | 93 | 45381 | 56.55 ug/L | 89 |
| 78) bromodichloromethane | 11.215 | 83 | 91949 | 55.40 ug/L | 100 |
| 79) cis-1,3-dichloropropene | 11.677 | 75 | 105078 | 53.93 ug/L | 95 |
| 81) 4-methyl-2-pentanone | 11.766 | 58 | 26773 | 53.92 ug/L | 92 |
| 82) toluene | 12.039 | 92 | 159793 | 55.72 ug/L | 98 |
| 83) 3-methyl-1-butanol | 11.787 | 70 | 37380 | 996.26 ug/L | 96 |
| 84) trans-1,3-dichloropropene | 12.238 | 75 | 91249 | 52.70 ug/L | 94 |
| 85) ethyl methacrylate | 12.227 | 69 | 72242 | 47.20 ug/L | 98 |
| 86) 1,1,2-trichloroethane | 12.448 | 83 | 52270 | 54.26 ug/L | 96 |
| 87) 2-hexanone | 12.621 | 58 | 18597 | 45.82 ug/L | 97 |
| 89) tetrachloroethene | 12.626 | 166 | 84616 | 52.70 ug/L | 99 |
| 90) 1,3-dichloropropane | 12.631 | 76 | 93663 | 51.19 ug/L | 95 |
| 91) butyl acetate | 12.694 | 56 | 36841 | 48.65 ug/L | 94 |
| 92) 3,3-Dimethyl-1-Butanol | 12.794 | 57 | 67406 | 372.44 ug/L | 96 |
| 93) dibromochloromethane | 12.893 | 129 | 78537 | 55.05 ug/L | 99 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 62690 | 52.10 ug/L | 96 |
| 95) n-Butyl Ether | 13.423 | 57 | 254755 | 44.66 ug/L | 98 |
| 96) chlorobenzene | 13.507 | 112 | 180854 | 53.48 ug/L | 99 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 83757 | 55.85 ug/L | 99 |
| 98) ethylbenzene | 13.559 | 91 | 293168 | 50.61 ug/L | 99 |
| 99) m,p-xylene | 13.669 | 106 | 231968 | 107.09 ug/L | 99 |
| 100) o-xylene | 14.083 | 106 | 120260 | 54.35 ug/L | 98 |
| 101) styrene | 14.094 | 104 | 184337 | 49.52 ug/L | 97 |
| 103) bromoform | 14.361 | 173 | 59621 | 53.56 ug/L | 99 |
| 105) isopropylbenzene | 14.424 | 105 | 318960 | 55.60 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 89959 | 53.13 ug/L | 98 |
| 108) cyclohexanone | 14.587 | 55 | 67342 | 367.69 ug/L | 99 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 87461 | 52.68 ug/L | 99 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 14374 | 39.12 ug/L | 98 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 20389 | 53.78 ug/L | 92 |
| 112) n-propylbenzene | 14.833 | 91 | 363649 | 58.22 ug/L | 100 |
| 114) 2-chlorotoluene | 14.980 | 126 | 79954 | 54.80 ug/L | 97 |
| 115) 4-chlorotoluene | 15.080 | 126 | 76073 | 53.70 ug/L | 96 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 275161 | 56.37 ug/L | 100 |
| 117) tert-butylbenzene | 15.331 | 119 | 226383 | 56.28 ug/L | 100 |
| 118) pentachloroethane | 15.410 | 167 | 66238 | 60.38 ug/L | 97 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 280691 | 57.27 ug/L | 98 |
| 120) sec-butylbenzene | 15.546 | 105 | 372952 | 58.02 ug/L | 100 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 172633 | 54.84 ug/L | 98 |
| 122) p-isopropyltoluene | 15.662 | 119 | 316285 | 56.35 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112545.D
Acq On : 12 Aug 2015 12:38 am
Operator : ximenac
Sample : bs
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 12 09:41:05 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 176213 | 52.18 | ug/L | 98 |
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 186915 | 55.08 | ug/L | 99 |
| 126) n-butylbenzene | 16.065 | 92 | 159806 | 54.42 | ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 24277 | 48.95 | ug/L | 97 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 201841 | 56.02 | ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 205029 | 55.35 | ug/L | 97 |
| 131) hexachlorobutadiene | 17.759 | 225 | 98241 | 53.58 | ug/L | 98 |
| 132) naphthalene | 17.900 | 128 | 423480 | 53.97 | ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 215311 | 55.99 | ug/L | 98 |
| 134) hexachloroethane | 16.443 | 119 | 66356 | 57.24 | ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 146174 | 44.33 | ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

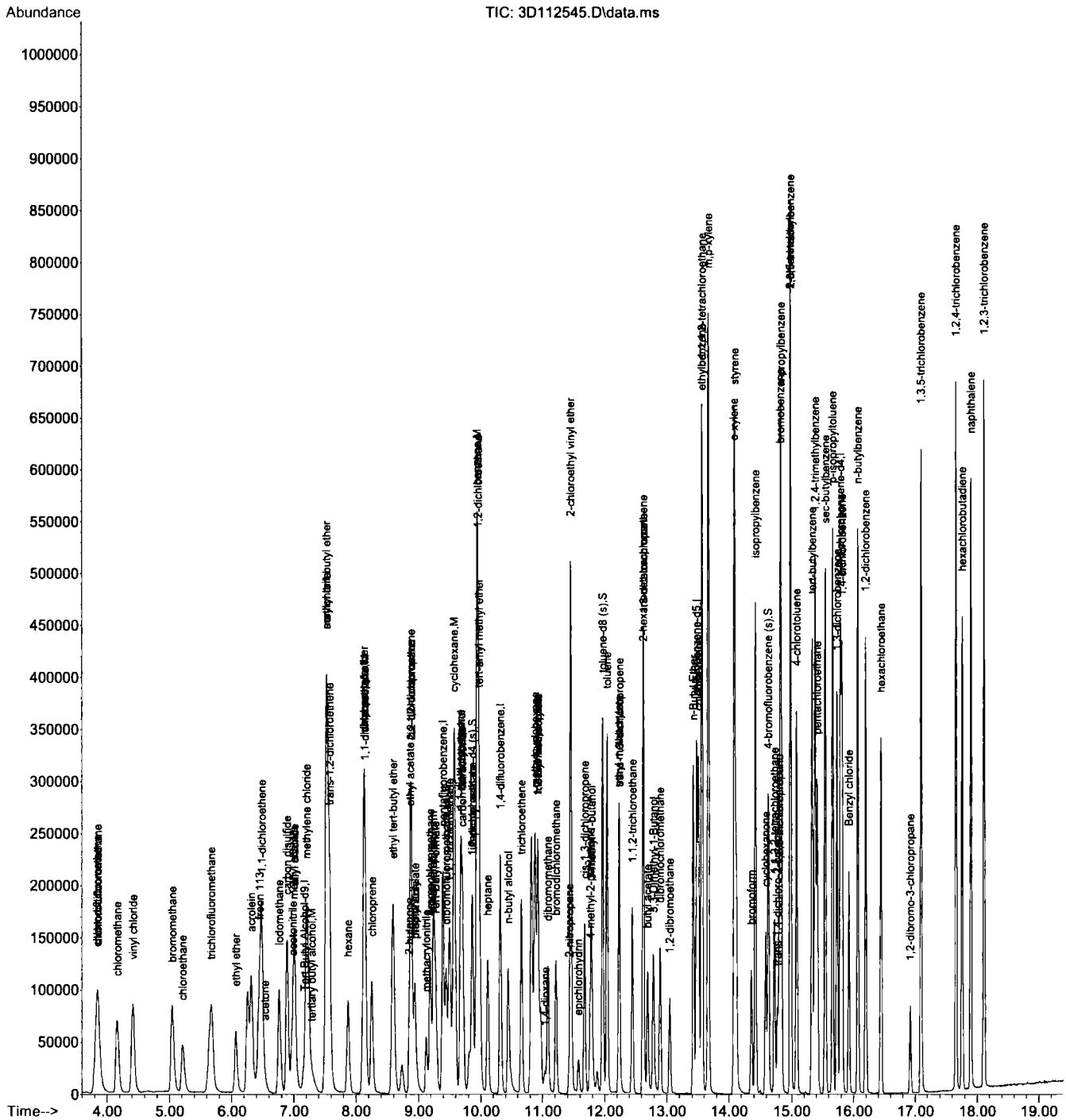
7.3.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112545.D
Acq On : 12 Aug 2015 12:38 am
Operator : ximenac
Sample : bs
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 38 Sample Multiplier: 1

Quant Time: Aug 12 09:41:05 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration






7.3.2
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112570.D
Acq On : 12 Aug 2015 12:33 pm
Operator : ximenac
Sample : bs
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 14:31:21 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 97953 | 500.00 ug/L | -0.01 |
| 4) pentafluorobenzene | 9.391 | 168 | 207104 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 238560 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 200201 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 122169 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 50) dibromofluoromethane (s) | 9.438 | 113 | 87153 | 54.92 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 109.84% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.858 | 65 | 78891 | 53.67 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 107.34% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 268063 | 51.31 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.62% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 94955 | 50.52 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 101.04% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.037 | 88 | 23107 | 1459.94 ug/L | 99 |
| 3) tertiary butyl alcohol | 7.289 | 59 | 49500 | 233.99 ug/L | 93 |
| 8) chlorodifluoromethane | 3.849 | 51 | 153661 | 54.65 ug/L | 98 |
| 9) dichlorodifluoromethane | 3.839 | 85 | 193726 | 51.47 ug/L | 99 |
| 10) chloromethane | 4.158 | 50 | 142073 | 47.47 ug/L | 99 |
| 11) vinyl chloride | 4.415 | 62 | 165704 | 55.20 ug/L | 99 |
| 12) bromomethane | 5.050 | 94 | 100041 | 51.58 ug/L | 98 |
| 13) chloroethane | 5.218 | 64 | 73785 | 58.03 ug/L | 96 |
| 16) trichlorofluoromethane | 5.674 | 101 | 176168 | 56.24 ug/L | 99 |
| 18) ethyl ether | 6.067 | 74 | 39493 | 51.04 ug/L | 94 |
| 21) acrolein | 6.319 | 56 | 140427 | 452.09 ug/L | 100 |
| 22) 1,1-dichloroethene | 6.481 | 61 | 129346 | 52.51 ug/L | 96 |
| 23) acetone | 6.528 | 43 | 20998 | 45.25 ug/L | 85 |
| 24) allyl chloride | 7.011 | 76 | 45363 | 59.29 ug/L | 91 |
| 25) acetonitrile | 6.969 | 40 | 80633 | 522.56 ug/L | 88 |
| 27) iodomethane | 6.764 | 142 | 197384 | 56.35 ug/L | 99 |
| 28) iso-butyl alcohol | 9.685 | 41 | 25332 | 491.31 ug/L | 96 |
| 29) carbon disulfide | 6.890 | 76 | 354175 | 56.85 ug/L | 99 |
| 30) methylene chloride | 7.205 | 84 | 98215 | 53.21 ug/L | 97 |
| 31) methyl acetate | 6.995 | 43 | 51449 | 49.91 ug/L | 97 |
| 32) methyl tert butyl ether | 7.530 | 73 | 272061 | 49.75 ug/L | 87 |
| 33) trans-1,2-dichloroethene | 7.572 | 61 | 117711 | 52.37 ug/L | 97 |
| 34) di-isopropyl ether | 8.117 | 45 | 277372 | 47.98 ug/L | 99 |
| 35) ethyl tert-butyl ether | 8.584 | 59 | 281106 | 51.61 ug/L | 97 |
| 36) 2-butanone | 8.851 | 72 | 7348 | 49.76 ug/L | 92 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 147764 | 55.34 ug/L | 99 |
| 38) chloroprene | 8.248 | 53 | 98805 | 50.55 ug/L | 97 |
| 39) acrylonitrile | 7.524 | 53 | 141114 | 264.04 ug/L | 98 |
| 40) vinyl acetate | 8.127 | 86 | 11261 | 56.76 ug/L | 96 |
| 41) ethyl acetate | 8.856 | 45 | 8631 | 42.48 ug/L | 91 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 153682 | 54.99 ug/L | 97 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 88672 | 49.13 ug/L | 100 |
| 44) propionitrile | 8.935 | 54 | 96747 | 485.78 ug/L | 95 |
| 45) methyl acrylate | 8.940 | 55 | 66725 | 49.70 ug/L | 98 |
| 46) bromochloromethane | 9.186 | 128 | 46574 | 53.62 ug/L | 96 |
| 47) tetrahydrofuran | 9.223 | 42 | 22664 | 43.32 ug/L | 99 |
| 48) chloroform | 9.244 | 83 | 138603 | 53.83 ug/L | 98 |
| 49) Tert-Butyl Formate | 9.276 | 59 | 73660 | 49.14 ug/L # | 97 |
| 52) freon 113 | 6.460 | 151 | 87838 | 57.91 ug/L | 97 |
| 53) methacrylonitrile | 9.124 | 41 | 35867 | 46.10 ug/L | 97 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 149220 | 56.13 ug/L | 96 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112570.D
Acq On : 12 Aug 2015 12:33 pm
Operator : ximenac
Sample : bs
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 14:31:21 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.973 | 73 | 269551 | 49.52 ug/L | 97 |
| 59) epichlorohydrin | 11.572 | 57 | 29377 | 224.31 ug/L | 99 |
| 60) n-butyl alcohol | 10.440 | 56 | 93101 | 2390.23 ug/L | 97 |
| 61) cyclohexane | 9.569 | 84 | 141274 | 50.57 ug/L | 95 |
| 62) carbon tetrachloride | 9.700 | 117 | 138744 | 60.13 ug/L | 99 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 96108 | 55.93 ug/L | 99 |
| 64) hexane | 7.870 | 57 | 153694 | 100.15 ug/L | 99 |
| 65) benzene | 9.936 | 78 | 289842 | 51.71 ug/L | 98 |
| 66) heptane | 10.109 | 57 | 48940 | 56.14 ug/L | 98 |
| 67) isopropyl acetate | 9.858 | 43 | 114685 | 47.03 ug/L | 98 |
| 68) 1,2-dichloroethane | 9.952 | 62 | 89748 | 53.61 ug/L | 99 |
| 69) trichloroethene | 10.655 | 95 | 70352 | 51.91 ug/L | 98 |
| 72) 2-nitropropane | 11.431 | 41 | 23966 | 48.37 ug/L | 100 |
| 73) 2-chloroethyl vinyl ether | 11.446 | 63 | 214994 | 249.88 ug/L | 99 |
| 74) methyl methacrylate | 10.922 | 41 | 98131 | 51.20 ug/L | 95 |
| 75) 1,2-dichloropropane | 10.917 | 63 | 76357 | 52.11 ug/L | 95 |
| 76) methylcyclohexane | 10.875 | 83 | 148370 | 58.52 ug/L | 96 |
| 77) dibromomethane | 11.079 | 93 | 47408 | 55.00 ug/L | 95 |
| 78) bromodichloromethane | 11.210 | 83 | 95889 | 53.78 ug/L | 97 |
| 79) cis-1,3-dichloropropene | 11.672 | 75 | 110107 | 52.61 ug/L | 98 |
| 81) 4-methyl-2-pentanone | 11.761 | 58 | 26137 | 49.00 ug/L | 96 |
| 82) toluene | 12.033 | 92 | 166153 | 53.94 ug/L | 99 |
| 83) 3-methyl-1-butanol | 11.787 | 70 | 36795 | 912.92 ug/L | 99 |
| 84) trans-1,3-dichloropropene | 12.233 | 75 | 96369 | 51.81 ug/L | 98 |
| 85) ethyl methacrylate | 12.227 | 69 | 72670 | 44.20 ug/L | 99 |
| 86) 1,1,2-trichloroethane | 12.442 | 83 | 53697 | 51.89 ug/L | 97 |
| 87) 2-hexanone | 12.621 | 58 | 18504 | 42.44 ug/L | 98 |
| 89) tetrachloroethene | 12.626 | 166 | 82940 | 48.66 ug/L | 100 |
| 90) 1,3-dichloropropane | 12.626 | 76 | 95533 | 49.18 ug/L | 96 |
| 91) butyl acetate | 12.694 | 56 | 37223 | 46.30 ug/L | 93 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 73709 | 383.61 ug/L | 97 |
| 93) dibromochloromethane | 12.893 | 129 | 81309 | 53.68 ug/L | 98 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 64561 | 50.54 ug/L | 99 |
| 95) n-Butyl Ether | 13.423 | 57 | 264688 | 43.71 ug/L | 98 |
| 96) chlorobenzene | 13.507 | 112 | 188969 | 52.63 ug/L | 100 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 86382 | 54.25 ug/L | 99 |
| 98) ethylbenzene | 13.559 | 91 | 303312 | 49.32 ug/L | 97 |
| 99) m,p-xylene | 13.664 | 106 | 239234 | 104.03 ug/L | 98 |
| 100) o-xylene | 14.083 | 106 | 124621 | 53.05 ug/L | 96 |
| 101) styrene | 14.094 | 104 | 191744 | 48.52 ug/L | 98 |
| 103) bromoform | 14.356 | 173 | 60581 | 51.26 ug/L | 99 |
| 105) isopropylbenzene | 14.424 | 105 | 327663 | 53.45 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 93520 | 51.68 ug/L | 98 |
| 108) cyclohexanone | 14.587 | 55 | 26832 | 172.04 ug/L | 95 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 88125 | 49.67 ug/L | 100 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 16262 | 41.41 ug/L | 96 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 20989 | 51.80 ug/L | 93 |
| 112) n-propylbenzene | 14.833 | 91 | 377762 | 56.59 ug/L | 100 |
| 114) 2-chlorotoluene | 14.980 | 126 | 83572 | 53.60 ug/L | 97 |
| 115) 4-chlorotoluene | 15.080 | 126 | 80845 | 53.40 ug/L | 95 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 287236 | 55.06 ug/L | 97 |
| 117) tert-butylbenzene | 15.331 | 119 | 236188 | 54.94 ug/L | 98 |
| 118) pentachloroethane | 15.410 | 167 | 74299 | 63.37 ug/L | 96 |
| 119) 1,2,4-trimethylbenzene | 15.379 | 105 | 290264 | 55.42 ug/L | 98 |
| 120) sec-butylbenzene | 15.546 | 105 | 392113 | 57.08 ug/L | 99 |
| 121) 1,3-dichlorobenzene | 15.730 | 146 | 180340 | 53.60 ug/L | 99 |
| 122) p-isopropyltoluene | 15.662 | 119 | 335368 | 55.91 ug/L | 99 |
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 186307 | 51.62 ug/L | 100 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112570.D
Acq On : 12 Aug 2015 12:33 pm
Operator : ximenac
Sample : bs
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 14:31:21 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 195325 | 53.85 ug/L | 98 |
| 126) n-butylbenzene | 16.065 | 92 | 173115 | 55.16 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 25560 | 48.22 ug/L | 95 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 220676 | 57.30 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 225321 | 56.92 ug/L | 98 |
| 131) hexachlorobutadiene | 17.759 | 225 | 108818 | 55.54 ug/L | 97 |
| 132) naphthalene | 17.900 | 128 | 443635 | 52.91 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 229725 | 55.90 ug/L | 99 |
| 134) hexachloroethane | 16.438 | 119 | 70374 | 56.80 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 178287 | 50.59 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

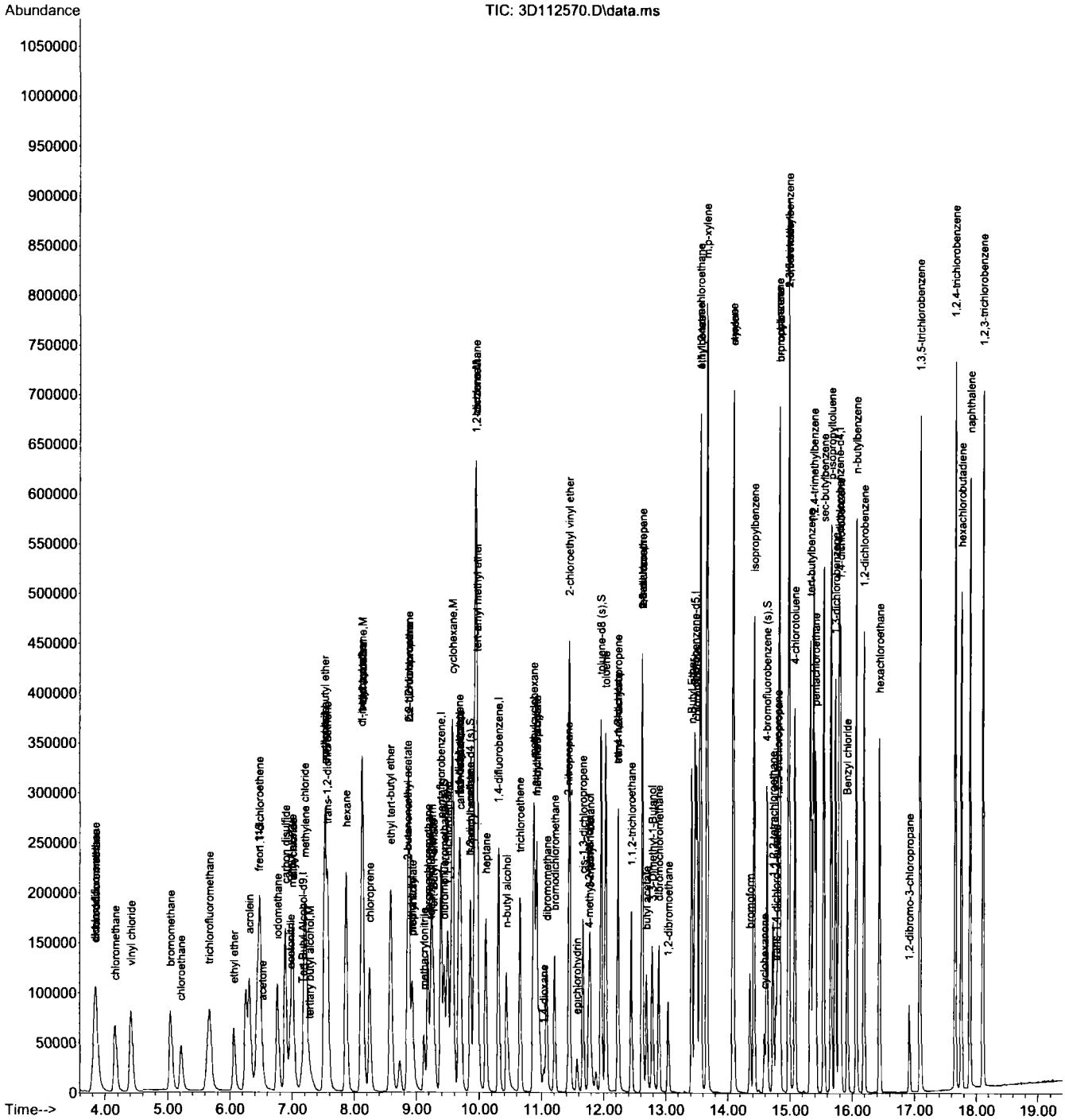
7.3.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112570.D
Acq On : 12 Aug 2015 12:33 pm
Operator : ximenac
Sample : bs
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 12 14:31:21 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112526.D
Acq On : 11 Aug 2015 4:03 pm
Operator : ximenac
Sample : jc1106-13ms
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 12 09:27:51 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 109061 | 500.00 ug/L | -0.01 |
| 4) pentafluorobenzene | 9.391 | 168 | 200873 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 227802 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 191425 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 118628 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 84366 | 54.82 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 109.64% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75945 | 53.27 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 106.54% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 257948 | 51.70 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 103.40% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 91571 | 50.17 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 100.34% | | |
| Target Compounds | | | | | Qvalue |
| 2) 1,4-dioxane | 11.037 | 88 | 28995 | 1645.36 ug/L | 97 |
| 3) tertiary butyl alcohol | 7.288 | 59 | 62710 | 266.24 ug/L | 94 |
| 8) chlorodifluoromethane | 3.849 | 51 | 131260 | 48.13 ug/L | 97 |
| 9) dichlorodifluoromethane | 3.849 | 85 | 131473 | 36.01 ug/L | 100 |
| 10) chloromethane | 4.158 | 50 | 115576 | 39.81 ug/L | 98 |
| 11) vinyl chloride | 4.415 | 62 | 126943 | 43.60 ug/L | 99 |
| 12) bromomethane | 5.050 | 94 | 84879 | 45.12 ug/L | 98 |
| 13) chloroethane | 5.212 | 64 | 55676 | 45.15 ug/L | 95 |
| 16) trichlorofluoromethane | 5.679 | 101 | 145920 | 48.03 ug/L | 98 |
| 18) ethyl ether | 6.062 | 74 | 42546 | 56.69 ug/L | 97 |
| 21) acrolein | 6.319 | 56 | 155848 | 517.30 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 129425 | 54.17 ug/L | 96 |
| 23) acetone | 6.539 | 43 | 26731 | 59.39 ug/L | 92 |
| 24) allyl chloride | 7.011 | 76 | 42264 | 56.95 ug/L | 98 |
| 25) acetonitrile | 6.979 | 40 | 91362 | 610.45 ug/L | 91 |
| 27) iodomethane | 6.764 | 142 | 207875 | 61.19 ug/L | 99 |
| 28) iso-butyl alcohol | 9.685 | 41 | 30786 | 615.61 ug/L | 87 |
| 29) carbon disulfide | 6.890 | 76 | 345032 | 57.10 ug/L | 98 |
| 30) methylene chloride | 7.199 | 84 | 106207 | 59.32 ug/L | 99 |
| 31) methyl acetate | 6.995 | 43 | 60840 | 60.85 ug/L | 98 |
| 32) methyl tert butyl ether | 7.530 | 73 | 304660 | 57.44 ug/L | 98 |
| 33) trans-1,2-dichloroethene | 7.572 | 61 | 124362 | 57.05 ug/L | 100 |
| 34) di-isopropyl ether | 8.122 | 45 | 286627 | 51.12 ug/L | 91 |
| 35) ethyl tert-butyl ether | 8.584 | 59 | 289842 | 54.87 ug/L | 99 |
| 36) 2-butanone | 8.846 | 72 | 8398 | 58.63 ug/L | 93 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 157561 | 60.84 ug/L | 100 |
| 38) chloroprene | 8.243 | 53 | 89458 | 47.19 ug/L | 96 |
| 39) acrylonitrile | 7.524 | 53 | 167940 | 323.98 ug/L | 98 |
| 40) vinyl acetate | 8.122 | 86 | 11588 | 60.22 ug/L | 87 |
| 41) ethyl acetate | 8.861 | 45 | 9556 | 48.50 ug/L # | 24 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 157191 | 57.99 ug/L | 99 |
| 43) cis-1,2-dichloroethene | 8.872 | 96 | 97111 | 55.47 ug/L | 95 |
| 44) propionitrile | 8.935 | 54 | 124100 | 642.45 ug/L | 100 |
| 45) methyl acrylate | 8.935 | 55 | 79232 | 60.85 ug/L | 98 |
| 46) bromochloromethane | 9.186 | 128 | 51313 | 60.91 ug/L | 95 |
| 47) tetrahydrofuran | 9.228 | 42 | 25820 | 50.88 ug/L | 94 |
| 48) chloroform | 9.244 | 83 | 144645 | 57.92 ug/L | 98 |
| 49) Tert-Butyl Formate | 9.270 | 59 | 69994 | 48.14 ug/L # | 96 |
| 52) freon 113 | 6.444 | 151 | 74338 | 50.53 ug/L | 98 |
| 53) methacrylonitrile | 9.124 | 41 | 41340 | 54.78 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112526.D
Acq On : 11 Aug 2015 4:03 pm
Operator : ximenac
Sample : jc1106-13ms
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 12 09:27:51 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 54) | 1,1,1-trichloroethane | 9.496 | 97 | 153086 | 59.37 ug/L | 99 |
| 57) | tert-amyl methyl ether | 9.968 | 73 | 285704 | 54.11 ug/L | 95 |
| 59) | epichlorohydrin | 11.572 | 57 | 33771 | 270.04 ug/L | 99 |
| 60) | n-butyl alcohol | 10.434 | 56 | 122662 | 3297.88 ug/L | 99 |
| 61) | cyclohexane | 9.569 | 84 | 133619 | 50.09 ug/L | 97 |
| 62) | carbon tetrachloride | 9.700 | 117 | 131538 | 59.70 ug/L | 98 |
| 63) | 1,1-dichloropropene | 9.669 | 75 | 89007 | 54.24 ug/L | 99 |
| 64) | hexane | 7.865 | 57 | 62930 | 42.94 ug/L | 97 |
| 65) | benzene | 9.936 | 78 | 298345 | 55.74 ug/L | 98 |
| 66) | heptane | 10.104 | 57 | 40051 | 48.11 ug/L | 98 |
| 67) | isopropyl acetate | 9.858 | 43 | 133566 | 57.36 ug/L | 99 |
| 68) | 1,2-dichloroethane | 9.947 | 62 | 94610 | 59.18 ug/L | 99 |
| 69) | trichloroethene | 10.655 | 95 | 71432 | 55.20 ug/L | 95 |
| 72) | 2-nitropropane | 11.425 | 41 | 17785 | 37.59 ug/L | 99 |
| 74) | methyl methacrylate | 10.917 | 41 | 104796 | 57.26 ug/L | 99 |
| 75) | 1,2-dichloropropane | 10.917 | 63 | 79487 | 56.81 ug/L | 94 |
| 76) | methylcyclohexane | 10.875 | 83 | 124108 | 51.26 ug/L | 95 |
| 77) | dibromomethane | 11.079 | 93 | 51968 | 63.13 ug/L | 93 |
| 78) | bromodichloromethane | 11.210 | 83 | 99138 | 58.23 ug/L | 98 |
| 79) | cis-1,3-dichloropropene | 11.666 | 75 | 116188 | 58.13 ug/L | 98 |
| 81) | 4-methyl-2-pentanone | 11.761 | 58 | 31981 | 62.79 ug/L | 96 |
| 82) | toluene | 12.033 | 92 | 170956 | 58.12 ug/L | 98 |
| 83) | 3-methyl-1-butanol | 11.782 | 70 | 51458 | 1337.01 ug/L | 96 |
| 84) | trans-1,3-dichloropropene | 12.233 | 75 | 107380 | 60.45 ug/L | 97 |
| 85) | ethyl methacrylate | 12.222 | 69 | 84472 | 53.81 ug/L | 99 |
| 86) | 1,1,2-trichloroethane | 12.442 | 83 | 58312 | 59.01 ug/L | 96 |
| 87) | 2-hexanone | 12.621 | 58 | 24591 | 59.06 ug/L | 93 |
| 89) | tetrachloroethene | 12.621 | 166 | 80258 | 49.24 ug/L | 98 |
| 90) | 1,3-dichloropropane | 12.626 | 76 | 104543 | 56.29 ug/L | 96 |
| 91) | butyl acetate | 12.694 | 56 | 45521 | 59.22 ug/L | 94 |
| 92) | 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 114967 | 625.76 ug/L | 99 |
| 93) | dibromochloromethane | 12.893 | 129 | 88282 | 60.95 ug/L | 96 |
| 94) | 1,2-dibromoethane | 13.045 | 107 | 71420 | 58.47 ug/L | 99 |
| 95) | n-Butyl Ether | 13.423 | 57 | 285198 | 49.25 ug/L | 98 |
| 96) | chlorobenzene | 13.507 | 112 | 195854 | 57.05 ug/L | 98 |
| 97) | 1,1,1,2-tetrachloroethane | 13.564 | 131 | 93304 | 61.29 ug/L | 99 |
| 98) | ethylbenzene | 13.559 | 91 | 316316 | 53.80 ug/L | 99 |
| 99) | m,p-xylene | 13.664 | 106 | 248269 | 112.91 ug/L | 98 |
| 100) | o-xylene | 14.083 | 106 | 129181 | 57.51 ug/L | 99 |
| 101) | styrene | 14.094 | 104 | 204004 | 53.99 ug/L | 98 |
| 103) | bromoform | 14.356 | 173 | 67934 | 60.12 ug/L | 99 |
| 105) | isopropylbenzene | 14.424 | 105 | 336418 | 56.51 ug/L | 99 |
| 107) | bromobenzene | 14.823 | 156 | 100408 | 57.15 ug/L | 97 |
| 108) | cyclohexanone | 14.587 | 55 | 31519 | 196.43 ug/L | 97 |
| 109) | 1,1,2,2-tetrachloroethane | 14.728 | 83 | 104559 | 60.69 ug/L | 99 |
| 110) | trans-1,4-dichloro-2-b... | 14.770 | 53 | 19881 | 52.14 ug/L | 94 |
| 111) | 1,2,3-trichloropropane | 14.802 | 110 | 24032 | 61.08 ug/L | 97 |
| 112) | n-propylbenzene | 14.833 | 91 | 364072 | 56.17 ug/L | 100 |
| 114) | 2-chlorotoluene | 14.980 | 126 | 88376 | 58.37 ug/L | 96 |
| 115) | 4-chlorotoluene | 15.080 | 126 | 84612 | 57.56 ug/L | 95 |
| 116) | 1,3,5-trimethylbenzene | 14.985 | 105 | 298400 | 58.90 ug/L | 98 |
| 117) | tert-butylbenzene | 15.331 | 119 | 234138 | 56.09 ug/L | 98 |
| 118) | pentachloroethane | 15.410 | 167 | 78446 | 68.91 ug/L | 98 |
| 119) | 1,2,4-trimethylbenzene | 15.379 | 105 | 294630 | 57.93 ug/L | 99 |
| 120) | sec-butylbenzene | 15.546 | 105 | 387355 | 58.07 ug/L | 99 |
| 121) | 1,3-dichlorobenzene | 15.730 | 146 | 190463 | 58.30 ug/L | 99 |
| 122) | p-isopropyltoluene | 15.662 | 119 | 333891 | 57.33 ug/L | 100 |
| 123) | 1,4-dichlorobenzene | 15.814 | 146 | 194167 | 55.40 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112526.D
Acq On : 11 Aug 2015 4:03 pm
Operator : ximenac
Sample : jc1106-13ms
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 12 09:27:51 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 206200 | 58.55 ug/L | 99 |
| 126) n-butylbenzene | 16.065 | 92 | 169458 | 55.60 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 29809 | 57.91 ug/L | 93 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 220521 | 58.97 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 230168 | 59.88 ug/L | 97 |
| 131) hexachlorobutadiene | 17.759 | 225 | 100067 | 52.59 ug/L | 99 |
| 132) naphthalene | 17.895 | 128 | 505438 | 62.08 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 242637 | 60.80 ug/L | 98 |
| 134) hexachloroethane | 16.438 | 119 | 70442 | 58.55 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 205038 | 59.92 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

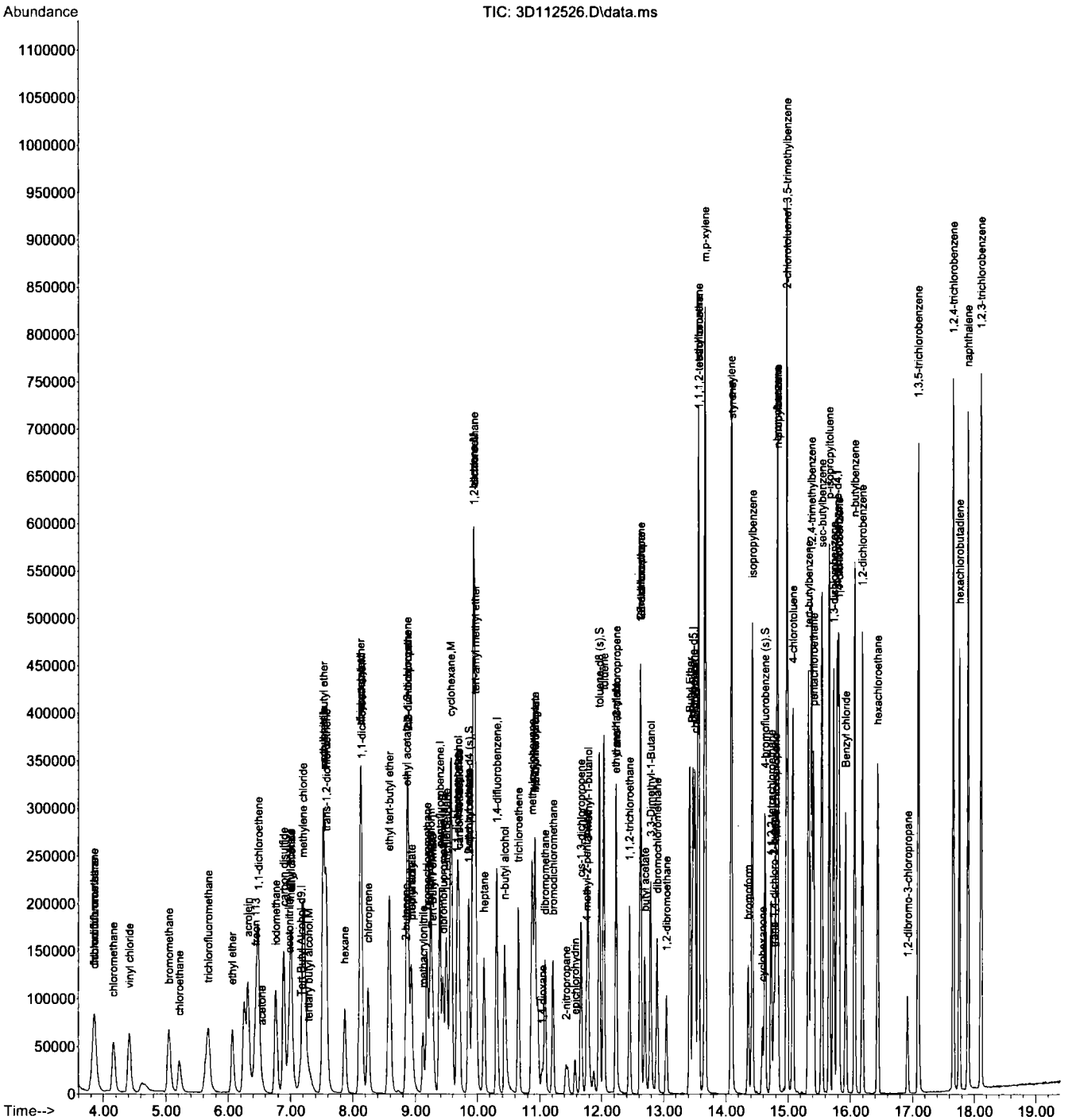
7.4.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112526.D
Acq On : 11 Aug 2015 4:03 pm
Operator : ximenac
Sample : jc1106-13ms
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 12 09:27:51 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112527.D
Acq On : 11 Aug 2015 4:30 pm
Operator : ximenac
Sample : jc1106-13msd
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 12 09:27:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 106157 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 209488 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 234394 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 194946 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 117427 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 86334 | 53.79 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 107.58% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 77471 | 52.10 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 104.20% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 263504 | 51.33 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.66% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 92277 | 51.07 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 102.14% | | |
| Target Compounds | | | | | Qvalue |
| 2) 1,4-dioxane | 11.037 | 88 | 27251 | 1588.70 ug/L | 92 |
| 3) tertiary butyl alcohol | 7.294 | 59 | 62783 | 273.84 ug/L | 95 |
| 8) chlorodifluoromethane | 3.860 | 51 | 131503 | 46.24 ug/L | 98 |
| 9) dichlorodifluoromethane | 3.844 | 85 | 133435 | 35.04 ug/L | 95 |
| 10) chloromethane | 4.164 | 50 | 115335 | 38.10 ug/L | 99 |
| 11) vinyl chloride | 4.421 | 62 | 129232 | 42.56 ug/L | 98 |
| 12) bromomethane | 5.050 | 94 | 84829 | 43.24 ug/L | 98 |
| 13) chloroethane | 5.212 | 64 | 54043 | 42.02 ug/L | 99 |
| 16) trichlorofluoromethane | 5.679 | 101 | 144785 | 45.69 ug/L | 97 |
| 18) ethyl ether | 6.072 | 74 | 42484 | 54.28 ug/L | 91 |
| 21) acrolein | 6.319 | 56 | 155482 | 494.86 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 125009 | 50.17 ug/L | 95 |
| 23) acetone | 6.533 | 43 | 24977 | 53.21 ug/L | 84 |
| 24) allyl chloride | 7.016 | 76 | 42273 | 54.62 ug/L | 96 |
| 25) acetonitrile | 6.974 | 40 | 90048 | 576.93 ug/L | 91 |
| 27) iodomethane | 6.764 | 142 | 206541 | 58.30 ug/L | 99 |
| 28) iso-butyl alcohol | 9.690 | 41 | 30622 | 587.15 ug/L | 94 |
| 29) carbon disulfide | 6.890 | 76 | 337722 | 53.60 ug/L | 99 |
| 30) methylene chloride | 7.199 | 84 | 105405 | 56.45 ug/L | 99 |
| 31) methyl acetate | 6.995 | 43 | 59945 | 57.49 ug/L | 98 |
| 32) methyl tert butyl ether | 7.535 | 73 | 304001 | 54.96 ug/L | 99 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 122979 | 54.09 ug/L | 99 |
| 34) di-isopropyl ether | 8.122 | 45 | 287467 | 49.16 ug/L | 96 |
| 35) ethyl tert-butyl ether | 8.594 | 59 | 292254 | 53.05 ug/L | 98 |
| 36) 2-butanone | 8.851 | 72 | 8518 | 57.02 ug/L | 86 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 155121 | 57.43 ug/L | 99 |
| 38) chloroprene | 8.248 | 53 | 90156 | 45.60 ug/L | 97 |
| 39) acrylonitrile | 7.530 | 53 | 168270 | 311.27 ug/L | 95 |
| 40) vinyl acetate | 8.127 | 86 | 11674 | 58.17 ug/L | 79 |
| 41) ethyl acetate | 8.861 | 45 | 9580 | 46.62 ug/L | 62 |
| 42) 2,2-dichloropropane | 8.888 | 77 | 154423 | 54.63 ug/L | 97 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 95982 | 52.57 ug/L | 99 |
| 44) propionitrile | 8.935 | 54 | 123881 | 614.94 ug/L | 95 |
| 45) methyl acrylate | 8.945 | 55 | 78803 | 58.03 ug/L | 98 |
| 46) bromochloromethane | 9.186 | 128 | 52198 | 59.41 ug/L | 97 |
| 47) tetrahydrofuran | 9.234 | 42 | 25432 | 48.06 ug/L | 96 |
| 48) chloroform | 9.244 | 83 | 145612 | 55.91 ug/L | 99 |
| 49) Tert-Butyl Formate | 9.276 | 59 | 58356 | 38.49 ug/L # | 97 |
| 52) freon 113 | 6.455 | 151 | 70632 | 46.04 ug/L | 92 |
| 53) methacrylonitrile | 9.124 | 41 | 40749 | 51.77 ug/L | 98 |

7.4.2 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112527.D
Acq On : 11 Aug 2015 4:30 pm
Operator : ximenac
Sample : jc1106-13msd
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 12 09:27:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 54) | 1,1,1-trichloroethane | 9.501 | 97 | 150897 | 56.12 ug/L | 99 |
| 57) | tert-amyl methyl ether | 9.973 | 73 | 285610 | 51.87 ug/L | 97 |
| 59) | epichlorohydrin | 11.572 | 57 | 32481 | 252.42 ug/L | 99 |
| 60) | n-butyl alcohol | 10.440 | 56 | 121033 | 3162.57 ug/L | 99 |
| 61) | cyclohexane | 9.574 | 84 | 133372 | 48.59 ug/L | 97 |
| 62) | carbon tetrachloride | 9.706 | 117 | 129099 | 56.95 ug/L | 99 |
| 63) | 1,1-dichloropropene | 9.674 | 75 | 89346 | 52.92 ug/L | 98 |
| 64) | hexane | 7.870 | 57 | 64386 | 42.70 ug/L | 97 |
| 65) | benzene | 9.941 | 78 | 300496 | 54.56 ug/L | 98 |
| 66) | heptane | 10.109 | 57 | 41851 | 48.86 ug/L | 99 |
| 67) | isopropyl acetate | 9.858 | 43 | 136012 | 56.77 ug/L | 100 |
| 68) | 1,2-dichloroethane | 9.952 | 62 | 95716 | 58.19 ug/L | 99 |
| 69) | trichloroethene | 10.660 | 95 | 71275 | 53.53 ug/L | 99 |
| 72) | 2-nitropropane | 11.425 | 41 | 17391 | 35.72 ug/L | 94 |
| 74) | methyl methacrylate | 10.922 | 41 | 107374 | 57.02 ug/L | 93 |
| 75) | 1,2-dichloropropane | 10.922 | 63 | 80495 | 55.91 ug/L | 95 |
| 76) | methylcyclohexane | 10.875 | 83 | 123748 | 49.68 ug/L | 98 |
| 77) | dibromomethane | 11.084 | 93 | 51861 | 61.23 ug/L | 94 |
| 78) | bromodichloromethane | 11.210 | 83 | 102174 | 58.32 ug/L | 99 |
| 79) | cis-1,3-dichloropropene | 11.672 | 75 | 116644 | 56.72 ug/L | 94 |
| 81) | 4-methyl-2-pentanone | 11.766 | 58 | 32889 | 62.76 ug/L | 99 |
| 82) | toluene | 12.033 | 92 | 169239 | 55.92 ug/L | 99 |
| 83) | 3-methyl-1-butanol | 11.787 | 70 | 49696 | 1254.91 ug/L | 96 |
| 84) | trans-1,3-dichloropropene | 12.233 | 75 | 107193 | 58.65 ug/L | 99 |
| 85) | ethyl methacrylate | 12.227 | 69 | 86539 | 53.58 ug/L | 99 |
| 86) | 1,1,2-trichloroethane | 12.448 | 83 | 57351 | 56.41 ug/L | 98 |
| 87) | 2-hexanone | 12.621 | 58 | 24265 | 56.64 ug/L | 97 |
| 89) | tetrachloroethene | 12.626 | 166 | 80218 | 48.33 ug/L | 98 |
| 90) | 1,3-dichloropropane | 12.626 | 76 | 104947 | 55.48 ug/L | 98 |
| 91) | butyl acetate | 12.694 | 56 | 46001 | 58.76 ug/L | 96 |
| 92) | 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 117562 | 628.33 ug/L | 98 |
| 93) | dibromochloromethane | 12.893 | 129 | 86848 | 58.88 ug/L | 99 |
| 94) | 1,2-dibromoethane | 13.045 | 107 | 72111 | 57.97 ug/L | 98 |
| 95) | n-Butyl Ether | 13.423 | 57 | 287404 | 48.74 ug/L | 99 |
| 96) | chlorobenzene | 13.507 | 112 | 193694 | 55.40 ug/L | 100 |
| 97) | 1,1,1,2-tetrachloroethane | 13.564 | 131 | 93275 | 60.16 ug/L | 99 |
| 98) | ethylbenzene | 13.559 | 91 | 313531 | 52.36 ug/L | 99 |
| 99) | m,p-xylene | 13.664 | 106 | 245683 | 109.71 ug/L | 99 |
| 100) | o-xylene | 14.083 | 106 | 128641 | 56.24 ug/L | 100 |
| 101) | styrene | 14.094 | 104 | 203827 | 52.96 ug/L | 99 |
| 103) | bromoform | 14.356 | 173 | 67500 | 58.65 ug/L | 99 |
| 105) | isopropylbenzene | 14.424 | 105 | 332846 | 56.48 ug/L | 99 |
| 107) | bromobenzene | 14.823 | 156 | 98900 | 56.86 ug/L | 98 |
| 108) | cyclohexanone | 14.587 | 55 | 29910 | 190.61 ug/L | 94 |
| 109) | 1,1,2,2-tetrachloroethane | 14.728 | 83 | 101377 | 59.45 ug/L | 98 |
| 110) | trans-1,4-dichloro-2-b... | 14.770 | 53 | 18255 | 48.37 ug/L | 97 |
| 111) | 1,2,3-trichloropropane | 14.802 | 110 | 23641 | 60.71 ug/L | 90 |
| 112) | n-propylbenzene | 14.833 | 91 | 358137 | 55.82 ug/L | 99 |
| 114) | 2-chlorotoluene | 14.980 | 126 | 87197 | 58.18 ug/L | 98 |
| 115) | 4-chlorotoluene | 15.080 | 126 | 83732 | 57.54 ug/L | 91 |
| 116) | 1,3,5-trimethylbenzene | 14.985 | 105 | 294268 | 58.68 ug/L | 97 |
| 117) | tert-butylbenzene | 15.331 | 119 | 233643 | 56.54 ug/L | 98 |
| 118) | pentachloroethane | 15.415 | 167 | 79829 | 70.84 ug/L | 96 |
| 119) | 1,2,4-trimethylbenzene | 15.378 | 105 | 288522 | 57.31 ug/L | 98 |
| 120) | sec-butylbenzene | 15.546 | 105 | 379751 | 57.51 ug/L | 99 |
| 121) | 1,3-dichlorobenzene | 15.730 | 146 | 187717 | 58.05 ug/L | 97 |
| 122) | p-isopropyltoluene | 15.662 | 119 | 330968 | 57.40 ug/L | 99 |
| 123) | 1,4-dichlorobenzene | 15.814 | 146 | 192115 | 55.37 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112527.D
Acq On : 11 Aug 2015 4:30 pm
Operator : ximenac
Sample : jc1106-13msd
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 12 09:27:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 203019 | 58.23 ug/L | 97 |
| 126) n-butylbenzene | 16.065 | 92 | 165123 | 54.73 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 29079 | 57.07 ug/L | 94 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 220653 | 59.61 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 232503 | 61.11 ug/L | 97 |
| 131) hexachlorobutadiene | 17.759 | 225 | 102558 | 54.45 ug/L | 97 |
| 132) naphthalene | 17.895 | 128 | 506611 | 62.86 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 246110 | 62.30 ug/L | 98 |
| 134) hexachloroethane | 16.443 | 119 | 70558 | 59.25 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 197569 | 58.32 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

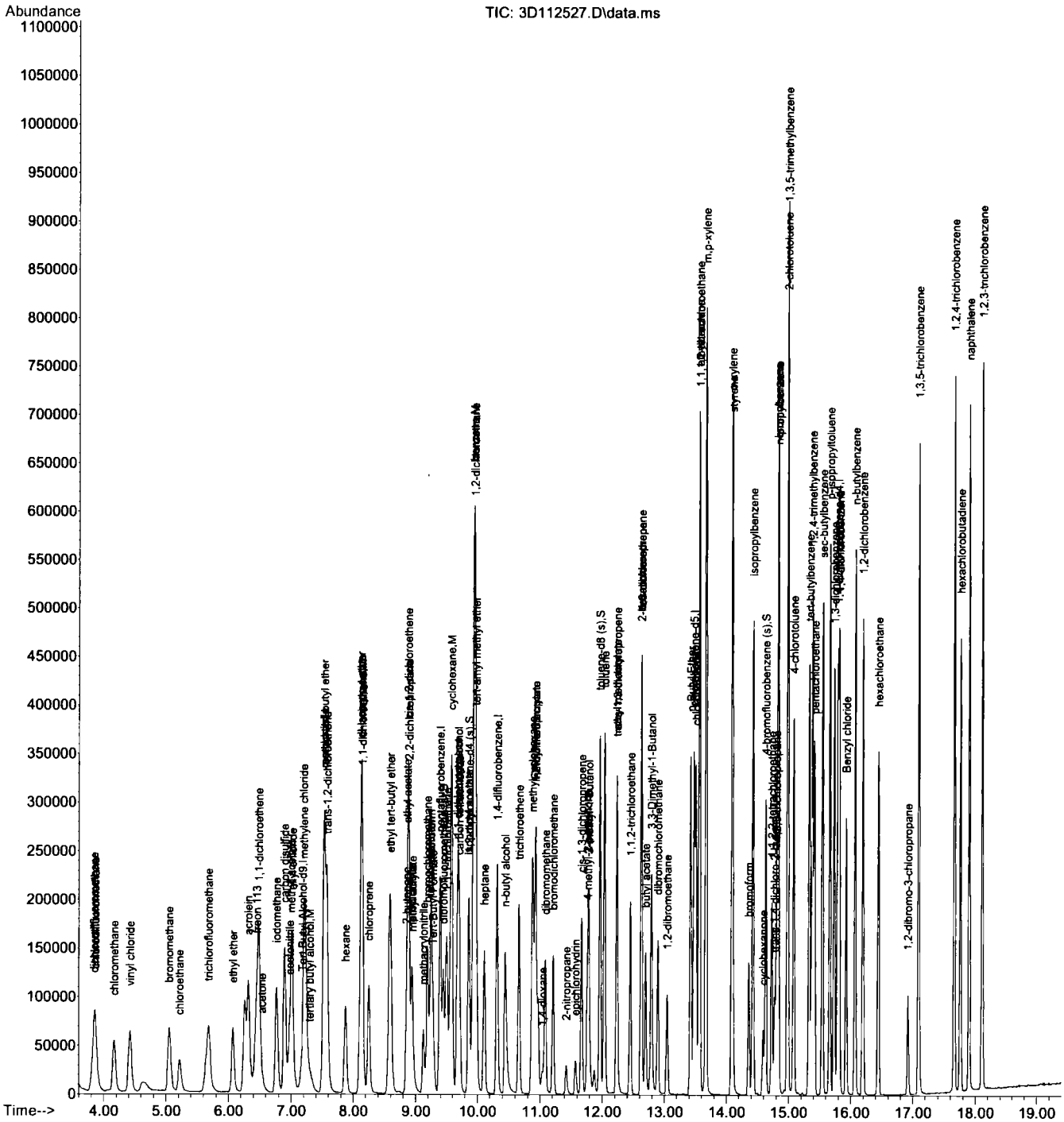
7.4.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112527.D
Acq On : 11 Aug 2015 4:30 pm
Operator : ximenac
Sample : jc1106-13msd
Misc : MS89468,V3D4822,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 12 09:27:45 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration






7.4.2 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112566.D
Acq On : 12 Aug 2015 10:44 am
Operator : ximenac
Sample : jc1072-1ms
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 12 14:30:35 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 99162 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 201673 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 227956 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 197596 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 122225 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.438 | 113 | 85006 | 55.01 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 110.02% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75958 | 53.07 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 106.14% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 261661 | 52.41 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 104.82% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 94453 | 50.23 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 100.46% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.037 | 88 | 24075 | 1502.55 ug/L | 92 |
| 3) tertiary butyl alcohol | 7.299 | 59 | 53979 | 252.05 ug/L | 97 |
| 8) chlorodifluoromethane | 3.849 | 51 | 147116 | 53.74 ug/L | 98 |
| 9) dichlorodifluoromethane | 3.844 | 85 | 178550 | 48.71 ug/L | 99 |
| 10) chloromethane | 4.164 | 50 | 145660 | 49.98 ug/L | 99 |
| 11) vinyl chloride | 4.415 | 62 | 160381 | 54.87 ug/L | 99 |
| 12) bromomethane | 5.050 | 94 | 101640 | 53.82 ug/L | 98 |
| 13) chloroethane | 5.212 | 64 | 65743 | 53.10 ug/L | 98 |
| 16) trichlorofluoromethane | 5.674 | 101 | 176554 | 57.88 ug/L | 98 |
| 18) ethyl ether | 6.061 | 74 | 39802 | 52.82 ug/L | 98 |
| 21) acrolein | 6.318 | 56 | 143914 | 475.79 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.481 | 61 | 121404 | 50.61 ug/L | 99 |
| 23) acetone | 6.533 | 43 | 23955 | 53.01 ug/L | 83 |
| 24) allyl chloride | 7.011 | 76 | 41232 | 55.34 ug/L | 99 |
| 25) acetonitrile | 6.969 | 40 | 85662 | 570.10 ug/L | 82 |
| 27) iodomethane | 6.764 | 142 | 190840 | 55.95 ug/L | 97 |
| 28) iso-butyl alcohol | 9.684 | 41 | 25910 | 516.05 ug/L | 96 |
| 29) carbon disulfide | 6.885 | 76 | 322550 | 53.17 ug/L | 98 |
| 30) methylene chloride | 7.199 | 84 | 98386 | 54.74 ug/L | 100 |
| 31) methyl acetate | 6.995 | 43 | 56126 | 55.91 ug/L | 97 |
| 32) methyl tert butyl ether | 7.530 | 73 | 284199 | 53.37 ug/L | 99 |
| 33) trans-1,2-dichloroethene | 7.572 | 61 | 116040 | 53.02 ug/L | 98 |
| 34) di-isopropyl ether | 8.122 | 45 | 280676 | 49.86 ug/L | 92 |
| 35) ethyl tert-butyl ether | 8.583 | 59 | 286134 | 53.95 ug/L | 97 |
| 36) 2-butanone | 8.846 | 72 | 7583 | 52.73 ug/L | 98 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 143182 | 55.06 ug/L | 97 |
| 38) chloroprene | 8.248 | 53 | 94261 | 49.53 ug/L | 96 |
| 39) acrylonitrile | 7.524 | 53 | 152060 | 292.18 ug/L | 96 |
| 40) vinyl acetate | 8.122 | 86 | 11254 | 58.25 ug/L | 86 |
| 41) ethyl acetate | 8.856 | 45 | 8771 | 44.34 ug/L | 93 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 150468 | 55.29 ug/L | 99 |
| 43) cis-1,2-dichloroethene | 8.872 | 96 | 87337 | 49.69 ug/L | 99 |
| 44) propionitrile | 8.935 | 54 | 109145 | 562.78 ug/L | 95 |
| 45) methyl acrylate | 8.940 | 55 | 72478 | 55.44 ug/L | 97 |
| 46) bromochloromethane | 9.186 | 128 | 47884 | 56.61 ug/L | 96 |
| 47) tetrahydrofuran | 9.228 | 42 | 24253 | 47.61 ug/L | 99 |
| 48) chloroform | 9.244 | 83 | 135615 | 54.09 ug/L | 99 |
| 49) Tert-Butyl Formate | 9.275 | 59 | 70116 | 48.04 ug/L # | 94 |
| 52) freon 113 | 6.455 | 151 | 82726 | 56.01 ug/L | 100 |
| 53) methacrylonitrile | 9.123 | 41 | 36947 | 48.76 ug/L | 98 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 142956 | 55.22 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112566.D
Acq On : 12 Aug 2015 10:44 am
Operator : ximenac
Sample : jc1072-1ms
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 12 14:30:35 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.968 | 73 | 275041 | 51.89 ug/L | 96 |
| 59) epichlorohydrin | 11.572 | 57 | 30613 | 244.62 ug/L | 98 |
| 60) n-butyl alcohol | 10.439 | 56 | 98978 | 2659.32 ug/L | 95 |
| 61) cyclohexane | 9.569 | 84 | 128823 | 48.26 ug/L | 97 |
| 62) carbon tetrachloride | 9.700 | 117 | 129690 | 58.83 ug/L | 98 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 86244 | 52.53 ug/L | 99 |
| 64) hexane | 7.870 | 57 | 73041 | 49.81 ug/L | 99 |
| 65) benzene | 9.936 | 78 | 281410 | 52.54 ug/L | 97 |
| 66) heptane | 10.104 | 57 | 42034 | 50.46 ug/L | 94 |
| 67) isopropyl acetate | 9.857 | 43 | 123295 | 52.92 ug/L | 99 |
| 68) 1,2-dichloroethane | 9.947 | 62 | 89897 | 56.19 ug/L | 98 |
| 69) trichloroethene | 10.654 | 95 | 68144 | 52.62 ug/L | 100 |
| 72) 2-nitropropane | 11.425 | 41 | 17382 | 36.71 ug/L | 96 |
| 74) methyl methacrylate | 10.922 | 41 | 97917 | 53.47 ug/L | 92 |
| 75) 1,2-dichloropropane | 10.922 | 63 | 74665 | 53.33 ug/L | 98 |
| 76) methylcyclohexane | 10.875 | 83 | 135116 | 55.77 ug/L | 96 |
| 77) dibromomethane | 11.079 | 93 | 49320 | 59.88 ug/L | 94 |
| 78) bromodichloromethane | 11.210 | 83 | 94853 | 55.67 ug/L | 97 |
| 79) cis-1,3-dichloropropene | 11.672 | 75 | 110594 | 55.30 ug/L | 97 |
| 81) 4-methyl-2-pentanone | 11.761 | 58 | 27476 | 53.91 ug/L | 98 |
| 82) toluene | 12.033 | 92 | 162686 | 55.27 ug/L | 100 |
| 83) 3-methyl-1-butanol | 11.787 | 70 | 40267 | 1045.53 ug/L | 98 |
| 84) trans-1,3-dichloropropene | 12.233 | 75 | 103407 | 58.18 ug/L | 96 |
| 85) ethyl methacrylate | 12.227 | 69 | 76000 | 48.38 ug/L | 99 |
| 86) 1,1,2-trichloroethane | 12.442 | 83 | 55076 | 55.70 ug/L | 96 |
| 87) 2-hexanone | 12.615 | 58 | 20285 | 48.69 ug/L | 92 |
| 89) tetrachloroethene | 12.621 | 166 | 77591 | 46.12 ug/L | 96 |
| 90) 1,3-dichloropropane | 12.626 | 76 | 99167 | 51.72 ug/L | 97 |
| 91) butyl acetate | 12.694 | 56 | 40733 | 51.34 ug/L | 96 |
| 92) 3,3-Dimethyl-1-Butanol | 12.783 | 57 | 80494 | 424.44 ug/L | 99 |
| 93) dibromochloromethane | 12.893 | 129 | 84074 | 56.23 ug/L | 99 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 68014 | 53.95 ug/L | 97 |
| 95) n-Butyl Ether | 13.423 | 57 | 267174 | 44.70 ug/L | 97 |
| 96) chlorobenzene | 13.507 | 112 | 187493 | 52.91 ug/L | 98 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 89179 | 56.75 ug/L | 98 |
| 98) ethylbenzene | 13.559 | 91 | 299257 | 49.31 ug/L | 99 |
| 99) m,p-xylene | 13.664 | 106 | 237455 | 104.62 ug/L | 99 |
| 100) o-xylene | 14.083 | 106 | 124912 | 53.88 ug/L | 95 |
| 101) styrene | 14.094 | 104 | 193974 | 49.73 ug/L | 99 |
| 103) bromoform | 14.356 | 173 | 64342 | 55.16 ug/L | 99 |
| 105) isopropylbenzene | 14.424 | 105 | 311571 | 50.80 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 96122 | 53.10 ug/L | 98 |
| 108) cyclohexanone | 14.587 | 55 | 26260 | 169.50 ug/L | 97 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 98494 | 55.49 ug/L | 99 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 18140 | 46.18 ug/L | 93 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 23275 | 57.42 ug/L | 88 |
| 112) n-propylbenzene | 14.833 | 91 | 340850 | 51.04 ug/L | 99 |
| 114) 2-chlorotoluene | 14.980 | 126 | 83855 | 53.76 ug/L | 98 |
| 115) 4-chlorotoluene | 15.080 | 126 | 82183 | 54.26 ug/L | 92 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 275526 | 52.79 ug/L | 99 |
| 117) tert-butylbenzene | 15.331 | 119 | 209081 | 48.61 ug/L | 98 |
| 118) pentachloroethane | 15.410 | 167 | 75067 | 64.00 ug/L | 97 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 274658 | 52.41 ug/L | 98 |
| 120) sec-butylbenzene | 15.546 | 105 | 342354 | 49.81 ug/L | 99 |
| 121) 1,3-dichlorobenzene | 15.730 | 146 | 184320 | 54.76 ug/L | 99 |
| 122) p-isopropyltoluene | 15.662 | 119 | 296579 | 49.42 ug/L | 100 |
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 191548 | 53.04 ug/L | 98 |
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 199943 | 55.10 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112566.D
Acq On : 12 Aug 2015 10:44 am
Operator : ximenac
Sample : jc1072-1ms
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 12 14:30:35 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 126) n-butylbenzene | 16.065 | 92 | 150910 | 48.06 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 27833 | 52.48 ug/L | 95 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 202966 | 52.68 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 211892 | 53.50 ug/L | 97 |
| 131) hexachlorobutadiene | 17.759 | 225 | 86841 | 44.30 ug/L | 98 |
| 132) naphthalene | 17.900 | 128 | 470470 | 56.08 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 223450 | 54.34 ug/L | 100 |
| 134) hexachloroethane | 16.443 | 119 | 62277 | 50.24 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 201287 | 57.09 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

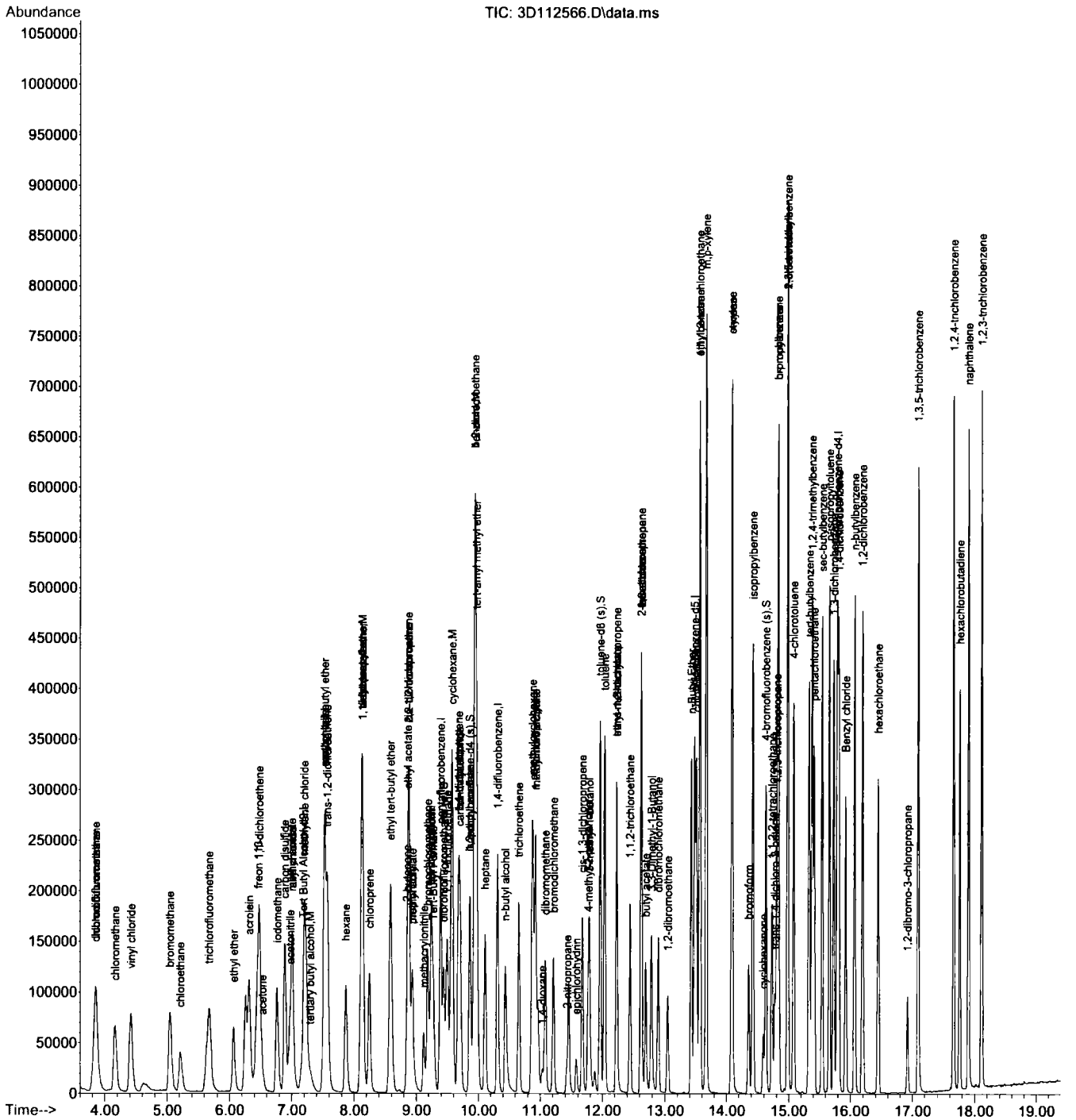
7.4.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112566.D
Acq On : 12 Aug 2015 10:44 am
Operator : ximenac
Sample : jc1072-1ms
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 12 14:30:35 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 14:32:45 2015 3D

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112567.D
Acq On : 12 Aug 2015 11:11 am
Operator : ximenac
Sample : jc1072-1msd
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 14:30:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 99080 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 197615 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 223819 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 186124 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 115672 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 50) dibromofluoromethane (s) | 9.438 | 113 | 80888 | 53.42 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 106.84% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 73491 | 52.40 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 104.80% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 252659 | 51.54 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 103.08% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 88333 | 49.63 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 99.26% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.032 | 88 | 25958 | 1621.41 ug/L | 97 |
| 3) tertiary butyl alcohol | 7.294 | 59 | 57556 | 268.98 ug/L | 98 |
| 8) chlorodifluoromethane | 3.844 | 51 | 147310 | 54.91 ug/L | 98 |
| 9) dichlorodifluoromethane | 3.844 | 85 | 179706 | 50.03 ug/L | 98 |
| 10) chloromethane | 4.158 | 50 | 142921 | 50.04 ug/L | 98 |
| 11) vinyl chloride | 4.410 | 62 | 160854 | 56.16 ug/L | 100 |
| 12) bromomethane | 5.044 | 94 | 99067 | 53.53 ug/L | 98 |
| 13) chloroethane | 5.207 | 64 | 62789 | 51.75 ug/L | 98 |
| 16) trichlorofluoromethane | 5.668 | 101 | 172450 | 57.69 ug/L | 100 |
| 18) ethyl ether | 6.061 | 74 | 40756 | 55.20 ug/L | 97 |
| 21) acrolein | 6.318 | 56 | 146250 | 493.44 ug/L | 96 |
| 22) 1,1-dichloroethene | 6.481 | 61 | 118926 | 50.60 ug/L | 97 |
| 23) acetone | 6.533 | 43 | 23270 | 52.55 ug/L | 99 |
| 24) allyl chloride | 7.010 | 76 | 39021 | 53.45 ug/L | 98 |
| 25) acetonitrile | 6.963 | 40 | 85366 | 579.79 ug/L | 81 |
| 27) iodomethane | 6.764 | 142 | 187707 | 56.16 ug/L | 97 |
| 28) iso-butyl alcohol | 9.684 | 41 | 26954 | 547.87 ug/L | 98 |
| 29) carbon disulfide | 6.885 | 76 | 313369 | 52.72 ug/L | 99 |
| 30) methylene chloride | 7.199 | 84 | 96406 | 54.74 ug/L | 95 |
| 31) methyl acetate | 6.995 | 43 | 57358 | 58.31 ug/L | 97 |
| 32) methyl tert butyl ether | 7.529 | 73 | 288749 | 55.34 ug/L | 99 |
| 33) trans-1,2-dichloroethene | 7.571 | 61 | 114081 | 53.20 ug/L | 97 |
| 34) di-isopropyl ether | 8.117 | 45 | 285559 | 51.77 ug/L | 98 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 288200 | 55.46 ug/L | 98 |
| 36) 2-butanone | 8.840 | 72 | 8338 | 59.17 ug/L | 87 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 142043 | 55.75 ug/L | 99 |
| 38) chloroprene | 8.243 | 53 | 94122 | 50.47 ug/L | 98 |
| 39) acrylonitrile | 7.524 | 53 | 155258 | 304.45 ug/L | 98 |
| 40) vinyl acetate | 8.122 | 86 | 11687 | 61.74 ug/L | 93 |
| 41) ethyl acetate | 8.856 | 45 | 9189 | 47.40 ug/L | 79 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 147270 | 55.23 ug/L | 99 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 86902 | 50.46 ug/L | 97 |
| 44) propionitrile | 8.935 | 54 | 112888 | 594.04 ug/L | 95 |
| 45) methyl acrylate | 8.940 | 55 | 75590 | 59.01 ug/L | 99 |
| 46) bromochloromethane | 9.186 | 128 | 47774 | 57.64 ug/L | 94 |
| 47) tetrahydrofuran | 9.223 | 42 | 24254 | 48.59 ug/L | 96 |
| 48) chloroform | 9.239 | 83 | 133924 | 54.51 ug/L | 99 |
| 49) Tert-Butyl Formate | 9.275 | 59 | 60765 | 42.48 ug/L # | 96 |
| 52) freon 113 | 6.449 | 151 | 81369 | 56.23 ug/L | 96 |
| 53) methacrylonitrile | 9.123 | 41 | 38950 | 52.46 ug/L | 98 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 138107 | 54.45 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112567.D
Acq On : 12 Aug 2015 11:11 am
Operator : ximenac
Sample : jc1072-1msd
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 14:30:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.968 | 73 | 279001 | 53.71 ug/L | 96 |
| 59) epichlorohydrin | 11.577 | 57 | 30931 | 251.73 ug/L | 99 |
| 60) n-butyl alcohol | 10.439 | 56 | 105489 | 2886.64 ug/L | 100 |
| 61) cyclohexane | 9.569 | 84 | 123316 | 47.05 ug/L | 99 |
| 62) carbon tetrachloride | 9.700 | 117 | 125204 | 57.84 ug/L | 99 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 85899 | 53.28 ug/L | 99 |
| 64) hexane | 7.870 | 57 | 72730 | 50.51 ug/L | 97 |
| 65) benzene | 9.936 | 78 | 279672 | 53.18 ug/L | 99 |
| 66) heptane | 10.104 | 57 | 43314 | 52.95 ug/L | 98 |
| 67) isopropyl acetate | 9.857 | 43 | 127326 | 55.66 ug/L | 99 |
| 68) 1,2-dichloroethane | 9.952 | 62 | 91054 | 57.97 ug/L | 96 |
| 69) trichloroethene | 10.654 | 95 | 68351 | 53.76 ug/L | 98 |
| 72) 2-nitropropane | 11.425 | 41 | 15980 | 34.38 ug/L | 96 |
| 74) methyl methacrylate | 10.922 | 41 | 98843 | 54.97 ug/L | 92 |
| 75) 1,2-dichloropropane | 10.922 | 63 | 75451 | 54.88 ug/L | 100 |
| 76) methylcyclohexane | 10.875 | 83 | 133784 | 56.24 ug/L | 96 |
| 77) dibromomethane | 11.079 | 93 | 48991 | 60.58 ug/L | 94 |
| 78) bromodichloromethane | 11.210 | 83 | 95182 | 56.90 ug/L | 98 |
| 79) cis-1,3-dichloropropene | 11.672 | 75 | 110784 | 56.41 ug/L | 99 |
| 81) 4-methyl-2-pentanone | 11.761 | 58 | 28776 | 57.50 ug/L | 97 |
| 82) toluene | 12.033 | 92 | 161940 | 56.03 ug/L | 96 |
| 83) 3-methyl-1-butanol | 11.782 | 70 | 41813 | 1105.74 ug/L | 99 |
| 84) trans-1,3-dichloropropene | 12.233 | 75 | 104000 | 59.59 ug/L | 99 |
| 85) ethyl methacrylate | 12.227 | 69 | 79952 | 51.84 ug/L | 98 |
| 86) 1,1,2-trichloroethane | 12.442 | 83 | 56502 | 58.20 ug/L | 94 |
| 87) 2-hexanone | 12.621 | 58 | 21228 | 51.89 ug/L | 96 |
| 89) tetrachloroethene | 12.626 | 166 | 76923 | 48.54 ug/L | 99 |
| 90) 1,3-dichloropropane | 12.626 | 76 | 102200 | 56.59 ug/L | 98 |
| 91) butyl acetate | 12.694 | 56 | 41854 | 56.00 ug/L | 95 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 87612 | 490.45 ug/L | 98 |
| 93) dibromochloromethane | 12.893 | 129 | 84180 | 59.78 ug/L | 98 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 68658 | 57.81 ug/L | 95 |
| 95) n-Butyl Ether | 13.423 | 57 | 265039 | 47.07 ug/L | 98 |
| 96) chlorobenzene | 13.507 | 112 | 186305 | 55.82 ug/L | 98 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 87992 | 59.44 ug/L | 97 |
| 98) ethylbenzene | 13.559 | 91 | 293412 | 51.32 ug/L | 100 |
| 99) m,p-xylene | 13.664 | 106 | 231748 | 108.40 ug/L | 99 |
| 100) o-xylene | 14.083 | 106 | 119960 | 54.93 ug/L | 98 |
| 101) styrene | 14.094 | 104 | 191532 | 52.13 ug/L | 99 |
| 103) bromoform | 14.361 | 173 | 65014 | 59.17 ug/L | 98 |
| 105) isopropylbenzene | 14.424 | 105 | 300078 | 51.70 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 93104 | 54.34 ug/L | 98 |
| 108) cyclohexanone | 14.587 | 55 | 27452 | 181.41 ug/L | 94 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 99067 | 58.97 ug/L | 97 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 18555 | 49.91 ug/L | 91 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 23055 | 60.10 ug/L | 92 |
| 112) n-propylbenzene | 14.833 | 91 | 325766 | 51.55 ug/L | 99 |
| 114) 2-chlorotoluene | 14.980 | 126 | 81181 | 54.99 ug/L | 94 |
| 115) 4-chlorotoluene | 15.079 | 126 | 77405 | 54.00 ug/L | 97 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 260889 | 52.82 ug/L | 98 |
| 117) tert-butylbenzene | 15.331 | 119 | 205120 | 50.39 ug/L | 99 |
| 118) pentachloroethane | 15.410 | 167 | 73021 | 65.78 ug/L | 97 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 262120 | 52.85 ug/L | 100 |
| 120) sec-butylbenzene | 15.546 | 105 | 330061 | 50.75 ug/L | 99 |
| 121) 1,3-dichlorobenzene | 15.730 | 146 | 176192 | 55.31 ug/L | 98 |
| 122) p-isopropyltoluene | 15.661 | 119 | 282594 | 49.76 ug/L | 99 |
| 123) 1,4-dichlorobenzene | 15.813 | 146 | 182598 | 53.43 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 191926 | 55.89 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112567.D
Acq On : 12 Aug 2015 11:11 am
Operator : ximenac
Sample : jc1072-1msd
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 14:30:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 126) n-butylbenzene | 16.065 | 92 | 144293 | 48.55 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 28816 | 57.42 ug/L | 97 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 194015 | 53.21 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 208872 | 55.73 ug/L | 97 |
| 131) hexachlorobutadiene | 17.759 | 225 | 89643 | 48.32 ug/L | 98 |
| 132) naphthalene | 17.895 | 128 | 472061 | 59.46 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 220243 | 56.60 ug/L | 99 |
| 134) hexachloroethane | 16.437 | 119 | 60758 | 51.79 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 199350 | 59.74 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

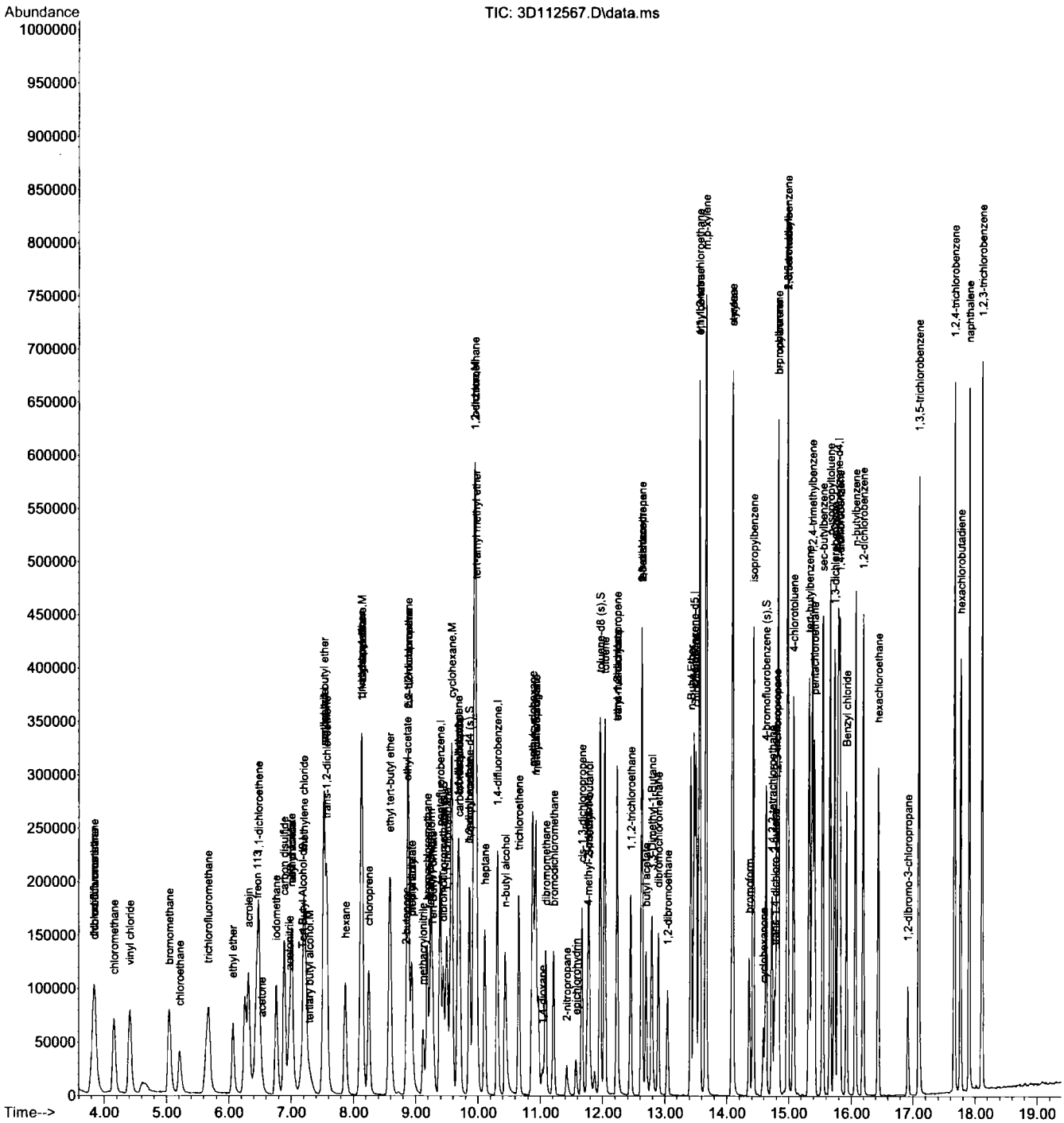
7.4.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112567.D
Acq On : 12 Aug 2015 11:11 am
Operator : ximenac
Sample : jc1072-1msd
Misc : MS89457,V3D4823,5,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 14:30:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 14:32:47 2015 3D

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112580.D
Acq On : 12 Aug 2015 5:04 pm
Operator : ximenac
Sample : jc1106-9ms
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 13 10:55:18 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| **Internal Standards** | | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.183 | 65 | 118942 | 500.00 | ug/L | 0.00 |
| 4) pentafluorobenzene | 9.396 | 168 | 243673 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 269432 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 220893 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 129859 | 50.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 99592 | 53.34 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 106.68% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 84836 | 49.05 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 98.10% | | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 300148 | 50.86 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 101.72% | | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 102824 | 51.46 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 102.92% | | | |
| **Target Compounds** | | | | | | Qvalue |
| 2) 1,4-dioxane | 11.037 | 88 | 29277 | 1523.35 | ug/L | 98 |
| 3) tertiary butyl alcohol | 7.299 | 59 | 68870 | 268.10 | ug/L | 98 |
| 8) chlorodifluoromethane | 3.859 | 51 | 149713 | 45.26 | ug/L | 100 |
| 9) dichlorodifluoromethane | 3.849 | 85 | 176433 | 39.84 | ug/L | 99 |
| 10) chloromethane | 4.169 | 50 | 156778 | 44.52 | ug/L | 99 |
| 11) vinyl chloride | 4.420 | 62 | 173369 | 49.09 | ug/L | 100 |
| 12) bromomethane | 5.050 | 94 | 111056 | 48.67 | ug/L | 98 |
| 13) chloroethane | 5.217 | 64 | 69034 | 46.15 | ug/L | 98 |
| 16) trichlorofluoromethane | 5.684 | 101 | 178449 | 48.42 | ug/L | 96 |
| 18) ethyl ether | 6.072 | 74 | 48221 | 52.96 | ug/L | 96 |
| 21) acrolein | 6.324 | 56 | 170834 | 467.44 | ug/L | 98 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 144097 | 49.72 | ug/L | 94 |
| 23) acetone | 6.544 | 43 | 28154 | 51.57 | ug/L | 91 |
| 24) allyl chloride | 7.010 | 76 | 46587 | 51.75 | ug/L | 89 |
| 25) acetonitrile | 6.984 | 40 | 99990 | 550.75 | ug/L | 91 |
| 27) iodomethane | 6.769 | 142 | 234986 | 57.02 | ug/L | 97 |
| 28) iso-butyl alcohol | 9.690 | 41 | 33327 | 549.37 | ug/L | 92 |
| 29) carbon disulfide | 6.895 | 76 | 367546 | 50.15 | ug/L | 99 |
| 30) methylene chloride | 7.204 | 84 | 117471 | 54.09 | ug/L | 97 |
| 31) methyl acetate | 7.000 | 43 | 68074 | 56.12 | ug/L | 97 |
| 32) methyl tert butyl ether | 7.529 | 73 | 344903 | 53.61 | ug/L | 99 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 134850 | 50.99 | ug/L | 97 |
| 34) di-isopropyl ether | 8.122 | 45 | 336711 | 49.51 | ug/L | 92 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 346892 | 54.13 | ug/L | 98 |
| 36) 2-butanone | 8.856 | 72 | 9539 | 54.90 | ug/L | 91 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 168581 | 53.66 | ug/L | 99 |
| 38) chloroprene | 8.248 | 53 | 110288 | 47.96 | ug/L | 96 |
| 39) acrylonitrile | 7.529 | 53 | 185809 | 295.49 | ug/L | 94 |
| 40) vinyl acetate | 8.132 | 86 | 13945 | 59.74 | ug/L | 75 |
| 41) ethyl acetate | 8.866 | 45 | 10421 | 43.60 | ug/L # | 1 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 167652 | 50.99 | ug/L | 99 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 114685 | 54.01 | ug/L | 96 |
| 44) propionitrile | 8.940 | 54 | 136437 | 582.25 | ug/L | 93 |
| 45) methyl acrylate | 8.940 | 55 | 87706 | 55.52 | ug/L | 98 |
| 46) bromochloromethane | 9.186 | 128 | 58993 | 57.73 | ug/L | 96 |
| 47) tetrahydrofuran | 9.228 | 42 | 28663 | 46.57 | ug/L | 95 |
| 48) chloroform | 9.244 | 83 | 161039 | 53.16 | ug/L | 98 |
| 49) Tert-Butyl Formate | 9.270 | 59 | 77644 | 44.02 | ug/L # | 97 |
| 52) freon 113 | 6.455 | 151 | 92379 | 51.77 | ug/L | 100 |
| 53) methacrylonitrile | 9.123 | 41 | 44740 | 48.87 | ug/L | 96 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112580.D
Acq On : 12 Aug 2015 5:04 pm
Operator : ximenac
Sample : jc1106-9ms
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 13 10:55:18 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 54) | 1,1,1-trichloroethane | 9.496 | 97 | 245937 | 78.63 | ug/L | 98 |
| 57) | tert-amyl methyl ether | 9.973 | 73 | 333272 | 52.04 | ug/L | 99 |
| 59) | epichlorohydrin | 11.577 | 57 | 37667 | 254.66 | ug/L | 93 |
| 60) | n-butyl alcohol | 10.439 | 56 | 134425 | 3055.72 | ug/L | 95 |
| 61) | cyclohexane | 9.569 | 84 | 146766 | 46.52 | ug/L | 97 |
| 62) | carbon tetrachloride | 9.705 | 117 | 141640 | 54.36 | ug/L | 98 |
| 63) | 1,1-dichloropropene | 9.674 | 75 | 99863 | 51.46 | ug/L | 97 |
| 64) | hexane | 7.876 | 57 | 85248 | 49.18 | ug/L | 99 |
| 65) | benzene | 9.936 | 78 | 329016 | 51.97 | ug/L | 99 |
| 66) | heptane | 10.109 | 57 | 48794 | 49.56 | ug/L | 95 |
| 67) | isopropyl acetate | 9.857 | 43 | 159239 | 57.82 | ug/L | 99 |
| 68) | 1,2-dichloroethane | 9.952 | 62 | 102119 | 54.01 | ug/L | 99 |
| 69) | trichloroethene | 10.660 | 95 | 80069 | 52.31 | ug/L | 96 |
| 72) | 2-nitropropane | 11.425 | 41 | 17612 | 31.47 | ug/L | 99 |
| 74) | methyl methacrylate | 10.922 | 41 | 116858 | 53.99 | ug/L | 92 |
| 75) | 1,2-dichloropropane | 10.922 | 63 | 86601 | 52.33 | ug/L | 100 |
| 76) | methylcyclohexane | 10.875 | 83 | 156528 | 54.67 | ug/L | 95 |
| 77) | dibromomethane | 11.079 | 93 | 56175 | 57.70 | ug/L | 94 |
| 78) | bromodichloromethane | 11.210 | 83 | 108951 | 54.11 | ug/L | 99 |
| 79) | cis-1,3-dichloropropene | 11.671 | 75 | 126627 | 53.57 | ug/L | 95 |
| 81) | 4-methyl-2-pentanone | 11.761 | 58 | 36431 | 60.47 | ug/L | 98 |
| 82) | toluene | 12.033 | 92 | 186346 | 53.56 | ug/L | 99 |
| 83) | 3-methyl-1-butanol | 11.782 | 70 | 57708 | 1267.73 | ug/L | 94 |
| 84) | trans-1,3-dichloropropene | 12.232 | 75 | 115504 | 54.98 | ug/L | 96 |
| 85) | ethyl methacrylate | 12.227 | 69 | 99339 | 53.50 | ug/L | 94 |
| 86) | 1,1,2-trichloroethane | 12.442 | 83 | 63873 | 54.65 | ug/L | 93 |
| 87) | 2-hexanone | 12.620 | 58 | 27687 | 56.22 | ug/L | 96 |
| 89) | tetrachloroethene | 12.626 | 166 | 88433 | 47.02 | ug/L | 99 |
| 90) | 1,3-dichloropropane | 12.631 | 76 | 114159 | 53.26 | ug/L | 96 |
| 91) | butyl acetate | 12.694 | 56 | 52922 | 59.66 | ug/L | 93 |
| 92) | 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 137227 | 647.28 | ug/L | 98 |
| 93) | dibromochloromethane | 12.893 | 129 | 95996 | 57.44 | ug/L | 99 |
| 94) | 1,2-dibromoethane | 13.045 | 107 | 79380 | 56.32 | ug/L | 95 |
| 95) | n-Butyl Ether | 13.423 | 57 | 316783 | 47.41 | ug/L | 99 |
| 96) | chlorobenzene | 13.507 | 112 | 214270 | 54.09 | ug/L | 98 |
| 97) | 1,1,1,2-tetrachloroethane | 13.564 | 131 | 104109 | 59.26 | ug/L | 99 |
| 98) | ethylbenzene | 13.559 | 91 | 345227 | 50.88 | ug/L | 98 |
| 99) | m,p-xylene | 13.664 | 106 | 271633 | 107.05 | ug/L | 98 |
| 100) | o-xylene | 14.083 | 106 | 146051 | 56.35 | ug/L | 97 |
| 101) | styrene | 14.094 | 104 | 223149 | 51.17 | ug/L | 99 |
| 103) | bromoform | 14.361 | 173 | 74117 | 56.84 | ug/L | 98 |
| 105) | isopropylbenzene | 14.424 | 105 | 369534 | 56.71 | ug/L | 99 |
| 107) | bromobenzene | 14.823 | 156 | 108038 | 56.17 | ug/L | 95 |
| 108) | cyclohexanone | 14.587 | 55 | 32221 | 187.12 | ug/L | 96 |
| 109) | 1,1,2,2-tetrachloroethane | 14.728 | 83 | 113463 | 60.16 | ug/L | 99 |
| 110) | trans-1,4-dichloro-2-b... | 14.770 | 53 | 13312 | 31.89 | ug/L | 91 |
| 111) | 1,2,3-trichloropropane | 14.802 | 110 | 25724 | 59.73 | ug/L | 93 |
| 112) | n-propylbenzene | 14.833 | 91 | 389070 | 54.84 | ug/L | 100 |
| 114) | 2-chlorotoluene | 14.980 | 126 | 93938 | 56.68 | ug/L | 96 |
| 115) | 4-chlorotoluene | 15.079 | 126 | 91952 | 57.14 | ug/L | 89 |
| 116) | 1,3,5-trimethylbenzene | 14.985 | 105 | 321149 | 57.91 | ug/L | 99 |
| 117) | tert-butylbenzene | 15.331 | 119 | 252891 | 55.34 | ug/L | 99 |
| 118) | pentachloroethane | 15.410 | 167 | 86846 | 69.69 | ug/L | 98 |
| 119) | 1,2,4-trimethylbenzene | 15.378 | 105 | 320802 | 57.62 | ug/L | 98 |
| 120) | sec-butylbenzene | 15.546 | 105 | 413153 | 56.58 | ug/L | 99 |
| 121) | 1,3-dichlorobenzene | 15.730 | 146 | 203280 | 56.84 | ug/L | 99 |
| 122) | p-isopropyltoluene | 15.661 | 119 | 354869 | 55.66 | ug/L | 98 |
| 123) | 1,4-dichlorobenzene | 15.813 | 146 | 207439 | 54.07 | ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112580.D
Acq On : 12 Aug 2015 5:04 pm
Operator : ximenac
Sample : jc1106-9ms
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 13 10:55:18 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 218588 | 56.70 ug/L | 97 |
| 126) n-butylbenzene | 16.065 | 92 | 174682 | 52.36 ug/L | 98 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 31729 | 56.31 ug/L | 97 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 232551 | 56.81 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 244660 | 58.15 ug/L | 97 |
| 131) hexachlorobutadiene | 17.759 | 225 | 99495 | 47.77 ug/L | 98 |
| 132) naphthalene | 17.895 | 128 | 558007 | 62.61 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 257406 | 58.92 ug/L | 97 |
| 134) hexachloroethane | 16.443 | 119 | 75009 | 56.95 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 225235 | 60.13 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

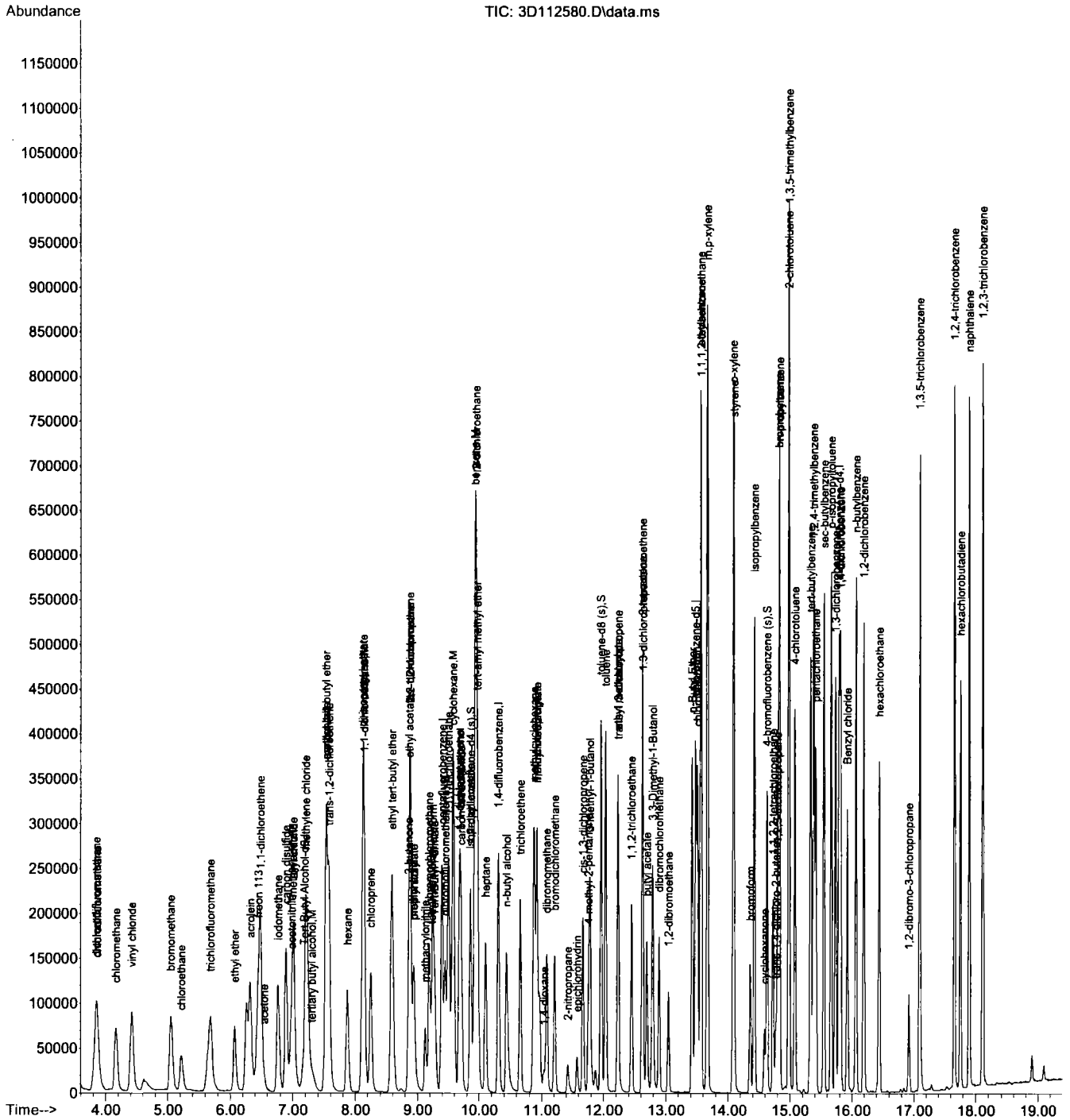
7.4.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112580.D
Acq On : 12 Aug 2015 5:04 pm
Operator : ximenac
Sample : jc1106-9ms
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 13 10:55:18 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112581.D
Acq On : 12 Aug 2015 5:31 pm
Operator : ximenac
Sample : jc1106-9msd
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 10:55:33 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 120440 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 245404 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.313 | 114 | 271506 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 223373 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 132733 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 98227 | 52.24 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 104.48% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 84093 | 48.28 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 96.56% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 304159 | 51.15 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.30% | | |
| 106) 4-bromofluorobenzene (s) | 14.628 | 95 | 103529 | 50.69 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 101.38% | | |
| Target Compounds | | | | | Qvalue |
| 2) 1,4-dioxane | 11.037 | 88 | 31259 | 1606.25 ug/L | 98 |
| 3) tertiary butyl alcohol | 7.283 | 59 | 71369 | 274.38 ug/L | 93 |
| 8) chlorodifluoromethane | 3.859 | 51 | 150846 | 45.28 ug/L | 98 |
| 9) dichlorodifluoromethane | 3.844 | 85 | 180947 | 40.57 ug/L | 99 |
| 10) chloromethane | 4.163 | 50 | 153746 | 43.35 ug/L | 99 |
| 11) vinyl chloride | 4.420 | 62 | 173771 | 48.85 ug/L | 98 |
| 12) bromomethane | 5.049 | 94 | 110789 | 48.21 ug/L | 97 |
| 13) chloroethane | 5.212 | 64 | 68041 | 45.16 ug/L | 98 |
| 16) trichlorofluoromethane | 5.679 | 101 | 180751 | 48.69 ug/L | 99 |
| 18) ethyl ether | 6.072 | 74 | 48214 | 52.58 ug/L | 93 |
| 21) acrolein | 6.318 | 56 | 165424 | 449.45 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 142451 | 48.80 ug/L | 95 |
| 23) acetone | 6.538 | 43 | 26747 | 48.64 ug/L | 93 |
| 24) allyl chloride | 7.016 | 76 | 48676 | 53.69 ug/L | 93 |
| 25) acetonitrile | 6.979 | 40 | 98817 | 540.45 ug/L | 96 |
| 27) iodomethane | 6.764 | 142 | 235196 | 56.67 ug/L | 98 |
| 28) iso-butyl alcohol | 9.684 | 41 | 33465 | 547.75 ug/L | 93 |
| 29) carbon disulfide | 6.895 | 76 | 367504 | 49.79 ug/L | 98 |
| 30) methylene chloride | 7.204 | 84 | 116382 | 53.21 ug/L | 95 |
| 31) methyl acetate | 7.000 | 43 | 65984 | 54.02 ug/L | 96 |
| 32) methyl tert butyl ether | 7.529 | 73 | 341097 | 52.64 ug/L | 98 |
| 33) trans-1,2-dichloroethene | 7.571 | 61 | 133109 | 49.98 ug/L | 99 |
| 34) di-isopropyl ether | 8.122 | 45 | 335679 | 49.01 ug/L | 93 |
| 35) ethyl tert-butyl ether | 8.583 | 59 | 345296 | 53.51 ug/L | 98 |
| 36) 2-butanone | 8.845 | 72 | 9056 | 51.75 ug/L | 100 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 166248 | 52.54 ug/L | 99 |
| 38) chloroprene | 8.248 | 53 | 107384 | 46.37 ug/L | 96 |
| 39) acrylonitrile | 7.529 | 53 | 178307 | 281.56 ug/L | 95 |
| 40) vinyl acetate | 8.127 | 86 | 13928 | 59.25 ug/L | 88 |
| 41) ethyl acetate | 8.856 | 45 | 11684 | 48.54 ug/L | 61 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 164890 | 49.80 ug/L | 98 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 112305 | 52.51 ug/L | 96 |
| 44) propionitrile | 8.935 | 54 | 131291 | 556.34 ug/L | 92 |
| 45) methyl acrylate | 8.940 | 55 | 85954 | 54.03 ug/L | 99 |
| 46) bromochloromethane | 9.186 | 128 | 58126 | 56.48 ug/L | 95 |
| 47) tetrahydrofuran | 9.223 | 42 | 27569 | 44.47 ug/L | 93 |
| 48) chloroform | 9.244 | 83 | 158266 | 51.87 ug/L | 100 |
| 49) Tert-Butyl Formate | 9.275 | 59 | 60646 | 34.14 ug/L # | 97 |
| 52) freon 113 | 6.455 | 151 | 92868 | 51.67 ug/L | 96 |
| 53) methacrylonitrile | 9.123 | 41 | 44948 | 48.75 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112581.D
Acq On : 12 Aug 2015 5:31 pm
Operator : ximenac
Sample : jc1106-9msd
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 10:55:33 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 54) | 1,1,1-trichloroethane | 9.501 | 97 | 247216 | 78.48 | ug/L | 97 |
| 57) | tert-amyl methyl ether | 9.967 | 73 | 332323 | 51.52 | ug/L | 98 |
| 59) | epichlorohydrin | 11.572 | 57 | 36351 | 243.88 | ug/L | 98 |
| 60) | n-butyl alcohol | 10.439 | 56 | 134782 | 3040.43 | ug/L | 96 |
| 61) | cyclohexane | 9.574 | 84 | 146344 | 46.03 | ug/L | 96 |
| 62) | carbon tetrachloride | 9.705 | 117 | 141526 | 53.90 | ug/L | 98 |
| 63) | 1,1-dichloropropene | 9.674 | 75 | 97659 | 49.94 | ug/L | 99 |
| 64) | hexane | 7.870 | 57 | 83558 | 47.84 | ug/L | 98 |
| 65) | benzene | 9.936 | 78 | 329060 | 51.58 | ug/L | 98 |
| 66) | heptane | 10.109 | 57 | 48456 | 48.84 | ug/L | 97 |
| 67) | isopropyl acetate | 9.857 | 43 | 154136 | 55.54 | ug/L | 98 |
| 68) | 1,2-dichloroethane | 9.952 | 62 | 101170 | 53.10 | ug/L | 99 |
| 69) | trichloroethene | 10.654 | 95 | 80528 | 52.21 | ug/L | 99 |
| 72) | 2-nitropropane | 11.425 | 41 | 17196 | 30.49 | ug/L | 94 |
| 74) | methyl methacrylate | 10.922 | 41 | 115705 | 53.05 | ug/L | 92 |
| 75) | 1,2-dichloropropane | 10.922 | 63 | 86939 | 52.13 | ug/L | 98 |
| 76) | methylcyclohexane | 10.874 | 83 | 154924 | 53.69 | ug/L | 96 |
| 77) | dibromomethane | 11.079 | 93 | 55998 | 57.08 | ug/L | 95 |
| 78) | bromodichloromethane | 11.210 | 83 | 108595 | 53.52 | ug/L | 97 |
| 79) | cis-1,3-dichloropropene | 11.671 | 75 | 127624 | 53.58 | ug/L | 98 |
| 81) | 4-methyl-2-pentanone | 11.761 | 58 | 36247 | 59.71 | ug/L | 99 |
| 82) | toluene | 12.033 | 92 | 189899 | 54.17 | ug/L | 99 |
| 83) | 3-methyl-1-butanol | 11.787 | 70 | 57545 | 1254.49 | ug/L | 94 |
| 84) | trans-1,3-dichloropropene | 12.232 | 75 | 118174 | 55.82 | ug/L | 93 |
| 85) | ethyl methacrylate | 12.227 | 69 | 98254 | 52.51 | ug/L | 97 |
| 86) | 1,1,2-trichloroethane | 12.447 | 83 | 64781 | 55.01 | ug/L | 97 |
| 87) | 2-hexanone | 12.620 | 58 | 27699 | 55.82 | ug/L | 96 |
| 89) | tetrachloroethene | 12.626 | 166 | 90263 | 47.46 | ug/L | 97 |
| 90) | 1,3-dichloropropane | 12.626 | 76 | 117108 | 54.03 | ug/L | 97 |
| 91) | butyl acetate | 12.694 | 56 | 52366 | 58.38 | ug/L | 92 |
| 92) | 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 136313 | 635.83 | ug/L | 98 |
| 93) | dibromochloromethane | 12.893 | 129 | 95866 | 56.72 | ug/L | 99 |
| 94) | 1,2-dibromoethane | 13.045 | 107 | 79829 | 56.01 | ug/L | 96 |
| 95) | n-Butyl Ether | 13.423 | 57 | 314784 | 46.59 | ug/L | 98 |
| 96) | chlorobenzene | 13.506 | 112 | 219227 | 54.73 | ug/L | 97 |
| 97) | 1,1,1,2-tetrachloroethane | 13.564 | 131 | 103486 | 58.25 | ug/L | 99 |
| 98) | ethylbenzene | 13.559 | 91 | 346330 | 50.48 | ug/L | 99 |
| 99) | m,p-xylene | 13.664 | 106 | 270932 | 105.59 | ug/L | 97 |
| 100) | o-xylene | 14.083 | 106 | 144745 | 55.23 | ug/L | 92 |
| 101) | styrene | 14.094 | 104 | 223372 | 50.66 | ug/L | 99 |
| 103) | bromoform | 14.356 | 173 | 73545 | 55.77 | ug/L | 100 |
| 105) | isopropylbenzene | 14.424 | 105 | 369051 | 55.41 | ug/L | 99 |
| 107) | bromobenzene | 14.822 | 156 | 108505 | 55.19 | ug/L | 97 |
| 108) | cyclohexanone | 14.587 | 55 | 32872 | 186.88 | ug/L | 96 |
| 109) | 1,1,2,2-tetrachloroethane | 14.728 | 83 | 112065 | 58.14 | ug/L | 99 |
| 110) | trans-1,4-dichloro-2-b... | 14.770 | 53 | 14496 | 33.98 | ug/L | 99 |
| 111) | 1,2,3-trichloropropane | 14.802 | 110 | 25718 | 58.42 | ug/L | 90 |
| 112) | n-propylbenzene | 14.833 | 91 | 389072 | 53.65 | ug/L | 99 |
| 114) | 2-chlorotoluene | 14.980 | 126 | 94247 | 55.64 | ug/L | 95 |
| 115) | 4-chlorotoluene | 15.079 | 126 | 91518 | 55.64 | ug/L | 89 |
| 116) | 1,3,5-trimethylbenzene | 14.985 | 105 | 320652 | 56.57 | ug/L | 98 |
| 117) | tert-butylbenzene | 15.331 | 119 | 260725 | 55.82 | ug/L | 96 |
| 118) | pentachloroethane | 15.415 | 167 | 86425 | 67.85 | ug/L | 99 |
| 119) | 1,2,4-trimethylbenzene | 15.378 | 105 | 315291 | 55.40 | ug/L | 98 |
| 120) | sec-butylbenzene | 15.546 | 105 | 415688 | 55.70 | ug/L | 100 |
| 121) | 1,3-dichlorobenzene | 15.735 | 146 | 204439 | 55.93 | ug/L | 99 |
| 122) | p-isopropyltoluene | 15.661 | 119 | 353525 | 54.25 | ug/L | 99 |
| 123) | 1,4-dichlorobenzene | 15.813 | 146 | 208322 | 53.12 | ug/L | 100 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112581.D
Acq On : 12 Aug 2015 5:31 pm
Operator : ximenac
Sample : jc1106-9msd
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 10:55:33 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 221300 | 56.16 ug/L | 98 |
| 126) n-butylbenzene | 16.065 | 92 | 173046 | 50.75 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 31134 | 54.06 ug/L | 98 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 235947 | 56.39 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 251677 | 58.52 ug/L | 96 |
| 131) hexachlorobutadiene | 17.759 | 225 | 104875 | 49.26 ug/L | 99 |
| 132) naphthalene | 17.900 | 128 | 557097 | 61.15 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 267604 | 59.93 ug/L | 99 |
| 134) hexachloroethane | 16.443 | 119 | 74829 | 55.59 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 222934 | 58.22 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

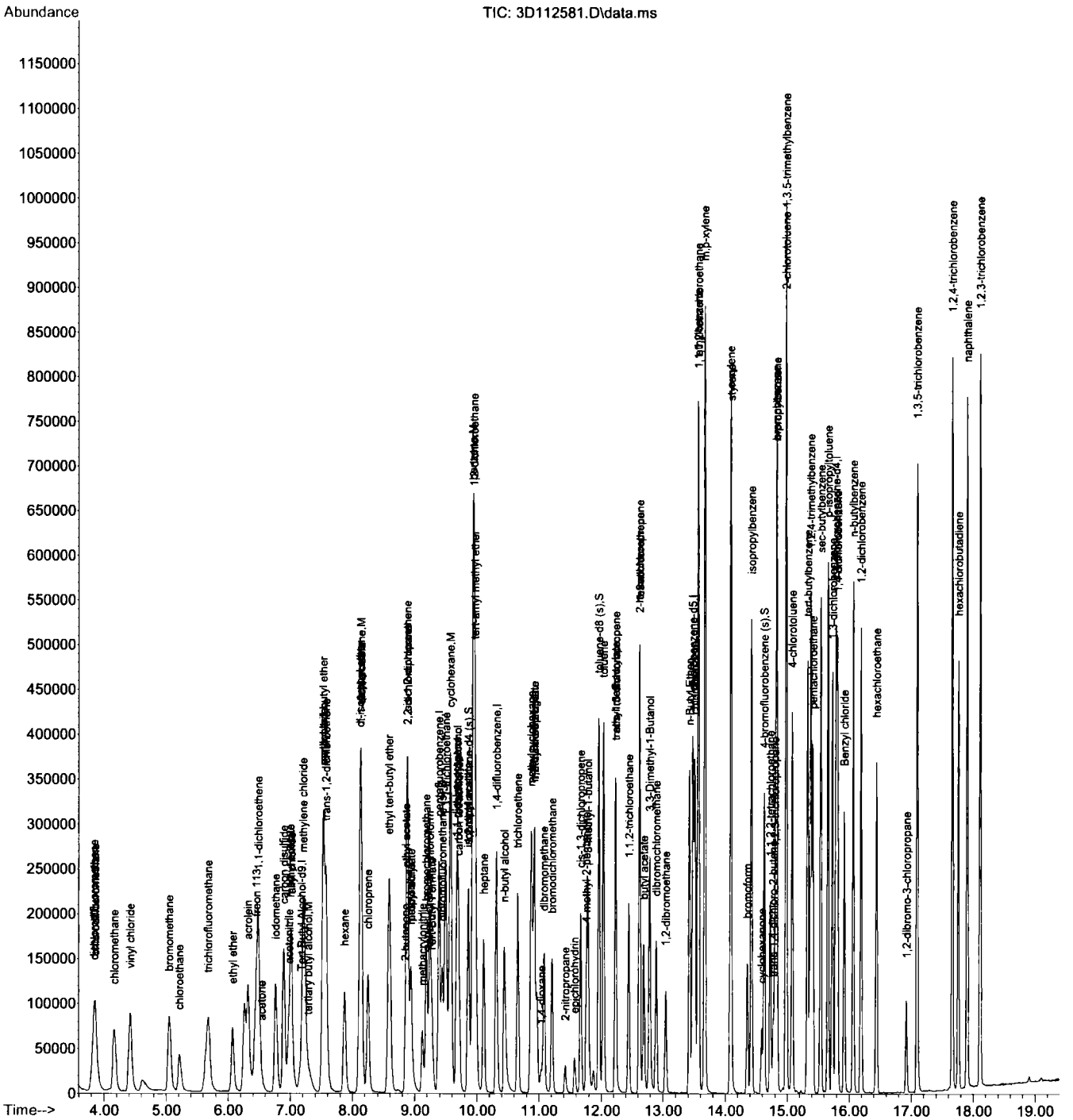
7.4.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4823-4824\
Data File : 3D112581.D
Acq On : 12 Aug 2015 5:31 pm
Operator : ximenac
Sample : jc1106-9msd
Misc : MS89468,V3D4824,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 10:55:33 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



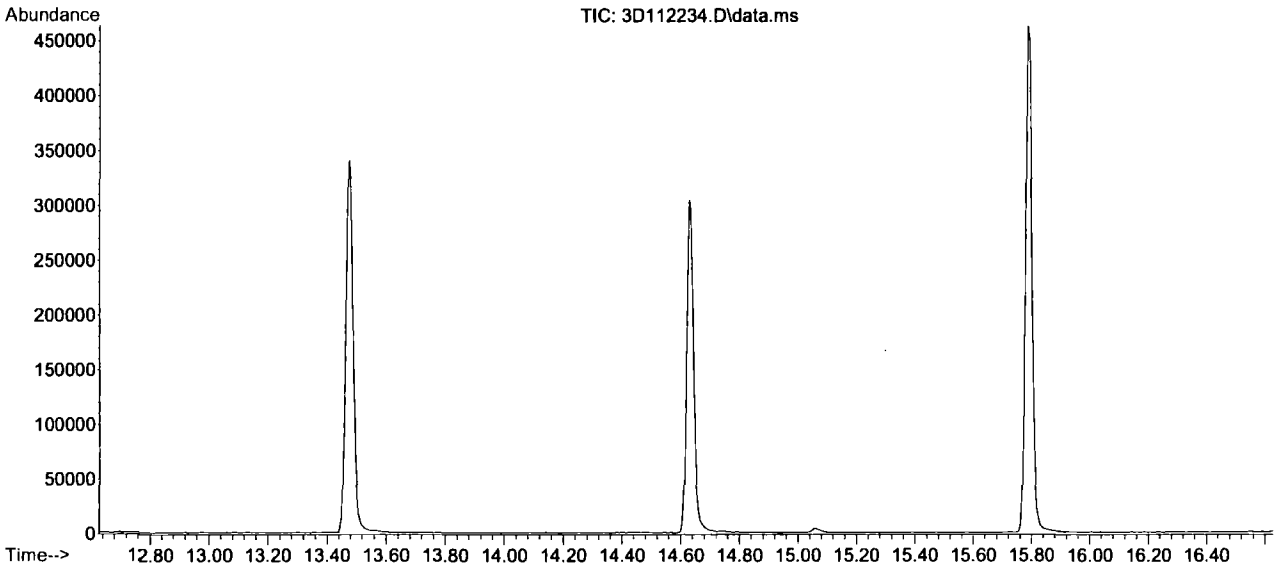


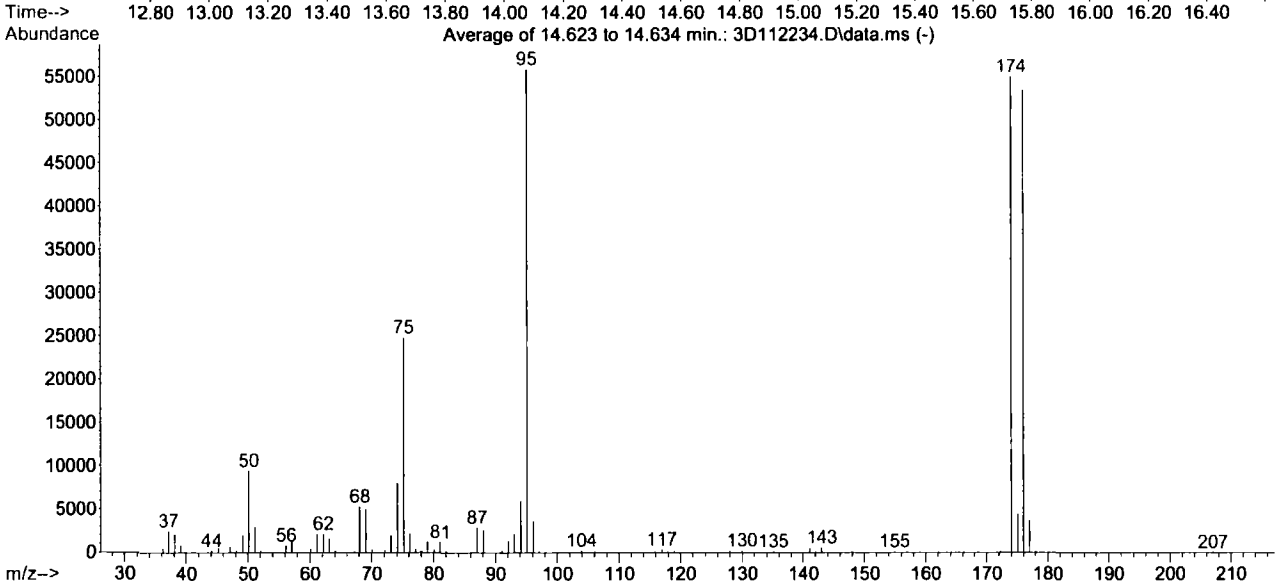

7.4.6
7

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\3D112234.D  Vial: 19
Acq On : 29 Jul 2015 7:16 pm  Operator: ximenac
Sample : bfb  Inst : MS3D
Misc : MS88759,V3D4810,5,,,,1  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um




AutoFind: Scans 2105, 2106, 2107; Background Corrected with Scan 2096

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.9 | 9449 | PASS |
| 75 | 95 | 30 | 60 | 44.4 | 24824 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 55917 | PASS |
| 96 | 95 | 5 | 9 | 6.5 | 3622 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 98.4 | 55002 | PASS |
| 175 | 174 | 5 | 9 | 8.0 | 4400 | PASS |
| 176 | 174 | 95 | 101 | 97.3 | 53496 | PASS |
| 177 | 176 | 5 | 9 | 6.9 | 3680 | PASS |

3D112234.D M3D4810.M Thu Jul 30 11:19:46 2015 3D

Average of 14.623 to 14.634 min.: 3D112234.D\data.ms
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.05 | 493 | 50.05 | 9449 | 64.00 | 176 | 77.70 | 93 |
| 37.05 | 2471 | 51.05 | 2986 | 67.10 | 126 | 77.95 | 253 |
| 38.05 | 2152 | 52.00 | 148 | 68.00 | 5281 | 78.90 | 1247 |
| 39.00 | 879 | 55.00 | 90 | 69.00 | 4980 | 80.00 | 329 |
| 39.85 | 75 | 56.05 | 800 | 70.00 | 366 | 80.95 | 1205 |
| 41.00 | 3 | 57.05 | 1312 | 72.00 | 256 | 81.90 | 232 |
| 44.00 | 189 | 58.00 | 27 | 73.00 | 2007 | 85.95 | 63 |
| 45.05 | 534 | 60.05 | 448 | 74.00 | 8028 | 86.95 | 2893 |
| 47.05 | 714 | 61.05 | 2114 | 75.05 | 24824 | 88.00 | 2603 |
| 47.95 | 270 | 62.05 | 2139 | 76.05 | 2203 | 90.95 | 262 |
| 49.05 | 1993 | 63.00 | 1570 | 77.00 | 380 | 92.00 | 1308 |

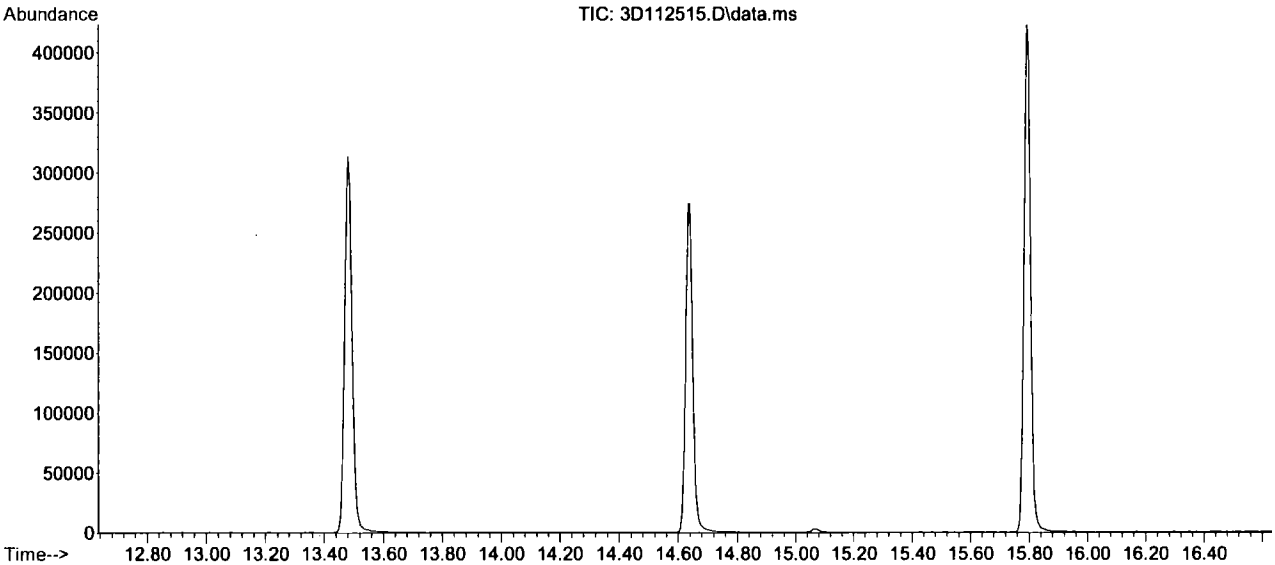
Average of 14.623 to 14.634 min.: 3D112234.D\data.ms
bfb
Modified:subtracted

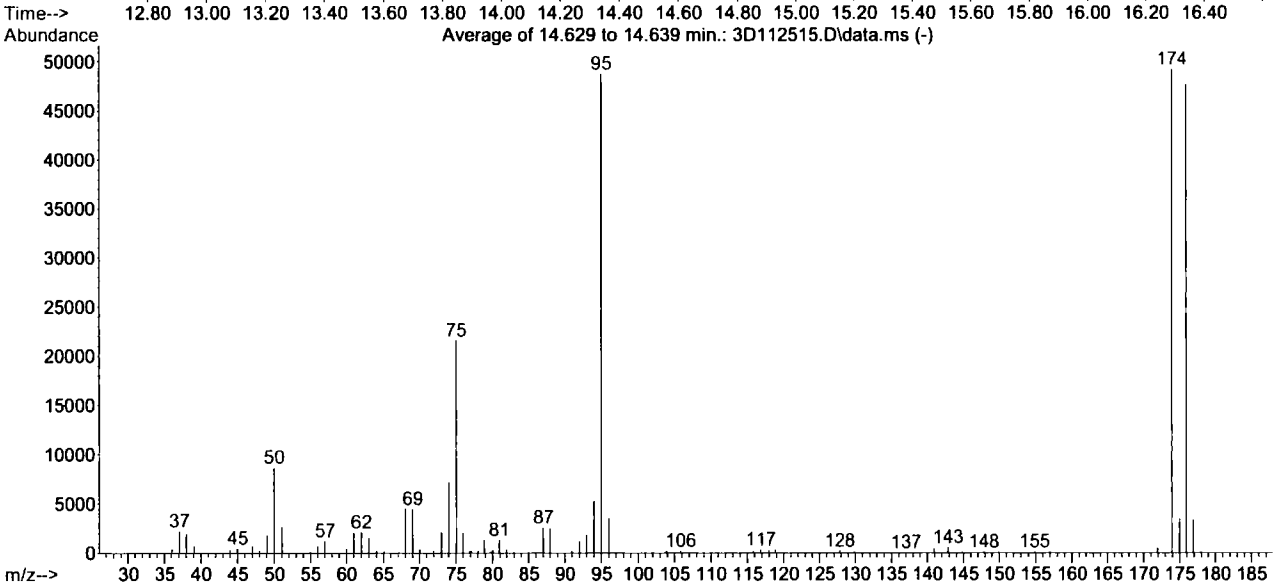
| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 93.00 | 2121 | 116.90 | 341 | 145.90 | 39 | 177.85 | 116 |
| 94.05 | 5943 | 117.85 | 145 | 147.90 | 149 | 206.95 | 14 |
| 95.00 | 55917 | 118.90 | 246 | 154.85 | 123 | | |
| 96.00 | 3622 | 127.90 | 167 | 156.95 | 68 | | |
| 97.00 | 131 | 128.90 | 35 | 159.00 | 36 | | |
| 103.85 | 210 | 129.85 | 199 | 171.60 | 26 | | |
| 104.80 | 27 | 134.95 | 117 | 172.15 | 123 | | |
| 105.00 | 67 | 136.90 | 43 | 173.90 | 55002 | | |
| 105.95 | 184 | 140.95 | 440 | 175.00 | 4400 | | |
| 114.90 | 29 | 141.85 | 74 | 175.90 | 53496 | | |
| 115.85 | 160 | 142.90 | 533 | 176.90 | 3680 | | |

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\3D112515.D  Vial: 3
Acq On : 11 Aug 2015 9:53 am  Operator: ximenac
Sample : bfb  Inst : MS3D
Misc : MS89341,V3D4822,5,,,,1  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um




AutoFind: Scans 2106, 2107, 2108; Background Corrected with Scan 2098

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 17.8 | 8665 | PASS |
| 75 | 95 | 30 | 60 | 44.2 | 21568 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 48757 | PASS |
| 96 | 95 | 5 | 9 | 7.1 | 3479 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 100.9 | 49194 | PASS |
| 175 | 174 | 5 | 9 | 7.2 | 3521 | PASS |
| 176 | 174 | 95 | 101 | 96.9 | 47664 | PASS |
| 177 | 176 | 5 | 9 | 6.9 | 3271 | PASS |

3D112515.D M3D4810.M Tue Aug 11 16:09:46 2015 3D

Average of 14.629 to 14.639 min.: 3D112515.D\data.ms
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.05 | 361 | 51.05 | 2687 | 67.10 | 135 | 78.05 | 194 |
| 37.05 | 2209 | 52.05 | 72 | 68.00 | 4455 | 78.90 | 1278 |
| 38.05 | 1937 | 54.95 | 113 | 69.00 | 4470 | 79.80 | 144 |
| 39.10 | 741 | 56.00 | 655 | 70.05 | 363 | 80.05 | 270 |
| 39.95 | 16 | 57.00 | 1190 | 71.95 | 248 | 80.95 | 1302 |
| 44.00 | 316 | 60.00 | 405 | 73.00 | 2109 | 81.95 | 303 |
| 45.00 | 454 | 61.00 | 2063 | 74.05 | 7123 | 86.00 | 26 |
| 47.00 | 696 | 62.00 | 2092 | 75.05 | 21568 | 87.00 | 2573 |
| 48.00 | 248 | 63.00 | 1519 | 76.00 | 2035 | 88.00 | 2413 |
| 49.05 | 1771 | 64.05 | 224 | 76.90 | 228 | 90.95 | 152 |
| 50.00 | 8665 | 65.05 | 163 | 77.10 | 165 | 92.00 | 1168 |

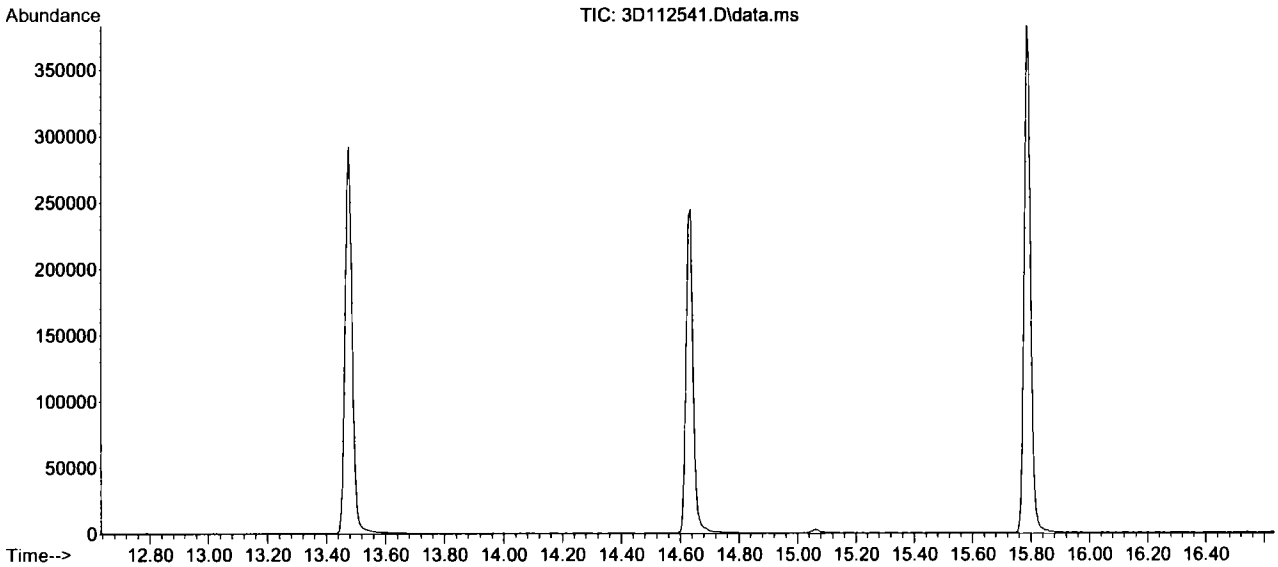
Average of 14.629 to 14.639 min.: 3D112515.D\data.ms
bfb
Modified:subtracted

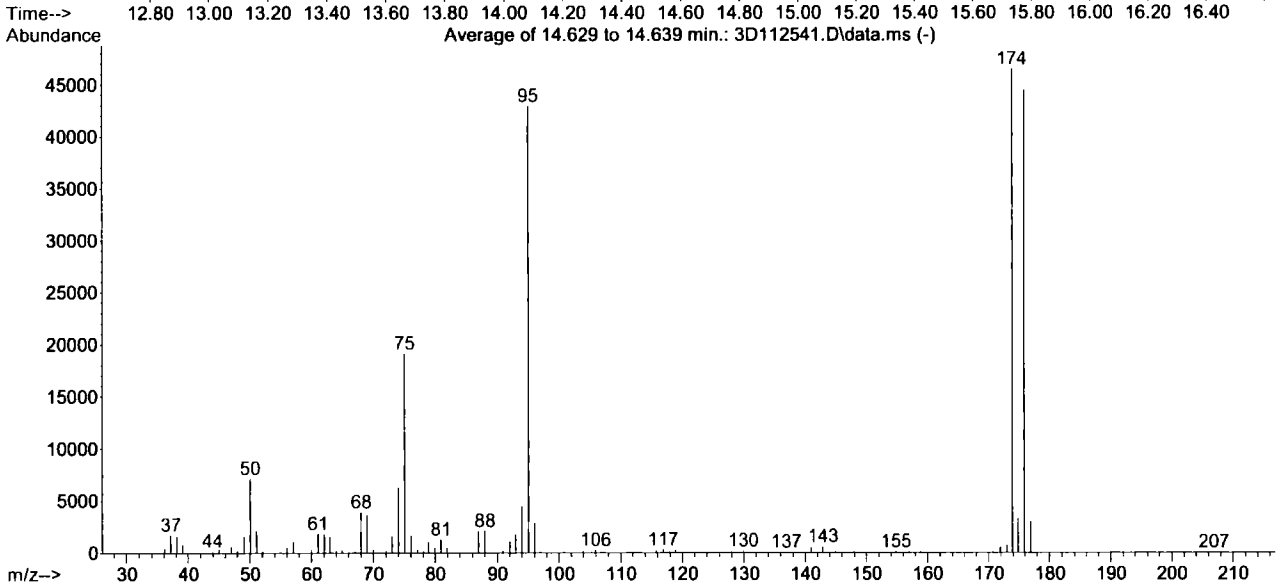
| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 93.00 | 1778 | 116.85 | 317 | 142.85 | 570 | 175.90 | 47664 |
| 94.00 | 5278 | 117.95 | 180 | 144.85 | 99 | 176.90 | 3271 |
| 95.00 | 48757 | 118.90 | 281 | 147.85 | 106 | 177.95 | 68 |
| 96.05 | 3479 | 127.85 | 197 | 149.90 | 36 | | |
| 96.90 | 54 | 129.00 | 36 | 154.85 | 127 | | |
| 103.80 | 79 | 129.90 | 155 | 156.80 | 31 | | |
| 103.95 | 126 | 130.80 | 30 | 157.00 | 67 | | |
| 104.90 | 28 | 135.00 | 30 | 170.90 | 26 | | |
| 105.85 | 195 | 137.00 | 30 | 171.95 | 513 | | |
| 114.90 | 25 | 140.95 | 431 | 173.90 | 49194 | | |
| 115.80 | 188 | 142.10 | 32 | 174.95 | 3521 | | |

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\3D\v3d4822\3D112541.D  Vial: 34
Acq On : 11 Aug 2015 10:50 pm  Operator: ximenac
Sample : bfb  Inst : MS3D
Misc : MS89468,V3D4823,5,,,,1  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um




AutoFind: Scans 2106, 2107, 2108; Background Corrected with Scan 2097

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 16.6 | 7142 | PASS |
| 75 | 95 | 30 | 60 | 44.5 | 19101 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 42928 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 2834 | PASS |
| 173 | 174 | 0.00 | 2 | 1.4 | 632 | PASS |
| 174 | 95 | 50 | 120 | 108.2 | 46456 | PASS |
| 175 | 174 | 5 | 9 | 7.1 | 3302 | PASS |
| 176 | 174 | 95 | 101 | 95.8 | 44520 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 2956 | PASS |

3D112541.D M3D4810.M Wed Aug 12 09:32:07 2015 T

Average of 14.629 to 14.639 min.: 3D112541.D\data.ms
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.05 | 362 | 51.10 | 2113 | 67.05 | 147 | 78.90 | 1091 |
| 37.10 | 1686 | 52.05 | 110 | 68.00 | 3901 | 79.95 | 446 |
| 38.10 | 1599 | 54.95 | 79 | 69.00 | 3608 | 80.90 | 1258 |
| 39.05 | 745 | 56.00 | 484 | 70.00 | 302 | 81.90 | 387 |
| 39.95 | 1 | 57.00 | 1032 | 72.00 | 203 | 87.00 | 2076 |
| 43.95 | 137 | 60.00 | 351 | 73.00 | 1577 | 88.00 | 2111 |
| 45.00 | 321 | 61.00 | 1831 | 74.00 | 6264 | 90.95 | 176 |
| 47.00 | 571 | 62.05 | 1765 | 75.00 | 19101 | 92.00 | 1103 |
| 47.95 | 244 | 63.00 | 1475 | 76.05 | 1637 | 93.00 | 1810 |
| 49.05 | 1557 | 63.95 | 182 | 77.05 | 287 | 94.00 | 4462 |
| 50.05 | 7142 | 64.95 | 267 | 78.05 | 194 | 95.00 | 42928 |

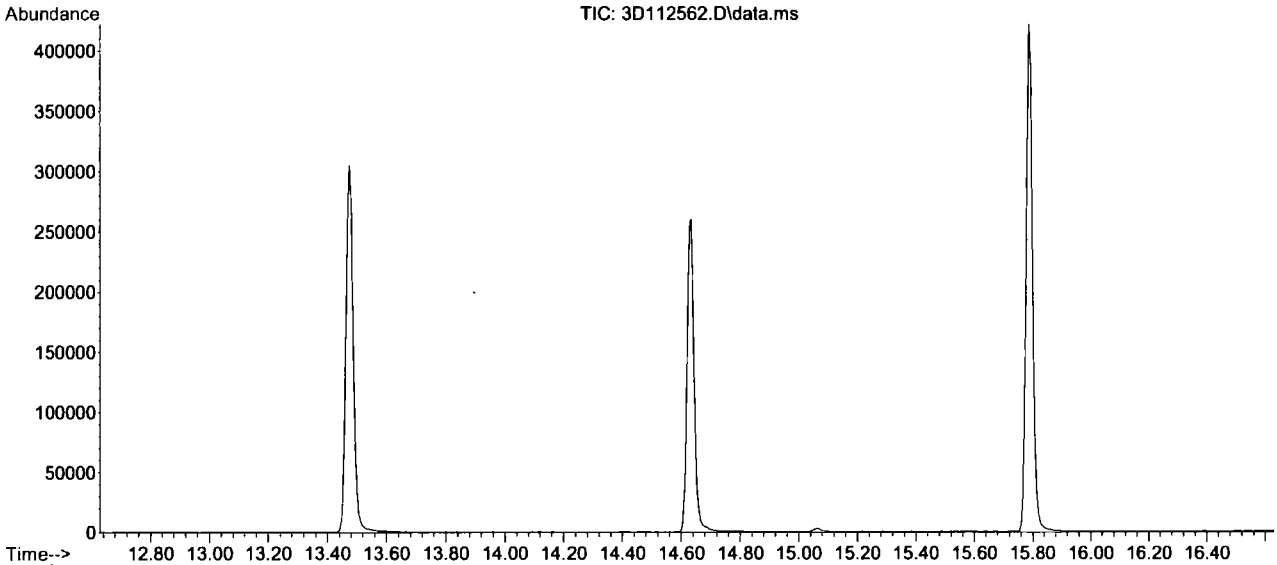
Average of 14.629 to 14.639 min.: 3D112541.D\data.ms
bfb
Modified:subtracted

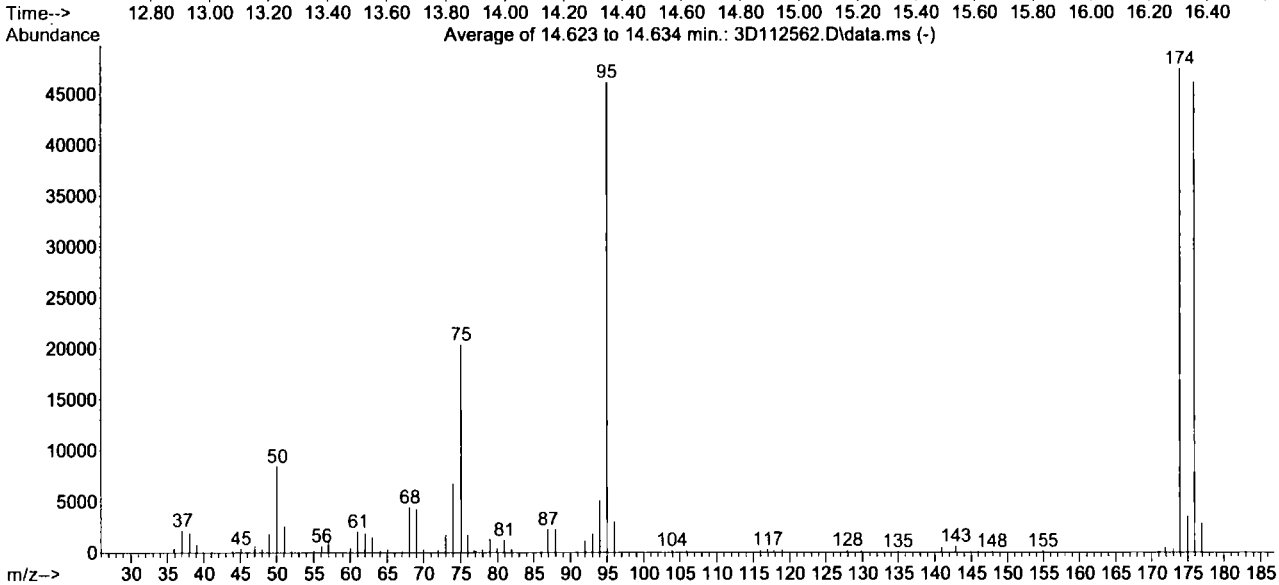
| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 96.05 | 2834 | 134.95 | 92 | 170.70 | 54 | | |
| 96.95 | 92 | 136.90 | 62 | 171.90 | 548 | | |
| 103.95 | 193 | 140.95 | 444 | 173.00 | 632 | | |
| 105.95 | 221 | 142.90 | 589 | 173.90 | 46456 | | |
| 115.80 | 187 | 144.90 | 80 | 174.90 | 3302 | | |
| 116.90 | 289 | 146.00 | 28 | 175.90 | 44520 | | |
| 117.90 | 159 | 147.90 | 121 | 176.95 | 2956 | | |
| 118.95 | 232 | 154.85 | 88 | 206.90 | 49 | | |
| 127.95 | 149 | 155.90 | 37 | | | | |
| 128.90 | 63 | 156.95 | 60 | | | | |
| 129.90 | 182 | 158.85 | 60 | | | | |

SW-846 Method 8260

Data File : C:\msdchem\1\DATA\3D112562.D  Vial: 1
Acq On : 12 Aug 2015 8:16 am  Operator: ximenac
Sample : bfb  Inst : MS3D
Misc : MS89457,V3D4824,5,,,,1  Multiplr: 1.00
MS Integration Params: rteint.p

Method : C:\msdchem\1\METHODS\M3D4810.M (RTE Integrator)
Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um




AutoFind: Scans 2105, 2106, 2107; Background Corrected with Scan 2097

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 18.2 | 8422 | PASS |
| 75 | 95 | 30 | 60 | 44.1 | 20373 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 46160 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 2967 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 385 | PASS |
| 174 | 95 | 50 | 120 | 102.8 | 47440 | PASS |
| 175 | 174 | 5 | 9 | 7.5 | 3561 | PASS |
| 176 | 174 | 95 | 101 | 97.4 | 46184 | PASS |
| 177 | 176 | 5 | 9 | 6.2 | 2874 | PASS |

3D112562.D M3D4810.M Wed Aug 12 14:28:45 2015 3D

Average of 14.623 to 14.634 min.: 3D112562.D\data.ms
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 35.95 | 390 | 49.00 | 1789 | 64.05 | 179 | 76.85 | 148 |
| 37.05 | 2149 | 50.05 | 8422 | 65.10 | 283 | 77.05 | 152 |
| 38.10 | 1907 | 51.05 | 2554 | 67.05 | 100 | 77.95 | 303 |
| 39.05 | 779 | 52.05 | 117 | 68.05 | 4438 | 78.95 | 1375 |
| 39.95 | 56 | 55.05 | 115 | 69.00 | 4241 | 79.90 | 388 |
| 41.10 | 30 | 56.05 | 614 | 69.95 | 305 | 80.90 | 1243 |
| 43.95 | 113 | 57.00 | 1014 | 71.95 | 210 | 81.95 | 344 |
| 45.05 | 364 | 60.05 | 434 | 73.00 | 1754 | 85.90 | 34 |
| 46.00 | 27 | 61.00 | 2028 | 74.00 | 6704 | 86.10 | 35 |
| 47.00 | 677 | 62.00 | 1884 | 75.05 | 20373 | 86.95 | 2252 |
| 48.05 | 259 | 63.00 | 1467 | 76.00 | 1689 | 87.95 | 2249 |

Average of 14.623 to 14.634 min.: 3D112562.D\data.ms
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 90.80 | 47 | 114.80 | 35 | 142.85 | 588 | 174.95 | 3561 |
| 90.95 | 103 | 115.95 | 142 | 144.00 | 29 | 175.90 | 46184 |
| 92.00 | 1155 | 116.95 | 291 | 144.90 | 159 | 176.95 | 2874 |
| 93.00 | 1866 | 117.85 | 145 | 145.95 | 68 | | |
| 94.00 | 5090 | 118.95 | 227 | 147.90 | 107 | | |
| 95.00 | 46160 | 127.95 | 206 | 154.90 | 112 | | |
| 96.00 | 2967 | 129.85 | 170 | 170.95 | 55 | | |
| 96.80 | 34 | 130.90 | 30 | 171.20 | 47 | | |
| 97.00 | 34 | 134.90 | 86 | 171.90 | 472 | | |
| 103.90 | 202 | 136.80 | 31 | 173.00 | 385 | | |
| 105.90 | 194 | 140.90 | 463 | 173.90 | 47440 | | |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112235.d
Acq On : 29 Jul 2015 8:15 pm
Operator : ximenac
Sample : IC4810-0.2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 06 13:48:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 110638 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.401 | 168 | 213329 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.319 | 114 | 234555 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.480 | 117 | 191394 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.793 | 152 | 121226 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.448 | 113 | 80221 | 43.48 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 86.96% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.873 | 65 | 75864 | 39.83 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 79.66% | | |
| 80) toluene-d8 (s) | 11.970 | 98 | 258418 | 51.74 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 103.48% | | |
| 106) 4-bromofluorobenzene (s) | 14.634 | 95 | 92882 | 45.28 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 90.56% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 10) chloromethane | 4.158 | 50 | 847 | 0.27 ug/L # | 48 |
| 11) vinyl chloride | 4.415 | 62 | 488 | 0.14 ug/L # | 50 |
| 12) bromomethane | 5.060 | 94 | 417 | 0.24 ug/L # | 60 |
| 27) iodomethane | 6.775 | 142 | 469 | 0.11 ug/L | 88 |
| 29) carbon disulfide | 6.895 | 76 | 1035 | 0.11 ug/L | 71 |
| 30) methylene chloride | 7.225 | 84 | 326 | 0.13 ug/L # | 33 |
| 32) methyl tert butyl ether | 7.556 | 73 | 1049 | 0.15 ug/L # | 46 |
| 33) trans-1,2-dichloroethene | 7.598 | 61 | 361 | 0.11 ug/L # | 83 |
| 34) di-isopropyl ether | 8.143 | 45 | 1282 | 0.16 ug/L # | 46 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 829 | 0.11 ug/L | 75 |
| 37) 1,1-dichloroethane | 8.164 | 63 | 407 | 0.11 ug/L # | 49 |
| 38) chloroprene | 8.264 | 53 | 303 | 0.11 ug/L # | 37 |
| 39) acrylonitrile | 7.566 | 53 | 381 | 0.54 ug/L # | 60 |
| 42) 2,2-dichloropropane | 8.903 | 77 | 631 | 0.18 ug/L | 56 |
| 43) cis-1,2-dichloroethene | 8.893 | 96 | 302 | 0.14 ug/L # | 41 |
| 48) chloroform | 9.260 | 83 | 463 | 0.13 ug/L | 59 |
| 57) tert-amyl methyl ether | 9.973 | 73 | 1114 | 0.15 ug/L | 52 |
| 62) carbon tetrachloride | 9.726 | 117 | 374 | 0.15 ug/L # | 66 |
| 64) hexane | 7.881 | 57 | 287 | 0.14 ug/L | 87 |
| 65) benzene | 9.947 | 78 | 1004 | 0.15 ug/L | 92 |
| 69) trichloroethene | 10.675 | 95 | 245 | 0.17 ug/L # | 75 |
| 76) methylcyclohexane | 10.901 | 83 | 328 | 0.11 ug/L # | 21 |
| 78) bromodichloromethane | 11.226 | 83 | 294 | 0.15 ug/L # | 27 |
| 79) cis-1,3-dichloropropene | 11.692 | 75 | 369 | 0.16 ug/L # | 61 |
| 82) toluene | 12.060 | 92 | 453 | 0.13 ug/L # | 52 |
| 84) trans-1,3-dichloropropene | 12.259 | 75 | 275 | 0.14 ug/L # | 67 |
| 96) chlorobenzene | 13.512 | 112 | 521 | 0.13 ug/L | 65 |
| 98) ethylbenzene | 13.575 | 91 | 1026 | 0.15 ug/L | 83 |
| 99) m,p-xylene | 13.690 | 106 | 607 | 0.24 ug/L | 72 |
| 100) o-xylene | 14.104 | 106 | 262 | 0.11 ug/L # | 42 |
| 105) isopropylbenzene | 14.429 | 105 | 890 | 0.13 ug/L | 84 |
| 109) 1,1,2,2-tetrachloroethane | 14.739 | 83 | 307 | 0.15 ug/L | 92 |
| 112) n-propylbenzene | 14.854 | 91 | 963 | 0.12 ug/L | 96 |
| 115) 4-chlorotoluene | 15.111 | 126 | 227 | 0.14 ug/L # | 30 |
| 116) 1,3,5-trimethylbenzene | 14.996 | 105 | 732 | 0.12 ug/L | 90 |
| 117) tert-butylbenzene | 15.336 | 119 | 608 | 0.12 ug/L | 99 |
| 119) 1,2,4-trimethylbenzene | 15.394 | 105 | 838 | 0.14 ug/L | 95 |
| 120) sec-butylbenzene | 15.557 | 105 | 788 | 0.10 ug/L | 79 |
| 121) 1,3-dichlorobenzene | 15.745 | 146 | 489 | 0.13 ug/L | 91 |
| 122) p-isopropyltoluene | 15.682 | 119 | 816 | 0.12 ug/L | 68 |
| 123) 1,4-dichlorobenzene | 15.819 | 146 | 642 | 0.16 ug/L | 91 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112235.d
Acq On : 29 Jul 2015 8:15 pm
Operator : ximenac
Sample : IC4810-0.2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 06 13:48:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.207 | 146 | 557 | 0.14 ug/L | 99 |
| 129) 1,3,5-trichlorobenzene | 17.114 | 180 | 477 | 0.11 ug/L # | 62 |
| 130) 1,2,4-trichlorobenzene | 17.675 | 180 | 630 | 0.15 ug/L | 96 |
| 132) naphthalene | 17.916 | 128 | 1654 | 0.17 ug/L | 94 |
| 133) 1,2,3-trichlorobenzene | 18.120 | 180 | 628 | 0.14 ug/L | 96 |
| 135) Benzyl chloride | 15.945 | 91 | 651 | 0.18 ug/L # | 61 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

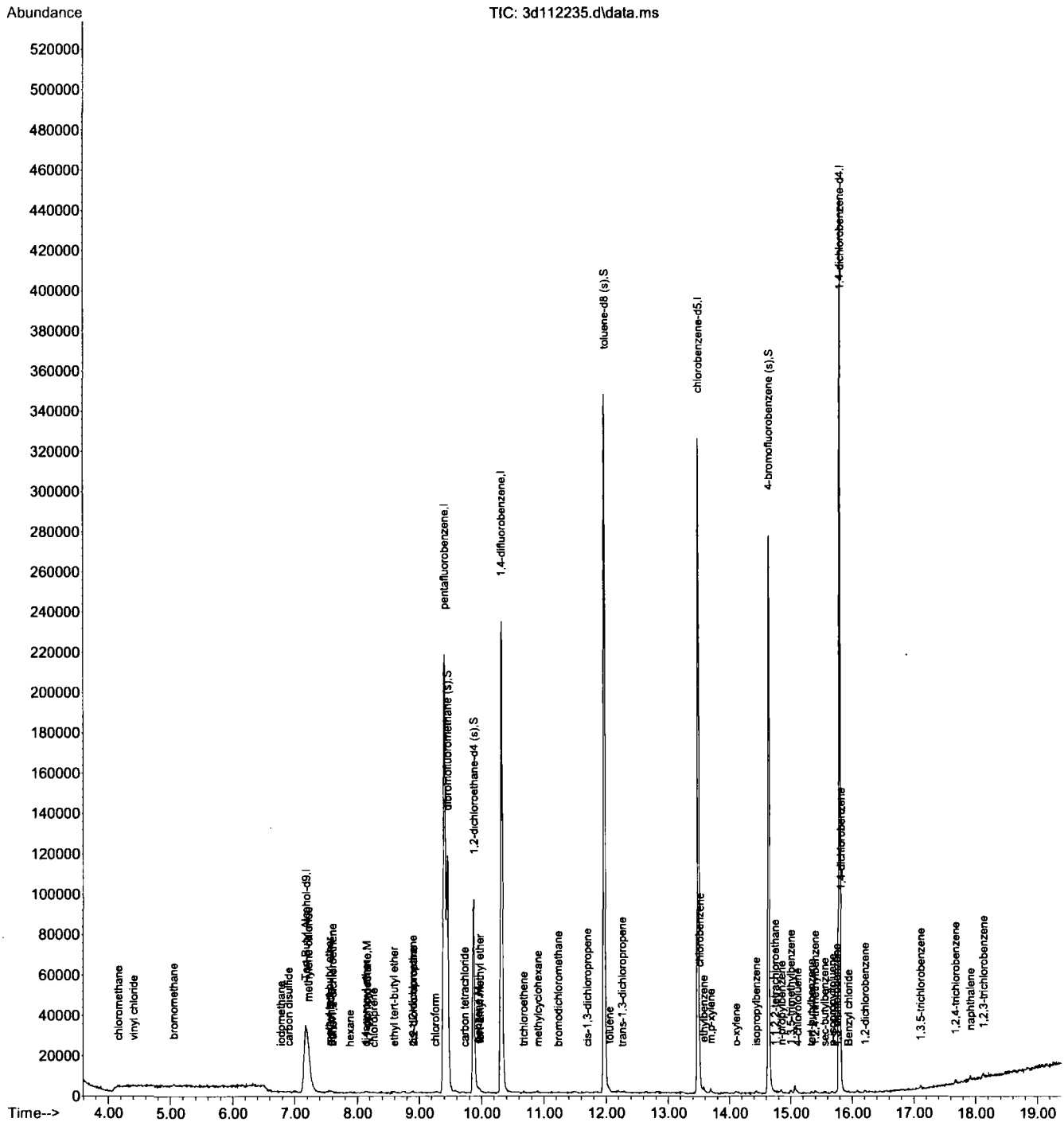
7.6.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112235.d
Acq On : 29 Jul 2015 8:15 pm
Operator : ximenac
Sample : IC4810-0.2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 06 13:48:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration






7.6.1
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112236.d
Acq On : 29 Jul 2015 8:42 pm
Operator : ximenac
Sample : IC4810-0.5
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 06 13:48:29 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.189 | 65 | 96167 | 500.00 | ug/L | 0.01 |
| 4) pentafluorobenzene | 9.401 | 168 | 202817 | 50.00 | ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.319 | 114 | 226728 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.480 | 117 | 188072 | 50.00 | ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.792 | 152 | 123641 | 50.00 | ug/L | 0.00 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.454 | 113 | 78153 | 44.55 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 89.10% | | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.873 | 65 | 73280 | 40.46 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 80.92% | | | |
| 80) toluene-d8 (s) | 11.970 | 98 | 246952 | 51.15 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.30% | | | |
| 106) 4-bromofluorobenzene (s) | 14.634 | 95 | 94678 | 45.25 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 90.50% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 10) chloromethane | 4.153 | 50 | 1710 | 0.57 | ug/L | 84 |
| 11) vinyl chloride | 4.410 | 62 | 1538 | 0.47 | ug/L | 69 |
| 12) bromomethane | 5.055 | 94 | 1144 | 0.70 | ug/L # | 52 |
| 13) chloroethane | 5.233 | 64 | 796 | 0.65 | ug/L | 70 |
| 16) trichlorofluoromethane | 5.694 | 101 | 1436 | 0.43 | ug/L | 87 |
| 21) acrolein | 6.339 | 56 | 1567 | 3.98 | ug/L | 68 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 849 | 0.24 | ug/L | 75 |
| 24) allyl chloride | 7.010 | 76 | 257 | 0.25 | ug/L # | 13 |
| 27) iodomethane | 6.780 | 142 | 1508 | 0.36 | ug/L | 97 |
| 29) carbon disulfide | 6.911 | 76 | 2697 | 0.31 | ug/L | 73 |
| 30) methylene chloride | 7.225 | 84 | 917 | 0.38 | ug/L # | 51 |
| 32) methyl tert butyl ether | 7.535 | 73 | 2637 | 0.40 | ug/L | 96 |
| 33) trans-1,2-dichloroethene | 7.592 | 61 | 1028 | 0.33 | ug/L # | 63 |
| 34) di-isopropyl ether | 8.132 | 45 | 3114 | 0.41 | ug/L # | 63 |
| 35) ethyl tert-butyl ether | 8.594 | 59 | 2770 | 0.38 | ug/L | 92 |
| 37) 1,1-dichloroethane | 8.153 | 63 | 1154 | 0.32 | ug/L | 91 |
| 38) chloroprene | 8.258 | 53 | 903 | 0.33 | ug/L | 76 |
| 39) acrylonitrile | 7.571 | 53 | 1255 | 1.88 | ug/L | 89 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 1441 | 0.43 | ug/L | 85 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 1007 | 0.48 | ug/L # | 37 |
| 46) bromochloromethane | 9.212 | 128 | 323 | 0.33 | ug/L # | 44 |
| 48) chloroform | 9.260 | 83 | 1250 | 0.37 | ug/L | 91 |
| 49) Tert-Butyl Formate | 9.291 | 59 | 768 | 0.41 | ug/L # | 82 |
| 54) 1,1,1-trichloroethane | 9.511 | 97 | 1198 | 0.38 | ug/L | 89 |
| 57) tert-amyl methyl ether | 9.983 | 73 | 3140 | 0.46 | ug/L | 87 |
| 62) carbon tetrachloride | 9.705 | 117 | 806 | 0.34 | ug/L | 91 |
| 63) 1,1-dichloropropene | 9.679 | 75 | 536 | 0.26 | ug/L # | 52 |
| 64) hexane | 7.886 | 57 | 709 | 0.37 | ug/L # | 47 |
| 65) benzene | 9.952 | 78 | 2575 | 0.40 | ug/L | 93 |
| 68) 1,2-dichloroethane | 9.962 | 62 | 663 | 0.33 | ug/L # | 42 |
| 69) trichloroethene | 10.675 | 95 | 623 | 0.44 | ug/L | 80 |
| 75) 1,2-dichloropropane | 10.937 | 63 | 663 | 0.40 | ug/L | 90 |
| 76) methylcyclohexane | 10.890 | 83 | 886 | 0.29 | ug/L | 78 |
| 77) dibromomethane | 11.095 | 93 | 290 | 0.31 | ug/L # | 71 |
| 78) bromodichloromethane | 11.226 | 83 | 837 | 0.43 | ug/L | 89 |
| 79) cis-1,3-dichloropropene | 11.687 | 75 | 808 | 0.37 | ug/L | 69 |
| 82) toluene | 12.044 | 92 | 1220 | 0.36 | ug/L | 98 |
| 84) trans-1,3-dichloropropene | 12.264 | 75 | 795 | 0.41 | ug/L | 83 |
| 86) 1,1,2-trichloroethane | 12.453 | 83 | 432 | 0.41 | ug/L | 82 |
| 89) tetrachloroethene | 12.636 | 166 | 697 | 0.45 | ug/L | 68 |
| 90) 1,3-dichloropropane | 12.647 | 76 | 796 | 0.40 | ug/L | 90 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112236.d
Acq On : 29 Jul 2015 8:42 pm
Operator : ximenac
Sample : IC4810-0.5
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 06 13:48:29 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 92) 3,3-Dimethyl-1-Butanol | 12.814 | 57 | 950 | 5.30 ug/L # | 90 |
| 93) dibromochloromethane | 12.904 | 129 | 503 | 0.33 ug/L # | 59 |
| 94) 1,2-dibromoethane | 13.066 | 107 | 489 | 0.37 ug/L | 89 |
| 96) chlorobenzene | 13.512 | 112 | 1533 | 0.40 ug/L | 92 |
| 97) 1,1,1,2-tetrachloroethane | 13.569 | 131 | 539 | 0.34 ug/L | 91 |
| 98) ethylbenzene | 13.580 | 91 | 2807 | 0.43 ug/L | 94 |
| 99) m,p-xylene | 13.680 | 106 | 1837 | 0.75 ug/L | 88 |
| 100) o-xylene | 14.094 | 106 | 949 | 0.39 ug/L | 98 |
| 101) styrene | 14.120 | 104 | 1435 | 0.37 ug/L | 90 |
| 103) bromoform | 14.372 | 173 | 449 | 0.40 ug/L | 91 |
| 105) isopropylbenzene | 14.435 | 105 | 2697 | 0.38 ug/L | 97 |
| 107) bromobenzene | 14.843 | 156 | 848 | 0.43 ug/L # | 53 |
| 109) 1,1,2,2-tetrachloroethane | 14.744 | 83 | 859 | 0.42 ug/L | 72 |
| 112) n-propylbenzene | 14.849 | 91 | 2878 | 0.36 ug/L | 94 |
| 114) 2-chlorotoluene | 14.996 | 126 | 727 | 0.42 ug/L # | 58 |
| 115) 4-chlorotoluene | 15.095 | 126 | 691 | 0.41 ug/L # | 73 |
| 116) 1,3,5-trimethylbenzene | 14.990 | 105 | 2331 | 0.39 ug/L | 84 |
| 117) tert-butylbenzene | 15.342 | 119 | 1703 | 0.34 ug/L | 83 |
| 118) pentachloroethane | 15.420 | 167 | 406 | 0.31 ug/L | 86 |
| 119) 1,2,4-trimethylbenzene | 15.394 | 105 | 2258 | 0.37 ug/L | 92 |
| 120) sec-butylbenzene | 15.557 | 105 | 2714 | 0.34 ug/L | 96 |
| 121) 1,3-dichlorobenzene | 15.745 | 146 | 1527 | 0.39 ug/L | 90 |
| 122) p-isopropyltoluene | 15.677 | 119 | 2660 | 0.39 ug/L | 97 |
| 123) 1,4-dichlorobenzene | 15.813 | 146 | 1649 | 0.41 ug/L | 88 |
| 124) 1,2-dichlorobenzene | 16.207 | 146 | 1561 | 0.37 ug/L | 91 |
| 126) n-butylbenzene | 16.081 | 92 | 1226 | 0.35 ug/L | 92 |
| 129) 1,3,5-trichlorobenzene | 17.108 | 180 | 1680 | 0.39 ug/L | 90 |
| 130) 1,2,4-trichlorobenzene | 17.669 | 180 | 1563 | 0.35 ug/L | 96 |
| 131) hexachlorobutadiene | 17.764 | 225 | 687 | 0.33 ug/L | 94 |
| 132) naphthalene | 17.911 | 128 | 3428 | 0.35 ug/L | 92 |
| 133) 1,2,3-trichlorobenzene | 18.115 | 180 | 1803 | 0.39 ug/L | 83 |
| 135) Benzyl chloride | 15.939 | 91 | 1862 | 0.49 ug/L # | 86 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

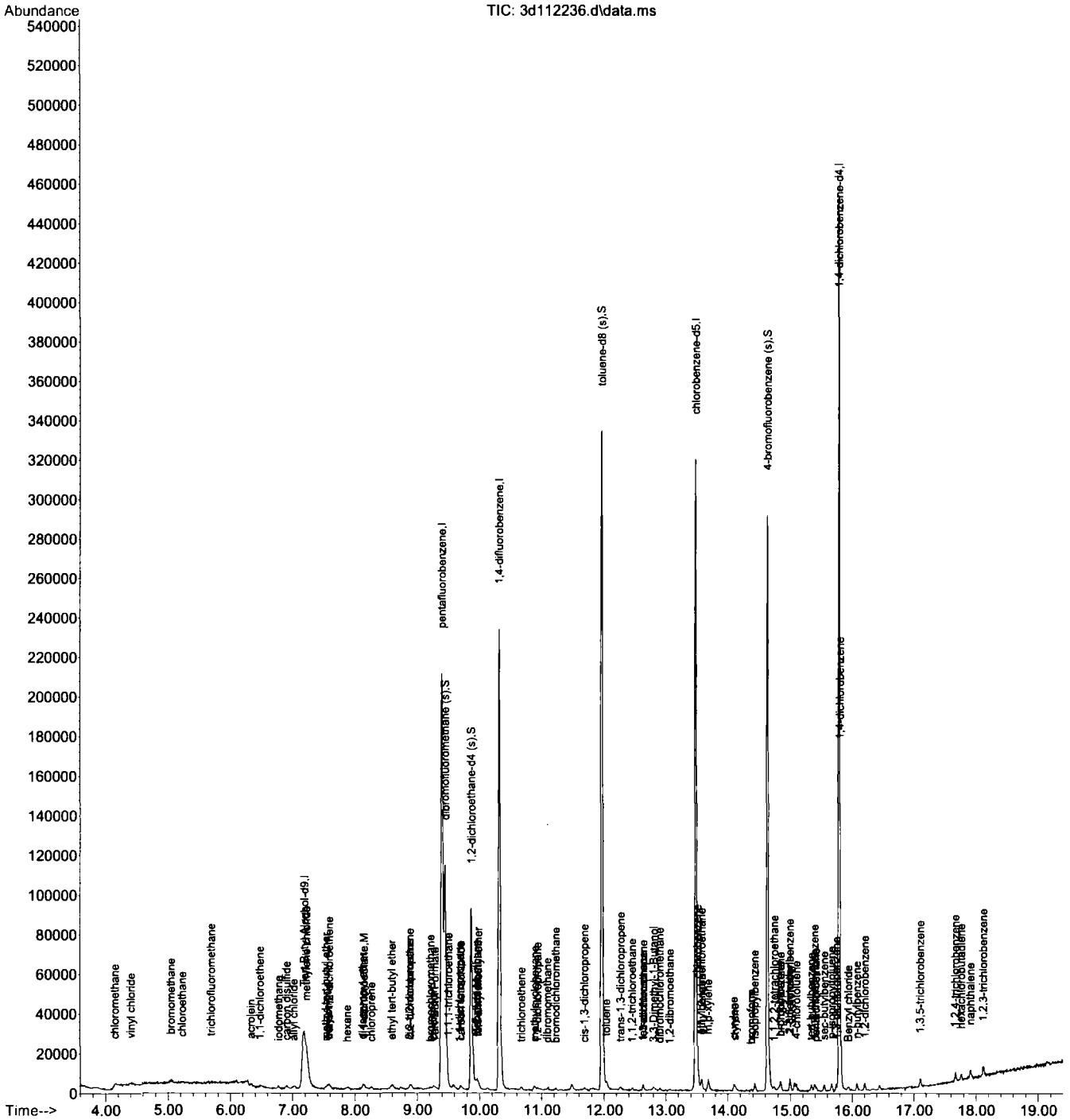
7.6.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112236.d
Acq On : 29 Jul 2015 8:42 pm
Operator : ximenac
Sample : IC4810-0.5
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 06 13:48:29 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




M3D4810.M Thu Aug 06 13:50:18 2015 3D



7.6.2
7

Manual Integrations
APPROVED
(compounds with "m" flag)
Jessica Reitan-Chu
08/06/15 14:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112237.d
Acq On : 29 Jul 2015 9:10 pm
Operator : ximenac
Sample : IC4810-1
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 06 13:49:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 97101 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.396 | 168 | 208847 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 236603 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 197557 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 125183 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 80599 | 44.62 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 89.24% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.868 | 65 | 74529 | 39.96 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 79.92% | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 261711 | 51.94 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 103.88% | | |
| 106) 4-bromofluorobenzene (s) | 14.634 | 95 | 98509 | 46.50 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 93.00% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.058 | 88 | 321 | 19.81 ug/L # | 39 |
| 9) dichlorodifluoromethane | 3.833 | 85 | 3408m | 0.80 ug/L | |
| 10) chloromethane | 4.137 | 50 | 2804 | 0.90 ug/L | 95 |
| 11) vinyl chloride | 4.394 | 62 | 2869 | 0.84 ug/L | 91 |
| 12) bromomethane | 5.039 | 94 | 2094 | 1.25 ug/L | 98 |
| 13) chloroethane | 5.207 | 64 | 1340 | 1.06 ug/L | 87 |
| 16) trichlorofluoromethane | 5.663 | 101 | 2816 | 0.83 ug/L | 79 |
| 18) ethyl ether | 6.067 | 74 | 948 | 1.14 ug/L | 83 |
| 21) acrolein | 6.324 | 56 | 311518 | 768.98 ug/L | 100 |
| 22) 1,1-dichloroethene | 6.491 | 61 | 3006 | 0.82 ug/L | 91 |
| 24) allyl chloride | 7.021 | 76 | 844 | 0.80 ug/L # | 41 |
| 25) acetonitrile | 7.016 | 40 | 1710 | 7.46 ug/L # | 1 |
| 27) iodomethane | 6.764 | 142 | 4119 | 0.95 ug/L | 91 |
| 29) carbon disulfide | 6.895 | 76 | 7493 | 0.84 ug/L | 95 |
| 30) methylene chloride | 7.204 | 84 | 2161 | 0.88 ug/L | 96 |
| 31) methyl acetate | 7.016 | 43 | 812 | 0.54 ug/L # | 63 |
| 32) methyl tert butyl ether | 7.535 | 73 | 6136 | 0.90 ug/L | 96 |
| 33) trans-1,2-dichloroethene | 7.582 | 61 | 2738 | 0.86 ug/L | 90 |
| 34) di-isopropyl ether | 8.122 | 45 | 6515 | 0.84 ug/L # | 54 |
| 35) ethyl tert-butyl ether | 8.583 | 59 | 5834 | 0.78 ug/L | 89 |
| 37) 1,1-dichloroethane | 8.153 | 63 | 3160 | 0.84 ug/L | 99 |
| 38) chloroprene | 8.263 | 53 | 2329 | 0.83 ug/L | 88 |
| 39) acrylonitrile | 7.566 | 53 | 2935 | 4.27 ug/L | 94 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 3355 | 0.96 ug/L | 93 |
| 43) cis-1,2-dichloroethene | 8.887 | 96 | 2226 | 1.03 ug/L | 87 |
| 44) propionitrile | 8.982 | 54 | 1844 | 7.24 ug/L | 69 |
| 46) bromochloromethane | 9.202 | 128 | 994 | 0.98 ug/L | 90 |
| 48) chloroform | 9.249 | 83 | 2901 | 0.84 ug/L | 97 |
| 49) Tert-Butyl Formate | 9.270 | 59 | 1443 | 0.74 ug/L # | 41 |
| 52) freon 113 | 6.455 | 151 | 1653 | 0.93 ug/L # | 68 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 3005 | 0.93 ug/L | 94 |
| 57) tert-amyl methyl ether | 9.983 | 73 | 5744 | 0.81 ug/L | 92 |
| 59) epichlorohydrin | 11.598 | 57 | 741 | 5.57 ug/L | 52 |
| 60) n-butyl alcohol | 10.497 | 56 | 2075 | 54.71 ug/L # | 54 |
| 61) cyclohexane | 9.569 | 84 | 3211 | 1.11 ug/L | 82 |
| 62) carbon tetrachloride | 9.705 | 117 | 2651 | 1.08 ug/L | 95 |
| 63) 1,1-dichloropropene | 9.684 | 75 | 1872 | 0.86 ug/L | 88 |
| 64) hexane | 7.870 | 57 | 1802 | 0.90 ug/L | 75 |
| 65) benzene | 9.952 | 78 | 6049 | 0.91 ug/L | 98 |
| 66) heptane | 10.125 | 57 | 919 | 0.86 ug/L # | 75 |
| 67) isopropyl acetate | 9.878 | 43 | 2086 | 0.67 ug/L # | 1 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112237.d
Acq On : 29 Jul 2015 9:10 pm
Operator : ximenac
Sample : IC4810-1
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 06 13:49:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

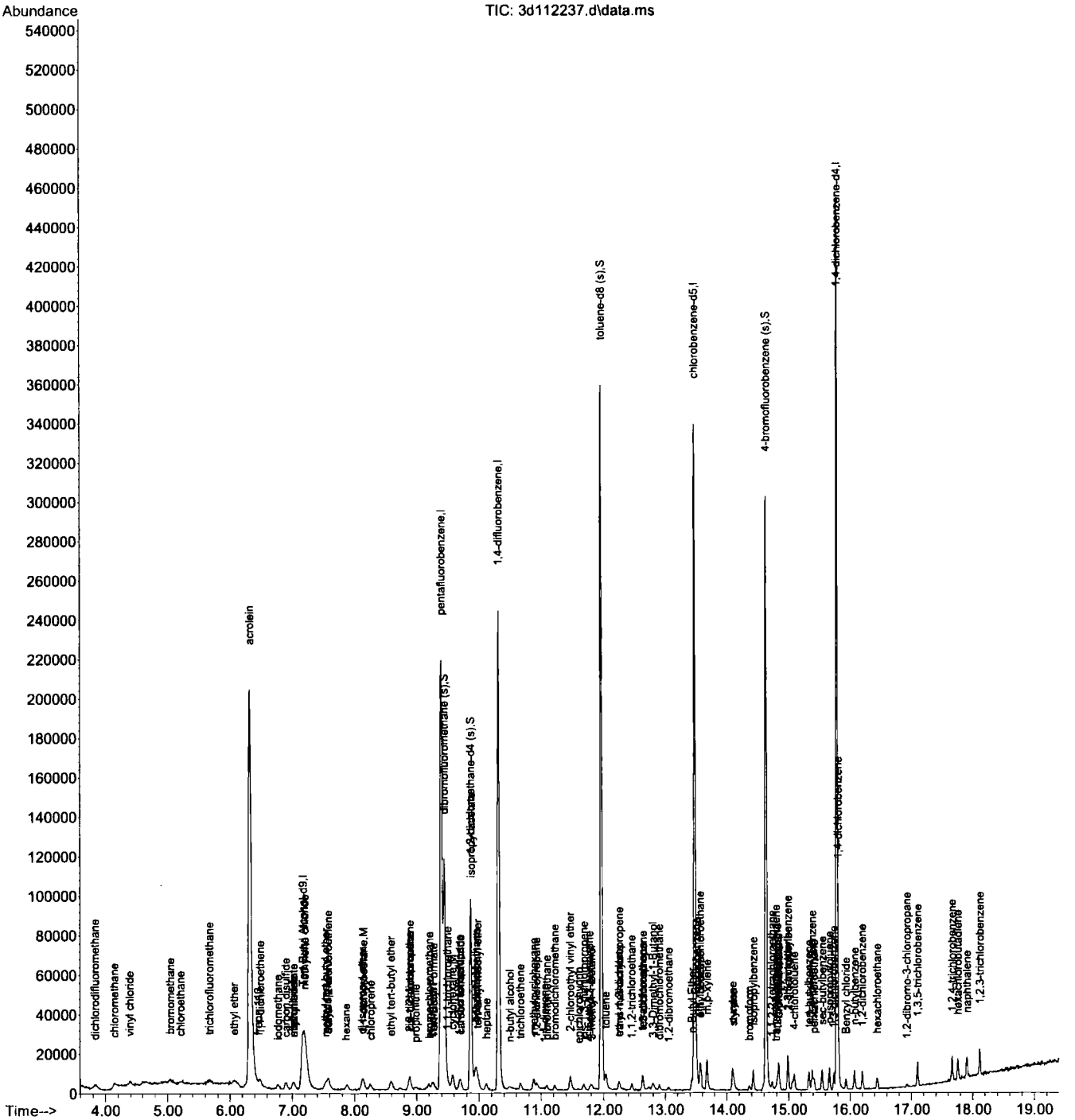
| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 68) 1,2-dichloroethane | 9.962 | 62 | 1745 | 0.83 ug/L | 90 |
| 69) trichloroethene | 10.670 | 95 | 1515 | 1.03 ug/L | 93 |
| 73) 2-chloroethyl vinyl ether | 11.472 | 63 | 4223 | 4.78 ug/L | 95 |
| 75) 1,2-dichloropropane | 10.927 | 63 | 1610 | 0.94 ug/L | 89 |
| 76) methylcyclohexane | 10.880 | 83 | 2926 | 0.93 ug/L | 91 |
| 77) dibromomethane | 11.089 | 93 | 905 | 0.93 ug/L | 95 |
| 78) bromodichloromethane | 11.221 | 83 | 1973 | 0.97 ug/L | 95 |
| 79) cis-1,3-dichloropropene | 11.687 | 75 | 2169 | 0.95 ug/L | 75 |
| 81) 4-methyl-2-pentanone | 11.776 | 58 | 437 | 0.78 ug/L # | 10 |
| 82) toluene | 12.038 | 92 | 3455 | 0.98 ug/L | 86 |
| 83) 3-methyl-1-butanol | 11.813 | 70 | 907 | 24.60 ug/L # | 82 |
| 84) trans-1,3-dichloropropene | 12.248 | 75 | 2028 | 0.99 ug/L | 80 |
| 85) ethyl methacrylate | 12.253 | 69 | 1658 | 1.05 ug/L | 72 |
| 86) 1,1,2-trichloroethane | 12.458 | 83 | 1211 | 1.11 ug/L | 92 |
| 89) tetrachloroethene | 12.631 | 166 | 1889 | 1.17 ug/L | 85 |
| 90) 1,3-dichloropropane | 12.641 | 76 | 1957 | 0.94 ug/L | 98 |
| 92) 3,3-Dimethyl-1-Butanol | 12.799 | 57 | 2325 | 12.35 ug/L # | 91 |
| 93) dibromochloromethane | 12.898 | 129 | 1506 | 0.95 ug/L | 93 |
| 94) 1,2-dibromoethane | 13.056 | 107 | 1190 | 0.86 ug/L | 91 |
| 95) n-Butyl Ether | 13.433 | 57 | 6600 | 1.01 ug/L # | 93 |
| 96) chlorobenzene | 13.512 | 112 | 3921 | 0.97 ug/L | 99 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 1648 | 1.00 ug/L | 77 |
| 98) ethylbenzene | 13.569 | 91 | 6901 | 1.00 ug/L | 94 |
| 99) m,p-xylene | 13.674 | 106 | 5180 | 2.02 ug/L | 97 |
| 100) o-xylene | 14.089 | 106 | 2566 | 1.00 ug/L | 100 |
| 101) styrene | 14.109 | 104 | 4200 | 1.03 ug/L | 92 |
| 103) bromoform | 14.361 | 173 | 1106 | 0.94 ug/L | 94 |
| 105) isopropylbenzene | 14.429 | 105 | 7128 | 0.98 ug/L | 98 |
| 107) bromobenzene | 14.833 | 156 | 2029 | 1.03 ug/L # | 69 |
| 109) 1,1,2,2-tetrachloroethane | 14.733 | 83 | 2036 | 0.98 ug/L | 86 |
| 110) trans-1,4-dichloro-2-b... | 14.786 | 53 | 383 | 0.80 ug/L | 92 |
| 111) 1,2,3-trichloropropane | 14.807 | 110 | 431 | 0.95 ug/L | 74 |
| 112) n-propylbenzene | 14.838 | 91 | 7929 | 0.98 ug/L | 99 |
| 114) 2-chlorotoluene | 14.985 | 126 | 1626 | 0.94 ug/L | 100 |
| 115) 4-chlorotoluene | 15.090 | 126 | 1782 | 1.03 ug/L | 92 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 5966 | 0.98 ug/L | 95 |
| 117) tert-butylbenzene | 15.331 | 119 | 4765 | 0.93 ug/L | 90 |
| 118) pentachloroethane | 15.420 | 167 | 1276 | 0.97 ug/L | 94 |
| 119) 1,2,4-trimethylbenzene | 15.384 | 105 | 6079 | 0.99 ug/L | 96 |
| 120) sec-butylbenzene | 15.551 | 105 | 8134 | 1.01 ug/L | 98 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 3820 | 0.97 ug/L | 93 |
| 122) p-isopropyltoluene | 15.667 | 119 | 6957 | 1.00 ug/L | 93 |
| 123) 1,4-dichlorobenzene | 15.813 | 146 | 4380 | 1.07 ug/L | 92 |
| 124) 1,2-dichlorobenzene | 16.196 | 146 | 4185 | 0.99 ug/L | 98 |
| 126) n-butylbenzene | 16.076 | 92 | 3470 | 0.97 ug/L | 81 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 520 | 0.94 ug/L | 86 |
| 129) 1,3,5-trichlorobenzene | 17.098 | 180 | 4284 | 0.99 ug/L | 98 |
| 130) 1,2,4-trichlorobenzene | 17.669 | 180 | 4286 | 0.96 ug/L | 91 |
| 131) hexachlorobutadiene | 17.759 | 225 | 2249 | 1.07 ug/L | 95 |
| 132) naphthalene | 17.905 | 128 | 8661 | 0.88 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.115 | 180 | 4570 | 0.99 ug/L | 93 |
| 134) hexachloroethane | 16.448 | 119 | 1151 | 0.97 ug/L | 95 |
| 135) Benzyl chloride | 15.934 | 91 | 4283 | 1.12 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112237.d
Acq On : 29 Jul 2015 9:10 pm
Operator : ximenac
Sample : IC4810-1
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 06 13:49:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration






7.6.3
7

# Manual Integration Approval Summary



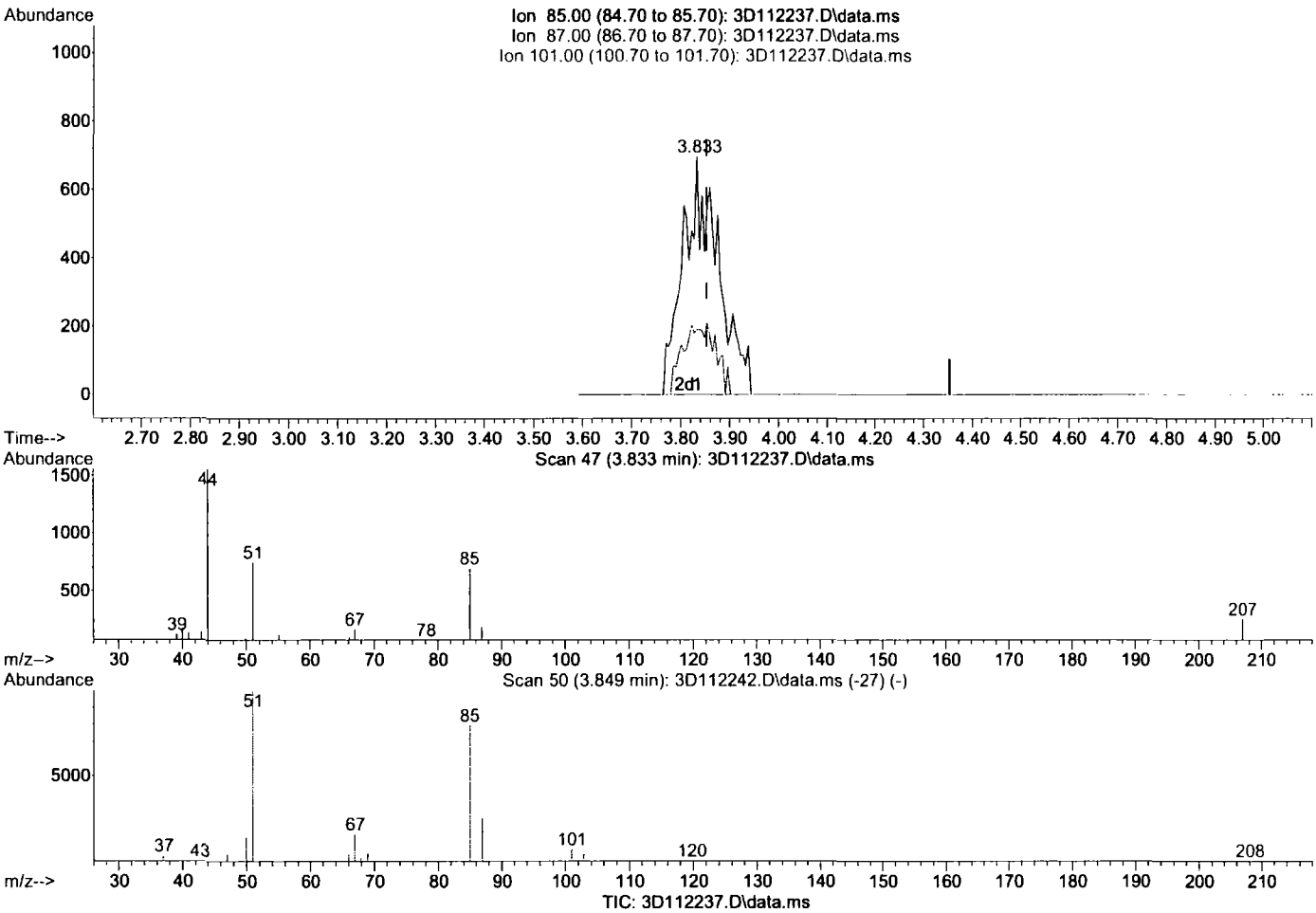
**Sample Number:** V3D4810-IC4810
**Lab FileID:** 3D112237.D
**Injection Time:** 07/29/15 21:10
**Method:** SW846 8260C
**Analyst approved:** 08/06/15 13:52 Henny Salim
**Supervisor approved:** 08/06/15 14:29 Jessica Reitan-Chu

| Parameter | CAS | Sig# | R.T. (min.) | Reason |
|---|---|---|---|---|
| Dichlorodifluoromethane | 75-71-8 | | 3.83 | Poor instrument integration |

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112237.D
Acq On : 29 Jul 2015 9:10 pm
Operator : ximenac
Sample : IC4810-1
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jul 30 08:37:55 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




(9) dichlorodifluoromethane

3.833min (-0.019) 0.80ug/L m

response 3408

| Ion | Exp% | Act% |
|---|---|---|
| 85.00 | 100 | 100 |
| 87.00 | 31.30 | 27.30 |
| 101.00 | 8.10 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Manual Integrations APPROVED (compounds with "m" flag)
Jessica Reitan-Chu
08/06/15 14:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112238.d
Acq On : 29 Jul 2015 9:37 pm
Operator : ximenac
Sample : IC4810-2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 06 13:49:15 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 91896 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.396 | 168 | 197423 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 221121 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 180387 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.793 | 152 | 114767 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 74452 | 43.60 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 87.20% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 70397 | 39.93 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 79.86% | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 244288 | 51.88 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 103.76% | | |
| 106) 4-bromofluorobenzene (s) | 14.634 | 95 | 87810 | 45.21 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 90.42% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.048 | 88 | 694 | 45.25 ug/L # | 60 |
| 3) tertiary butyl alcohol | 7.283 | 59 | 2143m | 10.37 ug/L | |
| 8) chlorodifluoromethane | 3.844 | 51 | 5524 | 1.41 ug/L | 93 |
| 9) dichlorodifluoromethane | 3.844 | 85 | 7278 | 1.82 ug/L | 96 |
| 10) chloromethane | 4.148 | 50 | 5016 | 1.70 ug/L | 98 |
| 11) vinyl chloride | 4.394 | 62 | 5371 | 1.67 ug/L | 97 |
| 12) bromomethane | 5.034 | 94 | 3528 | 2.23 ug/L | 81 |
| 13) chloroethane | 5.202 | 64 | 2287 | 1.91 ug/L | 95 |
| 16) trichlorofluoromethane | 5.674 | 101 | 5823 | 1.81 ug/L | 85 |
| 18) ethyl ether | 6.072 | 74 | 1425 | 1.81 ug/L | 83 |
| 21) acrolein | 6.318 | 56 | 595837 | 1555.92 ug/L | 97 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 4751 | 1.38 ug/L | 97 |
| 24) allyl chloride | 7.011 | 76 | 1423 | 1.43 ug/L # | 85 |
| 25) acetonitrile | 7.000 | 40 | 2912 | 13.44 ug/L # | 36 |
| 27) iodomethane | 6.769 | 142 | 6893 | 1.68 ug/L | 97 |
| 28) iso-butyl alcohol | 9.705 | 41 | 926 | 13.21 ug/L # | 72 |
| 29) carbon disulfide | 6.890 | 76 | 12180 | 1.45 ug/L | 96 |
| 30) methylene chloride | 7.205 | 84 | 3549 | 1.52 ug/L | 97 |
| 31) methyl acetate | 7.016 | 43 | 1975 | 1.38 ug/L # | 88 |
| 32) methyl tert butyl ether | 7.540 | 73 | 10043 | 1.56 ug/L | 96 |
| 33) trans-1,2-dichloroethene | 7.582 | 61 | 4499 | 1.49 ug/L | 92 |
| 34) di-isopropyl ether | 8.127 | 45 | 10502 | 1.44 ug/L # | 56 |
| 35) ethyl tert-butyl ether | 8.594 | 59 | 10092 | 1.42 ug/L | 96 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 5031 | 1.42 ug/L | 93 |
| 38) chloroprene | 8.253 | 53 | 4066 | 1.53 ug/L | 89 |
| 39) acrylonitrile | 7.556 | 53 | 4607 | 7.09 ug/L | 89 |
| 41) ethyl acetate | 8.888 | 45 | 479 | 2.22 ug/L # | 39 |
| 42) 2,2-dichloropropane | 8.888 | 77 | 5181 | 1.57 ug/L | 90 |
| 43) cis-1,2-dichloroethene | 8.888 | 96 | 3646 | 1.78 ug/L # | 81 |
| 44) propionitrile | 8.966 | 54 | 3462 | 14.39 ug/L | 72 |
| 45) methyl acrylate | 8.977 | 55 | 1966 | 1.24 ug/L | 73 |
| 46) bromochloromethane | 9.197 | 128 | 1530 | 1.59 ug/L # | 81 |
| 47) tetrahydrofuran | 9.244 | 42 | 1230 | 1.88 ug/L # | 61 |
| 48) chloroform | 9.249 | 83 | 5020 | 1.55 ug/L | 94 |
| 49) Tert-Butyl Formate | 9.276 | 59 | 2632 | 1.44 ug/L # | 88 |
| 52) freon 113 | 6.444 | 151 | 2895 | 1.72 ug/L | 79 |
| 53) methacrylonitrile | 9.139 | 41 | 1630 | 1.67 ug/L | 62 |
| 54) 1,1,1-trichloroethane | 9.491 | 97 | 4812 | 1.57 ug/L | 97 |
| 57) tert-amyl methyl ether | 9.978 | 73 | 10083 | 1.51 ug/L | 97 |
| 59) epichlorohydrin | 11.593 | 57 | 1322 | 10.63 ug/L | 68 |
| 60) n-butyl alcohol | 10.471 | 56 | 2972 | 83.84 ug/L | 90 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112238.d
Acq On : 29 Jul 2015 9:37 pm
Operator : ximenac
Sample : IC4810-2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 06 13:49:15 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 61) cyclohexane | 9.574 | 84 | 5021 | 1.86 ug/L | 94 |
| 62) carbon tetrachloride | 9.711 | 117 | 4206 | 1.83 ug/L | 96 |
| 63) 1,1-dichloropropene | 9.679 | 75 | 3058 | 1.51 ug/L | 84 |
| 64) hexane | 7.876 | 57 | 3186 | 1.69 ug/L | 71 |
| 65) benzene | 9.941 | 78 | 10496 | 1.69 ug/L | 97 |
| 66) heptane | 10.125 | 57 | 1727 | 1.73 ug/L | 82 |
| 67) isopropyl acetate | 9.879 | 43 | 4629 | 1.60 ug/L | 62 |
| 68) 1,2-dichloroethane | 9.962 | 62 | 3007 | 1.52 ug/L | 89 |
| 69) trichloroethene | 10.665 | 95 | 2636 | 1.91 ug/L | 94 |
| 73) 2-chloroethyl vinyl ether | 11.462 | 63 | 7676 | 9.29 ug/L | 94 |
| 74) methyl methacrylate | 10.948 | 41 | 2823 | 1.26 ug/L | 89 |
| 75) 1,2-dichloropropane | 10.922 | 63 | 2567 | 1.60 ug/L | 94 |
| 76) methylcyclohexane | 10.880 | 83 | 5176 | 1.76 ug/L | 93 |
| 77) dibromomethane | 11.084 | 93 | 1592 | 1.76 ug/L | 93 |
| 78) bromodichloromethane | 11.215 | 83 | 3129 | 1.64 ug/L | 92 |
| 79) cis-1,3-dichloropropene | 11.682 | 75 | 3854 | 1.80 ug/L | 94 |
| 81) 4-methyl-2-pentanone | 11.776 | 58 | 920 | 1.75 ug/L | 96 |
| 82) toluene | 12.039 | 92 | 5701 | 1.73 ug/L | 95 |
| 83) 3-methyl-1-butanol | 11.813 | 70 | 1458 | 42.31 ug/L | 84 |
| 84) trans-1,3-dichloropropene | 12.248 | 75 | 3201 | 1.68 ug/L | 87 |
| 85) ethyl methacrylate | 12.243 | 69 | 2635 | 1.79 ug/L | 83 |
| 86) 1,1,2-trichloroethane | 12.458 | 83 | 1827 | 1.80 ug/L | 92 |
| 87) 2-hexanone | 12.663 | 58 | 632m | 1.51 ug/L | |
| 89) tetrachloroethene | 12.631 | 166 | 2996 | 2.03 ug/L | 99 |
| 90) 1,3-dichloropropane | 12.636 | 76 | 3564 | 1.87 ug/L | 96 |
| 91) butyl acetate | 12.725 | 56 | 1247 | 1.53 ug/L # | 56 |
| 92) 3,3-Dimethyl-1-Butanol | 12.799 | 57 | 3466 | 20.16 ug/L # | 91 |
| 93) dibromochloromethane | 12.898 | 129 | 2576 | 1.78 ug/L | 91 |
| 94) 1,2-dibromoethane | 13.051 | 107 | 2138 | 1.68 ug/L | 94 |
| 95) n-Butyl Ether | 13.428 | 57 | 10714 | 1.79 ug/L # | 89 |
| 96) chlorobenzene | 13.512 | 112 | 6372 | 1.73 ug/L | 88 |
| 97) 1,1,1,2-tetrachloroethane | 13.570 | 131 | 2712 | 1.80 ug/L | 94 |
| 98) ethylbenzene | 13.570 | 91 | 10810 | 1.72 ug/L | 99 |
| 99) m,p-xylene | 13.674 | 106 | 8457 | 3.61 ug/L | 99 |
| 100) o-xylene | 14.089 | 106 | 4328 | 1.84 ug/L | 88 |
| 101) styrene | 14.104 | 104 | 6752 | 1.81 ug/L | 93 |
| 103) bromoform | 14.361 | 173 | 1953 | 1.82 ug/L | 83 |
| 105) isopropylbenzene | 14.429 | 105 | 11312 | 1.70 ug/L | 98 |
| 107) bromobenzene | 14.833 | 156 | 3361 | 1.86 ug/L | 89 |
| 109) 1,1,2,2-tetrachloroethane | 14.734 | 83 | 3182 | 1.67 ug/L | 95 |
| 110) trans-1,4-dichloro-2-b... | 14.786 | 53 | 628 | 1.44 ug/L # | 80 |
| 111) 1,2,3-trichloropropane | 14.807 | 110 | 646 | 1.56 ug/L | 79 |
| 112) n-propylbenzene | 14.838 | 91 | 13012 | 1.75 ug/L | 99 |
| 114) 2-chlorotoluene | 14.985 | 126 | 2828 | 1.77 ug/L # | 75 |
| 115) 4-chlorotoluene | 15.090 | 126 | 2646 | 1.67 ug/L | 88 |
| 116) 1,3,5-trimethylbenzene | 14.990 | 105 | 9596 | 1.71 ug/L | 93 |
| 117) tert-butylbenzene | 15.331 | 119 | 8045 | 1.71 ug/L | 96 |
| 118) pentachloroethane | 15.415 | 167 | 2010 | 1.67 ug/L | 90 |
| 119) 1,2,4-trimethylbenzene | 15.384 | 105 | 9434 | 1.68 ug/L | 93 |
| 120) sec-butylbenzene | 15.546 | 105 | 13151 | 1.78 ug/L | 99 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 6184 | 1.71 ug/L | 94 |
| 122) p-isopropyltoluene | 15.667 | 119 | 11115 | 1.75 ug/L | 99 |
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 6495 | 1.74 ug/L | 97 |
| 124) 1,2-dichlorobenzene | 16.196 | 146 | 6835 | 1.77 ug/L | 95 |
| 126) n-butylbenzene | 16.076 | 92 | 5866 | 1.78 ug/L | 92 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 883 | 1.74 ug/L | 95 |
| 129) 1,3,5-trichlorobenzene | 17.098 | 180 | 7345 | 1.85 ug/L | 98 |
| 130) 1,2,4-trichlorobenzene | 17.664 | 180 | 7027 | 1.71 ug/L | 98 |

7.6.4 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112238.d
Acq On : 29 Jul 2015 9:37 pm
Operator : ximenac
Sample : IC4810-2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 06 13:49:15 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 131) hexachlorobutadiene | 17.759 | 225 | 3791 | 1.96 ug/L | 94 |
| 132) naphthalene | 17.900 | 128 | 14293 | 1.58 ug/L | 98 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 7641 | 1.80 ug/L | 91 |
| 134) hexachloroethane | 16.443 | 119 | 1902 | 1.76 ug/L | 91 |
| 135) Benzyl chloride | 15.929 | 91 | 7260 | 2.06 ug/L | 99 |

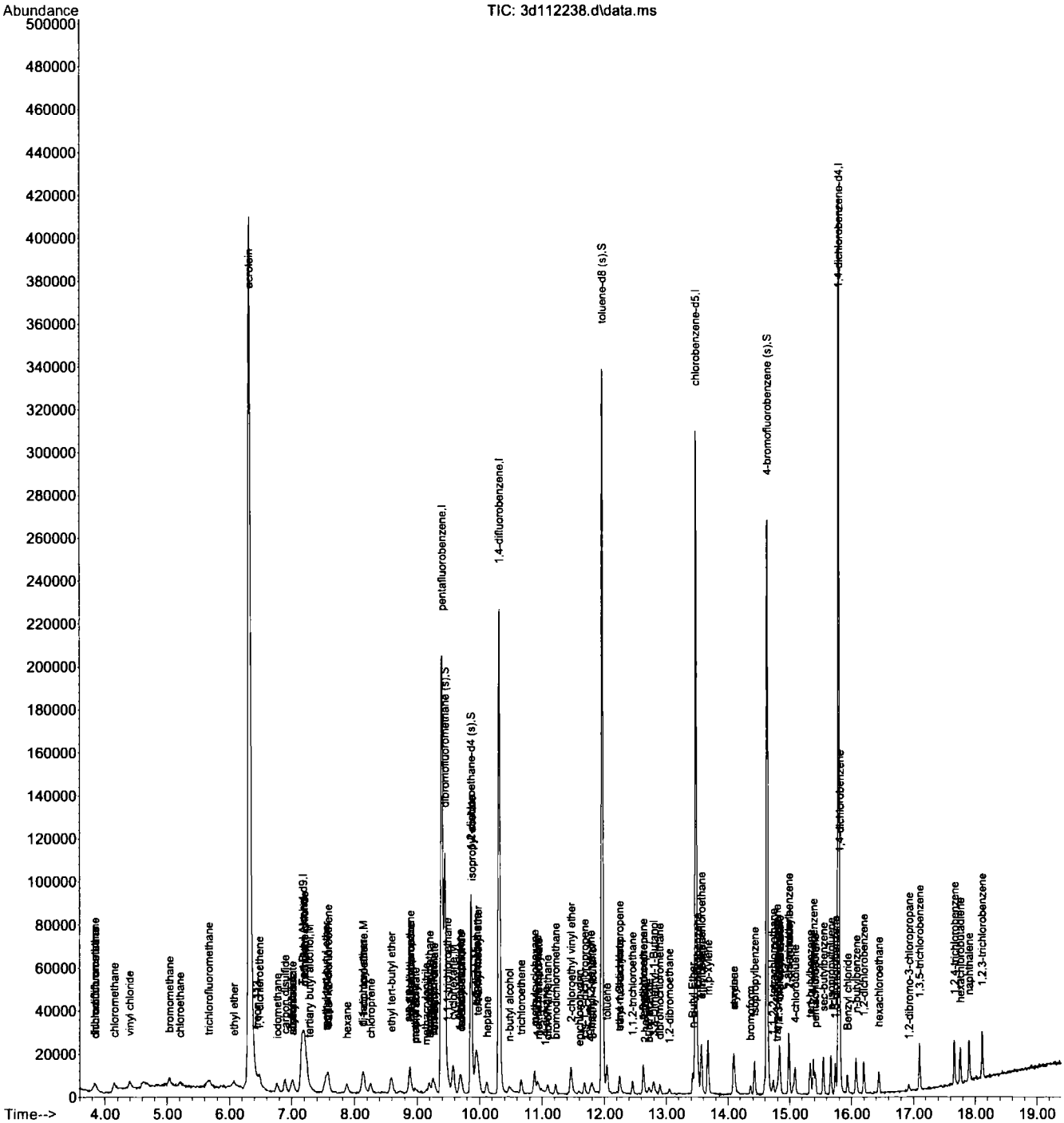
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.4 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112238.d
Acq On : 29 Jul 2015 9:37 pm
Operator : ximenac
Sample : IC4810-2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 06 13:49:15 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration



# Manual Integration Approval Summary



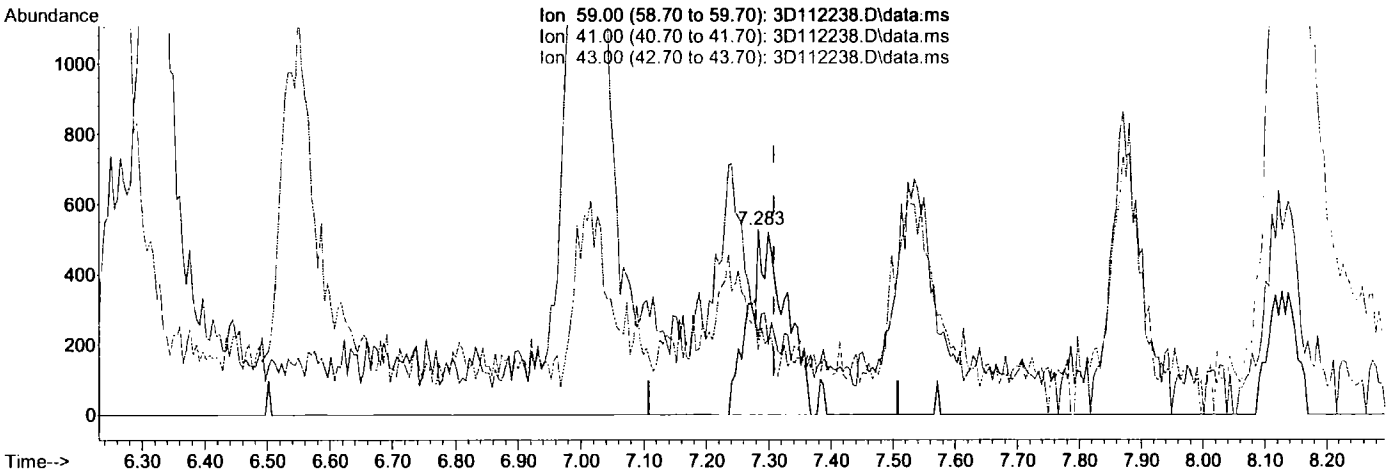
| | | | |
|---|---|---|---|
| **Sample Number:** | V3D4810-IC4810 | **Method:** | SW846 8260C |
| **Lab FileID:** | 3D112238.D | **Analyst approved:** | 08/06/15 13:52 Henny Salim |
| **Injection Time:** | 07/29/15 21:37 | **Supervisor approved:** | 08/06/15 14:29 Jessica Reitan-Chu |

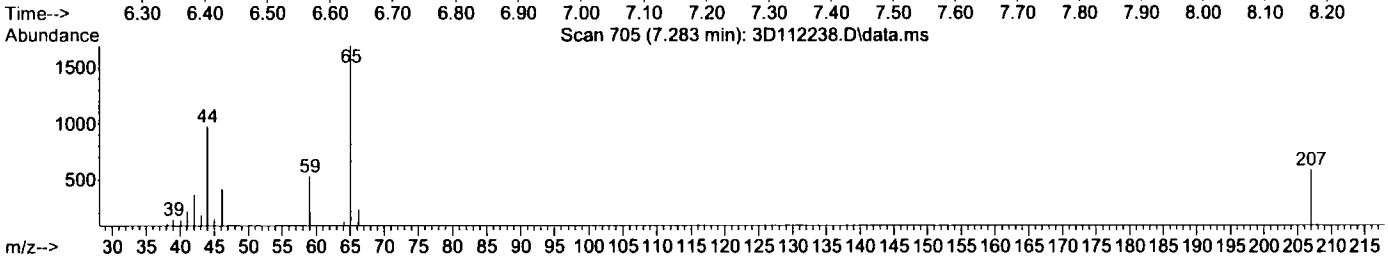
| Parameter | CAS | Sig# | R.T. (min.) | Reason |
|---|---|---|---|---|
| Tert Butyl Alcohol | 75-65-0 | | 7.28 | Poor instrument integration |
| 2-Hexanone | 591-78-6 | | 12.66 | Poor instrument integration |

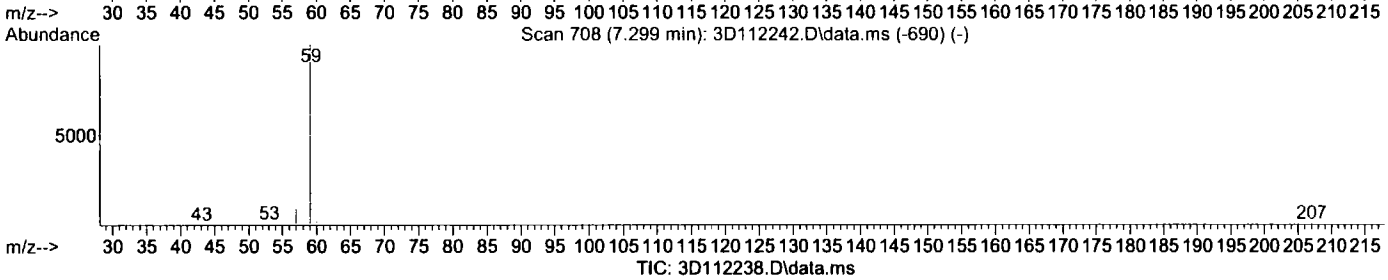
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112238.D
Acq On : 29 Jul 2015 9:37 pm
Operator : ximenac
Sample : IC4810-2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 30 08:37:57 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




TIC: 3D112238.D\data.ms

(3) tertiary butyl alcohol (M)

7.283min (-0.024) 10.37ug/L m

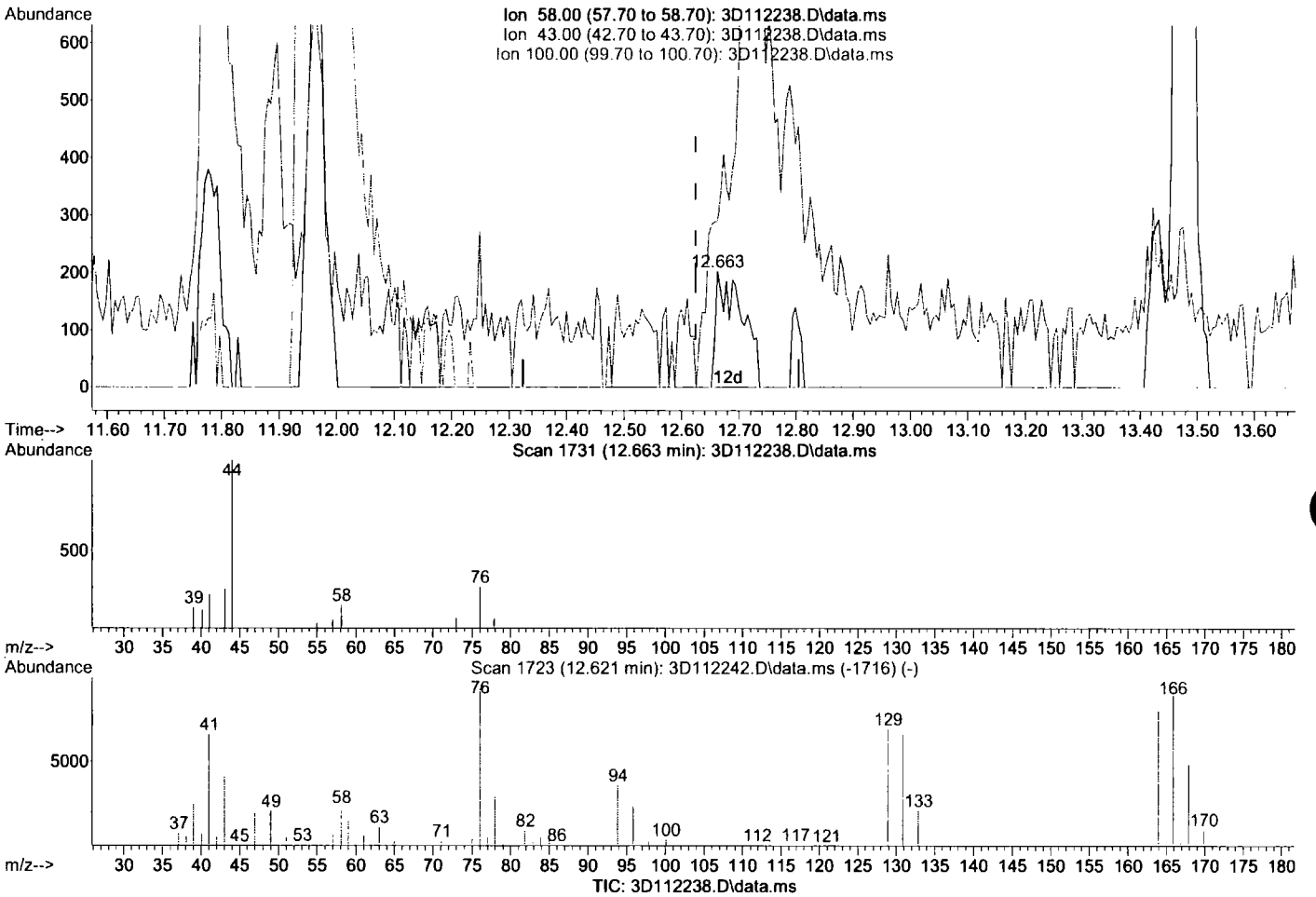
response 2143

| Ion | Exp% | Act% |
|---|---|---|
| 59.00 | 100 | 100 |
| 41.00 | 30.20 | 41.02 |
| 43.00 | 16.60 | 34.59 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112238.D
Acq On : 29 Jul 2015 9:37 pm
Operator : ximenac
Sample : IC4810-2
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jul 30 08:37:57 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




(87) 2-hexanone

12.663min (+0.039) 1.51ug/L m

response 632

| Ion | Exp% | Act% |
|---|---|---|
| 58.00 | 100 | 100 |
| 43.00 | 183.00 | 142.57# |
| 100.00 | 14.90 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112239.d
Acq On : 29 Jul 2015 10:04 pm
Operator : ximenac
Sample : IC4810-5
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 30 11:45:40 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 103357 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.396 | 168 | 208424 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 236372 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 193775 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 122426 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 79004 | 43.82 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 87.64% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75160 | 40.38 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 80.76% | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 257202 | 51.10 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.20% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 95829 | 46.26 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 92.52% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.042 | 88 | 1992 | 115.48 ug/L # | 65 |
| 3) tertiary butyl alcohol | 7.294 | 59 | 5490 | 23.62 ug/L | 85 |
| 8) chlorodifluoromethane | 3.854 | 51 | 14241 | 3.45 ug/L | 89 |
| 9) dichlorodifluoromethane | 3.838 | 85 | 20494 | 4.85 ug/L | 98 |
| 10) chloromethane | 4.148 | 50 | 14329 | 4.61 ug/L | 95 |
| 11) vinyl chloride | 4.405 | 62 | 15435 | 4.55 ug/L | 98 |
| 12) bromomethane | 5.044 | 94 | 9842 | 5.89 ug/L | 91 |
| 13) chloroethane | 5.212 | 64 | 6641 | 5.24 ug/L | 96 |
| 16) trichlorofluoromethane | 5.663 | 101 | 16831 | 4.95 ug/L | 96 |
| 18) ethyl ether | 6.082 | 74 | 3733 | 4.49 ug/L | 84 |
| 21) acrolein | 6.329 | 56 | 16708 | 41.33 ug/L | 94 |
| 22) 1,1-dichloroethene | 6.491 | 61 | 12228 | 3.36 ug/L | 94 |
| 23) acetone | 6.554 | 43 | 2497 | 4.20 ug/L | 92 |
| 24) allyl chloride | 7.016 | 76 | 3802 | 3.61 ug/L # | 64 |
| 25) acetonitrile | 6.989 | 40 | 7985 | 34.91 ug/L | 87 |
| 27) iodomethane | 6.769 | 142 | 17419 | 4.03 ug/L | 96 |
| 28) iso-butyl alcohol | 9.700 | 41 | 2677 | 36.16 ug/L | 92 |
| 29) carbon disulfide | 6.895 | 76 | 30912 | 3.48 ug/L | 97 |
| 30) methylene chloride | 7.204 | 84 | 8855 | 3.60 ug/L | 97 |
| 31) methyl acetate | 7.010 | 43 | 5821 | 3.86 ug/L # | 93 |
| 32) methyl tert butyl ether | 7.529 | 73 | 26062 | 3.82 ug/L | 95 |
| 33) trans-1,2-dichloroethene | 7.582 | 61 | 10922 | 3.42 ug/L | 93 |
| 34) di-isopropyl ether | 8.127 | 45 | 28139 | 3.65 ug/L # | 66 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 28689 | 3.83 ug/L | 97 |
| 36) 2-butanone | 8.877 | 72 | 551 | 3.21 ug/L # | 40 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 13258 | 3.54 ug/L | 97 |
| 38) chloroprene | 8.253 | 53 | 10153 | 3.61 ug/L | 88 |
| 39) acrylonitrile | 7.545 | 53 | 13036 | 19.01 ug/L | 95 |
| 40) vinyl acetate | 8.153 | 86 | 820 | 3.41 ug/L # | 1 |
| 41) ethyl acetate | 8.882 | 45 | 1135 | 4.99 ug/L # | 1 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 13031 | 3.74 ug/L | 97 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 8516 | 3.94 ug/L | 89 |
| 44) propionitrile | 8.956 | 54 | 9368 | 36.88 ug/L # | 57 |
| 45) methyl acrylate | 8.982 | 55 | 5927 | 3.55 ug/L | 95 |
| 46) bromochloromethane | 9.191 | 128 | 4132 | 4.07 ug/L # | 80 |
| 47) tetrahydrofuran | 9.244 | 42 | 2497 | 3.62 ug/L | 94 |
| 48) chloroform | 9.249 | 83 | 12212 | 3.56 ug/L | 94 |
| 49) Tert-Butyl Formate | 9.281 | 59 | 7337 | 3.79 ug/L # | 86 |
| 52) freon 113 | 6.455 | 151 | 7988 | 4.50 ug/L | 79 |
| 53) methacrylonitrile | 9.144 | 41 | 3379 | 3.28 ug/L | 86 |
| 54) 1,1,1-trichloroethane | 9.490 | 97 | 12500 | 3.87 ug/L | 87 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112239.d
Acq On : 29 Jul 2015 10:04 pm
Operator : ximenac
Sample : IC4810-5
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 30 11:45:40 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.978 | 73 | 26879 | 3.81 ug/L | 97 |
| 59) epichlorohydrin | 11.588 | 57 | 3344 | 25.15 ug/L | 93 |
| 60) n-butyl alcohol | 10.455 | 56 | 9220 | 243.33 ug/L | 96 |
| 61) cyclohexane | 9.574 | 84 | 12866 | 4.45 ug/L | 87 |
| 62) carbon tetrachloride | 9.711 | 117 | 11265 | 4.60 ug/L | 92 |
| 63) 1,1-dichloropropene | 9.684 | 75 | 8394 | 3.87 ug/L | 92 |
| 64) hexane | 7.875 | 57 | 7999 | 3.98 ug/L | 91 |
| 65) benzene | 9.941 | 78 | 26303 | 3.96 ug/L | 96 |
| 66) heptane | 10.114 | 57 | 4552 | 4.27 ug/L | 93 |
| 67) isopropyl acetate | 9.873 | 43 | 11841 | 3.83 ug/L | 80 |
| 68) 1,2-dichloroethane | 9.957 | 62 | 7828 | 3.71 ug/L | 97 |
| 69) trichloroethene | 10.665 | 95 | 6095 | 4.13 ug/L | 92 |
| 72) 2-nitropropane | 11.436 | 41 | 2599 | 4.46 ug/L | 94 |
| 73) 2-chloroethyl vinyl ether | 11.457 | 63 | 21267 | 24.08 ug/L | 97 |
| 74) methyl methacrylate | 10.943 | 41 | 8395 | 3.49 ug/L | 90 |
| 75) 1,2-dichloropropane | 10.927 | 63 | 6904 | 4.03 ug/L | 98 |
| 76) methylcyclohexane | 10.880 | 83 | 13545 | 4.31 ug/L | 94 |
| 77) dibromomethane | 11.084 | 93 | 4071 | 4.21 ug/L | 85 |
| 78) bromodichloromethane | 11.215 | 83 | 8288 | 4.07 ug/L | 92 |
| 79) cis-1,3-dichloropropene | 11.677 | 75 | 9561 | 4.19 ug/L | 96 |
| 81) 4-methyl-2-pentanone | 11.771 | 58 | 2559 | 4.56 ug/L | 95 |
| 82) toluene | 12.038 | 92 | 14664 | 4.17 ug/L | 91 |
| 83) 3-methyl-1-butanol | 11.797 | 70 | 3909 | 106.12 ug/L | 93 |
| 84) trans-1,3-dichloropropene | 12.243 | 75 | 8786 | 4.30 ug/L | 92 |
| 85) ethyl methacrylate | 12.243 | 69 | 7405 | 4.70 ug/L | 94 |
| 86) 1,1,2-trichloroethane | 12.453 | 83 | 4712 | 4.33 ug/L | 95 |
| 87) 2-hexanone | 12.641 | 58 | 2039 | 4.54 ug/L | 91 |
| 89) tetrachloroethene | 12.631 | 166 | 7517 | 4.74 ug/L | 99 |
| 90) 1,3-dichloropropane | 12.636 | 76 | 8725 | 4.25 ug/L | 97 |
| 91) butyl acetate | 12.710 | 56 | 3621 | 4.13 ug/L | 86 |
| 92) 3,3-Dimethyl-1-Butanol | 12.793 | 57 | 8670 | 46.95 ug/L # | 95 |
| 93) dibromochloromethane | 12.898 | 129 | 6864 | 4.41 ug/L | 94 |
| 94) 1,2-dibromoethane | 13.050 | 107 | 5896 | 4.32 ug/L | 99 |
| 95) n-Butyl Ether | 13.428 | 57 | 27368 | 4.25 ug/L | 95 |
| 96) chlorobenzene | 13.507 | 112 | 16872 | 4.26 ug/L | 93 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 6983 | 4.31 ug/L | 95 |
| 98) ethylbenzene | 13.564 | 91 | 27948 | 4.15 ug/L | 100 |
| 99) m,p-xylene | 13.669 | 106 | 22094 | 8.77 ug/L | 93 |
| 100) o-xylene | 14.089 | 106 | 11324 | 4.48 ug/L | 92 |
| 101) styrene | 14.099 | 104 | 17957 | 4.47 ug/L | 96 |
| 103) bromoform | 14.361 | 173 | 5321 | 4.62 ug/L | 97 |
| 105) isopropylbenzene | 14.424 | 105 | 29522 | 4.17 ug/L | 99 |
| 107) bromobenzene | 14.828 | 156 | 8206 | 4.25 ug/L | 92 |
| 108) cyclohexanone | 14.592 | 55 | 9785 | 51.82 ug/L | 96 |
| 109) 1,1,2,2-tetrachloroethane | 14.733 | 83 | 8583 | 4.22 ug/L | 98 |
| 110) trans-1,4-dichloro-2-b... | 14.775 | 53 | 2042 | 4.38 ug/L | 81 |
| 111) 1,2,3-trichloropropane | 14.807 | 110 | 1984 | 4.48 ug/L | 97 |
| 112) n-propylbenzene | 14.838 | 91 | 33004 | 4.17 ug/L | 100 |
| 114) 2-chlorotoluene | 14.985 | 126 | 7464 | 4.39 ug/L | 90 |
| 115) 4-chlorotoluene | 15.085 | 126 | 7495 | 4.44 ug/L | 91 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 25327 | 4.24 ug/L | 95 |
| 117) tert-butylbenzene | 15.331 | 119 | 19703 | 3.92 ug/L | 100 |
| 118) pentachloroethane | 15.415 | 167 | 5254 | 4.10 ug/L | 97 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 25772 | 4.30 ug/L | 99 |
| 120) sec-butylbenzene | 15.546 | 105 | 33972 | 4.32 ug/L | 99 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 16173 | 4.20 ug/L | 98 |
| 122) p-isopropyltoluene | 15.667 | 119 | 29093 | 4.29 ug/L | 98 |
| 123) 1,4-dichlorobenzene | 15.813 | 146 | 17166 | 4.30 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112239.d
Acq On : 29 Jul 2015 10:04 pm
Operator : ximenac
Sample : IC4810-5
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 30 11:45:40 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.196 | 146 | 17639 | 4.27 ug/L | 98 |
| 126) n-butylbenzene | 16.070 | 92 | 14766 | 4.20 ug/L | 97 |
| 128) 1,2-dibromo-3-chloropr... | 16.930 | 157 | 2382 | 4.39 ug/L | 82 |
| 129) 1,3,5-trichlorobenzene | 17.098 | 180 | 18081 | 4.26 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.664 | 180 | 18349 | 4.19 ug/L | 98 |
| 131) hexachlorobutadiene | 17.759 | 225 | 9315 | 4.52 ug/L | 92 |
| 132) naphthalene | 17.900 | 128 | 38147 | 3.95 ug/L | 98 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 19180 | 4.23 ug/L | 95 |
| 134) hexachloroethane | 16.443 | 119 | 5108 | 4.42 ug/L | 98 |
| 135) Benzyl chloride | 15.929 | 91 | 17026 | 4.54 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

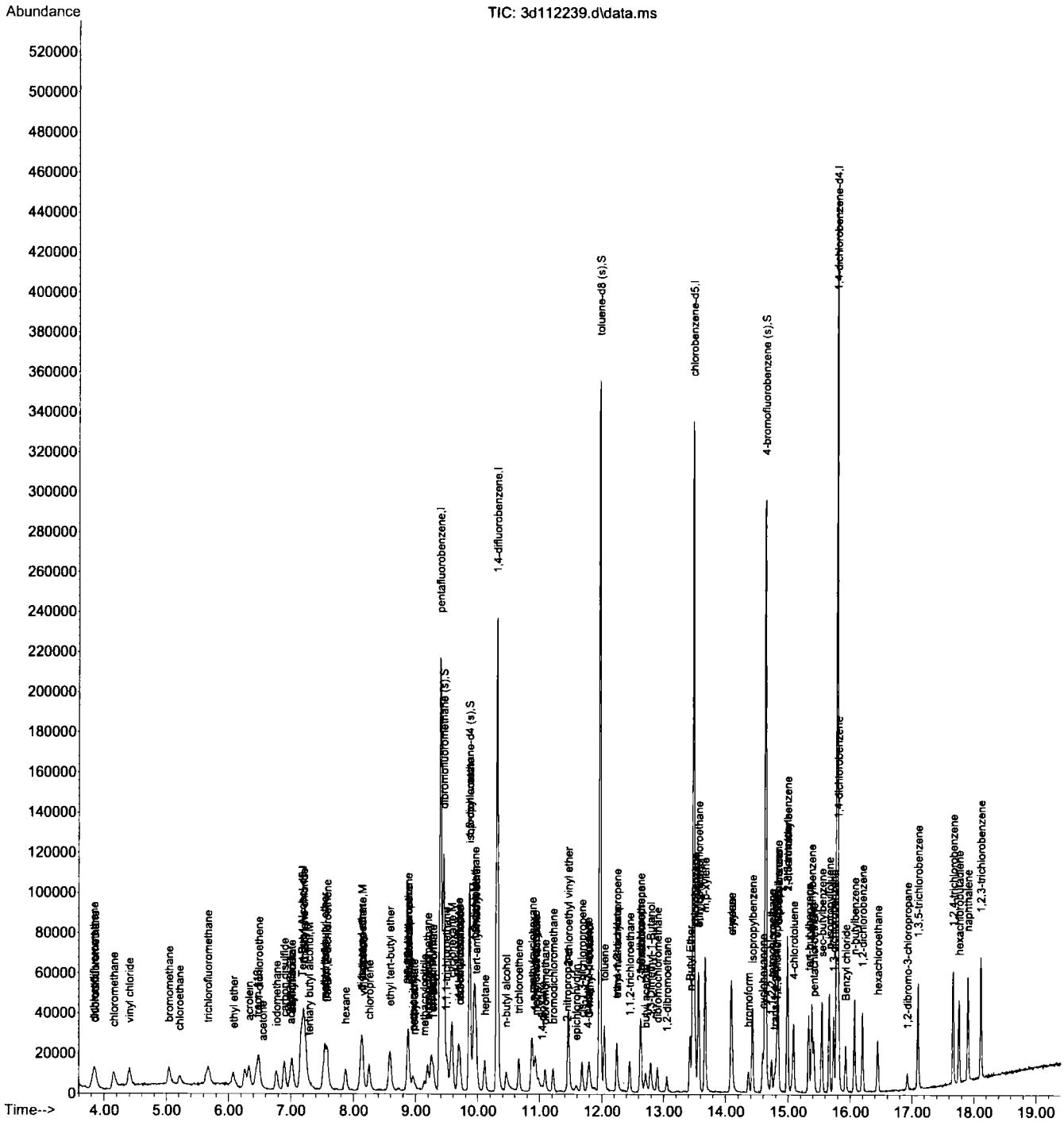
7.6.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112239.d
Acq On : 29 Jul 2015 10:04 pm
Operator : ximenac
Sample : IC4810-5
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Jul 30 11:45:40 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




M3D4810.M Thu Aug 06 13:50:21 2015 3D

Manual Integrations APPROVED (compounds with "m" flag)
Jessica Reitan-Chu
08/06/15 14:29

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112240.d
Acq On : 29 Jul 2015 10:31 pm
Operator : ximenac
Sample : IC4810-10
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 30 11:48:54 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 94749 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 201206 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 224714 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 185472 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 118281 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 75974 | 43.66 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 87.32% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 70388 | 39.18 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 78.36% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 246270 | 51.46 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.92% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 91078 | 45.50 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 91.00% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.037 | 88 | 3736 | 236.26 ug/L | 82 |
| 3) tertiary butyl alcohol | 7.299 | 59 | 9830 | 46.14 ug/L | 91 |
| 8) chlorodifluoromethane | 3.849 | 51 | 24666 | 6.19 ug/L | 95 |
| 9) dichlorodifluoromethane | 3.838 | 85 | 38339 | 9.40 ug/L | 96 |
| 10) chloromethane | 4.148 | 50 | 25990 | 8.66 ug/L | 97 |
| 11) vinyl chloride | 4.405 | 62 | 29135 | 8.89 ug/L | 97 |
| 12) bromomethane | 5.050 | 94 | 17972 | 11.14 ug/L | 99 |
| 13) chloroethane | 5.217 | 64 | 12105 | 9.90 ug/L | 94 |
| 16) trichlorofluoromethane | 5.673 | 101 | 31073 | 9.47 ug/L | 95 |
| 18) ethyl ether | 6.072 | 74 | 7336 | 9.13 ug/L | 97 |
| 21) acrolein | 6.324 | 56 | 29882 | 76.56 ug/L | 96 |
| 22) 1,1-dichloroethene | 6.491 | 61 | 23852 | 6.79 ug/L | 97 |
| 23) acetone | 6.549 | 43 | 4844 | 8.43 ug/L | 95 |
| 24) allyl chloride | 7.016 | 76 | 7520 | 7.39 ug/L # | 70 |
| 25) acetonitrile | 6.989 | 40 | 13588 | 61.54 ug/L # | 72 |
| 27) iodomethane | 6.769 | 142 | 34492 | 8.27 ug/L | 97 |
| 28) iso-butyl alcohol | 9.700 | 41 | 4644 | 64.99 ug/L | 89 |
| 29) carbon disulfide | 6.895 | 76 | 59937 | 6.99 ug/L | 98 |
| 30) methylene chloride | 7.210 | 84 | 17711 | 7.47 ug/L | 91 |
| 31) methyl acetate | 7.005 | 43 | 9525 | 6.53 ug/L | 96 |
| 32) methyl tert butyl ether | 7.535 | 73 | 52934 | 8.05 ug/L | 97 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 21380 | 6.93 ug/L | 93 |
| 34) di-isopropyl ether | 8.127 | 45 | 49458 | 6.64 ug/L | 82 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 48644 | 6.72 ug/L | 94 |
| 36) 2-butanone | 8.872 | 72 | 1397m | 8.42 ug/L | |
| 37) 1,1-dichloroethane | 8.143 | 63 | 26481 | 7.32 ug/L | 94 |
| 38) chloroprene | 8.253 | 53 | 17145 | 6.32 ug/L | 98 |
| 39) acrylonitrile | 7.540 | 53 | 27491 | 41.52 ug/L | 97 |
| 40) vinyl acetate | 8.143 | 86 | 1532 | 6.60 ug/L # | 35 |
| 41) ethyl acetate | 8.877 | 45 | 1777 | 8.09 ug/L # | 1 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 25506 | 7.59 ug/L | 93 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 16793 | 8.04 ug/L | 90 |
| 44) propionitrile | 8.945 | 54 | 19260 | 78.54 ug/L | 74 |
| 45) methyl acrylate | 8.956 | 55 | 13110 | 8.13 ug/L | 95 |
| 46) bromochloromethane | 9.192 | 128 | 8533 | 8.71 ug/L | 87 |
| 47) tetrahydrofuran | 9.233 | 42 | 5013 | 7.53 ug/L | 95 |
| 48) chloroform | 9.244 | 83 | 23924 | 7.23 ug/L | 98 |
| 49) Tert-Butyl Formate | 9.275 | 59 | 12780 | 6.84 ug/L # | 94 |
| 52) freon 113 | 6.460 | 151 | 13439 | 7.84 ug/L | 80 |
| 53) methacrylonitrile | 9.134 | 41 | 6903 | 6.94 ug/L | 89 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 24746 | 7.94 ug/L | 95 |

7.6.6 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112240.d
Acq On : 29 Jul 2015 10:31 pm
Operator : ximenac
Sample : IC4810-10
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 30 11:48:54 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | | Dev(Min) |
|---|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.973 | 73 | 45484 | 6.68 ug/L | | 97 |
| 59) epichlorohydrin | 11.582 | 57 | 5766 | 45.62 ug/L | | 94 |
| 60) n-butyl alcohol | 10.450 | 56 | 17409 | 483.28 ug/L | | 94 |
| 61) cyclohexane | 9.569 | 84 | 25733 | 9.37 ug/L | | 82 |
| 62) carbon tetrachloride | 9.705 | 117 | 21620 | 9.28 ug/L | | 99 |
| 63) 1,1-dichloropropene | 9.679 | 75 | 16227 | 7.88 ug/L | | 92 |
| 64) hexane | 7.876 | 57 | 13055 | 6.83 ug/L | | 95 |
| 65) benzene | 9.941 | 78 | 51889 | 8.23 ug/L | | 97 |
| 66) heptane | 10.114 | 57 | 7653 | 7.55 ug/L | | 92 |
| 67) isopropyl acetate | 9.863 | 43 | 20448 | 6.95 ug/L | | 87 |
| 68) 1,2-dichloroethane | 9.957 | 62 | 16233 | 8.10 ug/L | | 93 |
| 69) trichloroethene | 10.660 | 95 | 12453 | 8.89 ug/L | | 98 |
| 72) 2-nitropropane | 11.436 | 41 | 4289 | 7.74 ug/L | | 76 |
| 73) 2-chloroethyl vinyl ether | 11.457 | 63 | 37588 | 44.77 ug/L | | 97 |
| 74) methyl methacrylate | 10.927 | 41 | 17733 | 7.76 ug/L | | 97 |
| 75) 1,2-dichloropropane | 10.917 | 63 | 13357 | 8.19 ug/L | | 99 |
| 76) methylcyclohexane | 10.875 | 83 | 22551 | 7.55 ug/L | | 93 |
| 77) dibromomethane | 11.084 | 93 | 8388 | 9.12 ug/L | | 96 |
| 78) bromodichloromethane | 11.215 | 83 | 16668 | 8.61 ug/L | | 96 |
| 79) cis-1,3-dichloropropene | 11.677 | 75 | 20153 | 9.28 ug/L | | 94 |
| 81) 4-methyl-2-pentanone | 11.771 | 58 | 5014 | 9.39 ug/L | | 96 |
| 82) toluene | 12.039 | 92 | 29423 | 8.80 ug/L | | 99 |
| 83) 3-methyl-1-butanol | 11.792 | 70 | 7349 | 209.85 ug/L | | 91 |
| 84) trans-1,3-dichloropropene | 12.238 | 75 | 18095 | 9.32 ug/L | | 91 |
| 85) ethyl methacrylate | 12.227 | 69 | 15393 | 10.29 ug/L | | 98 |
| 86) 1,1,2-trichloroethane | 12.447 | 83 | 9602 | 9.29 ug/L | | 92 |
| 87) 2-hexanone | 12.636 | 58 | 3944 | 9.24 ug/L | # | 79 |
| 89) tetrachloroethene | 12.626 | 166 | 15228 | 10.03 ug/L | | 96 |
| 90) 1,3-dichloropropane | 12.631 | 76 | 18003 | 9.17 ug/L | | 96 |
| 91) butyl acetate | 12.704 | 56 | 6815 | 8.12 ug/L | # | 75 |
| 92) 3,3-Dimethyl-1-Butanol | 12.794 | 57 | 14747 | 83.43 ug/L | | 95 |
| 93) dibromochloromethane | 12.898 | 129 | 14143 | 9.49 ug/L | | 95 |
| 94) 1,2-dibromoethane | 13.050 | 107 | 12264 | 9.40 ug/L | | 94 |
| 95) n-Butyl Ether | 13.423 | 57 | 53856 | 8.74 ug/L | | 99 |
| 96) chlorobenzene | 13.507 | 112 | 33030 | 8.72 ug/L | | 95 |
| 97) 1,1,1,2-tetrachloroethane | 13.569 | 131 | 14160 | 9.13 ug/L | | 98 |
| 98) ethylbenzene | 13.564 | 91 | 55245 | 8.57 ug/L | | 98 |
| 99) m,p-xylene | 13.669 | 106 | 43436 | 18.02 ug/L | | 99 |
| 100) o-xylene | 14.089 | 106 | 21777 | 9.01 ug/L | | 88 |
| 101) styrene | 14.099 | 104 | 36701 | 9.54 ug/L | | 96 |
| 103) bromoform | 14.361 | 173 | 10922 | 9.90 ug/L | | 99 |
| 105) isopropylbenzene | 14.424 | 105 | 58523 | 8.56 ug/L | | 97 |
| 107) bromobenzene | 14.828 | 156 | 17244 | 9.25 ug/L | | 88 |
| 108) cyclohexanone | 14.587 | 55 | 21965 | 120.40 ug/L | | 94 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 17033 | 8.67 ug/L | | 98 |
| 110) trans-1,4-dichloro-2-b... | 14.775 | 53 | 3673 | 8.16 ug/L | | 93 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 3974 | 9.29 ug/L | | 98 |
| 112) n-propylbenzene | 14.833 | 91 | 65204 | 8.52 ug/L | | 100 |
| 114) 2-chlorotoluene | 14.980 | 126 | 14684 | 8.94 ug/L | | 96 |
| 115) 4-chlorotoluene | 15.085 | 126 | 15054 | 9.23 ug/L | | 93 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 49921 | 8.65 ug/L | | 96 |
| 117) tert-butylbenzene | 15.331 | 119 | 39986 | 8.23 ug/L | | 98 |
| 118) pentachloroethane | 15.415 | 167 | 10172 | 8.21 ug/L | | 95 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 50402 | 8.70 ug/L | | 99 |
| 120) sec-butylbenzene | 15.546 | 105 | 66528 | 8.75 ug/L | | 98 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 33232 | 8.94 ug/L | | 98 |
| 122) p-isopropyltoluene | 15.661 | 119 | 57504 | 8.78 ug/L | | 97 |
| 123) 1,4-dichlorobenzene | 15.813 | 146 | 34937 | 9.06 ug/L | | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112240.d
Acq On : 29 Jul 2015 10:31 pm
Operator : ximenac
Sample : IC4810-10
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 30 11:48:54 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.196 | 146 | 35274 | 8.84 ug/L | 99 |
| 126) n-butylbenzene | 16.070 | 92 | 30437 | 8.96 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 4754 | 9.07 ug/L | 90 |
| 129) 1,3,5-trichlorobenzene | 17.098 | 180 | 37404 | 9.12 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.664 | 180 | 38620 | 9.12 ug/L | 96 |
| 131) hexachlorobutadiene | 17.759 | 225 | 18465 | 9.28 ug/L | 98 |
| 132) naphthalene | 17.900 | 128 | 79663 | 8.55 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 38953 | 8.89 ug/L | 97 |
| 134) hexachloroethane | 16.443 | 119 | 10337 | 9.26 ug/L | 95 |
| 135) Benzyl chloride | 15.929 | 91 | 31103 | 8.58 ug/L | 99 |

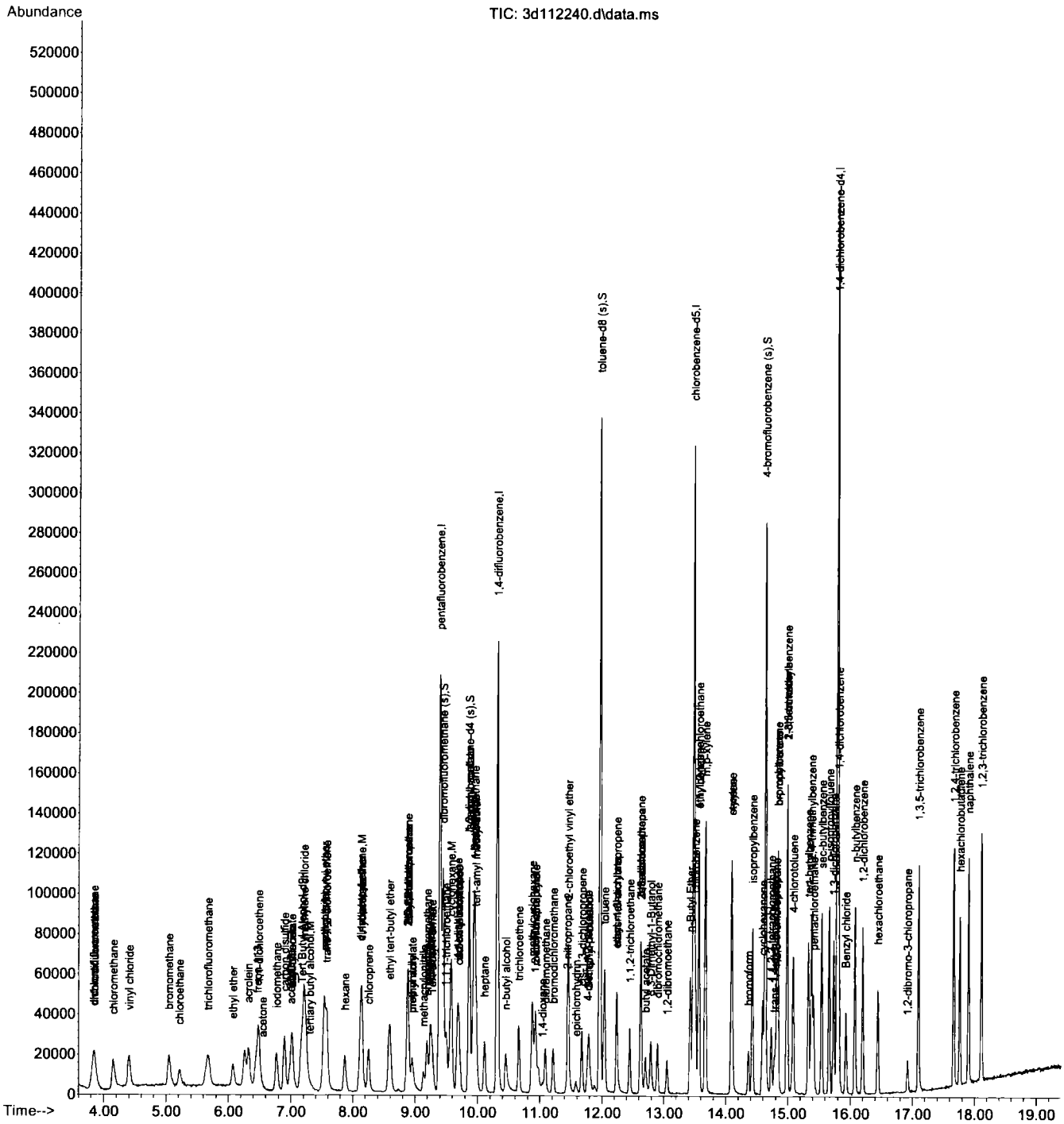
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.6 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112240.d
Acq On : 29 Jul 2015 10:31 pm
Operator : ximenac
Sample : IC4810-10
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 30 11:48:54 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




M3D4810.M Thu Aug 06 13:50:22 2015 3D



7.6.6
7

# Manual Integration Approval Summary



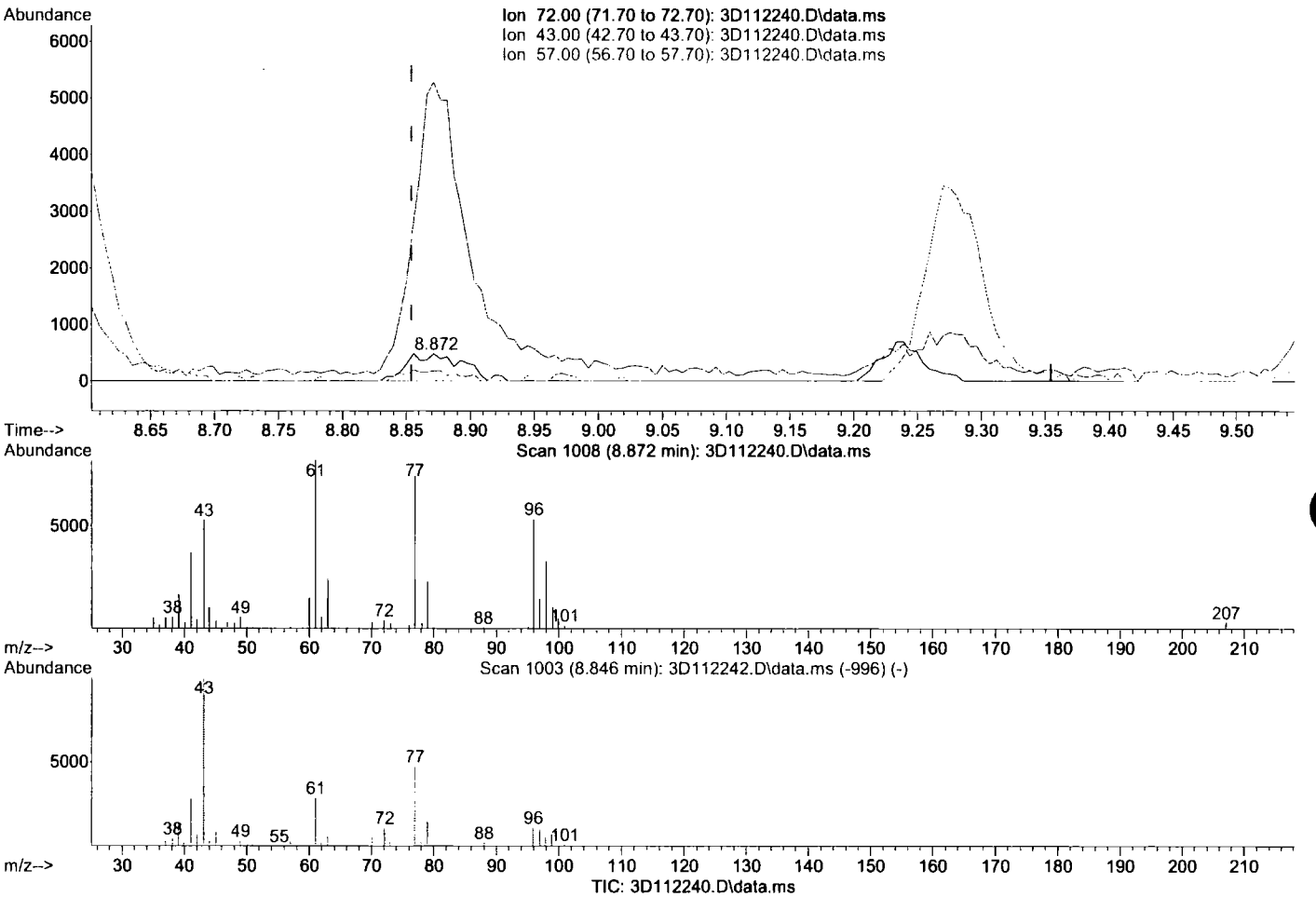
| | | | |
|---|---|---|---|
| **Sample Number:** | V3D4810-IC4810 | **Method:** | SW846 8260C |
| **Lab FileID:** | 3D112240.D | **Analyst approved:** | 07/30/15 13:02 Henny Salim |
| **Injection Time:** | 07/29/15 22:31 | **Supervisor approved:** | 08/06/15 14:29 Jessica Reitan-Chu |

| Parameter | CAS | Sig# | R.T. (min.) | Reason |
|---|---|---|---|---|
| 2-Butanone (MEK) | 78-93-3 | | 8.87 | Poor instrument integration |

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112240.D
Acq On : 29 Jul 2015 10:31 pm
Operator : ximenac
Sample : IC4810-10
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Jul 30 08:38:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




(36) 2-butanone

8.872min (+0.018) 8.42ug/L m

response 1397

| Ion | Exp% | Act% |
|---|---|---|
| 72.00 | 100 | 100 |
| 43.00 | 1321.10 | 1109.66 |
| 57.00 | 32.30 | 37.65 |
| 0.00 | 0.00 | 0.00 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3D112241.D
Acq On : 29 Jul 2015 10:58 pm
Operator : ximenac
Sample : IC4810-20
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 30 11:50:38 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.168 | 65 | 96365 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 205871 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 233597 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 190298 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 121957 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 78421 | 44.04 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 88.08% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 72634 | 39.51 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 79.02% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 257374 | 51.74 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 103.48% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 92946 | 45.04 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 90.08% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.037 | 88 | 8448 | 525.29 ug/L | 94 |
| 3) tertiary butyl alcohol | 7.294 | 59 | 21383 | 98.68 ug/L | 97 |
| 8) chlorodifluoromethane | 3.844 | 51 | 56463 | 13.85 ug/L | 96 |
| 9) dichlorodifluoromethane | 3.844 | 85 | 77901 | 18.66 ug/L | 99 |
| 10) chloromethane | 4.153 | 50 | 53465 | 17.42 ug/L | 98 |
| 11) vinyl chloride | 4.405 | 62 | 58988 | 17.59 ug/L | 95 |
| 12) bromomethane | 5.044 | 94 | 37153 | 22.50 ug/L | 97 |
| 13) chloroethane | 5.212 | 64 | 23722 | 18.95 ug/L | 95 |
| 16) trichlorofluoromethane | 5.663 | 101 | 64098 | 19.08 ug/L | 98 |
| 18) ethyl ether | 6.072 | 74 | 15421 | 18.76 ug/L | 97 |
| 21) acrolein | 6.324 | 56 | 60721 | 152.06 ug/L | 98 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 50149 | 13.94 ug/L | 97 |
| 23) acetone | 6.544 | 43 | 9878 | 16.80 ug/L | 87 |
| 24) allyl chloride | 7.011 | 76 | 16689 | 16.03 ug/L # | 83 |
| 25) acetonitrile | 6.974 | 40 | 30553 | 135.23 ug/L | 88 |
| 27) iodomethane | 6.764 | 142 | 74454 | 17.45 ug/L | 97 |
| 28) iso-butyl alcohol | 9.684 | 41 | 10148 | 138.79 ug/L | 95 |
| 29) carbon disulfide | 6.890 | 76 | 129241 | 14.72 ug/L | 98 |
| 30) methylene chloride | 7.205 | 84 | 37577 | 15.48 ug/L | 99 |
| 31) methyl acetate | 7.005 | 43 | 20757 | 13.92 ug/L | 95 |
| 32) methyl tert butyl ether | 7.530 | 73 | 112839 | 16.76 ug/L | 97 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 46857 | 14.85 ug/L | 92 |
| 34) di-isopropyl ether | 8.122 | 45 | 110619 | 14.51 ug/L | 90 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 110696 | 14.94 ug/L | 97 |
| 36) 2-butanone | 8.856 | 72 | 3248 | 19.14 ug/L | 67 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 57280 | 15.49 ug/L | 97 |
| 38) chloroprene | 8.248 | 53 | 38272 | 13.79 ug/L | 93 |
| 39) acrylonitrile | 7.535 | 53 | 59194 | 87.38 ug/L | 99 |
| 40) vinyl acetate | 8.138 | 86 | 4094 | 17.25 ug/L | 52 |
| 41) ethyl acetate | 8.872 | 45 | 4213 | 18.74 ug/L # | 1 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 54222 | 15.77 ug/L | 97 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 35402 | 16.57 ug/L | 90 |
| 44) propionitrile | 8.940 | 54 | 41971 | 167.28 ug/L | 84 |
| 45) methyl acrylate | 8.945 | 55 | 29812 | 18.07 ug/L | 98 |
| 46) bromochloromethane | 9.192 | 128 | 18677 | 18.63 ug/L # | 82 |
| 47) tetrahydrofuran | 9.228 | 42 | 10725 | 15.75 ug/L | 97 |
| 48) chloroform | 9.244 | 83 | 52546 | 15.52 ug/L | 99 |
| 49) Tert-Butyl Formate | 9.276 | 59 | 29933 | 15.66 ug/L | 99 |
| 52) freon 113 | 6.460 | 151 | 29980 | 17.10 ug/L | 81 |
| 53) methacrylonitrile | 9.129 | 41 | 15856 | 15.59 ug/L | 99 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 54834 | 17.20 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3D112241.D
Acq On : 29 Jul 2015 10:58 pm
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Sample : IC4810-20
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 30 11:50:38 2015
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Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.973 | 73 | 103703 | 14.88 ug/L | 97 |
| 59) epichlorohydrin | 11.577 | 57 | 12385 | 94.27 ug/L | 93 |
| 60) n-butyl alcohol | 10.445 | 56 | 37482 | 1000.95 ug/L | 87 |
| 61) cyclohexane | 9.574 | 84 | 53935 | 18.89 ug/L | 87 |
| 62) carbon tetrachloride | 9.705 | 117 | 48372 | 19.97 ug/L | 98 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 36376 | 16.99 ug/L | 94 |
| 64) hexane | 7.870 | 57 | 28424 | 14.30 ug/L | 94 |
| 65) benzene | 9.936 | 78 | 112757 | 17.20 ug/L | 98 |
| 66) heptane | 10.109 | 57 | 16664 | 15.82 ug/L | 96 |
| 67) isopropyl acetate | 9.863 | 43 | 49101 | 16.06 ug/L | 94 |
| 68) 1,2-dichloroethane | 9.952 | 62 | 34905 | 16.75 ug/L | 96 |
| 69) trichloroethene | 10.660 | 95 | 27014 | 18.54 ug/L | 91 |
| 72) 2-nitropropane | 11.436 | 41 | 10648 | 18.49 ug/L | 99 |
| 73) 2-chloroethyl vinyl ether | 11.451 | 63 | 88704 | 101.63 ug/L | 96 |
| 74) methyl methacrylate | 10.927 | 41 | 41085 | 17.30 ug/L | 91 |
| 75) 1,2-dichloropropane | 10.922 | 63 | 29465 | 17.38 ug/L | 98 |
| 76) methylcyclohexane | 10.880 | 83 | 51606 | 16.62 ug/L | 94 |
| 77) dibromomethane | 11.084 | 93 | 18582 | 19.44 ug/L | 92 |
| 78) bromodichloromethane | 11.210 | 83 | 36643 | 18.21 ug/L | 96 |
| 79) cis-1,3-dichloropropene | 11.672 | 75 | 45351 | 20.09 ug/L | 95 |
| 81) 4-methyl-2-pentanone | 11.771 | 58 | 11182 | 20.15 ug/L | 98 |
| 82) toluene | 12.039 | 92 | 66864 | 19.23 ug/L | 99 |
| 83) 3-methyl-1-butanol | 11.787 | 70 | 14832 | 407.43 ug/L | 91 |
| 84) trans-1,3-dichloropropene | 12.233 | 75 | 40244 | 19.95 ug/L | 99 |
| 85) ethyl methacrylate | 12.227 | 69 | 34164 | 21.96 ug/L | 98 |
| 86) 1,1,2-trichloroethane | 12.448 | 83 | 21411 | 19.93 ug/L | 97 |
| 87) 2-hexanone | 12.626 | 58 | 9318 | 21.00 ug/L | 98 |
| 89) tetrachloroethene | 12.626 | 166 | 35050 | 22.49 ug/L | 98 |
| 90) 1,3-dichloropropane | 12.631 | 76 | 39330 | 19.52 ug/L | 98 |
| 91) butyl acetate | 12.699 | 56 | 15344 | 17.81 ug/L | 96 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 31726 | 174.95 ug/L | 98 |
| 93) dibromochloromethane | 12.898 | 129 | 31662 | 20.70 ug/L | 96 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 27208 | 20.32 ug/L | 96 |
| 95) n-Butyl Ether | 13.423 | 57 | 118568 | 18.75 ug/L | 99 |
| 96) chlorobenzene | 13.507 | 112 | 74600 | 19.20 ug/L | 97 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 32140 | 20.20 ug/L | 97 |
| 98) ethylbenzene | 13.559 | 91 | 122689 | 18.55 ug/L | 99 |
| 99) m,p-xylene | 13.669 | 106 | 95400 | 38.58 ug/L | 100 |
| 100) o-xylene | 14.083 | 106 | 49837 | 20.09 ug/L | 90 |
| 101) styrene | 14.099 | 104 | 80880 | 20.50 ug/L | 93 |
| 103) bromoform | 14.361 | 173 | 24626 | 21.75 ug/L | 99 |
| 105) isopropylbenzene | 14.424 | 105 | 130640 | 18.53 ug/L | 98 |
| 107) bromobenzene | 14.823 | 156 | 37524 | 19.51 ug/L | 94 |
| 108) cyclohexanone | 14.587 | 55 | 49760 | 264.53 ug/L | 98 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 37265 | 18.39 ug/L | 98 |
| 110) trans-1,4-dichloro-2-b... | 14.775 | 53 | 8343 | 17.97 ug/L | 95 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 8484 | 19.24 ug/L | 90 |
| 112) n-propylbenzene | 14.833 | 91 | 142828 | 18.11 ug/L | 100 |
| 114) 2-chlorotoluene | 14.980 | 126 | 32656 | 19.28 ug/L | 92 |
| 115) 4-chlorotoluene | 15.080 | 126 | 32386 | 19.27 ug/L | 98 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 111035 | 18.65 ug/L | 95 |
| 117) tert-butylbenzene | 15.331 | 119 | 91815 | 18.32 ug/L | 96 |
| 118) pentachloroethane | 15.415 | 167 | 23555 | 18.43 ug/L | 96 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 111069 | 18.59 ug/L | 100 |
| 120) sec-butylbenzene | 15.546 | 105 | 150463 | 19.19 ug/L | 98 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 73542 | 19.18 ug/L | 99 |
| 122) p-isopropyltoluene | 15.662 | 119 | 129273 | 19.15 ug/L | 98 |
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 75030 | 18.88 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3D112241.D
Acq On : 29 Jul 2015 10:58 pm
Operator : ximenac
Sample : IC4810-20
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 30 11:50:38 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.196 | 146 | 77329 | 18.79 ug/L | 97 |
| 126) n-butylbenzene | 16.065 | 92 | 67003 | 19.14 ug/L | 98 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 11109 | 20.55 ug/L | 98 |
| 129) 1,3,5-trichlorobenzene | 17.098 | 180 | 84834 | 20.07 ug/L | 97 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 85540 | 19.60 ug/L | 98 |
| 131) hexachlorobutadiene | 17.759 | 225 | 39564 | 19.29 ug/L | 98 |
| 132) naphthalene | 17.900 | 128 | 178644 | 18.59 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 87582 | 19.38 ug/L | 99 |
| 134) hexachloroethane | 16.443 | 119 | 24382 | 21.19 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 66494 | 17.79 ug/L | 98 |

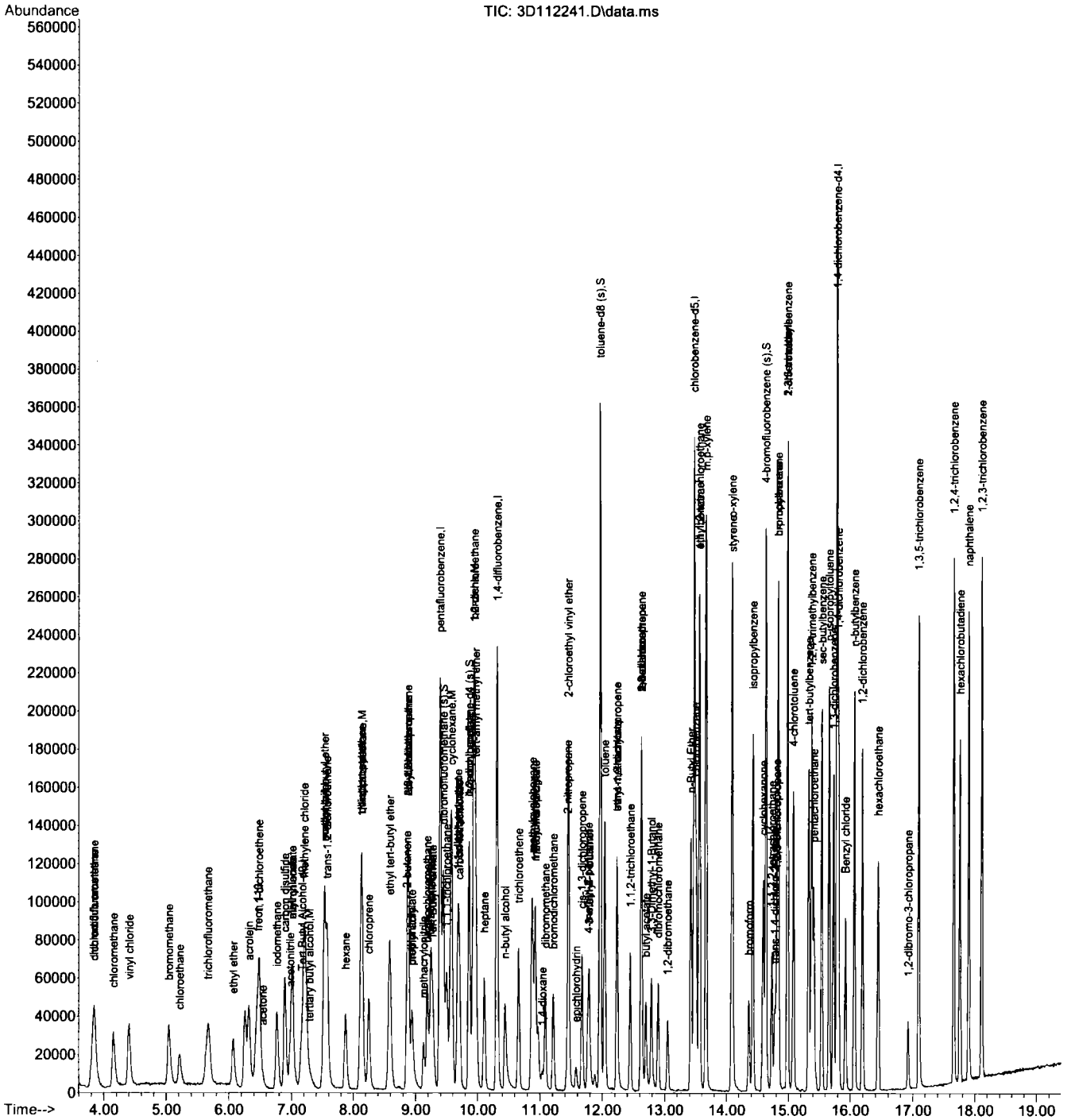
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.7 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3D112241.D
Acq On : 29 Jul 2015 10:58 pm
Operator : ximenac
Sample : IC4810-20
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Jul 30 11:50:38 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112242.d
Acq On : 29 Jul 2015 11:25 pm
Operator : ximenac
Sample : ICC4810-50
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 30 11:52:18 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 96354 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 213808 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 238297 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 193300 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 122120 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 82616 | 44.67 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 89.34% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 74743 | 39.15 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 78.30% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 262476 | 51.72 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 103.44% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 94748 | 45.85 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 91.70% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.037 | 88 | 21435 | 1332.96 ug/L | 88 |
| 3) tertiary butyl alcohol | 7.299 | 59 | 51882 | 239.46 ug/L | 96 |
| 8) chlorodifluoromethane | 3.854 | 51 | 144662 | 34.17 ug/L | 98 |
| 9) dichlorodifluoromethane | 3.849 | 85 | 193205 | 44.57 ug/L | 98 |
| 10) chloromethane | 4.164 | 50 | 145170 | 45.53 ug/L | 99 |
| 11) vinyl chloride | 4.415 | 62 | 161354 | 46.33 ug/L | 99 |
| 12) bromomethane | 5.050 | 94 | 96095 | 56.03 ug/L | 97 |
| 13) chloroethane | 5.212 | 64 | 62712 | 48.25 ug/L | 97 |
| 16) trichlorofluoromethane | 5.674 | 101 | 168107 | 48.19 ug/L | 99 |
| 18) ethyl ether | 6.072 | 74 | 38059 | 44.58 ug/L | 98 |
| 21) acrolein | 6.324 | 56 | 145068 | 349.79 ug/L | 98 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 132542 | 35.49 ug/L | 97 |
| 23) acetone | 6.544 | 43 | 20305 | 33.26 ug/L | 83 |
| 24) allyl chloride | 7.016 | 76 | 43027 | 39.79 ug/L # | 81 |
| 25) acetonitrile | 6.979 | 40 | 75584 | 322.12 ug/L | 91 |
| 27) iodomethane | 6.769 | 142 | 194884 | 43.98 ug/L | 98 |
| 28) iso-butyl alcohol | 9.685 | 41 | 25463 | 335.31 ug/L | 100 |
| 29) carbon disulfide | 6.895 | 76 | 334343 | 36.68 ug/L | 99 |
| 30) methylene chloride | 7.205 | 84 | 97033 | 38.49 ug/L | 95 |
| 31) methyl acetate | 7.000 | 43 | 53986 | 34.85 ug/L | 98 |
| 32) methyl tert butyl ether | 7.535 | 73 | 282066 | 40.35 ug/L | 96 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 119916 | 36.59 ug/L | 94 |
| 34) di-isopropyl ether | 8.122 | 45 | 292146 | 36.90 ug/L | 95 |
| 35) ethyl tert-butyl ether | 8.584 | 59 | 294220 | 38.24 ug/L | 98 |
| 36) 2-butanone | 8.846 | 72 | 7359 | 41.76 ug/L | 75 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 145923 | 37.98 ug/L | 99 |
| 38) chloroprene | 8.248 | 53 | 105722 | 36.68 ug/L | 96 |
| 39) acrylonitrile | 7.530 | 53 | 142501 | 202.55 ug/L | 97 |
| 40) vinyl acetate | 8.133 | 86 | 10726 | 43.51 ug/L | 64 |
| 41) ethyl acetate | 8.861 | 45 | 9145 | 39.18 ug/L | 95 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 137502 | 38.51 ug/L | 98 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 89025 | 40.13 ug/L | 92 |
| 44) propionitrile | 8.940 | 54 | 101157 | 388.20 ug/L | 98 |
| 45) methyl acrylate | 8.940 | 55 | 70423 | 41.10 ug/L | 98 |
| 46) bromochloromethane | 9.186 | 128 | 46329 | 44.49 ug/L # | 83 |
| 47) tetrahydrofuran | 9.228 | 42 | 24184 | 34.20 ug/L | 97 |
| 48) chloroform | 9.244 | 83 | 136324 | 38.76 ug/L | 97 |
| 49) Tert-Butyl Formate | 9.276 | 59 | 79581 | 40.10 ug/L # | 89 |
| 52) freon 113 | 6.450 | 151 | 80037 | 43.95 ug/L | 86 |
| 53) methacrylonitrile | 9.124 | 41 | 38770 | 36.70 ug/L | 93 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 140366 | 42.39 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112242.d
Acq On : 29 Jul 2015 11:25 pm
Operator : ximenac
Sample : ICC4810-50
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 30 11:52:18 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.973 | 73 | 273411 | 37.77 ug/L | 97 |
| 59) epichlorohydrin | 11.577 | 57 | 29046 | 216.73 ug/L | 95 |
| 60) n-butyl alcohol | 10.440 | 56 | 95617 | 2503.08 ug/L | 93 |
| 61) cyclohexane | 9.569 | 84 | 141247 | 48.48 ug/L | 84 |
| 62) carbon tetrachloride | 9.706 | 117 | 126210 | 51.07 ug/L | 99 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 91905 | 42.07 ug/L | 93 |
| 64) hexane | 7.876 | 57 | 76756 | 37.85 ug/L | 95 |
| 65) benzene | 9.936 | 78 | 284170 | 42.48 ug/L | 98 |
| 66) heptane | 10.109 | 57 | 43171 | 40.18 ug/L | 97 |
| 67) isopropyl acetate | 9.858 | 43 | 122747 | 39.34 ug/L | 97 |
| 68) 1,2-dichloroethane | 9.952 | 62 | 86550 | 40.70 ug/L | 98 |
| 69) trichloroethene | 10.655 | 95 | 68269 | 45.94 ug/L | 95 |
| 72) 2-nitropropane | 11.431 | 41 | 23129 | 39.37 ug/L | 97 |
| 73) 2-chloroethyl vinyl ether | 11.451 | 63 | 217123 | 243.86 ug/L | 98 |
| 74) methyl methacrylate | 10.922 | 41 | 98478 | 40.65 ug/L | 96 |
| 75) 1,2-dichloropropane | 10.917 | 63 | 74464 | 43.07 ug/L | 99 |
| 76) methylcyclohexane | 10.875 | 83 | 141516 | 44.67 ug/L | 95 |
| 77) dibromomethane | 11.084 | 93 | 44776 | 45.93 ug/L | 89 |
| 78) bromodichloromethane | 11.210 | 83 | 92134 | 44.88 ug/L | 94 |
| 79) cis-1,3-dichloropropene | 11.672 | 75 | 111103 | 48.24 ug/L | 94 |
| 81) 4-methyl-2-pentanone | 11.761 | 58 | 26308 | 46.47 ug/L | 98 |
| 82) toluene | 12.033 | 92 | 165473 | 46.65 ug/L | 98 |
| 83) 3-methyl-1-butanol | 11.787 | 70 | 36375 | 979.49 ug/L | 88 |
| 84) trans-1,3-dichloropropene | 12.233 | 75 | 99123 | 48.16 ug/L | 91 |
| 85) ethyl methacrylate | 12.227 | 69 | 83527 | 52.63 ug/L | 95 |
| 86) 1,1,2-trichloroethane | 12.448 | 83 | 51777 | 47.25 ug/L | 95 |
| 87) 2-hexanone | 12.621 | 58 | 20948 | 46.29 ug/L | 98 |
| 89) tetrachloroethene | 12.626 | 166 | 85256 | 53.86 ug/L | 99 |
| 90) 1,3-dichloropropane | 12.626 | 76 | 95746 | 46.78 ug/L | 96 |
| 91) butyl acetate | 12.694 | 56 | 39546 | 45.20 ug/L | 93 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 78103 | 423.99 ug/L | 100 |
| 93) dibromochloromethane | 12.893 | 129 | 78012 | 50.21 ug/L | 96 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 64300 | 47.27 ug/L | 100 |
| 95) n-Butyl Ether | 13.423 | 57 | 292584 | 45.55 ug/L | 98 |
| 96) chlorobenzene | 13.507 | 112 | 181711 | 46.05 ug/L | 96 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 82762 | 51.21 ug/L | 97 |
| 98) ethylbenzene | 13.559 | 91 | 302655 | 45.04 ug/L | 100 |
| 99) m,p-xylene | 13.669 | 106 | 235388 | 93.71 ug/L | 97 |
| 100) o-xylene | 14.083 | 106 | 123597 | 49.06 ug/L | 92 |
| 101) styrene | 14.094 | 104 | 201809 | 50.35 ug/L | 96 |
| 103) bromoform | 14.361 | 173 | 59726 | 51.94 ug/L | 99 |
| 105) isopropylbenzene | 14.424 | 105 | 327117 | 46.32 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 92715 | 48.15 ug/L | 92 |
| 108) cyclohexanone | 14.587 | 55 | 41632 | 221.03 ug/L | 98 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 87641 | 43.19 ug/L | 100 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 19328 | 41.57 ug/L | 97 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 19995 | 45.28 ug/L | 93 |
| 112) n-propylbenzene | 14.833 | 91 | 351383 | 44.48 ug/L | 99 |
| 114) 2-chlorotoluene | 14.980 | 126 | 79829 | 47.06 ug/L | 92 |
| 115) 4-chlorotoluene | 15.080 | 126 | 80891 | 48.06 ug/L | 97 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 277483 | 46.56 ug/L | 98 |
| 117) tert-butylbenzene | 15.331 | 119 | 234010 | 46.62 ug/L | 98 |
| 118) pentachloroethane | 15.415 | 167 | 62013 | 48.47 ug/L | 96 |
| 119) 1,2,4-trimethylbenzene | 15.379 | 105 | 274605 | 45.91 ug/L | 99 |
| 120) sec-butylbenzene | 15.546 | 105 | 371795 | 47.35 ug/L | 98 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 178588 | 46.51 ug/L | 99 |
| 122) p-isopropyltoluene | 15.662 | 119 | 317327 | 46.95 ug/L | 98 |
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 182996 | 45.99 ug/L | 99 |

7.6.8 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112242.d
Acq On : 29 Jul 2015 11:25 pm
Operator : ximenac
Sample : ICC4810-50
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 30 11:52:18 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 190124 | 46.14 ug/L | 99 |
| 126) n-butylbenzene | 16.065 | 92 | 162816 | 46.44 ug/L | 100 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 26104 | 48.23 ug/L | 96 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 206822 | 48.85 ug/L | 98 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 213293 | 48.80 ug/L | 99 |
| 131) hexachlorobutadiene | 17.759 | 225 | 96893 | 47.19 ug/L | 99 |
| 132) naphthalene | 17.900 | 128 | 430037 | 44.69 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 216874 | 47.93 ug/L | 98 |
| 134) hexachloroethane | 16.443 | 119 | 65619 | 56.94 ug/L | 97 |
| 135) Benzyl chloride | 15.924 | 91 | 165957 | 44.35 ug/L | 98 |

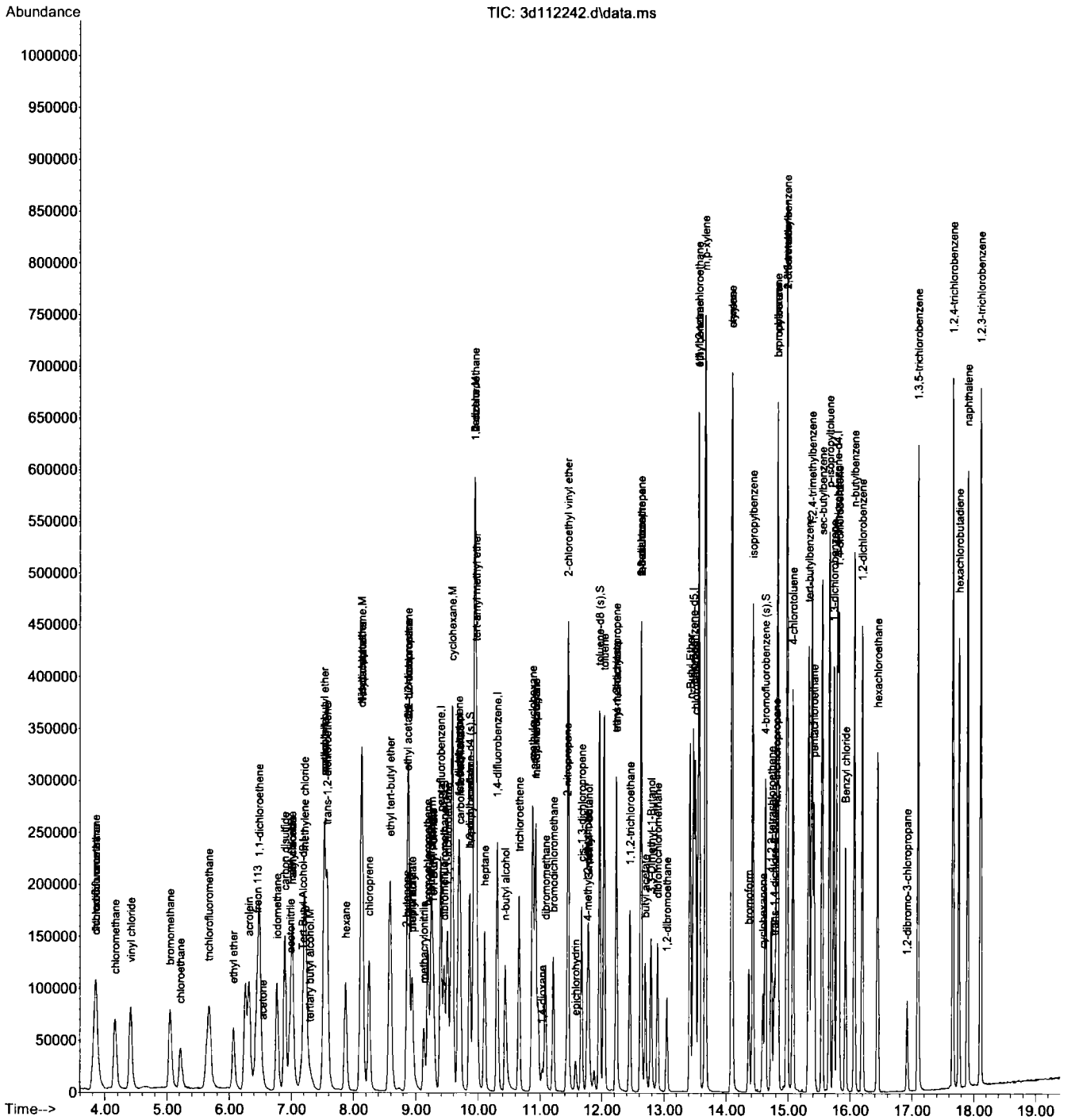
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.8

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112242.d
Acq On : 29 Jul 2015 11:25 pm
Operator : ximenac
Sample : ICC4810-50
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Jul 30 11:52:18 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




M3D4810.M Thu Aug 06 13:50:24 2015 3D

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112243.d
Acq On : 29 Jul 2015 11:53 pm
Operator : ximenac
Sample : IC4810-100
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 30 11:54:06 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 101373 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 208084 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 231990 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 189712 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 115891 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 80199 | 44.56 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 89.12% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 72486 | 39.01 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 78.02% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 253534 | 51.32 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.64% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 90865 | 46.33 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 92.66% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.032 | 88 | 44544 | 2632.87 ug/L | 88 |
| 3) tertiary butyl alcohol | 7.288 | 59 | 108317 | 475.19 ug/L | 98 |
| 8) chlorodifluoromethane | 3.844 | 51 | 290111 | 70.40 ug/L | 98 |
| 9) dichlorodifluoromethane | 3.833 | 85 | 369475 | 87.57 ug/L | 96 |
| 10) chloromethane | 4.163 | 50 | 286392 | 92.30 ug/L | 98 |
| 11) vinyl chloride | 4.415 | 62 | 326335 | 96.28 ug/L | 99 |
| 12) bromomethane | 5.044 | 94 | 183337 | 109.84 ug/L | 96 |
| 13) chloroethane | 5.212 | 64 | 117683 | 93.03 ug/L | 96 |
| 16) trichlorofluoromethane | 5.668 | 101 | 322274 | 94.92 ug/L | 99 |
| 18) ethyl ether | 6.067 | 74 | 74650 | 89.85 ug/L | 96 |
| 21) acrolein | 6.329 | 56 | 6378 | 15.80 ug/L | 93 |
| 22) 1,1-dichloroethene | 6.481 | 61 | 249495 | 68.63 ug/L | 94 |
| 23) acetone | 6.533 | 43 | 45160 | 76.01 ug/L | 96 |
| 24) allyl chloride | 7.010 | 76 | 78943 | 75.00 ug/L # | 86 |
| 25) acetonitrile | 6.979 | 40 | 156090 | 683.52 ug/L | 86 |
| 27) iodomethane | 6.764 | 142 | 370642 | 85.95 ug/L | 97 |
| 28) iso-butyl alcohol | 9.684 | 41 | 53395 | 722.48 ug/L | 96 |
| 29) carbon disulfide | 6.890 | 76 | 633150 | 71.37 ug/L | 98 |
| 30) methylene chloride | 7.204 | 84 | 182921 | 74.55 ug/L | 92 |
| 31) methyl acetate | 6.995 | 43 | 106630 | 70.74 ug/L | 95 |
| 32) methyl tert butyl ether | 7.529 | 73 | 554719 | 81.54 ug/L | 97 |
| 33) trans-1,2-dichloroethene | 7.571 | 61 | 225371 | 70.65 ug/L | 92 |
| 34) di-isopropyl ether | 8.122 | 45 | 567957 | 73.71 ug/L | 87 |
| 35) ethyl tert-butyl ether | 8.583 | 59 | 584396 | 78.04 ug/L | 98 |
| 36) 2-butanone | 8.840 | 72 | 16056 | 93.61 ug/L | 70 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 277583 | 74.24 ug/L | 98 |
| 38) chloroprene | 8.248 | 53 | 201905 | 71.97 ug/L | 95 |
| 39) acrylonitrile | 7.524 | 53 | 289356 | 422.60 ug/L | 99 |
| 40) vinyl acetate | 8.122 | 86 | 22420 | 93.45 ug/L | 65 |
| 41) ethyl acetate | 8.861 | 45 | 18603 | 81.89 ug/L | 73 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 267502 | 76.99 ug/L | 99 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 173618 | 80.42 ug/L | 90 |
| 44) propionitrile | 8.935 | 54 | 213487 | 841.82 ug/L | 92 |
| 45) methyl acrylate | 8.940 | 55 | 145849 | 87.46 ug/L | 96 |
| 46) bromochloromethane | 9.186 | 128 | 91593 | 90.37 ug/L # | 86 |
| 47) tetrahydrofuran | 9.223 | 42 | 48461 | 70.42 ug/L | 95 |
| 48) chloroform | 9.244 | 83 | 262330 | 76.63 ug/L | 97 |
| 49) Tert-Butyl Formate | 9.270 | 59 | 162008 | 83.88 ug/L | 98 |
| 52) freon 113 | 6.455 | 151 | 150661 | 85.00 ug/L | 89 |
| 53) methacrylonitrile | 9.118 | 41 | 80998 | 78.79 ug/L | 94 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 273762 | 84.95 ug/L | 97 |

7.6.9 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112243.d
Acq On : 29 Jul 2015 11:53 pm
Operator : ximenac
Sample : IC4810-100
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 30 11:54:06 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.973 | 73 | 548551 | 77.85 ug/L | 97 |
| 59) epichlorohydrin | 11.572 | 57 | 61959 | 474.88 ug/L | 95 |
| 60) n-butyl alcohol | 10.434 | 56 | 204395 | 5496.15 ug/L | 92 |
| 61) cyclohexane | 9.569 | 84 | 273210 | 96.33 ug/L | 83 |
| 62) carbon tetrachloride | 9.700 | 117 | 245891 | 102.20 ug/L | 100 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 179730 | 84.51 ug/L | 95 |
| 64) hexane | 7.870 | 57 | 142993 | 72.43 ug/L | 98 |
| 65) benzene | 9.936 | 78 | 557400 | 85.59 ug/L | 97 |
| 66) heptane | 10.109 | 57 | 82958 | 79.32 ug/L | 95 |
| 67) isopropyl acetate | 9.857 | 43 | 258670 | 85.17 ug/L | 98 |
| 68) 1,2-dichloroethane | 9.952 | 62 | 168762 | 81.52 ug/L | 98 |
| 69) trichloroethene | 10.654 | 95 | 132679 | 91.70 ug/L | 91 |
| 72) 2-nitropropane | 11.430 | 41 | 48762 | 85.26 ug/L | 96 |
| 73) 2-chloroethyl vinyl ether | 11.446 | 63 | 440900 | 508.65 ug/L | 99 |
| 74) methyl methacrylate | 10.922 | 41 | 206219 | 87.44 ug/L | 88 |
| 75) 1,2-dichloropropane | 10.916 | 63 | 145208 | 86.27 ug/L | 99 |
| 76) methylcyclohexane | 10.880 | 83 | 269475 | 87.37 ug/L | 94 |
| 77) dibromomethane | 11.084 | 93 | 88547 | 93.29 ug/L | 94 |
| 78) bromodichloromethane | 11.210 | 83 | 179872 | 89.99 ug/L | 97 |
| 79) cis-1,3-dichloropropene | 11.671 | 75 | 220654 | 98.41 ug/L | 92 |
| 81) 4-methyl-2-pentanone | 11.761 | 58 | 56507 | 102.53 ug/L | 97 |
| 82) toluene | 12.033 | 92 | 322489 | 93.39 ug/L | 97 |
| 83) 3-methyl-1-butanol | 11.782 | 70 | 78706 | 2176.99 ug/L | 88 |
| 84) trans-1,3-dichloropropene | 12.232 | 75 | 199141 | 99.39 ug/L | 91 |
| 85) ethyl methacrylate | 12.222 | 69 | 172834 | 111.87 ug/L | 97 |
| 86) 1,1,2-trichloroethane | 12.447 | 83 | 103157 | 96.69 ug/L | 98 |
| 87) 2-hexanone | 12.620 | 58 | 47662 | 108.18 ug/L | 97 |
| 89) tetrachloroethene | 12.626 | 166 | 163840 | 105.46 ug/L | 98 |
| 90) 1,3-dichloropropane | 12.626 | 76 | 190824 | 94.99 ug/L | 98 |
| 91) butyl acetate | 12.694 | 56 | 84118 | 97.96 ug/L | 92 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 185997 | 1028.81 ug/L | 99 |
| 93) dibromochloromethane | 12.893 | 129 | 158524 | 103.96 ug/L | 96 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 129781 | 97.22 ug/L | 100 |
| 95) n-Butyl Ether | 13.423 | 57 | 573195 | 90.93 ug/L | 98 |
| 96) chlorobenzene | 13.507 | 112 | 361557 | 93.35 ug/L | 96 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 165727 | 104.49 ug/L | 98 |
| 98) ethylbenzene | 13.559 | 91 | 599961 | 90.98 ug/L | 100 |
| 99) m,p-xylene | 13.664 | 106 | 464345 | 188.35 ug/L | 99 |
| 100) o-xylene | 14.083 | 106 | 244273 | 98.79 ug/L | 91 |
| 101) styrene | 14.094 | 104 | 397073 | 100.93 ug/L | 97 |
| 103) bromoform | 14.361 | 173 | 124093 | 109.95 ug/L | 98 |
| 105) isopropylbenzene | 14.424 | 105 | 647770 | 96.66 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 180039 | 98.52 ug/L | 91 |
| 108) cyclohexanone | 14.587 | 55 | 221967 | 1241.78 ug/L | 98 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 178365 | 92.62 ug/L | 100 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 40127 | 90.93 ug/L | 90 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 40860 | 97.49 ug/L | 97 |
| 112) n-propylbenzene | 14.833 | 91 | 689129 | 91.93 ug/L | 100 |
| 114) 2-chlorotoluene | 14.980 | 126 | 159391 | 99.02 ug/L | 93 |
| 115) 4-chlorotoluene | 15.079 | 126 | 155133 | 97.11 ug/L | 96 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 556138 | 98.32 ug/L | 97 |
| 117) tert-butylbenzene | 15.331 | 119 | 477104 | 100.17 ug/L | 98 |
| 118) pentachloroethane | 15.415 | 167 | 133536 | 109.97 ug/L | 96 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 547107 | 96.38 ug/L | 98 |
| 120) sec-butylbenzene | 15.546 | 105 | 751437 | 100.84 ug/L | 98 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 344497 | 94.55 ug/L | 99 |
| 122) p-isopropyltoluene | 15.661 | 119 | 639663 | 99.74 ug/L | 98 |
| 123) 1,4-dichlorobenzene | 15.813 | 146 | 351034 | 92.96 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112243.d
Acq On : 29 Jul 2015 11:53 pm
Operator : ximenac
Sample : IC4810-100
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 30 11:54:06 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 368245 | 94.17 ug/L | 98 |
| 126) n-butylbenzene | 16.065 | 92 | 316811 | 95.22 ug/L | 98 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 55537 | 108.12 ug/L | 97 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 405076 | 100.83 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 423668 | 102.13 ug/L | 99 |
| 131) hexachlorobutadiene | 17.759 | 225 | 199123 | 102.18 ug/L | 99 |
| 132) naphthalene | 17.895 | 128 | 893950 | 97.89 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 434998 | 101.30 ug/L | 98 |
| 134) hexachloroethane | 16.443 | 119 | 142757 | 130.55 ug/L | 97 |
| 135) Benzyl chloride | 15.924 | 91 | 325837 | 91.75 ug/L | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

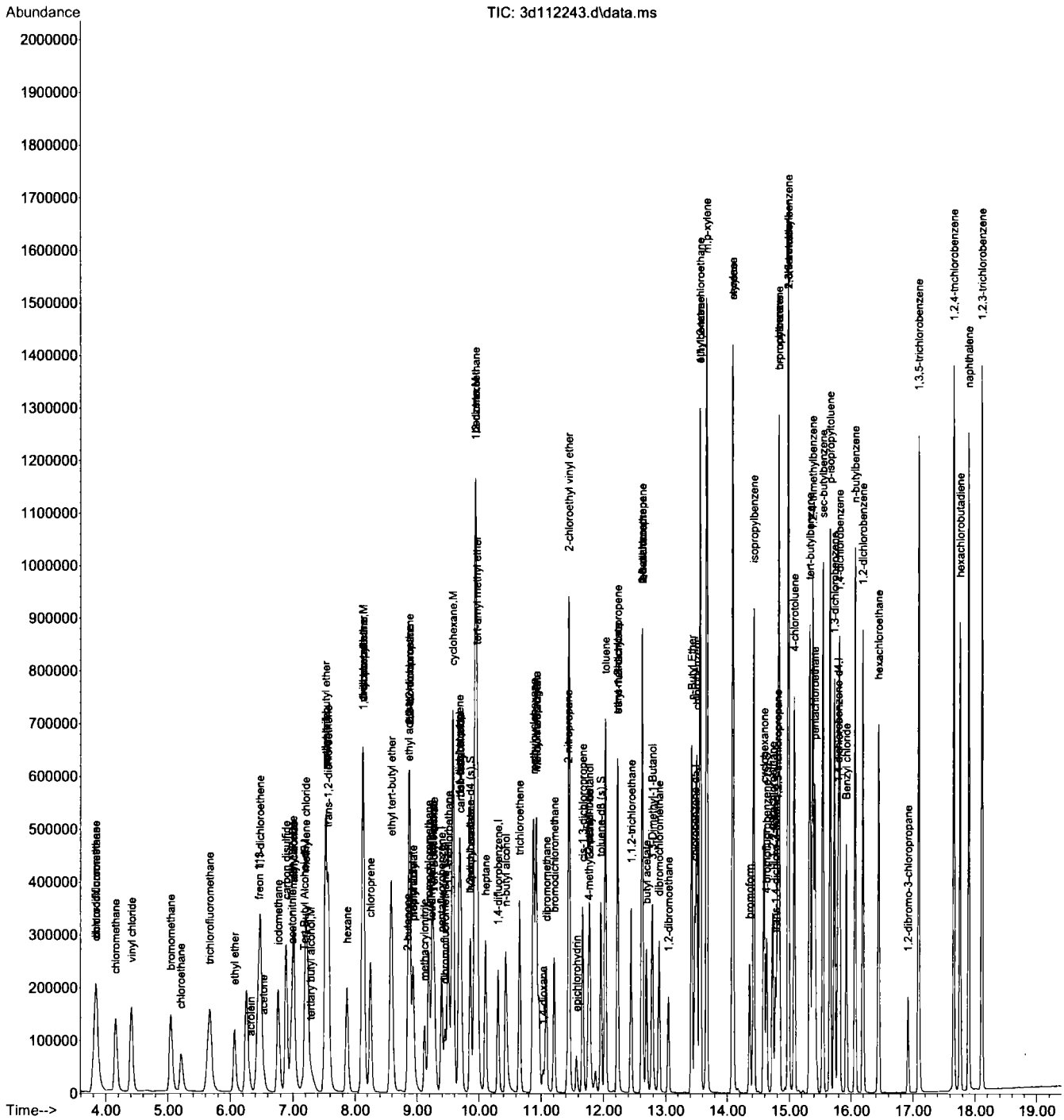
7.6.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112243.d
Acq On : 29 Jul 2015 11:53 pm
Operator : ximenac
Sample : IC4810-100
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Jul 30 11:54:06 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration




M3D4810.M Thu Aug 06 13:50:25 2015 3D



7.6.9
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112244.d
Acq On : 30 Jul 2015 12:20 am
Operator : ximenac
Sample : IC4810-200
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jul 30 11:55:56 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.183 | 65 | 113652 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 211907 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 243867 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 189787 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 123773 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 84139 | 45.91 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 91.82% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 75693 | 40.00 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 80.00% | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 260601 | 50.18 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.36% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 90862 | 43.38 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 86.76% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.032 | 88 | 95700 | 5045.42 ug/L | 84 |
| 3) tertiary butyl alcohol | 7.288 | 59 | 235989 | 923.44 ug/L | 96 |
| 8) chlorodifluoromethane | 3.844 | 51 | 590213 | 140.64 ug/L | 97 |
| 9) dichlorodifluoromethane | 3.838 | 85 | 728302 | 169.51 ug/L | 99 |
| 10) chloromethane | 4.169 | 50 | 622229 | 196.91 ug/L | 98 |
| 11) vinyl chloride | 4.420 | 62 | 703897 | 203.94 ug/L | 99 |
| 12) bromomethane | 5.044 | 94 | 357394 | 210.27 ug/L | 99 |
| 13) chloroethane | 5.207 | 64 | 234170 | 181.77 ug/L | 97 |
| 16) trichlorofluoromethane | 5.673 | 101 | 651329 | 188.38 ug/L | 100 |
| 18) ethyl ether | 6.067 | 74 | 153481 | 181.39 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.481 | 61 | 512563 | 138.46 ug/L | 94 |
| 23) acetone | 6.539 | 43 | 92034 | 152.11 ug/L | 95 |
| 24) allyl chloride | 7.010 | 76 | 161550 | 150.72 ug/L # | 84 |
| 25) acetonitrile | 6.969 | 40 | 323563 | 1391.33 ug/L | 97 |
| 27) iodomethane | 6.764 | 142 | 767087 | 174.67 ug/L | 98 |
| 28) iso-butyl alcohol | 9.684 | 41 | 118343 | 1572.40 ug/L | 91 |
| 29) carbon disulfide | 6.890 | 76 | 1299931 | 143.88 ug/L | 98 |
| 30) methylene chloride | 7.204 | 84 | 373651 | 149.54 ug/L | 93 |
| 31) methyl acetate | 6.995 | 43 | 228717 | 148.99 ug/L | 96 |
| 32) methyl tert butyl ether | 7.530 | 73 | 1138567 | 164.33 ug/L | 97 |
| 33) trans-1,2-dichloroethene | 7.571 | 61 | 461296 | 142.00 ug/L | 92 |
| 34) di-isopropyl ether | 8.122 | 45 | 1165663 | 148.55 ug/L | 84 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 1209427 | 158.60 ug/L | 97 |
| 36) 2-butanone | 8.840 | 72 | 34182 | 195.70 ug/L | 70 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 566169 | 148.70 ug/L | 99 |
| 38) chloroprene | 8.248 | 53 | 413880 | 144.88 ug/L | 94 |
| 39) acrylonitrile | 7.524 | 53 | 602572 | 864.16 ug/L | 98 |
| 40) vinyl acetate | 8.122 | 86 | 47648 | 195.02 ug/L | 74 |
| 41) ethyl acetate | 8.856 | 45 | 38508 | 166.45 ug/L | 69 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 537523 | 151.91 ug/L | 98 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 358567 | 163.08 ug/L | 90 |
| 44) propionitrile | 8.935 | 54 | 460126 | 1781.63 ug/L | 91 |
| 45) methyl acrylate | 8.935 | 55 | 311809 | 183.62 ug/L | 97 |
| 46) bromochloromethane | 9.186 | 128 | 188533 | 182.66 ug/L # | 86 |
| 47) tetrahydrofuran | 9.228 | 42 | 105272 | 150.22 ug/L | 94 |
| 48) chloroform | 9.244 | 83 | 542991 | 155.76 ug/L | 98 |
| 49) Tert-Butyl Formate | 9.275 | 59 | 343297 | 174.54 ug/L | 98 |
| 52) freon 113 | 6.449 | 151 | 296095 | 164.03 ug/L | 88 |
| 53) methacrylonitrile | 9.118 | 41 | 174920 | 167.08 ug/L | 93 |
| 54) 1,1,1-trichloroethane | 9.496 | 97 | 561095 | 170.96 ug/L | 97 |
| 57) tert-amyl methyl ether | 9.973 | 73 | 1153060 | 160.70 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112244.d
Acq On : 30 Jul 2015 12:20 am
Operator : ximenac
Sample : IC4810-200
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jul 30 11:55:56 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 59) epichlorohydrin | 11.572 | 57 | 130867 | 954.18 ug/L | 94 |
| 60) n-butyl alcohol | 10.434 | 56 | 459085 | 11743.50 ug/L | 91 |
| 61) cyclohexane | 9.569 | 84 | 548425 | 183.94 ug/L | 85 |
| 62) carbon tetrachloride | 9.705 | 117 | 498383 | 197.06 ug/L | 99 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 375601 | 168.01 ug/L | 94 |
| 64) hexane | 7.870 | 57 | 286276 | 137.95 ug/L | 95 |
| 65) benzene | 9.936 | 78 | 1180256 | 172.41 ug/L | 98 |
| 66) heptane | 10.109 | 57 | 166976 | 151.87 ug/L | 96 |
| 67) isopropyl acetate | 9.857 | 43 | 556260 | 174.23 ug/L | 99 |
| 68) 1,2-dichloroethane | 9.952 | 62 | 355113 | 163.19 ug/L | 99 |
| 69) trichloroethene | 10.654 | 95 | 282796 | 185.94 ug/L | 93 |
| 72) 2-nitropropane | 11.425 | 41 | 99101 | 164.84 ug/L | 98 |
| 73) 2-chloroethyl vinyl ether | 11.451 | 63 | 883990 | 970.16 ug/L | 97 |
| 74) methyl methacrylate | 10.922 | 41 | 434514 | 175.27 ug/L | 87 |
| 75) 1,2-dichloropropane | 10.917 | 63 | 303367 | 171.45 ug/L | 98 |
| 76) methylcyclohexane | 10.875 | 83 | 554075 | 170.89 ug/L | 93 |
| 77) dibromomethane | 11.079 | 93 | 185760 | 186.18 ug/L | 94 |
| 78) bromodichloromethane | 11.210 | 83 | 385984 | 183.71 ug/L | 96 |
| 79) cis-1,3-dichloropropene | 11.672 | 75 | 451689 | 191.64 ug/L | 93 |
| 81) 4-methyl-2-pentanone | 11.761 | 58 | 123218 | 212.69 ug/L | 94 |
| 82) toluene | 12.033 | 92 | 663934 | 182.90 ug/L | 98 |
| 83) 3-methyl-1-butanol | 11.782 | 70 | 180645 | 4753.24 ug/L | 87 |
| 84) trans-1,3-dichloropropene | 12.233 | 75 | 404138 | 191.88 ug/L | 91 |
| 85) ethyl methacrylate | 12.222 | 69 | 354848 | 218.49 ug/L | 97 |
| 86) 1,1,2-trichloroethane | 12.448 | 83 | 211819 | 188.88 ug/L | 98 |
| 87) 2-hexanone | 12.615 | 58 | 101312 | 218.76 ug/L | 97 |
| 89) tetrachloroethene | 12.626 | 166 | 330772 | 212.82 ug/L | 98 |
| 90) 1,3-dichloropropane | 12.626 | 76 | 381982 | 190.08 ug/L | 98 |
| 91) butyl acetate | 12.694 | 56 | 177748 | 206.92 ug/L | 95 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 447144 | 2472.31 ug/L | 99 |
| 93) dibromochloromethane | 12.893 | 129 | 323679 | 212.19 ug/L | 96 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 263194 | 197.08 ug/L | 99 |
| 95) n-Butyl Ether | 13.423 | 57 | 1137615 | 180.39 ug/L | 97 |
| 96) chlorobenzene | 13.507 | 112 | 729983 | 188.41 ug/L | 96 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 356803 | 224.87 ug/L | 97 |
| 98) ethylbenzene | 13.559 | 91 | 1207257 | 182.99 ug/L | 99 |
| 99) m,p-xylene | 13.669 | 106 | 932385 | 378.06 ug/L | 99 |
| 100) o-xylene | 14.083 | 106 | 501975 | 202.94 ug/L | 94 |
| 101) styrene | 14.094 | 104 | 798986 | 203.01 ug/L | 98 |
| 103) bromoform | 14.356 | 173 | 257021 | 227.64 ug/L | 98 |
| 105) isopropylbenzene | 14.424 | 105 | 1349790 | 188.60 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 362575 | 185.78 ug/L | 91 |
| 108) cyclohexanone | 14.587 | 55 | 459103 | 2404.85 ug/L | 97 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 373746 | 181.72 ug/L | 100 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 84850 | 180.04 ug/L | 89 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 84031 | 187.73 ug/L | 99 |
| 112) n-propylbenzene | 14.833 | 91 | 1372797 | 171.47 ug/L | 99 |
| 114) 2-chlorotoluene | 14.980 | 126 | 321057 | 186.74 ug/L | 95 |
| 115) 4-chlorotoluene | 15.079 | 126 | 315361 | 184.85 ug/L | 95 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 1167012 | 193.18 ug/L | 97 |
| 117) tert-butylbenzene | 15.331 | 119 | 1064850 | 209.33 ug/L | 98 |
| 118) pentachloroethane | 15.415 | 167 | 305312 | 235.43 ug/L | 94 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 1127745 | 186.01 ug/L | 98 |
| 120) sec-butylbenzene | 15.546 | 105 | 1595696 | 200.50 ug/L | 99 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 728618 | 187.24 ug/L | 98 |
| 122) p-isopropyltoluene | 15.661 | 119 | 1336685 | 195.15 ug/L | 98 |
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 752826 | 186.66 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 797169 | 190.87 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112244.d
Acq On : 30 Jul 2015 12:20 am
Operator : ximenac
Sample : IC4810-200
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jul 30 11:55:56 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 126) n-butylbenzene | 16.065 | 92 | 663120 | 186.61 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 128163 | 233.62 ug/L | 97 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 925275 | 215.65 ug/L | 98 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 958374 | 216.32 ug/L | 99 |
| 131) hexachlorobutadiene | 17.759 | 225 | 461755 | 221.87 ug/L | 99 |
| 132) naphthalene | 17.900 | 128 | 1999333 | 204.98 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 948626 | 206.85 ug/L | 99 |
| 134) hexachloroethane | 16.443 | 119 | 334395 | 286.32 ug/L | 97 |
| 135) Benzyl chloride | 15.924 | 91 | 717668 | 189.21 ug/L | 97 |

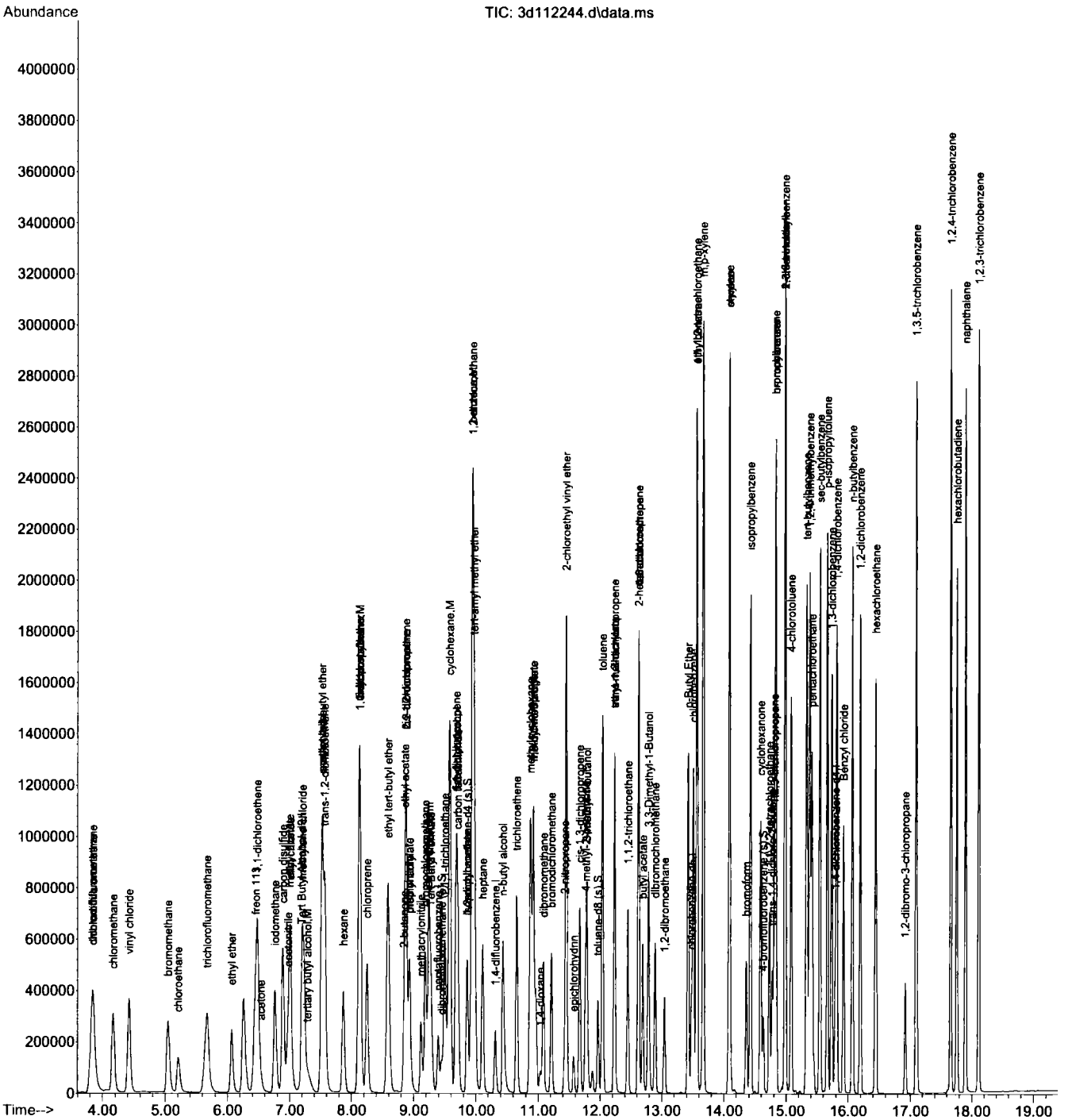
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.10 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112244.d
Acq On : 30 Jul 2015 12:20 am
Operator : ximenac
Sample : IC4810-200
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Jul 30 11:55:56 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Jul 30 08:37:34 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112247.d
Acq On : 30 Jul 2015 1:41 am
Operator : ximenac
Sample : ICV4810-50
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Aug 06 13:51:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.178 | 65 | 98586 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 207113 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 228341 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 187656 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 123839 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 80387 | 50.66 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 101.32% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 71580 | 48.69 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 97.38% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 251682 | 50.33 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.66% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 94440 | 49.57 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 99.14% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.037 | 88 | 22005 | 1381.38 ug/L | 98 |
| 3) tertiary butyl alcohol | 7.288 | 59 | 53644 | 251.95 ug/L | 96 |
| 8) chlorodifluoromethane | 3.854 | 51 | 117664 | 41.85 ug/L | 97 |
| 9) dichlorodifluoromethane | 3.849 | 85 | 139646 | 37.10 ug/L | 98 |
| 10) chloromethane | 4.164 | 50 | 124313 | 41.53 ug/L | 99 |
| 11) vinyl chloride | 4.410 | 62 | 136816 | 45.57 ug/L | 100 |
| 12) bromomethane | 5.050 | 94 | 89616 | 46.20 ug/L | 97 |
| 13) chloroethane | 5.212 | 64 | 65378 | 51.42 ug/L | 99 |
| 16) trichlorofluoromethane | 5.679 | 101 | 135791 | 43.34 ug/L | 99 |
| 18) ethyl ether | 6.067 | 74 | 36422 | 47.07 ug/L | 95 |
| 21) acrolein | 6.318 | 56 | 157273 | 506.30 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.491 | 61 | 103370 | 41.96 ug/L | 96 |
| 23) acetone | 6.539 | 43 | 22416 | 48.30 ug/L | 87 |
| 24) allyl chloride | 7.016 | 76 | 41133 | 53.76 ug/L | 98 |
| 25) acetonitrile | 6.974 | 40 | 78456 | 508.42 ug/L | 93 |
| 27) iodomethane | 6.764 | 142 | 170305 | 48.62 ug/L | 98 |
| 28) iso-butyl alcohol | 9.684 | 41 | 25600 | 496.49 ug/L | 91 |
| 29) carbon disulfide | 6.890 | 76 | 280190 | 44.98 ug/L | 99 |
| 30) methylene chloride | 7.205 | 84 | 88751 | 48.08 ug/L | 99 |
| 31) methyl acetate | 7.000 | 43 | 53457 | 51.85 ug/L | 98 |
| 32) methyl tert butyl ether | 7.530 | 73 | 536282 | 98.07 ug/L | 94 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 101915 | 45.34 ug/L | 97 |
| 34) di-isopropyl ether | 8.122 | 45 | 283901 | 49.11 ug/L | 94 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 290928 | 53.42 ug/L | 97 |
| 36) 2-butanone | 8.840 | 72 | 7736 | 52.38 ug/L | 97 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 132194 | 49.50 ug/L | 98 |
| 38) chloroprene | 8.248 | 53 | 97195 | 49.73 ug/L | 98 |
| 39) acrylonitrile | 7.524 | 53 | 141741 | 265.20 ug/L | 94 |
| 40) vinyl acetate | 8.127 | 86 | 11484 | 57.88 ug/L | 87 |
| 41) ethyl acetate | 8.861 | 45 | 9823 | 48.35 ug/L | 74 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 115296 | 41.26 ug/L | 98 |
| 43) cis-1,2-dichloroethene | 8.882 | 96 | 81068 | 44.91 ug/L | 97 |
| 44) propionitrile | 8.940 | 54 | 98024 | 492.17 ug/L | 98 |
| 45) methyl acrylate | 8.945 | 55 | 69484 | 51.75 ug/L | 99 |
| 46) bromochloromethane | 9.192 | 128 | 44037 | 50.70 ug/L | 98 |
| 47) tetrahydrofuran | 9.223 | 42 | 24949 | 47.69 ug/L | 97 |
| 48) chloroform | 9.244 | 83 | 125087 | 48.58 ug/L | 100 |
| 49) Tert-Butyl Formate | 9.275 | 59 | 81940 | 54.66 ug/L # | 99 |
| 52) freon 113 | 6.449 | 151 | 71327 | 47.03 ug/L | 99 |
| 53) methacrylonitrile | 9.123 | 41 | 39614 | 50.91 ug/L | 98 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 123034 | 46.28 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112247.d
Acq On : 30 Jul 2015 1:41 am
Operator : ximenac
Sample : ICV4810-50
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Aug 06 13:51:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.973 | 73 | 272329 | 50.03 ug/L | 99 |
| 59) epichlorohydrin | 11.572 | 57 | 31673 | 252.67 ug/L | 98 |
| 60) n-butyl alcohol | 10.439 | 56 | 99738 | 2675.22 ug/L | 98 |
| 61) cyclohexane | 9.574 | 84 | 116852 | 43.70 ug/L | 99 |
| 62) carbon tetrachloride | 9.705 | 117 | 107740 | 48.79 ug/L | 96 |
| 63) 1,1-dichloropropene | 9.679 | 75 | 80084 | 48.69 ug/L | 98 |
| 64) hexane | 7.870 | 57 | 47903 | 32.61 ug/L | 97 |
| 65) benzene | 9.936 | 78 | 256456 | 47.80 ug/L | 99 |
| 66) heptane | 10.104 | 57 | 37301 | 44.70 ug/L | 95 |
| 67) isopropyl acetate | 9.857 | 43 | 142485 | 61.05 ug/L | 96 |
| 68) 1,2-dichloroethane | 9.952 | 62 | 82754 | 51.64 ug/L | 97 |
| 69) trichloroethene | 10.660 | 95 | 61075 | 47.08 ug/L | 97 |
| 72) 2-nitropropane | 11.430 | 41 | 24588 | 51.85 ug/L | 100 |
| 73) 2-chloroethyl vinyl ether | 11.451 | 63 | 248238 | 301.43 ug/L | 98 |
| 74) methyl methacrylate | 10.922 | 41 | 100489 | 54.78 ug/L | 96 |
| 75) 1,2-dichloropropane | 10.922 | 63 | 70280 | 50.11 ug/L | 99 |
| 76) methylcyclohexane | 10.875 | 83 | 124476 | 51.30 ug/L | 97 |
| 77) dibromomethane | 11.084 | 93 | 42338 | 51.31 ug/L | 95 |
| 78) bromodichloromethane | 11.210 | 83 | 86540 | 50.71 ug/L | 99 |
| 79) cis-1,3-dichloropropene | 11.672 | 75 | 105521 | 52.67 ug/L | 97 |
| 81) 4-methyl-2-pentanone | 11.761 | 58 | 27358 | 53.59 ug/L | 98 |
| 82) toluene | 12.033 | 92 | 145656 | 49.40 ug/L | 100 |
| 83) 3-methyl-1-butanol | 11.787 | 70 | 37805 | 979.95 ug/L | 96 |
| 84) trans-1,3-dichloropropene | 12.233 | 75 | 90548 | 50.86 ug/L | 98 |
| 85) ethyl methacrylate | 12.227 | 69 | 79460 | 50.50 ug/L | 97 |
| 86) 1,1,2-trichloroethane | 12.448 | 83 | 49718 | 50.20 ug/L | 97 |
| 87) 2-hexanone | 12.621 | 58 | 21853 | 52.36 ug/L | 97 |
| 89) tetrachloroethene | 12.626 | 166 | 83541 | 52.29 ug/L | 99 |
| 90) 1,3-dichloropropane | 12.631 | 76 | 90638 | 49.78 ug/L | 99 |
| 91) butyl acetate | 12.694 | 56 | 41482 | 55.05 ug/L | 98 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 77128 | 428.24 ug/L | 99 |
| 93) dibromochloromethane | 12.893 | 129 | 74597 | 52.54 ug/L | 98 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 62203 | 51.95 ug/L | 99 |
| 95) n-Butyl Ether | 13.423 | 57 | 265121 | 46.70 ug/L | 99 |
| 96) chlorobenzene | 13.507 | 112 | 171846 | 51.06 ug/L | 99 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 75616 | 50.67 ug/L | 98 |
| 98) ethylbenzene | 13.559 | 91 | 273475 | 47.44 ug/L | 99 |
| 99) m,p-xylene | 13.669 | 106 | 214664 | 99.59 ug/L | 97 |
| 100) o-xylene | 14.083 | 106 | 114530 | 52.02 ug/L | 99 |
| 101) styrene | 14.094 | 104 | 192022 | 51.83 ug/L | 100 |
| 103) bromoform | 14.356 | 173 | 60528 | 54.64 ug/L | 99 |
| 105) isopropylbenzene | 14.424 | 105 | 289437 | 46.57 ug/L | 99 |
| 107) bromobenzene | 14.823 | 156 | 89866 | 48.99 ug/L | 98 |
| 108) cyclohexanone | 14.587 | 55 | 101056 | 487.84 ug/L | 97 |
| 109) 1,1,2,2-tetrachloroethane | 14.728 | 83 | 87322 | 48.55 ug/L | 99 |
| 110) trans-1,4-dichloro-2-b... | 14.770 | 53 | 19558 | 49.14 ug/L | 97 |
| 111) 1,2,3-trichloropropane | 14.802 | 110 | 20269 | 49.35 ug/L | 98 |
| 112) n-propylbenzene | 14.833 | 91 | 336151 | 49.68 ug/L | 99 |
| 114) 2-chlorotoluene | 14.980 | 126 | 75205 | 47.58 ug/L | 99 |
| 115) 4-chlorotoluene | 15.080 | 126 | 77133 | 50.26 ug/L | 93 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 251941 | 47.64 ug/L | 97 |
| 117) tert-butylbenzene | 15.331 | 119 | 208377 | 47.82 ug/L | 98 |
| 118) pentachloroethane | 15.415 | 167 | 49840 | 41.94 ug/L | 97 |
| 119) 1,2,4-trimethylbenzene | 15.378 | 105 | 268403 | 50.55 ug/L | 99 |
| 120) sec-butylbenzene | 15.546 | 105 | 329100 | 47.26 ug/L | 99 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 174542 | 51.18 ug/L | 98 |
| 122) p-isopropyltoluene | 15.662 | 119 | 293093 | 48.20 ug/L | 98 |
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 181410 | 49.58 ug/L | 98 |

7.6.11 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112247.d
Acq On : 30 Jul 2015 1:41 am
Operator : ximenac
Sample : ICV4810-50
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Aug 06 13:51:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 192407 | 52.33 ug/L | 100 |
| 126) n-butylbenzene | 16.065 | 92 | 153250 | 48.17 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 27972 | 52.06 ug/L | 94 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 203232 | 52.06 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 210402 | 52.43 ug/L | 98 |
| 131) hexachlorobutadiene | 17.759 | 225 | 88768 | 44.69 ug/L | 99 |
| 132) naphthalene | 17.900 | 128 | 440270 | 51.80 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 213504 | 51.25 ug/L | 99 |
| 134) hexachloroethane | 16.443 | 119 | 59302 | 47.22 ug/L | 99 |
| 135) Benzyl chloride | 15.924 | 91 | 175556 | 49.14 ug/L | 99 |

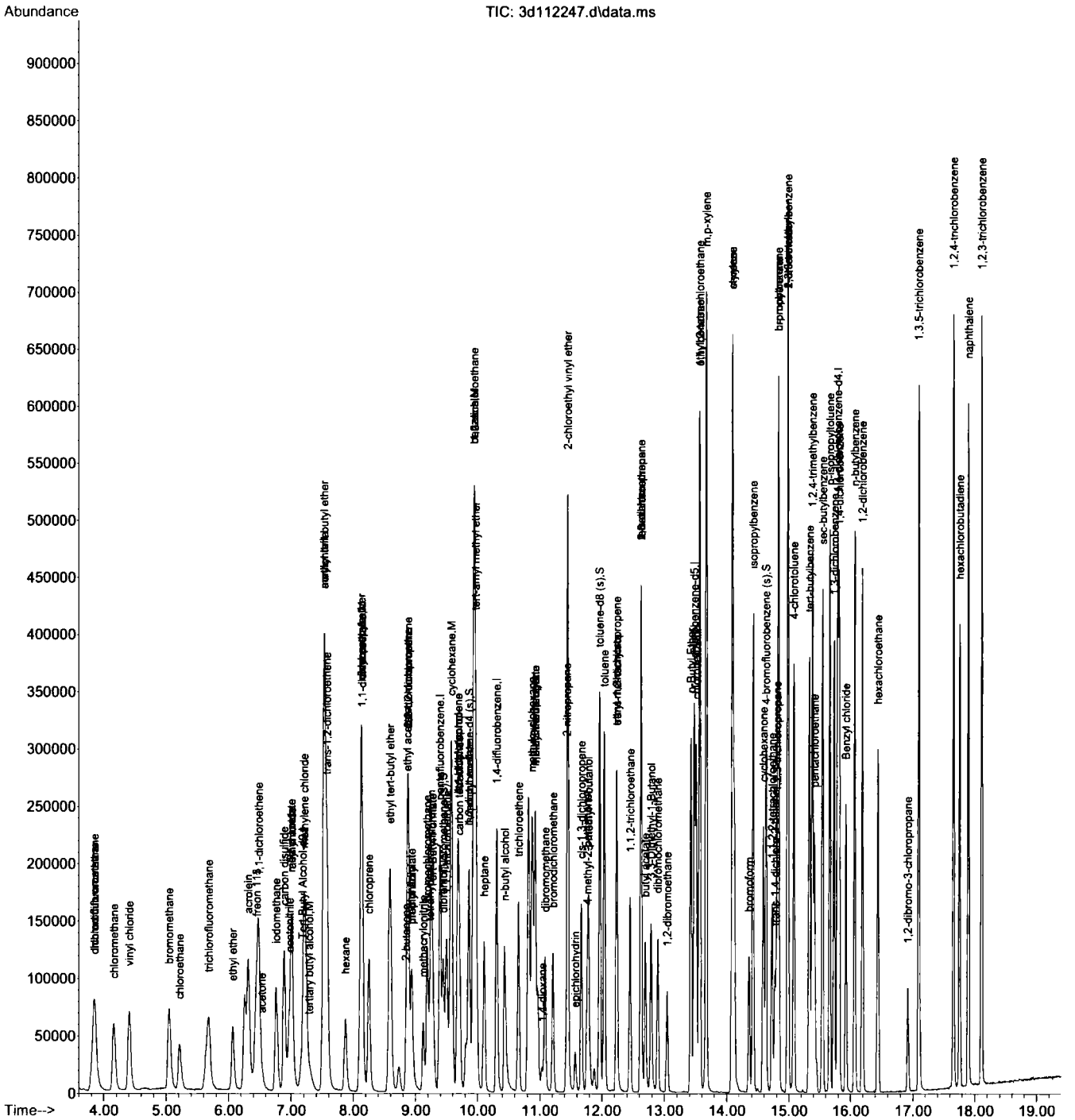
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.11 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\v3d4801-4810\
Data File : 3d112247.d
Acq On : 30 Jul 2015 1:41 am
Operator : ximenac
Sample : ICV4810-50
Misc : MS88759,V3D4810,5,,,,1
ALS Vial : 32 Sample Multiplier: 1

Quant Time: Aug 06 13:51:00 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112517.D
Acq On : 11 Aug 2015 11:16 am
Operator : ximenac
Sample : cc4810-20
Misc : MS89341,V3D4822,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 16:10:05 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.162 | 65 | 105534 | 500.00 ug/L | -0.02 |
| 4) pentafluorobenzene | 9.391 | 168 | 204849 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.314 | 114 | 234799 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 194668 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.793 | 152 | 122430 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.443 | 113 | 84380 | 53.76 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 107.52% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 77968 | 53.63 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 107.26% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 258676 | 50.30 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.60% | | |
| 106) 4-bromofluorobenzene (s) | 14.634 | 95 | 94609 | 50.23 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 100.46% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.037 | 88 | 9830 | 576.46 ug/L | 88 |
| 3) tertiary butyl alcohol | 7.299 | 59 | 22677 | 99.50 ug/L | 94 |
| 8) chlorodifluoromethane | 3.859 | 51 | 54443 | 19.58 ug/L | 97 |
| 9) dichlorodifluoromethane | 3.859 | 85 | 60799 | 16.33 ug/L | 99 |
| 10) chloromethane | 4.163 | 50 | 45185 | 15.26 ug/L | 98 |
| 11) vinyl chloride | 4.410 | 62 | 51634 | 17.39 ug/L | 97 |
| 12) bromomethane | 5.055 | 94 | 33348 | 17.38 ug/L | 94 |
| 13) chloroethane | 5.223 | 64 | 22579 | 17.95 ug/L | 98 |
| 16) trichlorofluoromethane | 5.684 | 101 | 63301 | 20.43 ug/L | 99 |
| 18) ethyl ether | 6.072 | 74 | 16113 | 21.05 ug/L | 97 |
| 21) acrolein | 6.324 | 56 | 58219 | 189.49 ug/L | 95 |
| 22) 1,1-dichloroethene | 6.486 | 61 | 49353 | 20.26 ug/L | 96 |
| 23) acetone | 6.539 | 43 | 11209 | 24.42 ug/L | 85 |
| 24) allyl chloride | 7.016 | 76 | 16135 | 21.32 ug/L | 98 |
| 25) acetonitrile | 6.979 | 40 | 35265 | 231.06 ug/L | 90 |
| 27) iodomethane | 6.764 | 142 | 77335 | 22.32 ug/L | 95 |
| 28) iso-butyl alcohol | 9.690 | 41 | 10690 | 209.61 ug/L | 93 |
| 29) carbon disulfide | 6.895 | 76 | 131042 | 21.27 ug/L | 99 |
| 30) methylene chloride | 7.199 | 84 | 40299 | 22.07 ug/L | 97 |
| 31) methyl acetate | 6.995 | 43 | 22642 | 22.20 ug/L | 98 |
| 32) methyl tert butyl ether | 7.535 | 73 | 113652 | 21.01 ug/L | 97 |
| 33) trans-1,2-dichloroethene | 7.577 | 61 | 47282 | 21.27 ug/L | 99 |
| 34) di-isopropyl ether | 8.122 | 45 | 102463 | 17.92 ug/L | 95 |
| 35) ethyl tert-butyl ether | 8.589 | 59 | 104578 | 19.41 ug/L | 98 |
| 36) 2-butanone | 8.851 | 72 | 2997 | 20.52 ug/L | 86 |
| 37) 1,1-dichloroethane | 8.143 | 63 | 57359 | 21.72 ug/L | 95 |
| 38) chloroprene | 8.248 | 53 | 33099 | 17.12 ug/L | 96 |
| 39) acrylonitrile | 7.529 | 53 | 62044 | 117.37 ug/L | 96 |
| 40) vinyl acetate | 8.132 | 86 | 4070 | 20.74 ug/L | 58 |
| 41) ethyl acetate | 8.866 | 45 | 3592 | 17.88 ug/L # | 24 |
| 42) 2,2-dichloropropane | 8.887 | 77 | 58652 | 21.22 ug/L | 98 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 34480 | 19.31 ug/L | 94 |
| 44) propionitrile | 8.940 | 54 | 45348 | 230.20 ug/L | 85 |
| 45) methyl acrylate | 8.945 | 55 | 29328 | 22.09 ug/L | 97 |
| 46) bromochloromethane | 9.186 | 128 | 18951 | 22.06 ug/L | 95 |
| 47) tetrahydrofuran | 9.223 | 42 | 9958 | 19.24 ug/L | 98 |
| 48) chloroform | 9.244 | 83 | 53107 | 20.85 ug/L | 100 |
| 49) Tert-Butyl Formate | 9.281 | 59 | 28385 | 19.14 ug/L # | 96 |
| 52) freon 113 | 6.460 | 151 | 30401 | 20.27 ug/L | 93 |
| 53) methacrylonitrile | 9.129 | 41 | 15091 | 19.61 ug/L | 97 |
| 54) 1,1,1-trichloroethane | 9.501 | 97 | 58473 | 22.24 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112517.D
Acq On : 11 Aug 2015 11:16 am
Operator : ximenac
Sample : cc4810-20
Misc : MS89341,V3D4822,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 16:10:05 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.973 | 73 | 101825 | 18.91 ug/L | 95 |
| 59) epichlorohydrin | 11.577 | 57 | 12217 | 94.78 ug/L | 96 |
| 60) n-butyl alcohol | 10.445 | 56 | 38470 | 1003.48 ug/L | 96 |
| 61) cyclohexane | 9.574 | 84 | 54644 | 19.87 ug/L | 95 |
| 62) carbon tetrachloride | 9.705 | 117 | 52750 | 23.23 ug/L | 96 |
| 63) 1,1-dichloropropene | 9.674 | 75 | 34793 | 20.57 ug/L | 97 |
| 64) hexane | 7.870 | 57 | 25436 | 16.84 ug/L | 99 |
| 65) benzene | 9.936 | 78 | 112369 | 20.37 ug/L | 99 |
| 66) heptane | 10.109 | 57 | 16118 | 18.78 ug/L | 97 |
| 67) isopropyl acetate | 9.863 | 43 | 46424 | 19.34 ug/L | 97 |
| 68) 1,2-dichloroethane | 9.957 | 62 | 36200 | 21.97 ug/L | 99 |
| 69) trichloroethene | 10.660 | 95 | 26892 | 20.16 ug/L | 99 |
| 72) 2-nitropropane | 11.441 | 41 | 9394 | 19.26 ug/L | 91 |
| 73) 2-chloroethyl vinyl ether | 11.451 | 63 | 84918 | 100.28 ug/L | 99 |
| 74) methyl methacrylate | 10.927 | 41 | 38364 | 20.34 ug/L | 91 |
| 75) 1,2-dichloropropane | 10.922 | 63 | 29639 | 20.55 ug/L | 97 |
| 76) methylcyclohexane | 10.880 | 83 | 48923 | 19.61 ug/L | 95 |
| 77) dibromomethane | 11.079 | 93 | 19442 | 22.92 ug/L | 91 |
| 78) bromodichloromethane | 11.210 | 83 | 37345 | 21.28 ug/L | 97 |
| 79) cis-1,3-dichloropropene | 11.672 | 75 | 43256 | 21.00 ug/L | 98 |
| 81) 4-methyl-2-pentanone | 11.766 | 58 | 11169 | 21.27 ug/L | 96 |
| 82) toluene | 12.039 | 92 | 63714 | 21.01 ug/L | 96 |
| 83) 3-methyl-1-butanol | 11.787 | 70 | 15186 | 382.81 ug/L | 98 |
| 84) trans-1,3-dichloropropene | 12.238 | 75 | 39200 | 21.41 ug/L | 95 |
| 85) ethyl methacrylate | 12.227 | 69 | 29508 | 18.24 ug/L | 96 |
| 86) 1,1,2-trichloroethane | 12.447 | 83 | 21807 | 21.41 ug/L | 96 |
| 87) 2-hexanone | 12.626 | 58 | 8021 | 18.69 ug/L | 83 |
| 89) tetrachloroethene | 12.626 | 166 | 33370 | 20.13 ug/L | 97 |
| 90) 1,3-dichloropropane | 12.631 | 76 | 39846 | 21.10 ug/L | 98 |
| 91) butyl acetate | 12.699 | 56 | 14578 | 18.65 ug/L | 92 |
| 92) 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 28725 | 153.74 ug/L | 95 |
| 93) dibromochloromethane | 12.898 | 129 | 32852 | 22.30 ug/L | 98 |
| 94) 1,2-dibromoethane | 13.045 | 107 | 26875 | 21.64 ug/L | 96 |
| 95) n-Butyl Ether | 13.423 | 57 | 99516 | 16.90 ug/L | 97 |
| 96) chlorobenzene | 13.507 | 112 | 73819 | 21.14 ug/L | 98 |
| 97) 1,1,1,2-tetrachloroethane | 13.564 | 131 | 33807 | 21.84 ug/L | 99 |
| 98) ethylbenzene | 13.564 | 91 | 117533 | 19.66 ug/L | 97 |
| 99) m,p-xylene | 13.669 | 106 | 91131 | 40.75 ug/L | 99 |
| 100) o-xylene | 14.089 | 106 | 47187 | 20.66 ug/L | 94 |
| 101) styrene | 14.099 | 104 | 72615 | 18.90 ug/L | 98 |
| 103) bromoform | 14.361 | 173 | 25629 | 22.30 ug/L | 97 |
| 105) isopropylbenzene | 14.429 | 105 | 121251 | 19.74 ug/L | 98 |
| 107) bromobenzene | 14.828 | 156 | 36987 | 20.40 ug/L | 96 |
| 108) cyclohexanone | 14.592 | 55 | 47206 | 259.91 ug/L | 97 |
| 109) 1,1,2,2-tetrachloroethane | 14.733 | 83 | 39443 | 22.18 ug/L | 92 |
| 110) trans-1,4-dichloro-2-b... | 14.775 | 53 | 7247 | 18.42 ug/L | 96 |
| 111) 1,2,3-trichloropropane | 14.807 | 110 | 9530 | 23.47 ug/L | 90 |
| 112) n-propylbenzene | 14.838 | 91 | 136729 | 20.44 ug/L | 100 |
| 114) 2-chlorotoluene | 14.985 | 126 | 32099 | 20.54 ug/L | 97 |
| 115) 4-chlorotoluene | 15.085 | 126 | 31828 | 20.98 ug/L | 95 |
| 116) 1,3,5-trimethylbenzene | 14.985 | 105 | 108453 | 20.74 ug/L | 97 |
| 117) tert-butylbenzene | 15.331 | 119 | 82994 | 19.26 ug/L | 98 |
| 118) pentachloroethane | 15.415 | 167 | 25378 | 21.60 ug/L | 96 |
| 119) 1,2,4-trimethylbenzene | 15.384 | 105 | 106276 | 20.25 ug/L | 98 |
| 120) sec-butylbenzene | 15.546 | 105 | 140165 | 20.36 ug/L | 98 |
| 121) 1,3-dichlorobenzene | 15.740 | 146 | 71994 | 21.35 ug/L | 99 |
| 122) p-isopropyltoluene | 15.667 | 119 | 120898 | 20.11 ug/L | 99 |
| 123) 1,4-dichlorobenzene | 15.819 | 146 | 75263 | 20.81 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112517.D
Acq On : 11 Aug 2015 11:16 am
Operator : ximenac
Sample : cc4810-20
Misc : MS89341,V3D4822,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 16:10:05 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.196 | 146 | 78353 | 21.56 ug/L | 99 |
| 126) n-butylbenzene | 16.070 | 92 | 63468 | 20.18 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.930 | 157 | 11422 | 21.50 ug/L | 95 |
| 129) 1,3,5-trichlorobenzene | 17.098 | 180 | 83689 | 21.69 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.664 | 180 | 87613 | 22.09 ug/L | 99 |
| 131) hexachlorobutadiene | 17.764 | 225 | 39454 | 20.09 ug/L | 97 |
| 132) naphthalene | 17.900 | 128 | 185567 | 22.08 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 18.115 | 180 | 92686 | 22.50 ug/L | 99 |
| 134) hexachloroethane | 16.443 | 119 | 24651 | 19.85 ug/L | 99 |
| 135) Benzyl chloride | 15.929 | 91 | 70680 | 20.01 ug/L | 99 |

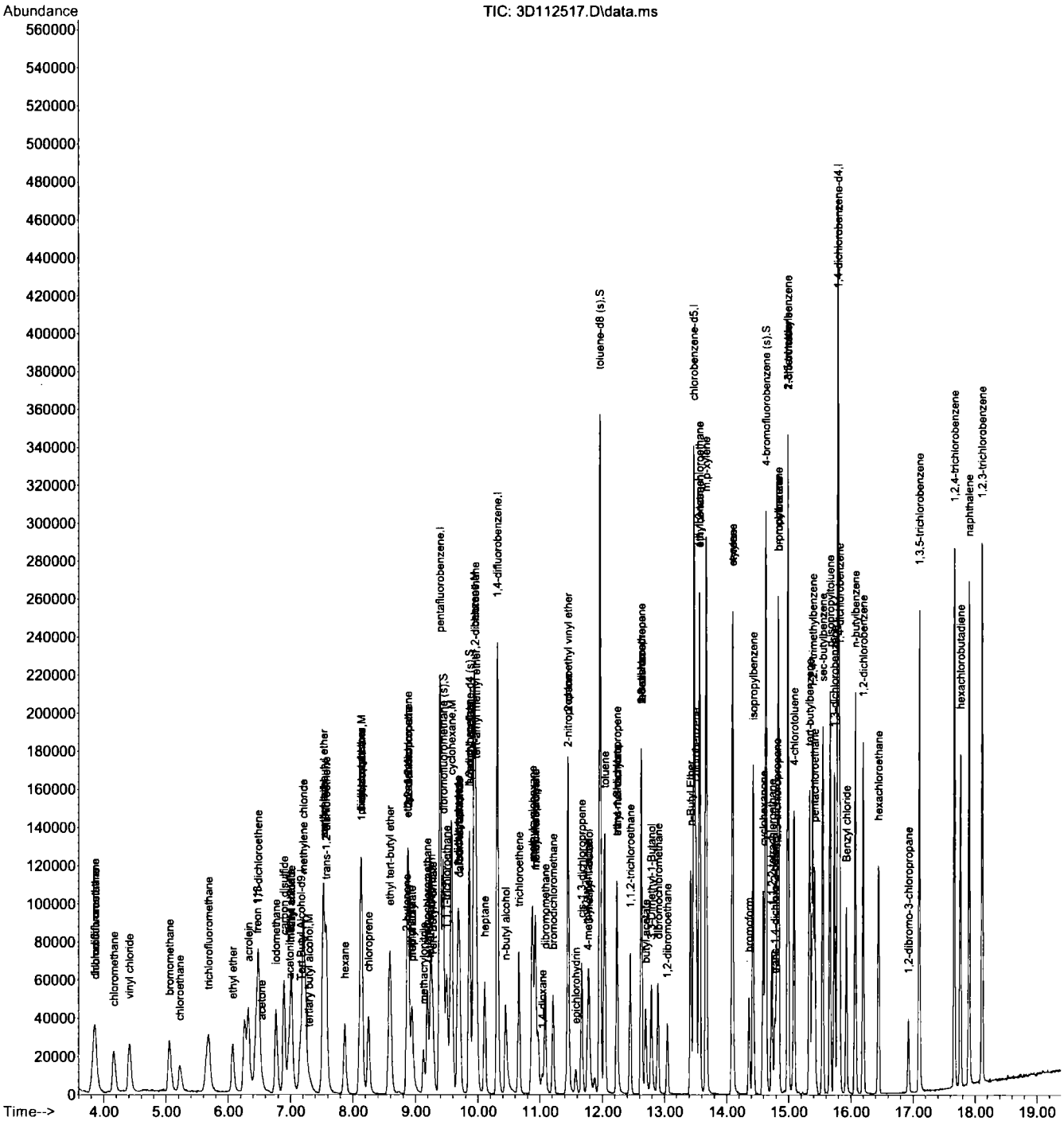
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.12 7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112517.D
Acq On : 11 Aug 2015 11:16 am
Operator : ximenac
Sample : cc4810-20
Misc : MS89341,V3D4822,5,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 11 16:10:05 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Tue Aug 11 16:12:33 2015 3D

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112542.D
Acq On : 11 Aug 2015 11:17 pm
Operator : ximenac
Sample : cc4810-50
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Aug 12 09:32:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| **Internal Standards** | | | | | |
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 90136 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.391 | 168 | 190390 | 50.00 ug/L | 0.00 |
| 58) 1,4-difluorobenzene | 10.308 | 114 | 217047 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 13.475 | 117 | 183008 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.787 | 152 | 113415 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 50) dibromofluoromethane (s) | 9.443 | 113 | 79309 | 54.37 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 108.74% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.863 | 65 | 73799 | 54.61 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 109.22% | | |
| 80) toluene-d8 (s) | 11.960 | 98 | 246124 | 51.78 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 103.56% | | |
| 106) 4-bromofluorobenzene (s) | 14.629 | 95 | 88049 | 50.46 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 100.92% | | |
| **Target Compounds** | | | | | Qvalue |
| 2) 1,4-dioxane | 11.037 | 88 | 21610 | 1483.76 ug/L | 96 |
| 3) tertiary butyl alcohol | 7.283 | 59 | 49609 | 254.84 ug/L | 88 |
| 8) chlorodifluoromethane | 3.849 | 51 | 148076 | 57.29 ug/L | 99 |
| 9) dichlorodifluoromethane | 3.838 | 85 | 199307 | 57.60 ug/L | 99 |
| 10) chloromethane | 4.164 | 50 | 152786 | 55.53 ug/L | 98 |
| 11) vinyl chloride | 4.415 | 62 | 175548 | 63.61 ug/L | 99 |
| 12) bromomethane | 5.044 | 94 | 104409 | 58.56 ug/L | 97 |
| 13) chloroethane | 5.212 | 64 | 68070 | 58.23 ug/L | 98 |
| 16) trichlorofluoromethane | 5.674 | 101 | 189373 | 65.76 ug/L | 100 |
| 18) ethyl ether | 6.067 | 74 | 37557 | 52.80 ug/L | 98 |
| 21) acrolein | 6.318 | 56 | 142341 | 498.48 ug/L | 98 |
| 22) 1,1-dichloroethene | 6.481 | 61 | 130742 | 57.73 ug/L | 96 |
| 23) acetone | 6.539 | 43 | 23143 | 54.25 ug/L | 93 |
| 24) allyl chloride | 7.011 | 76 | 39285 | 55.85 ug/L | 93 |
| 25) acetonitrile | 6.969 | 40 | 80333 | 566.31 ug/L | 85 |
| 27) iodomethane | 6.764 | 142 | 193438 | 60.07 ug/L | 97 |
| 28) iso-butyl alcohol | 9.684 | 41 | 24991 | 527.25 ug/L | 92 |
| 29) carbon disulfide | 6.890 | 76 | 342752 | 59.85 ug/L | 99 |
| 30) methylene chloride | 7.199 | 84 | 97758 | 57.61 ug/L | 97 |
| 31) methyl acetate | 6.995 | 43 | 52884 | 55.80 ug/L | 97 |
| 32) methyl tert butyl ether | 7.530 | 73 | 274088 | 54.52 ug/L | 98 |
| 33) trans-1,2-dichloroethene | 7.572 | 61 | 118788 | 57.49 ug/L | 98 |
| 34) di-isopropyl ether | 8.122 | 45 | 269440 | 50.70 ug/L | 96 |
| 35) ethyl tert-butyl ether | 8.583 | 59 | 271003 | 54.13 ug/L | 99 |
| 36) 2-butanone | 8.846 | 72 | 7227 | 53.23 ug/L | 94 |
| 37) 1,1-dichloroethane | 8.138 | 63 | 143209 | 58.34 ug/L | 99 |
| 38) chloroprene | 8.248 | 53 | 94040 | 52.34 ug/L | 96 |
| 39) acrylonitrile | 7.524 | 53 | 142489 | 290.01 ug/L | 98 |
| 40) vinyl acetate | 8.133 | 86 | 10225 | 56.06 ug/L | 97 |
| 41) ethyl acetate | 8.861 | 45 | 8499 | 45.51 ug/L # | 22 |
| 42) 2,2-dichloropropane | 8.877 | 77 | 138578 | 53.94 ug/L | 97 |
| 43) cis-1,2-dichloroethene | 8.877 | 96 | 86974 | 52.42 ug/L | 99 |
| 44) propionitrile | 8.935 | 54 | 103282 | 564.11 ug/L | 92 |
| 45) methyl acrylate | 8.940 | 55 | 68126 | 55.20 ug/L | 98 |
| 46) bromochloromethane | 9.186 | 128 | 46883 | 58.71 ug/L | 95 |
| 47) tetrahydrofuran | 9.228 | 42 | 23521 | 48.91 ug/L | 99 |
| 48) chloroform | 9.244 | 83 | 135486 | 57.24 ug/L | 97 |
| 49) Tert-Butyl Formate | 9.270 | 59 | 72249 | 52.43 ug/L # | 97 |
| 52) freon 113 | 6.449 | 151 | 86161 | 61.80 ug/L | 99 |
| 53) methacrylonitrile | 9.118 | 41 | 35698 | 49.91 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112542.D
Acq On : 11 Aug 2015 11:17 pm
Operator : ximenac
Sample : cc4810-50
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Aug 12 09:32:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| | Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 54) | 1,1,1-trichloroethane | 9.496 | 97 | 149830 | 61.31 ug/L | 99 |
| 57) | tert-amyl methyl ether | 9.968 | 73 | 266691 | 53.29 ug/L | 96 |
| 59) | epichlorohydrin | 11.572 | 57 | 29781 | 249.94 ug/L | 97 |
| 60) | n-butyl alcohol | 10.439 | 56 | 93525 | 2639.10 ug/L | 96 |
| 61) | cyclohexane | 9.569 | 84 | 143558 | 56.48 ug/L | 95 |
| 62) | carbon tetrachloride | 9.705 | 117 | 138066 | 65.77 ug/L | 99 |
| 63) | 1,1-dichloropropene | 9.674 | 75 | 91709 | 58.66 ug/L | 98 |
| 64) | hexane | 7.870 | 57 | 68892 | 49.34 ug/L | 97 |
| 65) | benzene | 9.936 | 78 | 287622 | 56.40 ug/L | 99 |
| 66) | heptane | 10.109 | 57 | 43439 | 54.76 ug/L | 96 |
| 67) | isopropyl acetate | 9.857 | 43 | 116582 | 52.55 ug/L | 99 |
| 68) | 1,2-dichloroethane | 9.952 | 62 | 88641 | 58.19 ug/L | 97 |
| 69) | trichloroethene | 10.660 | 95 | 69910 | 56.70 ug/L | 98 |
| 72) | 2-nitropropane | 11.436 | 41 | 23097 | 51.24 ug/L | 97 |
| 73) | 2-chloroethyl vinyl ether | 11.446 | 63 | 213337 | 272.53 ug/L | 99 |
| 74) | methyl methacrylate | 10.922 | 41 | 93021 | 53.35 ug/L | 96 |
| 75) | 1,2-dichloropropane | 10.917 | 63 | 74932 | 56.21 ug/L | 95 |
| 76) | methylcyclohexane | 10.875 | 83 | 141959 | 61.54 ug/L | 98 |
| 77) | dibromomethane | 11.079 | 93 | 48138 | 61.38 ug/L | 95 |
| 78) | bromodichloromethane | 11.210 | 83 | 94624 | 58.33 ug/L | 100 |
| 79) | cis-1,3-dichloropropene | 11.672 | 75 | 108083 | 56.76 ug/L | 96 |
| 81) | 4-methyl-2-pentanone | 11.761 | 58 | 25813 | 53.19 ug/L | 98 |
| 82) | toluene | 12.033 | 92 | 164755 | 58.79 ug/L | 99 |
| 83) | 3-methyl-1-butanol | 11.782 | 70 | 37649 | 1026.69 ug/L | 97 |
| 84) | trans-1,3-dichloropropene | 12.233 | 75 | 99241 | 58.64 ug/L | 97 |
| 85) | ethyl methacrylate | 12.227 | 69 | 73497 | 49.14 ug/L | 99 |
| 86) | 1,1,2-trichloroethane | 12.448 | 83 | 53544 | 56.87 ug/L | 96 |
| 87) | 2-hexanone | 12.621 | 58 | 18518 | 46.68 ug/L | 96 |
| 89) | tetrachloroethene | 12.621 | 166 | 82914 | 53.21 ug/L | 97 |
| 90) | 1,3-dichloropropane | 12.626 | 76 | 97175 | 54.73 ug/L | 98 |
| 91) | butyl acetate | 12.694 | 56 | 37786 | 51.42 ug/L | 97 |
| 92) | 3,3-Dimethyl-1-Butanol | 12.788 | 57 | 74574 | 424.57 ug/L | 96 |
| 93) | dibromochloromethane | 12.893 | 129 | 82021 | 59.23 ug/L | 99 |
| 94) | 1,2-dibromoethane | 13.045 | 107 | 64974 | 55.64 ug/L | 99 |
| 95) | n-Butyl Ether | 13.423 | 57 | 263624 | 47.62 ug/L | 98 |
| 96) | chlorobenzene | 13.507 | 112 | 185944 | 56.66 ug/L | 98 |
| 97) | 1,1,1,2-tetrachloroethane | 13.564 | 131 | 87180 | 59.90 ug/L | 99 |
| 98) | ethylbenzene | 13.559 | 91 | 304305 | 54.13 ug/L | 99 |
| 99) | m,p-xylene | 13.664 | 106 | 236694 | 112.59 ug/L | 99 |
| 100) | o-xylene | 14.083 | 106 | 121982 | 56.81 ug/L | 98 |
| 101) | styrene | 14.094 | 104 | 190505 | 52.73 ug/L | 99 |
| 103) | bromoform | 14.361 | 173 | 61700 | 57.11 ug/L | 98 |
| 105) | isopropylbenzene | 14.424 | 105 | 326905 | 57.44 ug/L | 99 |
| 107) | bromobenzene | 14.823 | 156 | 92605 | 55.13 ug/L | 96 |
| 108) | cyclohexanone | 14.587 | 55 | 43290 | 257.85 ug/L | 96 |
| 109) | 1,1,2,2-tetrachloroethane | 14.728 | 83 | 92291 | 56.03 ug/L | 96 |
| 110) | trans-1,4-dichloro-2-b... | 14.770 | 53 | 15239 | 41.80 ug/L | 96 |
| 111) | 1,2,3-trichloropropane | 14.802 | 110 | 21896 | 58.21 ug/L | 90 |
| 112) | n-propylbenzene | 14.833 | 91 | 354174 | 57.16 ug/L | 100 |
| 114) | 2-chlorotoluene | 14.980 | 126 | 82628 | 57.08 ug/L | 98 |
| 115) | 4-chlorotoluene | 15.080 | 126 | 79561 | 56.61 ug/L | 94 |
| 116) | 1,3,5-trimethylbenzene | 14.985 | 105 | 284456 | 58.73 ug/L | 98 |
| 117) | tert-butylbenzene | 15.331 | 119 | 232172 | 58.18 ug/L | 100 |
| 118) | pentachloroethane | 15.415 | 167 | 71757 | 65.93 ug/L | 98 |
| 119) | 1,2,4-trimethylbenzene | 15.378 | 105 | 277948 | 57.16 ug/L | 97 |
| 120) | sec-butylbenzene | 15.546 | 105 | 383709 | 60.17 ug/L | 98 |
| 121) | 1,3-dichlorobenzene | 15.735 | 146 | 178922 | 57.28 ug/L | 98 |
| 122) | p-isopropyltoluene | 15.662 | 119 | 322743 | 57.96 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112542.D
Acq On : 11 Aug 2015 11:17 pm
Operator : ximenac
Sample : cc4810-50
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Aug 12 09:32:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 123) 1,4-dichlorobenzene | 15.814 | 146 | 182339 | 54.42 ug/L | 100 |
| 124) 1,2-dichlorobenzene | 16.191 | 146 | 192134 | 57.06 ug/L | 98 |
| 126) n-butylbenzene | 16.065 | 92 | 163765 | 56.20 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropr... | 16.920 | 157 | 25408 | 51.63 ug/L | 93 |
| 129) 1,3,5-trichlorobenzene | 17.093 | 180 | 205876 | 57.59 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.659 | 180 | 213462 | 58.09 ug/L | 97 |
| 131) hexachlorobutadiene | 17.759 | 225 | 103316 | 56.80 ug/L | 99 |
| 132) naphthalene | 17.900 | 128 | 443378 | 56.96 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.110 | 180 | 224592 | 58.86 ug/L | 99 |
| 134) hexachloroethane | 16.443 | 119 | 69405 | 60.34 ug/L | 98 |
| 135) Benzyl chloride | 15.924 | 91 | 149724 | 45.76 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

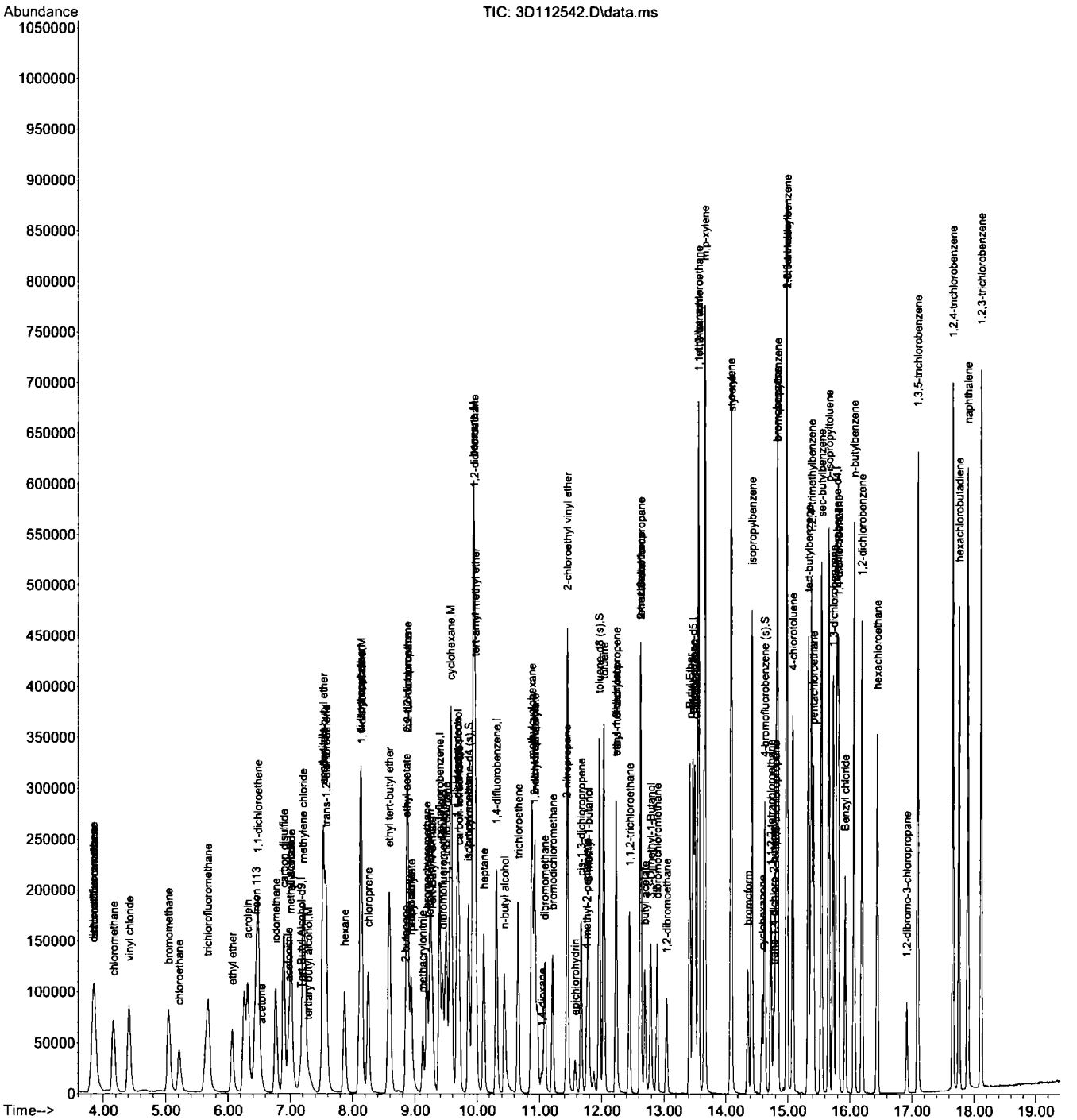
7.6.13

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\3D\v3d4822\
Data File : 3D112542.D
Acq On : 11 Aug 2015 11:17 pm
Operator : ximenac
Sample : cc4810-50
Misc : MS89468,V3D4823,5,,,,1
ALS Vial : 35 Sample Multiplier: 1

Quant Time: Aug 12 09:32:24 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112563.D
Acq On : 12 Aug 2015 9:17 am
Operator : ximenac
Sample : cc4810-20
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 12 14:29:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) Tert Butyl Alcohol-d9 | 7.173 | 65 | 97817 | 500.00 ug/L | 0.00 |
| 4) pentafluorobenzene | 9.401 | 168 | 204794 | 50.00 ug/L | 0.01 |
| 58) 1,4-difluorobenzene | 10.319 | 114 | 227986 | 50.00 ug/L | 0.01 |
| 88) chlorobenzene-d5 | 13.480 | 117 | 187452 | 50.00 ug/L | 0.00 |
| 104) 1,4-dichlorobenzene-d4 | 15.793 | 152 | 110302 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 50) dibromofluoromethane (s) | 9.449 | 113 | 82653 | 52.68 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 105.36% | | |
| 51) 1,2-dichloroethane-d4 (s) | 9.868 | 65 | 76752 | 52.80 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 105.60% | | |
| 80) toluene-d8 (s) | 11.965 | 98 | 256659 | 51.40 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 102.80% | | |
| 106) 4-bromofluorobenzene (s) | 14.634 | 95 | 86012 | 50.68 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 101.36% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) 1,4-dioxane | 11.042 | 88 | 9959 | 630.10 ug/L | 91 |
| 3) tertiary butyl alcohol | 7.288 | 59 | 20296 | 96.07 ug/L | 80 |
| 8) chlorodifluoromethane | 3.859 | 51 | 57601 | 20.72 ug/L | 97 |
| 9) dichlorodifluoromethane | 3.854 | 85 | 82562 | 22.18 ug/L | 97 |
| 10) chloromethane | 4.169 | 50 | 59192 | 20.00 ug/L | 99 |
| 11) vinyl chloride | 4.410 | 62 | 65708 | 22.14 ug/L | 98 |
| 12) bromomethane | 5.060 | 94 | 43160 | 22.50 ug/L | 98 |
| 13) chloroethane | 5.228 | 64 | 27840 | 22.14 ug/L | 98 |
| 16) trichlorofluoromethane | 5.684 | 101 | 75619 | 24.41 ug/L | 98 |
| 18) ethyl ether | 6.072 | 74 | 15913 | 20.80 ug/L | 92 |
| 21) acrolein | 6.329 | 56 | 56011 | 182.35 ug/L | 97 |
| 22) 1,1-dichloroethene | 6.492 | 61 | 48634 | 19.97 ug/L | 95 |
| 23) acetone | 6.549 | 43 | 10066 | 21.94 ug/L | 88 |
| 24) allyl chloride | 7.021 | 76 | 15306 | 20.23 ug/L | 91 |
| 25) acetonitrile | 6.979 | 40 | 31641 | 207.37 ug/L | 83 |
| 27) iodomethane | 6.769 | 142 | 71808 | 20.73 ug/L | 96 |
| 28) iso-butyl alcohol | 9.695 | 41 | 10383 | 203.65 ug/L | 97 |
| 29) carbon disulfide | 6.895 | 76 | 129102 | 20.96 ug/L | 100 |
| 30) methylene chloride | 7.210 | 84 | 37608 | 20.60 ug/L | 95 |
| 31) methyl acetate | 7.005 | 43 | 21579 | 21.17 ug/L | 97 |
| 32) methyl tert butyl ether | 7.540 | 73 | 100994 | 18.68 ug/L | 100 |
| 33) trans-1,2-dichloroethene | 7.582 | 61 | 46266 | 20.82 ug/L | 97 |
| 34) di-isopropyl ether | 8.127 | 45 | 99826 | 17.46 ug/L | 93 |
| 35) ethyl tert-butyl ether | 8.594 | 59 | 97865 | 18.17 ug/L | 99 |
| 36) 2-butanone | 8.856 | 72 | 2825 | 19.35 ug/L | 86 |
| 37) 1,1-dichloroethane | 8.148 | 63 | 57519 | 21.78 ug/L | 96 |
| 38) chloroprene | 8.258 | 53 | 35047 | 18.13 ug/L | 96 |
| 39) acrylonitrile | 7.535 | 53 | 58132 | 110.00 ug/L | 90 |
| 40) vinyl acetate | 8.138 | 86 | 4127 | 21.04 ug/L | 98 |
| 41) ethyl acetate | 8.872 | 45 | 3263 | 16.24 ug/L # | 1 |
| 42) 2,2-dichloropropane | 8.882 | 77 | 60173 | 21.77 ug/L | 96 |
| 43) cis-1,2-dichloroethene | 8.888 | 96 | 33920 | 19.01 ug/L | 97 |
| 44) propionitrile | 8.945 | 54 | 42657 | 216.60 ug/L | 85 |
| 45) methyl acrylate | 8.950 | 55 | 27367 | 20.61 ug/L | 98 |
| 46) bromochloromethane | 9.192 | 128 | 18615 | 21.67 ug/L | 96 |
| 47) tetrahydrofuran | 9.234 | 42 | 9682 | 18.72 ug/L | 97 |
| 48) chloroform | 9.249 | 83 | 53449 | 20.99 ug/L | 98 |
| 49) Tert-Butyl Formate | 9.281 | 59 | 26203 | 17.68 ug/L # | 95 |
| 52) freon 113 | 6.465 | 151 | 32611 | 21.74 ug/L | 99 |
| 53) methacrylonitrile | 9.134 | 41 | 14362 | 18.67 ug/L | 87 |
| 54) 1,1,1-trichloroethane | 9.506 | 97 | 59177 | 22.51 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112563.D
Acq On : 12 Aug 2015 9:17 am
Operator : ximenac
Sample : cc4810-20
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 12 14:29:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 57) tert-amyl methyl ether | 9.973 | 73 | 95408 | 17.72 ug/L | 96 |
| 59) epichlorohydrin | 11.582 | 57 | 12448 | 99.46 ug/L | 97 |
| 60) n-butyl alcohol | 10.455 | 56 | 38286 | 1028.52 ug/L | 99 |
| 61) cyclohexane | 9.574 | 84 | 57490 | 21.53 ug/L | 94 |
| 62) carbon tetrachloride | 9.705 | 117 | 53940 | 24.46 ug/L | 97 |
| 63) 1,1-dichloropropene | 9.679 | 75 | 36284 | 22.10 ug/L | 97 |
| 64) hexane | 7.881 | 57 | 25914 | 17.67 ug/L | 97 |
| 65) benzene | 9.941 | 78 | 114725 | 21.42 ug/L | 99 |
| 66) heptane | 10.114 | 57 | 15993 | 19.20 ug/L | 94 |
| 67) isopropyl acetate | 9.868 | 43 | 46031 | 19.75 ug/L | 95 |
| 68) 1,2-dichloroethane | 9.957 | 62 | 34988 | 21.87 ug/L | 97 |
| 69) trichloroethene | 10.665 | 95 | 27784 | 21.45 ug/L | 99 |
| 72) 2-nitropropane | 11.446 | 41 | 9339 | 19.72 ug/L | 89 |
| 73) 2-chloroethyl vinyl ether | 11.457 | 63 | 82696 | 100.57 ug/L | 96 |
| 74) methyl methacrylate | 10.927 | 41 | 38862 | 21.22 ug/L | 96 |
| 75) 1,2-dichloropropane | 10.927 | 63 | 30503 | 21.78 ug/L | 90 |
| 76) methylcyclohexane | 10.885 | 83 | 51374 | 21.20 ug/L | 99 |
| 77) dibromomethane | 11.084 | 93 | 19062 | 23.14 ug/L | 85 |
| 78) bromodichloromethane | 11.215 | 83 | 37030 | 21.73 ug/L | 97 |
| 79) cis-1,3-dichloropropene | 11.677 | 75 | 41112 | 20.55 ug/L | 97 |
| 81) 4-methyl-2-pentanone | 11.766 | 58 | 10236 | 20.08 ug/L | 96 |
| 82) toluene | 12.044 | 92 | 64614 | 21.95 ug/L | 96 |
| 83) 3-methyl-1-butanol | 11.792 | 70 | 14297 | 371.17 ug/L | 96 |
| 84) trans-1,3-dichloropropene | 12.238 | 75 | 38377 | 21.59 ug/L | 98 |
| 85) ethyl methacrylate | 12.238 | 69 | 26603 | 16.93 ug/L | 96 |
| 86) 1,1,2-trichloroethane | 12.453 | 83 | 21341 | 21.58 ug/L | 95 |
| 87) 2-hexanone | 12.631 | 58 | 7127 | 17.10 ug/L | 97 |
| 89) tetrachloroethene | 12.631 | 166 | 32054 | 20.08 ug/L | 98 |
| 90) 1,3-dichloropropane | 12.636 | 76 | 37877 | 20.83 ug/L | 96 |
| 91) butyl acetate | 12.699 | 56 | 13449 | 17.87 ug/L | 89 |
| 92) 3,3-Dimethyl-1-Butanol | 12.794 | 57 | 26532 | 147.47 ug/L | 97 |
| 93) dibromochloromethane | 12.898 | 129 | 31470 | 22.19 ug/L | 98 |
| 94) 1,2-dibromoethane | 13.051 | 107 | 25700 | 21.49 ug/L | 96 |
| 95) n-Butyl Ether | 13.428 | 57 | 93964 | 16.57 ug/L | 96 |
| 96) chlorobenzene | 13.512 | 112 | 72931 | 21.69 ug/L | 96 |
| 97) 1,1,1,2-tetrachloroethane | 13.570 | 131 | 33378 | 22.39 ug/L | 97 |
| 98) ethylbenzene | 13.564 | 91 | 116180 | 20.18 ug/L | 99 |
| 99) m,p-xylene | 13.674 | 106 | 90653 | 42.10 ug/L | 99 |
| 100) o-xylene | 14.089 | 106 | 45211 | 20.56 ug/L | 94 |
| 101) styrene | 14.104 | 104 | 68449 | 18.50 ug/L | 96 |
| 103) bromoform | 14.361 | 173 | 23452 | 21.19 ug/L | 99 |
| 105) isopropylbenzene | 14.429 | 105 | 117275 | 21.19 ug/L | 99 |
| 107) bromobenzene | 14.833 | 156 | 35580 | 21.78 ug/L | 93 |
| 108) cyclohexanone | 14.597 | 55 | 12069 | 113.68 ug/L | 97 |
| 109) 1,1,2,2-tetrachloroethane | 14.734 | 83 | 36431 | 22.74 ug/L | 99 |
| 110) trans-1,4-dichloro-2-b... | 14.781 | 53 | 5908 | 16.66 ug/L | 84 |
| 111) 1,2,3-trichloropropane | 14.807 | 110 | 8445 | 23.09 ug/L | 86 |
| 112) n-propylbenzene | 14.838 | 91 | 130317 | 21.62 ug/L | 99 |
| 114) 2-chlorotoluene | 14.985 | 126 | 30970 | 22.00 ug/L | 93 |
| 115) 4-chlorotoluene | 15.085 | 126 | 29434 | 21.53 ug/L | 91 |
| 116) 1,3,5-trimethylbenzene | 14.990 | 105 | 103124 | 21.89 ug/L | 98 |
| 117) tert-butylbenzene | 15.336 | 119 | 80629 | 20.77 ug/L | 98 |
| 118) pentachloroethane | 15.415 | 167 | 26490 | 25.03 ug/L | 94 |
| 119) 1,2,4-trimethylbenzene | 15.384 | 105 | 100133 | 21.17 ug/L | 98 |
| 120) sec-butylbenzene | 15.551 | 105 | 136274 | 21.97 ug/L | 98 |
| 121) 1,3-dichlorobenzene | 15.735 | 146 | 66388 | 21.85 ug/L | 95 |
| 122) p-isopropyltoluene | 15.667 | 119 | 115732 | 21.37 ug/L | 100 |
| 123) 1,4-dichlorobenzene | 15.819 | 146 | 67677 | 20.77 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112563.D
Acq On : 12 Aug 2015 9:17 am
Operator : ximenac
Sample : cc4810-20
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 12 14:29:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 124) 1,2-dichlorobenzene | 16.196 | 146 | 70488 | 21.52 ug/L | 97 |
| 126) n-butylbenzene | 16.071 | 92 | 57533 | 20.30 ug/L | 96 |
| 128) 1,2-dibromo-3-chloropr... | 16.925 | 157 | 9161 | 19.14 ug/L | 93 |
| 129) 1,3,5-trichlorobenzene | 17.098 | 180 | 73721 | 21.20 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.664 | 180 | 75868 | 21.23 ug/L | 95 |
| 131) hexachlorobutadiene | 17.764 | 225 | 37716 | 21.32 ug/L | 96 |
| 132) naphthalene | 17.900 | 128 | 158867 | 20.98 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 18.115 | 180 | 82043 | 22.11 ug/L | 99 |
| 134) hexachloroethane | 16.443 | 119 | 24527 | 21.93 ug/L | 98 |
| 135) Benzyl chloride | 15.929 | 91 | 60346 | 18.97 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.6.14

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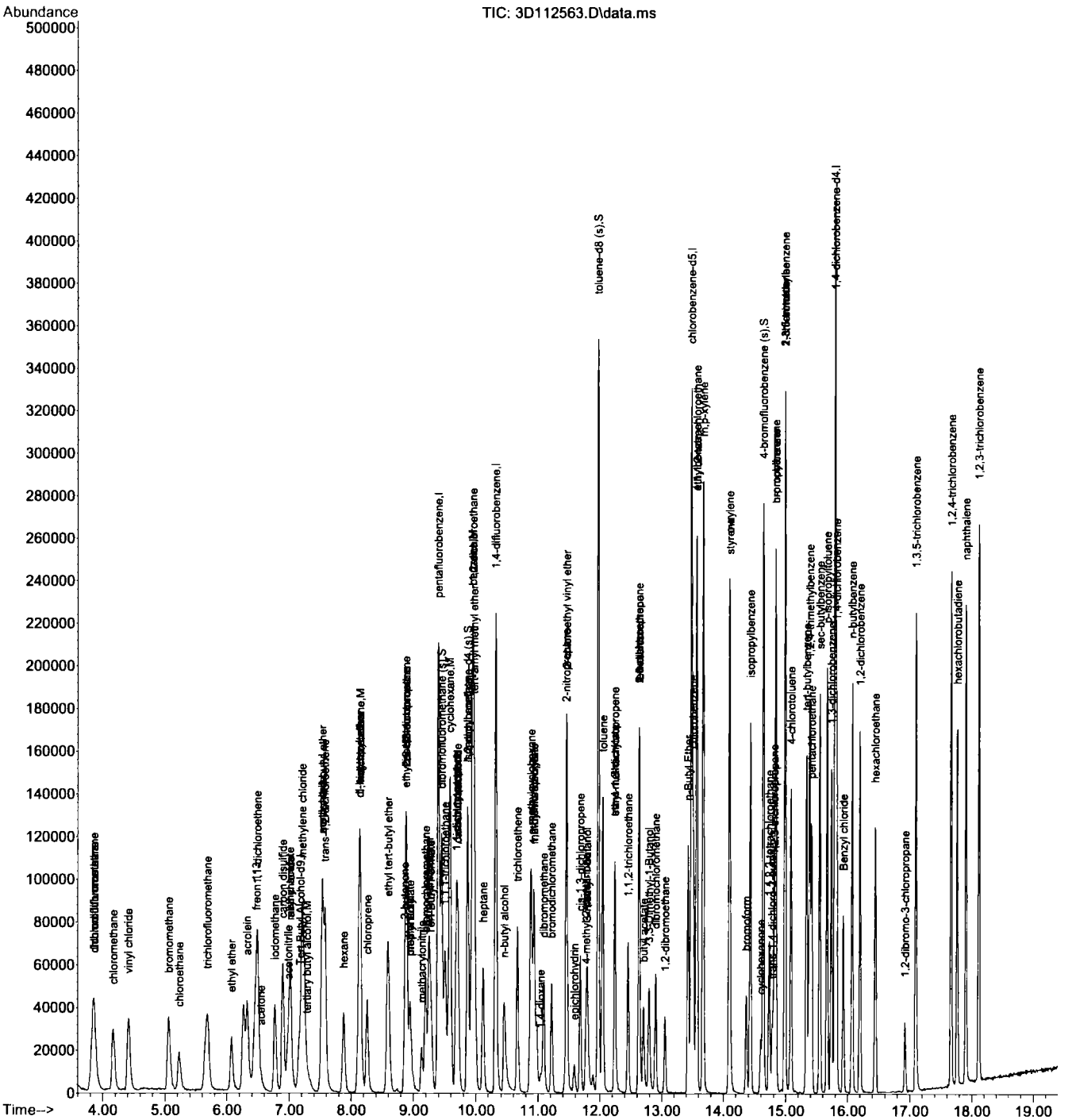
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\
Data File : 3D112563.D
Acq On : 12 Aug 2015 9:17 am
Operator : ximenac
Sample : cc4810-20
Misc : MS89457,V3D4824,5,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 12 14:29:03 2015
Quant Method : C:\msdchem\1\METHODS\M3D4810.M
Quant Title : Method SW846 8260B, ZB 624 60m x 0.25mm x 1.4 um
QLast Update : Thu Aug 06 11:10:54 2015
Response via : Initial Calibration




M3D4810.M Wed Aug 12 14:32:43 2015 3D



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ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V3D4810

**Print Analyst Name:** XIMENA

**Analyst Signature:** [illegible]

**Columns:** ZB-624 (60m x 0.25 mm x 1.4 µm)

**Method** V8260C

**Initial Cal. Method** M3D4810

**Date:** 7/29/15

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 41.99 STD A | 100 ppm |
| V015-2114 | 72.16 STD B | 100 ppm |
| V015-2114 | 71.11 STD C | 100 ppm |
| V015-2114 | 54.9 STD Ace | 1000 ppm |
| V015-2114 | 63 IS | 50/2500 ppm |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 49.20 Ext A | 100 ppm |
| V015-2114 | 73.15 Ext B | 100 ppm |
| V015-2114 | 76.6 Ext C | 100 ppm |
| V015-2114 | 48.4 Ext Ace | 1000 ppm |
| V015-2114 | 51.4 Hex | 100 ppm |

**Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.**

**Supervisor Signature:** HS **Date:** 7/30/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3D112234 | bfb | | | | | | | | | | | ok | | |
| | 112235 | IC4810-0.2 | V8260C AQ | | | | 5 | | | | W | | ok | .1 ml ABC Ace → 500 ml | |
| | 112236 | IC4810-0.5 | ✓ | | | | 5 | | | | W | | ok | 2.5 ml ABC Ace → 500 ml | |
| | 112237 | IC4810-1 | ✓ | | | | 5 | | | | W | | ok | 200 ml Ace + 2 ml A,B,C → 200 m | |
| | 112238 | IC4810-2 | ✓ | | | | 5 | | | | W | | ok | 200 ml Ace + 2 ml ABC → 100 ml | |
| | 112239 | IC4810-5 | ✓ | | | | 5 | | | | W | | ok | 5 ml ABC Ace → 100 ml | |
| | 112240 | IC4810-10 | ✓ | | | | 5 | | | | W | | ok | 5 ml ABC Ace → 50 ml | |
| | 112241 | IC4810-20 | ✓ | | | | 5 | | | | W | | ok | 10 ml ABC Ace → 50 ml | |
| | 112242 | ICC4810-50 | ✓ | | | | 5 | | | | W | | ok | 25 ml ABC Ace → 50 ml | |
| | 112243 | IC4810-100 | ✓ | | | | 5 | | | | W | | ok | 1 ml Ace + 50 ml ABC → 50 ml | |
| | 112244 | IC4810-200 | ✓ | | | | 5 | | | | W | | ok | 100 ml ABC → 50 ml | |
| | 112245 | ib | | | | | 5 | | | | | | | | |
| | 112246 | ib | | | | | 5 | | | | | | | | |
| | 112247 | ICV4810-50 | ✓ | | | | 5 | | | | W | | ok | 25 ml Ext (ABC Ace Hex) → 50 | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | KC 7/29/15 | | | | | | | |

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

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7.7.1

7

ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V3D4822

**Print Analyst Name:** X. MENA

**Date:** 8/11/15

**Analyst Signature:** [signature]

**Columns:** ZB-624 (60m x 0.25mm x 1.4um)

**Method** V8260C

**Initial Cal. Method** M3D4810

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 95.7 Ext A | 100 ppm |
| V015-2114 | 72.23 Ext B | 100 ppm |
| V015-2114 | 111.1 Ext C | 100 ppm |
| V015-2114 | 103.4 Ext Acr | 1000 ppm |
| V015-2114 | 92.5 Hex | 100 ppm |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 93.6 STD A | 100 ppm |
| V015-2114 | 72.46 STD B | 100 ppm |
| V015-2114 | 118.2 STD C | 100 ppm |
| V015-2114 | 54.41 STD ACR | 1000 ppm |
| V015-2114 | 89 I/S | 250/2500 ppm |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** [signature] **Date:** 8/12/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* < 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3D112515 | bfb | | | | | | | | | | | OK | 9:53 AM | |
| | 112516 | CC4810-20 | | | | | 5 | | | | | | NG | compounds ↑ | |
| | 112517 | CC4810-20 | | | | | 5 | | | | | | OK | 20ml Std ABC Acr / 100ml 10↓ 23↑ | |
| | 112518 | ib | | | | | 5 | | | | | | | | |
| | 112519 | mb | | | | | 5 | | | | W | | OK | | |
| | 112520 | bs | | | | | 5 | | | | W | | OK | 25ml EST (ABC Acr hex) / 50ml | |
| | 112521 | ib | | | | | 5 | | | | | | | | |
| | 112522 | JC1106-7 | 89468 SL | WTB | 1 | | 5 | | 1X | | W | | OK | | ✓ |
| | 112523 | JC1106-5 | ✓ | GW | 1 | | 5 | | 1X | | W | | OK | | ✓ |
| | 112524 | JC1106-13 | ✓ | GW | 1 | | 5 | | 1X | | W | | OK | | ✓ |
| | 112525 | JC1106-10 | ✓ | GW | 1 | | 5 | | 1X | | W | | OK | | ✓ |
| | 112526 | JC1106-13 ms | ✓ | GW | 6 | | 5 | | 1X | | W | | OK | DF ML ABC Acro | ✓ |
| | 112527 | JC1106-13 msd | ✓ | GW | 7 | | 5 | | 1X | | W | | OK | 10 to ml | ✓ |
| | 112528 | ib | | | | | 5 | | | | W | | | | |
| | 112529 | JC1106-19 | 89468 SL | WTB | 1 | | 5 | | 1X | | W | | OK | | ✓ |
| | 112530 | JC1106-6 | ✓ | GW | 1 | | 5 | | 1X | | W | | OK | | ✓ |
| | 112531 | JC1106-3 | ✓ | GW | 1 | | 5 | | 1X | | W | | OK | | ✓ |

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

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Form: OR001-9
Rev. Date: 2/14/2007

7.7.2

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ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V3D4822

**Print Analyst Name:** XIMENA

**Date:** 8/11/15

**Analyst Signature:** [illegible]

**Columns:** ZB-624 (60m x 0.25mm x 1.4um)

**Method** V8260C

**Initial Cal. Method** M3D4810

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| | | |
| | | |
| Sel PO | 289 | |
| | | |
| | | |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** HM **Date:** 8/10/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* < 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3D112532 | JC1106-4 | 89468 SL | W | 1 | | 5 | | 1X | | | ✓ | OC | | ✓ |
| | 112533 | JC1106-15 | ✓ | W | 1 | | 5 | | 1X | | | ✓ | OC | | ✓ |
| | 112534 | JC1106-18 | ✓ | W | 1 | | 5 | | 1X | | | ✓ | OC | | ✓ |
| | 112535 | JC1106-8 | ✓ | W | 2 | | 5 | | 1X | | | ✓ | OC | | ✓ |
| | 112536 | JC1106-14 | ✓ | W | 1 | | 5 | | 1X | | | ✓ | OC | | ✓ |
| | 112537 | JC1106-12 | ✓ | W | 1 | | 5 | | 1X | | | ✓ | OC | | ✓ |
| | 112538 | JC1106-11 | ✓ | W | 1 | | 5 | | 1X | | | ✓ | OC | | ✓ |
| | 112539 | JC1106-9 | ✓ | W | 2 | | 5 | | 1X | | | ✓ | NG | out of bfb tune 9:55 pm | ✓ |
| | 112540 | ib | | | | | 5 | | | | | | | | |

XC 8/11/15

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

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ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V3D4823 / V3D4824

**Print Analyst Name:** XIMENA

**Date:** 8/12/15

**Analyst Signature:** [signature]

**Columns:** ZB-624 (60mx0.25mmx1.4um).

**Method** V8260C

**Initial Cal. Method** M3D4810

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 95.11 Ext A | 100 ppm |
| V015-2114 | 72.64 Ext B | 100 ppm |
| V015-2114 | 111.2 Ext C | 100 ppm |
| V015-2114 | 107.4 Ext Air | 1000 ppm |
| V015-2114 | 92.2 Hex | 100 ppm |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 93.6 STD A | 100 ppm |
| V015-2114 | 72.46 STD B | 100 ppm |
| V015-2114 | 118.2 STD C | 100 ppm |
| V015-2114 | 54.41 STD Air | 1000 ppm |
| V015-2114 | 89 I/S | 250/500 ppm |

**Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.** PH paper 212713

Exp 5/1/16

**Supervisor Signature:** [signature] **Date:** 8/13/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3D112562 | bfb | | | | | | | | | | | OK | 8:16am | |
| | 112563 | -CC4810-20 | | | | | 5 | | | | W | | OK | 2, 16, 62 ↑ 20ml Std A B C Air | 100ml |
| | 112564 | ib | | | | | 5 | | | | | | | | |
| | 112565 | mb2 | | | | | 5 | | | | W | | OK | | |
| | 112566 | JC1072-1ms | 89457 TCL20+ | G W | 4 | | 5 | | 1X | | W | | OK | 25ml ABC Air | ✓ |
| | 112567 | JC1072-1msd | ✓ | G W | 4 | | 5 | | 1X | | W | | OK | 50ml. | ✓ |
| | 112568 | ib | | | | | 5 | | | | W | | | | |
| | 112569 | mb | | | | | 5 | | | | W | | OK | | |
| | 112570 | bs | | | | | 5 | | | | W | | OK | 25ml Ext (A B C Air Hex) | 150ml |
| | 112571 | ib | | | | | 5 | | | | W | | | | |
| R | 112572 | JC1106-9 | 89468 SL | G W | 1 | | 5 | | 1X | | W | | OK | | ✓ |
| R | 112573 | JC1106-16 | ✓ | G W | 2 | | 5 | | 1X | | W | | OK | | ✓ |
| R | 112574 | JC1106-2 | ✓ | G W | 2 | | 5 | | 1X | | W | | OK | | ✓ |
| R | 112575 | JC1106-1 | ✓ | G W | 2 | | 5 | | 1X | | W | | OK | | ✓ |
| R | 112576 | JC726-8 | 89228 TCL20+ TBA | G W | 2 | | 5 | | 1X | | W | | OK | | 5 |
| R | 112577 | JC1082-3 | 89462 TCL20+ TBA | G W | 1 | | 10/50 | | 5X | | W | | OK | /DL 50X | ✓ |
| R | 112578 | JC726-9 | 89228 TCL20+ TBA | G W | 2 | | 5 | | 1X | | W | | OK | | ✓ |
| R | 112579 | JC726-2 | ✓ | G W | 2 | | 5 | | 1X | | W | | OK | | ✓ |

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

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7.7.3

7

ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V3D4823 / V3D4824

**Print Analyst Name:** XIMENA

**Date:** 8/12/15

**Analyst Signature:** [illegible]

**Columns:** ZB-624 (60 m x 0.25 mm x 1.4 µm).

**Method** V8260C

**Initial Cal. Method** M3D4810

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 95.11 Ext A | 100 ppm |
| V015-2114 | 72.64 Ext B | 100 ppm |
| V015-2114 | 111.2 Ext C | 100 ppm |
| V015-2114 | 107.4 Ext Air | 1000 ppm |
| V015-2114 | 92.2 Hex | 100 ppm |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 93.6 STD A | 100 ppm |
| V015-2114 | 72.46 STD B | 100 ppm |
| V015-2114 | 118.2 STD C | 100 ppm |
| V015-2114 | 54.41 STD Air | 1000 ppm |
| V015-2114 | 89 IS | 200/5000 ppm |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044. PH paper 212713 Exp 5/1/16

**Supervisor Signature:** [illegible] **Date:** 8/13/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3D112562 | bfb | | | | | | | | | | | OK | 8:16am | |
| | 112563 | -CC4810-20 | | | | | 5 | | | | ✓ | | OK | 2, 16, 62 ↑ 20ml Std ABC Air | 100ml |
| | 112564 | ib | | | | | 5 | | | | | | | | |
| | 112565 | mb2 | | | | | 5 | | | | ✓ | | OK | | |
| | 112566 | JC1072-1ms | 89457 TCL20+ | G | 4 | | 5 | | 1X | | ✓ | | OK | 25ml ABC Air 50ml. | ✓ |
| | 112567 | JC1072-1msd | ✓ | G | 4 | | 5 | | 1X | | ✓ | | OK | | ✓ |
| | 112568 | ib | | | | | 5 | | | | ✓ | | | | |
| | 112569 | mb | | | | | 5 | | | | ✓ | | OK | | |
| | 112570 | bs | | | | | 5 | | | | ✓ | | OK | 25ml Ext (A B C Air Hex) 150ml | |
| | 112571 | ib | | | | | 5 | | | | ✓ | | | | |
| R | 112572 | JC1106-9 | 89468 SL | G | 1 | | 5 | | 1X | | ✓ | | OK | | ✓ |
| R | 112573 | JC1106-16 | ✓ | G | 2 | | 5 | | 1X | | ✓ | | OK | | ✓ |
| R | 112574 | JC1106-2 | ✓ | G | 2 | | 5 | | 1X | | ✓ | | OK | | ✓ |
| R | 112575 | JC1106-1 | ✓ | G | 2 | | 5 | | 1X | | ✓ | | OK | | ✓ |
| R | 112576 | JC726-8 | 89228 TCL20+TBA | G | 2 | | 5 | | 1X | | ✓ | | OK | | 5 |
| R | 112577 | JC1082-3 | 89462 TCL20+TBA | G | 1 | | 10/50 | | 5X | | ✓ | | OK | /DL 50X | ✓ |
| R | 112578 | JC726-9 | 89228 TCL20+TBA | G | 2 | | 5 | | 1X | | ✓ | | OK | | ✓ |
| R | 112579 | JC726-2 | ✓ | G | 2 | | 5 | | 1X | | ✓ | | OK | | ✓ |

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

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Rev. Date: 2/14/2007

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7.7.4 7

ACCUTEST.

# VOLATILE ANALYSIS LOG

Batch ID: V3D4824

Print Analyst Name: Ximena

Date: 8/12/15

Analyst Signature: [signature]

Columns: ZB624 (60mx0.25mm x1.4um)

Method V8260C

Initial Cal. Method M3D4810

| Standard Data | | |
|---|---|---|
| Lot # | Description | Conc. |
| | | |
| | | |
| | | |
| | | |
| | | |

| Standard Data | | |
|---|---|---|
| Lot # | Description | Conc. |
| | | |
| | | |
| See pg 297 | | |
| | | |
| | | |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

Supervisor Signature: [signature] Date: 8/13/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3D112580 | JC1106-9 ms | 89468 SL | G W | 2 | | 5 | | 1X | | W | W | OC | | ✓ |
| | 112581 | JC1106-9 msd | ✓ | G W | 2 | | 5 | | 1X | | W | W | OC | | ✓ |
| DL | 112582 | JC1082-8 16 | 89462 TCL20+TBA | G W | 1 | | 1/50 | | 50X | | W | W | OC | | ✓ |
| | 112583 | JC1182-3 | 89517 PPTCL42+ | W T B | 2 | | 5 | | 1X | | W | W | OC | | ✓ |
| | 112584 | JC1177-1 | HPXYL, NAP OXYL, TBA | E F | 5 | | 5 | | 1X | | W | W | OC | | 5 |
| | 112585 | JC1182-2 | ✓ | I N | 7 | | 5 | | 1X | | W | W | RR | /RR1X c/o | ✓ |
| | 112586 | JC1182-1 | ✓ | E F | 6 | | 5 | | 1X | | W | W | RR | /RR1X c/o 7:46PM | ✓ |
| | 112587 | bfb | | | | | | | | | | | OC | | |
| | 112588 | CC4810-50 | | | | | 5 | | | | W | W | OC | 25 ml Std A B C Acr/50 ml 16↑ 52, 62, 76, 133↑ | |
| | 112589 | CC4810-50 | | | | | 5 | | | | W | W | OC | | |
| | 112590A | mb2 | | | | | 5 | | | | | | OC | | |
| | 112591 | JC1006-2 | 89431 NJTCL20+ | G W | 1 | | 5 | | 1X | | W | W | OC | | ✓ |
| | 112592 | JC1006-1 | TBA ✓ | G W | 2 | | 5 | | 1X | | W | W | OC | | ✓ |
| | 112593 | JC1080-2 | 89461 TCL20+TBA | G W | 1 | | 5 | | 1X | | W | W | OC | | ✓ |
| | 112594 | JC1080-1 | ✓ | G W | 1 | | 5 | | 1X | | W | W | OC | | ✓ |
| | 112595 | JC1082-2 | 89462 TCL20+ | G W | 1 | | 5 | | 1X | | W | W | OC | | ✓ |
| | 112596 | JC1082-1 | TBA ✓ | G W | 1 | | 5 | | 1X | | W | W | OC | | ✓ |
| | 112597 | JC1080-3 | 89461 TCL20+TBA | G W | 1 | | 5 | | 1X | | W | W | OC | | ✓ |

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result. [signature] 8/13/15
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

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LABORATORIES

08/24/15

# Technical Report for

## United Technologies Corporation

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

60339110 PO#59048ACM

Accutest Job Number: JC1107

Sampling Dates: 08/06/15 - 08/07/15

Report to:

AECOM, INC.
27755 Diehl Road Suite 100
Warrenville, IL 60555
peter.hollatz@aecom.com

ATTN: Peter Hollatz

Total number of pages in report: **215**

NELAP ACCREDITED LABORATORY TNI

Nancy L. Cole
Nancy Cole
Laboratory Director

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Client Service contact: Marie Meidhof 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, DE, FL, IL, IN, KS, KY, LA, MA, MD, MI, MT, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TN, TX, VA, WV, DoD ELAP (L-A-B L2248)

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# Sample Summary

United Technologies Corporation

**Job No:** JC1107

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM

| Sample Number | Collected Date | Time By | Received | Matrix Code | Matrix Type | Client Sample ID |
|---|---|---|---|---|---|---|
| JC1107-1 | 08/06/15 | 12:10 AH | 08/08/15 | AQ | Ground Water | HSSER-RAMW01-080615 |
| JC1107-2 | 08/06/15 | 11:05 AH | 08/08/15 | AQ | Field Blank Water | HSSER-FBLK02-080615 |
| JC1107-3 | 08/06/15 | 13:20 AH | 08/08/15 | AQ | Ground Water | HSSER-RAMW02-080615 |
| JC1107-3D | 08/06/15 | 13:20 AH | 08/08/15 | AQ | Water Dup/MSD | HSSER-MSD02-080615 |
| JC1107-3S | 08/06/15 | 13:20 AH | 08/08/15 | AQ | Water Matrix Spike | HSSER-MS02-080615 |
| JC1107-4 | 08/06/15 | 14:50 AH | 08/08/15 | AQ | Ground Water | HSSER-RAMW03-080615 |
| JC1107-5 | 08/06/15 | 16:10 AH | 08/08/15 | AQ | Ground Water | HSSER-RAMW08-080615 |
| JC1107-6 | 08/06/15 | 00:00 AH | 08/08/15 | AQ | Ground Water | HSSER-DUP02-080615 |
| JC1107-7 | 08/07/15 | 08:10 AH | 08/08/15 | AQ | Ground Water | HSSER-RAMW07-080715 |
| JC1107-8 | 08/07/15 | 09:35 AH | 08/08/15 | AQ | Ground Water | HSSER-RAMW06-080715 |
| JC1107-9 | 08/07/15 | 10:55 AH | 08/08/15 | AQ | Ground Water | HSSER-RAMW05-080715 |
| JC1107-10 | 08/07/15 | 11:55 AH | 08/08/15 | AQ | Ground Water | HSSER-RAMW04-080715 |
| JC1107-11 | 08/07/15 | 11:15 AH | 08/08/15 | AQ | Equipment Blank | HSSER-EBLK02-080715 |

# Sample Summary
(continued)

United Technologies Corporation

**Job No:** JC1107

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM

| Sample Number | Collected Date | Time By | Received | Matrix Code | Type | Client Sample ID |
|---|---|---|---|---|---|---|
| JC1107-12 | 08/07/15 | 11:15 AH | 08/08/15 | AQ | Trip Blank Water | HSSER-TRIP02-080415 |

ACCUTEST LABORATORIES

# CASE NARRATIVE / CONFORMANCE SUMMARY

| | | | |
|---|---|---|---|
| **Client:** | United Technologies Corporation | **Job No** | JC1107 |
| **Site:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | **Report Date** | 8/24/2015 11:09:50 A |

On 08/08/2015, 9 Sample(s), 1 Trip Blank(s) and 1 Field Blank(s) and 1 Equipment Blank(s) were received at Accutest Laboratories at a maximum corrected temperature of 1.9 C. Samples were intact and chemically preserved, unless noted below. An Accutest Job Number of JC1107 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

## Volatiles by GCMS By Method SW846 8260C

**Matrix:** AQ **Batch ID:** V4B2296

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC1107-3MS, JC1107-3MSD were used as the QC samples indicated.

**Matrix:** AQ **Batch ID:** V4B2297

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JC869-3DUP, JC869-4MS were used as the QC samples indicated.

Accutest certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting Accutest's Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

Accutest Laboratories is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by Accutest Laboratories indicated via signature on the report cover

# Summary of Hits



**Job Number:** JC1107
**Account:** United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Collected:** 08/06/15 thru 08/07/15

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| **JC1107-1** | **HSSER-RAMW01-080615** | | | | | |
| 1,1-Dichloroethane | | 0.0037 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.00070 J | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0052 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0039 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| 1,1,2-Trichloroethane | | 0.00022 J | 0.0010 | 0.00021 | mg/l | SW846 8260C |
| Trichloroethene | | 0.0012 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1107-2** | **HSSER-FBLK02-080615** | | | | | |
| Toluene | | 0.00033 J | 0.0010 | 0.00016 | mg/l | SW846 8260C |
| **JC1107-3** | **HSSER-RAMW02-080615** | | | | | |
| 1,1-Dichloroethane | | 0.0029 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0025 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0032 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.00041 J | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1107-4** | **HSSER-RAMW03-080615** | | | | | |
| 1,1-Dichloroethane | | 0.00039 J | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0011 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.00043 J | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.00043 J | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1107-5** | **HSSER-RAMW08-080615** | | | | | |
| 1,1-Dichloroethane | | 0.00025 J | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| **JC1107-6** | **HSSER-DUP02-080615** | | | | | |
| 1,1-Dichloroethane | | 0.00041 J | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0011 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.00041 J | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.00044 J | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1107-7** | **HSSER-RAMW07-080715** | | | | | |
| 1,1-Dichloroethane | | 0.0072 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| 1,1-Dichloroethene | | 0.0069 | 0.0010 | 0.00051 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.0016 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| Tetrachloroethene | | 0.0015 | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0762 | 0.0010 | 0.00025 | mg/l | SW846 8260C |

# Summary of Hits

**Job Number:** JC1107
**Account:** United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Collected:** 08/06/15 thru 08/07/15

| Lab Sample ID / Analyte | Client Sample ID | Result/ Qual | RL | MDL | Units | Method |
|---|---|---|---|---|---|---|
| Trichloroethene | | 0.0015 | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1107-8** | **HSSER-RAMW06-080715** | | | | | |
| 1,1-Dichloroethane | | 0.0026 | 0.0010 | 0.00017 | mg/l | SW846 8260C |
| 1,1-Dichloroethene | | 0.0056 | 0.0010 | 0.00051 | mg/l | SW846 8260C |
| cis-1,2-Dichloroethene | | 0.0068 | 0.0010 | 0.00027 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.0596 | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| Trichloroethene | | 0.00061 J | 0.0010 | 0.00022 | mg/l | SW846 8260C |
| **JC1107-9** | **HSSER-RAMW05-080715** | | | | | |
| 1,1,1-Trichloroethane | | 0.00052 J | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| **JC1107-10** | **HSSER-RAMW04-080715** | | | | | |
| Tetrachloroethene | | 0.00043 J | 0.0010 | 0.00040 | mg/l | SW846 8260C |
| 1,1,1-Trichloroethane | | 0.00039 J | 0.0010 | 0.00025 | mg/l | SW846 8260C |
| **JC1107-11** | **HSSER-EBLK02-080715** | | | | | |
| Toluene | | 0.00032 J | 0.0010 | 0.00016 | mg/l | SW846 8260C |
| **JC1107-12** | **HSSER-TRIP02-080415** | | | | | |

No hits reported in this sample.

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Sample Results

Report of Analysis

Raw Data: 4B54425.D

Accutest Laboratories

# Report of Analysis



4.1

| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-RAMW01-080615 | | |
| **Lab Sample ID:** | JC1107-1 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54425.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0037 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.00070 | 0.0010 | 0.00027 | mg/l | J |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0052 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0039 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | 0.00022 | 0.0010 | 0.00021 | mg/l | J |
| 79-01-6 | Trichloroethene | 0.0012 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 105% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-FBLK02-080615 | | |
| **Lab Sample ID:** | JC1107-2 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Field Blank Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54426.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | 0.00033 | 0.0010 | 0.00016 | mg/l | J |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: 4B54416.D

Accutest Laboratories

# Report of Analysis



4.3 4

| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-RAMW02-080615 | | |
| **Lab Sample ID:** | JC1107-3 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54416.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0029 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0025 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0032 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.00041 | 0.0010 | 0.00022 | mg/l | J |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 98% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-RAMW03-080615 | | |
| **Lab Sample ID:** | JC1107-4 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54427.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.00039 | 0.0010 | 0.00017 | mg/l | J |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0011 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.00043 | 0.0010 | 0.00025 | mg/l | J |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.00043 | 0.0010 | 0.00022 | mg/l | J |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 93% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | | 78-117% |

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-RAMW08-080615 | | |
| **Lab Sample ID:** | JC1107-5 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54428.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.00025 | 0.0010 | 0.00017 | mg/l | J |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 98% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-DUP02-080615 | | |
| **Lab Sample ID:** | JC1107-6 | **Date Sampled:** | 08/06/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54429.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.00041 | 0.0010 | 0.00017 | mg/l | J |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0011 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.00041 | 0.0010 | 0.00025 | mg/l | J |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.00044 | 0.0010 | 0.00022 | mg/l | J |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 98% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 103% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: 4B54451.D

Accutest Laboratories

# Report of Analysis



4.7

| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-RAMW07-080715 | | |
| **Lab Sample ID:** | JC1107-7 | **Date Sampled:** | 08/07/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54451.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0072 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | 0.0069 | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.0016 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.0015 | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0762 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.0015 | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 98% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-RAMW06-080715 | | |
| **Lab Sample ID:** | JC1107-8 | **Date Sampled:** | 08/07/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54450.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 0.0026 | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | 0.0056 | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | 0.0068 | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.0596 | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | 0.00061 | 0.0010 | 0.00022 | mg/l | J |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 91% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 98% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 107% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis



| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-RAMW05-080715 | | |
| **Lab Sample ID:** | JC1107-9 | **Date Sampled:** | 08/07/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54452.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.00052 | 0.0010 | 0.00025 | mg/l | J |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 97% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 93% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 98% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 106% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-RAMW04-080715 | | |
| **Lab Sample ID:** | JC1107-10 | **Date Sampled:** | 08/07/15 |
| **Matrix:** | AQ - Ground Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54453.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | 0.00043 | 0.0010 | 0.00040 | mg/l | J |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | 0.00039 | 0.0010 | 0.00025 | mg/l | J |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 98% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 105% | | 78-117% |

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

# Report of Analysis





| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-EBLK02-080715 | | |
| **Lab Sample ID:** | JC1107-11 | **Date Sampled:** | 08/07/15 |
| **Matrix:** | AQ - Equipment Blank | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54423.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | 0.00032 | 0.0010 | 0.00016 | mg/l | J |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 96% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 91% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Raw Data: 4B54424.D

Accutest Laboratories

# Report of Analysis



4.12

| | | | |
|---|---|---|---|
| **Client Sample ID:** | HSSER-TRIP02-080415 | | |
| **Lab Sample ID:** | JC1107-12 | **Date Sampled:** | 08/07/15 |
| **Matrix:** | AQ - Trip Blank Water | **Date Received:** | 08/08/15 |
| **Method:** | SW846 8260C | **Percent Solids:** | n/a |
| **Project:** | ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL | | |

| | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| Run #1 | 4B54424.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| Run #2 | | | | | | | |

| | Purge Volume |
|---|---|
| Run #1 | 5.0 ml |
| Run #2 | |

**VOA Special List**

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 0.0010 | 0.00017 | mg/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 0.0010 | 0.00018 | mg/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.0010 | 0.00051 | mg/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.0010 | 0.00027 | mg/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.0010 | 0.00065 | mg/l | |
| 100-41-4 | Ethylbenzene | ND | 0.0010 | 0.00027 | mg/l | |
| 75-09-2 | Methylene chloride | ND | 0.0020 | 0.00073 | mg/l | |
| 127-18-4 | Tetrachloroethene | ND | 0.0010 | 0.00040 | mg/l | |
| 108-88-3 | Toluene | ND | 0.0010 | 0.00016 | mg/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 0.0010 | 0.00025 | mg/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 0.0010 | 0.00021 | mg/l | |
| 79-01-6 | Trichloroethene | ND | 0.0010 | 0.00022 | mg/l | |
| 75-01-4 | Vinyl chloride | ND | 0.0010 | 0.00015 | mg/l | |

| CAS No. | Surrogate Recoveries | Run# 1 | Run# 2 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 96% | | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 105% | | 78-117% |

ND = Not detected MDL = Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range
J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

New Jersey ACCUTEST LABORATORIES

# Misc. Forms

## Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Sample Tracking Chronicle
- Internal Chain of Custody

GW
WTB

ACCUTEST LABORATORIES

# CHAIN OF CUSTODY

PAGE 1 OF 2

2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # 6349 4061 6410
Bottle Order Control #
Accutest Quote #
Accutest Job # JC1107

**Client / Reporting Information**

Company Name: AECOM
Street Address: 27755 Diehl Rd Suite 100
City / State / Zip: Warrenville IL 60555
Project Contact / E-mail: Peter Hollatz Peter.Hollatz@aecom.com
Phone #: 630-839-5386 Fax #: 630-836-1711
Sampler(s) Name(s): Allan Hollatz Phone #: 630-836-1700

**Project Information**

Project Name: UTAS Plants 1/2 Facilities
Street:
City / State: Rockford IL
Project #: 60339110
Client Purchase Order #: 59048 ACM
Project Manager: Peter Hollatz

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

**Requested Analysis (see TEST CODE sheet)**

**Matrix Codes**: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

| Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | VOC | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -1 | HSSER-RAMW01-080615 | | 8-6-15 | 1210 | AH | GW | 3 | X | | | | | | | | X | V859 |
| -2 | HSSER-FBLK02-080615 | | 8-6-15 | 1105 | | | 3 | X | | | | | | | | X | |
| | HSSER-RAMW02-080615 | | 8-6-15 | 1320 | | | 3 | X | | | | | | | | X | |
| -3 | HSSER-MSD02-080615 | | 8-6-15 | 1320 | | | 3 | X | | | | | | | | X | |
| | HSSER-MSD02-080615 | | 8-6-15 | 1320 | | | 3 | X | | | | | | | | X | |
| -4 | HSSER-RAMW03-080615 | | 8-6-15 | 1450 | | | 3 | X | | | | | | | | X | |
| -5 | HSSER-RAMW08-080615 | | 8-6-15 | 1610 | | | 3 | X | | | | | | | | X | |
| -6 | HSSER-DUP02-080615 | | 8-6-15 | 0000 | | | 3 | X | | | | | | | | X | |
| -7 | HSSER-RAMW07-080715 | | 8-7-15 | 0810 | | | 3 | X | | | | | | | | X | |
| -8 | HSSER-RAMW06-080715 | | 8-7-15 | 0935 | | | 3 | X | | | | | | | | X | |
| -9 | HSSER-RAMW05-080715 | | 8-7-15 | 1055 | | | 3 | X | | | | | | | | X | |
| -10 | HSSER-RAMW04-080715 | | 8-7-15 | 1155 | | | 3 | X | | | | | | | | X | |

INITIAL ASSESSMENT 3A Dom
LABEL VERIFICATION JM

**Turnaround Time (Business days)**

- [ ] Std. 10 Business Days
- [ ] 5 Day RUSH
- [ ] 3 Day RUSH
- [ ] 2 Day RUSH
- [ ] 1 Day RUSH
- [ ] other

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

**Data Deliverable Information**

- [ ] Commercial "A" (Level 1)
- [ ] Commercial "B" (Level 2)
- [ ] FULLT1 (Level 3+4)
- [ ] NJ Reduced
- [ ] Commercial "C"
- [ ] NJ Data of Known Quality Protocol Reporting
- [ ] NYASP Category A
- [ ] NYASP Category B
- [ ] State Forms
- [ ] EDD Format
- [ ] Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

**Comments / Special Instructions**

List of 13 VOC
Level 1V Data

Sample Custody must be documented below each time samples change possession, including courier delivery.

| Relinquished by Sampler | Date Time | Received By | Relinquished By | Date Time | Received By |
|---|---|---|---|---|---|
| 1 Allan Hollatz | 8-7-15 1800 | 1 FX | 2 FX | 8/8/15 10:00 | 2 [signature] |
| 3 | | 3 | 4 | | 4 |
| 5 | | 5 | | | |

Custody Seal # ☐ Intact ☐ Not intact
Preserved where applicable ☐
On Ice ☑
Cooler Temp 2.2°C - ip

5.1

JC1107: Chain of Custody
Page 1 of 3

GW
WTB

ACCUTEST LABORATORIES

# CHAIN OF CUSTODY



2235 Route 130, Dayton, NJ 08810
TEL 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # 634994061641 0
Accutest Quote #
Bottle Order Control #
Accutest Job # JC1107

**Client / Reporting Information**

Company Name: AECOM
Street Address: 27755 Diehl Rd Suite 100
City: Warrenville State: IL Zip: 60555
Project Contact: Peter Hollatz E-mail: Peter.Hollatz@aecom.com
Phone #: 6308395386 Fax #: 6308361711
Sampler(s) Name(s): Allen Hollatz Phone #: 630-836-1700

**Project Information**

Project Name: UTAS Plants 1/2 Facility
Street:
City: Rockford State: IL
Project #: 60339110
Client Purchase Order #: 59048 ACM
Project Manager: Peter Hollatz

Billing Information (if different from Report to)
Company Name:
Street Address:
City State Zip:
Attention:

**Requested Analysis (see TEST CODE sheet)**: VOC *

**Matrix Codes**: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

| Accutest Sample # | Field ID / Point of Collection | MEOH/OI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | OI Water | MEOH | ENCORE | VOC * | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| -11 | HSSER-EBLK02-080715 | | 8-7-15 | 1115 | AH | GW | 3 | X | | | | | | | | X | V859 |
| -12 | HSSER-Trip02-080415 | | 8-4-15 | — | | | 2 | X | | | | | | | | X | |

**Turnaround Time (Business days)**
Approved By (Accutest PM): / Date:
- Std. 10 Business Days
- 5 Day RUSH
- 3 Day RUSH
- 2 Day RUSH
- 1 Day RUSH
- other

Emergency & Rush T/A data available VIA Lablink

**Data Deliverable Information**
- Commercial "A" (Level 1)
- Commercial "B" (Level 2)
- FULLT1 (Level 3+4)
- NJ Reduced
- Commercial "C"
- NJ Data of Known Quality Protocol Reporting
- NYASP Category A
- NYASP Category B
- State Forms
- EDD Format
- Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

**Comments / Special Instructions**
*List of 13 VOC
Level IV Data.

Sample Custody must be documented below each time samples change possession, including courier delivery.

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 Allen Hollatz | 8-7-15 1800 | 1 FX | 2 FX | 8/8/15 10:00 | 2 |
| Relinquished by Sampler: 3 | Date Time: | Received By: 3 | Relinquished By: 4 | Date Time: | Received By: 4 |
| Relinquished by: 5 | Date Time: | Received By: 5 | Custody Seal # | ☐ Intact ☐ Not intact | Preserved where applicable ☐ On Ice ☑ Cooler Temp 22°C - SP |

5.1

JC1107: Chain of Custody
Page 2 of 3

ACCUTEST LABORATORIES

# Accutest Laboratories Sample Receipt Summary

**Accutest Job Number:** JC1107 **Client:** **Project:**

**Date / Time Received:** 8/8/2015 10:00:00 AM **Delivery Method:** **Airbill #'s:**

Cooler Temps (Raw Measured) °C: Cooler 1: (2.2);

Cooler Temps (Corrected) °C: Cooler 1: (1.9);

| Cooler Security | Y | N | | Y | N |
|---|---|---|---|---|---|
| 1. Custody Seals Present: | ☑ | ☐ | 3. COC Present: | ☑ | ☐ |
| 2. Custody Seals Intact: | ☑ | ☐ | 4. Smpl Dates/Time OK | ☑ | ☐ |

| Cooler Temperature | Y | N |
|---|---|---|
| 1. Temp criteria achieved: | ☑ | ☐ |
| 2. Cooler temp verification: | IR Gun | |
| 3. Cooler media: | Ice (Bag) | |
| 4. No. Coolers: | 1 | |

| Quality Control Preservation | Y | N | N/A |
|---|---|---|---|
| 1. Trip Blank present / cooler: | ☑ | ☐ | ☐ |
| 2. Trip Blank listed on COC: | ☑ | ☐ | ☐ |
| 3. Samples preserved properly: | ☑ | ☐ | |
| 4. VOCs headspace free: | ☑ | ☐ | ☐ |

| Sample Integrity - Documentation | Y | N |
|---|---|---|
| 1. Sample labels present on bottles: | ☑ | ☐ |
| 2. Container labeling complete: | ☑ | ☐ |
| 3. Sample container label / COC agree: | ☑ | ☐ |

| Sample Integrity - Condition | Y | N |
|---|---|---|
| 1. Sample recvd within HT: | ☑ | ☐ |
| 2. All containers accounted for: | ☑ | ☐ |
| 3. Condition of sample: | Intact | |

| Sample Integrity - Instructions | Y | N | N/A |
|---|---|---|---|
| 1. Analysis requested is clear: | ☑ | ☐ | |
| 2. Bottles received for unspecified tests | ☐ | ☑ | |
| 3. Sufficient volume recvd for analysis: | ☑ | ☐ | |
| 4. Compositing instructions clear: | ☐ | ☐ | ☑ |
| 5. Filtering instructions clear: | ☐ | ☐ | ☑ |

Comments

Accutest Laboratories
V:732.329.0200

2235 US Highway 130
F: 732 329.3499

Dayton, New Jersey
www/accutest.com

5.1

**JC1107: Chain of Custody**
**Page 3 of 3**

# Internal Sample Tracking Chronicle

United Technologies Corporation

**Job No:** JC1107

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM

5.2

5

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JC1107-1 Collected: 06-AUG-15 12:10 By: AH Received: 08-AUG-15 By: DG HSSER-RAMW01-080615 | | | | | | |
| JC1107-1 | SW846 8260C | 12-AUG-15 18:46 | TP | | | V8260SL |
| JC1107-2 Collected: 06-AUG-15 11:05 By: AH Received: 08-AUG-15 By: DG HSSER-FBLK02-080615 | | | | | | |
| JC1107-2 | SW846 8260C | 12-AUG-15 19:14 | TP | | | V8260SL |
| JC1107-3 Collected: 06-AUG-15 13:20 By: AH Received: 08-AUG-15 By: DG HSSER-RAMW02-080615 | | | | | | |
| JC1107-3 | SW846 8260C | 12-AUG-15 14:35 | TP | | | V8260SL |
| JC1107-4 Collected: 06-AUG-15 14:50 By: AH Received: 08-AUG-15 By: DG HSSER-RAMW03-080615 | | | | | | |
| JC1107-4 | SW846 8260C | 12-AUG-15 19:42 | TP | | | V8260SL |
| JC1107-5 Collected: 06-AUG-15 16:10 By: AH Received: 08-AUG-15 By: DG HSSER-RAMW08-080615 | | | | | | |
| JC1107-5 | SW846 8260C | 12-AUG-15 20:10 | TP | | | V8260SL |
| JC1107-6 Collected: 06-AUG-15 00:00 By: AH Received: 08-AUG-15 By: DG HSSER-DUP02-080615 | | | | | | |
| JC1107-6 | SW846 8260C | 12-AUG-15 20:38 | TP | | | V8260SL |
| JC1107-7 Collected: 07-AUG-15 08:10 By: AH Received: 08-AUG-15 By: DG HSSER-RAMW07-080715 | | | | | | |
| JC1107-7 | SW846 8260C | 13-AUG-15 06:51 | TP | | | V8260SL |
| JC1107-8 Collected: 07-AUG-15 09:35 By: AH Received: 08-AUG-15 By: DG HSSER-RAMW06-080715 | | | | | | |
| JC1107-8 | SW846 8260C | 13-AUG-15 06:23 | TP | | | V8260SL |

# Internal Sample Tracking Chronicle

United Technologies Corporation

**Job No:** JC1107

ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
Project No: 60339110 PO#59048ACM

5.2 5

| Sample Number | Method | Analyzed | By | Prepped | By | Test Codes |
|---|---|---|---|---|---|---|
| JC1107-9 Collected: 07-AUG-15 10:55 By: AH Received: 08-AUG-15 By: DG<br>HSSER-RAMW05-080715 | | | | | | |
| JC1107-9 | SW846 8260C | 13-AUG-15 07:19 | TP | | | V8260SL |
| JC1107-10 Collected: 07-AUG-15 11:55 By: AH Received: 08-AUG-15 By: DG<br>HSSER-RAMW04-080715 | | | | | | |
| JC1107-10 | SW846 8260C | 13-AUG-15 07:48 | TP | | | V8260SL |
| JC1107-11 Collected: 07-AUG-15 11:15 By: AH Received: 08-AUG-15 By: DG<br>HSSER-EBLK02-080715 | | | | | | |
| JC1107-11 | SW846 8260C | 12-AUG-15 17:51 | TP | | | V8260SL |
| JC1107-12 Collected: 07-AUG-15 11:15 By: AH Received: 08-AUG-15 By: DG<br>HSSER-TRIP02-080415 | | | | | | |
| JC1107-12 | SW846 8260C | 12-AUG-15 18:18 | TP | | | V8260SL |

# Accutest Internal Chain of Custody



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Received:** 08/08/15

| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JC1107-1.1 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-1.1 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-1.1 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-1.1 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-2.1 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-2.1 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-2.1 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-2.1 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-3.3 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-3.3 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-3.3 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-3.3 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-4.1 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-4.1 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-4.1 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-4.1 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-5.2 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-5.2 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-5.2 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-5.2 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-6.2 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-6.2 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-6.2 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-6.2 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-7.2 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-7.2 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-7.2 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-7.2 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-8.2 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-8.2 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-8.2 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-8.2 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-9.2 | Secured Storage | Toan Pham | 08/12/15 14:09 | Retrieve from Storage |
| JC1107-9.2 | Toan Pham | GCMS4B | 08/12/15 14:09 | Load on Instrument |
| JC1107-9.2 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-9.2 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |

5.3

# Accutest Internal Chain of Custody



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Received:** 08/08/15

| Sample.Bottle Number | Transfer FROM | Transfer TO | Date/Time | Reason |
|---|---|---|---|---|
| JC1107-10.2 | Secured Storage | Toan Pham | 08/12/15 14:09 | Retrieve from Storage |
| JC1107-10.2 | Toan Pham | GCMS4B | 08/12/15 14:09 | Load on Instrument |
| JC1107-10.2 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-10.2 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-11.2 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-11.2 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-11.2 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-11.2 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |
| JC1107-12.2 | Secured Storage | Toan Pham | 08/12/15 12:13 | Retrieve from Storage |
| JC1107-12.2 | Toan Pham | GCMS4B | 08/12/15 12:13 | Load on Instrument |
| JC1107-12.2 | GCMS4B | Zobia Hamid | 08/13/15 09:59 | Unload from Instrument |
| JC1107-12.2 | Zobia Hamid | Secured Storage | 08/13/15 09:59 | Return to Storage |

5.3

New Jersey
ACCUTEST
LABORATORIES

# GC/MS Volatiles

## QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

# Method Blank Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V4B2296-MB | 4B54409.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1107-1, JC1107-2, JC1107-3, JC1107-4, JC1107-5, JC1107-6, JC1107-11, JC1107-12

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.18 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.51 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.27 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.65 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.73 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.40 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.16 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.21 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.22 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.15 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 98% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | 73-122% |
| 2037-26-5 | Toluene-D8 | 98% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 105% | 78-117% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

6.1.1

# Method Blank Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V4B2297-MB | 4B54433.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2297 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1107-7, JC1107-8, JC1107-9, JC1107-10

6.1.2

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.18 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.51 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.27 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.65 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.73 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.40 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.16 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.21 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.22 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.15 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 98% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 93% | 73-122% |
| 2037-26-5 | Toluene-D8 | 98% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 104% | 78-117% |

| CAS No. | Tentatively Identified Compounds | R.T. | Est. Conc. | Units | Q |
|---|---|---|---|---|---|
| | Total TIC, Volatile | | 0 | ug/l | |

# Method Blank Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V4B2297-MB2 | 4B54457.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC869-3DUP, JC869-4MS

6.1.3

| CAS No. | Compound | Result | RL | MDL | Units | Q |
|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | 1.0 | 0.17 | ug/l | |
| 107-06-2 | 1,2-Dichloroethane | ND | 1.0 | 0.18 | ug/l | |
| 75-35-4 | 1,1-Dichloroethene | ND | 1.0 | 0.51 | ug/l | |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 1.0 | 0.27 | ug/l | |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 1.0 | 0.65 | ug/l | |
| 100-41-4 | Ethylbenzene | ND | 1.0 | 0.27 | ug/l | |
| 75-09-2 | Methylene chloride | ND | 2.0 | 0.73 | ug/l | |
| 127-18-4 | Tetrachloroethene | ND | 1.0 | 0.40 | ug/l | |
| 108-88-3 | Toluene | ND | 1.0 | 0.16 | ug/l | |
| 71-55-6 | 1,1,1-Trichloroethane | ND | 1.0 | 0.25 | ug/l | |
| 79-00-5 | 1,1,2-Trichloroethane | ND | 1.0 | 0.21 | ug/l | |
| 79-01-6 | Trichloroethene | ND | 1.0 | 0.22 | ug/l | |
| 75-01-4 | Vinyl chloride | ND | 1.0 | 0.15 | ug/l | |

| CAS No. | Surrogate Recoveries | | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 96% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 106% | 78-117% |

# Blank Spike Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V4B2296-BS | 4B54410.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1107-1, JC1107-2, JC1107-3, JC1107-4, JC1107-5, JC1107-6, JC1107-11, JC1107-12

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 50 | 46.7 | 93 | 80-125 |
| 107-06-2 | 1,2-Dichloroethane | 50 | 49.7 | 99 | 78-131 |
| 75-35-4 | 1,1-Dichloroethene | 50 | 51.1 | 102 | 73-127 |
| 156-59-2 | cis-1,2-Dichloroethene | 50 | 47.9 | 96 | 77-118 |
| 156-60-5 | trans-1,2-Dichloroethene | 50 | 45.4 | 91 | 75-118 |
| 100-41-4 | Ethylbenzene | 50 | 49.9 | 100 | 80-118 |
| 75-09-2 | Methylene chloride | 50 | 49.7 | 99 | 75-122 |
| 127-18-4 | Tetrachloroethene | 50 | 50.6 | 101 | 69-138 |
| 108-88-3 | Toluene | 50 | 48.6 | 97 | 80-122 |
| 71-55-6 | 1,1,1-Trichloroethane | 50 | 49.5 | 99 | 80-131 |
| 79-00-5 | 1,1,2-Trichloroethane | 50 | 47.9 | 96 | 78-122 |
| 79-01-6 | Trichloroethene | 50 | 50.9 | 102 | 83-122 |
| 75-01-4 | Vinyl chloride | 50 | 43.8 | 88 | 57-138 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 100% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | 78-117% |

* = Outside of Control Limits.

6.2.1

# Blank Spike Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| V4B2297-BS | 4B54434.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2297 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1107-7, JC1107-8, JC1107-9, JC1107-10

| CAS No. | Compound | Spike ug/l | BSP ug/l | BSP % | Limits |
|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 50 | 45.7 | 91 | 80-125 |
| 107-06-2 | 1,2-Dichloroethane | 50 | 50.1 | 100 | 78-131 |
| 75-35-4 | 1,1-Dichloroethene | 50 | 48.2 | 96 | 73-127 |
| 156-59-2 | cis-1,2-Dichloroethene | 50 | 47.2 | 94 | 77-118 |
| 156-60-5 | trans-1,2-Dichloroethene | 50 | 46.0 | 92 | 75-118 |
| 100-41-4 | Ethylbenzene | 50 | 49.1 | 98 | 80-118 |
| 75-09-2 | Methylene chloride | 50 | 47.9 | 96 | 75-122 |
| 127-18-4 | Tetrachloroethene | 50 | 50.8 | 102 | 69-138 |
| 108-88-3 | Toluene | 50 | 48.7 | 97 | 80-122 |
| 71-55-6 | 1,1,1-Trichloroethane | 50 | 52.1 | 104 | 80-131 |
| 79-00-5 | 1,1,2-Trichloroethane | 50 | 47.8 | 96 | 78-122 |
| 79-01-6 | Trichloroethene | 50 | 50.4 | 101 | 83-122 |
| 75-01-4 | Vinyl chloride | 50 | 43.1 | 86 | 57-138 |

| CAS No. | Surrogate Recoveries | BSP | Limits |
|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 100% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | 73-122% |
| 2037-26-5 | Toluene-D8 | 100% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 96% | 78-117% |

6.2.2

* = Outside of Control Limits.

Raw Data: 4B54459.D

# Matrix Spike Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| JC869-4MS | 4B54459.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |
| JC869-4 | 4B54442.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |

6.3.1

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1107-7, JC1107-8, JC1107-9, JC1107-10

| CAS No. | Compound | JC869-4 ug/l | Q | Spike ug/l | MS ug/l | MS % | Limits |
|---|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | | 50 | 49.0 | 98 | 60-129 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 50 | 51.9 | 104 | 72-133 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 50 | 54.5 | 109 | 40-137 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 50 | 51.9 | 104 | 57-128 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 50 | 51.8 | 104 | 53-128 |
| 100-41-4 | Ethylbenzene | ND | | 50 | 54.6 | 109 | 38-139 |
| 75-09-2 | Methylene chloride | ND | | 50 | 50.8 | 102 | 63-128 |
| 127-18-4 | Tetrachloroethene | ND | | 50 | 55.0 | 110 | 43-145 |
| 108-88-3 | Toluene | ND | | 50 | 53.2 | 106 | 51-136 |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | 50 | 58.9 | 118 | 51-141 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 50 | 49.1 | 98 | 71-127 |
| 79-01-6 | Trichloroethene | ND | | 50 | 55.1 | 110 | 55-136 |
| 75-01-4 | Vinyl chloride | ND | | 50 | 54.6 | 109 | 34-147 |

| CAS No. | Surrogate Recoveries | MS | JC869-4 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 101% | 98% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 95% | 93% | 73-122% |
| 2037-26-5 | Toluene-D8 | 99% | 99% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 97% | 105% | 78-117% |

* = Outside of Control Limits.

# Matrix Spike/Matrix Spike Duplicate Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| JC1107-3MS | 4B54420.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| JC1107-3MSD | 4B54421.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |
| JC1107-3 | 4B54416.D | 1 | 08/12/15 | TP | n/a | n/a | V4B2296 |

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1107-1, JC1107-2, JC1107-3, JC1107-4, JC1107-5, JC1107-6, JC1107-11, JC1107-12

6.4.1 6

| CAS No. | Compound | JC1107-3 ug/l | Q | Spike ug/l | MS ug/l | MS % | Spike ug/l | MSD ug/l | MSD % | RPD | Limits Rec/RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | 2.9 | | 50 | 50.5 | 95 | 50 | 49.9 | 94 | 1 | 60-129/13 |
| 107-06-2 | 1,2-Dichloroethane | ND | | 50 | 52.3 | 105 | 50 | 51.2 | 102 | 2 | 72-133/12 |
| 75-35-4 | 1,1-Dichloroethene | ND | | 50 | 52.3 | 105 | 50 | 52.1 | 104 | 0 | 40-137/17 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | 50 | 50.4 | 101 | 50 | 50.2 | 100 | 0 | 57-128/13 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | 50 | 49.7 | 99 | 50 | 49.4 | 99 | 1 | 53-128/15 |
| 100-41-4 | Ethylbenzene | ND | | 50 | 53.2 | 106 | 50 | 52.5 | 105 | 1 | 38-139/12 |
| 75-09-2 | Methylene chloride | ND | | 50 | 50.2 | 100 | 50 | 50.0 | 100 | 0 | 63-128/13 |
| 127-18-4 | Tetrachloroethene | 2.5 | | 50 | 54.1 | 103 | 50 | 53.1 | 101 | 2 | 43-145/15 |
| 108-88-3 | Toluene | ND | | 50 | 51.4 | 103 | 50 | 51.0 | 102 | 1 | 51-136/13 |
| 71-55-6 | 1,1,1-Trichloroethane | 3.2 | | 50 | 58.7 | 111 | 50 | 57.3 | 108 | 2 | 51-141/16 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | 50 | 50.4 | 101 | 50 | 50.7 | 101 | 1 | 71-127/12 |
| 79-01-6 | Trichloroethene | 0.41 | J | 50 | 53.6 | 106 | 50 | 52.7 | 105 | 2 | 55-136/14 |
| 75-01-4 | Vinyl chloride | ND | | 50 | 42.2 | 84 | 50 | 42.9 | 86 | 2 | 34-147/17 |

| CAS No. | Surrogate Recoveries | MS | MSD | JC1107-3 | Limits |
|---|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 98% | 99% | 98% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 94% | 94% | 92% | 73-122% |
| 2037-26-5 | Toluene-D8 | 98% | 99% | 99% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 95% | 95% | 104% | 78-117% |

* = Outside of Control Limits.

# Duplicate Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| Sample | File ID | DF | Analyzed | By | Prep Date | Prep Batch | Analytical Batch |
|---|---|---|---|---|---|---|---|
| JC869-3DUP | 4B54458.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |
| JC869-3 | 4B54441.D | 1 | 08/13/15 | TP | n/a | n/a | V4B2297 |

6.5.1

**The QC reported here applies to the following samples:** **Method:** SW846 8260C

JC1107-7, JC1107-8, JC1107-9, JC1107-10

| CAS No. | Compound | JC869-3 ug/l | Q | DUP ug/l | Q | RPD | Limits |
|---|---|---|---|---|---|---|---|
| 75-34-3 | 1,1-Dichloroethane | ND | | ND | | nc | 30 |
| 107-06-2 | 1,2-Dichloroethane | ND | | ND | | nc | 30 |
| 75-35-4 | 1,1-Dichloroethene | ND | | ND | | nc | 30 |
| 156-59-2 | cis-1,2-Dichloroethene | ND | | ND | | nc | 30 |
| 156-60-5 | trans-1,2-Dichloroethene | ND | | ND | | nc | 30 |
| 100-41-4 | Ethylbenzene | ND | | ND | | nc | 30 |
| 75-09-2 | Methylene chloride | ND | | ND | | nc | 30 |
| 127-18-4 | Tetrachloroethene | ND | | ND | | nc | 30 |
| 108-88-3 | Toluene | ND | | ND | | nc | 30 |
| 71-55-6 | 1,1,1-Trichloroethane | ND | | ND | | nc | 30 |
| 79-00-5 | 1,1,2-Trichloroethane | ND | | ND | | nc | 30 |
| 79-01-6 | Trichloroethene | ND | | ND | | nc | 30 |
| 75-01-4 | Vinyl chloride | ND | | ND | | nc | 30 |

| CAS No. | Surrogate Recoveries | DUP | JC869-3 | Limits |
|---|---|---|---|---|
| 1868-53-7 | Dibromofluoromethane | 99% | 98% | 76-120% |
| 17060-07-0 | 1,2-Dichloroethane-D4 | 92% | 93% | 73-122% |
| 2037-26-5 | Toluene-D8 | 97% | 98% | 84-119% |
| 460-00-4 | 4-Bromofluorobenzene | 109% | 104% | 78-117% |

* = Outside of Control Limits.

# Instrument Performance Check (BFB)



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2289-BFB
**Lab File ID:** 4B54241.D
**Instrument ID:** GCMS4B
**Injection Date:** 08/05/15
**Injection Time:** 09:05

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 14.99 - 40.0% of mass 95 | 23821 | 20.4 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 56474 | 48.5 | | Pass |
| 95 | Base peak, 100% relative abundance | 116525 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 7868 | 6.75 | | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.00 | (0.00) [a] | Pass |
| 174 | 50.0 - 120.0% of mass 95 | 116618 | 100.1 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 9749 | 8.37 | (8.36) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 112621 | 96.6 | (96.6) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 7858 | 6.74 | (6.98) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

6.6.1

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| V4B2289-IC2289 | 4B54242.D | 08/05/15 | 09:39 | 00:34 | Initial cal 0.2 |
| V4B2289-IC2289 | 4B54243.D | 08/05/15 | 10:07 | 01:02 | Initial cal 0.5 |
| V4B2289-IC2289 | 4B54244.D | 08/05/15 | 10:35 | 01:30 | Initial cal 1 |
| V4B2289-IC2289 | 4B54245.D | 08/05/15 | 11:03 | 01:58 | Initial cal 2 |
| V4B2289-IC2289 | 4B54246.D | 08/05/15 | 11:31 | 02:26 | Initial cal 5 |
| V4B2289-IC2289 | 4B54247.D | 08/05/15 | 11:59 | 02:54 | Initial cal 10 |
| V4B2289-IC2289 | 4B54248.D | 08/05/15 | 12:27 | 03:22 | Initial cal 20 |
| V4B2289-ICC2289 | 4B54249.D | 08/05/15 | 12:54 | 03:49 | Initial cal 50 |
| V4B2289-IC2289 | 4B54250.D | 08/05/15 | 13:22 | 04:17 | Initial cal 100 |
| V4B2289-IC2289 | 4B54251.D | 08/05/15 | 13:50 | 04:45 | Initial cal 200 |
| V4B2289-ICV2289 | 4B54254.D | 08/05/15 | 15:20 | 06:15 | Initial cal verification 50 |

# Instrument Performance Check (BFB)



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | |
|---|---|---|---|
| **Sample:** | V4B2296-BFB | **Injection Date:** | 08/12/15 |
| **Lab File ID:** | 4B54405.D | **Injection Time:** | 09:13 |
| **Instrument ID:** | GCMS4B | | |

6.6.2

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 14.99 - 40.0% of mass 95 | 18701 | 19.3 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 44842 | 46.4 | | Pass |
| 95 | Base peak, 100% relative abundance | 96672 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 6517 | 6.74 | | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.00 | (0.00) [a] | Pass |
| 174 | 50.0 - 120.0% of mass 95 | 101530 | 105.0 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 8723 | 9.02 | (8.59) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 98101 | 101.5 | (96.6) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 6561 | 6.79 | (6.69) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| V4B2296-CC2289 | 4B54407.D | 08/12/15 | 10:09 | 00:56 | Continuing cal 20 |
| V4B2296-MB | 4B54409.D | 08/12/15 | 11:13 | 02:00 | Method Blank |
| V4B2296-BS | 4B54410.D | 08/12/15 | 11:47 | 02:34 | Blank Spike |
| ZZZZZZ | 4B54413.D | 08/12/15 | 13:10 | 03:57 | (unrelated sample) |
| ZZZZZZ | 4B54414.D | 08/12/15 | 13:38 | 04:25 | (unrelated sample) |
| ZZZZZZ | 4B54415.D | 08/12/15 | 14:06 | 04:53 | (unrelated sample) |
| JC1107-3 | 4B54416.D | 08/12/15 | 14:35 | 05:22 | HSSER-RAMW02-080615 |
| JC1107-3MS | 4B54420.D | 08/12/15 | 16:27 | 07:14 | Matrix Spike |
| JC1107-3MSD | 4B54421.D | 08/12/15 | 16:55 | 07:42 | Matrix Spike Duplicate |
| JC1107-11 | 4B54423.D | 08/12/15 | 17:51 | 08:38 | HSSER-EBLK02-080715 |
| JC1107-12 | 4B54424.D | 08/12/15 | 18:18 | 09:05 | HSSER-TRIP02-080415 |
| JC1107-1 | 4B54425.D | 08/12/15 | 18:46 | 09:33 | HSSER-RAMW01-080615 |
| JC1107-2 | 4B54426.D | 08/12/15 | 19:14 | 10:01 | HSSER-FBLK02-080615 |
| JC1107-4 | 4B54427.D | 08/12/15 | 19:42 | 10:29 | HSSER-RAMW03-080615 |
| JC1107-5 | 4B54428.D | 08/12/15 | 20:10 | 10:57 | HSSER-RAMW08-080615 |
| JC1107-6 | 4B54429.D | 08/12/15 | 20:38 | 11:25 | HSSER-DUP02-080615 |

# Instrument Performance Check (BFB)



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2297-BFB
**Lab File ID:** 4B54430.D
**Instrument ID:** GCMS4B
**Injection Date:** 08/12/15
**Injection Time:** 21:06

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 14.99 - 40.0% of mass 95 | 18824 | 19.0 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 47162 | 47.6 | | Pass |
| 95 | Base peak, 100% relative abundance | 98989 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 6769 | 6.84 | | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.00 | (0.00) [a] | Pass |
| 174 | 50.0 - 120.0% of mass 95 | 102565 | 103.6 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 8410 | 8.50 | (8.20) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 100890 | 101.9 | (98.4) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 6717 | 6.79 | (6.66) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| V4B2297-CC2289 | 4B54431.D | 08/12/15 | 21:35 | 00:29 | Continuing cal 50 |
| V4B2297-MB | 4B54433.D | 08/12/15 | 22:30 | 01:24 | Method Blank |
| V4B2297-BS | 4B54434.D | 08/12/15 | 22:58 | 01:52 | Blank Spike |
| ZZZZZZ | 4B54438.D | 08/13/15 | 00:49 | 03:43 | (unrelated sample) |
| ZZZZZZ | 4B54439.D | 08/13/15 | 01:16 | 04:10 | (unrelated sample) |
| ZZZZZZ | 4B54440.D | 08/13/15 | 01:44 | 04:38 | (unrelated sample) |
| JC869-3 | 4B54441.D | 08/13/15 | 02:12 | 05:06 | (used for QC only; not part of job JC1107) |
| JC869-4 | 4B54442.D | 08/13/15 | 02:39 | 05:33 | (used for QC only; not part of job JC1107) |
| ZZZZZZ | 4B54443.D | 08/13/15 | 03:07 | 06:01 | (unrelated sample) |
| ZZZZZZ | 4B54444.D | 08/13/15 | 03:34 | 06:28 | (unrelated sample) |
| ZZZZZZ | 4B54445.D | 08/13/15 | 04:03 | 06:57 | (unrelated sample) |
| ZZZZZZ | 4B54446.D | 08/13/15 | 04:31 | 07:25 | (unrelated sample) |
| ZZZZZZ | 4B54447.D | 08/13/15 | 04:59 | 07:53 | (unrelated sample) |
| ZZZZZZ | 4B54448.D | 08/13/15 | 05:27 | 08:21 | (unrelated sample) |
| JC1107-8 | 4B54450.D | 08/13/15 | 06:23 | 09:17 | HSSER-RAMW06-080715 |
| JC1107-7 | 4B54451.D | 08/13/15 | 06:51 | 09:45 | HSSER-RAMW07-080715 |
| JC1107-9 | 4B54452.D | 08/13/15 | 07:19 | 10:13 | HSSER-RAMW05-080715 |
| JC1107-10 | 4B54453.D | 08/13/15 | 07:48 | 10:42 | HSSER-RAMW04-080715 |

6.6.3

# Instrument Performance Check (BFB)



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2298-BFB
**Lab File ID:** 4B54454.D
**Instrument ID:** GCMS4B
**Injection Date:** 08/13/15
**Injection Time:** 09:00

6.6.4

| m/e | Ion Abundance Criteria | Raw Abundance | % Relative Abundance | | Pass/Fail |
|---|---|---|---|---|---|
| 50 | 14.99 - 40.0% of mass 95 | 17050 | 18.8 | | Pass |
| 75 | 30.0 - 60.0% of mass 95 | 41786 | 46.1 | | Pass |
| 95 | Base peak, 100% relative abundance | 90570 | 100.0 | | Pass |
| 96 | 5.0 - 9.0% of mass 95 | 6316 | 6.97 | | Pass |
| 173 | Less than 2.0% of mass 174 | 0 | 0.00 | (0.00) [a] | Pass |
| 174 | 50.0 - 120.0% of mass 95 | 92250 | 101.9 | | Pass |
| 175 | 5.0 - 9.0% of mass 174 | 7549 | 8.33 | (8.18) [a] | Pass |
| 176 | 95.0 - 101.0% of mass 174 | 90642 | 100.1 | (98.3) [a] | Pass |
| 177 | 5.0 - 9.0% of mass 176 | 6125 | 6.76 | (6.76) [b] | Pass |

(a) Value is % of mass 174
(b) Value is % of mass 176

**This check applies to the following Samples, MS, MSD, Blanks, and Standards:**

| Lab Sample ID | Lab File ID | Date Analyzed | Time Analyzed | Hours Lapsed | Client Sample ID |
|---|---|---|---|---|---|
| V4B2298-CC2289 | 4B54455.D | 08/13/15 | 09:46 | 00:46 | Continuing cal 20 |
| V4B2297-MB2 | 4B54457.D | 08/13/15 | 10:43 | 01:43 | Method Blank |
| JC869-3DUP | 4B54458.D | 08/13/15 | 11:17 | 02:17 | Duplicate |
| JC869-4MS | 4B54459.D | 08/13/15 | 11:45 | 02:45 | Matrix Spike |
| V4B2298-MB1 | 4B54461.D | 08/13/15 | 13:09 | 04:09 | Method Blank |
| V4B2298-BS | 4B54462.D | 08/13/15 | 13:38 | 04:38 | Blank Spike |
| ZZZZZZ | 4B54463.D | 08/13/15 | 14:12 | 05:12 | (unrelated sample) |
| JC1045-15 | 4B54464.D | 08/13/15 | 14:40 | 05:40 | (used for QC only; not part of job JC1107) |
| ZZZZZZ | 4B54465.D | 08/13/15 | 15:07 | 06:07 | (unrelated sample) |
| ZZZZZZ | 4B54466.D | 08/13/15 | 15:36 | 06:36 | (unrelated sample) |
| JC1045-15MS | 4B54467.D | 08/13/15 | 16:04 | 07:04 | Matrix Spike |
| JC1045-15MSD | 4B54468.D | 08/13/15 | 16:32 | 07:32 | Matrix Spike Duplicate |
| ZZZZZZ | 4B54470.D | 08/13/15 | 17:28 | 08:28 | (unrelated sample) |
| ZZZZZZ | 4B54471.D | 08/13/15 | 17:56 | 08:56 | (unrelated sample) |
| ZZZZZZ | 4B54472.D | 08/13/15 | 18:23 | 09:23 | (unrelated sample) |
| ZZZZZZ | 4B54473.D | 08/13/15 | 18:51 | 09:51 | (unrelated sample) |
| ZZZZZZ | 4B54474.D | 08/13/15 | 19:19 | 10:19 | (unrelated sample) |
| ZZZZZZ | 4B54475.D | 08/13/15 | 19:48 | 10:48 | (unrelated sample) |
| ZZZZZZ | 4B54476.D | 08/13/15 | 20:15 | 11:15 | (unrelated sample) |

# Volatile Internal Standard Area Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | |
|---|---|---|---|
| **Check Std:** | V4B2296-CC2289 | **Injection Date:** | 08/12/15 |
| **Lab File ID:** | 4B54407.D | **Injection Time:** | 10:09 |
| **Instrument ID:** | GCMS4B | **Method:** | SW846 8260C |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 140756 | 6.58 | 435392 | 8.56 | 495542 | 9.42 | 438556 | 12.60 | 244012 | 15.14 |
| Upper Limit [a] | 281512 | 7.08 | 870784 | 9.06 | 991084 | 9.92 | 877112 | 13.10 | 488024 | 15.64 |
| Lower Limit [b] | 70378 | 6.08 | 217696 | 8.06 | 247771 | 8.92 | 219278 | 12.10 | 122006 | 14.64 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| V4B2296-MB | 159324 | 6.58 | 450495 | 8.56 | 509837 | 9.42 | 441074 | 12.60 | 215904 | 15.14 |
| V4B2296-BS | 125516 | 6.58 | 422985 | 8.56 | 486014 | 9.42 | 432148 | 12.60 | 252161 | 15.14 |
| ZZZZZZ | 177760 | 6.57 | 440406 | 8.56 | 500506 | 9.42 | 446169 | 12.60 | 227577 | 15.14 |
| ZZZZZZ | 174695 | 6.58 | 446349 | 8.56 | 503883 | 9.42 | 442977 | 12.60 | 227518 | 15.14 |
| ZZZZZZ | 145577 | 6.58 | 442931 | 8.56 | 498816 | 9.42 | 445606 | 12.60 | 229559 | 15.14 |
| JC1107-3 | 146811 | 6.58 | 443287 | 8.56 | 502337 | 9.42 | 441128 | 12.60 | 222699 | 15.14 |
| JC1107-3MS | 145924 | 6.58 | 413150 | 8.56 | 475209 | 9.42 | 424091 | 12.60 | 251934 | 15.14 |
| JC1107-3MSD | 152325 | 6.58 | 431587 | 8.56 | 496307 | 9.42 | 441468 | 12.60 | 260200 | 15.14 |
| JC1107-11 | 140434 | 6.58 | 450428 | 8.56 | 498750 | 9.42 | 437102 | 12.60 | 216722 | 15.14 |
| JC1107-12 | 137119 | 6.58 | 445018 | 8.56 | 501240 | 9.42 | 439157 | 12.60 | 212599 | 15.14 |
| JC1107-1 | 138307 | 6.58 | 439595 | 8.56 | 488233 | 9.42 | 433020 | 12.60 | 211888 | 15.14 |
| JC1107-2 | 140461 | 6.58 | 437134 | 8.56 | 492560 | 9.42 | 432075 | 12.60 | 213576 | 15.14 |
| JC1107-4 | 150775 | 6.58 | 439086 | 8.56 | 491241 | 9.42 | 432149 | 12.60 | 214304 | 15.14 |
| JC1107-5 | 149773 | 6.58 | 427592 | 8.56 | 484870 | 9.42 | 426026 | 12.60 | 211603 | 15.14 |
| JC1107-6 | 145128 | 6.58 | 431535 | 8.56 | 484038 | 9.42 | 425202 | 12.60 | 215693 | 15.14 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | |
|---|---|---|---|
| **Check Std:** | V4B2297-CC2289 | **Injection Date:** | 08/12/15 |
| **Lab File ID:** | 4B54431.D | **Injection Time:** | 21:35 |
| **Instrument ID:** | GCMS4B | **Method:** | SW846 8260C |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 129429 | 6.58 | 415468 | 8.56 | 477620 | 9.42 | 432693 | 12.60 | 251516 | 15.14 |
| Upper Limit [a] | 258858 | 7.08 | 830936 | 9.06 | 955240 | 9.92 | 865386 | 13.10 | 503032 | 15.64 |
| Lower Limit [b] | 64715 | 6.08 | 207734 | 8.06 | 238810 | 8.92 | 216347 | 12.10 | 125758 | 14.64 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| V4B2297-MB | 149010 | 6.58 | 437268 | 8.56 | 487916 | 9.42 | 429546 | 12.60 | 212618 | 15.14 |
| V4B2297-BS | 119545 | 6.57 | 416714 | 8.56 | 479398 | 9.42 | 432369 | 12.60 | 251910 | 15.14 |
| ZZZZZZ | 149580 | 6.58 | 445004 | 8.56 | 502390 | 9.42 | 436916 | 12.60 | 215385 | 15.14 |
| ZZZZZZ | 141252 | 6.58 | 435800 | 8.56 | 486562 | 9.42 | 427224 | 12.60 | 209932 | 15.14 |
| ZZZZZZ | 136795 | 6.57 | 434712 | 8.56 | 483983 | 9.42 | 430219 | 12.60 | 208221 | 15.14 |
| JC869-3 | 144272 | 6.58 | 433663 | 8.56 | 489597 | 9.42 | 429586 | 12.60 | 208261 | 15.14 |
| JC869-4 | 137817 | 6.58 | 429129 | 8.56 | 483587 | 9.42 | 426165 | 12.60 | 207686 | 15.14 |
| ZZZZZZ | 140668 | 6.58 | 429440 | 8.56 | 488300 | 9.42 | 427955 | 12.60 | 208028 | 15.14 |
| ZZZZZZ | 142053 | 6.57 | 429641 | 8.56 | 482462 | 9.42 | 422562 | 12.60 | 204634 | 15.14 |
| ZZZZZZ | 147189 | 6.58 | 428108 | 8.56 | 479980 | 9.42 | 421440 | 12.60 | 202976 | 15.14 |
| ZZZZZZ | 143075 | 6.58 | 423446 | 8.56 | 479173 | 9.42 | 429412 | 12.60 | 222190 | 15.14 |
| ZZZZZZ | 129439 | 6.58 | 429498 | 8.56 | 485670 | 9.42 | 425477 | 12.60 | 202610 | 15.14 |
| ZZZZZZ | 137442 | 6.57 | 428832 | 8.56 | 483312 | 9.42 | 440691 | 12.60 | 252677 | 15.14 |
| JC1107-8 | 144786 | 6.58 | 464734 | 8.56 | 523670 | 9.42 | 454873 | 12.60 | 216894 | 15.14 |
| JC1107-7 | 181708 | 6.58 | 443640 | 8.56 | 499255 | 9.42 | 435289 | 12.60 | 212248 | 15.14 |
| JC1107-9 | 142504 | 6.58 | 438675 | 8.56 | 494969 | 9.42 | 432890 | 12.60 | 208348 | 15.14 |
| JC1107-10 | 134311 | 6.58 | 433187 | 8.56 | 481637 | 9.42 | 421297 | 12.60 | 205804 | 15.14 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | |
|---|---|---|---|
| **Check Std:** | V4B2298-CC2289 | **Injection Date:** | 08/13/15 |
| **Lab File ID:** | 4B54455.D | **Injection Time:** | 09:46 |
| **Instrument ID:** | GCMS4B | **Method:** | SW846 8260C |

| | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| Check Std | 150330 | 6.57 | 418083 | 8.56 | 472304 | 9.41 | 415435 | 12.60 | 226426 | 15.14 |
| Upper Limit [a] | 300660 | 7.07 | 836166 | 9.06 | 944608 | 9.91 | 830870 | 13.10 | 452852 | 15.64 |
| Lower Limit [b] | 75165 | 6.07 | 209042 | 8.06 | 236152 | 8.91 | 207718 | 12.10 | 113213 | 14.64 |

| Lab Sample ID | IS 1 AREA | RT | IS 2 AREA | RT | IS 3 AREA | RT | IS 4 AREA | RT | IS 5 AREA | RT |
|---|---|---|---|---|---|---|---|---|---|---|
| V4B2297-MB2 | 129837 | 6.58 | 435467 | 8.56 | 485700 | 9.42 | 421308 | 12.60 | 200871 | 15.14 |
| JC869-3DUP | 129185 | 6.58 | 418519 | 8.56 | 473275 | 9.42 | 402037 | 12.60 | 185731 | 15.14 |
| JC869-4MS | 137687 | 6.58 | 412721 | 8.56 | 476155 | 9.42 | 427821 | 12.60 | 246362 | 15.14 |
| V4B2298-MB1 | 141611 | 6.58 | 423356 | 8.56 | 470956 | 9.41 | 406520 | 12.60 | 189367 | 15.14 |
| V4B2298-BS | 133396 | 6.57 | 415006 | 8.56 | 473437 | 9.42 | 421683 | 12.60 | 239628 | 15.14 |
| ZZZZZZ | 153534 | 6.58 | 428237 | 8.56 | 479142 | 9.42 | 408818 | 12.60 | 199520 | 15.14 |
| JC1045-15 | 139403 | 6.58 | 433083 | 8.56 | 486646 | 9.42 | 425186 | 12.60 | 205509 | 15.14 |
| ZZZZZZ | 145344 | 6.58 | 432936 | 8.56 | 485272 | 9.42 | 420337 | 12.60 | 199487 | 15.14 |
| ZZZZZZ | 141731 | 6.58 | 425207 | 8.56 | 470874 | 9.42 | 412527 | 12.60 | 204040 | 15.14 |
| JC1045-15MS | 134272 | 6.58 | 405035 | 8.56 | 462082 | 9.42 | 418249 | 12.60 | 241503 | 15.14 |
| JC1045-15MSD | 136201 | 6.58 | 418290 | 8.56 | 479337 | 9.42 | 430460 | 12.60 | 248080 | 15.14 |
| ZZZZZZ | 141097 | 6.58 | 437011 | 8.56 | 487946 | 9.42 | 428097 | 12.60 | 205837 | 15.14 |
| ZZZZZZ | 143967 | 6.58 | 431844 | 8.56 | 485058 | 9.42 | 424528 | 12.60 | 212720 | 15.14 |
| ZZZZZZ | 144271 | 6.58 | 429633 | 8.56 | 483460 | 9.42 | 423107 | 12.60 | 201687 | 15.14 |
| ZZZZZZ | 141731 | 6.58 | 425547 | 8.56 | 478561 | 9.42 | 416690 | 12.60 | 199888 | 15.14 |
| ZZZZZZ | 144549 | 6.58 | 427563 | 8.56 | 477656 | 9.42 | 416181 | 12.60 | 200991 | 15.14 |
| ZZZZZZ | 141741 | 6.58 | 419551 | 8.56 | 471047 | 9.42 | 417921 | 12.60 | 198968 | 15.14 |
| ZZZZZZ | 148549 | 6.58 | 425269 | 8.56 | 479509 | 9.42 | 418275 | 12.60 | 201366 | 15.14 |

**IS 1** = Tert Butyl Alcohol-D9
**IS 2** = Pentafluorobenzene
**IS 3** = 1,4-Difluorobenzene
**IS 4** = Chlorobenzene-D5
**IS 5** = 1,4-Dichlorobenzene-d4

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Surrogate Recovery Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Method:** SW846 8260C **Matrix:** AQ

**Samples and QC shown here apply to the above method**

| Lab Sample ID | Lab File ID | S1 | S2 | S3 | S4 |
|---|---|---|---|---|---|
| JC1107-1 | 4B54425.D | 97 | 92 | 100 | 105 |
| JC1107-2 | 4B54426.D | 97 | 94 | 99 | 104 |
| JC1107-3 | 4B54416.D | 98 | 92 | 99 | 104 |
| JC1107-4 | 4B54427.D | 97 | 93 | 99 | 104 |
| JC1107-5 | 4B54428.D | 98 | 94 | 99 | 104 |
| JC1107-6 | 4B54429.D | 98 | 94 | 99 | 103 |
| JC1107-7 | 4B54451.D | 97 | 92 | 98 | 104 |
| JC1107-8 | 4B54450.D | 97 | 91 | 98 | 107 |
| JC1107-9 | 4B54452.D | 97 | 93 | 98 | 106 |
| JC1107-10 | 4B54453.D | 98 | 94 | 100 | 105 |
| JC1107-11 | 4B54423.D | 96 | 91 | 100 | 104 |
| JC1107-12 | 4B54424.D | 96 | 92 | 99 | 105 |
| JC1107-3MS | 4B54420.D | 98 | 94 | 98 | 95 |
| JC1107-3MSD | 4B54421.D | 99 | 94 | 99 | 95 |
| JC869-3DUP | 4B54458.D | 99 | 92 | 97 | 109 |
| JC869-4MS | 4B54459.D | 101 | 95 | 99 | 97 |
| V4B2296-BS | 4B54410.D | 100 | 94 | 100 | 96 |
| V4B2296-MB | 4B54409.D | 98 | 92 | 98 | 105 |
| V4B2297-BS | 4B54434.D | 100 | 95 | 100 | 96 |
| V4B2297-MB | 4B54433.D | 98 | 93 | 98 | 104 |
| V4B2297-MB2 | 4B54457.D | 96 | 92 | 99 | 106 |

| Surrogate Compounds | Recovery Limits |
|---|---|
| **S1** = Dibromofluoromethane | 76-120% |
| **S2** = 1,2-Dichloroethane-D4 | 73-122% |
| **S3** = Toluene-D8 | 84-119% |
| **S4** = 4-Bromofluorobenzene | 78-117% |

6.8.1 ⑥

# Initial Calibration Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL
**Sample:** V4B2289-ICC2289
**Lab FileID:** 4B54249.D

Response Factor Report MS4B

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

Calibration Files
1 =4B54244.D 0.5 =4B54243.D 100 =4B54250.D 50 =4B54249.D
20 =4B54248.D 200 =4B54251.D 5 =4B54246.D 2 =4B54245.D
10 =4B54247.D 0.2 =4B54242.D = =

Compound

| | 1 | 0.5 | 100 | 50 | 20 | 200 | 5 | 2 | 10 | 0.2 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 ----------ISTD---------- | | | | | | | | | | | | |
| 2) tertiary butyl alcohol | | | | | | | | | | | | |
| | 1.351 | 1.204 | 1.128 | 1.249 | 1.143 | 1.152 | 1.209 | 1.241 | | | 1.209 | 6.02 |
| 3) 1,4-dioxane | | | | | | | | | | | | |
| | | 0.122 | 0.113 | 0.120 | 0.119 | 0.106 | 0.092 | 0.111 | | | 0.112 | 9.46 |
| 4) Ethanol | | | | | | | | | | | | |
| | | | | | | | | | | | 0.000# | -1.00 |
| 5) I pentafluorobenzene ----------ISTD---------- | | | | | | | | | | | | |
| 6) CHLOROTRIFLUOROETHENE | | | | | | | | | | | | |
| | | | | | | | | | | | 0.000# | -1.00 |
| 7) chlorodifluoromethane | | | | | | | | | | | | |
| | 0.575 | 0.504 | 0.479 | 0.486 | 0.505 | 0.472 | 0.527 | 0.496 | | | 0.506 | 6.48 |
| 8) dichlorodifluoromethane | | | | | | | | | | | | |
| | | 0.504 | 0.474 | 0.460 | 0.477 | 0.497 | 0.474 | 0.504 | | | 0.484 | 3.59 |
| 9) Freon 114 | | | | | | | | | | | | |
| | | | | | | | | | | | 0.000# | -1.00 |
| 10) chloromethane | | | | | | | | | | | | |
| | 0.181 | 0.188 | 0.193 | 0.176 | 0.174 | 0.193 | 0.188 | 0.191 | 0.182 | | 0.185 | 3.86 |
| 11) vinyl chloride | | | | | | | | | | | | |
| | 0.497 | 0.466 | 0.571 | 0.527 | 0.518 | 0.552 | 0.545 | 0.562 | 0.551 | | 0.532 | 6.36 |
| 12) bromomethane | | | | | | | | | | | | |
| | 0.285 | 0.344 | 0.307 | 0.300 | 0.289 | 0.253 | 0.315 | 0.338 | 0.317 | | 0.305 | 9.14 |
| 13) chloroethane | | | | | | | | | | | | |
| | 0.189 | 0.211 | 0.221 | 0.210 | 0.207 | 0.193 | 0.220 | 0.214 | 0.219 | | 0.209 | 5.55 |
| 14) vinyl bromide | | | | | | | | | | | | |
| | | | | | | | | | | | 0.000# | -1.00 |
| 15) trichlorofluoromethane | | | | | | | | | | | | |
| | 0.391 | 0.548 | 0.508 | 0.491 | 0.514 | 0.524 | 0.514 | 0.531 | | | 0.503 | 9.55 |
| 16) 1,3-butadiene | | | | | | | | | | | | |
| | | | | | | | | | | | 0.000# | -1.00 |
| 17) Pentane | | | | | | | | | | | | |
| | | | | | | | | | | | 0.000# | -1.00 |
| 18) freon 123a | | | | | | | | | | | | |
| | | | | | | | | | | | 0.000# | -1.00 |
| 19) ethyl ether | | | | | | | | | | | | |
| | 0.208 | 0.158 | 0.198 | 0.188 | 0.188 | 0.201 | 0.183 | 0.198 | 0.193 | | 0.191 | 7.49 |
| 20) 2-chloropropane--The compound does not meet initial ctiteria. | | | | | | | | | | | | |
| | | 0.055 | 0.056 | 0.066 | 0.047 | 0.066 | | 0.073 | | | 0.061 | 15.71 |
| 21) acrolein | | | | | | | | | | | | |
| | 0.061 | 0.058 | 0.071 | 0.067 | 0.062 | 0.070 | 0.061 | 0.059 | 0.065 | | 0.064 | 7.35 |
| 22) 1,1-dichloroethene | | | | | | | | | | | | |
| | 0.457 | 0.323 | 0.386 | 0.366 | 0.380 | 0.404 | 0.392 | 0.430 | 0.415 | | 0.395 | 9.75 |
| 23) acetone | | | | | | | | | | | | |

# Initial Calibration Summary

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2289-ICC2289
**Lab FileID:** 4B54249.D

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0.035 | 0.034 | 0.033 | 0.034 | 0.033 | 0.033 | 0.031 | | 0.033 | 3.62 |
| 24) | allyl chloride | | | | | | | | | | | |
| | 0.320 | | 0.311 | 0.270 | 0.258 | 0.322 | 0.255 | 0.260 | 0.318 | | 0.289 | 10.69 |
| 25) | acetonitrile | | | | | | | | | | | |
| | | | 0.032 | 0.031 | 0.034 | 0.031 | 0.029 | 0.031 | 0.035 | | 0.032 | 5.56 |
| 26) | iodomethane | | | | | | | | | | | |
| | 0.778 | 0.601 | 0.768 | 0.734 | 0.729 | 0.785 | 0.740 | 0.775 | 0.800 | | 0.746 | 7.98 |
| 27) | carbon disulfide | | | | | | | | | | | |
| | 1.249 | 0.924 | 1.171 | 1.107 | 1.158 | 1.187 | 1.143 | 1.246 | 1.243 | | 1.159 | 8.72 |
| 28) | methylene chloride | | | | | | | | | | | |
| | 0.434 | 0.358 | 0.425 | 0.413 | 0.407 | 0.434 | 0.413 | 0.431 | 0.447 | | 0.418 | 6.16 |
| 29) | methyl acetate | | | | | | | | | | | |
| | 0.049 | | 0.062 | 0.060 | 0.059 | 0.064 | 0.048 | 0.051 | 0.058 | | 0.056 | 10.68 |
| 30) | 1-chloropropane | | | | | | | | | | | |
| | | | 0.680 | 0.652 | 0.668 | 0.669 | 0.751 | 0.822 | 0.752 | | 0.714 | 8.79 |
| 31) | methyl tert butyl ether | | | | | | | | | | | |
| | 1.130 | 0.893 | 1.075 | 1.034 | 1.043 | 1.069 | 1.057 | 1.084 | 1.097 | | 1.053 | 6.34 |
| 32) | trans-1,2-dichloroethene | | | | | | | | | | | |
| | 0.478 | 0.371 | 0.368 | 0.345 | 0.359 | 0.376 | 0.383 | 0.408 | 0.407 | | 0.388 | 10.19 |
| 33) | di-isopropyl ether | | | | | | | | | | | |
| | 1.503 | 1.187 | 1.394 | 1.367 | 1.373 | 1.353 | 1.353 | 1.484 | 1.420 | | 1.381 | 6.61 |
| 34) | 2-butanone | | | | | | | | | | | |
| | | | 0.048 | 0.043 | 0.044 | 0.047 | 0.040 | | 0.043 | | 0.044 | 6.65 |
| 35) | 1,1-dichloroethane | | | | | | | | | | | |
| | 0.739 | | 0.713 | 0.683 | 0.718 | 0.702 | 0.734 | 0.773 | 0.776 | | 0.730 | 4.47 |
| 36) | chloroprene | | | | | | | | | | | |
| | 0.605 | | 0.531 | 0.499 | 0.525 | 0.520 | 0.536 | 0.556 | 0.551 | | 0.540 | 5.87 |
| 37) | acrylonitrile | | | | | | | | | | | |
| | 0.160 | | 0.152 | 0.148 | 0.146 | 0.153 | 0.145 | 0.135 | 0.151 | | 0.149 | 4.94 |
| 38) | vinyl acetate | | | | | | | | | | | |
| | 0.050 | | 0.058 | 0.056 | 0.057 | 0.059 | 0.051 | 0.066 | 0.054 | | 0.056 | 8.84 |
| 39) | ethyl tert-butyl ether | | | | | | | | | | | |
| | 1.281 | 1.073 | 1.258 | 1.227 | 1.216 | 1.249 | 1.179 | 1.318 | 1.243 | | 1.227 | 5.70 |
| 40) | ethyl acetate | | | | | | | | | | | |
| | | | 0.061 | 0.059 | 0.058 | 0.059 | 0.057 | 0.065 | 0.062 | | 0.060 | 4.48 |
| 41) | 2,2-dichloropropane | | | | | | | | | | | |
| | 0.359 | | 0.272 | 0.272 | 0.302 | 0.244 | 0.320 | 0.362 | 0.338 | | 0.309 | 14.11 |
| 42) | cis-1,2-dichloroethene | | | | | | | | | | | |
| | 0.455 | | 0.419 | 0.399 | 0.399 | 0.421 | 0.401 | 0.447 | 0.433 | | 0.422 | 5.21 |
| 43) | methylacrylate | | | | | | | | | | | |
| | | | 0.061 | 0.057 | 0.056 | 0.062 | 0.051 | | 0.056 | | 0.057 | 7.24 |
| 44) | propionitrile | | | | | | | | | | | |
| | 0.061 | 0.051 | 0.063 | 0.059 | 0.060 | 0.063 | 0.061 | 0.058 | 0.063 | | 0.060 | 6.51 |
| 45) | bromochloromethane | | | | | | | | | | | |
| | 0.212 | | 0.224 | 0.214 | 0.213 | 0.229 | 0.206 | 0.212 | 0.223 | | 0.216 | 3.51 |
| 46) | tetrahydrofuran | | | | | | | | | | | |
| | 0.161 | | 0.141 | 0.134 | 0.142 | 0.136 | 0.143 | 0.151 | 0.145 | | 0.144 | 6.08 |
| 47) | chloroform | | | | | | | | | | | |
| | 0.499 | 0.364 | 0.431 | 0.425 | 0.425 | 0.440 | 0.435 | 0.476 | 0.470 | 0.402 | 0.437 | 8.79 |
| 48) | T-BUTYL FORMATE | | | | | | | | | | | |
| | 0.261 | | 0.307 | 0.297 | 0.279 | 0.311 | 0.251 | 0.259 | 0.268 | | 0.279 | 8.33 |
| 49) | dibromofluoromethane (s) | | | | | | | | | | | |
| | 0.358 | 0.353 | 0.368 | 0.363 | 0.368 | 0.368 | 0.360 | 0.348 | 0.366 | 0.363 | 0.362 | 1.90 |
| 50) | 1,2-dichloroethane-d4 (s) | | | | | | | | | | | |
| | 0.398 | 0.399 | 0.391 | 0.397 | 0.404 | 0.380 | 0.402 | 0.401 | 0.399 | 0.403 | 0.397 | 1.83 |
| 51) | freon 113 | | | | | | | | | | | |
| | 0.242 | | 0.232 | 0.227 | 0.236 | 0.233 | 0.250 | 0.241 | 0.256 | | 0.240 | 4.08 |
| 52) | methacrylonitrile | | | | | | | | | | | |
| | 0.273 | 0.243 | 0.273 | 0.256 | 0.259 | 0.269 | 0.261 | 0.276 | 0.272 | | 0.265 | 4.01 |
| 53) | 1,1,1-trichloroethane | | | | | | | | | | | |

# Initial Calibration Summary

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2289-ICC2289
**Lab FileID:** 4B54249.D

```
      0.472       0.457 0.435 0.455 0.448 0.449 0.480 0.498        0.462    4.41
54)  cyclohexane
      0.534       0.500 0.460 0.481 0.515 0.501 0.517 0.539        0.506    5.21
55)  iso-butyl alcohol
                  0.017 0.015 0.016 0.017 0.018       0.017        0.016    6.13

56) I   1,4-difluorobenzene   ----------------ISTD---------------------
57)  epichlorohydrin
      0.039 0.028 0.036 0.034 0.031 0.036 0.036 0.032 0.036        0.034    9.51
58)  n-butyl alcohol
      0.011 0.009 0.010 0.009 0.010 0.010 0.010 0.009 0.010        0.010#   6.67
59)  carbon tetrachloride
      0.422       0.395 0.372 0.389 0.396 0.389 0.413 0.424        0.400    4.52
60)  1,1-dichloropropene
      0.479       0.430 0.403 0.433 0.429 0.444 0.466 0.473        0.445    5.88
61)  hexane
      0.389       0.320 0.298 0.317 0.313 0.354 0.358 0.352        0.338    9.00
62)  Tert Amyl alcohol
                                                                   0.000#  -1.00
63)  benzene
      1.477 1.164 1.263 1.211 1.251 1.265 1.310 1.422 1.378 1.345  1.309    7.44
64)  iso-octane
                  1.009 0.959 1.013 0.995 1.131 1.143 1.107        1.051    7.03
65)  tert-amyl methyl ether
      0.203       0.197 0.205 0.205 0.204 0.204 0.235 0.213        0.208    5.57
66)  heptane
      0.249       0.225 0.210 0.225 0.221 0.246 0.258 0.226        0.232    7.10
67)  isopropyl acetate
                  0.140 0.139 0.147 0.139 0.202       0.173        0.156   16.45
68)  1,2-dichloroethane
      0.477 0.339 0.420 0.423 0.435 0.404 0.441 0.471 0.472        0.431    9.99
69)  trichloroethene
      0.384       0.347 0.332 0.334 0.348 0.348 0.354 0.371        0.352    4.99
70)  Tert-amyl Ethyl Ether
                                                                   0.000#  -1.00
71)  ethyl acrylate
                  0.495 0.478 0.457 0.478 0.625 0.508 0.501        0.506   10.93
72)  2-nitropropane
      0.160 0.119 0.139 0.136 0.140 0.131 0.145 0.151 0.150        0.141    8.59
73)  2-chloroethyl vinyl ether
      0.219 0.187 0.218 0.215 0.211 0.213 0.207 0.218 0.218 0.180  0.209    6.65
74)  methyl methacrylate
      0.082       0.089 0.085 0.084 0.091 0.083 0.078 0.082        0.084    4.85
75)  1,2-dichloropropane
      0.381       0.367 0.361 0.370 0.360 0.365 0.404 0.401        0.376    4.66
76)  dibromomethane
      0.239 0.175 0.226 0.220 0.217 0.227 0.218 0.213 0.235        0.219    8.53
77)  methylcyclohexane
      0.464       0.456 0.416 0.439 0.450 0.470 0.461 0.467        0.453    3.97
78)  bromodichloromethane
      0.496 0.356 0.486 0.472 0.465 0.487 0.480 0.495 0.498        0.471    9.40
79)  cis-1,3-dichloropropene
      0.623       0.615 0.590 0.591 0.612 0.597 0.620 0.631        0.610    2.53
80)  toluene-d8 (s)
      1.178 1.175 1.178 1.185 1.177 1.168 1.173 1.179 1.186 1.174  1.177    0.44
81)  4-methyl-2-pentanone
      0.139       0.148 0.141 0.147 0.148 0.151 0.134 0.148        0.144    4.03
82)  toluene
      0.908       0.816 0.771 0.784 0.833 0.828 0.873 0.860        0.834    5.45
83)  3-methyl-1-butanol
```

```
      0.018       0.016 0.015 0.016 0.015 0.017 0.017 0.016        0.016    6.45
 84)  trans-1,3-dichloropropene
      0.554 0.415 0.557 0.542 0.537 0.551 0.551 0.535 0.564        0.534    8.57
 85)  ethyl methacrylate
      0.430       0.477 0.449 0.428 0.477 0.421 0.409 0.445        0.442    5.71
 86)  1,1,2-trichloroethane
      0.306       0.294 0.283 0.274 0.293 0.278 0.300 0.294        0.290    3.77
 87)  2-hexanone
      0.135       0.142 0.127 0.128 0.138 0.138 0.117 0.131        0.132    6.07

 88) I   chlorobenzene-d5       ----------------ISTD--------------------
 89)  tetrachloroethene
      0.458       0.417 0.393 0.418 0.414 0.449 0.469 0.457        0.434    6.31
 90)  1,3-dichloropropane
      0.649 0.453 0.587 0.576 0.581 0.583 0.619 0.633 0.616        0.588    9.69
 91)  butyl acetate
      0.275       0.271 0.258 0.259 0.274 0.276 0.258 0.277        0.268    3.15
 92)  3,3-DIMETHYL-1-BUTANOL
      0.043 0.035 0.038 0.036 0.040 0.038 0.042 0.042 0.041        0.039    7.37
 93)  dibromochloromethane
      0.480       0.468 0.444 0.439 0.479 0.443 0.464 0.464        0.460    3.54
 94)  1,2-dibromoethane
      0.411 0.309 0.404 0.382 0.379 0.413 0.389 0.389 0.394        0.385    8.03
 95)  n-butyl ether
                                                                   0.000#  -1.00
 96)  chlorobenzene
      1.177 0.836 1.060 1.001 1.028 1.086 1.057 1.168 1.105        1.057    9.61
 97)  1,1,1,2-tetrachloroethane
      0.424       0.396 0.385 0.391 0.408 0.403 0.405 0.421        0.404    3.41
 98)  ethylbenzene
      1.982 1.384 1.751 1.665 1.721 1.773 1.801 1.919 1.856        1.761    9.78
 99)  m,p-xylene
      0.759 0.520 0.682 0.639 0.654 0.699 0.675 0.707 0.706        0.671    9.87
100)  o-xylene
      0.730 0.504 0.709 0.665 0.667 0.724 0.686 0.694 0.710        0.677   10.16
101)  styrene
      1.165       1.199 1.124 1.126 1.226 1.102 1.116 1.186        1.155    3.88
102)  bromoform
      0.367       0.377 0.355 0.344 0.388 0.344 0.332 0.355        0.358    5.16

103) I   1,4-dichlorobenzene-d ----------------ISTD--------------------
104)  isopropylbenzene
      3.596       3.029 2.849 2.979 3.113 3.176 3.336 3.314        3.174    7.46
105)  4-bromofluorobenzene (s)
      0.877 0.889 0.852 0.854 0.867 0.857 0.880 0.881 0.867 0.907  0.873    1.96
106)  cyclohexanone--The compound does not meet initial ctiteria.
                  0.092 0.078 0.092 0.073 0.106 0.094 0.099        0.091   12.79
107)  bromobenzene
      1.044 0.764 0.926 0.875 0.897 0.963 0.953 0.985 0.973        0.931    8.59
108)  1,1,2,2-tetrachloroethane
      0.982 0.794 0.926 0.891 0.906 0.944 0.966 0.981 0.975        0.930    6.53
109)  trans-1,4-dichloro-2-butene
      0.261 0.194 0.248 0.232 0.235 0.251 0.251 0.223 0.257        0.239    8.70
110)  1,2,3-trichloropropane
      0.214 0.179 0.220 0.214 0.228 0.221 0.239 0.228 0.239        0.220    8.14
111)  n-propylbenzene
      4.087 3.067 3.493 3.255 3.426 3.565 3.703 3.872 3.822        3.588    8.90
112)  4-ETHYLTOLUENE
                                                                   0.000#  -1.00
113)  2-chlorotoluene
```

6.9.1

6

# Initial Calibration Summary

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2289-ICC2289
**Lab FileID:** 4B54249.D

```
      0.879       0.789 0.737 0.769 0.816 0.798 0.864 0.854        0.813    6.08
114)  4-chlorotoluene
      2.629 1.912 2.281 2.163 2.218 2.348 2.358 2.520 2.450        2.320    9.12
115)  1,3,5-trimethylbenzene
      2.946       2.581 2.431 2.523 2.617 2.644 2.848 2.785        2.672    6.50
116)  tert-butylbenzene
      2.577 2.142 2.261 2.144 2.210 2.291 2.334 2.467 2.434        2.318    6.47
117)  pentachloroethane
      0.524 0.406 0.462 0.448 0.455 0.507 0.488 0.537 0.490        0.480    8.58
118)  1,2,4-trimethylbenzene
      2.803 2.082 2.536 2.442 2.511 2.592 2.636 2.770 2.792        2.574    8.77
119)  sec-butylbenzene
      3.819       3.417 3.224 3.342 3.490 3.502 3.692 3.689        3.522    5.67
120)  1,3-dichlorobenzene
      1.908 1.417 1.706 1.639 1.659 1.757 1.731 1.833 1.830 1.468  1.695    9.25
121)  p-isopropyltoluene
      3.116       2.887 2.731 2.830 2.915 2.943 3.055 3.075        2.944    4.47
122)  1,4-dichlorobenzene
      1.901 1.471 1.694 1.620 1.635 1.746 1.689 1.841 1.777 1.578  1.695    7.52
123)  benzyl chloride
      1.897 1.673 1.672 1.633 1.603 1.686 1.702 1.740 1.644        1.694    5.06
124)  1,2-dichlorobenzene
      1.862 1.320 1.666 1.606 1.632 1.681 1.658 1.712 1.757        1.655    8.88
125)  1,4-DIETHYLBENZENE
                                                                   0.000#  -1.00
126)  n-butylbenzene
      1.500       1.482 1.387 1.428 1.484 1.416 1.441 1.544        1.460    3.52
127)  1,2,4,5-TETRAMETHYLBENZENE
                                                                   0.000#  -1.00
128)  1,2-dibromo-3-chloropropane
      0.162       0.150 0.140 0.145 0.152 0.144 0.146 0.155        0.149    4.78
129)  1,3,5-TRICHLOROBENZENE
      1.375 1.058 1.343 1.305 1.318 1.352 1.323 1.401 1.404        1.320    7.91
130)  1,2,4-trichlorobenzene
      1.032       1.117 1.068 1.037 1.154 0.990 0.997 1.063        1.057    5.34
131)  hexachlorobutadiene
                  0.575 0.581 0.640 0.595 0.674 0.713 0.725        0.643    9.70
132)  naphthalene
      1.641       2.051 1.913 1.867 2.165 1.712 1.677 1.841        1.858    9.88
133)  1,2,3-trichlorobenzene
      0.838       0.933 0.895 0.908 0.971 0.841 0.846 0.902        0.892    5.36
134)  hexachloroethane
      0.653       0.598 0.562 0.580 0.623 0.606 0.622 0.640        0.610    4.95
 ---------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

          M4B2289.M         Mon Aug 10 08:20:19 2015   GCMS4B
```

6.9.1 6

# Initial Calibration Verification



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2289-ICV2289
**Lab FileID:** 4B54254.D

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\4B54254.D  Vial: 14
Acq On : 5 Aug 2015 3:20 pm  Operator: TOANP
Sample : icv2289-50  Inst : MS4B
Misc : MS88663,V4B2289,w,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Mon Aug 10 08:19:32 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| | Compound | TrueValue | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | tert butyl alcohol-d9 | 500.00 | 1.000 | 1.000 | 0.0 | 100 | 0.00 | 6.57 |
| 2 M | tertiary butyl alcohol | 250.00 | 1.209 | 1.239 | -2.5 | 110 | 0.00 | 6.67 |
| 3 M | 1,4-dioxane | 1250.00 | 0.112 | 0.126 | -12.5 | 111 | 0.00 | 10.11 |
| 4 | Ethanol | | ----------NA---------- | | | | | |
| 5 I | pentafluorobenzene | 50.00 | 1.000 | 1.000 | 0.0 | 103 | 0.00 | 8.56 |
| 6 | CHLOROTRIFLUOROETHENE | | ----------NA---------- | | | | | |
| 7 M | chlorodifluoromethane | 50.00 | 0.506 | 0.448 | 11.5 | 97 | 0.00 | 3.63 |
| 8 M | dichlorodifluoromethane | 50.00 | 0.484 | 0.379 | 21.7 | 83 | -0.01 | 3.60 |
| 9 | Freon 114 | | ----------NA---------- | | | | | |
| 10 M | chloromethane | 50.00 | 0.185 | 0.170 | 8.1 | 100 | 0.00 | 3.96 |
| 11 M | vinyl chloride | 50.00 | 0.532 | 0.467 | 12.2 | 91 | 0.00 | 4.17 |
| 12 M | bromomethane | 50.00 | 0.305 | 0.309 | -1.3 | 106 | 0.01 | 4.76 |
| 13 M | chloroethane | 50.00 | 0.209 | 0.243 | -16.3 | 119 | 0.01 | 4.92 |
| 14 | vinyl bromide | | ----------NA---------- | | | | | |
| 15 M | trichlorofluoromethane | 50.00 | 0.503 | 0.463 | 8.0 | 94 | 0.00 | 5.27 |
| 16 | 1,3-butadiene | | ----------NA---------- | | | | | |
| 17 | Pentane | | ----------NA---------- | | | | | |
| 18 | freon 123a | | ----------NA---------- | | | | | |
| 19 M | ethyl ether | 50.00 | 0.191 | 0.190 | 0.5 | 105 | 0.00 | 5.63 |
| 20 | 2-chloropropane | 50.00 | 0.061 | 0.040 | 34.4# | 74 | 0.00 | 5.81 |
| 21 M | acrolein | 500.00 | 0.064 | 0.080 | -25.0 | 123 | 0.00 | 5.86 |
| 22 M | 1,1-dichloroethene | 50.00 | 0.395 | 0.387 | 2.0 | 109 | 0.01 | 6.03 |
| 23 M | acetone | 50.00 | 0.033 | 0.036 | -9.1 | 109 | 0.00 | 6.05 |
| 24 M | allyl chloride | 50.00 | 0.289 | 0.369 | -27.7 | 141 | -0.01 | 6.45 |
| 25 M | acetonitrile | 500.00 | 0.032 | 0.031 | 3.1 | 103 | 0.00 | 6.45 |
| 26 M | iodomethane | 50.00 | 0.746 | 0.687 | 7.9 | 97 | 0.01 | 6.28 |
| 27 M | carbon disulfide | 50.00 | 1.159 | 1.081 | 6.7 | 101 | 0.00 | 6.39 |
| 28 M | methylene chloride | 50.00 | 0.418 | 0.421 | -0.7 | 105 | 0.01 | 6.65 |
| 29 M | methyl acetate | 50.00 | 0.056 | 0.055 | 1.8 | 96 | 0.00 | 6.44 |
| 30 | 1-chloropropane | 50.00 | 0.714 | 0.650 | 9.0 | 103 | 0.00 | 6.65 |
| 31 M | methyl tert butyl ether | 100.00 | 1.053 | 0.997 | 5.3 | 100 | 0.00 | 6.89 |
| 32 M | trans-1,2-dichloroethene | 50.00 | 0.388 | 0.347 | 10.6 | 104 | 0.00 | 6.95 |
| 33 M | di-isopropyl ether | 50.00 | 1.381 | 1.334 | 3.4 | 101 | 0.00 | 7.41 |
| 34 M | 2-butanone | 50.00 | 0.044 | 0.045 | -2.3 | 106 | 0.00 | 8.08 |
| 35 M | 1,1-dichloroethane | 50.00 | 0.730 | 0.690 | 5.5 | 104 | 0.00 | 7.45 |
| 36 M | chloroprene | 50.00 | 0.540 | 0.487 | 9.8 | 101 | 0.00 | 7.54 |
| 37 M | acrylonitrile | 250.00 | 0.149 | 0.151 | -1.3 | 106 | 0.00 | 6.92 |
| 38 M | vinyl acetate | 50.00 | 0.056 | 0.061 | -8.9 | 113 | 0.00 | 7.43 |
| 39 M | ethyl tert-butyl ether | 50.00 | 1.227 | 1.211 | 1.3 | 102 | 0.00 | 7.83 |
| 40 M | ethyl acetate | 50.00 | 0.060 | 0.057 | 5.0 | 99 | 0.00 | 8.08 |
| 41 M | 2,2-dichloropropane | 50.00 | 0.309 | 0.240 | 22.3 | 91 | 0.00 | 8.10 |

# Initial Calibration Verification

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2289-ICV2289
**Lab FileID:** 4B54254.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 42 M | cis-1,2-dichloroethene | 50.00 | 0.422 | 0.397 | 5.9 | 103 | 0.00 | 8.11 |
| 43 | methylacrylate | 50.00 | 0.057 | 0.057 | 0.0 | 103 | 0.00 | 8.16 |
| 44 M | propionitrile | 500.00 | 0.060 | 0.057 | 5.0 | 99 | 0.00 | 8.18 |
| 45 M | bromochloromethane | 50.00 | 0.216 | 0.214 | 0.9 | 103 | 0.00 | 8.40 |
| 46 M | tetrahydrofuran | 50.00 | 0.144 | 0.136 | 5.6 | 104 | 0.00 | 8.43 |
| 47 M | chloroform | 50.00 | 0.437 | 0.427 | 2.3 | 104 | 0.00 | 8.44 |
| 48 M | T-BUTYL FORMATE | 50.00 | 0.279 | 0.280 | -0.4 | 98 | 0.00 | 8.46 |
| 49 S | dibromofluoromethane (s) | 50.00 | 0.362 | 0.362 | 0.0 | 103 | 0.00 | 8.63 |
| 50 S | 1,2-dichloroethane-d4 (s) | 50.00 | 0.397 | 0.379 | 4.5 | 99 | 0.00 | 9.02 |
| 51 M | freon 113 | 50.00 | 0.240 | 0.222 | 7.5 | 101 | 0.00 | 5.97 |
| 52 M | methacrylonitrile | 50.00 | 0.265 | 0.259 | 2.3 | 105 | 0.00 | 8.34 |
| 53 M | 1,1,1-trichloroethane | 50.00 | 0.462 | 0.418 | 9.5 | 99 | 0.00 | 8.67 |
| 54 M | cyclohexane | 50.00 | 0.506 | 0.393 | 22.3 | 88 | 0.00 | 8.73 |
| 55 | iso-butyl alcohol | 500.00 | 0.016 | 0.016 | 0.0 | 107 | 0.00 | 8.82 |
| 56 I | 1,4-difluorobenzene | 50.00 | 1.000 | 1.000 | 0.0 | 103 | 0.00 | 9.42 |
| 57 M | epichlorohydrin | 250.00 | 0.034 | 0.035 | -2.9 | 105 | 0.00 | 10.63 |
| 58 M | n-butyl alcohol | 2500.00 | 0.010 | 0.009# | 10.0 | 108 | 0.00 | 9.53 |
| 59 M | carbon tetrachloride | 50.00 | 0.400 | 0.353 | 11.8 | 98 | 0.00 | 8.86 |
| 60 M | 1,1-dichloropropene | 50.00 | 0.445 | 0.420 | 5.6 | 107 | 0.00 | 8.83 |
| 61 M | hexane | 50.00 | 0.338 | 0.365 | -8.0 | 127 | 0.00 | 7.20 |
| 62 | Tert Amyl alcohol | | ----------NA---------- | | | | | |
| 63 M | benzene | 50.00 | 1.309 | 1.226 | 6.3 | 104 | 0.00 | 9.08 |
| 64 m | iso-octane | 50.00 | 1.051 | 0.739 | 29.7 | 79 | 0.00 | 9.07 |
| 65 M | tert-amyl methyl ether | 50.00 | 0.208 | 0.193 | 7.2 | 97 | 0.00 | 9.09 |
| 66 M | heptane | 50.00 | 0.232 | 0.243 | -4.7 | 119 | 0.00 | 9.21 |
| 67 M | isopropyl acetate | 50.00 | 0.156 | 0.135 | 13.5 | 100 | 0.00 | 8.99 |
| 68 M | 1,2-dichloroethane | 50.00 | 0.431 | 0.409 | 5.1 | 100 | 0.00 | 9.10 |
| 69 M | trichloroethene | 50.00 | 0.352 | 0.332 | 5.7 | 103 | 0.00 | 9.74 |
| 70 | Tert-amyl Ethyl Ether | | ----------NA---------- | | | | | |
| 71 | ethyl acrylate | 50.00 | 0.506 | 0.464 | 8.3 | 100 | 0.00 | 9.73 |
| 72 M | 2-nitropropane | 50.00 | 0.141 | 0.139 | 1.4 | 105 | 0.00 | 10.50 |
| 73 M | 2-chloroethyl vinyl ether | 250.00 | 0.209 | 0.233 | -11.5 | 112 | 0.00 | 10.50 |
| 74 M | methyl methacrylate | 50.00 | 0.084 | 0.089 | -6.0 | 108 | 0.00 | 9.99 |
| 75 M | 1,2-dichloropropane | 50.00 | 0.376 | 0.361 | 4.0 | 103 | 0.00 | 10.00 |
| 76 M | dibromomethane | 50.00 | 0.219 | 0.213 | 2.7 | 100 | 0.00 | 10.16 |
| 77 M | methylcyclohexane | 50.00 | 0.453 | 0.396 | 12.6 | 98 | 0.00 | 9.94 |
| 78 M | bromodichloromethane | 50.00 | 0.471 | 0.468 | 0.6 | 102 | 0.00 | 10.28 |
| 79 M | cis-1,3-dichloropropene | 50.00 | 0.610 | 0.584 | 4.3 | 102 | 0.00 | 10.72 |
| 80 S | toluene-d8 (s) | 50.00 | 1.177 | 1.169 | 0.7 | 102 | 0.00 | 11.01 |
| 81 M | 4-methyl-2-pentanone | 50.00 | 0.144 | 0.147 | -2.1 | 107 | 0.00 | 10.82 |
| 82 M | toluene | 50.00 | 0.834 | 0.778 | 6.7 | 104 | 0.00 | 11.09 |
| 83 M | 3-methyl-1-butanol | 1000.00 | 0.016 | 0.015 | 6.3 | 108 | 0.00 | 10.83 |
| 84 M | trans-1,3-dichloropropene | 50.00 | 0.534 | 0.501 | 6.2 | 95 | 0.00 | 11.29 |
| 85 M | ethyl methacrylate | 50.00 | 0.442 | 0.443 | -0.2 | 102 | 0.00 | 11.27 |
| 86 M | 1,1,2-trichloroethane | 50.00 | 0.290 | 0.282 | 2.8 | 103 | 0.00 | 11.52 |
| 87 M | 2-hexanone | 50.00 | 0.132 | 0.131 | 0.8 | 106 | 0.00 | 11.69 |
| 88 I | chlorobenzene-d5 | 50.00 | 1.000 | 1.000 | 0.0 | 101 | 0.00 | 12.60 |
| 89 M | tetrachloroethene | 50.00 | 0.434 | 0.399 | 8.1 | 103 | 0.00 | 11.69 |
| 90 M | 1,3-dichloropropane | 50.00 | 0.588 | 0.571 | 2.9 | 100 | 0.00 | 11.71 |
| 91 M | butyl acetate | 50.00 | 0.268 | 0.260 | 3.0 | 102 | 0.00 | 11.76 |
| 92 M | 3,3-DIMETHYL-1-BUTANOL | 500.00 | 0.039 | 0.035 | 10.3 | 99 | 0.00 | 11.87 |
| 93 M | dibromochloromethane | 50.00 | 0.460 | 0.449 | 2.4 | 102 | 0.00 | 11.99 |
| 94 M | 1,2-dibromoethane | 50.00 | 0.385 | 0.385 | 0.0 | 102 | 0.00 | 12.15 |
| 95 | n-butyl ether | | ----------NA---------- | | | | | |
| 96 M | chlorobenzene | 50.00 | 1.057 | 1.032 | 2.4 | 104 | 0.00 | 12.63 |
| 97 M | 1,1,1,2-tetrachloroethane | 50.00 | 0.404 | 0.378 | 6.4 | 99 | 0.00 | 12.70 |
| 98 M | ethylbenzene | 50.00 | 1.761 | 1.663 | 5.6 | 101 | 0.00 | 12.69 |
| 99 M | m,p-xylene | 100.00 | 0.671 | 0.647 | 3.6 | 102 | 0.00 | 12.80 |

6.9.2

# Initial Calibration Verification

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2289-ICV2289
**Lab FileID:** 4B54254.D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 100 | M | o-xylene | 50.00 | 0.677 | 0.677 | 0.0 | 103 | 0.00 | 13.25 |
| 101 | M | styrene | 50.00 | 1.155 | 1.130 | 2.2 | 102 | 0.00 | 13.27 |
| 102 | M | bromoform | 50.00 | 0.358 | 0.359 | -0.3 | 102 | 0.00 | 13.57 |
| 103 | I | 1,4-dichlorobenzene-d4 | 50.00 | 1.000 | 1.000 | 0.0 | 99 | 0.00 | 15.14 |
| 104 | M | isopropylbenzene | 50.00 | 3.174 | 2.910 | 8.3 | 101 | 0.00 | 13.63 |
| 105 | S | 4-bromofluorobenzene (s) | 50.00 | 0.873 | 0.863 | 1.1 | 100 | 0.00 | 13.86 |
| 106 | | cyclohexanone | 500.00 | 0.091 | 0.063 | 30.8# | 80 | 0.00 | 13.83 |
| 107 | M | bromobenzene | 50.00 | 0.931 | 0.888 | 4.6 | 100 | 0.00 | 14.07 |
| 108 | M | 1,1,2,2-tetrachloroethane | 50.00 | 0.930 | 0.890 | 4.3 | 98 | 0.00 | 13.98 |
| 109 | M | trans-1,4-dichloro-2-bute | 50.00 | 0.239 | 0.228 | 4.6 | 97 | 0.00 | 14.02 |
| 110 | M | 1,2,3-trichloropropane | 50.00 | 0.220 | 0.214 | 2.7 | 99 | 0.00 | 14.06 |
| 111 | M | n-propylbenzene | 50.00 | 3.588 | 3.502 | 2.4 | 106 | 0.00 | 14.08 |
| 112 | | 4-ETHYLTOLUENE | | ----------NA---------- | | | | | |
| 113 | M | 2-chlorotoluene | 50.00 | 0.813 | 0.746 | 8.2 | 100 | 0.00 | 14.24 |
| 114 | M | 4-chlorotoluene | 50.00 | 2.320 | 2.169 | 6.5 | 99 | 0.00 | 14.35 |
| 115 | M | 1,3,5-trimethylbenzene | 50.00 | 2.672 | 2.467 | 7.7 | 100 | 0.00 | 14.24 |
| 116 | M | tert-butylbenzene | 50.00 | 2.318 | 2.204 | 4.9 | 101 | 0.00 | 14.62 |
| 117 | M | pentachloroethane | 50.00 | 0.480 | 0.472 | 1.7 | 104 | 0.00 | 14.72 |
| 118 | M | 1,2,4-trimethylbenzene | 50.00 | 2.574 | 2.571 | 0.1 | 104 | 0.00 | 14.68 |
| 119 | M | sec-butylbenzene | 50.00 | 3.522 | 3.232 | 8.2 | 99 | 0.00 | 14.87 |
| 120 | M | 1,3-dichlorobenzene | 50.00 | 1.695 | 1.651 | 2.6 | 99 | 0.00 | 15.08 |
| 121 | M | p-isopropyltoluene | 50.00 | 2.944 | 2.772 | 5.8 | 100 | 0.00 | 15.00 |
| 122 | M | 1,4-dichlorobenzene | 50.00 | 1.695 | 1.633 | 3.7 | 99 | 0.00 | 15.17 |
| 123 | | benzyl chloride | 50.00 | 1.694 | 1.593 | 6.0 | 96 | 0.00 | 15.30 |
| 124 | M | 1,2-dichlorobenzene | 50.00 | 1.655 | 1.636 | 1.1 | 100 | 0.00 | 15.61 |
| 125 | | 1,4-DIETHYLBENZENE | | ----------NA---------- | | | | | |
| 126 | M | n-butylbenzene | 50.00 | 1.460 | 1.397 | 4.3 | 99 | 0.00 | 15.46 |
| 127 | | 1,2,4,5-TETRAMETHYLBENZEN | | ----------NA---------- | | | | | |
| 128 | M | 1,2-dibromo-3-chloropropa | 50.00 | 0.149 | 0.147 | 1.3 | 104 | 0.00 | 16.46 |
| 129 | | 1,3,5-TRICHLOROBENZENE | 50.00 | 1.320 | 1.346 | -2.0 | 102 | 0.00 | 16.65 |
| 130 | M | 1,2,4-trichlorobenzene | 50.00 | 1.057 | 1.046 | 1.0 | 96 | 0.00 | 17.33 |
| 131 | M | hexachlorobutadiene | 50.00 | 0.643 | 0.568 | 11.7 | 96 | 0.00 | 17.44 |
| 132 | M | naphthalene | 50.00 | 1.858 | 1.964 | -5.7 | 101 | 0.00 | 17.62 |
| 133 | M | 1,2,3-trichlorobenzene | 50.00 | 0.892 | 0.907 | -1.7 | 100 | 0.00 | 17.86 |
| 134 | m | hexachloroethane | 50.00 | 0.610 | 0.592 | 3.0 | 104 | 0.00 | 15.89 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B54249.D M4B2289.M Mon Aug 10 08:22:28 2015 GCMS4B

6.9.2 6

# Continuing Calibration Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2296-CC2289
**Lab FileID:** 4B54407.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\4B54407.D  Vial: 3
Acq On : 12 Aug 2015 10:09 am  Operator: TOANP
Sample : CC2289-20  Inst : MS4B
Misc : MS89342,V4B2296,w,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Mon Aug 10 08:19:32 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | | Compound | TrueValue | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | tert butyl alcohol-d9 | 500.00 | 1.000 | 1.000 | 0.0 | 94 | 0.00 | 6.58 |
| 2 | M | tertiary butyl alcohol | 100.00 | 1.209 | 1.151 | 4.8 | 87 | 0.00 | 6.68 |
| 3 | M | 1,4-dioxane | 500.00 | 0.112 | 0.128 | -14.3 | 100 | 0.00 | 10.11 |
| 4 | | Ethanol | | ----------NA---------- | | | | | |
| 5 | I | pentafluorobenzene | 50.00 | 1.000 | 1.000 | 0.0 | 99 | 0.00 | 8.56 |
| 6 | | CHLOROTRIFLUOROETHENE | | ----------NA---------- | | | | | |
| 7 | M | chlorodifluoromethane | 20.00 | 0.506 | 0.451 | 10.9 | 92 | 0.00 | 3.63 |
| 8 | M | dichlorodifluoromethane | 20.00 | 0.484 | 0.425 | 12.2 | 92 | 0.00 | 3.61 |
| 9 | | Freon 114 | | ----------NA---------- | | | | | |
| 10 | M | chloromethane | 20.00 | 0.185 | 0.173 | 6.5 | 98 | 0.01 | 3.97 |
| 11 | M | vinyl chloride | 20.00 | 0.532 | 0.458 | 13.9 | 88 | 0.00 | 4.17 |
| 12 | M | bromomethane | 20.00 | 0.305 | 0.319 | -4.6 | 110 | 0.01 | 4.76 |
| 13 | M | chloroethane | 20.00 | 0.209 | 0.219 | -4.8 | 106 | 0.01 | 4.92 |
| 14 | | vinyl bromide | | ----------NA---------- | | | | | |
| 15 | M | trichlorofluoromethane | 20.00 | 0.503 | 0.501 | 0.4 | 101 | 0.00 | 5.28 |
| 16 | | 1,3-butadiene | | ----------NA---------- | | | | | |
| 17 | | Pentane | | ----------NA---------- | | | | | |
| 18 | | freon 123a | | ----------NA---------- | | | | | |
| 19 | M | ethyl ether | 20.00 | 0.191 | 0.163 | 14.7 | 86 | 0.00 | 5.63 |
| 20 | | 2-chloropropane | 20.00 | 0.061 | 0.056 | 8.2 | 84 | 0.00 | 5.81 |
| 21 | M | acrolein | 200.00 | 0.064 | 0.053 | 17.2 | 84 | 0.00 | 5.86 |
| 22 | M | 1,1-dichloroethene | 20.00 | 0.395 | 0.374 | 5.3 | 98 | 0.01 | 6.03 |
| 23 | M | acetone | 20.00 | 0.033 | 0.029 | 12.1 | 86 | 0.00 | 6.05 |
| 24 | M | allyl chloride | 20.00 | 0.289 | 0.267 | 7.6 | 103 | 0.00 | 6.46 |
| 25 | M | acetonitrile | 200.00 | 0.032 | 0.027 | 15.6 | 80 | 0.00 | 6.45 |
| 26 | M | iodomethane | 20.00 | 0.746 | 0.695 | 6.8 | 95 | 0.00 | 6.28 |
| 27 | M | carbon disulfide | 20.00 | 1.159 | 1.104 | 4.7 | 95 | 0.00 | 6.38 |
| 28 | M | methylene chloride | 20.00 | 0.418 | 0.390 | 6.7 | 95 | 0.01 | 6.65 |
| 29 | M | methyl acetate | 20.00 | 0.056 | 0.051 | 8.9 | 85 | 0.00 | 6.44 |
| 30 | | 1-chloropropane | 20.00 | 0.714 | 0.616 | 13.7 | 92 | 0.00 | 6.66 |
| 31 | M | methyl tert butyl ether | 20.00 | 1.053 | 0.968 | 8.1 | 92 | 0.00 | 6.89 |
| 32 | M | trans-1,2-dichloroethene | 20.00 | 0.388 | 0.340 | 12.4 | 94 | 0.00 | 6.95 |
| 33 | M | di-isopropyl ether | 20.00 | 1.381 | 1.141 | 17.4 | 83 | 0.00 | 7.41 |
| 34 | M | 2-butanone | 20.00 | 0.044 | 0.036 | 18.2 | 81 | 0.00 | 8.08 |
| 35 | M | 1,1-dichloroethane | 20.00 | 0.730 | 0.635 | 13.0 | 88 | 0.00 | 7.46 |
| 36 | M | chloroprene | 20.00 | 0.540 | 0.486 | 10.0 | 92 | 0.00 | 7.55 |
| 37 | M | acrylonitrile | 100.00 | 0.149 | 0.126 | 15.4 | 86 | 0.00 | 6.93 |
| 38 | M | vinyl acetate | 20.00 | 0.056 | 0.051 | 8.9 | 89 | 0.00 | 7.43 |
| 39 | M | ethyl tert-butyl ether | 20.00 | 1.227 | 1.103 | 10.1 | 90 | 0.00 | 7.83 |
| 40 | M | ethyl acetate | 20.00 | 0.060 | 0.049 | 18.3 | 85 | 0.00 | 8.08 |
| 41 | M | 2,2-dichloropropane | 20.00 | 0.309 | 0.285 | 7.8 | 94 | 0.00 | 8.11 |

# Continuing Calibration Summary

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2296-CC2289
**Lab FileID:** 4B54407.D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42 | M | cis-1,2-dichloroethene | 20.00 | 0.422 | 0.380 | 10.0 | 95 | 0.00 | 8.11 |
| 43 | | methylacrylate | 20.00 | 0.057 | 0.050 | 12.3 | 89 | 0.00 | 8.16 |
| 44 | M | propionitrile | 200.00 | 0.060 | 0.050 | 16.7 | 83 | 0.00 | 8.19 |
| 45 | M | bromochloromethane | 20.00 | 0.216 | 0.205 | 5.1 | 96 | 0.00 | 8.40 |
| 46 | M | tetrahydrofuran | 20.00 | 0.144 | 0.117 | 18.7 | 82 | 0.00 | 8.43 |
| 47 | M | chloroform | 20.00 | 0.437 | 0.401 | 8.2 | 94 | 0.00 | 8.44 |
| 48 | M | T-BUTYL FORMATE | 20.00 | 0.279 | 0.256 | 8.2 | 91 | 0.00 | 8.46 |
| 49 | S | dibromofluoromethane (s) | 50.00 | 0.362 | 0.356 | 1.7 | 96 | 0.00 | 8.63 |
| 50 | S | 1,2-dichloroethane-d4 (s) | 50.00 | 0.397 | 0.366 | 7.8 | 90 | 0.00 | 9.02 |
| 51 | M | freon 113 | 20.00 | 0.240 | 0.218 | 9.2 | 92 | 0.01 | 5.97 |
| 52 | M | methacrylonitrile | 20.00 | 0.265 | 0.210 | 20.8# | 81 | 0.00 | 8.34 |
| 53 | M | 1,1,1-trichloroethane | 20.00 | 0.462 | 0.431 | 6.7 | 94 | 0.00 | 8.67 |
| 54 | M | cyclohexane | 20.00 | 0.506 | 0.399 | 21.1# | 82 | 0.00 | 8.74 |
| 55 | | iso-butyl alcohol | 200.00 | 0.016 | 0.014 | 12.5 | 86 | 0.00 | 8.83 |
| 56 | I | 1,4-difluorobenzene | 50.00 | 1.000 | 1.000 | 0.0 | 96 | 0.00 | 9.42 |
| 57 | M | epichlorohydrin | 100.00 | 0.034 | 0.030 | 11.8 | 90 | 0.00 | 10.64 |
| 58 | M | n-butyl alcohol | 1000.00 | 0.010 | 0.010# | 0.0 | 98 | 0.00 | 9.53 |
| 59 | M | carbon tetrachloride | 20.00 | 0.400 | 0.360 | 10.0 | 88 | 0.00 | 8.86 |
| 60 | M | 1,1-dichloropropene | 20.00 | 0.445 | 0.401 | 9.9 | 89 | 0.00 | 8.83 |
| 61 | M | hexane | 20.00 | 0.338 | 0.283 | 16.3 | 85 | 0.00 | 7.20 |
| 62 | | Tert Amyl alcohol | | ----------NA---------- | | | | | |
| 63 | M | benzene | 20.00 | 1.309 | 1.210 | 7.6 | 92 | 0.00 | 9.08 |
| 64 | m | iso-octane | 20.00 | 1.051 | 0.813 | 22.6# | 77 | 0.00 | 9.07 |
| 65 | M | tert-amyl methyl ether | 20.00 | 0.208 | 0.186 | 10.6 | 87 | 0.00 | 9.09 |
| 66 | M | heptane | 20.00 | 0.232 | 0.201 | 13.4 | 85 | 0.00 | 9.21 |
| 67 | M | isopropyl acetate | 20.00 | 0.156 | 0.130 | 16.7 | 85 | 0.00 | 8.99 |
| 68 | M | 1,2-dichloroethane | 20.00 | 0.431 | 0.414 | 3.9 | 91 | 0.00 | 9.10 |
| 69 | M | trichloroethene | 20.00 | 0.352 | 0.341 | 3.1 | 98 | 0.00 | 9.74 |
| 70 | | Tert-amyl Ethyl Ether | | ----------NA---------- | | | | | |
| 71 | | ethyl acrylate | | ----------NA---------- | | | | | |
| 72 | M | 2-nitropropane | 20.00 | 0.141 | 0.122 | 13.5 | 84 | 0.00 | 10.50 |
| 73 | M | 2-chloroethyl vinyl ether | 100.00 | 0.209 | 0.176 | 15.8 | 80 | 0.00 | 10.50 |
| 74 | M | methyl methacrylate | 20.00 | 0.084 | 0.079 | 6.0 | 90 | 0.00 | 9.99 |
| 75 | M | 1,2-dichloropropane | 20.00 | 0.376 | 0.336 | 10.6 | 87 | 0.00 | 10.00 |
| 76 | M | dibromomethane | 20.00 | 0.219 | 0.209 | 4.6 | 92 | 0.00 | 10.16 |
| 77 | M | methylcyclohexane | 20.00 | 0.453 | 0.394 | 13.0 | 86 | 0.00 | 9.94 |
| 78 | M | bromodichloromethane | 20.00 | 0.471 | 0.452 | 4.0 | 93 | 0.00 | 10.28 |
| 79 | M | cis-1,3-dichloropropene | 20.00 | 0.610 | 0.543 | 11.0 | 88 | 0.00 | 10.72 |
| 80 | S | toluene-d8 (s) | 50.00 | 1.177 | 1.159 | 1.5 | 94 | 0.00 | 11.02 |
| 81 | M | 4-methyl-2-pentanone | 20.00 | 0.144 | 0.127 | 11.8 | 82 | 0.00 | 10.82 |
| 82 | M | toluene | 20.00 | 0.834 | 0.772 | 7.4 | 94 | 0.00 | 11.09 |
| 83 | M | 3-methyl-1-butanol | 400.00 | 0.016 | 0.015 | 6.3 | 93 | 0.00 | 10.83 |
| 84 | M | trans-1,3-dichloropropene | 20.00 | 0.534 | 0.485 | 9.2 | 86 | 0.00 | 11.29 |
| 85 | M | ethyl methacrylate | 20.00 | 0.442 | 0.393 | 11.1 | 88 | 0.00 | 11.27 |
| 86 | M | 1,1,2-trichloroethane | 20.00 | 0.290 | 0.265 | 8.6 | 93 | 0.00 | 11.52 |
| 87 | M | 2-hexanone | 20.00 | 0.132 | 0.111 | 15.9 | 83 | 0.00 | 11.69 |
| 88 | I | chlorobenzene-d5 | 50.00 | 1.000 | 1.000 | 0.0 | 96 | 0.00 | 12.60 |
| 89 | M | tetrachloroethene | 20.00 | 0.434 | 0.424 | 2.3 | 97 | 0.00 | 11.69 |
| 90 | M | 1,3-dichloropropane | 20.00 | 0.588 | 0.544 | 7.5 | 90 | 0.00 | 11.71 |
| 91 | M | butyl acetate | 20.00 | 0.268 | 0.219 | 18.3 | 81 | 0.00 | 11.76 |
| 92 | M | 3,3-DIMETHYL-1-BUTANOL | 200.00 | 0.039 | 0.040 | -2.6 | 97 | 0.00 | 11.87 |
| 93 | M | dibromochloromethane | 20.00 | 0.460 | 0.436 | 5.2 | 95 | 0.00 | 11.99 |
| 94 | M | 1,2-dibromoethane | 20.00 | 0.385 | 0.374 | 2.9 | 95 | 0.00 | 12.15 |
| 95 | | n-butyl ether | | ----------NA---------- | | | | | |
| 96 | M | chlorobenzene | 20.00 | 1.057 | 1.027 | 2.8 | 96 | 0.00 | 12.63 |
| 97 | M | 1,1,1,2-tetrachloroethane | 20.00 | 0.404 | 0.391 | 3.2 | 96 | 0.00 | 12.69 |
| 98 | M | ethylbenzene | 20.00 | 1.761 | 1.695 | 3.7 | 94 | 0.00 | 12.68 |
| 99 | M | m,p-xylene | 40.00 | 0.671 | 0.651 | 3.0 | 95 | 0.00 | 12.80 |

# Continuing Calibration Summary

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2296-CC2289
**Lab FileID:** 4B54407.D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 100 | M | o-xylene | 20.00 | 0.677 | 0.676 | 0.1 | 97 | 0.00 | 13.26 |
| 101 | M | styrene | 20.00 | 1.155 | 1.096 | 5.1 | 93 | 0.00 | 13.27 |
| 102 | M | bromoform | 20.00 | 0.358 | 0.319 | 10.9 | 89 | 0.00 | 13.57 |
| 103 | I | 1,4-dichlorobenzene-d4 | 50.00 | 1.000 | 1.000 | 0.0 | 93 | 0.00 | 15.14 |
| 104 | M | isopropylbenzene | 20.00 | 3.174 | 3.051 | 3.9 | 95 | 0.00 | 13.63 |
| 105 | S | 4-bromofluorobenzene (s) | 50.00 | 0.873 | 0.855 | 2.1 | 92 | 0.00 | 13.86 |
| 106 | | cyclohexanone | 200.00 | 0.091 | 0.087 | 4.4 | 88 | 0.00 | 13.83 |
| 107 | M | bromobenzene | 20.00 | 0.931 | 0.932 | -0.1 | 97 | 0.00 | 14.07 |
| 108 | M | 1,1,2,2-tetrachloroethane | 20.00 | 0.930 | 0.890 | 4.3 | 91 | 0.00 | 13.98 |
| 109 | M | trans-1,4-dichloro-2-bute | 20.00 | 0.239 | 0.133 | 44.4# | 53 | 0.00 | 14.02 |
| 110 | M | 1,2,3-trichloropropane | 20.00 | 0.220 | 0.218 | 0.9 | 89 | 0.00 | 14.06 |
| 111 | M | n-propylbenzene | 20.00 | 3.588 | 3.462 | 3.5 | 94 | 0.00 | 14.08 |
| 112 | | 4-ETHYLTOLUENE | | ----------NA---------- | | | | | |
| 113 | M | 2-chlorotoluene | 20.00 | 0.813 | 0.787 | 3.2 | 95 | 0.00 | 14.24 |
| 114 | M | 4-chlorotoluene | 20.00 | 2.320 | 2.187 | 5.7 | 92 | 0.00 | 14.35 |
| 115 | M | 1,3,5-trimethylbenzene | 20.00 | 2.672 | 2.593 | 3.0 | 96 | 0.00 | 14.24 |
| 116 | M | tert-butylbenzene | 20.00 | 2.318 | 2.315 | 0.1 | 97 | 0.00 | 14.62 |
| 117 | M | pentachloroethane | 20.00 | 0.480 | 0.505 | -5.2 | 103 | 0.00 | 14.72 |
| 118 | M | 1,2,4-trimethylbenzene | 20.00 | 2.574 | 2.542 | 1.2 | 94 | 0.00 | 14.68 |
| 119 | M | sec-butylbenzene | 20.00 | 3.522 | 3.378 | 4.1 | 94 | 0.00 | 14.87 |
| 120 | M | 1,3-dichlorobenzene | 20.00 | 1.695 | 1.676 | 1.1 | 94 | 0.00 | 15.08 |
| 121 | M | p-isopropyltoluene | 20.00 | 2.944 | 2.908 | 1.2 | 96 | 0.00 | 15.00 |
| 122 | M | 1,4-dichlorobenzene | 20.00 | 1.695 | 1.658 | 2.2 | 94 | 0.00 | 15.17 |
| 123 | | benzyl chloride | 20.00 | 1.694 | 1.499 | 11.5 | 87 | 0.00 | 15.30 |
| 124 | M | 1,2-dichlorobenzene | 20.00 | 1.655 | 1.663 | -0.5 | 95 | 0.00 | 15.61 |
| 125 | | 1,4-DIETHYLBENZENE | | ----------NA---------- | | | | | |
| 126 | M | n-butylbenzene | 20.00 | 1.460 | 1.385 | 5.1 | 90 | 0.00 | 15.46 |
| 127 | | 1,2,4,5-TETRAMETHYLBENZEN | | ----------NA---------- | | | | | |
| 128 | M | 1,2-dibromo-3-chloropropa | 20.00 | 0.149 | 0.137 | 8.1 | 88 | 0.00 | 16.46 |
| 129 | | 1,3,5-TRICHLOROBENZENE | 20.00 | 1.320 | 1.326 | -0.5 | 94 | 0.00 | 16.65 |
| 130 | M | 1,2,4-trichlorobenzene | 20.00 | 1.057 | 0.987 | 6.6 | 89 | 0.00 | 17.33 |
| 131 | M | hexachlorobutadiene | 20.00 | 0.643 | 0.707 | -10.0 | 103 | 0.00 | 17.44 |
| 132 | M | naphthalene | 20.00 | 1.858 | 1.712 | 7.9 | 85 | 0.00 | 17.62 |
| 133 | M | 1,2,3-trichlorobenzene | 20.00 | 0.892 | 0.847 | 5.0 | 87 | 0.00 | 17.88 |
| 134 | m | hexachloroethane | 20.00 | 0.610 | 0.584 | 4.3 | 94 | 0.00 | 15.89 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B54248.D M4B2289.M Wed Aug 12 17:18:30 2015 GCMS4B

6.9.3

# Continuing Calibration Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2297-CC2289
**Lab FileID:** 4B54431.D

Evaluate Continuing Calibration Report

Data File : C:\MSDChem\1\DATA\4B54431.D  Vial: 27
Acq On : 12 Aug 2015 9:35 pm  Operator: TOANP
Sample : cc2289-50  Inst : MS4B
Misc : MS89499,V4B2297,w,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Mon Aug 10 08:19:32 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | Compound | TrueValue | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | tert butyl alcohol-d9 | 500.00 | 1.000 | 1.000 | 0.0 | 91 | 0.00 | 6.58 |
| 2 M | tertiary butyl alcohol | 250.00 | 1.209 | 1.305 | -7.9 | 105 | 0.00 | 6.68 |
| 3 M | 1,4-dioxane | 1250.00 | 0.112 | 0.122 | -8.9 | 98 | 0.00 | 10.11 |
| 4 | Ethanol | | ----------NA---------- | | | | | |
| 5 I | pentafluorobenzene | 50.00 | 1.000 | 1.000 | 0.0 | 97 | 0.00 | 8.56 |
| 6 | CHLOROTRIFLUOROETHENE | | ----------NA---------- | | | | | |
| 7 M | chlorodifluoromethane | 50.00 | 0.506 | 0.449 | 11.3 | 91 | 0.00 | 3.64 |
| 8 M | dichlorodifluoromethane | 50.00 | 0.484 | 0.454 | 6.2 | 93 | -0.01 | 3.60 |
| 9 | Freon 114 | | ----------NA---------- | | | | | |
| 10 M | chloromethane | 50.00 | 0.185 | 0.158 | 14.6 | 87 | 0.00 | 3.96 |
| 11 M | vinyl chloride | 50.00 | 0.532 | 0.463 | 13.0 | 85 | 0.00 | 4.18 |
| 12 M | bromomethane | 50.00 | 0.305 | 0.296 | 3.0 | 96 | 0.00 | 4.75 |
| 13 M | chloroethane | 50.00 | 0.209 | 0.197 | 5.7 | 91 | 0.00 | 4.91 |
| 14 | vinyl bromide | | ----------NA---------- | | | | | |
| 15 M | trichlorofluoromethane | 50.00 | 0.503 | 0.525 | -4.4 | 100 | 0.00 | 5.28 |
| 16 | 1,3-butadiene | | ----------NA---------- | | | | | |
| 17 | Pentane | | ----------NA---------- | | | | | |
| 18 | freon 123a | | ----------NA---------- | | | | | |
| 19 M | ethyl ether | 50.00 | 0.191 | 0.167 | 12.6 | 87 | 0.00 | 5.62 |
| 20 | 2-chloropropane | 50.00 | 0.061 | 0.064 | -4.9 | 112 | 0.00 | 5.81 |
| 21 M | acrolein | 500.00 | 0.064 | 0.061 | 4.7 | 88 | 0.00 | 5.86 |
| 22 M | 1,1-dichloroethene | 50.00 | 0.395 | 0.356 | 9.9 | 94 | 0.00 | 6.02 |
| 23 M | acetone | 50.00 | 0.033 | 0.032 | 3.0 | 93 | 0.00 | 6.05 |
| 24 M | allyl chloride | 50.00 | 0.289 | 0.205 | 29.1# | 74 | 0.00 | 6.46 |
| 25 M | acetonitrile | 500.00 | 0.032 | 0.028 | 12.5 | 87 | -0.01 | 6.44 |
| 26 M | iodomethane | 50.00 | 0.746 | 0.722 | 3.2 | 96 | 0.00 | 6.27 |
| 27 M | carbon disulfide | 50.00 | 1.159 | 1.097 | 5.3 | 96 | 0.00 | 6.38 |
| 28 M | methylene chloride | 50.00 | 0.418 | 0.379 | 9.3 | 89 | 0.00 | 6.64 |
| 29 M | methyl acetate | 50.00 | 0.056 | 0.057 | -1.8 | 94 | 0.00 | 6.44 |
| 30 | 1-chloropropane | 50.00 | 0.714 | 0.559 | 21.7# | 83 | 0.00 | 6.66 |
| 31 M | methyl tert butyl ether | 50.00 | 1.053 | 0.977 | 7.2 | 92 | 0.00 | 6.89 |
| 32 M | trans-1,2-dichloroethene | 50.00 | 0.388 | 0.338 | 12.9 | 95 | 0.00 | 6.95 |
| 33 M | di-isopropyl ether | 50.00 | 1.381 | 1.180 | 14.6 | 84 | 0.00 | 7.41 |
| 34 M | 2-butanone | 50.00 | 0.044 | 0.040 | 9.1 | 90 | 0.00 | 8.08 |
| 35 M | 1,1-dichloroethane | 50.00 | 0.730 | 0.622 | 14.8 | 89 | 0.00 | 7.45 |
| 36 M | chloroprene | 50.00 | 0.540 | 0.501 | 7.2 | 98 | 0.00 | 7.55 |
| 37 M | acrylonitrile | 250.00 | 0.149 | 0.130 | 12.8 | 85 | 0.00 | 6.92 |
| 38 M | vinyl acetate | 50.00 | 0.056 | 0.055 | 1.8 | 96 | 0.00 | 7.43 |
| 39 M | ethyl tert-butyl ether | 50.00 | 1.227 | 1.145 | 6.7 | 91 | 0.00 | 7.83 |
| 40 M | ethyl acetate | 50.00 | 0.060 | 0.051 | 15.0 | 84 | 0.00 | 8.08 |
| 41 M | 2,2-dichloropropane | 50.00 | 0.309 | 0.266 | 13.9 | 95 | 0.00 | 8.11 |

# Continuing Calibration Summary

**Job Number:** JC1107 **Sample:** V4B2297-CC2289
**Account:** UTC United Technologies Corporation **Lab FileID:** 4B54431.D
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42 | M | cis-1,2-dichloroethene | 50.00 | 0.422 | 0.379 | 10.2 | 92 | 0.00 | 8.11 |
| 43 | | methylacrylate | 50.00 | 0.057 | 0.054 | 5.3 | 92 | 0.00 | 8.17 |
| 44 | M | propionitrile | 500.00 | 0.060 | 0.053 | 11.7 | 87 | 0.00 | 8.18 |
| 45 | M | bromochloromethane | 50.00 | 0.216 | 0.212 | 1.9 | 96 | 0.00 | 8.40 |
| 46 | M | tetrahydrofuran | 50.00 | 0.144 | 0.115 | 20.1# | 83 | 0.00 | 8.43 |
| 47 | M | chloroform | 50.00 | 0.437 | 0.406 | 7.1 | 93 | 0.00 | 8.44 |
| 48 | M | T-BUTYL FORMATE | 50.00 | 0.279 | 0.287 | -2.9 | 94 | 0.00 | 8.46 |
| 49 | S | dibromofluoromethane (s) | 50.00 | 0.362 | 0.358 | 1.1 | 96 | 0.00 | 8.63 |
| 50 | S | 1,2-dichloroethane-d4 (s) | 50.00 | 0.397 | 0.383 | 3.5 | 94 | 0.00 | 9.02 |
| 51 | M | freon 113 | 50.00 | 0.240 | 0.236 | 1.7 | 101 | 0.00 | 5.96 |
| 52 | M | methacrylonitrile | 50.00 | 0.265 | 0.218 | 17.7 | 83 | 0.00 | 8.34 |
| 53 | M | 1,1,1-trichloroethane | 50.00 | 0.462 | 0.454 | 1.7 | 102 | 0.00 | 8.67 |
| 54 | M | cyclohexane | 50.00 | 0.506 | 0.427 | 15.6 | 90 | 0.00 | 8.74 |
| 55 | | iso-butyl alcohol | 500.00 | 0.016 | 0.014 | 12.5 | 92 | 0.00 | 8.82 |
| 56 | I | 1,4-difluorobenzene | 50.00 | 1.000 | 1.000 | 0.0 | 95 | 0.00 | 9.42 |
| 57 | M | epichlorohydrin | 250.00 | 0.034 | 0.032 | 5.9 | 88 | 0.00 | 10.63 |
| 58 | M | n-butyl alcohol | 2500.00 | 0.010 | 0.009# | 10.0 | 99 | 0.00 | 9.53 |
| 59 | M | carbon tetrachloride | 50.00 | 0.400 | 0.396 | 1.0 | 101 | 0.00 | 8.86 |
| 60 | M | 1,1-dichloropropene | 50.00 | 0.445 | 0.394 | 11.5 | 93 | 0.00 | 8.83 |
| 61 | M | hexane | 50.00 | 0.338 | 0.286 | 15.4 | 91 | 0.00 | 7.20 |
| 62 | | Tert Amyl alcohol | | ----------NA---------- | | | | | |
| 63 | M | benzene | 50.00 | 1.309 | 1.162 | 11.2 | 91 | 0.00 | 9.08 |
| 64 | m | iso-octane | 50.00 | 1.051 | 0.828 | 21.2# | 82 | 0.00 | 9.06 |
| 65 | M | tert-amyl methyl ether | 50.00 | 0.208 | 0.208 | 0.0 | 96 | 0.00 | 9.09 |
| 66 | M | heptane | 50.00 | 0.232 | 0.246 | -6.0 | 111 | 0.00 | 9.21 |
| 67 | M | isopropyl acetate | 50.00 | 0.156 | 0.129 | 17.3 | 88 | 0.00 | 8.99 |
| 68 | M | 1,2-dichloroethane | 50.00 | 0.431 | 0.408 | 5.3 | 91 | 0.00 | 9.10 |
| 69 | M | trichloroethene | 50.00 | 0.352 | 0.331 | 6.0 | 94 | 0.00 | 9.74 |
| 70 | | Tert-amyl Ethyl Ether | | ----------NA---------- | | | | | |
| 71 | | ethyl acrylate | | ----------NA---------- | | | | | |
| 72 | M | 2-nitropropane | 50.00 | 0.141 | 0.130 | 7.8 | 90 | 0.00 | 10.50 |
| 73 | M | 2-chloroethyl vinyl ether | 250.00 | 0.209 | 0.195 | 6.7 | 86 | 0.00 | 10.50 |
| 74 | M | methyl methacrylate | 50.00 | 0.084 | 0.084 | 0.0 | 94 | 0.00 | 9.99 |
| 75 | M | 1,2-dichloropropane | 50.00 | 0.376 | 0.328 | 12.8 | 86 | 0.00 | 10.00 |
| 76 | M | dibromomethane | 50.00 | 0.219 | 0.215 | 1.8 | 92 | 0.00 | 10.16 |
| 77 | M | methylcyclohexane | 50.00 | 0.453 | 0.436 | 3.8 | 99 | 0.00 | 9.94 |
| 78 | M | bromodichloromethane | 50.00 | 0.471 | 0.456 | 3.2 | 91 | 0.00 | 10.28 |
| 79 | M | cis-1,3-dichloropropene | 50.00 | 0.610 | 0.551 | 9.7 | 88 | 0.00 | 10.72 |
| 80 | S | toluene-d8 (s) | 50.00 | 1.177 | 1.165 | 1.0 | 93 | 0.00 | 11.02 |
| 81 | M | 4-methyl-2-pentanone | 50.00 | 0.144 | 0.132 | 8.3 | 89 | 0.00 | 10.82 |
| 82 | M | toluene | 50.00 | 0.834 | 0.771 | 7.6 | 95 | 0.00 | 11.09 |
| 83 | M | 3-methyl-1-butanol | 1000.00 | 0.016 | 0.014 | 12.5 | 93 | 0.00 | 10.83 |
| 84 | M | trans-1,3-dichloropropene | 50.00 | 0.534 | 0.508 | 4.9 | 89 | 0.00 | 11.29 |
| 85 | M | ethyl methacrylate | 50.00 | 0.442 | 0.428 | 3.2 | 90 | 0.00 | 11.27 |
| 86 | M | 1,1,2-trichloroethane | 50.00 | 0.290 | 0.272 | 6.2 | 91 | 0.00 | 11.52 |
| 87 | M | 2-hexanone | 50.00 | 0.132 | 0.115 | 12.9 | 86 | 0.00 | 11.69 |
| 88 | I | chlorobenzene-d5 | 50.00 | 1.000 | 1.000 | 0.0 | 94 | 0.00 | 12.60 |
| 89 | M | tetrachloroethene | 50.00 | 0.434 | 0.419 | 3.5 | 101 | 0.00 | 11.69 |
| 90 | M | 1,3-dichloropropane | 50.00 | 0.588 | 0.547 | 7.0 | 90 | 0.00 | 11.71 |
| 91 | M | butyl acetate | 50.00 | 0.268 | 0.236 | 11.9 | 87 | 0.00 | 11.76 |
| 92 | M | 3,3-DIMETHYL-1-BUTANOL | 500.00 | 0.039 | 0.034 | 12.8 | 90 | 0.00 | 11.87 |
| 93 | M | dibromochloromethane | 50.00 | 0.460 | 0.450 | 2.2 | 96 | 0.00 | 11.99 |
| 94 | M | 1,2-dibromoethane | 50.00 | 0.385 | 0.383 | 0.5 | 95 | 0.00 | 12.15 |
| 95 | | n-butyl ether | | ----------NA---------- | | | | | |
| 96 | M | chlorobenzene | 50.00 | 1.057 | 1.014 | 4.1 | 96 | 0.00 | 12.63 |
| 97 | M | 1,1,1,2-tetrachloroethane | 50.00 | 0.404 | 0.390 | 3.5 | 96 | 0.00 | 12.70 |
| 98 | M | ethylbenzene | 50.00 | 1.761 | 1.665 | 5.5 | 95 | 0.00 | 12.69 |
| 99 | M | m,p-xylene | 100.00 | 0.671 | 0.638 | 4.9 | 94 | 0.00 | 12.80 |

# Continuing Calibration Summary

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2297-CC2289
**Lab FileID:** 4B54431.D

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 100 M | o-xylene | 50.00 | 0.677 | 0.669 | 1.2 | 95 | 0.00 | 13.25 |
| 101 M | styrene | 50.00 | 1.155 | 1.112 | 3.7 | 94 | 0.00 | 13.27 |
| 102 M | bromoform | 50.00 | 0.358 | 0.349 | 2.5 | 93 | 0.00 | 13.57 |
| 103 I | 1,4-dichlorobenzene-d4 | 50.00 | 1.000 | 1.000 | 0.0 | 93 | 0.00 | 15.14 |
| 104 M | isopropylbenzene | 50.00 | 3.174 | 2.899 | 8.7 | 95 | 0.00 | 13.63 |
| 105 S | 4-bromofluorobenzene (s) | 50.00 | 0.873 | 0.847 | 3.0 | 93 | 0.00 | 13.86 |
| 106 | cyclohexanone | 500.00 | 0.091 | 0.037 | 59.3# | 45# | 0.00 | 13.83 |
| 107 M | bromobenzene | 50.00 | 0.931 | 0.894 | 4.0 | 95 | 0.00 | 14.07 |
| 108 M | 1,1,2,2-tetrachloroethane | 50.00 | 0.930 | 0.869 | 6.6 | 91 | 0.00 | 13.98 |
| 109 M | trans-1,4-dichloro-2-bute | 50.00 | 0.239 | 0.148 | 38.1# | 60 | 0.00 | 14.02 |
| 110 M | 1,2,3-trichloropropane | 50.00 | 0.220 | 0.215 | 2.3 | 94 | 0.00 | 14.06 |
| 111 M | n-propylbenzene | 50.00 | 3.588 | 3.278 | 8.6 | 94 | 0.00 | 14.08 |
| 112 | 4-ETHYLTOLUENE | | ----------NA---------- | | | | | |
| 113 M | 2-chlorotoluene | 50.00 | 0.813 | 0.745 | 8.4 | 94 | 0.00 | 14.24 |
| 114 M | 4-chlorotoluene | 50.00 | 2.320 | 2.111 | 9.0 | 91 | 0.00 | 14.35 |
| 115 M | 1,3,5-trimethylbenzene | 50.00 | 2.672 | 2.474 | 7.4 | 95 | 0.00 | 14.24 |
| 116 M | tert-butylbenzene | 50.00 | 2.318 | 2.230 | 3.8 | 97 | 0.00 | 14.62 |
| 117 M | pentachloroethane | 50.00 | 0.480 | 0.472 | 1.7 | 98 | 0.00 | 14.72 |
| 118 M | 1,2,4-trimethylbenzene | 50.00 | 2.574 | 2.452 | 4.7 | 94 | 0.00 | 14.68 |
| 119 M | sec-butylbenzene | 50.00 | 3.522 | 3.288 | 6.6 | 95 | 0.00 | 14.87 |
| 120 M | 1,3-dichlorobenzene | 50.00 | 1.695 | 1.670 | 1.5 | 95 | 0.00 | 15.08 |
| 121 M | p-isopropyltoluene | 50.00 | 2.944 | 2.815 | 4.4 | 96 | 0.00 | 15.00 |
| 122 M | 1,4-dichlorobenzene | 50.00 | 1.695 | 1.630 | 3.8 | 94 | 0.00 | 15.17 |
| 123 | benzyl chloride | 50.00 | 1.694 | 1.462 | 13.7 | 84 | 0.00 | 15.30 |
| 124 M | 1,2-dichlorobenzene | 50.00 | 1.655 | 1.652 | 0.2 | 96 | 0.00 | 15.61 |
| 125 | 1,4-DIETHYLBENZENE | | ----------NA---------- | | | | | |
| 126 M | n-butylbenzene | 50.00 | 1.460 | 1.375 | 5.8 | 92 | 0.00 | 15.46 |
| 127 | 1,2,4,5-TETRAMETHYLBENZEN | | ----------NA---------- | | | | | |
| 128 M | 1,2-dibromo-3-chloropropa | 50.00 | 0.149 | 0.141 | 5.4 | 94 | 0.00 | 16.46 |
| 129 | 1,3,5-TRICHLOROBENZENE | 50.00 | 1.320 | 1.378 | -4.4 | 98 | 0.00 | 16.65 |
| 130 M | 1,2,4-trichlorobenzene | 50.00 | 1.057 | 1.071 | -1.3 | 94 | 0.00 | 17.33 |
| 131 M | hexachlorobutadiene | 50.00 | 0.643 | 0.666 | -3.6 | 107 | 0.00 | 17.44 |
| 132 M | naphthalene | 50.00 | 1.858 | 1.871 | -0.7 | 91 | 0.00 | 17.62 |
| 133 M | 1,2,3-trichlorobenzene | 50.00 | 0.892 | 0.920 | -3.1 | 96 | 0.00 | 17.88 |
| 134 m | hexachloroethane | 50.00 | 0.610 | 0.576 | 5.6 | 95 | 0.00 | 15.89 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B54249.D M4B2289.M Thu Aug 13 12:17:21 2015 GCMS4B

6.9.4 6

Raw Data: 4B54455.D

# Continuing Calibration Summary



**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2298-CC2289
**Lab FileID:** 4B54455.D

Evaluate Continuing Calibration Report

Data File : C:\MSDCHEM\1\DATA\4B54455.D  Vial: 2
Acq On : 13 Aug 2015 9:46 am  Operator: TOANP
Sample : cc2289-20  Inst : MS4B
Misc : MS89470,V4B2298,w,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Mon Aug 10 08:19:32 2015
Response via : Multiple Level Calibration

Min. RRF : 0.010 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

| | Compound | TrueValue | AvgRF | CCRF | %Dev | Area% | Dev(min) | R.T. |
|---|---|---|---|---|---|---|---|---|
| 1 | tert butyl alcohol-d9 | 500.00 | 1.000 | 1.000 | 0.0 | 100 | 0.00 | 6.57 |
| 2 M | tertiary butyl alcohol | 100.00 | 1.209 | 1.311 | -8.4 | 105 | 0.00 | 6.67 |
| 3 M | 1,4-dioxane | 500.00 | 0.112 | 0.113 | -0.9 | 94 | -0.01 | 10.10 |
| 4 | Ethanol | | ----------NA---------- | | | | | |
| 5 I | pentafluorobenzene | 50.00 | 1.000 | 1.000 | 0.0 | 95 | 0.00 | 8.56 |
| 6 | CHLOROTRIFLUOROETHENE | | ----------NA---------- | | | | | |
| 7 M | chlorodifluoromethane | 20.00 | 0.506 | 0.458 | 9.5 | 90 | 0.00 | 3.64 |
| 8 M | dichlorodifluoromethane | 20.00 | 0.484 | 0.562 | -16.1 | 117 | -0.01 | 3.60 |
| 9 | Freon 114 | | ----------NA---------- | | | | | |
| 10 M | chloromethane | 20.00 | 0.185 | 0.180 | 2.7 | 99 | 0.01 | 3.97 |
| 11 M | vinyl chloride | 20.00 | 0.532 | 0.474 | 10.9 | 87 | 0.00 | 4.17 |
| 12 M | bromomethane | 20.00 | 0.305 | 0.344 | -12.8 | 114 | 0.02 | 4.77 |
| 13 M | chloroethane | 20.00 | 0.209 | 0.231 | -10.5 | 107 | 0.02 | 4.92 |
| 14 | vinyl bromide | | ----------NA---------- | | | | | |
| 15 M | trichlorofluoromethane | 20.00 | 0.503 | 0.641 | -27.4# | 124 | 0.00 | 5.28 |
| 16 | 1,3-butadiene | | ----------NA---------- | | | | | |
| 17 | Pentane | | ----------NA---------- | | | | | |
| 18 | freon 123a | | ----------NA---------- | | | | | |
| 19 M | ethyl ether | 20.00 | 0.191 | 0.179 | 6.3 | 91 | 0.00 | 5.63 |
| 20 | 2-chloropropane | 20.00 | 0.061 | 0.051 | 16.4 | 74 | 0.00 | 5.81 |
| 21 M | acrolein | 200.00 | 0.064 | 0.059 | 7.8 | 90 | 0.00 | 5.86 |
| 22 M | 1,1-dichloroethene | 20.00 | 0.395 | 0.402 | -1.8 | 101 | 0.01 | 6.03 |
| 23 M | acetone | 20.00 | 0.033 | 0.036 | -9.1 | 104 | 0.00 | 6.05 |
| 24 M | allyl chloride | 20.00 | 0.289 | 0.317 | -9.7 | 117 | 0.00 | 6.46 |
| 25 M | acetonitrile | 200.00 | 0.032 | 0.034 | -6.3 | 95 | 0.00 | 6.45 |
| 26 M | iodomethane | 20.00 | 0.746 | 0.706 | 5.4 | 92 | 0.01 | 6.28 |
| 27 M | carbon disulfide | 20.00 | 1.159 | 1.088 | 6.1 | 90 | 0.00 | 6.38 |
| 28 M | methylene chloride | 20.00 | 0.418 | 0.428 | -2.4 | 100 | 0.02 | 6.66 |
| 29 M | methyl acetate | 20.00 | 0.056 | 0.058 | -3.6 | 93 | 0.00 | 6.44 |
| 30 | 1-chloropropane | 20.00 | 0.714 | 0.641 | 10.2 | 91 | 0.00 | 6.65 |
| 31 M | methyl tert butyl ether | 20.00 | 1.053 | 1.062 | -0.9 | 97 | 0.00 | 6.89 |
| 32 M | trans-1,2-dichloroethene | 20.00 | 0.388 | 0.358 | 7.7 | 95 | 0.00 | 6.95 |
| 33 M | di-isopropyl ether | 20.00 | 1.381 | 1.192 | 13.7 | 83 | 0.00 | 7.41 |
| 34 M | 2-butanone | 20.00 | 0.044 | 0.044 | 0.0 | 94 | 0.00 | 8.08 |
| 35 M | 1,1-dichloroethane | 20.00 | 0.730 | 0.691 | 5.3 | 92 | 0.00 | 7.45 |
| 36 M | chloroprene | 20.00 | 0.540 | 0.512 | 5.2 | 93 | 0.00 | 7.54 |
| 37 M | acrylonitrile | 100.00 | 0.149 | 0.144 | 3.4 | 94 | 0.00 | 6.92 |
| 38 M | vinyl acetate | 20.00 | 0.056 | 0.054 | 3.6 | 91 | 0.00 | 7.43 |
| 39 M | ethyl tert-butyl ether | 20.00 | 1.227 | 1.157 | 5.7 | 91 | 0.00 | 7.82 |
| 40 M | ethyl acetate | 20.00 | 0.060 | 0.054 | 10.0 | 89 | -0.01 | 8.08 |
| 41 M | 2,2-dichloropropane | 20.00 | 0.309 | 0.293 | 5.2 | 93 | 0.00 | 8.10 |

# Continuing Calibration Summary

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2298-CC2289
**Lab FileID:** 4B54455.D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42 | M | cis-1,2-dichloroethene | 20.00 | 0.422 | 0.413 | 2.1 | 99 | 0.00 | 8.11 |
| 43 | | methylacrylate | 20.00 | 0.057 | 0.056 | 1.8 | 95 | 0.00 | 8.16 |
| 44 | M | propionitrile | 200.00 | 0.060 | 0.059 | 1.7 | 93 | 0.00 | 8.18 |
| 45 | M | bromochloromethane | 20.00 | 0.216 | 0.229 | -6.0 | 102 | 0.00 | 8.40 |
| 46 | M | tetrahydrofuran | 20.00 | 0.144 | 0.131 | 9.0 | 88 | -0.01 | 8.42 |
| 47 | M | chloroform | 20.00 | 0.437 | 0.441 | -0.9 | 99 | 0.00 | 8.44 |
| 48 | M | T-BUTYL FORMATE | 20.00 | 0.279 | 0.269 | 3.6 | 92 | 0.00 | 8.46 |
| 49 | S | dibromofluoromethane (s) | 50.00 | 0.362 | 0.355 | 1.9 | 92 | 0.00 | 8.62 |
| 50 | S | 1,2-dichloroethane-d4 (s) | 50.00 | 0.397 | 0.378 | 4.8 | 89 | 0.00 | 9.01 |
| 51 | M | freon 113 | 20.00 | 0.240 | 0.280 | -16.7 | 113 | 0.01 | 5.97 |
| 52 | M | methacrylonitrile | 20.00 | 0.265 | 0.235 | 11.3 | 87 | 0.00 | 8.34 |
| 53 | M | 1,1,1-trichloroethane | 20.00 | 0.462 | 0.459 | 0.6 | 96 | 0.00 | 8.67 |
| 54 | M | cyclohexane | 20.00 | 0.506 | 0.488 | 3.6 | 97 | 0.00 | 8.74 |
| 55 | | iso-butyl alcohol | 200.00 | 0.016 | 0.018 | -12.5 | 110 | 0.00 | 8.82 |
| 56 | I | 1,4-difluorobenzene | 50.00 | 1.000 | 1.000 | 0.0 | 91 | 0.00 | 9.41 |
| 57 | M | epichlorohydrin | 100.00 | 0.034 | 0.033 | 2.9 | 96 | 0.00 | 10.63 |
| 58 | M | n-butyl alcohol | 1000.00 | 0.010 | 0.010 | 0.0 | 97 | 0.00 | 9.52 |
| 59 | M | carbon tetrachloride | 20.00 | 0.400 | 0.420 | -5.0 | 98 | 0.00 | 8.85 |
| 60 | M | 1,1-dichloropropene | 20.00 | 0.445 | 0.451 | -1.3 | 95 | 0.00 | 8.83 |
| 61 | M | hexane | 20.00 | 0.338 | 0.390 | -15.4 | 112 | 0.00 | 7.20 |
| 62 | | Tert Amyl alcohol | | ----------NA---------- | | | | | |
| 63 | M | benzene | 20.00 | 1.309 | 1.294 | 1.1 | 94 | 0.00 | 9.08 |
| 64 | m | iso-octane | 20.00 | 1.051 | 1.020 | 2.9 | 92 | 0.00 | 9.06 |
| 65 | M | tert-amyl methyl ether | 20.00 | 0.208 | 0.207 | 0.5 | 92 | 0.00 | 9.09 |
| 66 | M | heptane | 20.00 | 0.232 | 0.347 | -49.6# | 141 | 0.00 | 9.21 |
| 67 | M | isopropyl acetate | 20.00 | 0.156 | 0.141 | 9.6 | 88 | 0.00 | 8.99 |
| 68 | M | 1,2-dichloroethane | 20.00 | 0.431 | 0.464 | -7.7 | 97 | 0.00 | 9.10 |
| 69 | M | trichloroethene | 20.00 | 0.352 | 0.362 | -2.8 | 99 | 0.00 | 9.73 |
| 70 | | Tert-amyl Ethyl Ether | | ----------NA---------- | | | | | |
| 71 | | ethyl acrylate | | ----------NA---------- | | | | | |
| 72 | M | 2-nitropropane | 20.00 | 0.141 | 0.142 | -0.7 | 92 | 0.00 | 10.50 |
| 73 | M | 2-chloroethyl vinyl ether | 100.00 | 0.209 | 0.186 | 11.0 | 80 | 0.00 | 10.50 |
| 74 | M | methyl methacrylate | 20.00 | 0.084 | 0.090 | -7.1 | 98 | 0.00 | 9.98 |
| 75 | M | 1,2-dichloropropane | 20.00 | 0.376 | 0.358 | 4.8 | 88 | 0.00 | 10.00 |
| 76 | M | dibromomethane | 20.00 | 0.219 | 0.236 | -7.8 | 99 | 0.00 | 10.16 |
| 77 | M | methylcyclohexane | 20.00 | 0.453 | 0.520 | -14.8 | 108 | 0.00 | 9.94 |
| 78 | M | bromodichloromethane | 20.00 | 0.471 | 0.496 | -5.3 | 97 | 0.00 | 10.27 |
| 79 | M | cis-1,3-dichloropropene | 20.00 | 0.610 | 0.595 | 2.5 | 92 | 0.00 | 10.72 |
| 80 | S | toluene-d8 (s) | 50.00 | 1.177 | 1.157 | 1.7 | 90 | 0.00 | 11.01 |
| 81 | M | 4-methyl-2-pentanone | 20.00 | 0.144 | 0.142 | 1.4 | 88 | 0.00 | 10.82 |
| 82 | M | toluene | 20.00 | 0.834 | 0.851 | -2.0 | 99 | 0.00 | 11.09 |
| 83 | M | 3-methyl-1-butanol | 400.00 | 0.016 | 0.016 | 0.0 | 95 | 0.00 | 10.83 |
| 84 | M | trans-1,3-dichloropropene | 20.00 | 0.534 | 0.538 | -0.7 | 91 | 0.00 | 11.29 |
| 85 | M | ethyl methacrylate | 20.00 | 0.442 | 0.441 | 0.2 | 94 | 0.00 | 11.27 |
| 86 | M | 1,1,2-trichloroethane | 20.00 | 0.290 | 0.293 | -1.0 | 97 | 0.00 | 11.52 |
| 87 | M | 2-hexanone | 20.00 | 0.132 | 0.123 | 6.8 | 87 | 0.00 | 11.69 |
| 88 | I | chlorobenzene-d5 | 50.00 | 1.000 | 1.000 | 0.0 | 91 | 0.00 | 12.60 |
| 89 | M | tetrachloroethene | 20.00 | 0.434 | 0.451 | -3.9 | 98 | 0.00 | 11.69 |
| 90 | M | 1,3-dichloropropane | 20.00 | 0.588 | 0.614 | -4.4 | 96 | 0.00 | 11.71 |
| 91 | M | butyl acetate | 20.00 | 0.268 | 0.235 | 12.3 | 82 | 0.00 | 11.76 |
| 92 | M | 3,3-DIMETHYL-1-BUTANOL | 200.00 | 0.039 | 0.039 | 0.0 | 90 | 0.00 | 11.87 |
| 93 | M | dibromochloromethane | 20.00 | 0.460 | 0.495 | -7.6 | 102 | 0.00 | 11.99 |
| 94 | M | 1,2-dibromoethane | 20.00 | 0.385 | 0.418 | -8.6 | 100 | 0.00 | 12.15 |
| 95 | | n-butyl ether | | ----------NA---------- | | | | | |
| 96 | M | chlorobenzene | 20.00 | 1.057 | 1.118 | -5.8 | 99 | 0.00 | 12.63 |
| 97 | M | 1,1,1,2-tetrachloroethane | 20.00 | 0.404 | 0.434 | -7.4 | 101 | 0.00 | 12.69 |
| 98 | M | ethylbenzene | 20.00 | 1.761 | 1.835 | -4.2 | 97 | 0.00 | 12.68 |
| 99 | M | m,p-xylene | 40.00 | 0.671 | 0.715 | -6.6 | 99 | 0.00 | 12.80 |

# Continuing Calibration Summary

**Job Number:** JC1107
**Account:** UTC United Technologies Corporation
**Project:** ENSRILW: UTAS Plants 1/2 Facility, Rockford, IL

**Sample:** V4B2298-CC2289
**Lab FileID:** 4B54455.D

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 100 | M | o-xylene | 20.00 | 0.677 | 0.732 | -8.1 | 99 | 0.00 | 13.25 |
| 101 | M | styrene | 20.00 | 1.155 | 1.195 | -3.5 | 96 | 0.00 | 13.27 |
| 102 | M | bromoform | 20.00 | 0.358 | 0.373 | -4.2 | 98 | 0.00 | 13.57 |
| 103 | I | 1,4-dichlorobenzene-d4 | 50.00 | 1.000 | 1.000 | 0.0 | 86 | 0.00 | 15.14 |
| 104 | M | isopropylbenzene | 20.00 | 3.174 | 3.421 | -7.8 | 99 | 0.00 | 13.63 |
| 105 | S | 4-bromofluorobenzene (s) | 50.00 | 0.873 | 0.877 | -0.5 | 87 | 0.00 | 13.86 |
| 106 | | cyclohexanone | 200.00 | 0.091 | 0.044 | 51.6# | 41# | 0.00 | 13.82 |
| 107 | M | bromobenzene | 20.00 | 0.931 | 1.046 | -12.4 | 101 | 0.00 | 14.07 |
| 108 | M | 1,1,2,2-tetrachloroethane | 20.00 | 0.930 | 1.012 | -8.8 | 96 | 0.00 | 13.98 |
| 109 | M | trans-1,4-dichloro-2-bute | 20.00 | 0.239 | 0.181 | 24.3# | 67 | 0.00 | 14.02 |
| 110 | M | 1,2,3-trichloropropane | 20.00 | 0.220 | 0.261 | -18.6 | 99 | 0.00 | 14.05 |
| 111 | M | n-propylbenzene | 20.00 | 3.588 | 3.733 | -4.0 | 94 | 0.00 | 14.08 |
| 112 | | 4-ETHYLTOLUENE | | ----------NA---------- | | | | | |
| 113 | M | 2-chlorotoluene | 20.00 | 0.813 | 0.862 | -6.0 | 97 | 0.00 | 14.24 |
| 114 | M | 4-chlorotoluene | 20.00 | 2.320 | 2.403 | -3.6 | 94 | 0.00 | 14.35 |
| 115 | M | 1,3,5-trimethylbenzene | 20.00 | 2.672 | 2.844 | -6.4 | 97 | 0.00 | 14.24 |
| 116 | M | tert-butylbenzene | 20.00 | 2.318 | 2.548 | -9.9 | 99 | 0.00 | 14.62 |
| 117 | M | pentachloroethane | 20.00 | 0.480 | 0.606 | -26.3# | 115 | 0.00 | 14.72 |
| 118 | M | 1,2,4-trimethylbenzene | 20.00 | 2.574 | 2.783 | -8.1 | 96 | 0.00 | 14.68 |
| 119 | M | sec-butylbenzene | 20.00 | 3.522 | 3.691 | -4.8 | 95 | 0.00 | 14.87 |
| 120 | M | 1,3-dichlorobenzene | 20.00 | 1.695 | 1.869 | -10.3 | 97 | 0.00 | 15.08 |
| 121 | M | p-isopropyltoluene | 20.00 | 2.944 | 3.132 | -6.4 | 96 | 0.00 | 15.00 |
| 122 | M | 1,4-dichlorobenzene | 20.00 | 1.695 | 1.788 | -5.5 | 94 | 0.00 | 15.17 |
| 123 | | benzyl chloride | 20.00 | 1.694 | 1.740 | -2.7 | 94 | 0.00 | 15.30 |
| 124 | M | 1,2-dichlorobenzene | 20.00 | 1.655 | 1.838 | -11.1 | 97 | 0.00 | 15.61 |
| 125 | | 1,4-DIETHYLBENZENE | | ----------NA---------- | | | | | |
| 126 | M | n-butylbenzene | 20.00 | 1.460 | 1.434 | 1.8 | 87 | 0.00 | 15.46 |
| 127 | | 1,2,4,5-TETRAMETHYLBENZEN | | ----------NA---------- | | | | | |
| 128 | M | 1,2-dibromo-3-chloropropa | 20.00 | 0.149 | 0.159 | -6.7 | 95 | 0.00 | 16.46 |
| 129 | | 1,3,5-TRICHLOROBENZENE | 20.00 | 1.320 | 1.446 | -9.5 | 95 | 0.00 | 16.65 |
| 130 | M | 1,2,4-trichlorobenzene | 20.00 | 1.057 | 1.058 | -0.1 | 88 | 0.00 | 17.33 |
| 131 | M | hexachlorobutadiene | 20.00 | 0.643 | 0.768 | -19.4 | 104 | 0.00 | 17.44 |
| 132 | M | naphthalene | 20.00 | 1.858 | 1.895 | -2.0 | 88 | 0.00 | 17.62 |
| 133 | M | 1,2,3-trichlorobenzene | 20.00 | 0.892 | 0.923 | -3.5 | 88 | 0.00 | 17.88 |
| 134 | m | hexachloroethane | 20.00 | 0.610 | 0.683 | -12.0 | 102 | 0.00 | 15.89 |

(#) = Out of Range SPCC's out = 0 CCC's out = 0
4B54248.D M4B2289.M Thu Aug 13 16:13:01 2015 GCMS4B

6.9.5 6

New Jersey
ACCUTEST
LABORATORIES

# GC/MS Volatiles

## Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54425.D
Acq On : 12 Aug 2015 6:46 pm
Operator : TOANP
Sample : jc1107-1
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 13 11:53:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 138307 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 439595 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 488233 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 433020 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 211888 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 154755 | 48.69 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 97.38% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 160819 | 46.04 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 92.08% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 576118 | 50.12 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.24% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 193369 | 52.27 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 104.54% | | |
| **Target Compounds** | | | | | Qvalue |
| 22) 1,1-dichloroethene | 6.03 | 96 | 1618 | 0.47 ug/L # | 47 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 23437 | 3.65 ug/L | 92 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 2603 | 0.70 ug/L | 82 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 15867 | 3.91 ug/L | 93 |
| 69) trichloroethene | 9.74 | 95 | 4280 | 1.24 ug/L | 87 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 611 | 0.22 ug/L | 85 |
| 89) tetrachloroethene | 11.69 | 164 | 19538 | 5.19 ug/L | 97 |

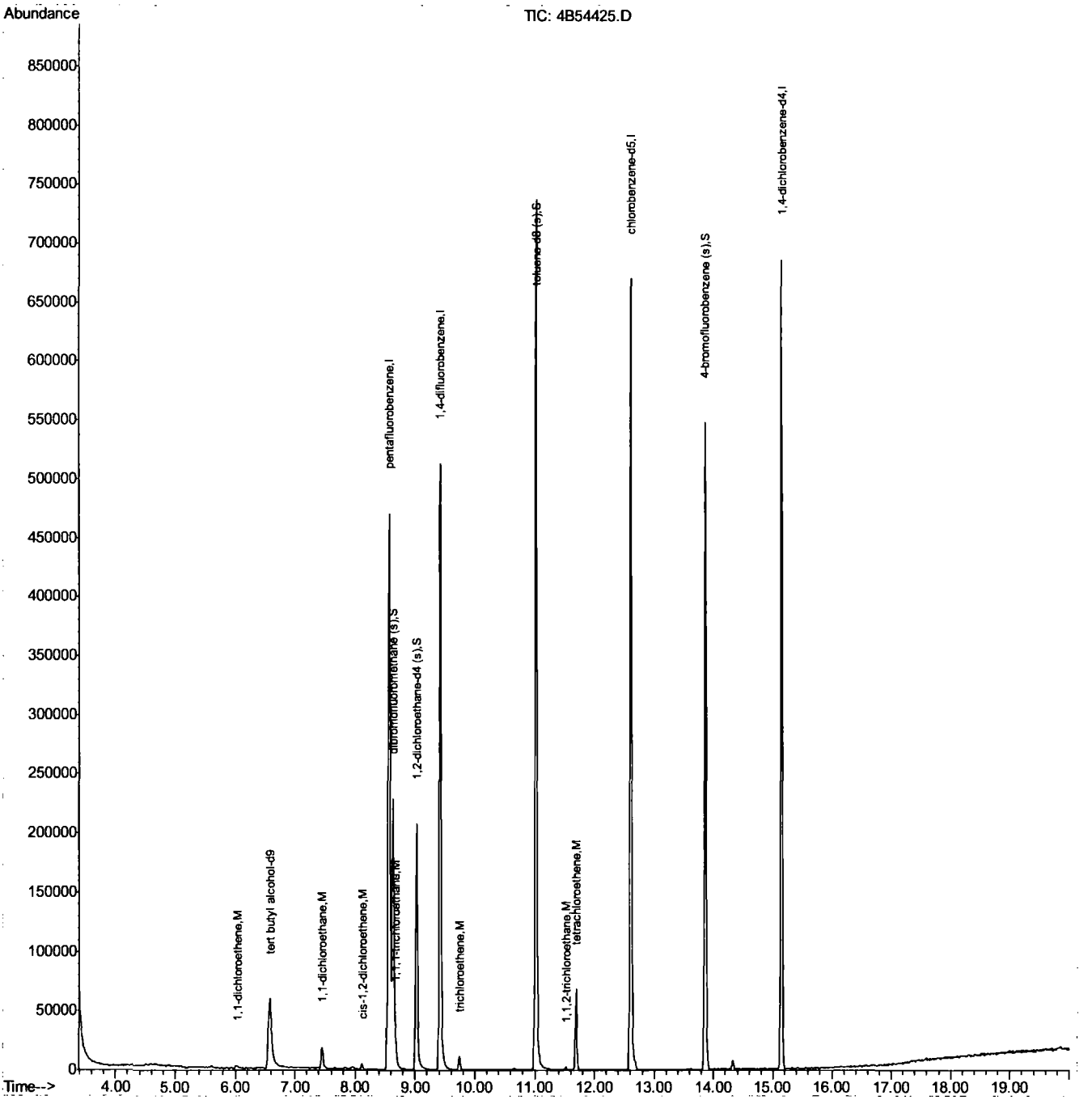
(#) = qualifier out of range (m) = manual integration (+) = signals summed

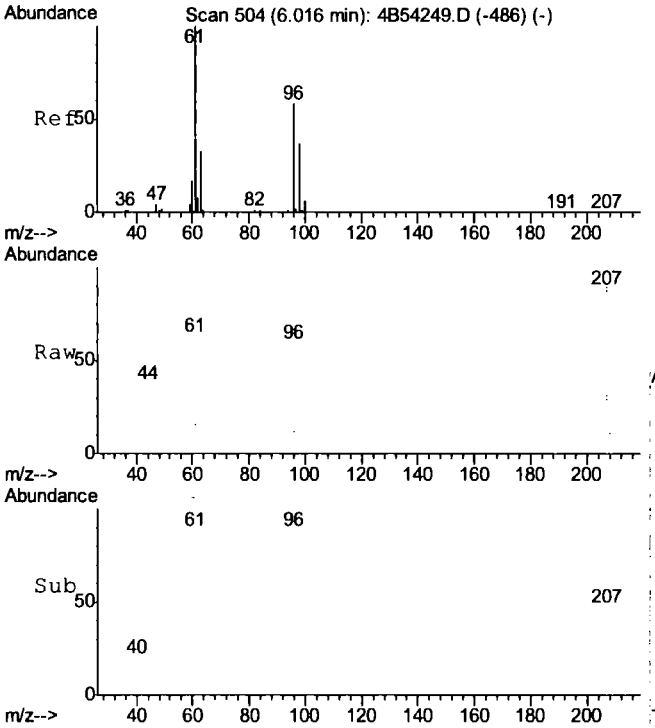
7.1.1

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54425.D
Acq On : 12 Aug 2015 6:46 pm
Operator : TOANP
Sample : jc1107-1
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Aug 13 11:53:59 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

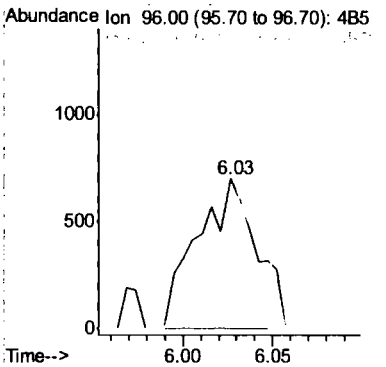


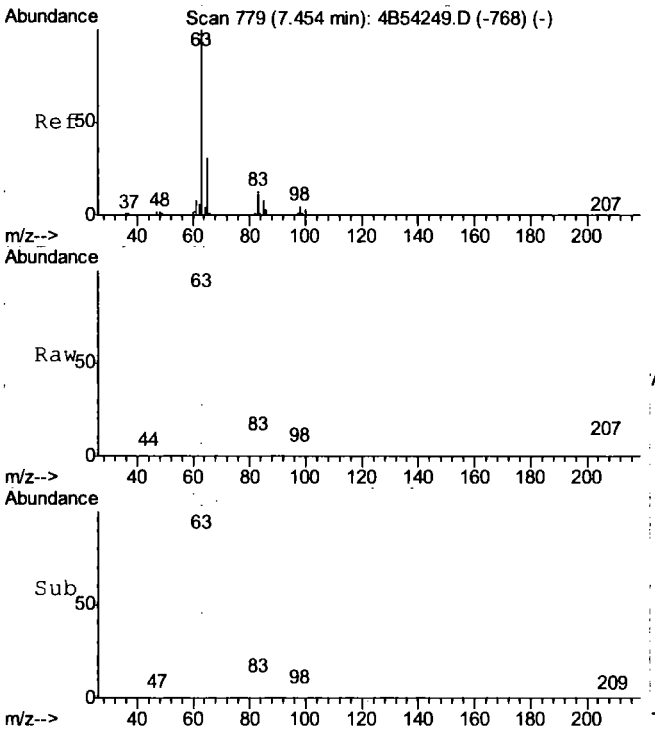



#22
1,1-dichloroethene
Concen: 0.47 ug/L
RT: 6.03 min Scan# 506
Delta R.T. 0.01 min
Lab File: 4B54425.D
Acq: 12 Aug 2015 6:46 pm

Tgt Ion: 96 Resp: 1618

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 84.9 | 141.9 | 201.9# |
| 63 | 39.6 | 26.8 | 86.8 |

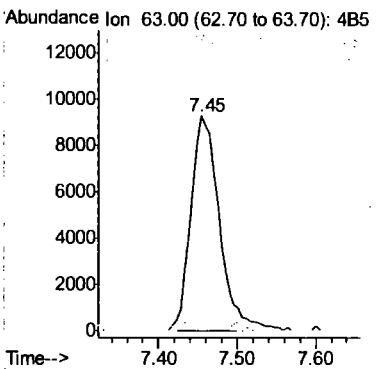


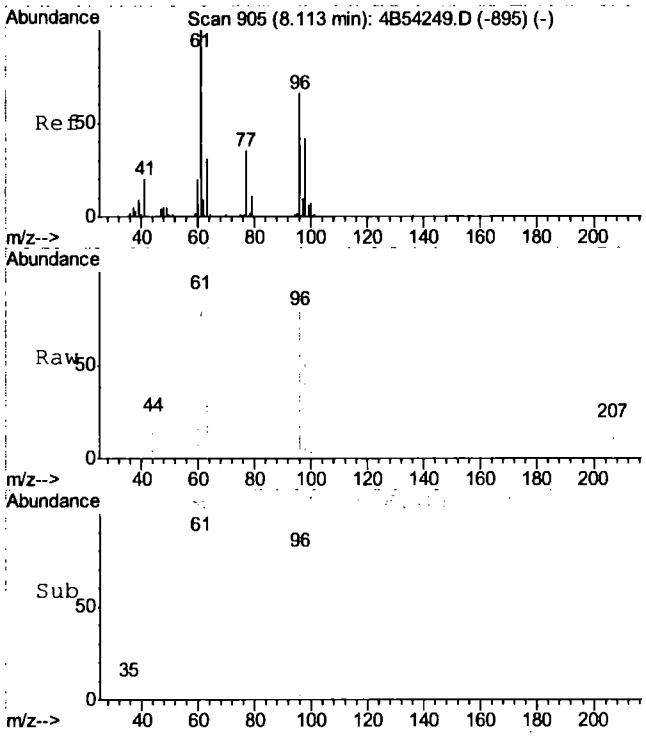




#35
1,1-dichloroethane
Concen: 3.65 ug/L
RT: 7.45 min Scan# 779
Delta R.T. -0.00 min
Lab File: 4B54425.D
Acq: 12 Aug 2015 6:46 pm

Tgt Ion: 63 Resp: 23437

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 36.4 | 1.3 | 61.3 |
| 83 | 11.2 | 0.0 | 42.6 |

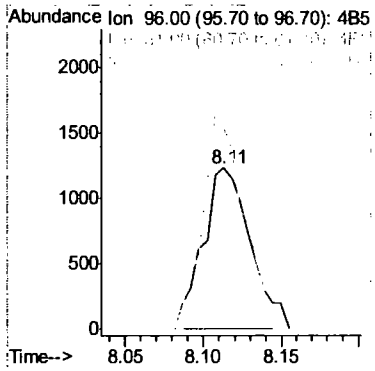


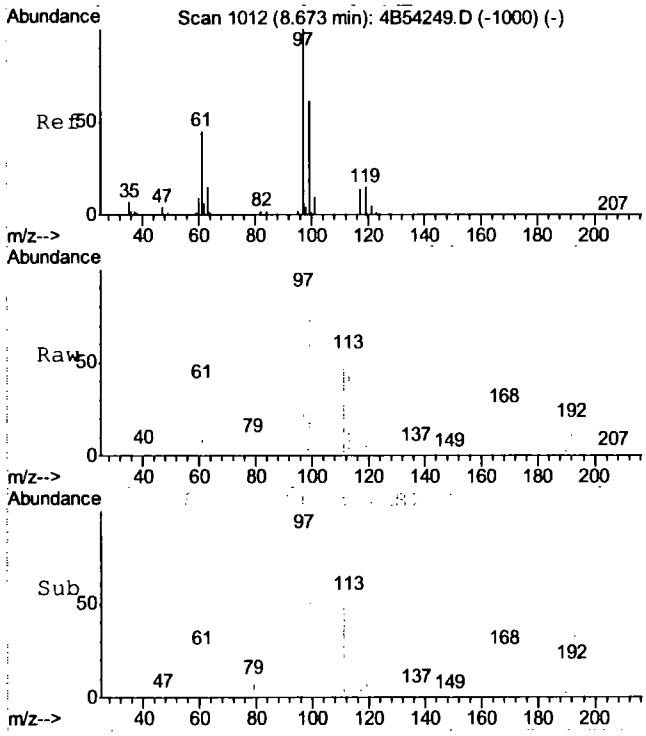



#42
cis-1,2-dichloroethene
Concen: 0.70 ug/L
RT: 8.11 min Scan# 905
Delta R.T. -0.00 min
Lab File: 4B54425.D
Acq: 12 Aug 2015 6:46 pm

Tgt Ion: 96 Resp: 2603

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 124.9 | 123.9 | 183.9 |
| 98 | 69.3 | 34.0 | 94.0 |

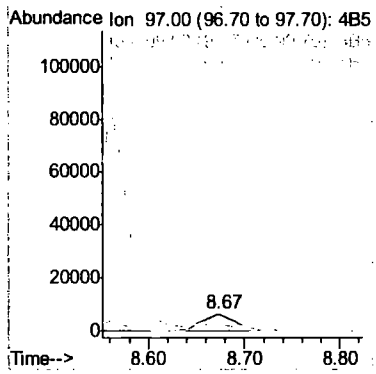



#53
1,1,1-trichloroethane
Concen: 3.91 ug/L
RT: 8.67 min Scan# 1012
Delta R.T. -0.00 min
Lab File: 4B54425.D
Acq: 12 Aug 2015 6:46 pm

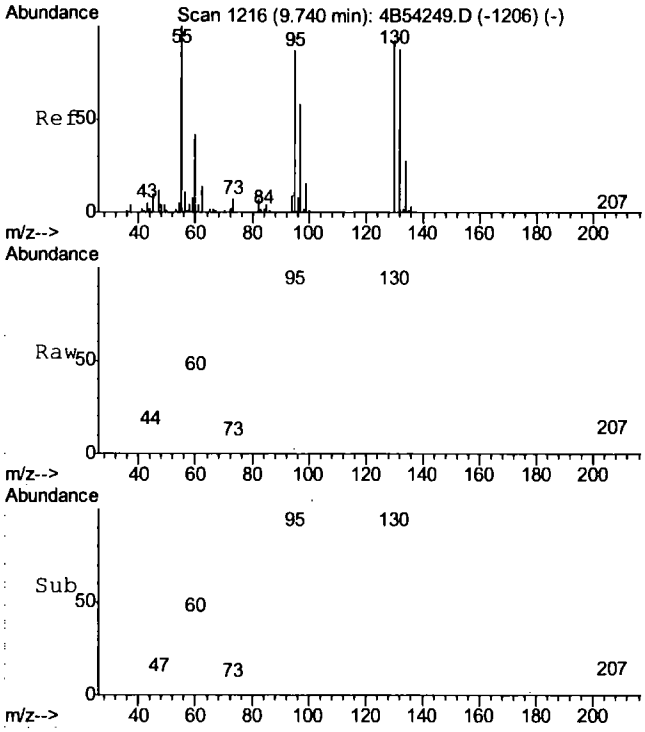
Tgt Ion: 97 Resp: 15867

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 70.9 | 35.6 | 95.6 |
| 61 | 39.4 | 14.6 | 74.6 |




7.1.1

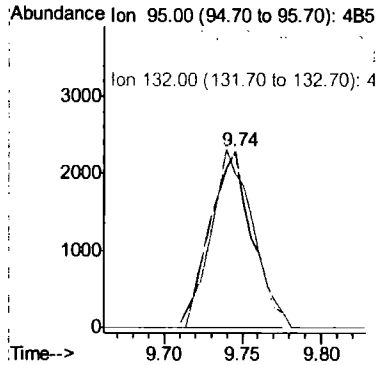
7

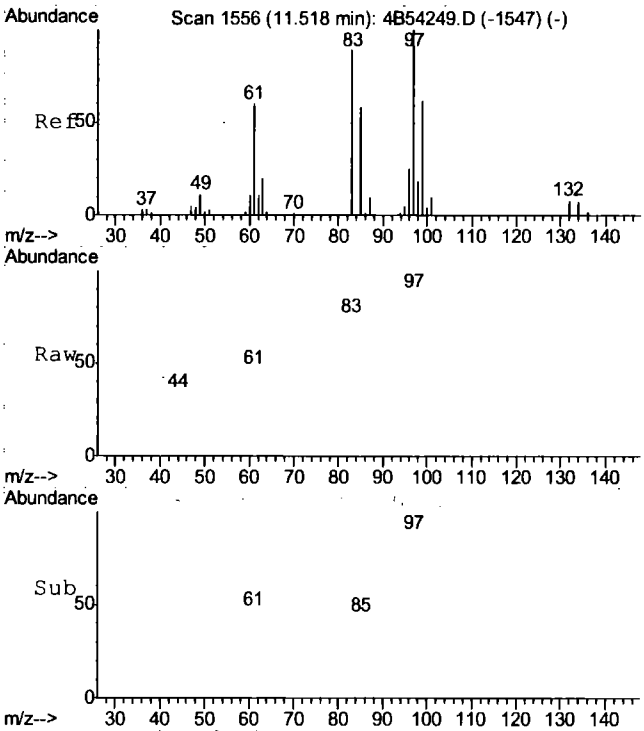



#69
trichloroethene
Concen: 1.24 ug/L
RT: 9.74 min Scan# 1217
Delta R.T. 0.01 min
Lab File: 4B54425.D
Acq: 12 Aug 2015 6:46 pm

Tgt Ion: 95 Resp: 4280

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 57.4 | 36.5 | 96.5 |
| 130 | 93.4 | 76.6 | 136.6 |
| 132 | 87.3 | 71.3 | 131.3 |

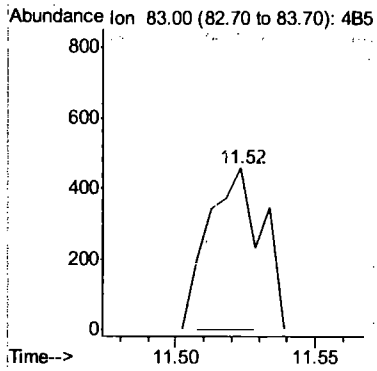


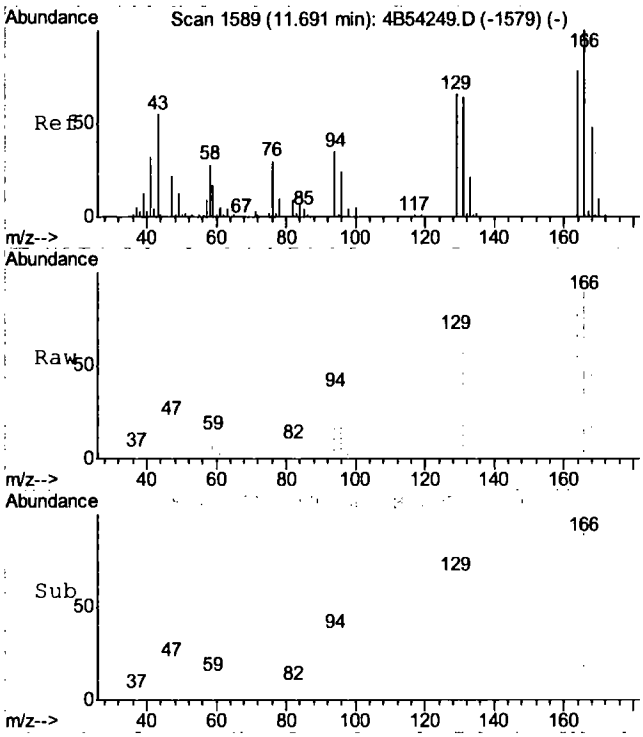




#86
1,1,2-trichloroethane
Concen: 0.22 ug/L
RT: 11.52 min Scan# 1557
Delta R.T. 0.01 min
Lab File: 4B54425.D
Acq: 12 Aug 2015 6:46 pm

Tgt Ion: 83 Resp: 611

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 83 | 100 | | |
| 97 | 132.8 | 82.1 | 142.1 |
| 85 | 58.5 | 34.8 | 94.8 |

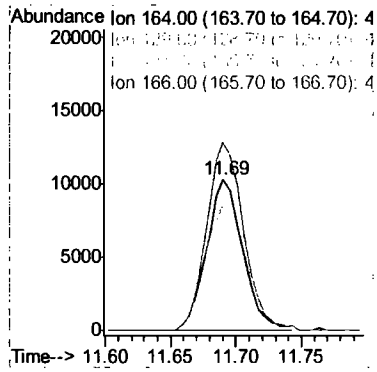





#89
tetrachloroethene
Concen: 5.19 ug/L
RT: 11.69 min Scan# 1589
Delta R.T. -0.00 min
Lab File: 4B54425.D
Acq: 12 Aug 2015 6:46 pm

Tgt Ion:164 Resp: 19538

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 129 | 83.1 | 54.7 | 114.7 |
| 131 | 78.9 | 52.0 | 112.0 |
| 166 | 124.8 | 98.8 | 158.8 |




7.1.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54426.D
Acq On : 12 Aug 2015 7:14 pm
Operator : TOANP
Sample : jc1107-2
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Aug 13 11:54:35 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 140461 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 437134 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 492560 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 432075 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 213576 | 50.00 | ug/L | 0.00 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 154048 | 48.74 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 97.48% | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 162717 | 46.84 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 93.68% | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 574141 | 49.51 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.02% | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 193164 | 51.80 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 103.60% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 82) toluene | 11.09 | 92 | 2719 | 0.33 | ug/L | 97 |

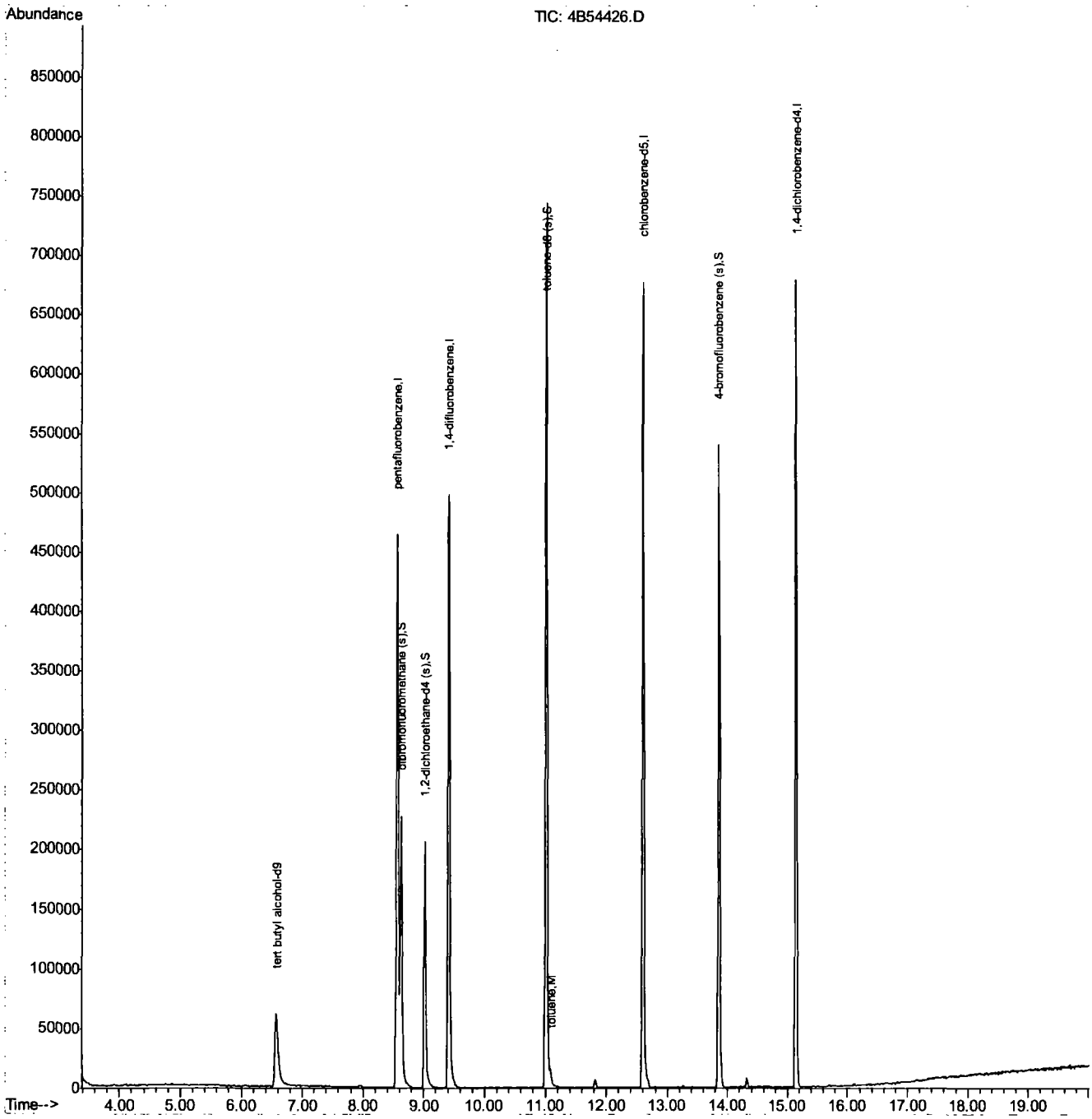
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.2 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54426.D
Acq On : 12 Aug 2015 7:14 pm
Operator : TOANP
Sample : jc1107-2
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 22 Sample Multiplier: 1

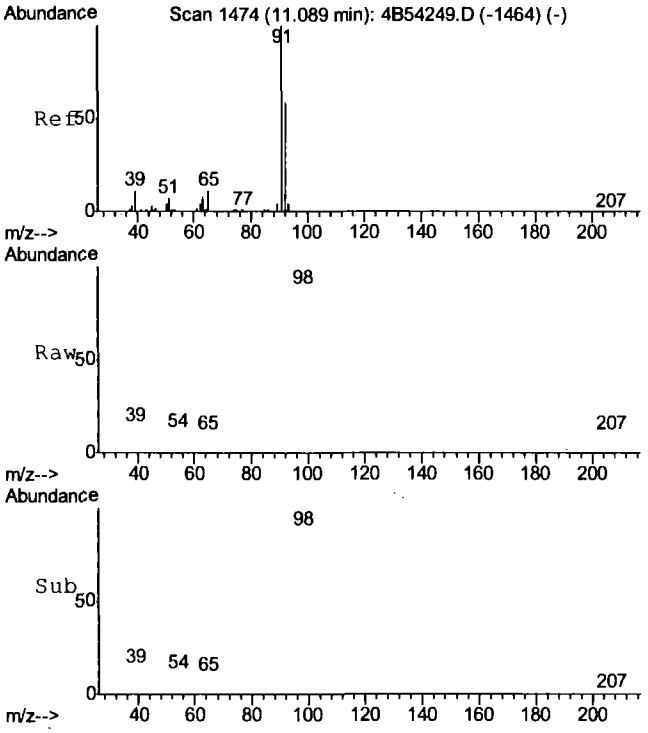
Quant Time: Aug 13 11:54:35 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration




7.1.2 7



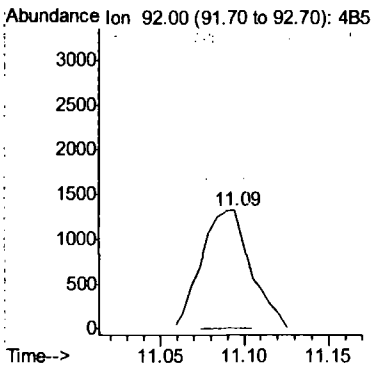
ACCUTEST LABORATORIES JC1107




#82
toluene
Concen: 0.33 ug/L
RT: 11.09 min Scan# 1475
Delta R.T. 0.01 min
Lab File: 4B54426.D
Acq: 12 Aug 2015 7:14 pm

Tgt Ion: 92 Resp: 2719

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 166.2 | 140.0 | 200.0 |
| 65 | 21.0 | 0.0 | 49.3 |




7.1.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54416.D
Acq On : 12 Aug 2015 2:35 pm
Operator : TOANP
Sample : jc1107-3
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 12 17:33:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 146811 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 443287 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 502337 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 441128 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 222699 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 157207 | 49.04 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 98.08% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 162622 | 46.16 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 92.32% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 583347 | 49.33 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.66% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 202204 | 52.01 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 104.02% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 22) 1,1-dichloroethene | 6.03 | 96 | 1583 | 0.45 ug/L # | 50 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 18549 | 2.87 ug/L | 95 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 13114 | 3.20 ug/L | 97 |
| 69) trichloroethene | 9.74 | 95 | 1468 | 0.41 ug/L | 87 |
| 89) tetrachloroethene | 11.69 | 164 | 9638 | 2.51 ug/L | 92 |
| 120) 1,3-dichlorobenzene | 15.09 | 146 | 1820 | 0.24 ug/L | 83 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 1776 | 0.38 ug/L | 97 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

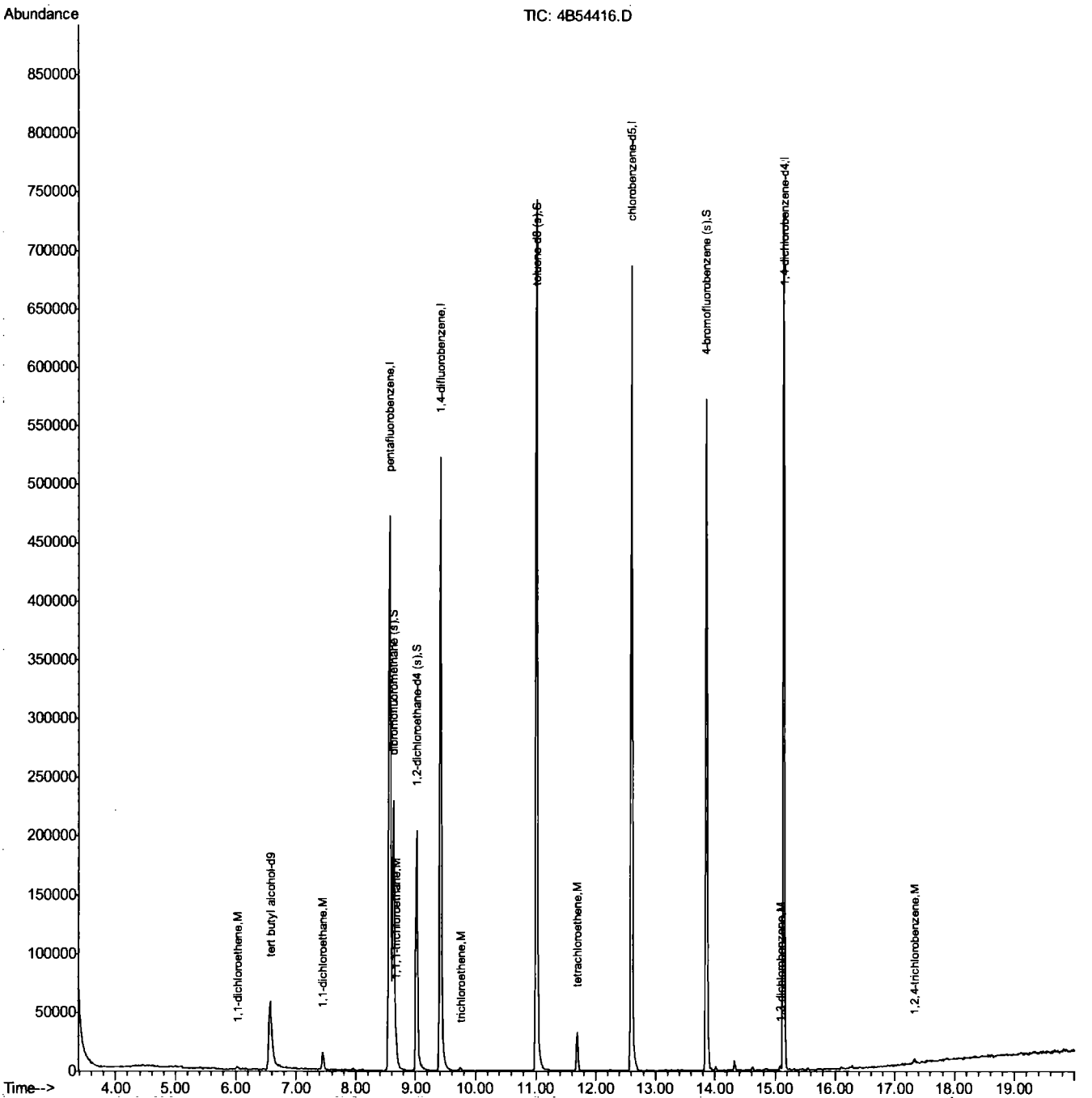
7.1.3

7

Quantitation Report (QT Reviewed)

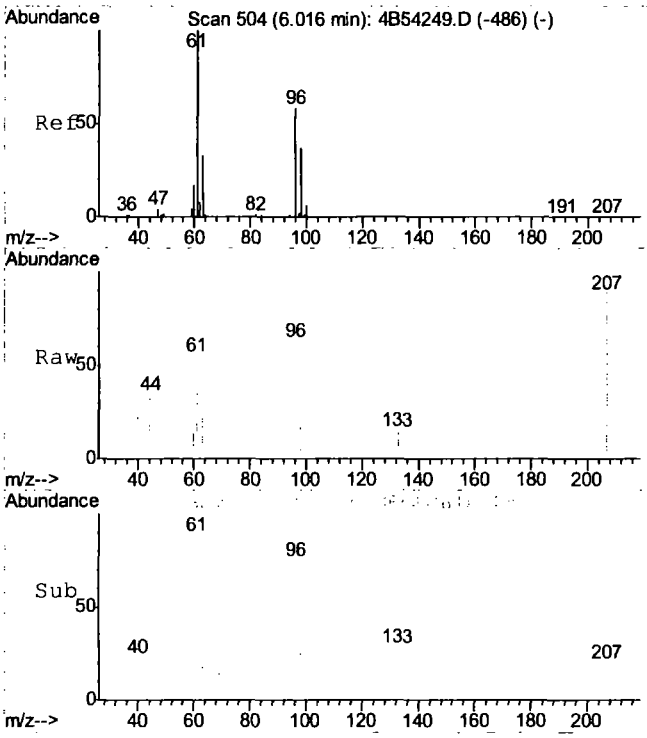
Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54416.D
Acq On : 12 Aug 2015 2:35 pm
Operator : TOANP
Sample : jc1107-3
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Aug 12 17:33:24 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration





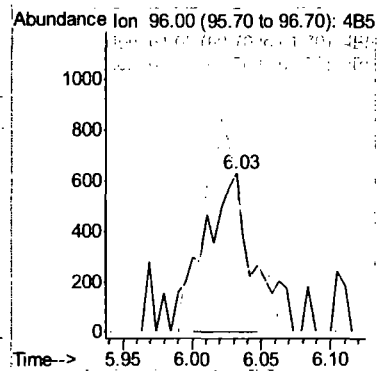

ACCUTEST LABORATORIES JC1107

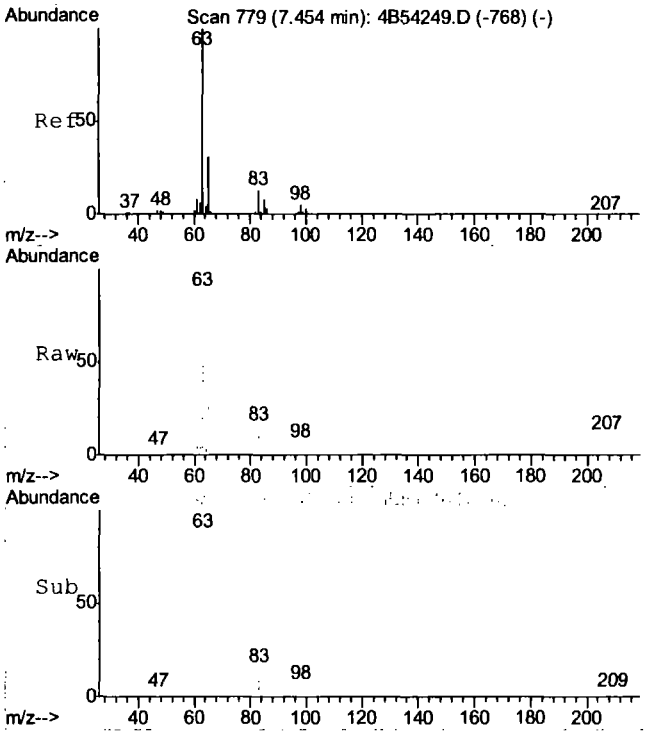



#22
1,1-dichloroethene
Concen: 0.45 ug/L
RT: 6.03 min Scan# 507
Delta R.T. 0.02 min
Lab File: 4B54416.D
Acq: 12 Aug 2015 2:35 pm

Tgt Ion: 96 Resp: 1583

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 87.9 | 141.9 | 201.9# |
| 63 | 43.2 | 26.8 | 86.8 |

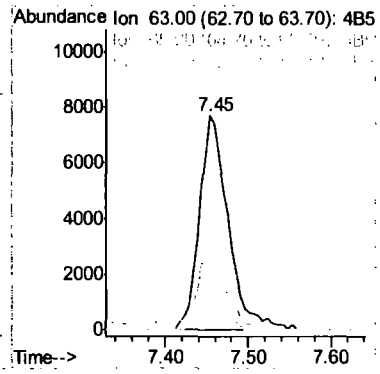


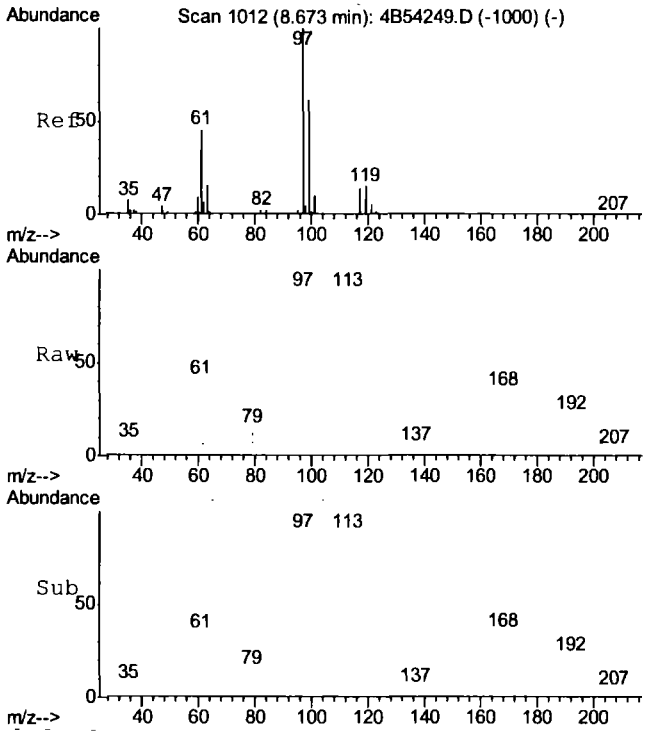

#35
1,1-dichloroethane
Concen: 2.87 ug/L
RT: 7.45 min Scan# 779
Delta R.T. -0.00 min
Lab File: 4B54416.D
Acq: 12 Aug 2015 2:35 pm

Tgt Ion: 63 Resp: 18549

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 32.9 | 1.3 | 61.3 |
| 83 | 16.2 | 0.0 | 42.6 |



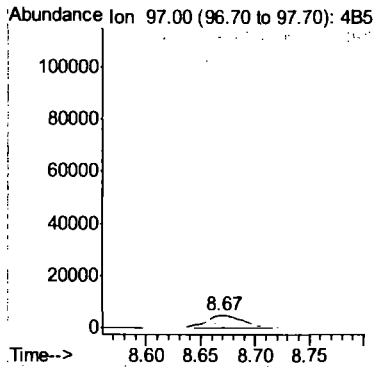

7.1.3

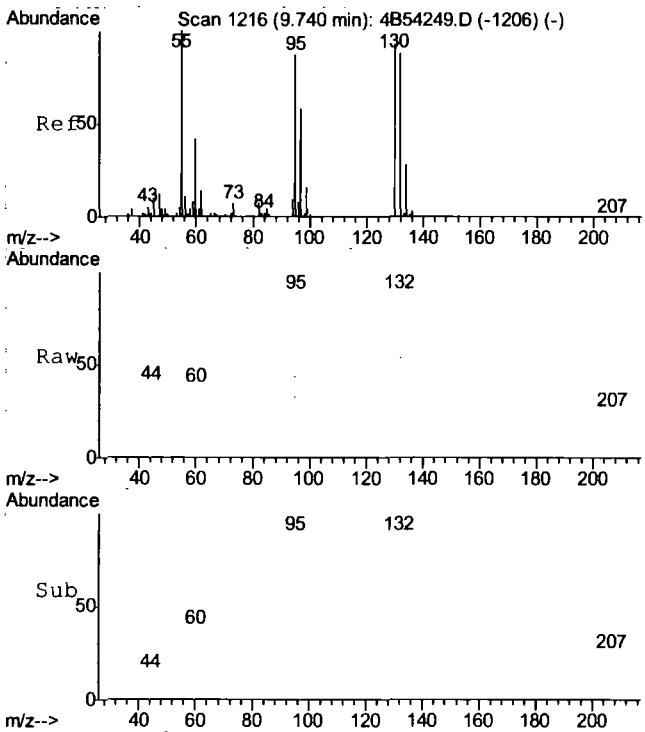



#53
1,1,1-trichloroethane
Concen: 3.20 ug/L
RT: 8.67 min Scan# 1011
Delta R.T. -0.01 min
Lab File: 4B54416.D
Acq: 12 Aug 2015 2:35 pm

Tgt Ion: 97 Resp: 13114

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 63.7 | 35.6 | 95.6 |
| 61 | 41.4 | 14.6 | 74.6 |

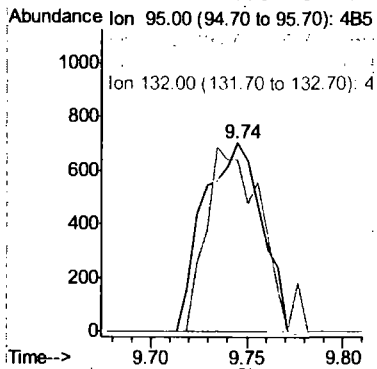


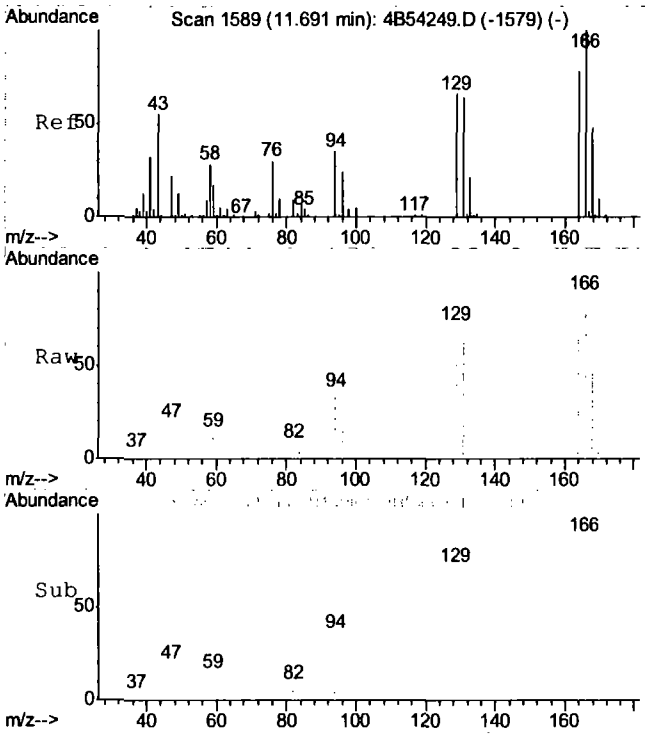




#69
trichloroethene
Concen: 0.41 ug/L
RT: 9.74 min Scan# 1217
Delta R.T. 0.01 min
Lab File: 4B54416.D
Acq: 12 Aug 2015 2:35 pm

Tgt Ion: 95 Resp: 1468

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 77.8 | 36.5 | 96.5 |
| 130 | 90.3 | 76.6 | 136.6 |
| 132 | 90.9 | 71.3 | 131.3 |

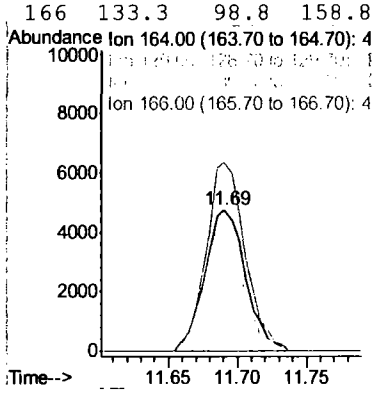


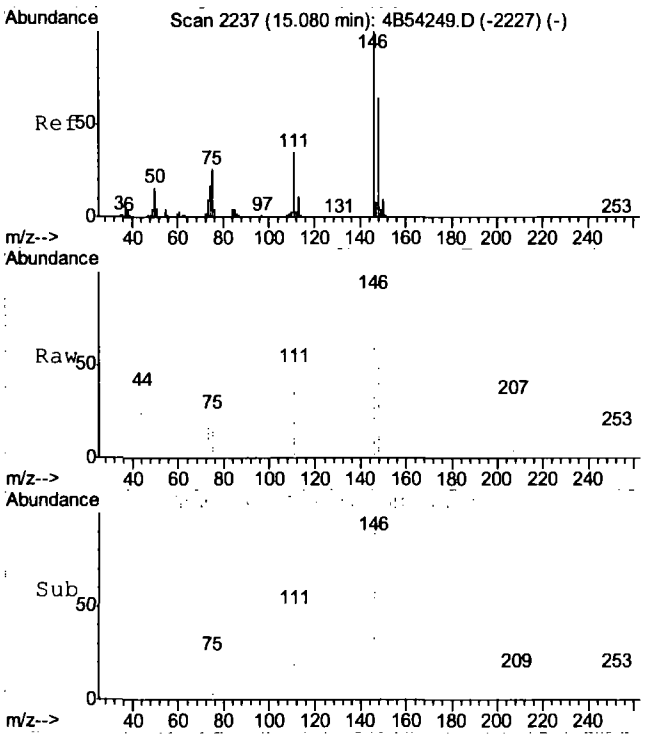



#89
tetrachloroethene
Concen: 2.51 ug/L
RT: 11.69 min Scan# 1589
Delta R.T. -0.00 min
Lab File: 4B54416.D
Acq: 12 Aug 2015 2:35 pm

Tgt Ion:164 Resp: 9638

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 129 | 95.9 | 54.7 | 114.7 |
| 131 | 89.5 | 52.0 | 112.0 |
| 166 | 133.3 | 98.8 | 158.8 |

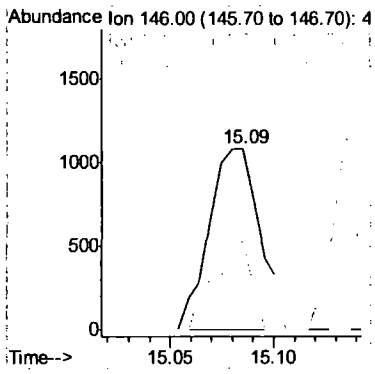


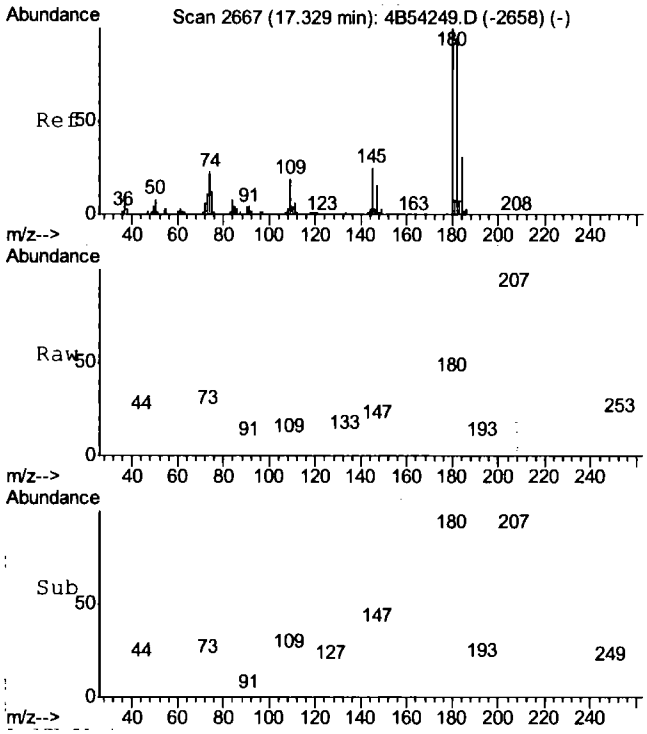

#120
1,3-dichlorobenzene
Concen: 0.24 ug/L
RT: 15.09 min Scan# 2238
Delta R.T. 0.01 min
Lab File: 4B54416.D
Acq: 12 Aug 2015 2:35 pm

Tgt Ion:146 Resp: 1820

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 146 | 100 | | |
| 111 | 49.4 | 5.0 | 65.0 |
| 148 | 54.2 | 33.6 | 93.6 |



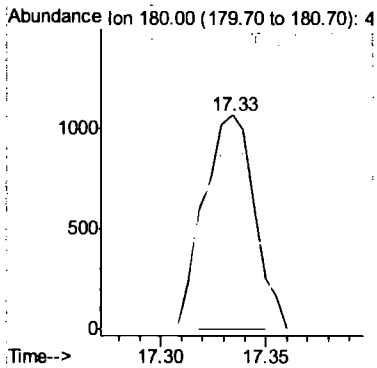

7.1.3




#130
1,2,4-trichlorobenzene
Concen: 0.38 ug/L
RT: 17.33 min Scan# 2668
Delta R.T. 0.01 min
Lab File: 4B54416.D
Acq: 12 Aug 2015 2:35 pm

Tgt Ion:180 Resp: 1776

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 180 | 100 | | |
| 182 | 91.5 | 64.9 | 124.9 |
| 145 | 23.9 | 0.0 | 55.4 |




7.1.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54427.D
Acq On : 12 Aug 2015 7:42 pm
Operator : TOANP
Sample : jc1107-4
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 13 11:55:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 150775 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 439086 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 491241 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 432149 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 214304 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 154067 | 48.52 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 97.04% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 162055 | 46.44 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 92.88% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 571699 | 49.44 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.88% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 195212 | 52.18 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 104.36% | | |
| **Target Compounds** | | | | | Qvalue |
| 35) 1,1-dichloroethane | 7.45 | 63 | 2481 | 0.39 ug/L | 95 |
| 53) 1,1,1-trichloroethane | 8.68 | 97 | 1751 | 0.43 ug/L | 95 |
| 69) trichloroethene | 9.74 | 95 | 1503 | 0.43 ug/L | 88 |
| 89) tetrachloroethene | 11.70 | 164 | 4000 | 1.07 ug/L | 87 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

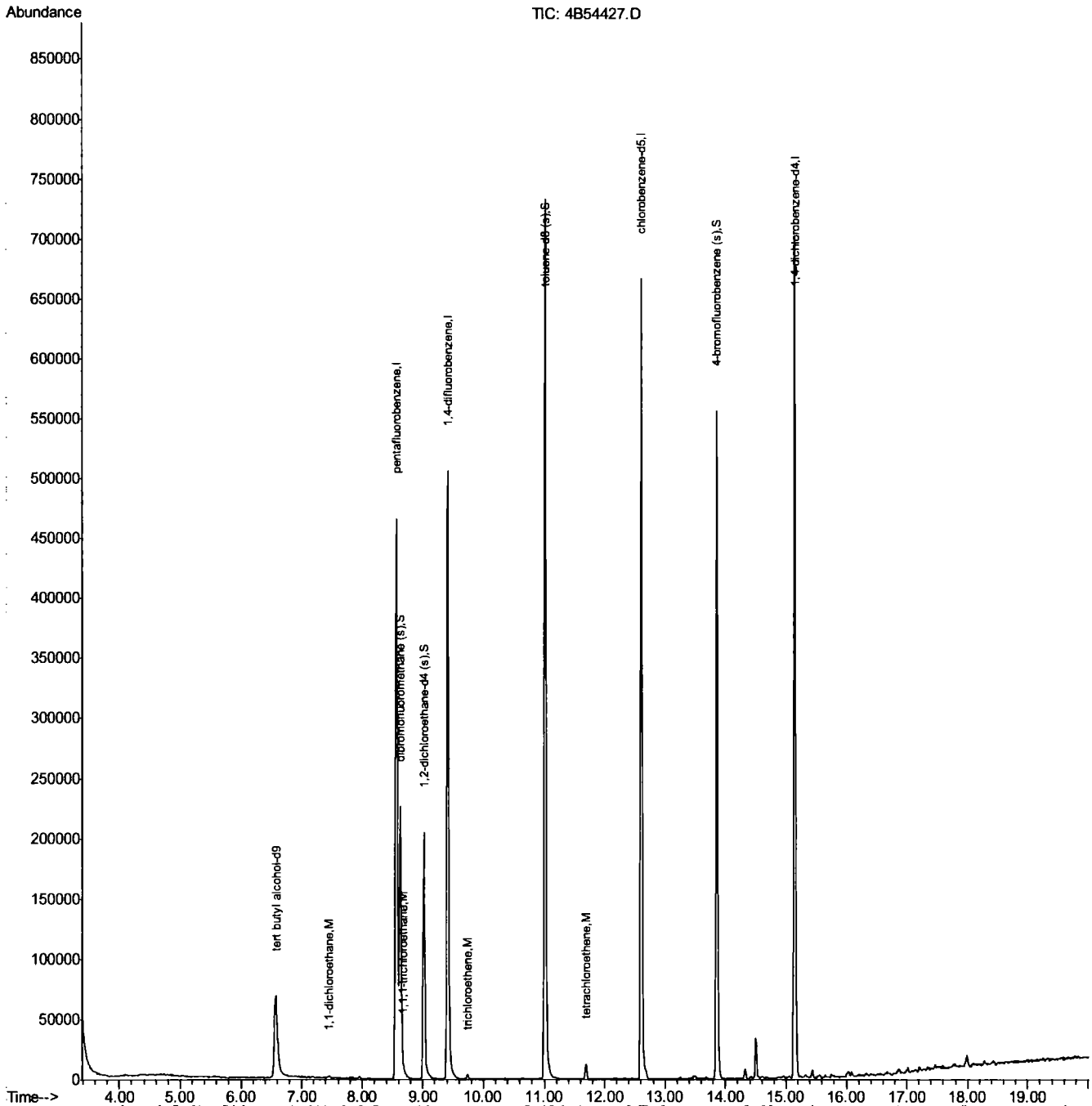
7.1.4

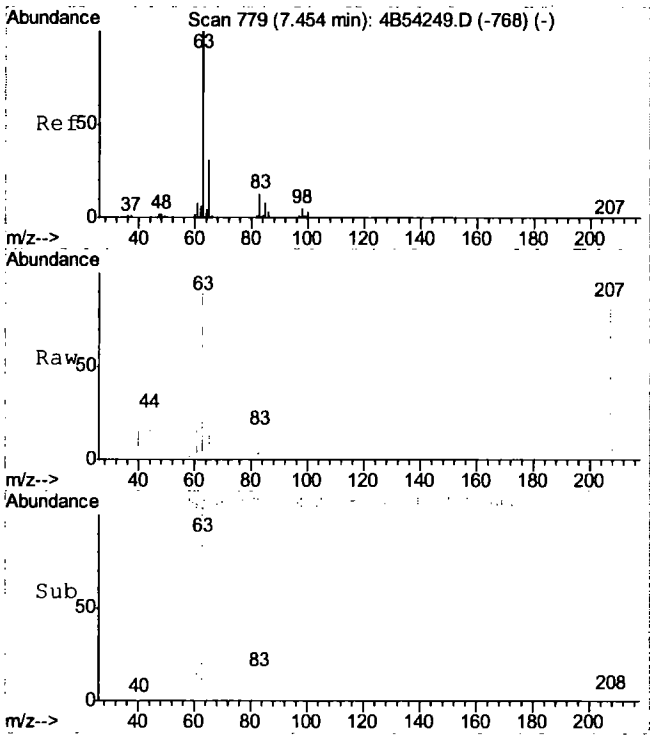
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54427.D
Acq On : 12 Aug 2015 7:42 pm
Operator : TOANP
Sample : jc1107-4
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Aug 13 11:55:29 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

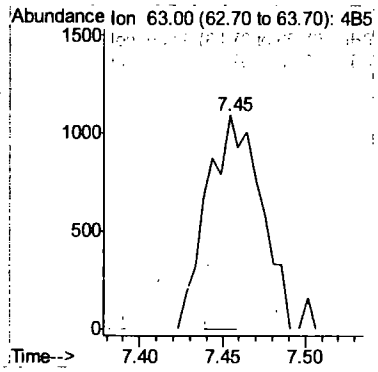


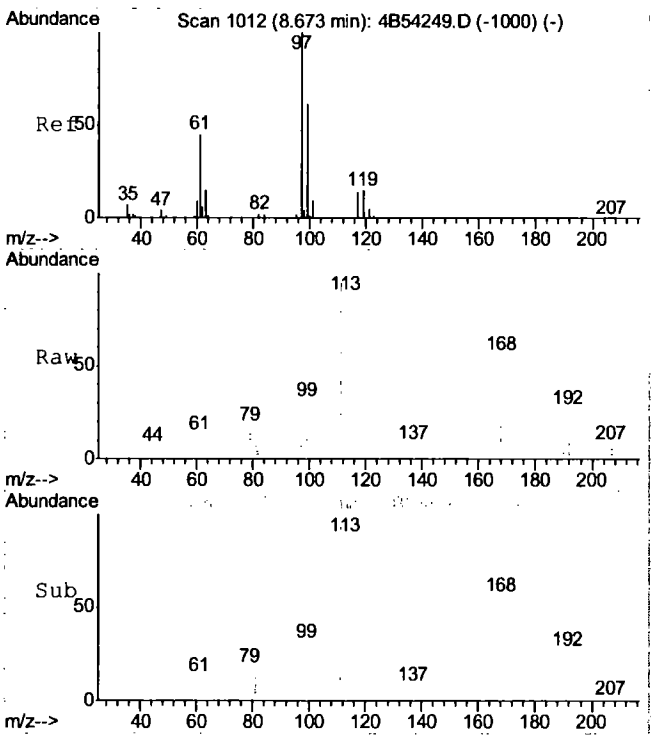



#35
1,1-dichloroethane
Concen: 0.39 ug/L
RT: 7.45 min Scan# 779
Delta R.T. -0.00 min
Lab File: 4B54427.D
Acq: 12 Aug 2015 7:42 pm

Tgt Ion: 63 Resp: 2481

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 32.9 | 1.3 | 61.3 |
| 83 | 16.2 | 0.0 | 42.6 |

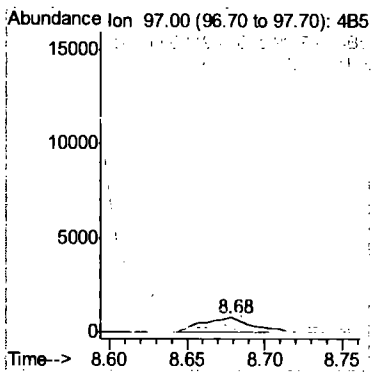


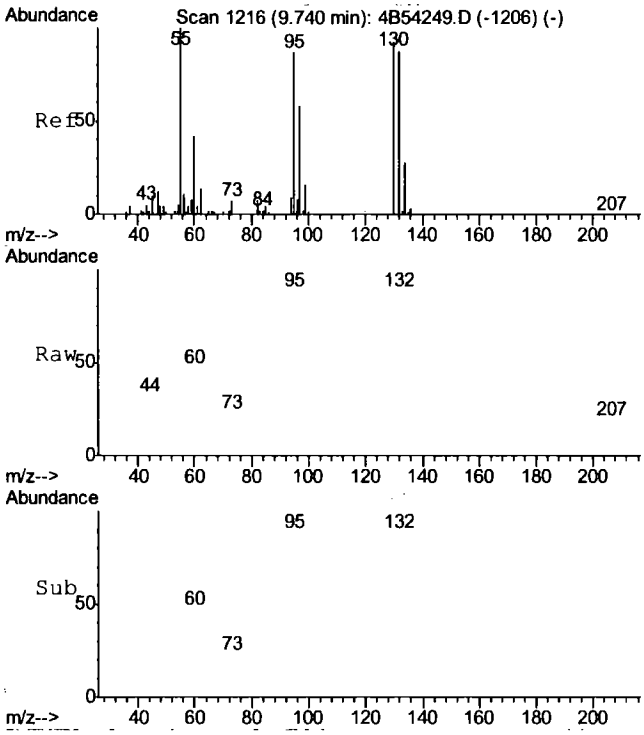

#53
1,1,1-trichloroethane
Concen: 0.43 ug/L
RT: 8.68 min Scan# 1013
Delta R.T. 0.01 min
Lab File: 4B54427.D
Acq: 12 Aug 2015 7:42 pm

Tgt Ion: 97 Resp: 1751

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 59.0 | 35.6 | 95.6 |
| 61 | 44.9 | 14.6 | 74.6 |



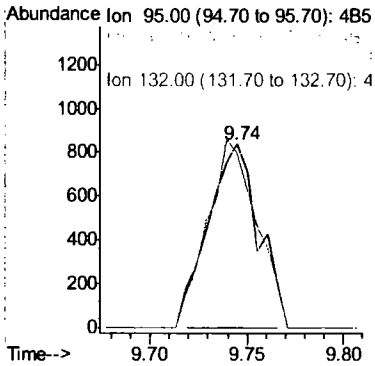

7.1.4

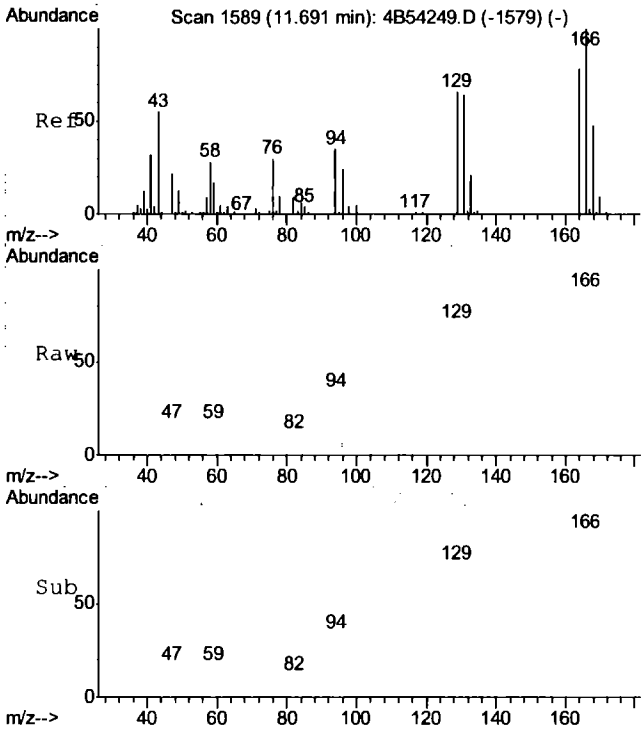



#69
trichloroethene
Concen: 0.43 ug/L
RT: 9.74 min Scan# 1217
Delta R.T. 0.01 min
Lab File: 4B54427.D
Acq: 12 Aug 2015 7:42 pm

Tgt Ion: 95 Resp: 1503

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 52.9 | 36.5 | 96.5 |
| 130 | 91.6 | 76.6 | 136.6 |
| 132 | 95.5 | 71.3 | 131.3 |

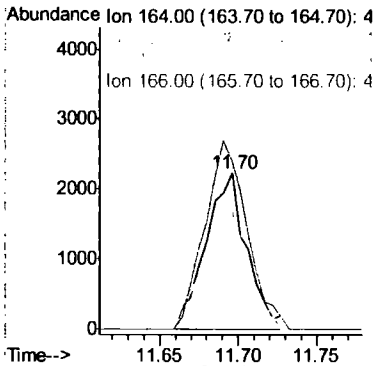



#89
tetrachloroethene
Concen: 1.07 ug/L
RT: 11.70 min Scan# 1590
Delta R.T. 0.01 min
Lab File: 4B54427.D
Acq: 12 Aug 2015 7:42 pm

Tgt Ion:164 Resp: 4000

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 129 | 76.3 | 54.7 | 114.7 |
| 131 | 74.5 | 52.0 | 112.0 |
| 166 | 107.6 | 98.8 | 158.8 |



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54428.D
Acq On : 12 Aug 2015 8:10 pm
Operator : TOANP
Sample : jc1107-5
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 13 11:56:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 149773 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 427592 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 484870 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 426026 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 211603 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 151366 | 48.96 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 97.92% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 160044 | 47.10 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 94.20% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 565579 | 49.55 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.10% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 192511 | 52.11 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 104.22% | | |
| **Target Compounds** | | | | | Qvalue |
| 23) acetone | 6.06 | 58 | 2209 | 7.78 ug/L | 97 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 1530 | 0.25 ug/L | 58 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

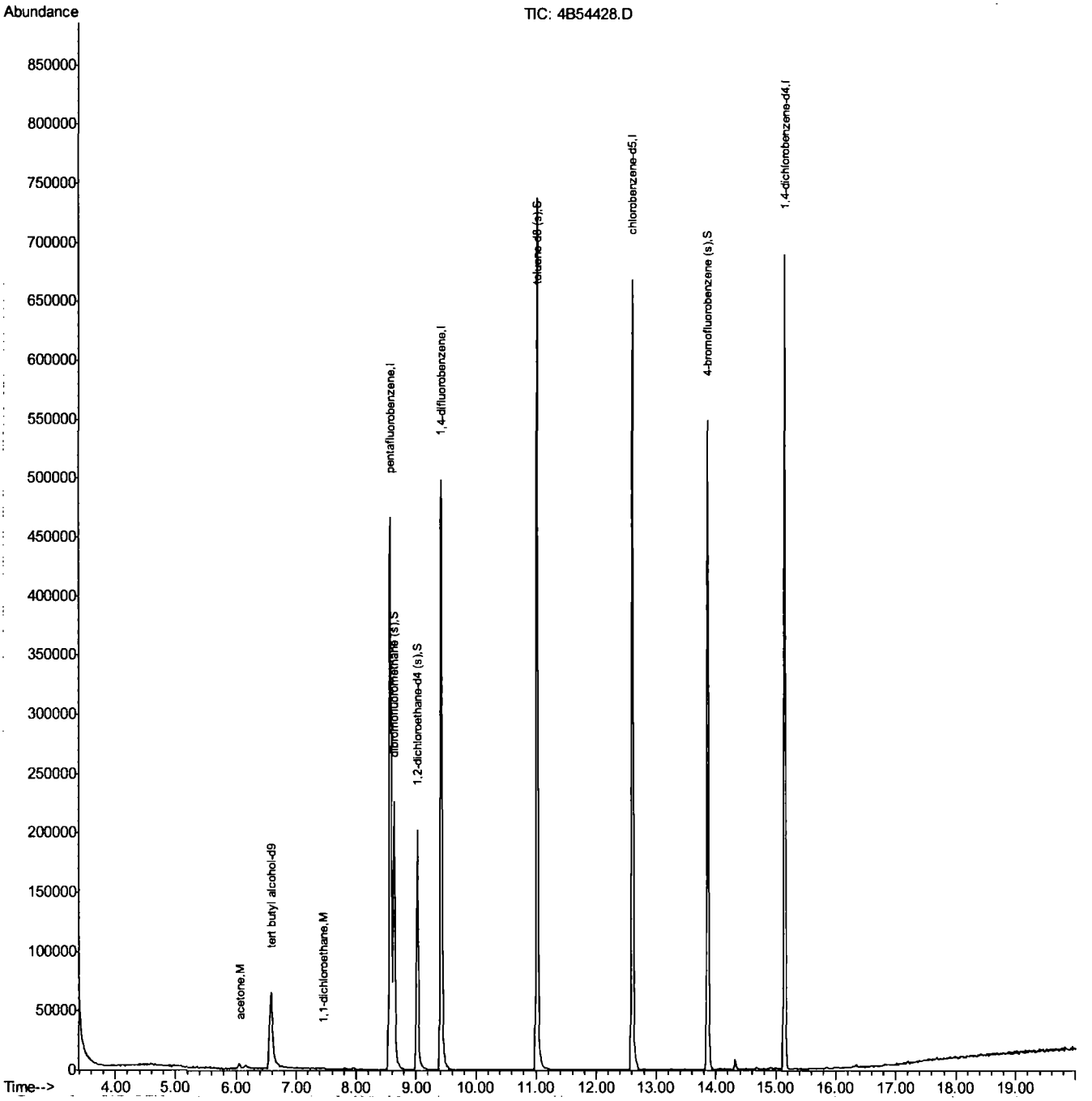
7.1.5

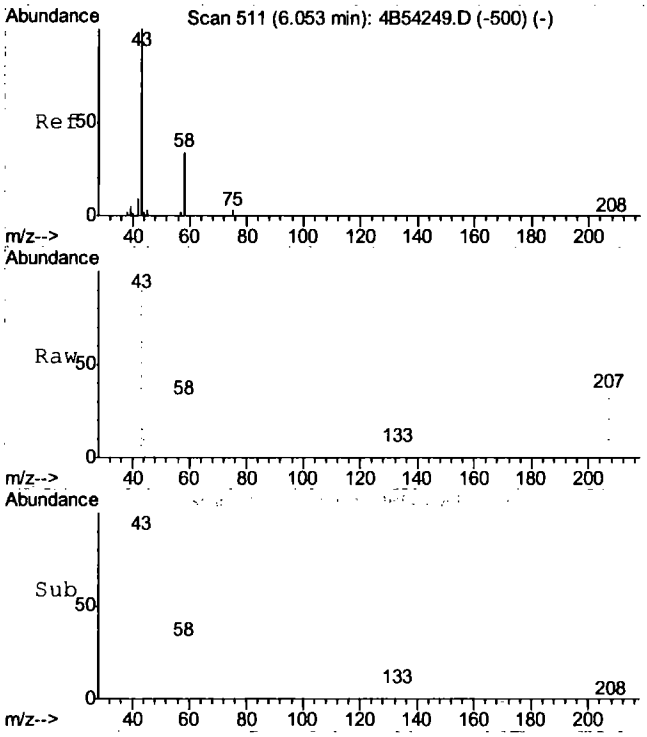
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54428.D
Acq On : 12 Aug 2015 8:10 pm
Operator : TOANP
Sample : jc1107-5
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 24 Sample Multiplier: 1

Quant Time: Aug 13 11:56:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

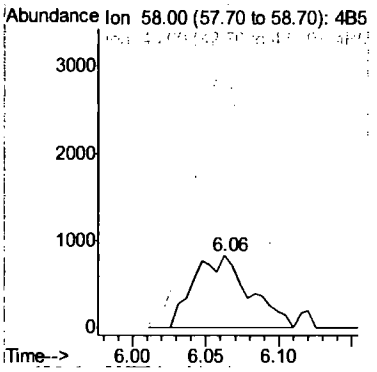


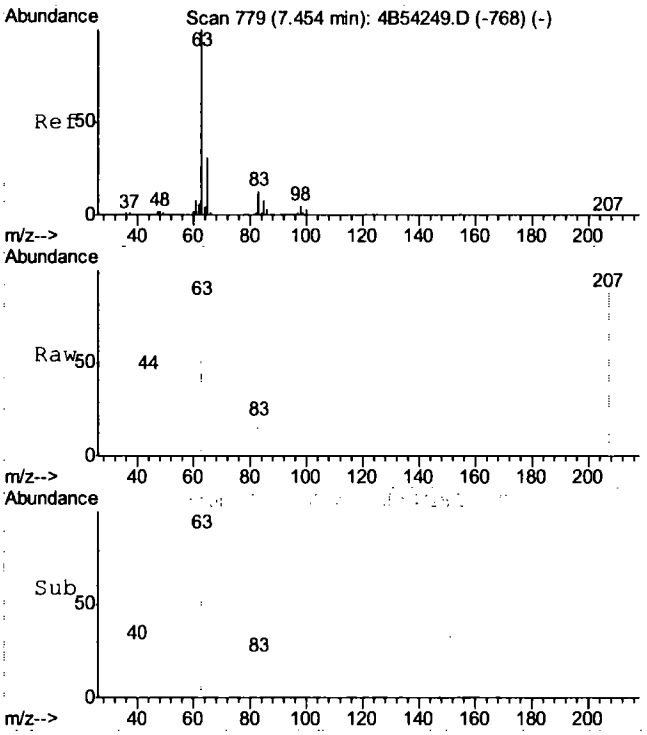



#23
acetone
Concen: 7.78 ug/L
RT: 6.06 min Scan# 513
Delta R.T. 0.01 min
Lab File: 4B54428.D
Acq: 12 Aug 2015 8:10 pm

Tgt Ion: 58 Resp: 2209

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 58 | 100 | | |
| 43 | 304.1 | 268.4 | 328.4 |

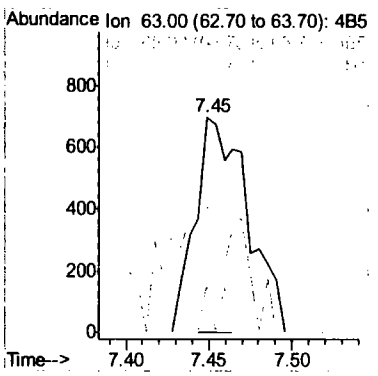



#35
1,1-dichloroethane
Concen: 0.25 ug/L
RT: 7.45 min Scan# 778
Delta R.T. -0.01 min
Lab File: 4B54428.D
Acq: 12 Aug 2015 8:10 pm

Tgt Ion: 63 Resp: 1530

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 58.5 | 1.3 | 61.3 |
| 83 | 22.1 | 0.0 | 42.6 |




7.1.5

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54429.D
Acq On : 12 Aug 2015 8:38 pm
Operator : TOANP
Sample : jc1107-6
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 13 11:56:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

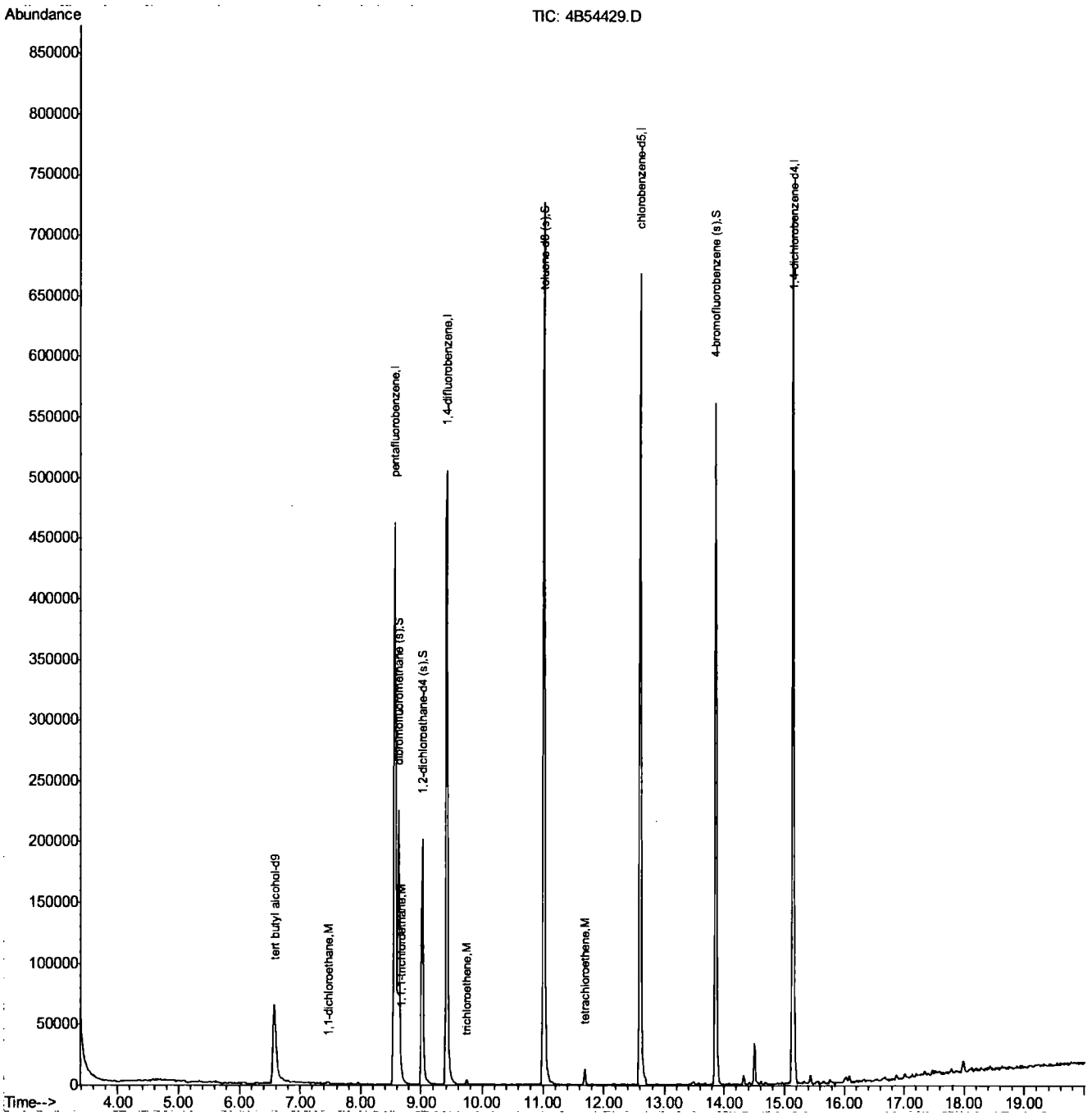
| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 145128 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 431535 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 484038 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 425202 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 215693 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 153306 | 49.13 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 98.26% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 161032 | 46.96 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 93.92% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 565731 | 49.65 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.30% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 193473 | 51.38 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 102.76% | | |
| **Target Compounds** | | | | | Qvalue |
| 35) 1,1-dichloroethane | 7.45 | 63 | 2594 | 0.41 ug/L | 75 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 1638 | 0.41 ug/L | 78 |
| 69) trichloroethene | 9.73 | 95 | 1495 | 0.44 ug/L | 82 |
| 89) tetrachloroethene | 11.69 | 164 | 3931 | 1.06 ug/L | 90 |

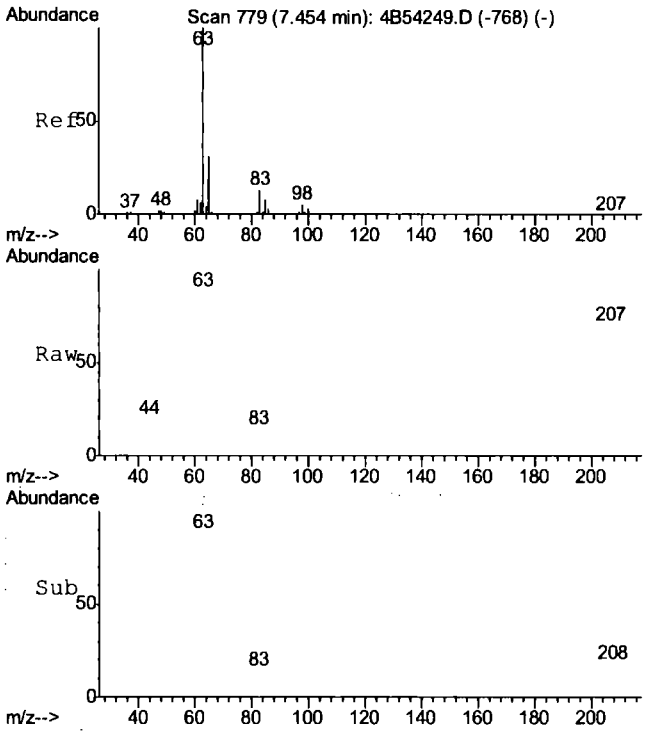
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54429.D
Acq On : 12 Aug 2015 8:38 pm
Operator : TOANP
Sample : jc1107-6
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 13 11:56:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

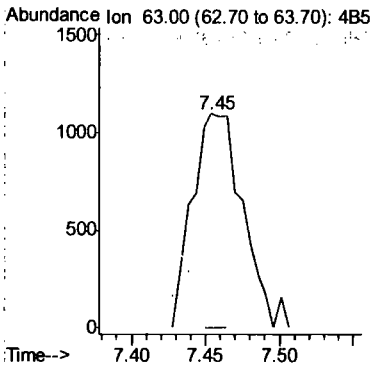


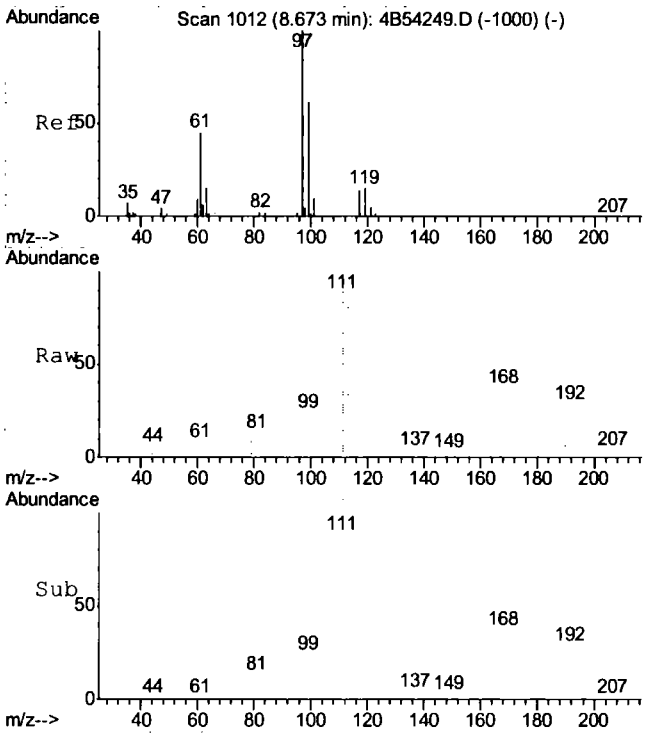



#35
1,1-dichloroethane
Concen: 0.41 ug/L
RT: 7.45 min Scan# 779
Delta R.T. -0.00 min
Lab File: 4B54429.D
Acq: 12 Aug 2015 8:38 pm

Tgt Ion: 63 Resp: 2594

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 50.2 | 1.3 | 61.3 |
| 83 | 14.0 | 0.0 | 42.6 |

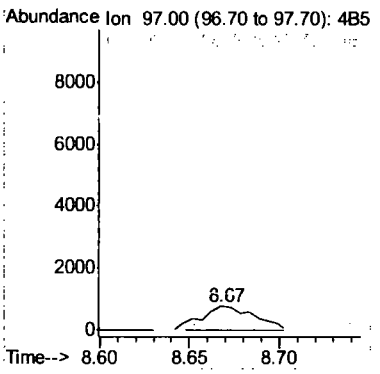


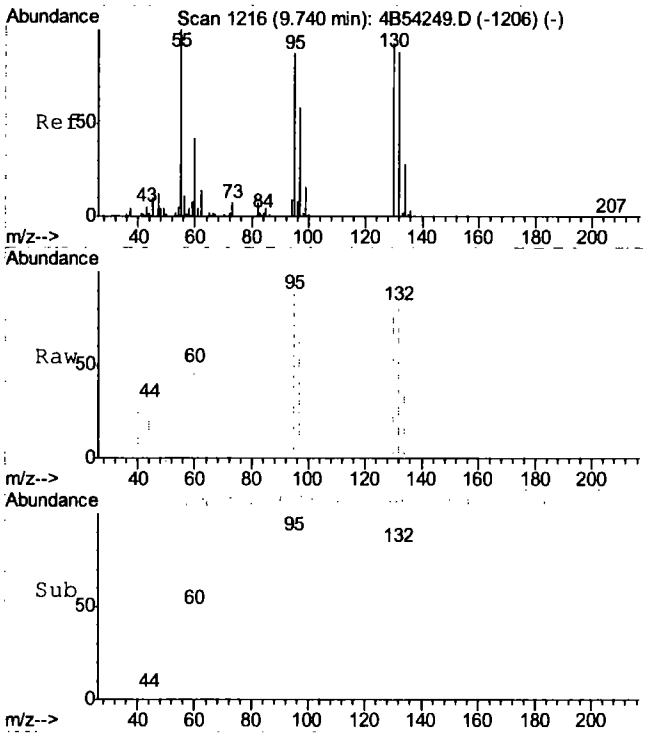

#53
1,1,1-trichloroethane
Concen: 0.41 ug/L
RT: 8.67 min Scan# 1011
Delta R.T. -0.01 min
Lab File: 4B54429.D
Acq: 12 Aug 2015 8:38 pm

Tgt Ion: 97 Resp: 1638

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 90.7 | 35.6 | 95.6 |
| 61 | 49.1 | 14.6 | 74.6 |



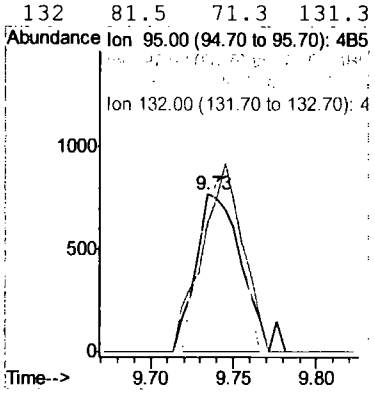

7.1.6

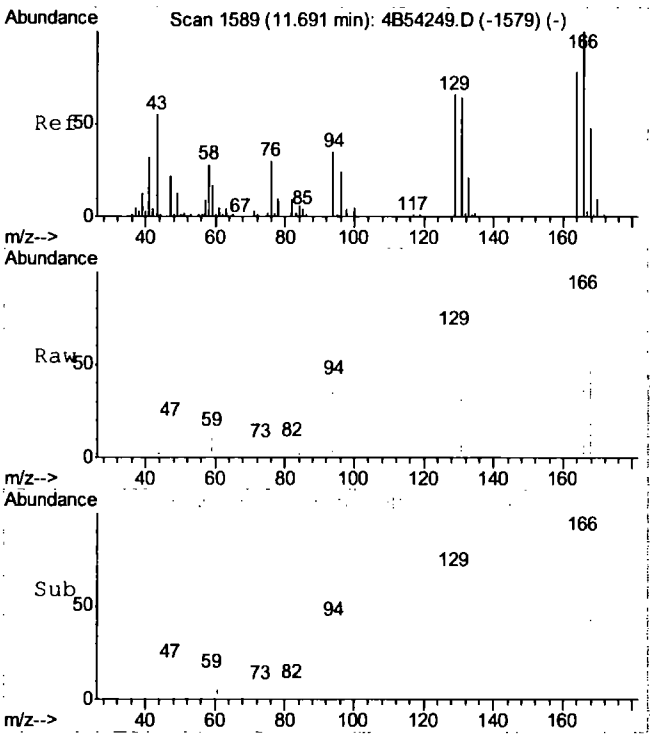



#69
trichloroethene
Concen: 0.44 ug/L
RT: 9.73 min Scan# 1215
Delta R.T. -0.01 min
Lab File: 4B54429.D
Acq: 12 Aug 2015 8:38 pm

Tgt Ion: 95 Resp: 1495

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 67.1 | 36.5 | 96.5 |
| 130 | 78.4 | 76.6 | 136.6 |
| 132 | 81.5 | 71.3 | 131.3 |

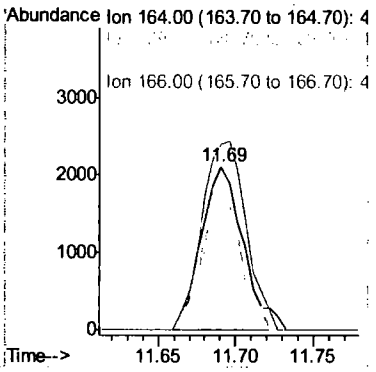



#89
tetrachloroethene
Concen: 1.06 ug/L
RT: 11.69 min Scan# 1589
Delta R.T. -0.00 min
Lab File: 4B54429.D
Acq: 12 Aug 2015 8:38 pm

Tgt Ion:164 Resp: 3931

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 129 | 78.9 | 54.7 | 114.7 |
| 131 | 74.3 | 52.0 | 112.0 |
| 166 | 113.7 | 98.8 | 158.8 |




7.1.6

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54451.D
Acq On : 13 Aug 2015 6:51 am
Operator : TOANP
Sample : jc1107-7
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Aug 13 12:27:21 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 181708 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 443640 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 499255 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 435289 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 212248 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 155837 | 48.58 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 97.16% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 161936 | 45.93 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 91.86% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 576442 | 49.05 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.10% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 193363 | 52.18 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 104.36% | | |
| **Target Compounds** | | | | | Qvalue |
| 22) 1,1-dichloroethene | 6.02 | 96 | 24240 | 6.92 ug/L | 91 |
| 35) 1,1-dichloroethane | 7.46 | 63 | 46438 | 7.17 ug/L | 96 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 5968 | 1.59 ug/L | 91 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 311978 | 76.16 ug/L | 99 |
| 69) trichloroethene | 9.74 | 95 | 5132 | 1.46 ug/L | 91 |
| 89) tetrachloroethene | 11.69 | 164 | 5791 | 1.53 ug/L | 95 |

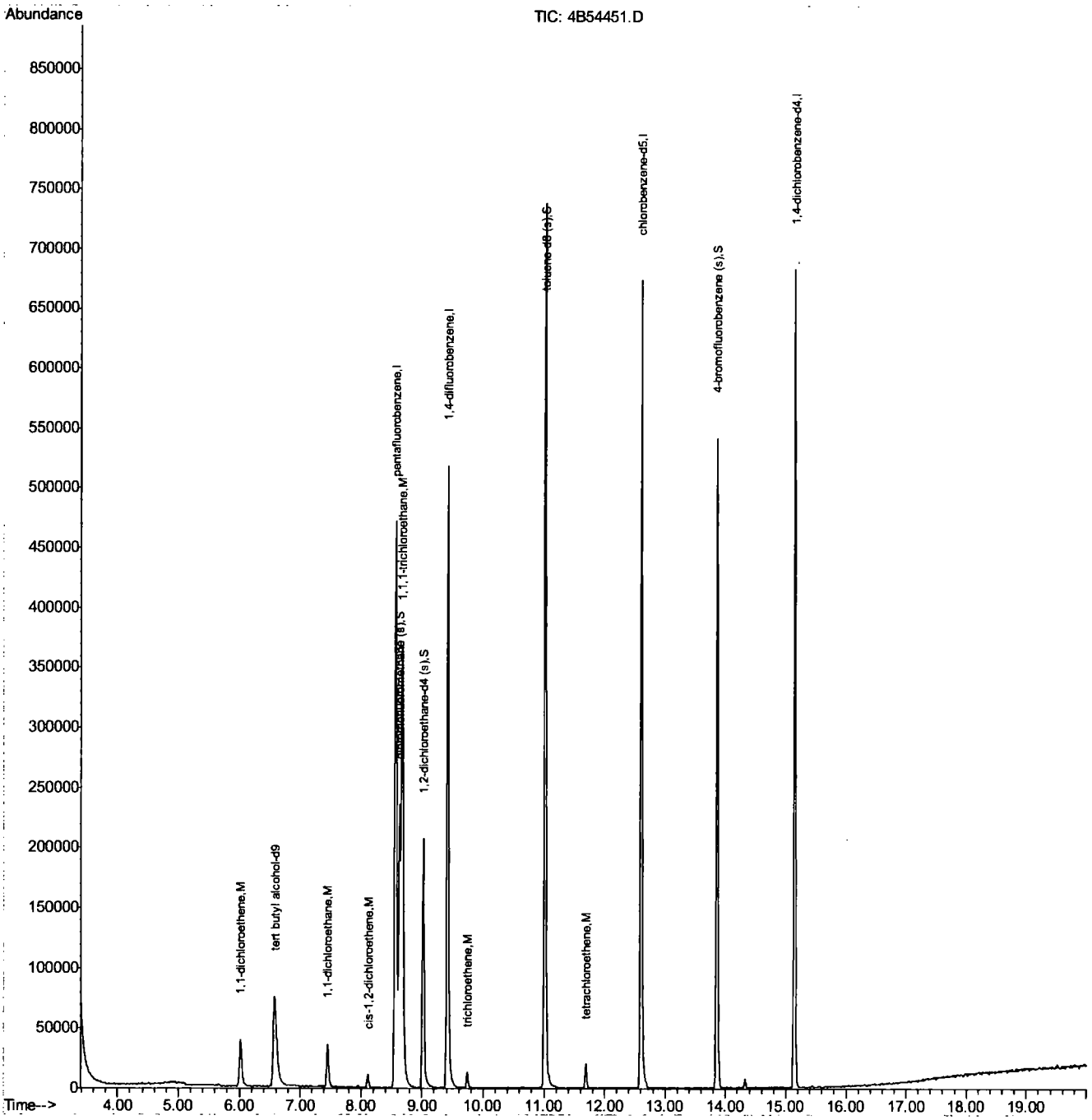
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54451.D
Acq On : 13 Aug 2015 6:51 am
Operator : TOANP
Sample : jc1107-7
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 47 Sample Multiplier: 1

Quant Time: Aug 13 12:27:21 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration




7.1.7

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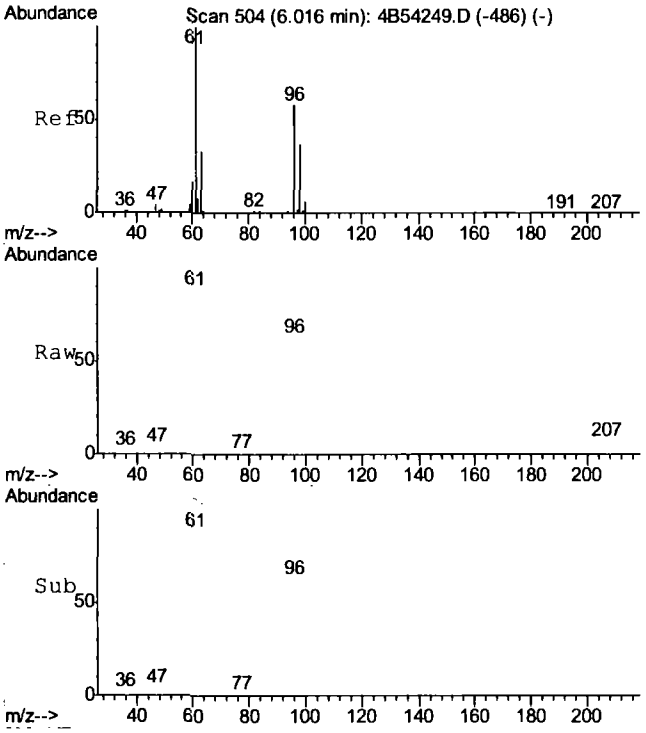
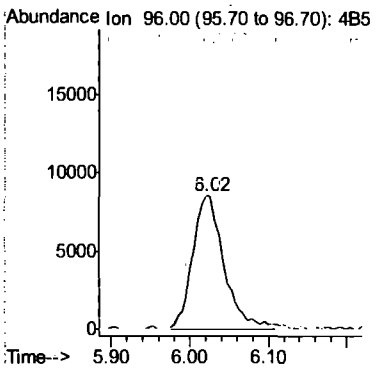
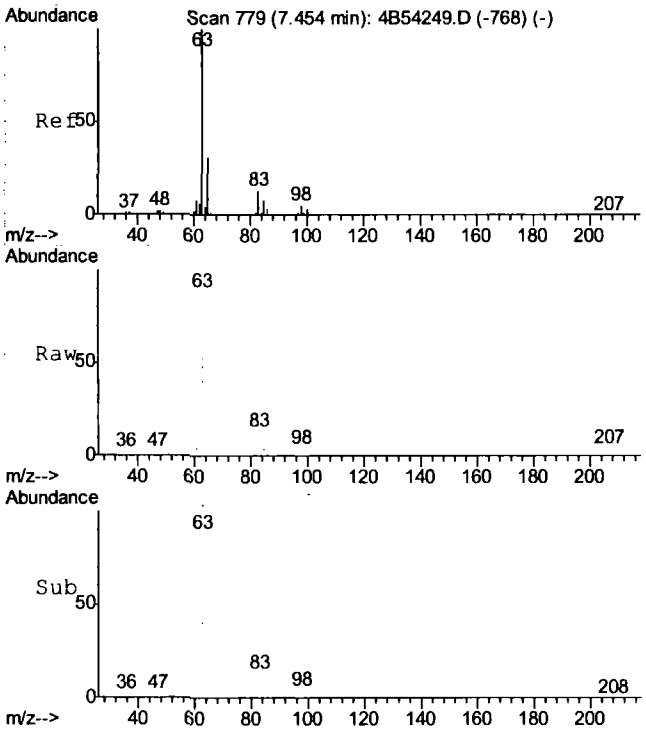



#22
1,1-dichloroethene
Concen: 6.92 ug/L
RT: 6.02 min Scan# 505
Delta R.T. 0.01 min
Lab File: 4B54451.D
Acq: 13 Aug 2015 6:51 am

Tgt Ion: 96 Resp: 24240

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 159.7 | 141.9 | 201.9 |
| 63 | 50.8 | 26.8 | 86.8 |

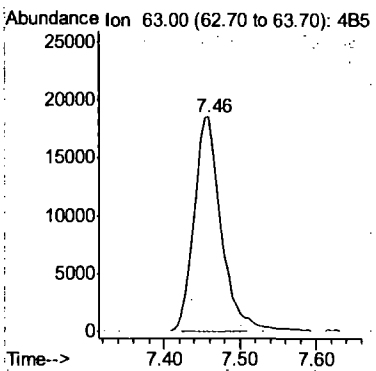



#35
1,1-dichloroethane
Concen: 7.17 ug/L
RT: 7.46 min Scan# 780
Delta R.T. 0.01 min
Lab File: 4B54451.D
Acq: 13 Aug 2015 6:51 am

Tgt Ion: 63 Resp: 46438

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 33.9 | 1.3 | 61.3 |
| 83 | 13.0 | 0.0 | 42.6 |




7.1.7

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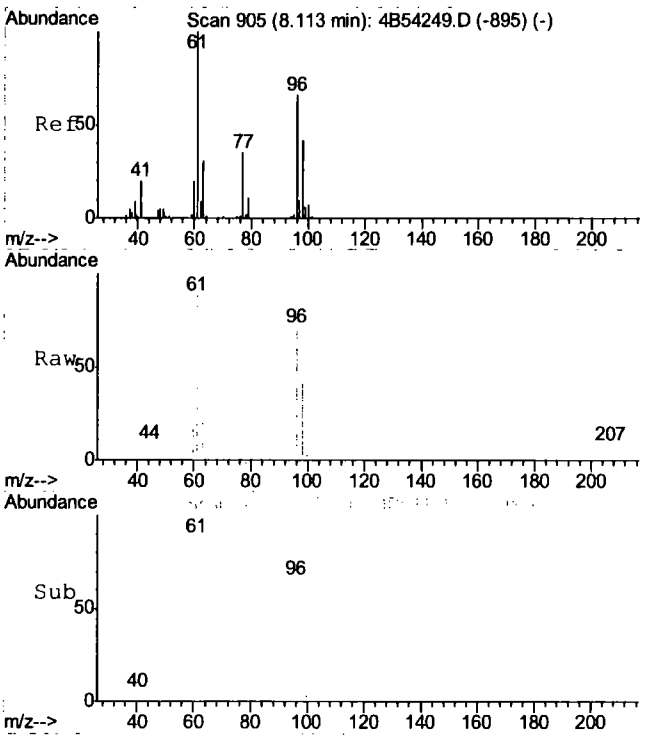
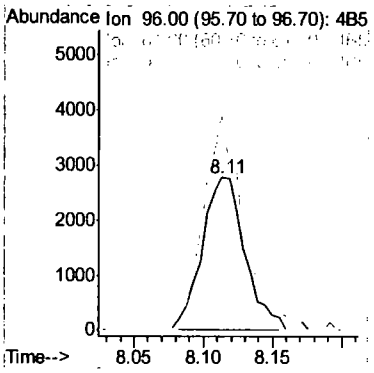
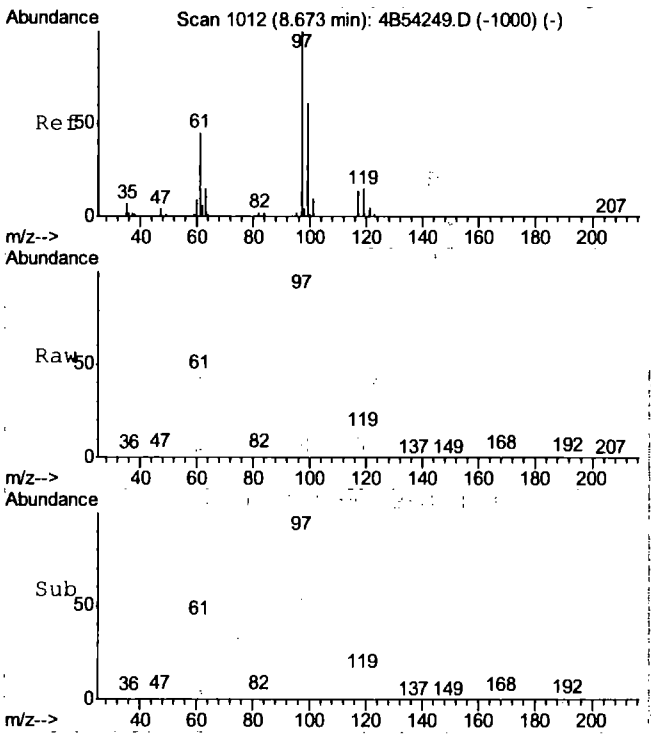



#42
cis-1,2-dichloroethene
Concen: 1.59 ug/L
RT: 8.11 min Scan# 905
Delta R.T. -0.00 min
Lab File: 4B54451.D
Acq: 13 Aug 2015 6:51 am

Tgt Ion: 96 Resp: 5968

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 140.6 | 123.9 | 183.9 |
| 98 | 60.5 | 34.0 | 94.0 |

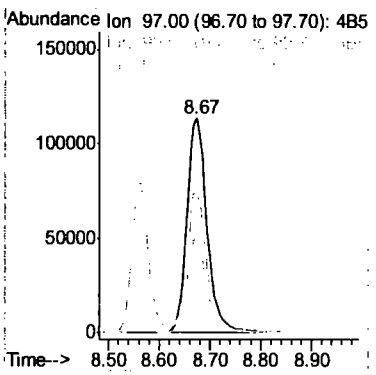



#53
1,1,1-trichloroethane
Concen: 76.16 ug/L
RT: 8.67 min Scan# 1012
Delta R.T. -0.00 min
Lab File: 4B54451.D
Acq: 13 Aug 2015 6:51 am

Tgt Ion: 97 Resp: 311978

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 66.6 | 35.6 | 95.6 |
| 61 | 45.4 | 14.6 | 74.6 |




7.1.7

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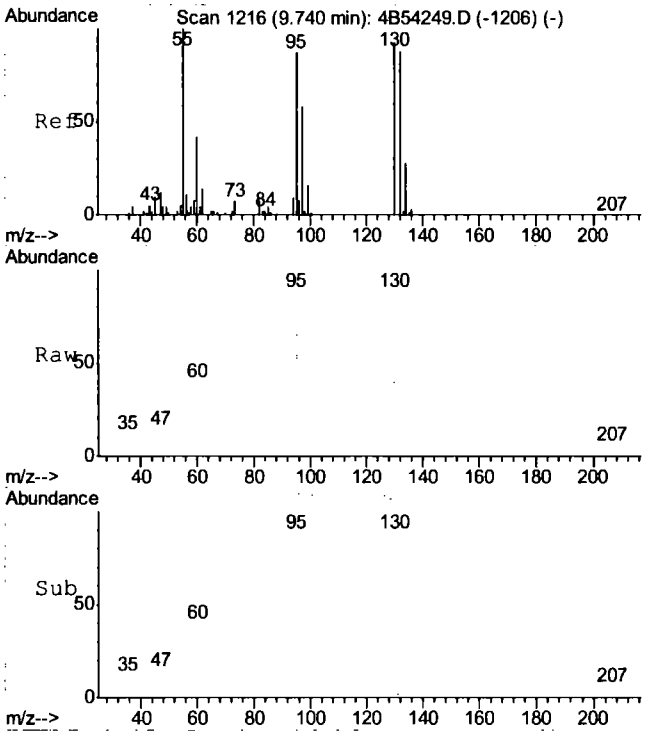
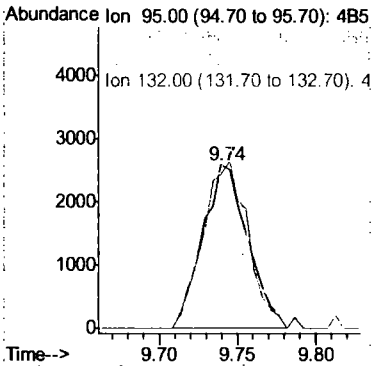
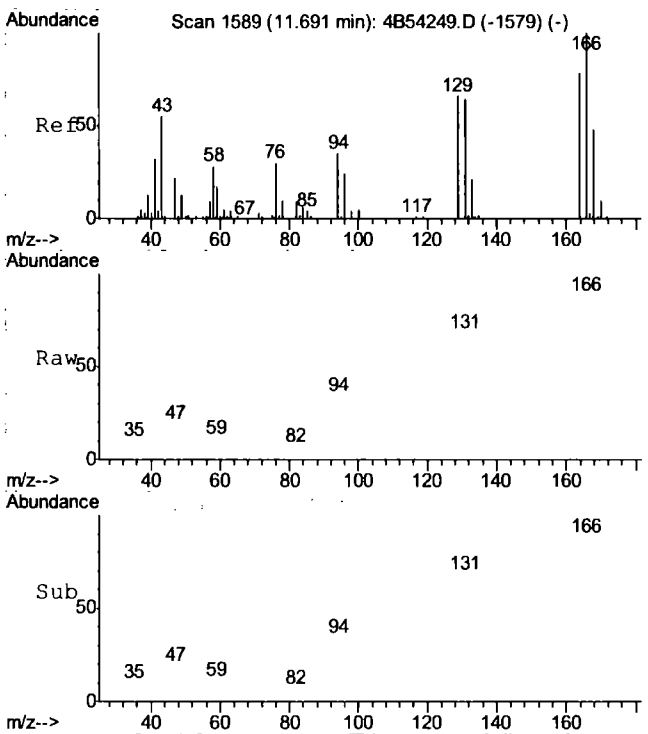



#69
trichloroethene
Concen: 1.46 ug/L
RT: 9.74 min Scan# 1216
Delta R.T. -0.00 min
Lab File: 4B54451.D
Acq: 13 Aug 2015 6:51 am

Tgt Ion: 95 Resp: 5132

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 74.1 | 36.5 | 96.5 |
| 130 | 96.7 | 76.6 | 136.6 |
| 132 | 94.1 | 71.3 | 131.3 |

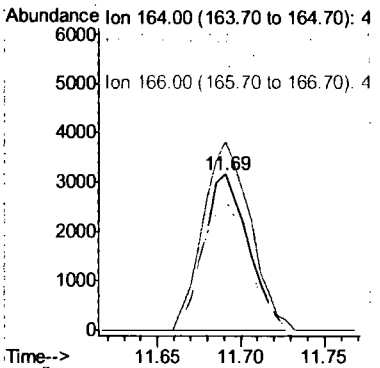



#89
tetrachloroethene
Concen: 1.53 ug/L
RT: 11.69 min Scan# 1589
Delta R.T. -0.00 min
Lab File: 4B54451.D
Acq: 13 Aug 2015 6:51 am

Tgt Ion:164 Resp: 5791

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 129 | 76.6 | 54.7 | 114.7 |
| 131 | 82.3 | 52.0 | 112.0 |
| 166 | 121.3 | 98.8 | 158.8 |




7.1.7



ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54450.D
Acq On : 13 Aug 2015 6:23 am
Operator : TOANP
Sample : jc1107-8
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Aug 13 12:26:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 144786 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 464734 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 523670 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 454873 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 216894 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 163277 | 48.59 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 97.18% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 168285 | 45.57 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 91.14% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 606079 | 49.16 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.32% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 202524 | 53.48 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 106.96% | | |
| Target Compounds | | | | | Qvalue |
| 22) 1,1-dichloroethene | 6.03 | 96 | 20483 | 5.58 ug/L | 89 |
| 35) 1,1-dichloroethane | 7.46 | 63 | 17853 | 2.63 ug/L | 97 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 26728 | 6.82 ug/L | 90 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 255683 | 59.59 ug/L | 97 |
| 69) trichloroethene | 9.74 | 95 | 2248 | 0.61 ug/L | 87 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.8

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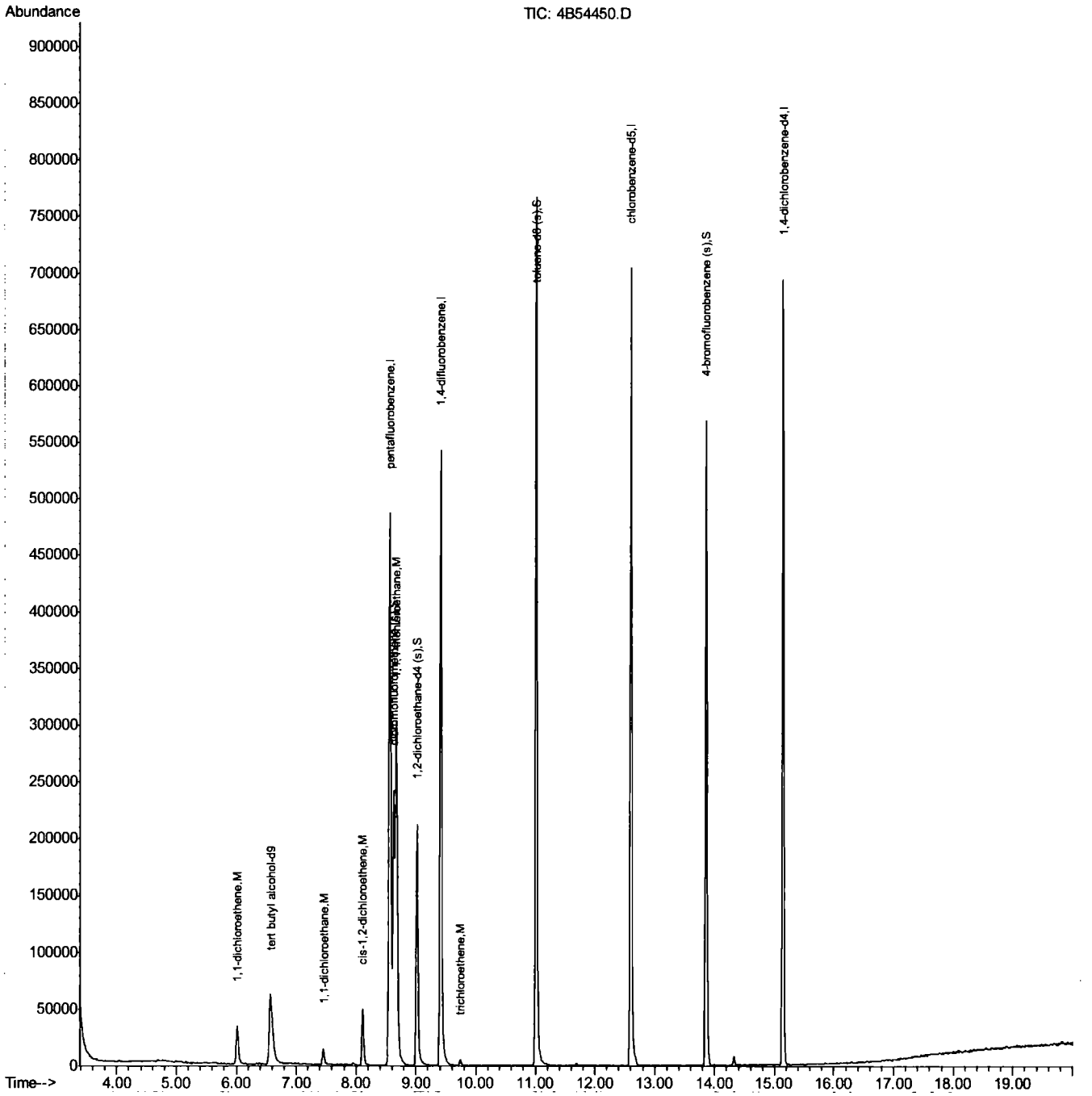
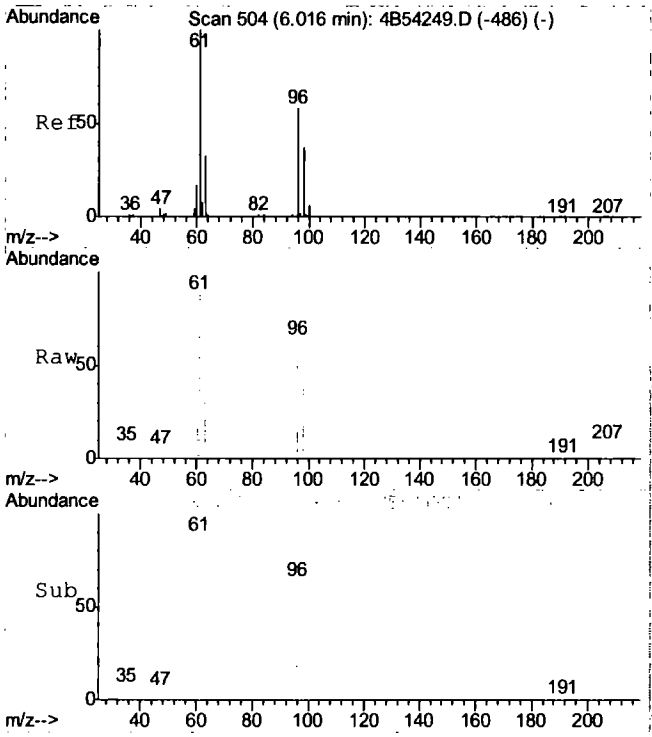
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54450.D
Acq On : 13 Aug 2015 6:23 am
Operator : TOANP
Sample : jc1107-8
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Aug 13 12:26:41 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

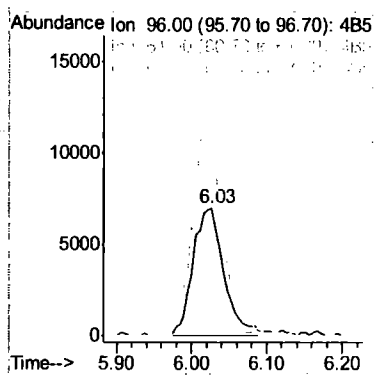


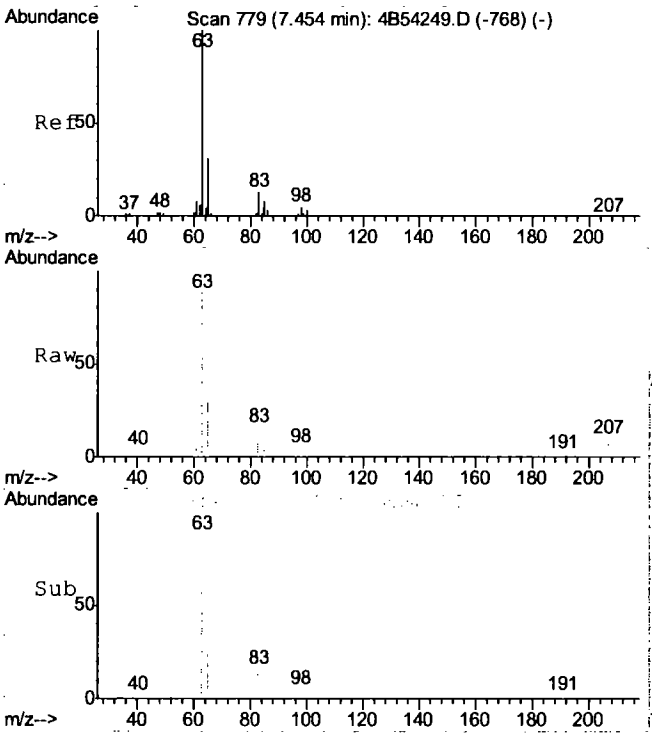



#22
1,1-dichloroethene
Concen: 5.58 ug/L
RT: 6.03 min Scan# 506
Delta R.T. 0.01 min
Lab File: 4B54450.D
Acq: 13 Aug 2015 6:23 am

Tgt Ion: 96 Resp: 20483

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 156.9 | 141.9 | 201.9 |
| 63 | 48.8 | 26.8 | 86.8 |

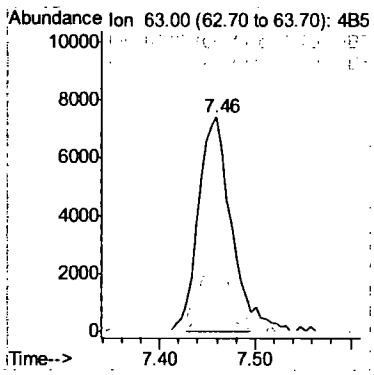



#35
1,1-dichloroethane
Concen: 2.63 ug/L
RT: 7.46 min Scan# 780
Delta R.T. 0.01 min
Lab File: 4B54450.D
Acq: 13 Aug 2015 6:23 am

Tgt Ion: 63 Resp: 17853

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 63 | 100 | | |
| 65 | 30.9 | 1.3 | 61.3 |
| 83 | 15.5 | 0.0 | 42.6 |




7.1.8

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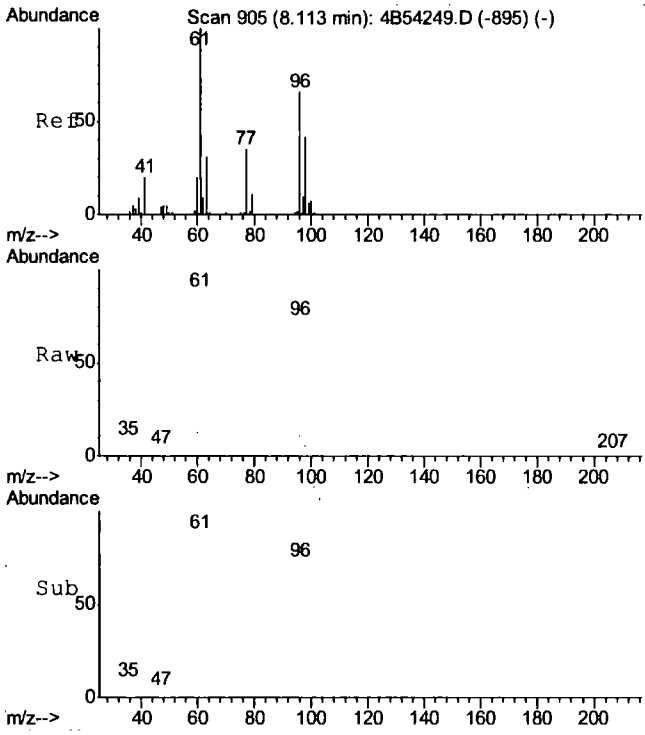
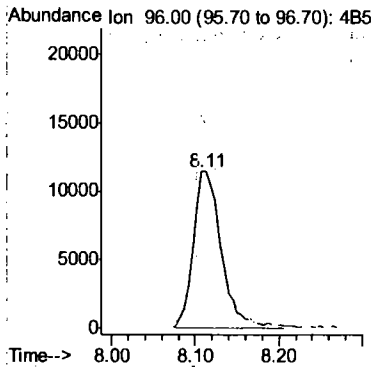
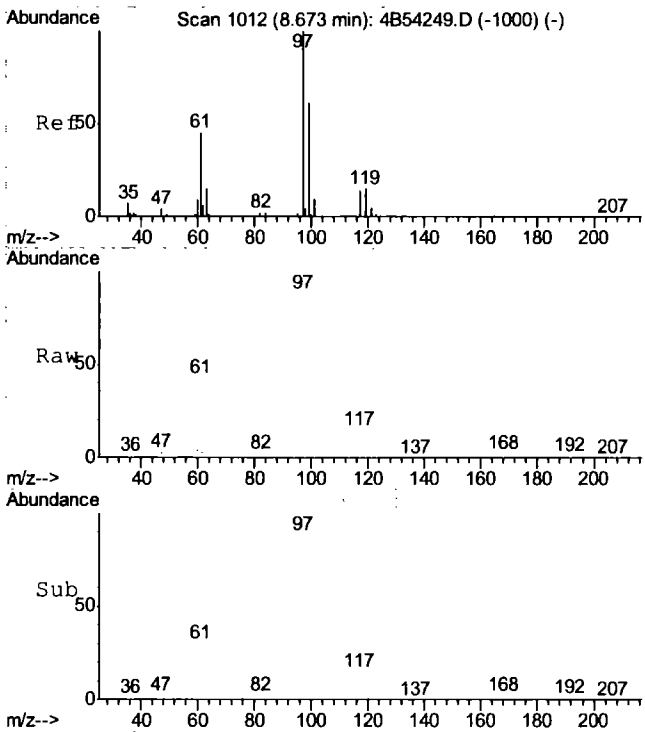



#42
cis-1,2-dichloroethene
Concen: 6.82 ug/L
RT: 8.11 min Scan# 904
Delta R.T. -0.01 min
Lab File: 4B54450.D
Acq: 13 Aug 2015 6:23 am

Tgt Ion: 96 Resp: 26728

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 96 | 100 | | |
| 61 | 136.8 | 123.9 | 183.9 |
| 98 | 61.6 | 34.0 | 94.0 |

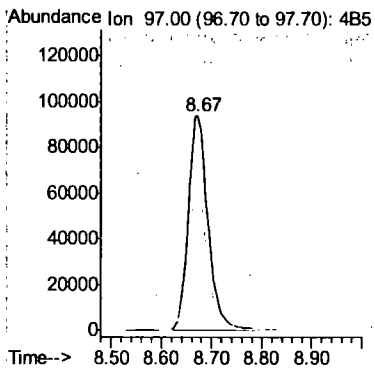



#53
1,1,1-trichloroethane
Concen: 59.59 ug/L
RT: 8.67 min Scan# 1012
Delta R.T. -0.00 min
Lab File: 4B54450.D
Acq: 13 Aug 2015 6:23 am

Tgt Ion: 97 Resp: 255683

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 67.9 | 35.6 | 95.6 |
| 61 | 42.8 | 14.6 | 74.6 |




7.1.8

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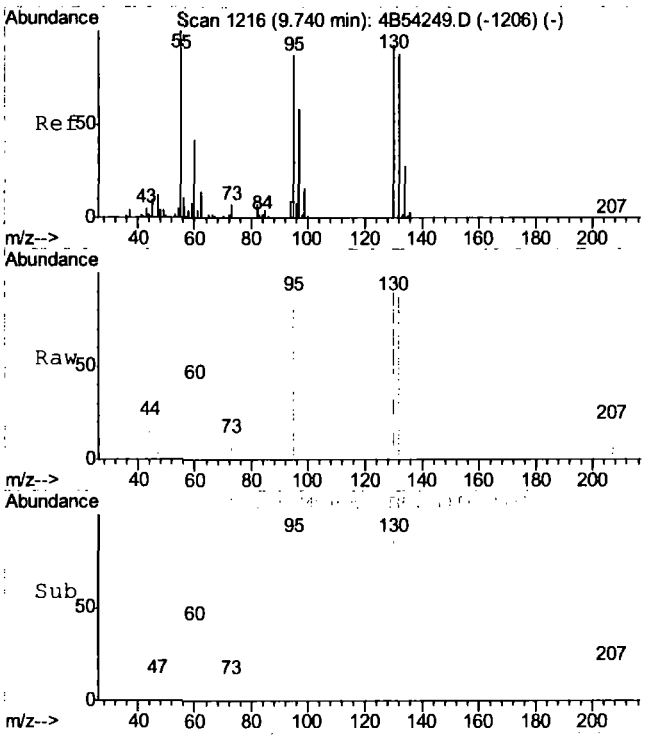
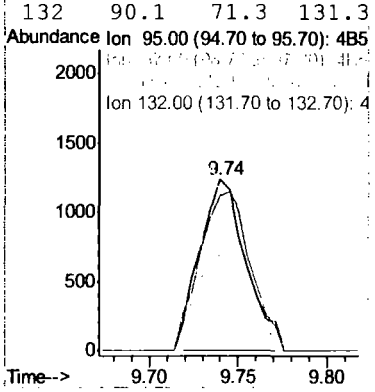



#69
trichloroethene
Concen: 0.61 ug/L
RT: 9.74 min Scan# 1216
Delta R.T. -0.00 min
Lab File: 4B54450.D
Acq: 13 Aug 2015 6:23 am

Tgt Ion: 95 Resp: 2248

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 95 | 100 | | |
| 97 | 56.1 | 36.5 | 96.5 |
| 130 | 91.2 | 76.6 | 136.6 |
| 132 | 90.1 | 71.3 | 131.3 |




7.1.8 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54452.D
Acq On : 13 Aug 2015 7:19 am
Operator : TOANP
Sample : jc1107-9
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Aug 13 12:27:52 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 142504 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 438675 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 494969 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 432890 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 208348 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 153512 | 48.40 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 96.80% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 162448 | 46.60 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 93.20% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 573762 | 49.24 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.48% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 192346 | 52.88 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 105.76% | | |
| **Target Compounds** | | | | | Qvalue |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 2089 | 0.52 ug/L # | 63 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

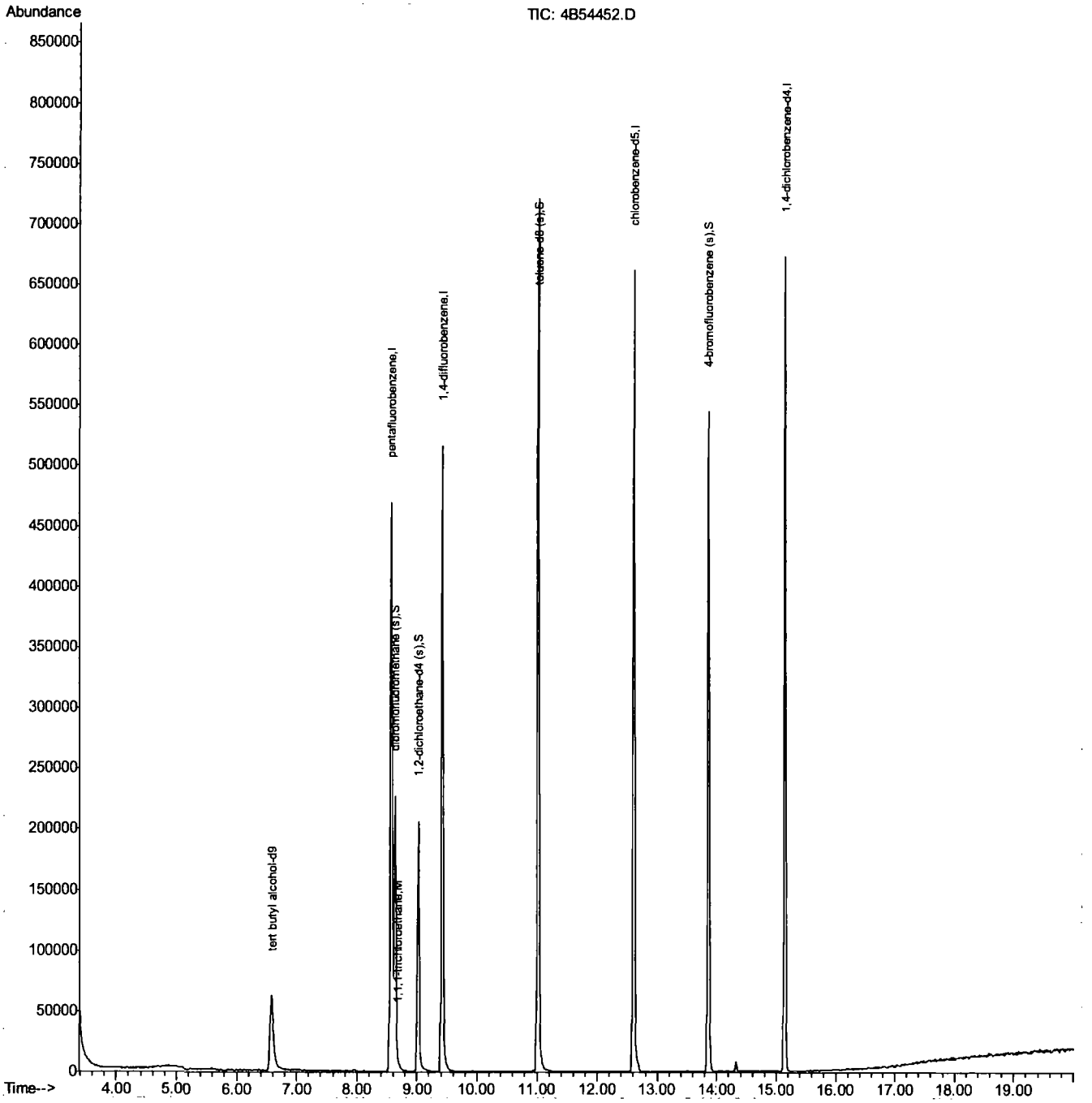
7.1.9

7

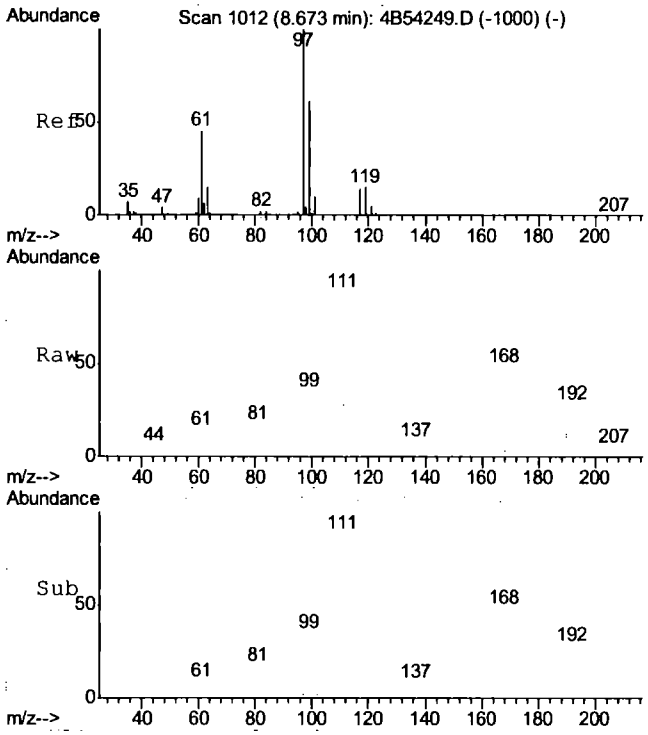
Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54452.D
Acq On : 13 Aug 2015 7:19 am
Operator : TOANP
Sample : jc1107-9
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 48 Sample Multiplier: 1

Quant Time: Aug 13 12:27:52 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration



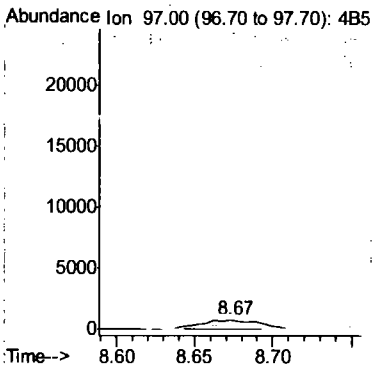

M4B2289.M Thu Aug 13 14:57:36 2015 GCMS4B




#53
1,1,1-trichloroethane
Concen: 0.52 ug/L
RT: 8.67 min Scan# 1012
Delta R.T. -0.00 min
Lab File: 4B54452.D
Acq: 13 Aug 2015 7:19 am

Tgt Ion: 97 Resp: 2089

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 100.7 | 35.6 | 95.6# |
| 61 | 60.9 | 14.6 | 74.6 |




7.1.9

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54453.D
Acq On : 13 Aug 2015 7:48 am
Operator : TOANP
Sample : jc1107-10
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Aug 13 12:28:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 134311 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 433187 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 481637 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 421297 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 205804 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 152759 | 48.77 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 97.54% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 161927 | 47.04 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 94.08% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 565751 | 49.90 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.80% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 188288 | 52.40 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 104.80% | | |
| **Target Compounds** | | | | | Qvalue |
| 53) 1,1,1-trichloroethane | 8.68 | 97 | 1563 | 0.39 ug/L # | 64 |
| 89) tetrachloroethene | 11.69 | 164 | 1592 | 0.43 ug/L # | 79 |

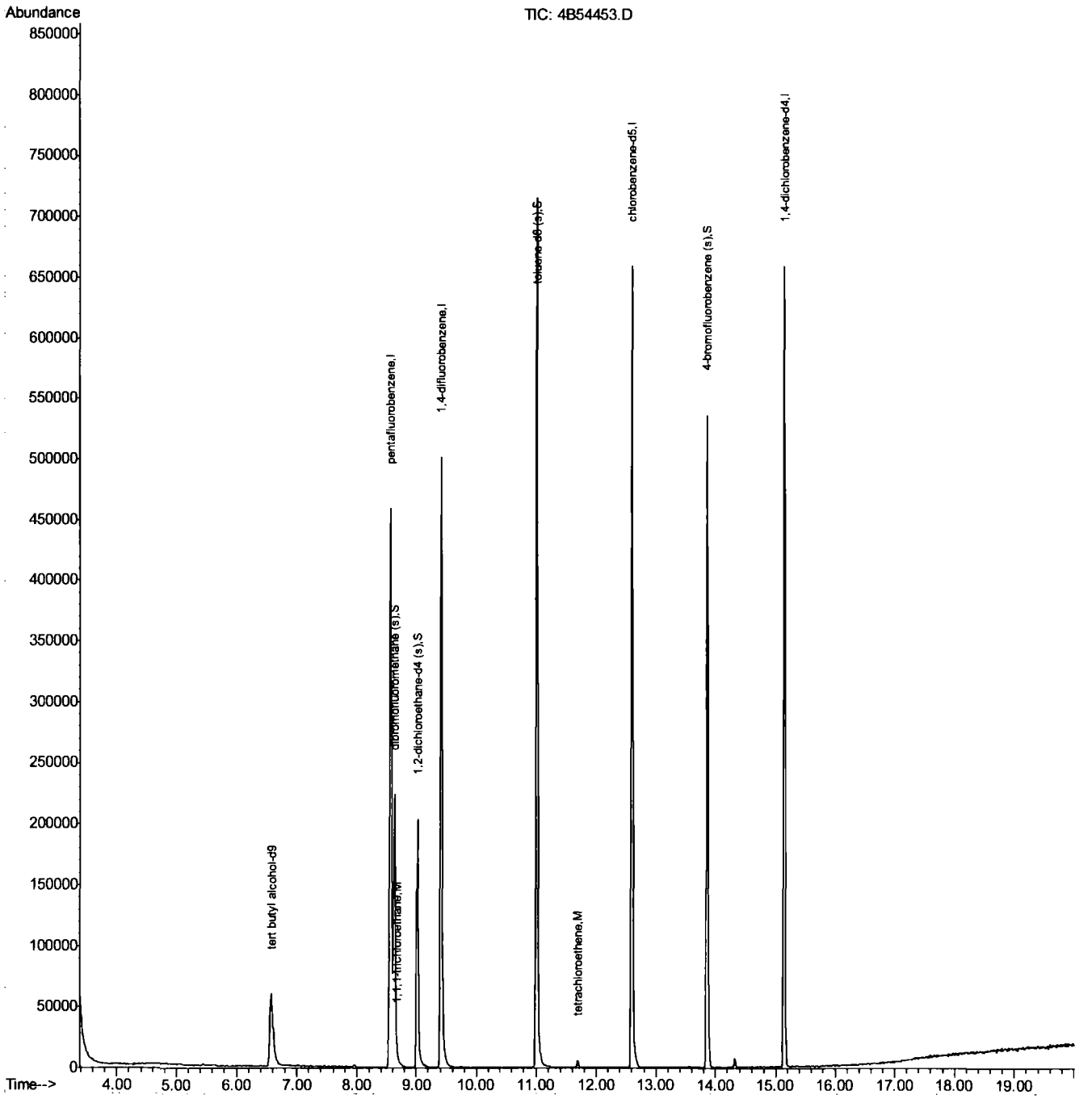
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.10 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54453.D
Acq On : 13 Aug 2015 7:48 am
Operator : TOANP
Sample : jc1107-10
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 49 Sample Multiplier: 1

Quant Time: Aug 13 12:28:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration




M4B2289.M Thu Aug 13 14:57:37 2015 GCMS4B

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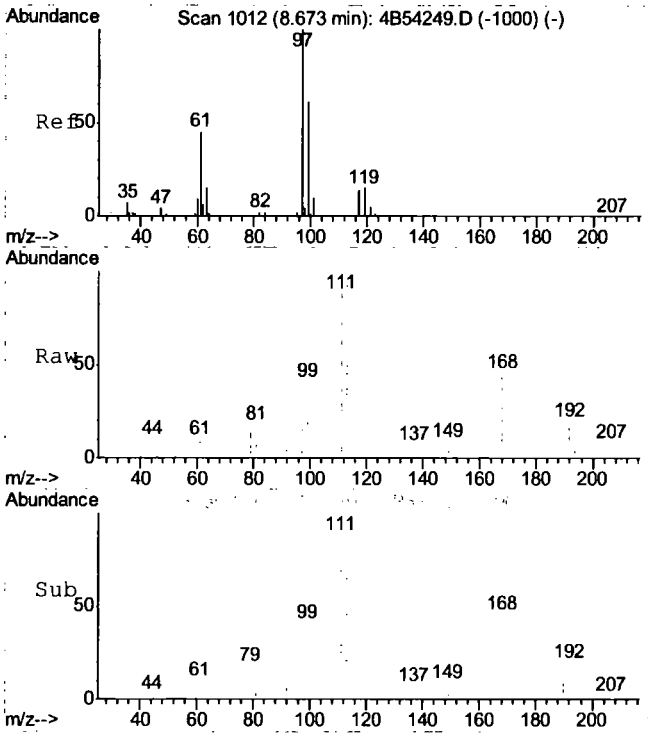
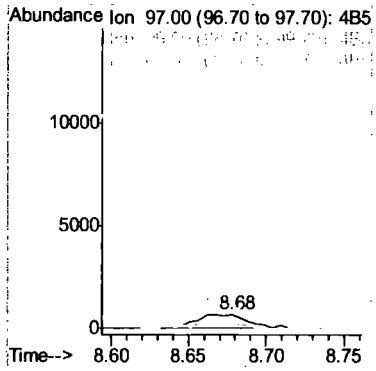
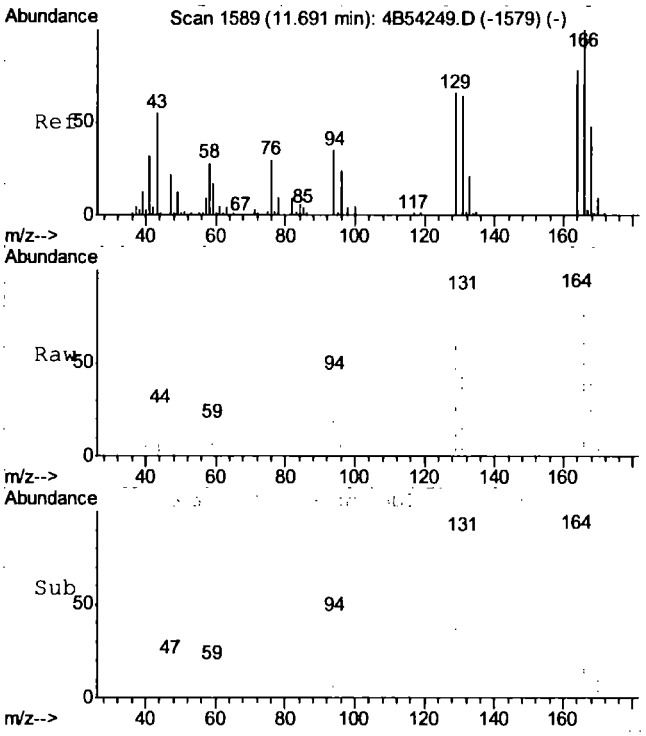



#53
1,1,1-trichloroethane
Concen: 0.39 ug/L
RT: 8.68 min Scan# 1013
Delta R.T. 0.00 min
Lab File: 4B54453.D
Acq: 13 Aug 2015 7:48 am

Tgt Ion: 97 Resp: 1563

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 97 | 100 | | |
| 99 | 109.5 | 35.6 | 95.6# |
| 61 | 40.3 | 14.6 | 74.6 |

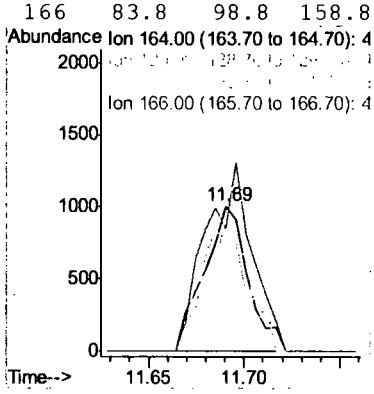



#89
tetrachloroethene
Concen: 0.43 ug/L
RT: 11.69 min Scan# 1589
Delta R.T. -0.00 min
Lab File: 4B54453.D
Acq: 13 Aug 2015 7:48 am

Tgt Ion:164 Resp: 1592

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 164 | 100 | | |
| 129 | 77.1 | 54.7 | 114.7 |
| 131 | 87.2 | 52.0 | 112.0 |
| 166 | 83.8 | 98.8 | 158.8# |




7.1.10 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54423.D
Acq On : 12 Aug 2015 5:51 pm
Operator : TOANP
Sample : jc1107-11
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 13 11:51:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 140434 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 450428 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 498750 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 437102 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 216722 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 155872 | 47.86 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 95.72% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 163515 | 45.68 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 91.36% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 584968 | 49.82 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.64% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 196797 | 52.01 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 104.02% | | |
| **Target Compounds** | | | | | Qvalue |
| 82) toluene | 11.09 | 92 | 2632 | 0.32 ug/L | 88 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

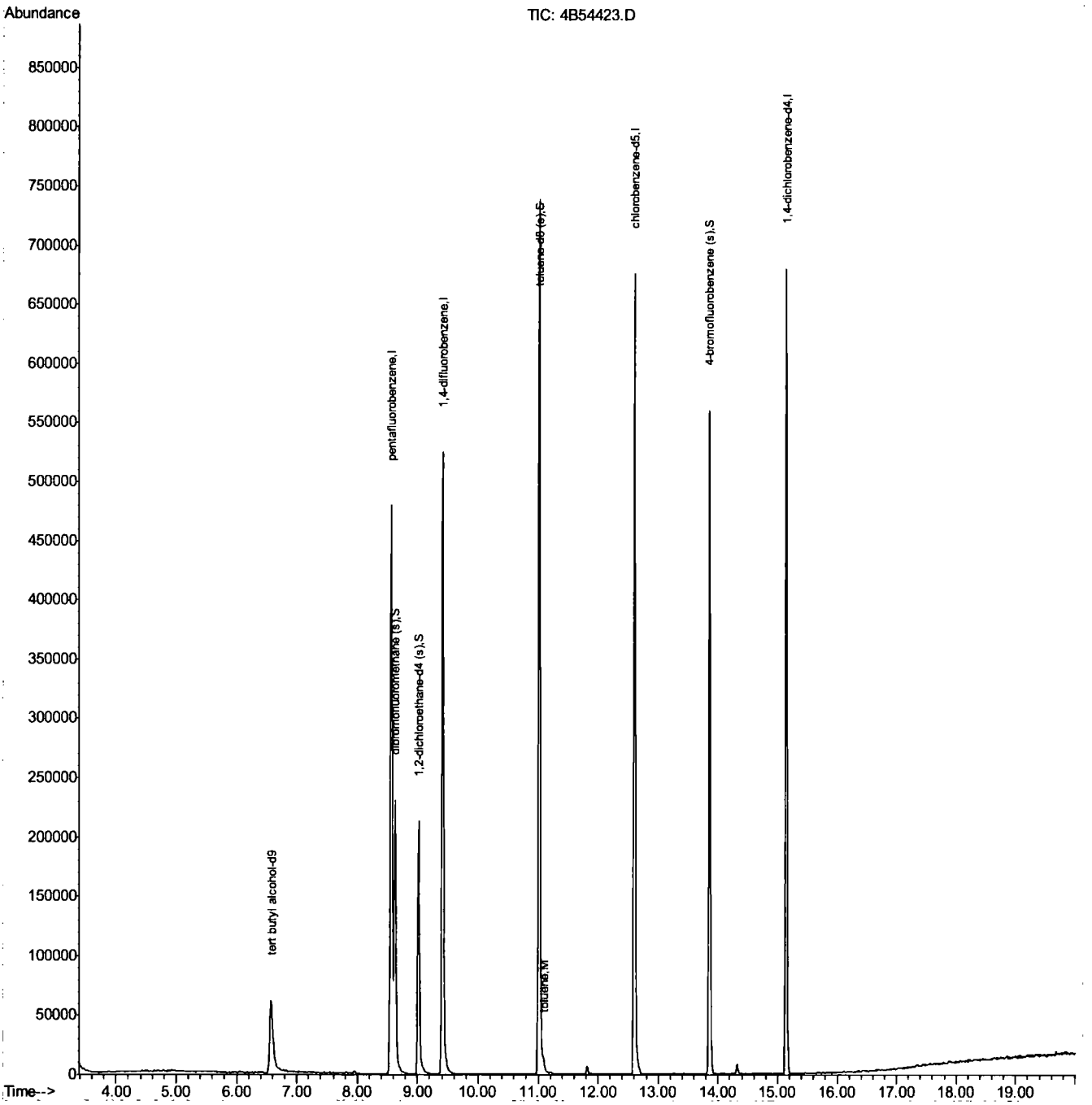
7.1.11

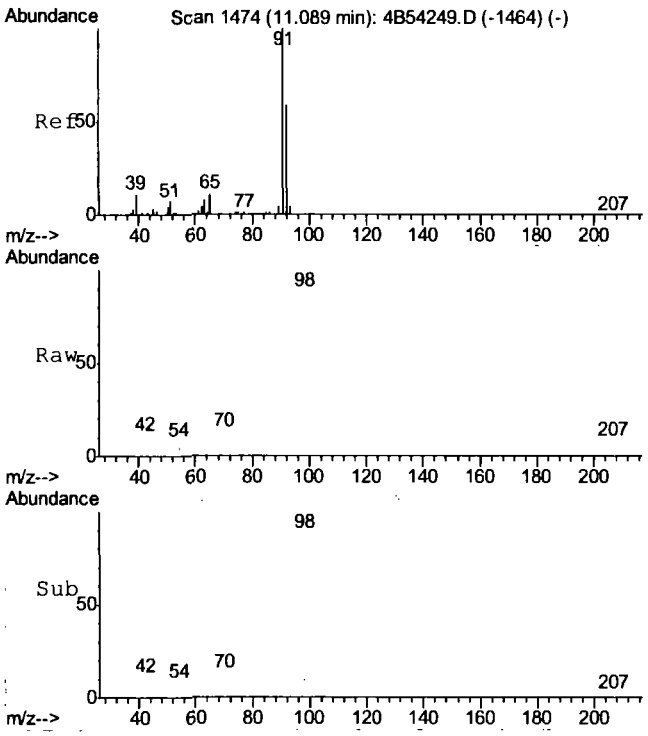
7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54423.D
Acq On : 12 Aug 2015 5:51 pm
Operator : TOANP
Sample : jc1107-11
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 13 11:51:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

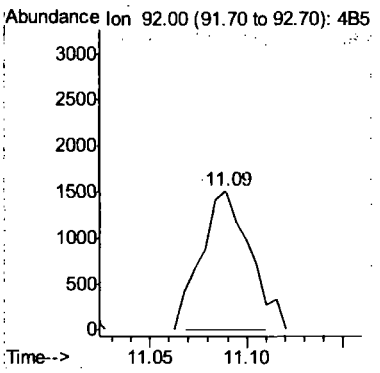





#82
toluene
Concen: 0.32 ug/L
RT: 11.09 min Scan# 1474
Delta R.T. -0.00 min
Lab File: 4B54423.D
Acq: 12 Aug 2015 5:51 pm

Tgt Ion: 92 Resp: 2632

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 92 | 100 | | |
| 91 | 153.7 | 140.0 | 200.0 |
| 65 | 26.4 | 0.0 | 49.3 |




7.1.11

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54424.D
Acq On : 12 Aug 2015 6:18 pm
Operator : TOANP
Sample : jc1107-12
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 11:52:30 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 137119 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 445018 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 501240 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 439157 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 212599 | 50.00 ug/L | 0.00 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 154156 | 47.91 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 95.82% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 163125 | 46.13 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 92.26% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 583978 | 49.49 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.98% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 195413 | 52.65 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 105.30% | | |

Target Compounds Qvalue

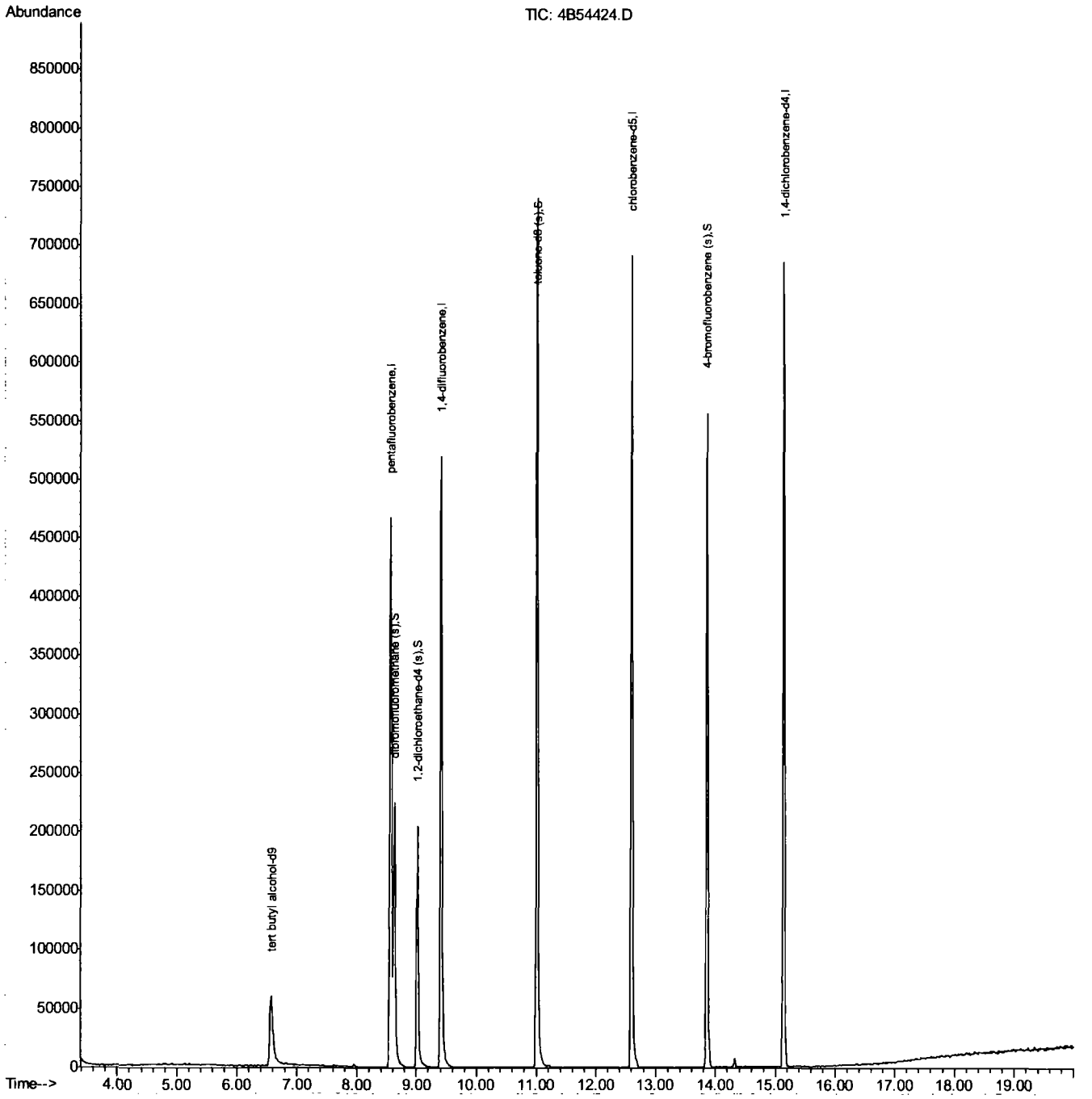
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.1.12 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54424.D
Acq On : 12 Aug 2015 6:18 pm
Operator : TOANP
Sample : jc1107-12
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Aug 13 11:52:30 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54409.D
Acq On : 12 Aug 2015 11:13 am
Operator : TOANP
Sample : mb
Misc : MS89345,V4B2296,w,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 12 17:19:20 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 159324 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 450495 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 509837 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 441074 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 215904 | 50.00 ug/L | 0.00 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 159782 | 49.05 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 98.10% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 165032 | 46.10 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 92.20% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 589342 | 49.10 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.20% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 197125 | 52.30 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 104.60% | | |

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

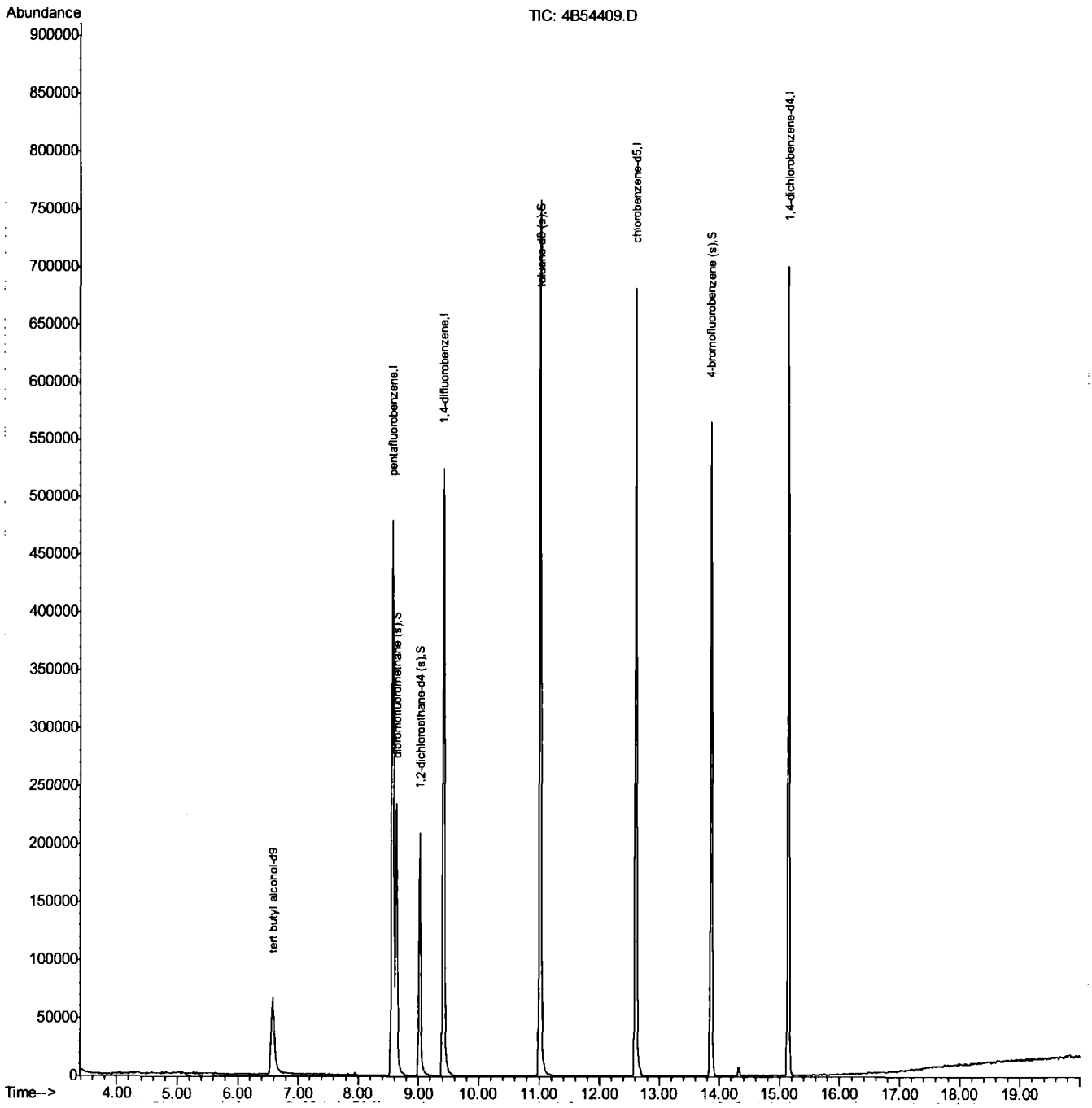
7.2.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54409.D
Acq On : 12 Aug 2015 11:13 am
Operator : TOANP
Sample : mb
Misc : MS89345,V4B2296,w,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 12 17:19:20 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration










ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54433.D
Acq On : 12 Aug 2015 10:30 pm
Operator : TOANP
Sample : mb
Misc : MS89344,V4B2297,w,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 13 12:18:03 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 149010 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 437268 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 487916 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 429546 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 212618 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 155085 | 49.05 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 98.10% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 160972 | 46.32 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 92.64% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 562290 | 48.95 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 97.90% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 192907 | 51.97 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 103.94% | | |

| Target Compounds | Qvalue |
|---|---|

(#) = qualifier out of range (m) = manual integration (+) = signals summed

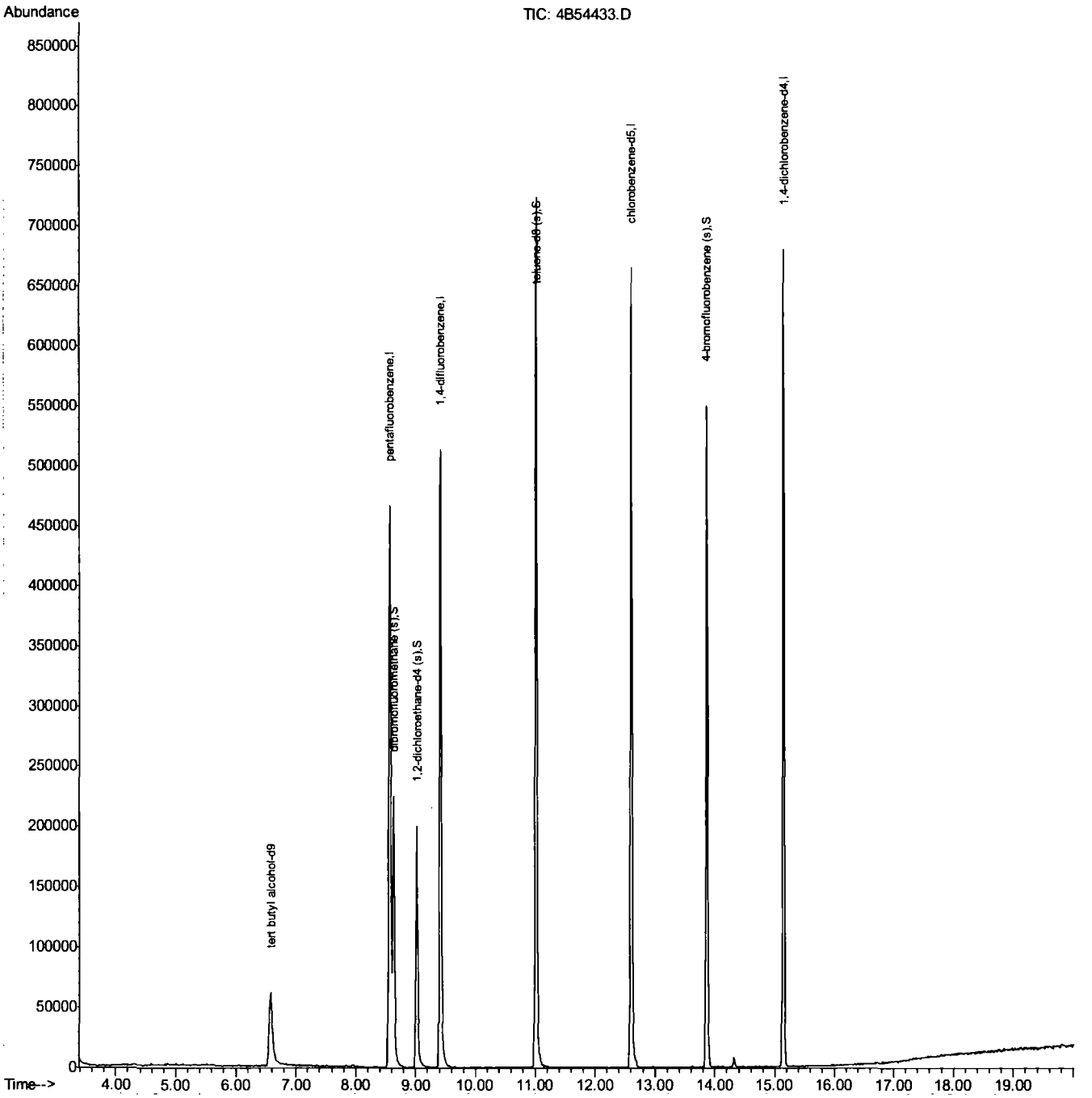
7.2.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54433.D
Acq On : 12 Aug 2015 10:30 pm
Operator : TOANP
Sample : mb
Misc : MS89344,V4B2297,w,,,,1
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Aug 13 12:18:03 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration










ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54457.D
Acq On : 13 Aug 2015 10:43 am
Operator : TOANP
Sample : mb2
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 13 16:13:50 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 129837 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 435467 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 485700 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 421308 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 200871 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 151604 | 48.15 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 96.30% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 159509 | 46.09 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 92.18% | | |
| 80) toluene-d8 (s) | 11.01 | 98 | 564925 | 49.41 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.82% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 186401 | 53.15 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 106.30% | | |

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

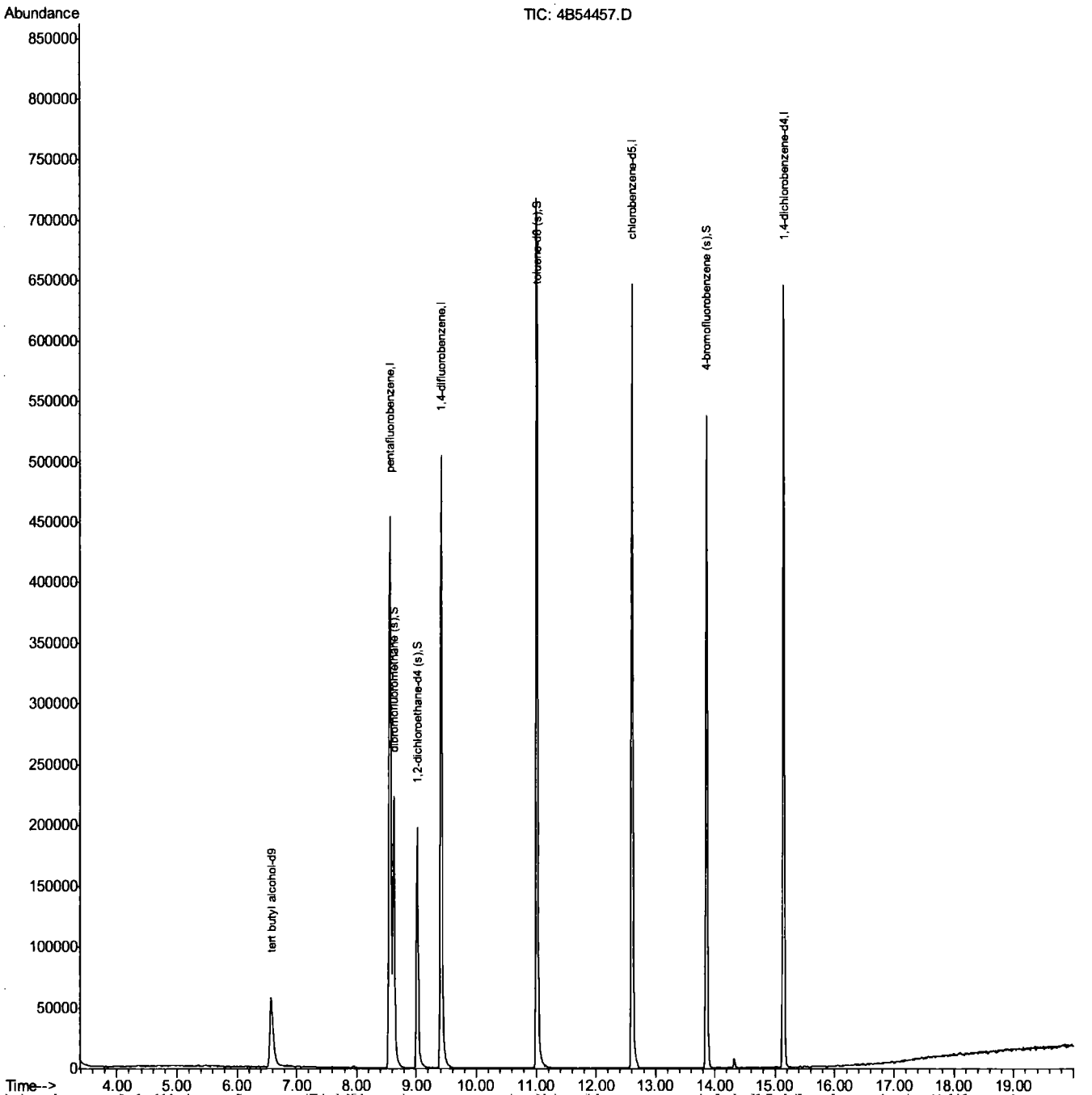
7.2.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54457.D
Acq On : 13 Aug 2015 10:43 am
Operator : TOANP
Sample : mb2
Misc : MS89470,V4B2297,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 13 16:13:50 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration




M4B2289.M Thu Aug 13 16:35:21 2015 GCMS4B



ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54410.D
Acq On : 12 Aug 2015 11:47 am
Operator : TOANP
Sample : bs
Misc : MS89342,V4B2296,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 17:19:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 125516 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 422985 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 486014 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 432148 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 252161 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 152320 | 49.80 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 99.60% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.01 | 65 | 157774 | 46.94 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 93.88% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 569670 | 49.79 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.58% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 210611 | 47.84 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 95.68% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 80738 | 265.92 ug/L | 92 |
| 3) 1,4-dioxane | 10.11 | 88 | 40983 | 1460.06 ug/L | 96 |
| 7) chlorodifluoromethane | 3.63 | 51 | 208473 | 48.74 ug/L | 97 |
| 8) dichlorodifluoromethane | 3.60 | 85 | 214457 | 52.35 ug/L | 99 |
| 10) chloromethane | 3.97 | 52 | 70440 | 44.96 ug/L | 96 |
| 11) vinyl chloride | 4.17 | 62 | 197387 | 43.84 ug/L | 99 |
| 12) bromomethane | 4.76 | 94 | 139164 | 53.90 ug/L | 97 |
| 13) chloroethane | 4.91 | 64 | 105680 | 59.70 ug/L | 93 |
| 15) trichlorofluoromethane | 5.28 | 101 | 230436 | 54.19 ug/L | 97 |
| 19) ethyl ether | 5.63 | 74 | 75972 | 47.13 ug/L | 93 |
| 20) 2-chloropropane | 5.81 | 39 | 19076 | 37.19 ug/L | 89 |
| 21) acrolein | 5.86 | 56 | 241166 | 446.86 ug/L | 100 |
| 22) 1,1-dichloroethene | 6.03 | 96 | 170653 | 51.10 ug/L | 94 |
| 23) acetone | 6.05 | 58 | 11987 | 42.66 ug/L # | 68 |
| 24) allyl chloride | 6.46 | 76 | 133255 | 54.50 ug/L | 99 |
| 25) acetonitrile | 6.44 | 40 | 121339 | 451.09 ug/L # | 65 |
| 26) iodomethane | 6.28 | 142 | 308239 | 48.87 ug/L | 99 |
| 27) carbon disulfide | 6.38 | 76 | 503357 | 51.36 ug/L | 99 |
| 28) methylene chloride | 6.65 | 84 | 175943 | 49.73 ug/L | 95 |
| 29) methyl acetate | 6.44 | 74 | 22821 | 47.93 ug/L # | 76 |
| 30) 1-chloropropane | 6.66 | 42 | 264519 | 43.81 ug/L | 98 |
| 31) methyl tert butyl ether | 6.89 | 73 | 434034 | 48.70 ug/L | 99 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 149297 | 45.45 ug/L | 95 |
| 33) di-isopropyl ether | 7.41 | 45 | 518284 | 44.35 ug/L | 79 |
| 34) 2-butanone | 8.08 | 72 | 17316 | 46.25 ug/L # | 91 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 288399 | 46.72 ug/L | 100 |
| 36) chloroprene | 7.54 | 53 | 216192 | 47.29 ug/L | 97 |
| 37) acrylonitrile | 6.92 | 53 | 280875 | 223.42 ug/L | 99 |
| 38) vinyl acetate | 7.43 | 86 | 23520 | 49.32 ug/L | 56 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 503173 | 48.46 ug/L | 99 |
| 40) ethyl acetate | 8.08 | 45 | 21140 | 41.60 ug/L | 92 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 114135 | 43.73 ug/L | 94 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 170950 | 47.91 ug/L | 91 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54410.D
Acq On : 12 Aug 2015 11:47 am
Operator : TOANP
Sample : bs
Misc : MS89342,V4B2296,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 17:19:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 23445 | 48.38 ug/L # | 85 |
| 44) propionitrile | 8.18 | 54 | 212359 | 418.80 ug/L | 93 |
| 45) bromochloromethane | 8.40 | 128 | 92879 | 50.71 ug/L | 92 |
| 46) tetrahydrofuran | 8.43 | 42 | 49194 | 40.37 ug/L | 97 |
| 47) chloroform | 8.44 | 85 | 184819 | 50.04 ug/L | 96 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 119362 | 50.56 ug/L | 97 |
| 51) freon 113 | 5.97 | 151 | 113766 | 56.11 ug/L | 94 |
| 52) methacrylonitrile | 8.34 | 41 | 94903 | 42.38 ug/L | 94 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 193415 | 49.53 ug/L | 98 |
| 54) cyclohexane | 8.74 | 84 | 193475 | 45.21 ug/L # | 80 |
| 55) iso-butyl alcohol | 8.82 | 43 | 62167 | 446.09 ug/L | 96 |
| 57) epichlorohydrin | 10.63 | 57 | 76150 | 228.23 ug/L | 98 |
| 58) n-butyl alcohol | 9.53 | 56 | 227462 | 2404.11 ug/L | 95 |
| 59) carbon tetrachloride | 8.86 | 117 | 192962 | 49.62 ug/L | 98 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 216624 | 50.13 ug/L | 98 |
| 61) hexane | 7.20 | 57 | 163564 | 49.84 ug/L | 96 |
| 63) benzene | 9.08 | 78 | 611879 | 48.11 ug/L | 99 |
| 64) iso-octane | 9.06 | 57 | 469419 | 45.95 ug/L | 98 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 101319 | 50.11 ug/L | 96 |
| 66) heptane | 9.21 | 57 | 140100 | 62.00 ug/L | 95 |
| 67) isopropyl acetate | 8.99 | 61 | 62825 | 41.32 ug/L # | 89 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 208216 | 49.68 ug/L | 96 |
| 69) trichloroethene | 9.74 | 95 | 174303 | 50.92 ug/L | 99 |
| 72) 2-nitropropane | 10.50 | 41 | 62908 | 45.85 ug/L # | 79 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 446068 | 220.00 ug/L | 97 |
| 74) methyl methacrylate | 9.99 | 100 | 43054 | 52.78 ug/L | 97 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 174236 | 47.69 ug/L | 98 |
| 76) dibromomethane | 10.16 | 93 | 107104 | 50.34 ug/L | 96 |
| 77) methylcyclohexane | 9.94 | 83 | 239493 | 54.41 ug/L | 95 |
| 78) bromodichloromethane | 10.27 | 83 | 233335 | 51.00 ug/L | 98 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 283004 | 47.74 ug/L | 97 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 66400 | 47.28 ug/L | 98 |
| 82) toluene | 11.09 | 92 | 393840 | 48.58 ug/L | 98 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 140042 | 893.14 ug/L | 94 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 244719 | 47.14 ug/L | 98 |
| 85) ethyl methacrylate | 11.27 | 69 | 208579 | 48.56 ug/L | 95 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 135123 | 47.88 ug/L | 97 |
| 87) 2-hexanone | 11.69 | 58 | 58096 | 45.30 ug/L | 89 |
| 89) tetrachloroethene | 11.69 | 164 | 190106 | 50.64 ug/L | 100 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 243801 | 47.93 ug/L | 95 |
| 91) butyl acetate | 11.76 | 56 | 102078 | 44.00 ug/L | 97 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.86 | 57 | 157177 | 461.68 ug/L | 97 |
| 93) dibromochloromethane | 11.99 | 129 | 200308 | 50.36 ug/L | 98 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 169586 | 50.90 ug/L | 98 |
| 96) chlorobenzene | 12.63 | 112 | 462805 | 50.64 ug/L | 97 |
| 97) 1,1,1,2-tetrachloroethane | 12.69 | 131 | 171668 | 49.15 ug/L | 98 |
| 98) ethylbenzene | 12.68 | 91 | 759642 | 49.90 ug/L | 98 |
| 99) m,p-xylene | 12.80 | 106 | 588889 | 101.52 ug/L | 98 |
| 100) o-xylene | 13.25 | 106 | 309374 | 52.90 ug/L | 99 |
| 101) styrene | 13.27 | 104 | 504694 | 50.54 ug/L | 96 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54410.D
Acq On : 12 Aug 2015 11:47 am
Operator : TOANP
Sample : bs
Misc : MS89342,V4B2296,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 17:19:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 102) bromoform | 13.57 | 173 | 154764 | 50.07 ug/L | 97 |
| 104) isopropylbenzene | 13.63 | 105 | 773988 | 48.35 ug/L | 99 |
| 106) cyclohexanone | 13.82 | 55 | 58265 | 127.57 ug/L | 98 |
| 107) bromobenzene | 14.07 | 156 | 234879 | 50.02 ug/L | 94 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 220431 | 47.02 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 40192 | 33.35 ug/L | 98 |
| 110) 1,2,3-trichloropropane | 14.05 | 110 | 54350 | 48.93 ug/L | 97 |
| 111) n-propylbenzene | 14.08 | 91 | 913646 | 50.49 ug/L | 98 |
| 113) 2-chlorotoluene | 14.24 | 126 | 196888 | 48.01 ug/L | 95 |
| 114) 4-chlorotoluene | 14.35 | 91 | 559301 | 47.81 ug/L | 100 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 651161 | 48.32 ug/L | 99 |
| 116) tert-butylbenzene | 14.62 | 119 | 593009 | 50.73 ug/L | 99 |
| 117) pentachloroethane | 14.72 | 167 | 133059 | 55.00 ug/L | 97 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 670628 | 51.67 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 865965 | 48.76 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 430996 | 50.43 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 747967 | 50.37 ug/L | 98 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 429954 | 50.29 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 406259 | 47.55 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 432194 | 51.78 ug/L | 98 |
| 126) n-butylbenzene | 15.46 | 92 | 369492 | 50.17 ug/L | 98 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 37125 | 49.34 ug/L | 98 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 359822 | 54.06 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 277779 | 52.10 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 172131 | 53.05 ug/L | 98 |
| 132) naphthalene | 17.62 | 128 | 486651 | 51.92 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 239182 | 53.19 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 157654 | 51.21 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

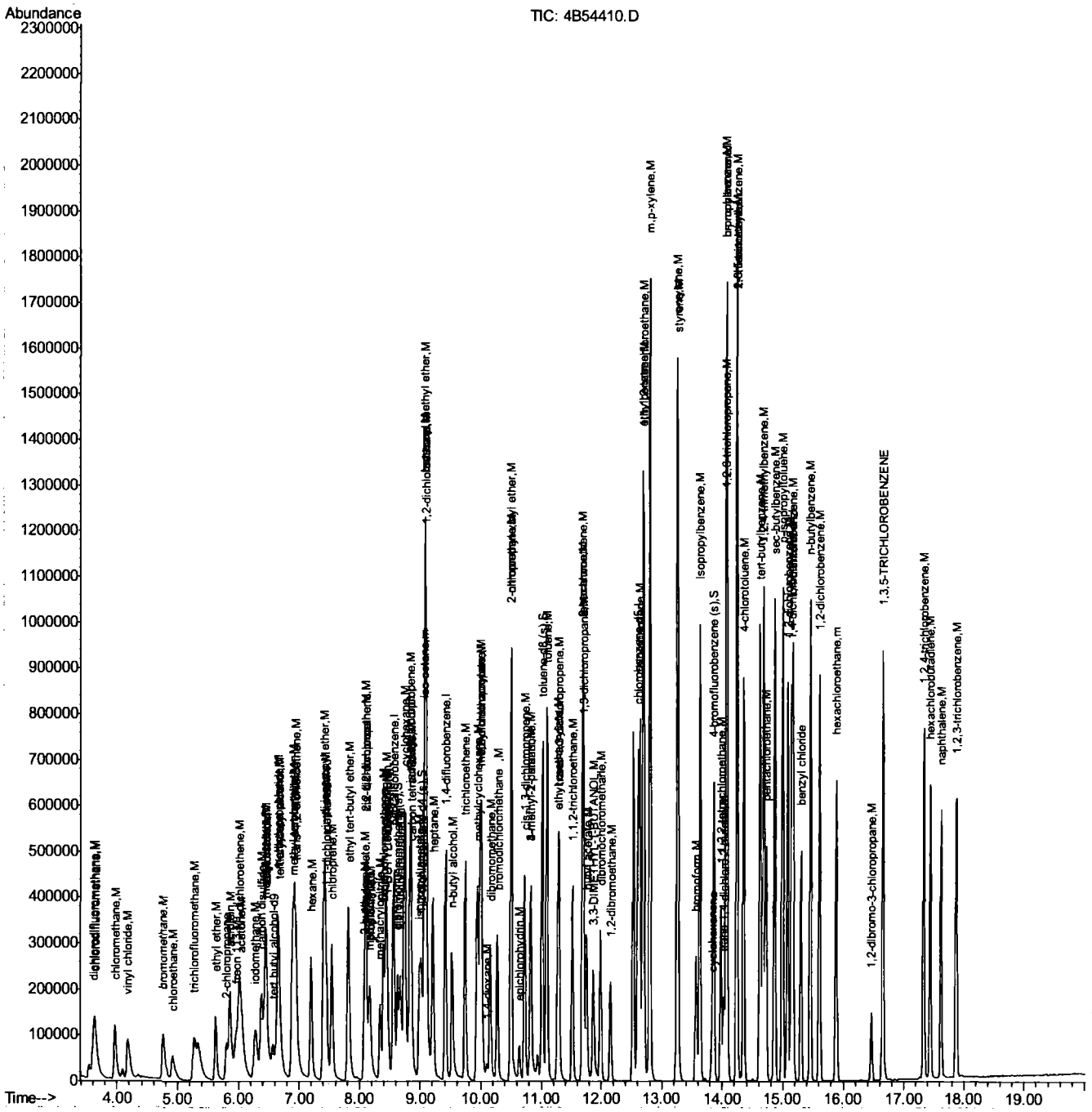
7.3.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54410.D
Acq On : 12 Aug 2015 11:47 am
Operator : TOANP
Sample : bs
Misc : MS89342,V4B2296,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 12 17:19:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration










ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54434.D
Acq On : 12 Aug 2015 10:58 pm
Operator : TOANP
Sample : bs
Misc : MS89499,V4B2297,w,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Aug 13 12:18:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.57 | 65 | 119545 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 416714 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 479398 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 432369 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 251910 | 50.00 ug/L | 0.00 |

System Monitoring Compounds

| | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 150569 | 49.97 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 99.94% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 156539 | 47.27 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 94.54% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 562727 | 49.86 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.72% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 211529 | 48.10 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.20% | | |

Target Compounds

| | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 77819 | 269.11 ug/L | 81 |
| 3) 1,4-dioxane | 10.12 | 88 | 39076 | 1461.65 ug/L | 90 |
| 7) chlorodifluoromethane | 3.64 | 51 | 194732 | 46.21 ug/L | 96 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 209439 | 51.90 ug/L | 97 |
| 10) chloromethane | 3.96 | 52 | 63419 | 41.09 ug/L | 95 |
| 11) vinyl chloride | 4.18 | 62 | 190998 | 43.06 ug/L | 98 |
| 12) bromomethane | 4.76 | 94 | 125552 | 49.36 ug/L | 99 |
| 13) chloroethane | 4.91 | 64 | 97508 | 55.91 ug/L | 95 |
| 15) trichlorofluoromethane | 5.28 | 101 | 218388 | 52.13 ug/L | 96 |
| 19) ethyl ether | 5.63 | 74 | 74125 | 46.68 ug/L | 93 |
| 20) 2-chloropropane | 5.81 | 39 | 27738 | 54.89 ug/L | 72 |
| 21) acrolein | 5.86 | 56 | 230474 | 433.47 ug/L | 98 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 158620 | 48.21 ug/L | 95 |
| 23) acetone | 6.05 | 58 | 12338 | 44.57 ug/L | 100 |
| 24) allyl chloride | 6.46 | 76 | 92133 | 38.25 ug/L # | 69 |
| 25) acetonitrile | 6.44 | 40 | 111822 | 421.97 ug/L # | 61 |
| 26) iodomethane | 6.28 | 142 | 318367 | 51.24 ug/L | 98 |
| 27) carbon disulfide | 6.38 | 76 | 496936 | 51.46 ug/L | 100 |
| 28) methylene chloride | 6.64 | 84 | 167070 | 47.93 ug/L | 89 |
| 29) methyl acetate | 6.44 | 74 | 22655 | 48.29 ug/L | 92 |
| 30) 1-chloropropane | 6.66 | 42 | 252662 | 42.48 ug/L | 98 |
| 31) methyl tert butyl ether | 6.89 | 73 | 420931 | 47.95 ug/L | 97 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 148779 | 45.97 ug/L | 94 |
| 33) di-isopropyl ether | 7.41 | 45 | 503737 | 43.75 ug/L | 83 |
| 34) 2-butanone | 8.08 | 72 | 17274 | 46.84 ug/L # | 71 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 277889 | 45.69 ug/L | 99 |
| 36) chloroprene | 7.54 | 53 | 215684 | 47.89 ug/L | 99 |
| 37) acrylonitrile | 6.92 | 53 | 275960 | 222.81 ug/L | 99 |
| 38) vinyl acetate | 7.43 | 86 | 22768 | 48.46 ug/L | 94 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 484932 | 47.41 ug/L | 99 |
| 40) ethyl acetate | 8.08 | 45 | 21146 | 42.24 ug/L # | 86 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 105539 | 41.05 ug/L | 96 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 166008 | 47.22 ug/L | 92 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54434.D
Acq On : 12 Aug 2015 10:58 pm
Operator : TOANP
Sample : bs
Misc : MS89499,V4B2297,w,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Aug 13 12:18:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 23370 | 48.95 ug/L # | 83 |
| 44) propionitrile | 8.18 | 54 | 205034 | 410.44 ug/L | 99 |
| 45) bromochloromethane | 8.40 | 128 | 90308 | 50.05 ug/L | 88 |
| 46) tetrahydrofuran | 8.43 | 42 | 48682 | 40.55 ug/L | 94 |
| 47) chloroform | 8.44 | 85 | 176689 | 48.56 ug/L | 99 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 117095 | 50.34 ug/L | 98 |
| 51) freon 113 | 5.97 | 151 | 109688 | 54.91 ug/L | 93 |
| 52) methacrylonitrile | 8.34 | 41 | 92804 | 42.06 ug/L | 94 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 200468 | 52.10 ug/L | 99 |
| 54) cyclohexane | 8.74 | 84 | 195425 | 46.35 ug/L | 98 |
| 55) iso-butyl alcohol | 8.82 | 43 | 52898 | 385.29 ug/L | 96 |
| 57) epichlorohydrin | 10.63 | 57 | 70926 | 215.51 ug/L | 97 |
| 58) n-butyl alcohol | 9.53 | 56 | 220654 | 2364.34 ug/L | 95 |
| 59) carbon tetrachloride | 8.86 | 117 | 203113 | 52.95 ug/L | 96 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 207673 | 48.73 ug/L | 98 |
| 61) hexane | 7.20 | 57 | 147470 | 45.55 ug/L | 96 |
| 63) benzene | 9.08 | 78 | 599187 | 47.76 ug/L | 99 |
| 64) iso-octane | 9.07 | 57 | 424347 | 42.11 ug/L | 99 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 100064 | 50.17 ug/L | 91 |
| 66) heptane | 9.21 | 57 | 122580 | 55.00 ug/L | 95 |
| 67) isopropyl acetate | 8.99 | 61 | 62596 | 41.74 ug/L | 96 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 206975 | 50.07 ug/L | 97 |
| 69) trichloroethene | 9.74 | 95 | 170107 | 50.38 ug/L | 98 |
| 72) 2-nitropropane | 10.50 | 41 | 63610 | 47.00 ug/L # | 75 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 451101 | 225.55 ug/L | 97 |
| 74) methyl methacrylate | 9.99 | 100 | 43032 | 53.48 ug/L | 94 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 169332 | 46.98 ug/L | 100 |
| 76) dibromomethane | 10.16 | 93 | 105542 | 50.29 ug/L | 96 |
| 77) methylcyclohexane | 9.94 | 83 | 228391 | 52.60 ug/L | 96 |
| 78) bromodichloromethane | 10.28 | 83 | 230393 | 51.05 ug/L | 96 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 269693 | 46.12 ug/L | 99 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 65511 | 47.29 ug/L | 99 |
| 82) toluene | 11.09 | 92 | 389391 | 48.70 ug/L | 100 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 135351 | 875.14 ug/L | 94 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 238087 | 46.49 ug/L | 97 |
| 85) ethyl methacrylate | 11.27 | 69 | 208989 | 49.33 ug/L | 94 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 133047 | 47.80 ug/L | 100 |
| 87) 2-hexanone | 11.69 | 58 | 57589 | 45.53 ug/L | 97 |
| 89) tetrachloroethene | 11.69 | 164 | 190649 | 50.76 ug/L | 99 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 240641 | 47.29 ug/L | 98 |
| 91) butyl acetate | 11.76 | 56 | 100090 | 43.12 ug/L | 97 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 148539 | 436.09 ug/L | 98 |
| 93) dibromochloromethane | 11.99 | 129 | 198751 | 49.95 ug/L | 98 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 170201 | 51.06 ug/L | 99 |
| 96) chlorobenzene | 12.63 | 112 | 461919 | 50.51 ug/L | 97 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 171673 | 49.12 ug/L | 97 |
| 98) ethylbenzene | 12.68 | 91 | 747421 | 49.07 ug/L | 98 |
| 99) m,p-xylene | 12.80 | 106 | 577161 | 99.44 ug/L | 97 |
| 100) o-xylene | 13.25 | 106 | 301613 | 51.55 ug/L | 98 |
| 101) styrene | 13.27 | 104 | 499698 | 50.01 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54434.D
Acq On : 12 Aug 2015 10:58 pm
Operator : TOANP
Sample : bs
Misc : MS89499,V4B2297,w,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Aug 13 12:18:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 102) bromoform | 13.57 | 173 | 154475 | 49.95 ug/L | 97 |
| 104) isopropylbenzene | 13.63 | 105 | 757885 | 47.39 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 51567 | 113.02 ug/L | 97 |
| 107) bromobenzene | 14.07 | 156 | 234384 | 49.97 ug/L | 94 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 216775 | 46.29 ug/L | 100 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 36579 | 30.38 ug/L | 96 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 54601 | 49.21 ug/L | 94 |
| 111) n-propylbenzene | 14.08 | 91 | 900669 | 49.83 ug/L | 98 |
| 113) 2-chlorotoluene | 14.24 | 126 | 194849 | 47.56 ug/L | 94 |
| 114) 4-chlorotoluene | 14.35 | 91 | 549230 | 46.99 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 638965 | 47.47 ug/L | 98 |
| 116) tert-butylbenzene | 14.62 | 119 | 579694 | 49.64 ug/L | 98 |
| 117) pentachloroethane | 14.72 | 167 | 124082 | 51.34 ug/L | 96 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 663282 | 51.16 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 842420 | 47.48 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 426355 | 49.93 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 733198 | 49.43 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 421366 | 49.34 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 303218 | 35.52 ug/L | 98 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 425305 | 51.01 ug/L | 98 |
| 126) n-butylbenzene | 15.46 | 92 | 353705 | 48.08 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 35318 | 46.99 ug/L | 94 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 349714 | 52.59 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 268201 | 50.35 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 165651 | 51.10 ug/L | 98 |
| 132) naphthalene | 17.62 | 128 | 469696 | 50.16 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 227814 | 50.71 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 154070 | 50.09 ug/L | 99 |

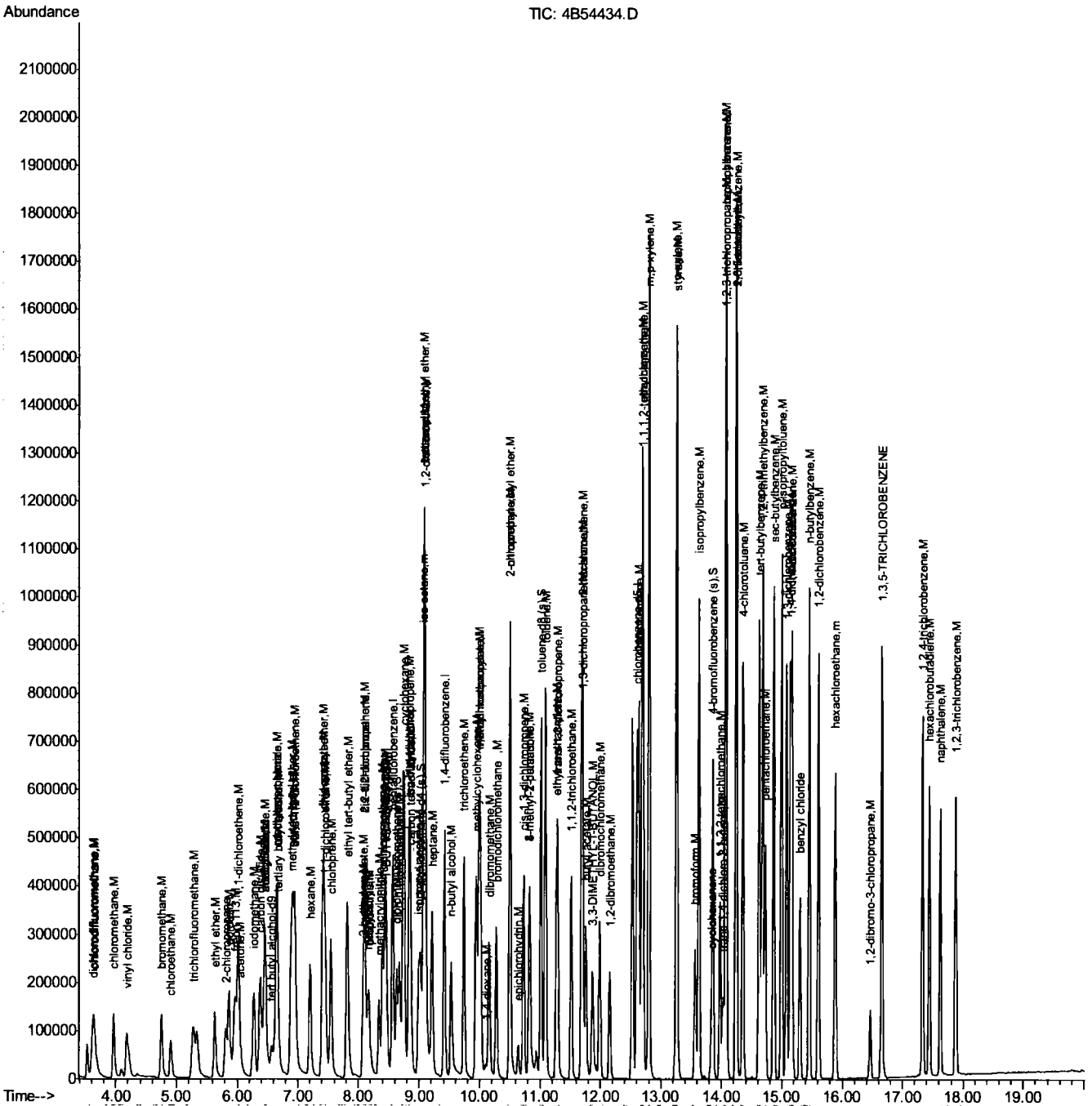
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.3.2 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54434.D
Acq On : 12 Aug 2015 10:58 pm
Operator : TOANP
Sample : bs
Misc : MS89499,V4B2297,w,,,,1
ALS Vial : 30 Sample Multiplier: 1

Quant Time: Aug 13 12:18:14 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration










ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54420.D
Acq On : 12 Aug 2015 4:27 pm
Operator : TOANP
Sample : jc1107-3ms
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 12 17:34:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 145924 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 413150 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 475209 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 424091 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 251934 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 146219 | 48.94 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 97.88% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 154947 | 47.19 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 94.38% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 548875 | 49.06 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.12% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 209894 | 47.72 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 95.44% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.68 | 59 | 92446 | 261.90 ug/L # | 66 |
| 3) 1,4-dioxane | 10.11 | 88 | 46419 | 1422.44 ug/L | 91 |
| 7) chlorodifluoromethane | 3.64 | 51 | 202387 | 48.44 ug/L | 97 |
| 8) dichlorodifluoromethane | 3.62 | 85 | 182817 | 45.69 ug/L | 99 |
| 10) chloromethane | 3.96 | 52 | 59267 | 38.73 ug/L | 95 |
| 11) vinyl chloride | 4.17 | 62 | 185509 | 42.19 ug/L | 96 |
| 12) bromomethane | 4.75 | 94 | 116429 | 46.17 ug/L | 96 |
| 13) chloroethane | 4.91 | 64 | 80362 | 46.48 ug/L | 96 |
| 15) trichlorofluoromethane | 5.28 | 101 | 229438 | 55.24 ug/L | 93 |
| 19) ethyl ether | 5.63 | 74 | 77152 | 49.00 ug/L | 95 |
| 20) 2-chloropropane | 5.81 | 39 | 28732 | 57.35 ug/L | 83 |
| 21) acrolein | 5.86 | 56 | 169159 | 320.90 ug/L | 97 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 170664 | 52.32 ug/L | 93 |
| 23) acetone | 6.06 | 58 | 11899 | 43.36 ug/L | 87 |
| 24) allyl chloride | 6.46 | 76 | 104754 | 43.86 ug/L # | 73 |
| 25) acetonitrile | 6.45 | 40 | 121562 | 462.68 ug/L # | 77 |
| 26) iodomethane | 6.27 | 142 | 333529 | 54.14 ug/L | 100 |
| 27) carbon disulfide | 6.38 | 76 | 515813 | 53.88 ug/L | 99 |
| 28) methylene chloride | 6.64 | 84 | 173444 | 50.19 ug/L | 88 |
| 29) methyl acetate | 6.44 | 74 | 24287 | 52.22 ug/L # | 82 |
| 30) 1-chloropropane | 6.66 | 42 | 273886 | 46.44 ug/L | 98 |
| 31) methyl tert butyl ether | 6.89 | 73 | 444395 | 51.05 ug/L | 97 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 159396 | 49.68 ug/L | 94 |
| 33) di-isopropyl ether | 7.41 | 45 | 509304 | 44.62 ug/L | 85 |
| 34) 2-butanone | 8.08 | 72 | 18189 | 49.74 ug/L # | 92 |
| 35) 1,1-dichloroethane | 7.46 | 63 | 304212 | 50.45 ug/L | 98 |
| 36) chloroprene | 7.55 | 53 | 223363 | 50.02 ug/L | 96 |
| 37) acrylonitrile | 6.92 | 53 | 284746 | 231.89 ug/L | 99 |
| 38) vinyl acetate | 7.43 | 86 | 25221 | 54.14 ug/L | 91 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 492874 | 48.60 ug/L | 98 |
| 40) ethyl acetate | 8.08 | 45 | 22167 | 44.66 ug/L # | 82 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 132587 | 52.01 ug/L | 98 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 175506 | 50.36 ug/L | 92 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54420.D
Acq On : 12 Aug 2015 4:27 pm
Operator : TOANP
Sample : jc1107-3ms
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 12 17:34:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 24522 | 51.81 ug/L # | 90 |
| 44) propionitrile | 8.18 | 54 | 235959 | 476.42 ug/L | 98 |
| 45) bromochloromethane | 8.40 | 128 | 96004 | 53.67 ug/L | 88 |
| 46) tetrahydrofuran | 8.43 | 42 | 49313 | 41.43 ug/L | 95 |
| 47) chloroform | 8.44 | 85 | 187825 | 52.06 ug/L | 96 |
| 48) T-BUTYL FORMATE | 8.47 | 59 | 69522 | 30.15 ug/L | 92 |
| 51) freon 113 | 5.97 | 151 | 118220 | 59.69 ug/L | 89 |
| 52) methacrylonitrile | 8.34 | 41 | 97714 | 44.67 ug/L | 93 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 223758 | 58.66 ug/L | 98 |
| 54) cyclohexane | 8.74 | 84 | 226065 | 54.08 ug/L | 86 |
| 55) iso-butyl alcohol | 8.82 | 43 | 64461 | 473.57 ug/L | 94 |
| 57) epichlorohydrin | 10.63 | 57 | 74823 | 229.35 ug/L | 96 |
| 58) n-butyl alcohol | 9.53 | 56 | 264824 | 2862.64 ug/L | 96 |
| 59) carbon tetrachloride | 8.86 | 117 | 215871 | 56.77 ug/L | 99 |
| 60) 1,1-dichloropropene | 8.84 | 75 | 219639 | 51.99 ug/L | 97 |
| 61) hexane | 7.20 | 57 | 184761 | 57.58 ug/L | 95 |
| 63) benzene | 9.08 | 78 | 620517 | 49.90 ug/L | 100 |
| 64) iso-octane | 9.07 | 57 | 522751 | 52.33 ug/L | 92 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 99789 | 50.47 ug/L | 94 |
| 66) heptane | 9.21 | 57 | 146747 | 66.42 ug/L | 97 |
| 67) isopropyl acetate | 8.99 | 61 | 64892 | 43.65 ug/L | 93 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 214202 | 52.27 ug/L | 96 |
| 69) trichloroethene | 9.74 | 95 | 179466 | 53.62 ug/L | 98 |
| 72) 2-nitropropane | 10.50 | 41 | 48292 | 35.99 ug/L # | 1 |
| 74) methyl methacrylate | 9.99 | 100 | 44117 | 55.31 ug/L | 95 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 170253 | 47.66 ug/L | 99 |
| 76) dibromomethane | 10.16 | 93 | 111304 | 53.50 ug/L | 96 |
| 77) methylcyclohexane | 9.94 | 83 | 252717 | 58.72 ug/L | 97 |
| 78) bromodichloromethane | 10.28 | 83 | 239082 | 53.44 ug/L | 97 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 290900 | 50.19 ug/L | 99 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 70838 | 51.59 ug/L | 100 |
| 82) toluene | 11.09 | 92 | 407614 | 51.42 ug/L | 100 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 170672 | 1113.24 ug/L | 93 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 263522 | 51.91 ug/L | 98 |
| 85) ethyl methacrylate | 11.27 | 69 | 224209 | 53.39 ug/L | 95 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 139070 | 50.40 ug/L | 99 |
| 87) 2-hexanone | 11.69 | 58 | 63467 | 50.62 ug/L | 91 |
| 89) tetrachloroethene | 11.69 | 164 | 199308 | 54.10 ug/L | 99 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 256067 | 51.30 ug/L | 96 |
| 91) butyl acetate | 11.76 | 56 | 110480 | 48.52 ug/L | 90 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 205818 | 616.04 ug/L | 98 |
| 93) dibromochloromethane | 11.99 | 129 | 208162 | 53.33 ug/L | 100 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 178685 | 54.65 ug/L | 100 |
| 96) chlorobenzene | 12.63 | 112 | 480473 | 53.57 ug/L | 99 |
| 97) 1,1,1,2-tetrachloroethane | 12.69 | 131 | 184198 | 53.73 ug/L | 99 |
| 98) ethylbenzene | 12.68 | 91 | 794714 | 53.19 ug/L | 98 |
| 99) m,p-xylene | 12.80 | 106 | 615541 | 108.13 ug/L | 98 |
| 100) o-xylene | 13.25 | 106 | 315041 | 54.89 ug/L | 98 |
| 101) styrene | 13.27 | 104 | 529958 | 54.07 ug/L | 96 |
| 102) bromoform | 13.57 | 173 | 162017 | 53.41 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54420.D
Acq On : 12 Aug 2015 4:27 pm
Operator : TOANP
Sample : jc1107-3ms
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 12 17:34:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

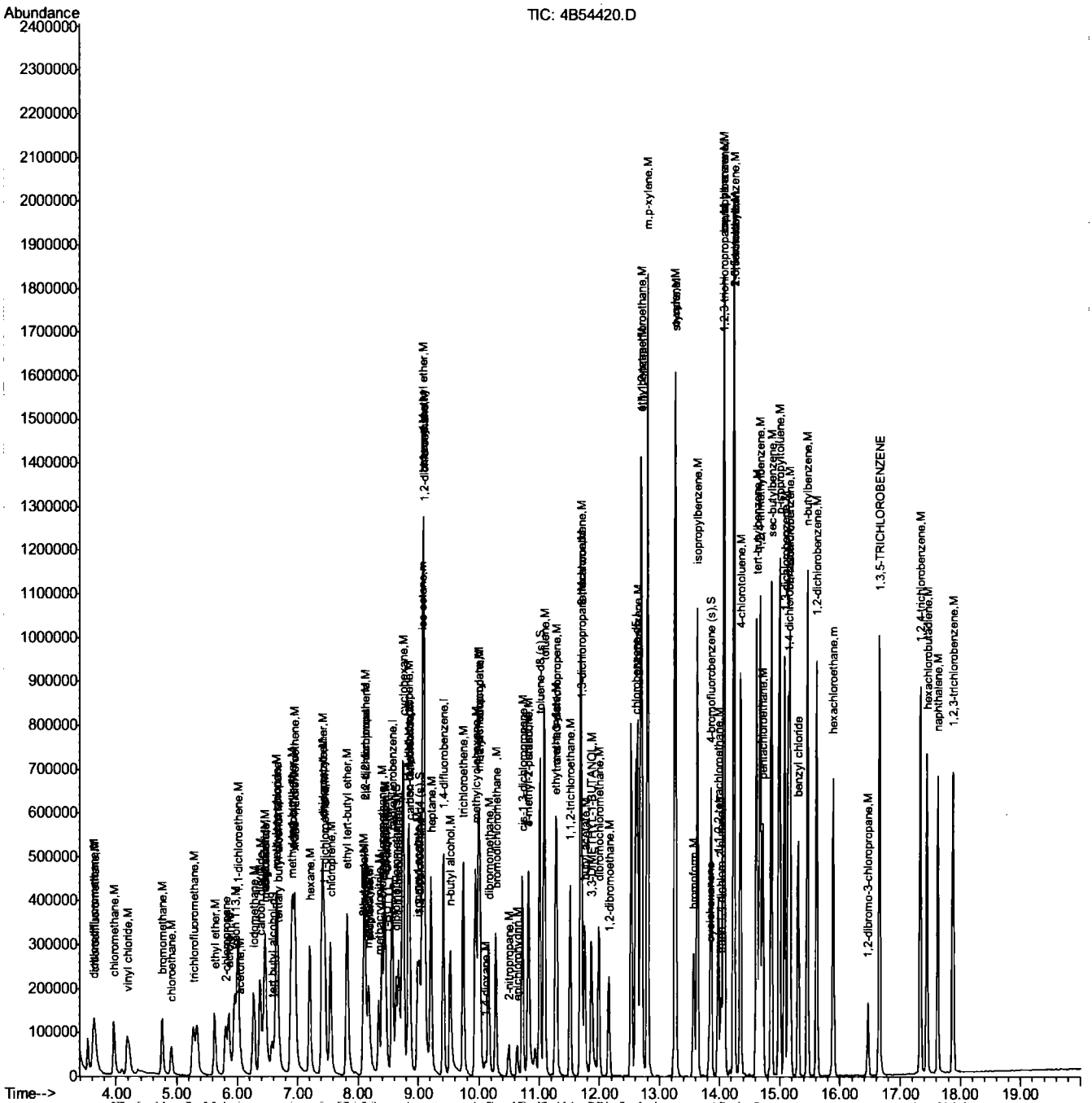
| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 104) isopropylbenzene | 13.63 | 105 | 815736 | 51.01 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 66806 | 146.40 ug/L | 96 |
| 107) bromobenzene | 14.07 | 156 | 248024 | 52.87 ug/L | 94 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 246827 | 52.70 ug/L | 97 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 36786 | 30.55 ug/L | 98 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 59661 | 53.76 ug/L | 97 |
| 111) n-propylbenzene | 14.08 | 91 | 923668 | 51.09 ug/L | 98 |
| 113) 2-chlorotoluene | 14.24 | 126 | 209162 | 51.05 ug/L | 93 |
| 114) 4-chlorotoluene | 14.35 | 91 | 591958 | 50.64 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 694141 | 51.56 ug/L | 99 |
| 116) tert-butylbenzene | 14.62 | 119 | 623349 | 53.38 ug/L | 100 |
| 117) pentachloroethane | 14.72 | 167 | 145768 | 60.31 ug/L | 97 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 688126 | 53.07 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 936467 | 52.77 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 467336 | 54.73 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 797547 | 53.76 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 458472 | 53.68 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 442896 | 51.88 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 460120 | 55.18 ug/L | 99 |
| 126) n-butylbenzene | 15.46 | 92 | 398677 | 54.19 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 41192 | 54.80 ug/L | 98 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 394491 | 59.32 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 318498 | 59.79 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 194742 | 60.07 ug/L | 99 |
| 132) naphthalene | 17.62 | 128 | 564473 | 60.28 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 268620 | 59.79 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 163993 | 53.31 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54420.D
Acq On : 12 Aug 2015 4:27 pm
Operator : TOANP
Sample : jc1107-3ms
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Aug 12 17:34:23 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54421.D
Acq On : 12 Aug 2015 4:55 pm
Operator : TOANP
Sample : jc1107-3msd
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 12 17:34:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 152325 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 431587 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 496307 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 441468 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 260200 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 154857 | 49.62 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 99.24% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 161657 | 47.13 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 94.26% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 576789 | 49.37 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.74% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 216499 | 47.66 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 95.32% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 89567 | 243.08 ug/L | 86 |
| 3) 1,4-dioxane | 10.11 | 88 | 47520 | 1394.99 ug/L | 94 |
| 7) chlorodifluoromethane | 3.64 | 51 | 210227 | 48.17 ug/L | 97 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 189508 | 45.34 ug/L | 98 |
| 10) chloromethane | 3.96 | 52 | 64753 | 40.51 ug/L | 98 |
| 11) vinyl chloride | 4.18 | 62 | 197226 | 42.94 ug/L | 99 |
| 12) bromomethane | 4.75 | 94 | 125764 | 47.74 ug/L | 98 |
| 13) chloroethane | 4.91 | 64 | 87858 | 48.64 ug/L | 95 |
| 15) trichlorofluoromethane | 5.27 | 101 | 232716 | 53.63 ug/L | 97 |
| 19) ethyl ether | 5.63 | 74 | 82251 | 50.01 ug/L | 93 |
| 20) 2-chloropropane | 5.81 | 39 | 29336 | 56.05 ug/L | 84 |
| 21) acrolein | 5.87 | 56 | 189985 | 345.01 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 177385 | 52.05 ug/L | 95 |
| 23) acetone | 6.06 | 58 | 13198 | 46.04 ug/L | 95 |
| 24) allyl chloride | 6.46 | 76 | 108679 | 43.56 ug/L # | 70 |
| 25) acetonitrile | 6.46 | 40 | 119799 | 436.49 ug/L | 95 |
| 26) iodomethane | 6.27 | 142 | 347146 | 53.95 ug/L | 99 |
| 27) carbon disulfide | 6.38 | 76 | 537414 | 53.74 ug/L | 99 |
| 28) methylene chloride | 6.64 | 84 | 180316 | 49.95 ug/L | 94 |
| 29) methyl acetate | 6.44 | 74 | 25461 | 52.41 ug/L # | 78 |
| 30) 1-chloropropane | 6.66 | 42 | 275918 | 44.79 ug/L | 98 |
| 31) methyl tert butyl ether | 6.89 | 73 | 462206 | 50.83 ug/L | 99 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 165563 | 49.40 ug/L | 94 |
| 33) di-isopropyl ether | 7.41 | 45 | 524081 | 43.95 ug/L | 82 |
| 34) 2-butanone | 8.08 | 72 | 19054 | 49.88 ug/L # | 87 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 314200 | 49.88 ug/L | 97 |
| 36) chloroprene | 7.55 | 53 | 229938 | 49.29 ug/L | 96 |
| 37) acrylonitrile | 6.92 | 53 | 302982 | 236.20 ug/L | 100 |
| 38) vinyl acetate | 7.43 | 86 | 25152 | 51.69 ug/L | 89 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 514175 | 48.54 ug/L | 99 |
| 40) ethyl acetate | 8.08 | 45 | 24201 | 46.67 ug/L # | 82 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 134937 | 50.67 ug/L | 96 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 182838 | 50.22 ug/L | 93 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54421.D
Acq On : 12 Aug 2015 4:55 pm
Operator : TOANP
Sample : jc1107-3msd
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 12 17:34:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 25257 | 51.08 ug/L # | 84 |
| 44) propionitrile | 8.19 | 54 | 241220 | 466.23 ug/L | 89 |
| 45) bromochloromethane | 8.40 | 128 | 100267 | 53.66 ug/L | 89 |
| 46) tetrahydrofuran | 8.43 | 42 | 49924 | 40.16 ug/L | 96 |
| 47) chloroform | 8.44 | 85 | 190700 | 50.60 ug/L | 97 |
| 48) T-BUTYL FORMATE | 8.47 | 59 | 58305 | 24.20 ug/L | 87 |
| 51) freon 113 | 5.97 | 151 | 123260 | 59.58 ug/L | 93 |
| 52) methacrylonitrile | 8.34 | 41 | 101860 | 44.58 ug/L | 94 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 228132 | 57.25 ug/L | 97 |
| 54) cyclohexane | 8.74 | 84 | 232167 | 53.17 ug/L | 87 |
| 55) iso-butyl alcohol | 8.83 | 43 | 63854 | 449.07 ug/L | 97 |
| 57) epichlorohydrin | 10.64 | 57 | 73240 | 214.96 ug/L | 98 |
| 58) n-butyl alcohol | 9.53 | 56 | 275172 | 2848.05 ug/L | 94 |
| 59) carbon tetrachloride | 8.86 | 117 | 218618 | 55.05 ug/L | 99 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 222772 | 50.49 ug/L | 97 |
| 61) hexane | 7.20 | 57 | 190343 | 56.79 ug/L | 98 |
| 63) benzene | 9.08 | 78 | 644086 | 49.59 ug/L | 99 |
| 64) iso-octane | 9.06 | 57 | 525836 | 50.40 ug/L | 91 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 104909 | 50.81 ug/L | 97 |
| 66) heptane | 9.21 | 57 | 152250 | 65.98 ug/L | 98 |
| 67) isopropyl acetate | 8.99 | 61 | 68520 | 44.13 ug/L | 95 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 218971 | 51.17 ug/L | 97 |
| 69) trichloroethene | 9.74 | 95 | 184187 | 52.69 ug/L | 97 |
| 72) 2-nitropropane | 10.50 | 41 | 48732 | 34.78 ug/L # | 1 |
| 74) methyl methacrylate | 9.99 | 100 | 46827 | 56.22 ug/L | 93 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 180659 | 48.42 ug/L | 98 |
| 76) dibromomethane | 10.16 | 93 | 114696 | 52.79 ug/L | 95 |
| 77) methylcyclohexane | 9.94 | 83 | 257454 | 57.27 ug/L | 97 |
| 78) bromodichloromethane | 10.28 | 83 | 244662 | 52.36 ug/L | 98 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 304397 | 50.29 ug/L | 98 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 75678 | 52.77 ug/L | 98 |
| 82) toluene | 11.09 | 92 | 421834 | 50.96 ug/L | 100 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 171711 | 1072.40 ug/L | 93 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 271958 | 51.30 ug/L | 99 |
| 85) ethyl methacrylate | 11.27 | 69 | 236210 | 53.86 ug/L | 94 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 146215 | 50.74 ug/L | 97 |
| 87) 2-hexanone | 11.69 | 58 | 67440 | 51.50 ug/L | 92 |
| 89) tetrachloroethene | 11.69 | 164 | 203518 | 53.07 ug/L | 99 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 263415 | 50.70 ug/L | 98 |
| 91) butyl acetate | 11.76 | 56 | 113316 | 47.81 ug/L | 91 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 209509 | 602.41 ug/L | 97 |
| 93) dibromochloromethane | 11.99 | 129 | 215971 | 53.15 ug/L | 100 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 185856 | 54.61 ug/L | 100 |
| 96) chlorobenzene | 12.63 | 112 | 497434 | 53.28 ug/L | 98 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 186022 | 52.13 ug/L | 99 |
| 98) ethylbenzene | 12.69 | 91 | 817250 | 52.55 ug/L | 98 |
| 99) m,p-xylene | 12.80 | 106 | 630210 | 106.35 ug/L | 99 |
| 100) o-xylene | 13.25 | 106 | 326053 | 54.57 ug/L | 97 |
| 101) styrene | 13.27 | 104 | 546084 | 53.53 ug/L | 96 |
| 102) bromoform | 13.57 | 173 | 167897 | 53.17 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54421.D
Acq On : 12 Aug 2015 4:55 pm
Operator : TOANP
Sample : jc1107-3msd
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 12 17:34:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 104) isopropylbenzene | 13.63 | 105 | 837973 | 50.73 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 67454 | 143.12 ug/L | 96 |
| 107) bromobenzene | 14.07 | 156 | 252617 | 52.14 ug/L | 94 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 254860 | 52.69 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 39860 | 32.05 ug/L | 97 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 60736 | 52.99 ug/L | 99 |
| 111) n-propylbenzene | 14.08 | 91 | 940003 | 50.35 ug/L | 99 |
| 113) 2-chlorotoluene | 14.24 | 126 | 214132 | 50.60 ug/L | 93 |
| 114) 4-chlorotoluene | 14.35 | 91 | 608802 | 50.43 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 707216 | 50.86 ug/L | 99 |
| 116) tert-butylbenzene | 14.62 | 119 | 640203 | 53.08 ug/L | 98 |
| 117) pentachloroethane | 14.72 | 167 | 149461 | 59.88 ug/L | 99 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 703004 | 52.49 ug/L | 100 |
| 119) sec-butylbenzene | 14.87 | 105 | 953129 | 52.01 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 479023 | 54.31 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 815334 | 53.22 ug/L | 100 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 470985 | 53.39 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 448143 | 50.83 ug/L | 98 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 467546 | 54.29 ug/L | 99 |
| 126) n-butylbenzene | 15.46 | 92 | 406730 | 53.53 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 41838 | 53.89 ug/L | 96 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 401126 | 58.40 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 320514 | 58.26 ug/L | 98 |
| 131) hexachlorobutadiene | 17.44 | 225 | 196283 | 58.62 ug/L | 99 |
| 132) naphthalene | 17.62 | 128 | 574398 | 59.39 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 269989 | 58.19 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 167337 | 52.67 ug/L | 99 |

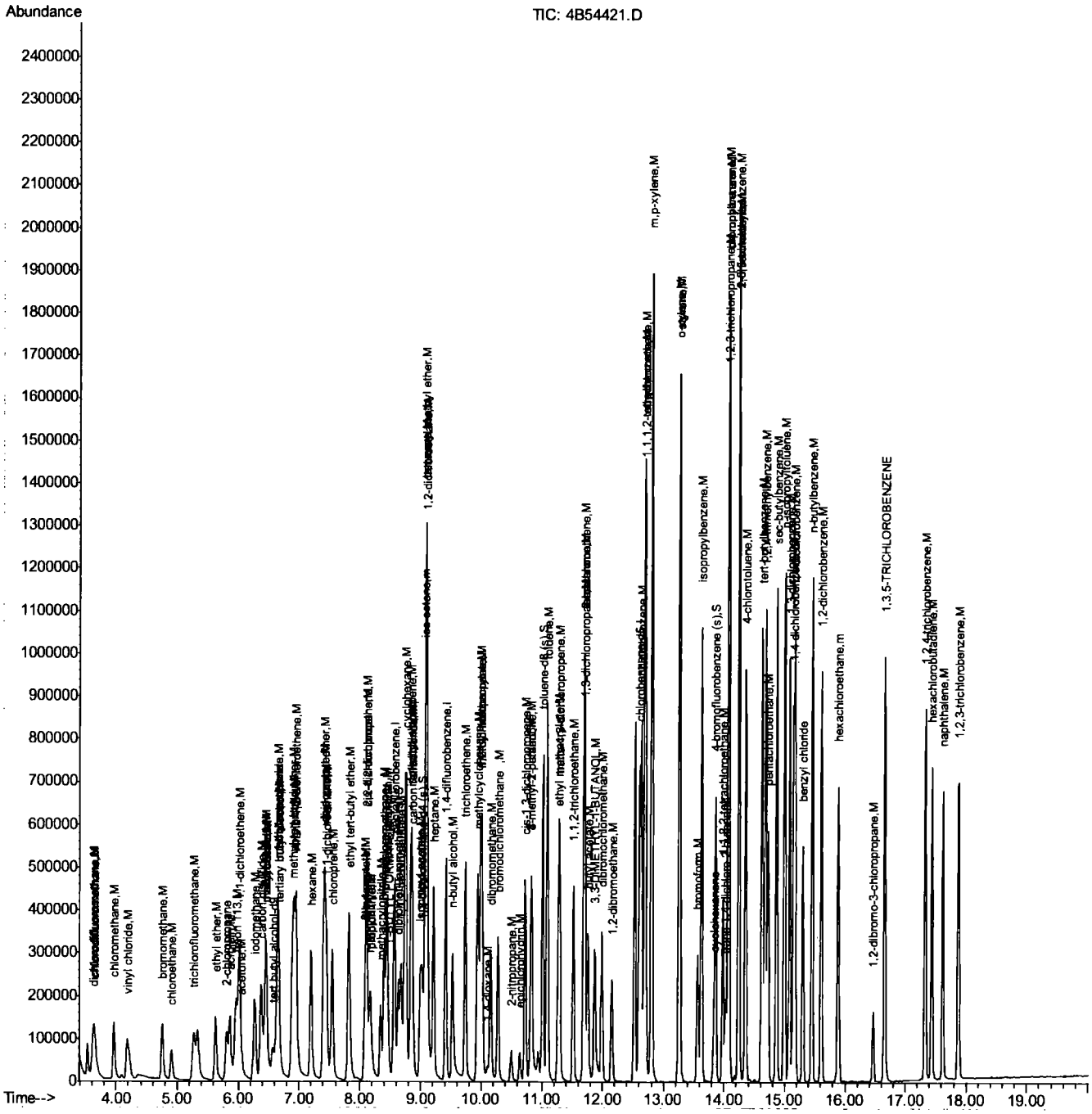
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.4.2 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54421.D
Acq On : 12 Aug 2015 4:55 pm
Operator : TOANP
Sample : jc1107-3msd
Misc : MS89470,V4B2296,w,,,,1
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Aug 12 17:34:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54459.D
Acq On : 13 Aug 2015 11:45 am
Operator : TOANP
Sample : JC869-4MS
Misc : MS89344,V4B2297,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 16:15:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 137687 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 412721 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 476155 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 427821 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 246362 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 150570 | 50.45 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 100.90% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.01 | 65 | 155487 | 47.41 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 94.82% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 552932 | 49.33 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 98.66% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 209256 | 48.65 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 97.30% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 183278 | 550.29 ug/L # | 47 |
| 3) 1,4-dioxane | 10.11 | 88 | 41734 | 1355.38 ug/L | 92 |
| 7) chlorodifluoromethane | 3.64 | 51 | 135136 | 32.38 ug/L | 91 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 262049 | 65.56 ug/L | 98 |
| 10) chloromethane | 3.97 | 52 | 77549 | 50.73 ug/L | 98 |
| 11) vinyl chloride | 4.18 | 62 | 239658 | 54.56 ug/L | 99 |
| 12) bromomethane | 4.76 | 94 | 131315 | 52.13 ug/L | 97 |
| 13) chloroethane | 4.91 | 64 | 97826 | 56.64 ug/L | 97 |
| 15) trichlorofluoromethane | 5.28 | 101 | 287855 | 69.37 ug/L | 99 |
| 19) ethyl ether | 5.63 | 74 | 72543 | 46.13 ug/L | 89 |
| 20) 2-chloropropane | 5.81 | 39 | 29441 | 58.83 ug/L | 90 |
| 21) acrolein | 5.86 | 56 | 190735 | 362.20 ug/L | 98 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 177639 | 54.51 ug/L | 93 |
| 23) acetone | 6.05 | 58 | 12921 | 47.13 ug/L # | 80 |
| 24) allyl chloride | 6.46 | 76 | 104117 | 43.64 ug/L # | 68 |
| 25) acetonitrile | 6.45 | 40 | 118532 | 451.62 ug/L # | 82 |
| 26) iodomethane | 6.27 | 142 | 336270 | 54.65 ug/L | 99 |
| 27) carbon disulfide | 6.38 | 76 | 569086 | 59.51 ug/L | 99 |
| 28) methylene chloride | 6.64 | 84 | 175232 | 50.76 ug/L | 90 |
| 29) methyl acetate | 6.44 | 74 | 22891 | 49.27 ug/L # | 83 |
| 30) 1-chloropropane | 6.66 | 42 | 284968 | 48.37 ug/L # | 95 |
| 31) methyl tert butyl ether | 6.89 | 73 | 491494 | 56.52 ug/L | 97 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 165879 | 51.75 ug/L | 94 |
| 33) di-isopropyl ether | 7.41 | 45 | 507107 | 44.47 ug/L | 81 |
| 34) 2-butanone | 8.08 | 72 | 17548 | 48.04 ug/L # | 90 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 294914 | 48.96 ug/L | 98 |
| 36) chloroprene | 7.55 | 53 | 227088 | 50.91 ug/L | 97 |
| 37) acrylonitrile | 6.92 | 53 | 268714 | 219.06 ug/L | 99 |
| 38) vinyl acetate | 7.43 | 86 | 23969 | 51.51 ug/L | 82 |
| 39) ethyl tert-butyl ether | 7.82 | 59 | 495070 | 48.87 ug/L | 97 |
| 40) ethyl acetate | 8.08 | 45 | 20488 | 41.32 ug/L | 73 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 142835 | 56.09 ug/L | 97 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 180575 | 51.86 ug/L | 93 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54459.D
Acq On : 13 Aug 2015 11:45 am
Operator : TOANP
Sample : JC869-4MS
Misc : MS89344,V4B2297,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 16:15:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 22868 | 48.36 ug/L # | 83 |
| 44) propionitrile | 8.18 | 54 | 225830 | 456.44 ug/L | 96 |
| 45) bromochloromethane | 8.40 | 128 | 96370 | 53.93 ug/L | 87 |
| 46) tetrahydrofuran | 8.43 | 42 | 47851 | 40.25 ug/L | 97 |
| 47) chloroform | 8.44 | 85 | 190991 | 53.00 ug/L | 98 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 104446 | 45.34 ug/L | 99 |
| 51) freon 113 | 5.97 | 151 | 115366 | 58.31 ug/L | 89 |
| 52) methacrylonitrile | 8.34 | 41 | 92060 | 42.13 ug/L | 96 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 224337 | 58.87 ug/L | 97 |
| 54) cyclohexane | 8.74 | 84 | 235781 | 56.46 ug/L | 91 |
| 55) iso-butyl alcohol | 8.83 | 43 | 64841 | 476.85 ug/L | 96 |
| 57) epichlorohydrin | 10.63 | 57 | 72658 | 222.27 ug/L | 98 |
| 58) n-butyl alcohol | 9.53 | 56 | 218861 | 2361.10 ug/L | 96 |
| 59) carbon tetrachloride | 8.86 | 117 | 209958 | 55.11 ug/L | 100 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 228712 | 54.03 ug/L | 99 |
| 61) hexane | 7.20 | 57 | 170260 | 52.95 ug/L | 96 |
| 63) benzene | 9.08 | 78 | 634983 | 50.96 ug/L | 99 |
| 64) iso-octane | 9.07 | 57 | 503338 | 50.29 ug/L | 99 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 99530 | 50.24 ug/L | 95 |
| 66) heptane | 9.21 | 57 | 158642 | 71.66 ug/L | 98 |
| 67) isopropyl acetate | 8.99 | 61 | 61837 | 41.51 ug/L | 98 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 213003 | 51.88 ug/L | 95 |
| 69) trichloroethene | 9.74 | 95 | 184757 | 55.09 ug/L | 97 |
| 72) 2-nitropropane | 10.50 | 41 | 45116 | 33.56 ug/L # | 1 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 23289 | 11.72 ug/L | 96 |
| 74) methyl methacrylate | 9.99 | 100 | 41578 | 52.03 ug/L | 95 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 174541 | 48.76 ug/L | 99 |
| 76) dibromomethane | 10.16 | 93 | 109586 | 52.57 ug/L | 96 |
| 77) methylcyclohexane | 9.94 | 83 | 262192 | 60.80 ug/L | 98 |
| 78) bromodichloromethane | 10.28 | 83 | 241463 | 53.87 ug/L | 100 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 291094 | 50.12 ug/L | 99 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 63500 | 46.15 ug/L | 96 |
| 82) toluene | 11.09 | 92 | 422525 | 53.20 ug/L | 100 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 144751 | 942.29 ug/L | 93 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 263178 | 51.74 ug/L | 96 |
| 85) ethyl methacrylate | 11.27 | 69 | 207396 | 49.29 ug/L | 94 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 135665 | 49.07 ug/L | 98 |
| 87) 2-hexanone | 11.69 | 58 | 55327 | 44.04 ug/L | 89 |
| 89) tetrachloroethene | 11.69 | 164 | 204431 | 55.00 ug/L | 98 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 249269 | 49.50 ug/L | 96 |
| 91) butyl acetate | 11.76 | 56 | 101836 | 44.34 ug/L | 92 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 162916 | 483.38 ug/L | 97 |
| 93) dibromochloromethane | 11.99 | 129 | 206021 | 52.32 ug/L | 99 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 173460 | 52.59 ug/L | 100 |
| 96) chlorobenzene | 12.63 | 112 | 492295 | 54.41 ug/L | 97 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 182770 | 52.85 ug/L | 100 |
| 98) ethylbenzene | 12.68 | 91 | 822760 | 54.59 ug/L | 98 |
| 99) m,p-xylene | 12.80 | 106 | 632042 | 110.06 ug/L | 99 |
| 100) o-xylene | 13.25 | 106 | 320643 | 55.38 ug/L | 97 |
| 101) styrene | 13.27 | 104 | 531791 | 53.79 ug/L | 96 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54459.D
Acq On : 13 Aug 2015 11:45 am
Operator : TOANP
Sample : JC869-4MS
Misc : MS89344,V4B2297,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 16:15:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 102) bromoform | 13.57 | 173 | 157134 | 51.35 ug/L | 98 |
| 104) isopropylbenzene | 13.63 | 105 | 843758 | 53.95 ug/L | 99 |
| 106) cyclohexanone | 13.82 | 55 | 56354 | 126.29 ug/L | 96 |
| 107) bromobenzene | 14.07 | 156 | 246694 | 53.78 ug/L | 92 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 222670 | 48.62 ug/L | 98 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 38683 | 32.85 ug/L | 93 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 54928 | 50.62 ug/L | 96 |
| 111) n-propylbenzene | 14.08 | 91 | 942196 | 53.30 ug/L | 98 |
| 113) 2-chlorotoluene | 14.24 | 126 | 210757 | 52.60 ug/L | 95 |
| 114) 4-chlorotoluene | 14.35 | 91 | 596143 | 52.16 ug/L | 100 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 697302 | 52.97 ug/L | 99 |
| 116) tert-butylbenzene | 14.62 | 119 | 632393 | 55.38 ug/L | 99 |
| 117) pentachloroethane | 14.72 | 167 | 141496 | 59.87 ug/L | 97 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 682393 | 53.81 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 953850 | 54.97 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 455976 | 54.60 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 807374 | 55.66 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 446086 | 53.41 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 429949 | 51.50 ug/L | 98 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 441998 | 54.21 ug/L | 98 |
| 126) n-butylbenzene | 15.46 | 92 | 395869 | 55.02 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 35726 | 48.60 ug/L | 93 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 373244 | 57.40 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 282580 | 54.25 ug/L | 98 |
| 131) hexachlorobutadiene | 17.44 | 225 | 190359 | 60.04 ug/L | 99 |
| 132) naphthalene | 17.62 | 128 | 473209 | 51.68 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 236221 | 53.77 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 157289 | 52.29 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

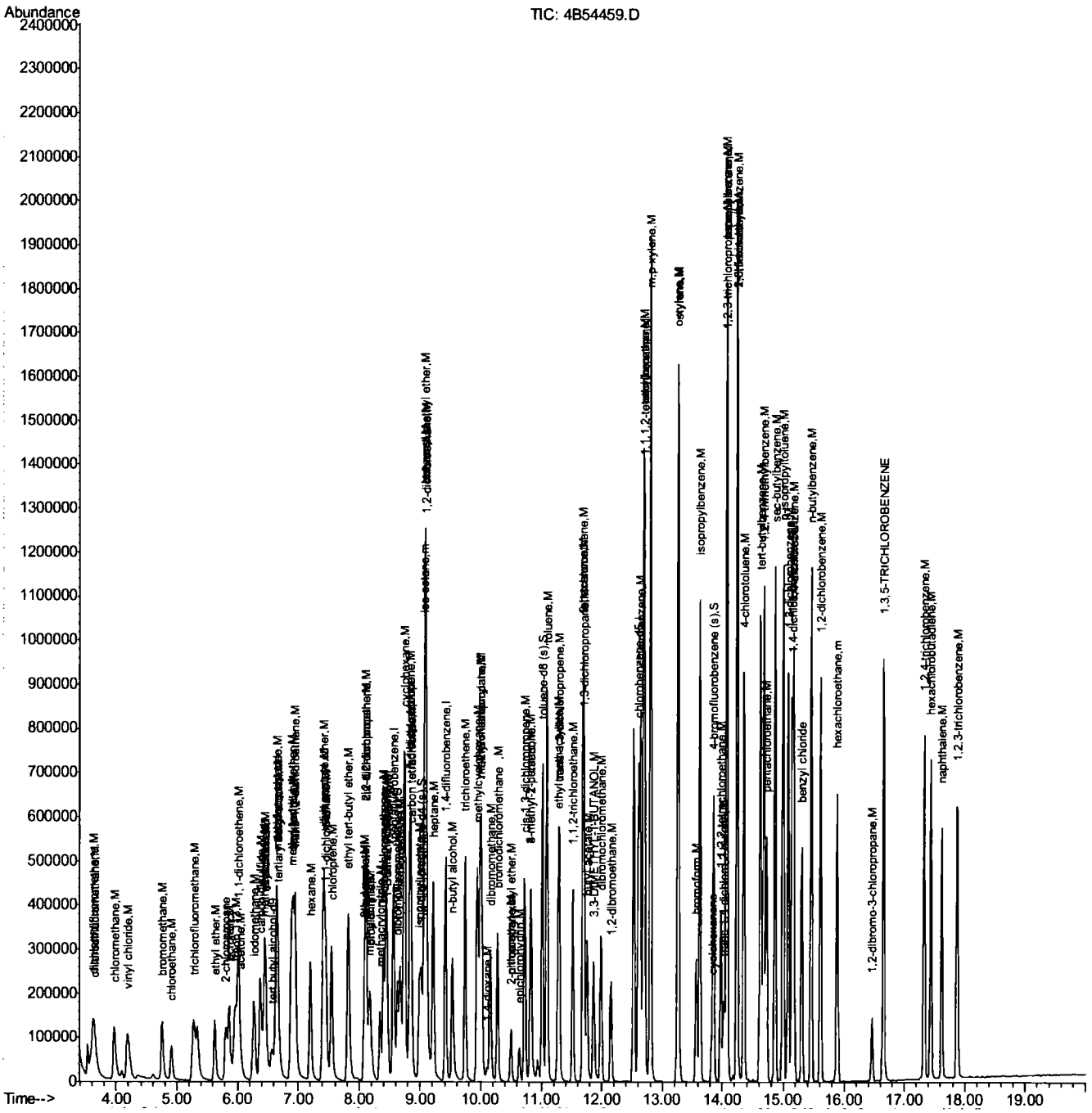
7.4.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54459.D
Acq On : 13 Aug 2015 11:45 am
Operator : TOANP
Sample : JC869-4MS
Misc : MS89344,V4B2297,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 13 16:15:51 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration






ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54458.D
Acq On : 13 Aug 2015 11:17 am
Operator : TOANP
Sample : JC869-3DUP
Misc : MS89344,V4B2297,w,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 16:15:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 129185 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 418519 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 473275 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 402037 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 185731 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 150429 | 49.71 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 99.42% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 152325 | 45.80 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 91.60% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 539166 | 48.39 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 96.78% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 177414 | 54.71 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 109.42% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.68 | 59 | 99984 | 319.96 ug/L # | 20 |
| 31) methyl tert butyl ether | 6.89 | 73 | 674325 | 76.48 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

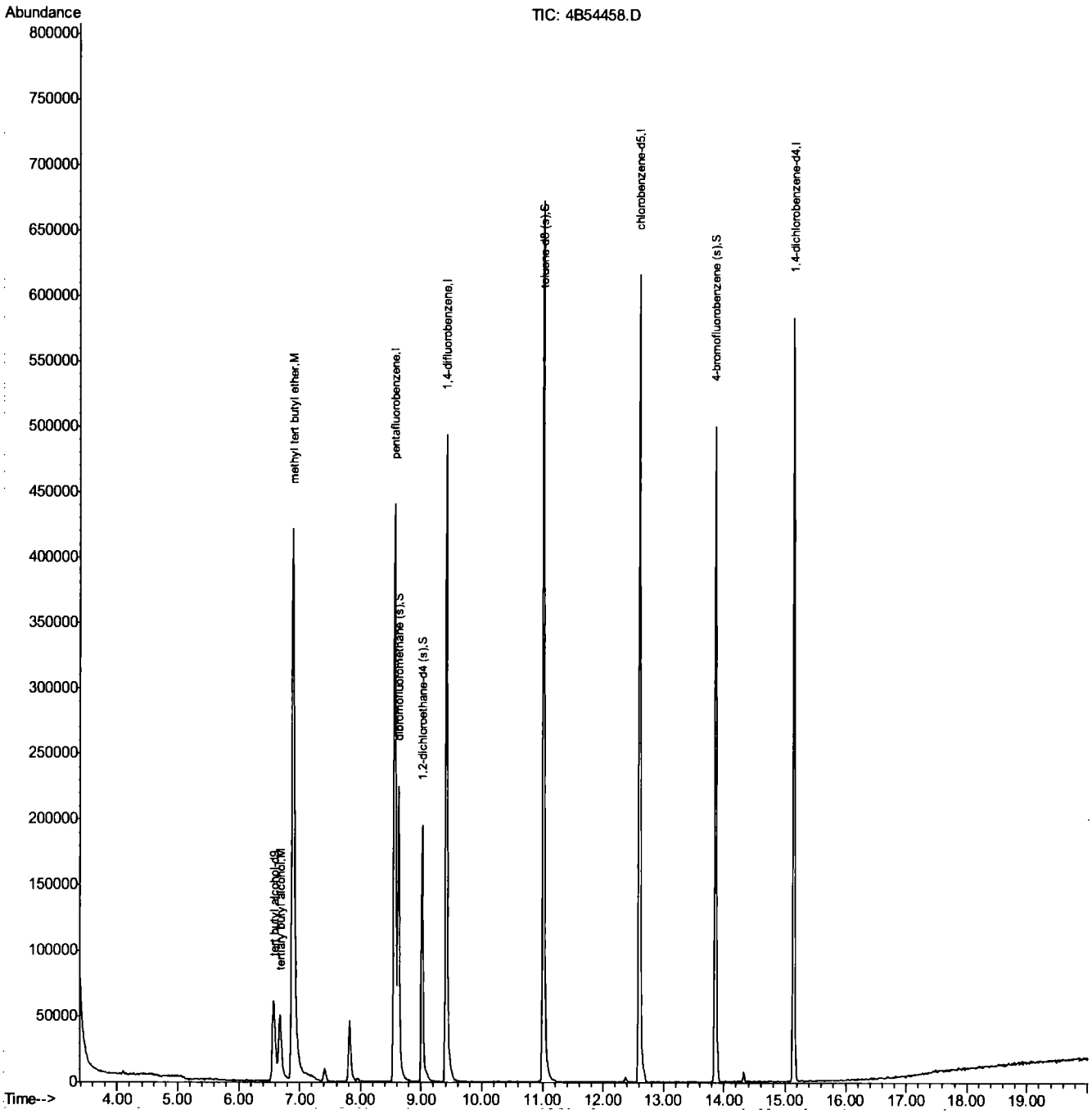
7.5.1

7

Quantitation Report (QT Reviewed)

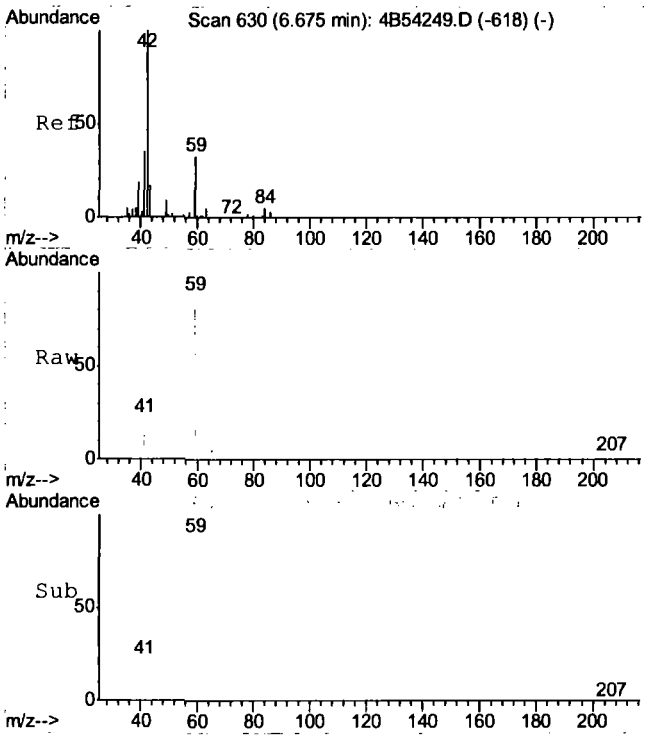
Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54458.D
Acq On : 13 Aug 2015 11:17 am
Operator : TOANP
Sample : JC869-3DUP
Misc : MS89344,V4B2297,w,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 13 16:15:38 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration




M4B2289.M Thu Aug 13 16:35:24 2015 GCMS4B

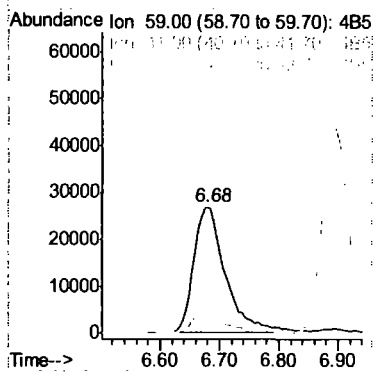
Page: 2

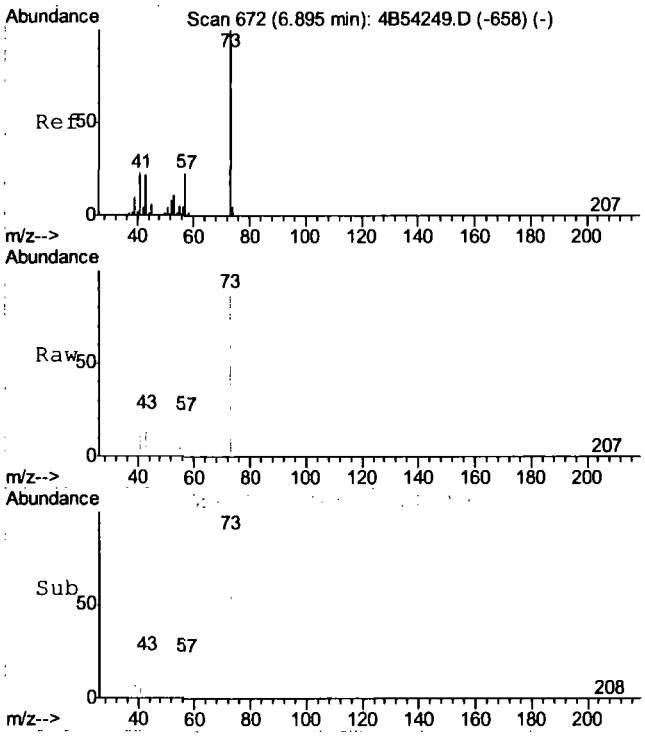



#2
tertiary butyl alcohol
Concen: 319.96 ug/L
RT: 6.68 min Scan# 631
Delta R.T. 0.01 min
Lab File: 4B54458.D
Acq: 13 Aug 2015 11:17 am

Tgt Ion: 59 Resp: 99984

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 59 | 100 | | |
| 41 | 22.0 | 92.9 | 152.9# |
| 43 | 12.9 | 25.2 | 85.2# |

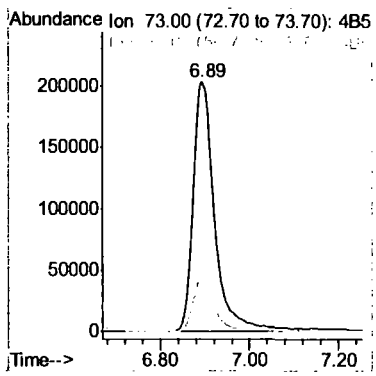



#31
methyl tert butyl ether
Concen: 76.48 ug/L
RT: 6.89 min Scan# 672
Delta R.T. -0.00 min
Lab File: 4B54458.D
Acq: 13 Aug 2015 11:17 am

Tgt Ion: 73 Resp: 674325

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 73 | 100 | | |
| 57 | 22.0 | 0.0 | 68.7 |




7.5.1

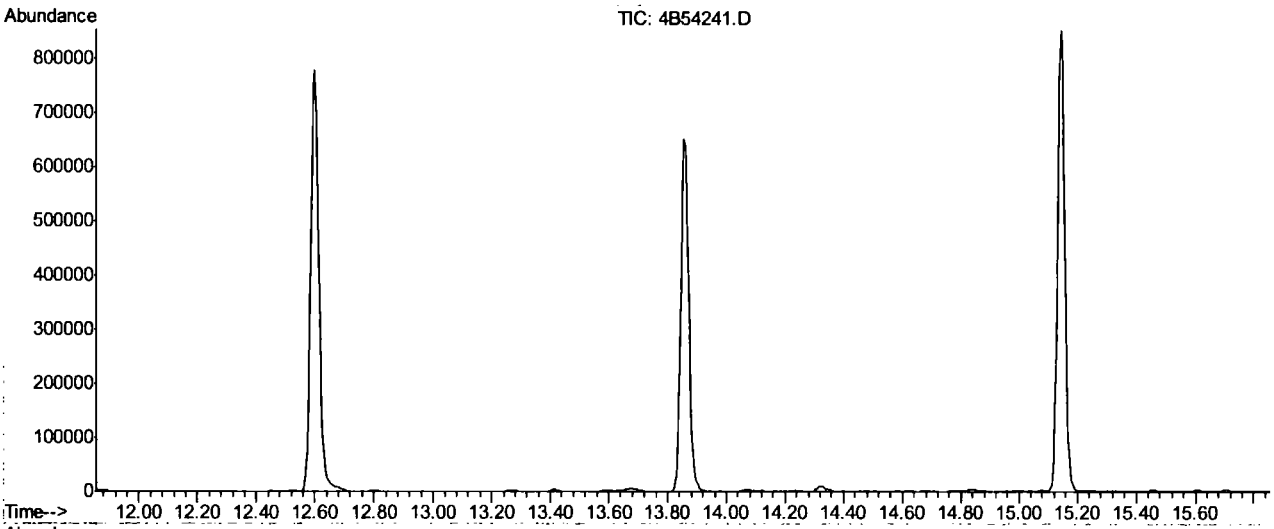
7

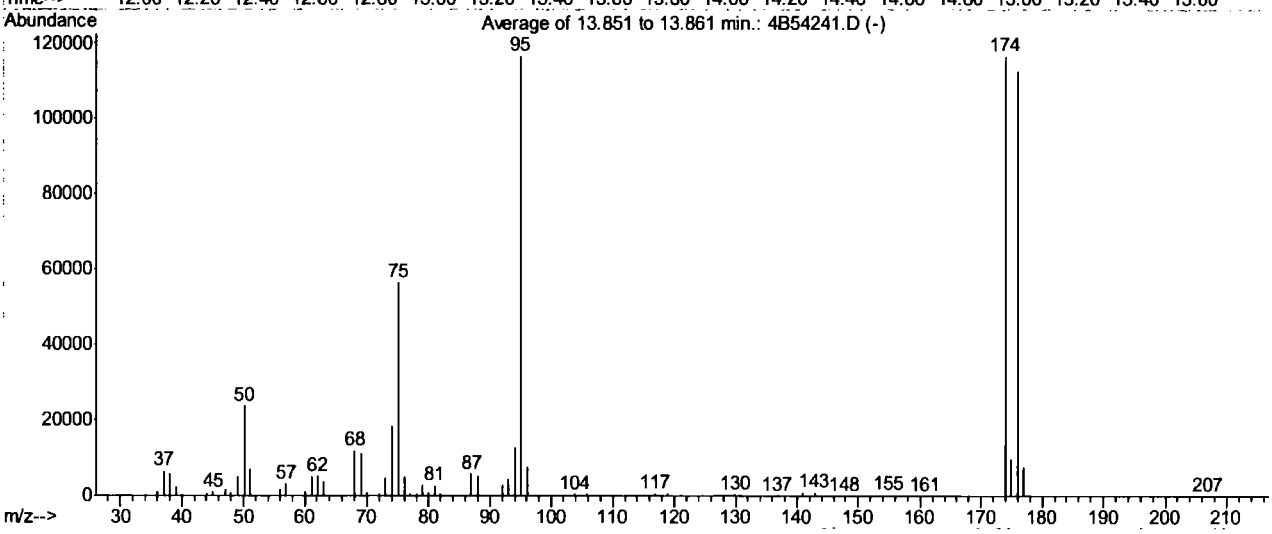
SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\4B54241.D
Acq On : 5 Aug 2015 9:05 am
Sample : bfb
Misc : MS88663,V4B2289,w,,,,1
MS Integration Params: RTEINT.P

Vial: 1
Operator: TOANP
Inst : MS4B
Multiplr: 1.00

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um




AutoFind: Scans 2002, 2003, 2004; Background Corrected with Scan 1993

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 20.4 | 23821 | PASS |
| 75 | 95 | 30 | 60 | 48.5 | 56474 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 116525 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 7868 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 100.1 | 116618 | PASS |
| 175 | 174 | 5 | 9 | 8.4 | 9749 | PASS |
| 176 | 174 | 95 | 101 | 96.6 | 112621 | PASS |
| 177 | 176 | 5 | 9 | 7.0 | 7858 | PASS |

4B54241.D M4B2289.M Thu Aug 06 09:00:21 2015 GCMS4B

Average of 13.851 to 13.861 min.: 4B54241.D
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.10 | 1315 | 51.10 | 7161 | 64.00 | 116 | 77.00 | 751 |
| 37.10 | 6644 | 52.10 | 338 | 64.20 | 181 | 78.00 | 544 |
| 38.10 | 5932 | 55.10 | 458 | 67.10 | 142 | 78.95 | 2868 |
| 39.10 | 2254 | 56.05 | 1766 | 68.00 | 11950 | 79.95 | 960 |
| 40.00 | 273 | 57.05 | 3179 | 69.10 | 11507 | 81.00 | 2838 |
| 44.05 | 634 | 57.90 | 72 | 69.95 | 843 | 81.90 | 627 |
| 45.05 | 1108 | 58.10 | 60 | 72.05 | 612 | 86.00 | 110 |
| 47.05 | 1902 | 60.00 | 1094 | 73.00 | 4764 | 87.00 | 5892 |
| 48.00 | 795 | 61.10 | 5023 | 74.10 | 18488 | 88.00 | 5478 |
| 49.10 | 5206 | 62.10 | 5332 | 75.10 | 56474 | 90.95 | 382 |
| 50.10 | 23821 | 63.10 | 3765 | 76.05 | 5002 | 92.05 | 2969 |

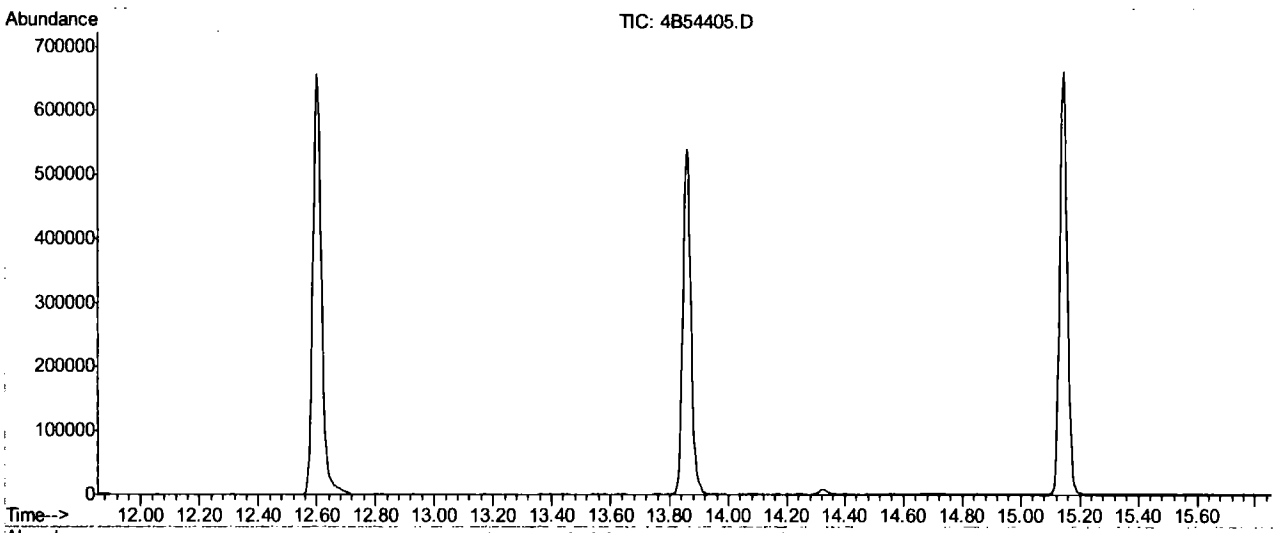
Average of 13.851 to 13.861 min.: 4B54241.D
bfb
Modified:subtracted

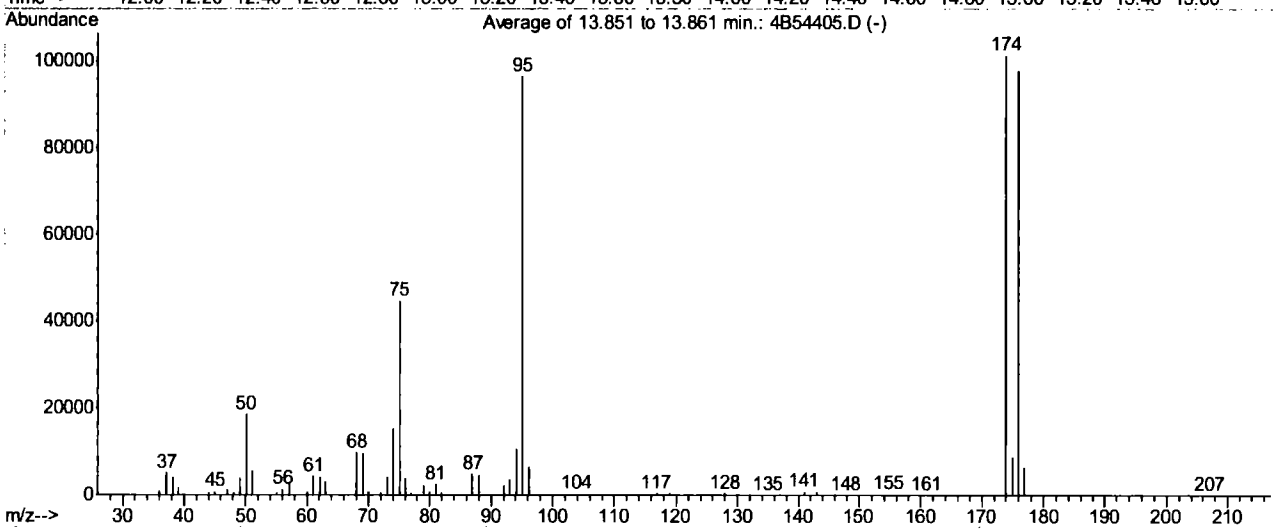
| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 93.05 | 4444 | 117.95 | 344 | 142.95 | 1027 | 173.95 | 116618 |
| 94.05 | 12802 | 118.95 | 544 | 145.70 | 62 | 175.00 | 9749 |
| 95.00 | 116525 | 127.90 | 458 | 147.00 | 55 | 175.95 | 112621 |
| 96.05 | 7868 | 128.95 | 162 | 147.70 | 66 | 176.95 | 7858 |
| 96.95 | 221 | 129.95 | 495 | 147.90 | 214 | 177.90 | 224 |
| 103.90 | 528 | 130.90 | 194 | 149.00 | 57 | 207.00 | 54 |
| 104.90 | 60 | 134.95 | 113 | 149.90 | 54 | | |
| 105.10 | 58 | 136.85 | 222 | 155.05 | 313 | | |
| 105.90 | 506 | 139.80 | 52 | 156.95 | 219 | | |
| 115.95 | 399 | 141.00 | 861 | 160.90 | 55 | | |
| 116.90 | 674 | 142.00 | 99 | 171.30 | 51 | | |

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\4B54405.D  Vial: 1
Acq On : 12 Aug 2015 9:13 am  Operator: TOANP
Sample : BFB  Inst : MS4B
Misc : MS89342,V4B2296,w,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um




AutoFind: Scans 2002, 2003, 2004; Background Corrected with Scan 1993

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 19.3 | 18701 | PASS |
| 75 | 95 | 30 | 60 | 46.4 | 44842 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 96672 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 6517 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 105.0 | 101530 | PASS |
| 175 | 174 | 5 | 9 | 8.6 | 8723 | PASS |
| 176 | 174 | 95 | 101 | 96.6 | 98101 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 6561 | PASS |

4B54405.D M4B2289.M Wed Aug 12 17:16:48 2015 GCMS4B

Average of 13.851 to 13.861 min.: 4B54405.D
BFB
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.05 | 998 | 49.10 | 3996 | 64.05 | 268 | 77.90 | 306 |
| 37.10 | 5202 | 50.10 | 18701 | 67.05 | 285 | 78.10 | 195 |
| 38.10 | 4225 | 51.10 | 5773 | 68.00 | 9862 | 78.95 | 2347 |
| 39.10 | 1750 | 52.15 | 263 | 69.05 | 9506 | 80.00 | 683 |
| 40.00 | 215 | 55.05 | 426 | 70.05 | 742 | 80.95 | 2506 |
| 42.05 | 125 | 56.05 | 1391 | 72.05 | 648 | 81.95 | 481 |
| 43.20 | 54 | 57.10 | 2507 | 73.05 | 4064 | 86.00 | 64 |
| 44.00 | 489 | 60.05 | 781 | 74.05 | 15256 | 87.00 | 4883 |
| 45.05 | 803 | 61.05 | 4351 | 75.10 | 44842 | 88.00 | 4597 |
| 47.00 | 1356 | 62.10 | 4225 | 76.05 | 3933 | 91.00 | 320 |
| 48.10 | 633 | 63.10 | 3051 | 76.95 | 629 | 92.00 | 2436 |

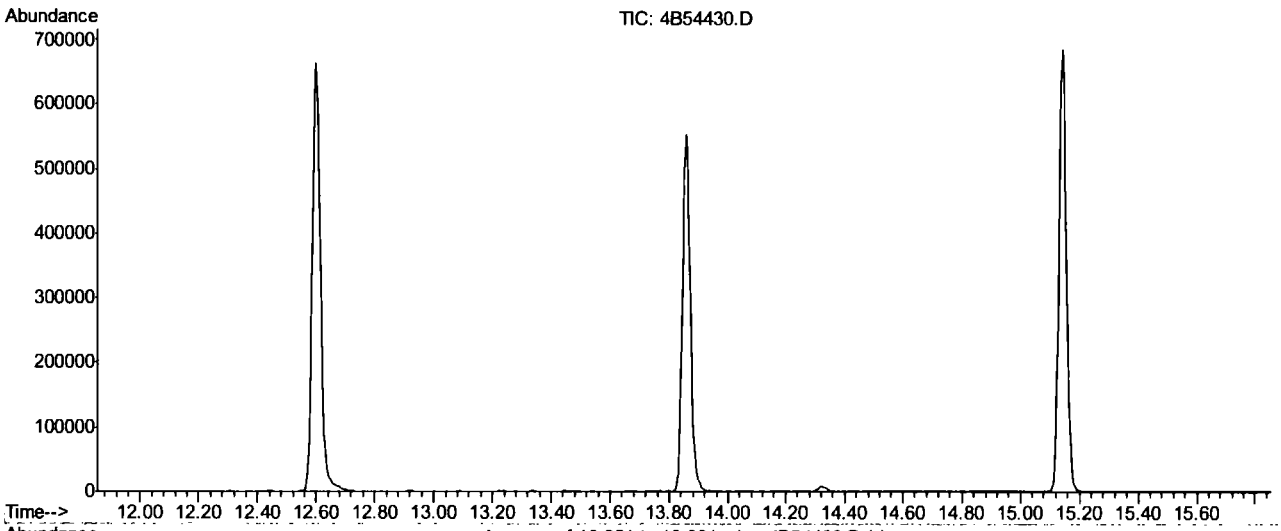
Average of 13.851 to 13.861 min.: 4B54405.D
BFB
Modified:subtracted

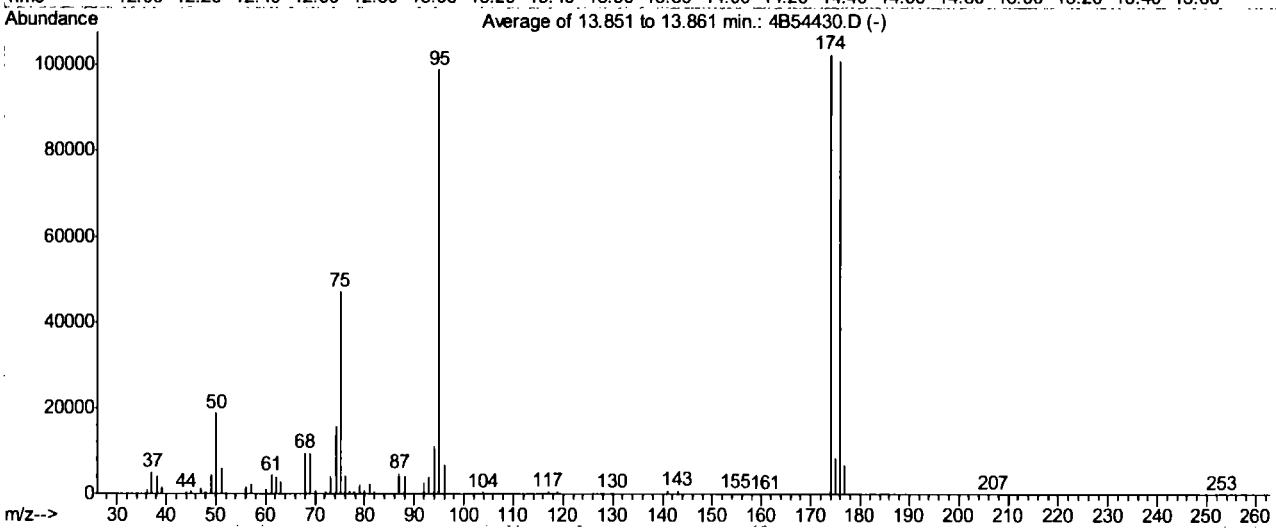
| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 93.00 | 3623 | 117.90 | 242 | 142.95 | 876 | 174.00 | 101530 |
| 94.10 | 10563 | 118.95 | 495 | 145.00 | 54 | 175.00 | 8723 |
| 95.05 | 96672 | 127.95 | 413 | 145.90 | 142 | 175.95 | 98101 |
| 96.05 | 6517 | 128.90 | 135 | 147.00 | 54 | 176.95 | 6561 |
| 97.10 | 210 | 129.95 | 384 | 147.95 | 228 | 177.90 | 255 |
| 103.90 | 374 | 130.90 | 52 | 149.95 | 114 | 207.15 | 149 |
| 104.90 | 130 | 135.00 | 120 | 154.95 | 287 | | |
| 106.00 | 301 | 136.90 | 145 | 156.95 | 205 | | |
| 106.90 | 52 | 140.95 | 882 | 159.00 | 61 | | |
| 115.95 | 331 | 142.00 | 57 | 160.95 | 103 | | |
| 116.90 | 513 | 142.30 | 66 | 172.25 | 238 | | |

SW-846 Method 8260

Data File : C:\MSDChem\1\DATA\4B54430.D  Vial: 26
Acq On : 12 Aug 2015 9:06 pm  Operator: TOANP
Sample : bfb  Inst : MS4B
Misc : MS89499,V4B2297,w,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um




AutoFind: Scans 2002, 2003, 2004; Background Corrected with Scan 1993

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 19.0 | 18824 | PASS |
| 75 | 95 | 30 | 60 | 47.6 | 47162 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 98989 | PASS |
| 96 | 95 | 5 | 9 | 6.8 | 6769 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 103.6 | 102565 | PASS |
| 175 | 174 | 5 | 9 | 8.2 | 8410 | PASS |
| 176 | 174 | 95 | 101 | 98.4 | 100890 | PASS |
| 177 | 176 | 5 | 9 | 6.7 | 6717 | PASS |

4B54430.D M4B2289.M Thu Aug 13 12:16:49 2015 GCMS4B

Average of 13.851 to 13.861 min.: 4B54430.D
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.10 | 1012 | 51.10 | 6094 | 67.10 | 98 | 78.95 | 2224 |
| 37.10 | 5056 | 52.05 | 251 | 68.05 | 9518 | 79.95 | 756 |
| 38.10 | 4108 | 55.10 | 253 | 69.00 | 9514 | 80.95 | 2371 |
| 39.10 | 1608 | 56.05 | 1467 | 70.05 | 735 | 81.95 | 486 |
| 40.00 | 61 | 57.05 | 2415 | 72.15 | 473 | 85.95 | 130 |
| 44.05 | 475 | 58.10 | 57 | 72.95 | 3843 | 87.00 | 4857 |
| 45.05 | 880 | 60.05 | 967 | 74.10 | 15718 | 88.00 | 4310 |
| 47.05 | 1324 | 61.10 | 4403 | 75.10 | 47162 | 91.00 | 263 |
| 48.05 | 634 | 62.05 | 4068 | 76.10 | 4189 | 91.20 | 107 |
| 49.10 | 4499 | 63.05 | 3017 | 77.05 | 712 | 92.05 | 2676 |
| 50.10 | 18824 | 64.05 | 301 | 77.95 | 480 | 93.00 | 3941 |

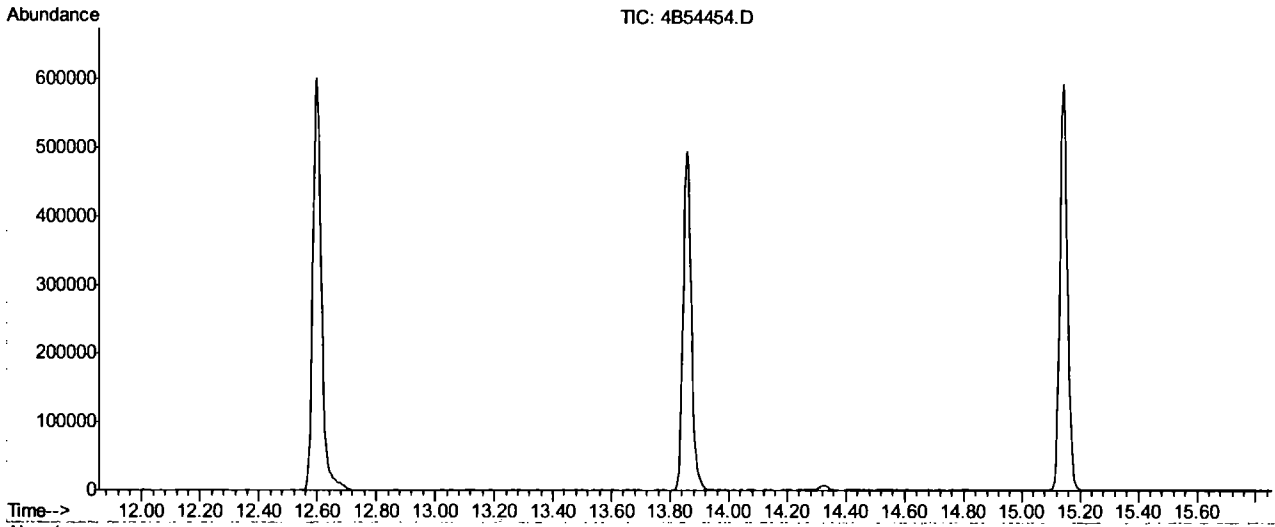
Average of 13.851 to 13.861 min.: 4B54430.D
bfb
Modified:subtracted

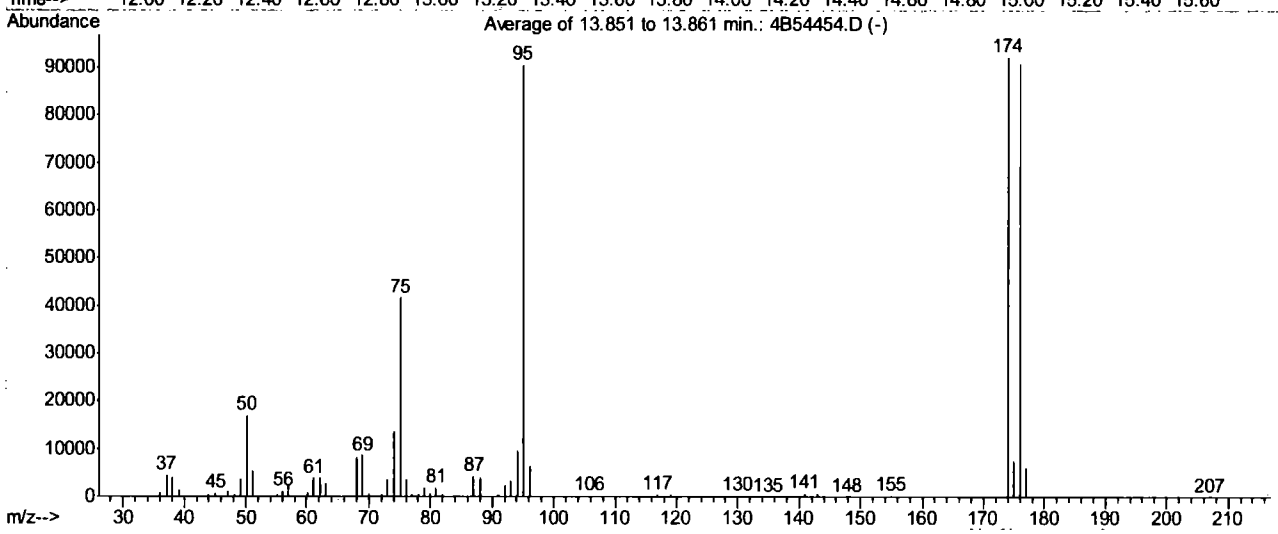
| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 94.05 | 11051 | 117.80 | 321 | 146.90 | 57 | 177.90 | 219 |
| 95.00 | 98989 | 118.95 | 435 | 147.95 | 258 | 206.95 | 116 |
| 96.05 | 6769 | 127.85 | 324 | 154.90 | 306 | 253.00 | 157 |
| 97.05 | 140 | 129.00 | 131 | 156.95 | 134 | | |
| 103.95 | 430 | 129.90 | 377 | 160.90 | 50 | | |
| 104.95 | 122 | 130.90 | 70 | 171.75 | 118 | | |
| 105.95 | 388 | 134.90 | 188 | 172.20 | 98 | | |
| 106.90 | 52 | 136.95 | 107 | 174.00 | 102565 | | |
| 115.80 | 64 | 140.95 | 867 | 175.00 | 8410 | | |
| 115.95 | 168 | 141.90 | 75 | 176.00 | 100890 | | |
| 117.00 | 574 | 142.95 | 884 | 176.90 | 6717 | | |

SW-846 Method 8260

Data File : C:\MSDCHEM\1\DATA\4B54454.D  Vial: 1
Acq On : 13 Aug 2015 9:00 am  Operator: TOANP
Sample : bfb  Inst : MS4B
Misc : MS89470,V4B2298,w,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um




AutoFind: Scans 2002, 2003, 2004; Background Corrected with Scan 1993

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 15 | 40 | 18.8 | 17050 | PASS |
| 75 | 95 | 30 | 60 | 46.1 | 41786 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 90570 | PASS |
| 96 | 95 | 5 | 9 | 7.0 | 6316 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 101.9 | 92250 | PASS |
| 175 | 174 | 5 | 9 | 8.2 | 7549 | PASS |
| 176 | 174 | 95 | 101 | 98.3 | 90642 | PASS |
| 177 | 176 | 5 | 9 | 6.8 | 6125 | PASS |

4B54454.D M4B2289.M Thu Aug 13 16:12:05 2015 GCMS4B

Average of 13.851 to 13.861 min.: 4B54454.D
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 36.10 | 862 | 50.10 | 17050 | 67.10 | 110 | 79.00 | 1922 |
| 37.10 | 4563 | 51.10 | 5337 | 68.05 | 8334 | 79.95 | 624 |
| 38.10 | 3942 | 52.05 | 262 | 69.00 | 8693 | 80.95 | 1965 |
| 39.10 | 1502 | 55.05 | 374 | 70.05 | 686 | 82.00 | 477 |
| 40.00 | 33 | 56.10 | 1273 | 72.05 | 478 | 87.00 | 4259 |
| 44.00 | 528 | 57.05 | 2298 | 73.00 | 3548 | 88.00 | 3952 |
| 45.10 | 803 | 60.05 | 937 | 74.10 | 13782 | 91.00 | 371 |
| 47.05 | 1177 | 61.05 | 3968 | 75.10 | 41786 | 92.00 | 2306 |
| 47.80 | 136 | 62.10 | 3929 | 76.05 | 3601 | 93.05 | 3393 |
| 48.15 | 526 | 63.10 | 2811 | 77.00 | 574 | 94.10 | 9760 |
| 49.10 | 3685 | 64.10 | 235 | 78.05 | 426 | 95.00 | 90570 |

Average of 13.851 to 13.861 min.: 4B54454.D
bfb
Modified:subtracted

| m/z | abund. | m/z | abund. | m/z | abund. | m/z | abund. |
|---|---|---|---|---|---|---|---|
| 96.05 | 6316 | 128.95 | 205 | 154.95 | 247 | | |
| 97.00 | 230 | 129.95 | 320 | 156.90 | 193 | | |
| 103.95 | 358 | 134.95 | 197 | 158.80 | 50 | | |
| 104.95 | 126 | 136.90 | 120 | 172.10 | 74 | | |
| 105.90 | 361 | 140.95 | 759 | 174.00 | 92250 | | |
| 107.00 | 59 | 143.00 | 706 | 175.00 | 7549 | | |
| 115.95 | 314 | 145.90 | 50 | 176.00 | 90642 | | |
| 116.95 | 502 | 147.90 | 238 | 176.95 | 6125 | | |
| 117.95 | 302 | 150.00 | 56 | 177.90 | 127 | | |
| 119.00 | 501 | 152.90 | 50 | 178.10 | 64 | | |
| 127.95 | 301 | 153.90 | 62 | 207.05 | 170 | | |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54242.D
Acq On : 5 Aug 2015 9:39 am
Operator : TOANP
Sample : ic2289-0.2
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 07 10:38:36 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 189317 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 455240 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 533050 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 471164 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 250843 | 50.00 | ug/L | 0.00 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 165428 | 50.74 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 101.48% | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 183485 | 50.72 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 101.44% | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 626021 | 49.88 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.76% | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 227429 | 51.33 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 102.66% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 47) chloroform | 8.44 | 85 | 732 | 0.18 | ug/L # | 67 |
| 63) benzene | 9.08 | 78 | 2867 | 0.20 | ug/L | 92 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 3836 | 1.76 | ug/L | 96 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 1473 | 0.17 | ug/L | 96 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 1583 | 0.18 | ug/L | 79 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

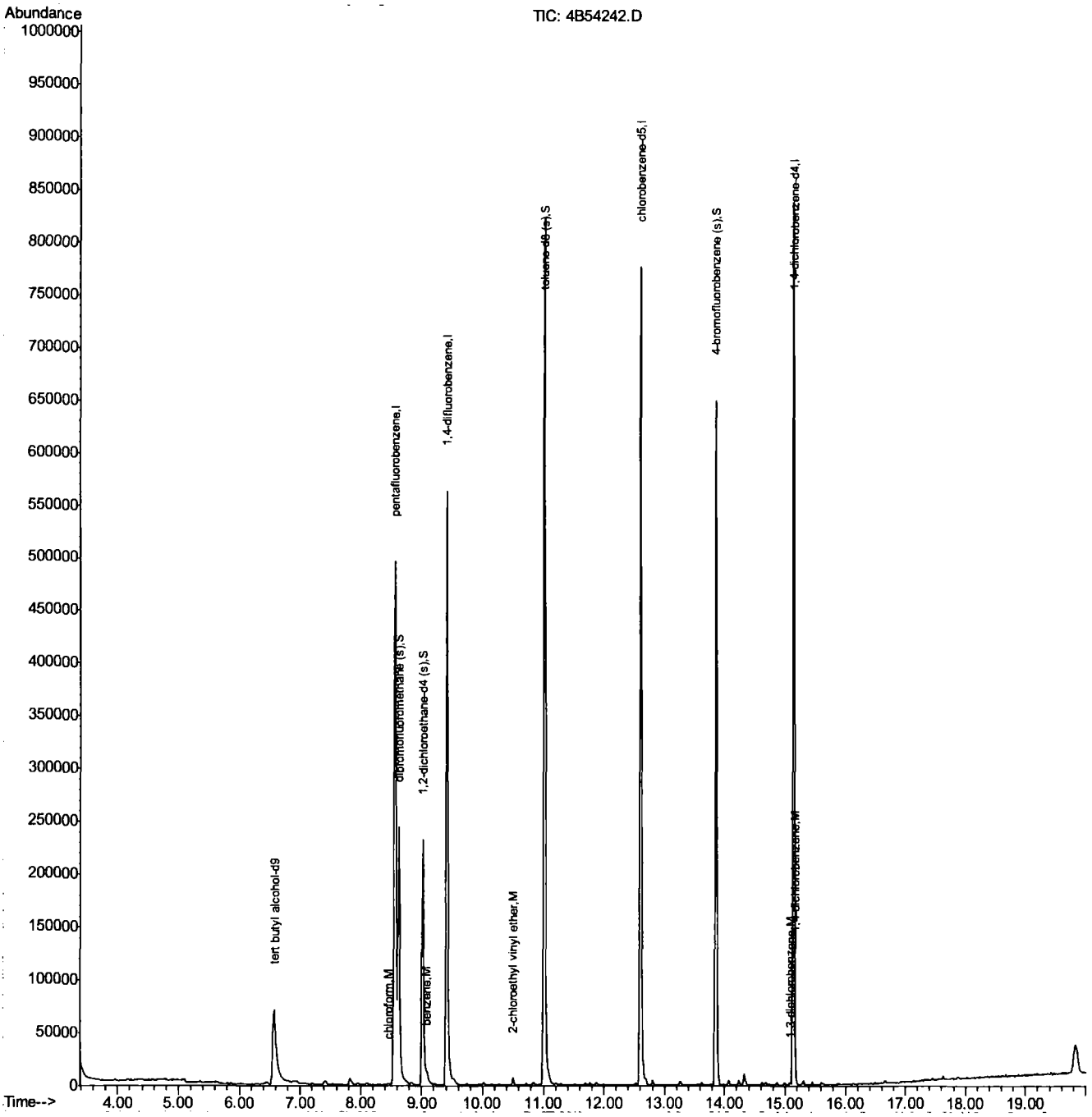
7.7.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54242.D
Acq On : 5 Aug 2015 9:39 am
Operator : TOANP
Sample : ic2289-0.2
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 07 10:38:36 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration




M4B2289.M Mon Aug 10 08:29:44 2015 GCMS4B

Page: 2

Cal Report: 4B54243.D

Manual Integrations APPROVED (compounds with "m" flag)
Jessica Reitan-Chu
08/10/15 09:30

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54243.D
Acq On : 5 Aug 2015 10:07 am
Operator : TOANP
Sample : ic2289-0.5
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 06 08:44:03 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 161627 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 464201 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 539990 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 476569 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 253504 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 163660 | 49.23 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 76 - 120 Recovery = 98.46% | | | | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 185165 | 50.19 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 73 - 122 Recovery = 100.38% | | | | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 634463 | 49.90 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 84 - 119 Recovery = 99.80% | | | | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 225253 | 50.30 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 78 - 117 Recovery = 100.60% | | | | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 10) chloromethane | 3.96 | 52 | 875 | 0.51 | ug/L # | 76 |
| 11) vinyl chloride | 4.16 | 62 | 2163 | 0.47 | ug/L | 84 |
| 12) bromomethane | 4.76 | 94 | 1598 | 0.49 | ug/L | 85 |
| 13) chloroethane | 4.92 | 64 | 979 | 0.50 | ug/L # | 44 |
| 19) ethyl ether | 5.63 | 74 | 735 | 0.42 | ug/L # | 65 |
| 21) acrolein | 5.87 | 56 | 2685 | 4.76 | ug/L | 93 |
| 22) 1,1-dichloroethene | 6.03 | 96 | 1501 | 0.40 | ug/L # | 66 |
| 26) iodomethane | 6.28 | 142 | 2790 | 0.41 | ug/L | 72 |
| 27) carbon disulfide | 6.38 | 76 | 4291 | 0.40 | ug/L | 71 |
| 28) methylene chloride | 6.65 | 84 | 1664 | 0.43 | ug/L # | 59 |
| 31) methyl tert butyl ether | 6.90 | 73 | 4143 | 0.45 | ug/L | 93 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 1720 | 0.45 | ug/L # | 66 |
| 33) di-isopropyl ether | 7.41 | 45 | 5508 | 0.39 | ug/L | 90 |
| 39) ethyl tert-butyl ether | 7.82 | 59 | 4980 | 0.39 | ug/L | 96 |
| 44) propionitrile | 8.20 | 54 | 2348m | 4.29 | ug/L | |
| 47) chloroform | 8.44 | 85 | 1690 | 0.41 | ug/L | 95 |
| 52) methacrylonitrile | 8.34 | 41 | 1130 | 0.46 | ug/L | 87 |
| 57) epichlorohydrin | 10.64 | 57 | 755 | 1.91 | ug/L | 66 |
| 58) n-butyl alcohol | 9.54 | 56 | 2498 | 18.71 | ug/L | 95 |
| 63) benzene | 9.08 | 78 | 6286 | 0.43 | ug/L | 87 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 1829 | 0.42 | ug/L | 74 |
| 72) 2-nitropropane | 10.50 | 41 | 644 | 0.41 | ug/L # | 49 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 5053 | 2.28 | ug/L | 94 |
| 76) dibromomethane | 10.16 | 93 | 943 | 0.40 | ug/L | 90 |
| 78) bromodichloromethane | 10.28 | 83 | 1925 | 0.41 | ug/L | 81 |
| 84) trans-1,3-dichloropropene | 11.30 | 75 | 2239 | 0.42 | ug/L | 90 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 2158 | 0.41 | ug/L | 98 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.88 | 57 | 1664 | 3.49 | ug/L | 86 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 1474 | 0.44 | ug/L | 90 |
| 96) chlorobenzene | 12.64 | 112 | 3985 | 0.41 | ug/L | 89 |
| 98) ethylbenzene | 12.69 | 91 | 6598 | 0.41 | ug/L | 88 |
| 99) m,p-xylene | 12.80 | 106 | 4961 | 0.83 | ug/L | 94 |
| 100) o-xylene | 13.25 | 106 | 2401 | 0.40 | ug/L # | 77 |

7.7.2

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54243.D
Acq On : 5 Aug 2015 10:07 am
Operator : TOANP
Sample : ic2289-0.5
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 06 08:44:03 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 107) bromobenzene | 14.07 | 156 | 1937 | 0.42 ug/L | 94 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 2013 | 0.45 ug/L | 94 |
| 109) trans-1,4-dichloro-2-buten | 14.03 | 53 | 492 | 0.41 ug/L # | 64 |
| 110) 1,2,3-trichloropropane | 14.07 | 110 | 455 | 0.41 ug/L | 88 |
| 111) n-propylbenzene | 14.08 | 91 | 7776 | 0.44 ug/L | 99 |
| 114) 4-chlorotoluene | 14.35 | 91 | 4846 | 0.42 ug/L | 92 |
| 116) tert-butylbenzene | 14.62 | 119 | 5430 | 0.48 ug/L | 94 |
| 117) pentachloroethane | 14.72 | 167 | 1029 | 0.42 ug/L # | 84 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 5277 | 0.42 ug/L | 90 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 3591 | 0.42 ug/L | 89 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 3728 | 0.43 ug/L | 92 |
| 123) benzyl chloride | 15.31 | 91 | 4240 | 0.42 ug/L # | 91 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 3345 | 0.41 ug/L | 95 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 2681 | 0.42 ug/L | 98 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

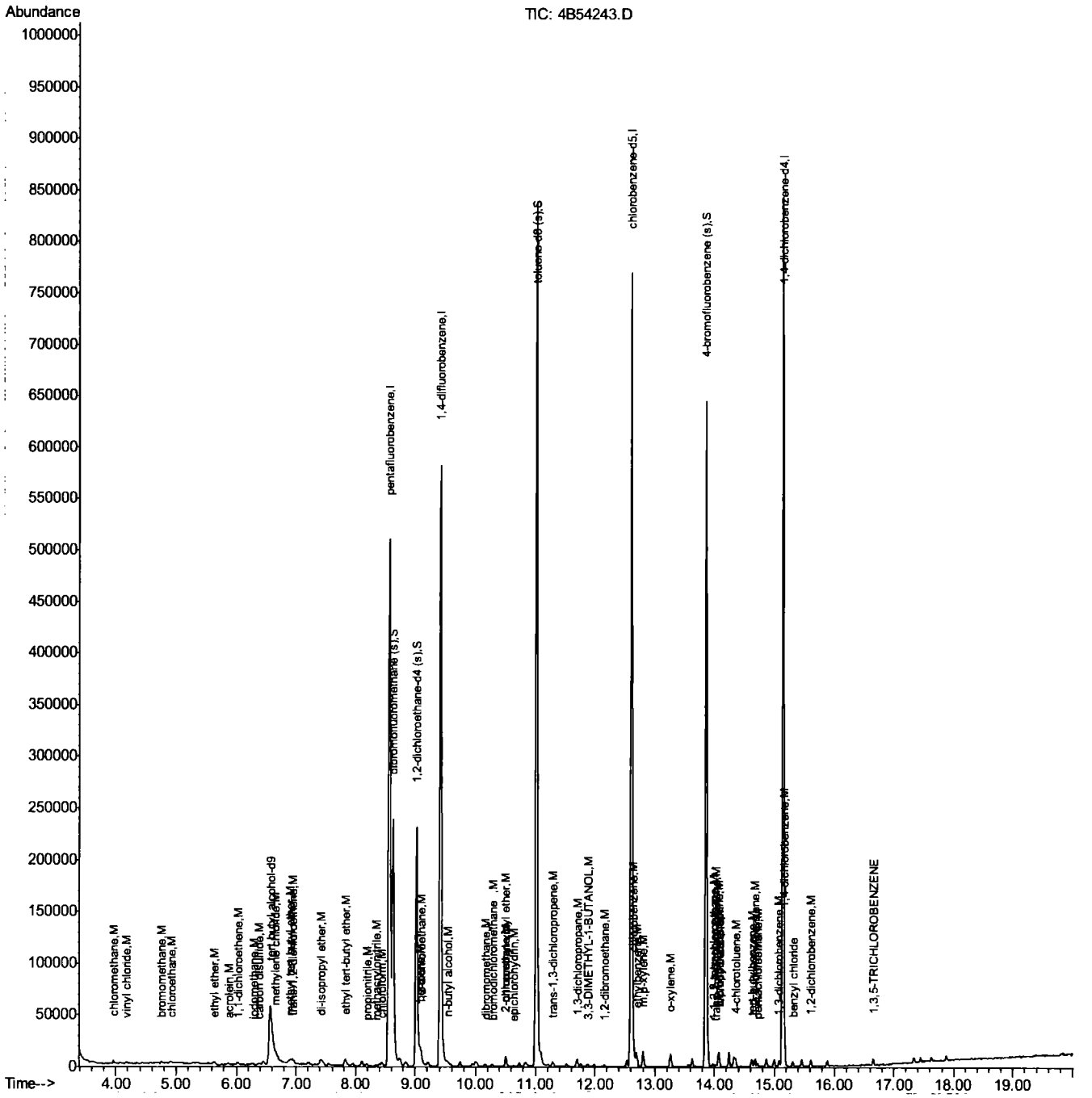
7.7.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54243.D
Acq On : 5 Aug 2015 10:07 am
Operator : TOANP
Sample : ic2289-0.5
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 06 08:44:03 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration






ACCUTEST LABORATORIES JC1107

7.7.2 7

# Manual Integration Approval Summary



| | | | |
|---|---|---|---|
| **Sample Number:** | V4B2289-IC2289 | **Method:** | SW846 8260C |
| **Lab FileID:** | 4B54243.D | **Analyst approved:** | 08/06/15 09:13 Dong, Mei |
| **Injection Time:** | 08/05/15 10:07 | **Supervisor approved:** | 08/10/15 09:30 Jessica Reitan-Chu |

| Parameter | CAS | Sig# | R.T. (min.) | Reason |
|---|---|---|---|---|
| Propionitrile | 107-12-0 | | 8.20 | Poor instrument integration |

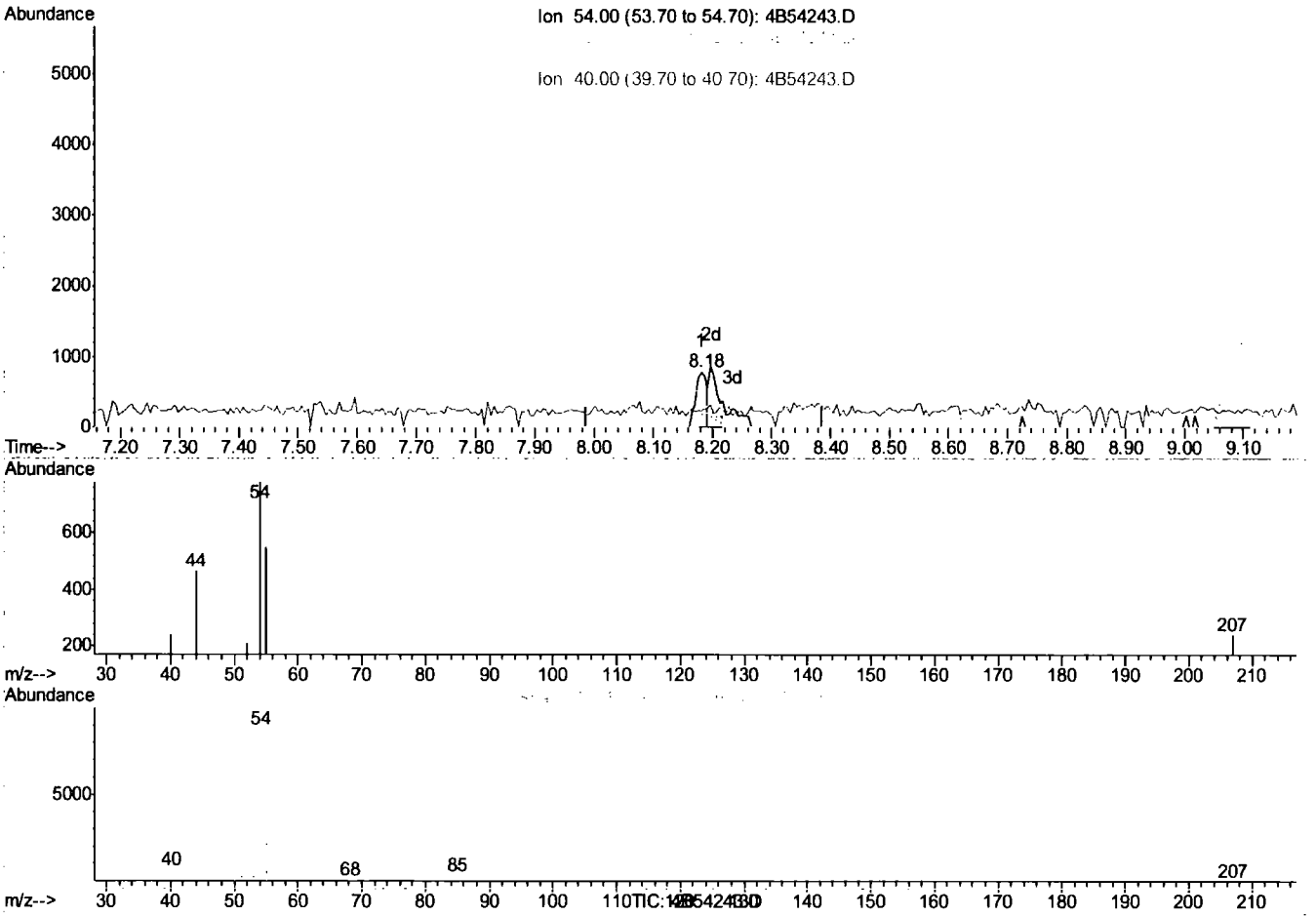
Cal Report: 4B54243.D

Quantitation Report (Qedit)

Data File : C:\MSDChem\1\DATA\4B54243.D Vial: 3
Acq On : 5 Aug 2015 10:07 am Operator: TOANP
Sample : ic2289-0.5 Inst : MS4B
Misc : MS88663,V4B2289,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Quant Time: Aug 05 13:59:41 2015 Results File: M4B2289.RES

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Wed Aug 05 13:57:32 2015
Response via : Multiple Level Calibration




(44) propionitrile (M)

8.18min 1.85ug/L

response 1014

| Ion | Exp% | Act% |
|---|---|---|
| 54.00 | 100 | 100 |
| 52.00 | 19.10 | 26.63 |
| 55.00 | 34.20 | 34.57 |
| 40.00 | 6.10 | 10.76 |

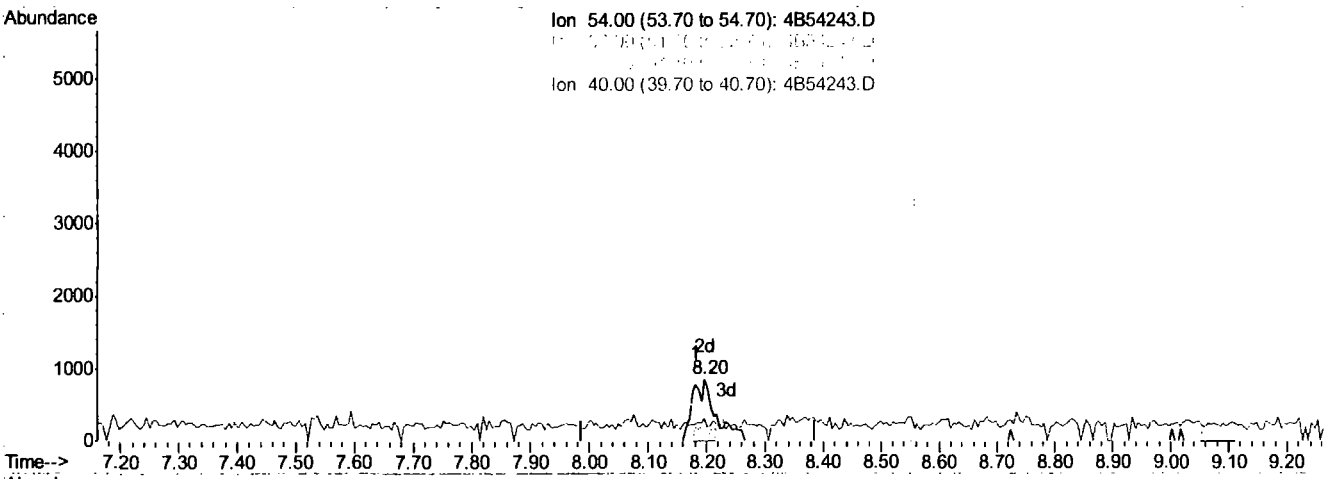
4B54243.D M4B2289.M Wed Aug 05 14:00:59 2015 GCMS4B

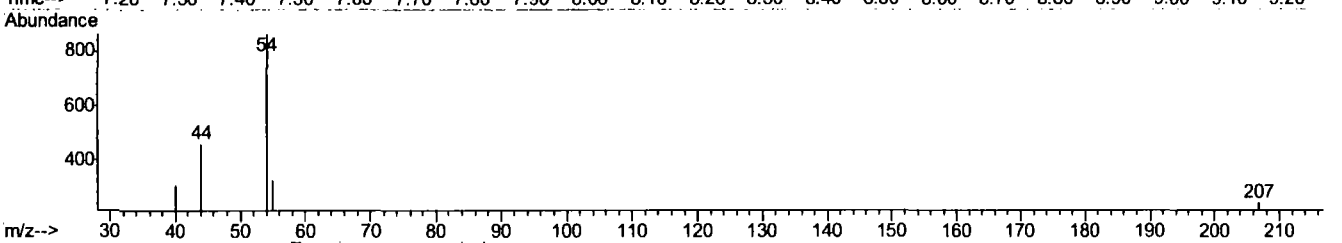
Quantitation Report (Qedit)

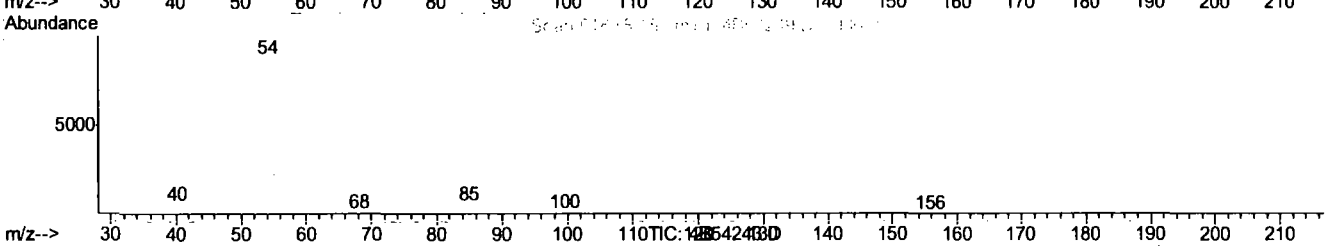
Data File : C:\MSDChem\1\DATA\4B54243.D Vial: 3
Acq On : 5 Aug 2015 10:07 am Operator: TOANP
Sample : ic2289-0.5 Inst : MS4B
Misc : MS88663,V4B2289,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Quant Time: Aug 06 08:44:03 2015 Results File: M4B2289.RES

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Thu Aug 06 08:53:28 2015
Response via : Multiple Level Calibration




(44) propionitrile (M)

8.20min 4.29ug/L m

response 2348

| Ion | Exp% | Act% |
|---|---|---|
| 54.00 | 100 | 100 |
| 52.00 | 19.10 | 24.88 |
| 55.00 | 34.20 | 37.85 |
| 40.00 | 6.10 | 35.88 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54244.D
Acq On : 5 Aug 2015 10:35 am
Operator : TOANF
Sample : ic2289-1
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 10 08:18:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 168106 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 456387 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 528116 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 470067 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 254497 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 163277 | 49.96 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 99.92% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 181441 | 50.02 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 100.04% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 621889 | 50.01 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.02% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 223099 | 49.63 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 99.26% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 2271 | 5.49 ug/L # | 72 |
| 7) chlorodifluoromethane | 3.64 | 51 | 5246 | 1.20 ug/L | 97 |
| 10) chloromethane | 3.95 | 52 | 1654 | 0.97 ug/L # | 61 |
| 11) vinyl chloride | 4.16 | 62 | 4538 | 1.00 ug/L | 85 |
| 12) bromomethane | 4.76 | 94 | 2599 | 0.81 ug/L | 92 |
| 13) chloroethane | 4.92 | 64 | 1722 | 0.90 ug/L | 86 |
| 15) trichlorofluoromethane | 5.28 | 101 | 3571 | 0.86 ug/L # | 62 |
| 19) ethyl ether | 5.63 | 74 | 1897 | 1.10 ug/L | 88 |
| 21) acrolein | 5.87 | 56 | 5534 | 9.97 ug/L | 80 |
| 22) 1,1-dichloroethene | 6.01 | 96 | 4173 | 1.13 ug/L | 86 |
| 24) allyl chloride | 6.45 | 76 | 2918 | 1.11 ug/L # | 33 |
| 26) iodomethane | 6.28 | 142 | 7104 | 1.05 ug/L | 89 |
| 27) carbon disulfide | 6.38 | 76 | 11398 | 1.08 ug/L | 91 |
| 28) methylene chloride | 6.64 | 84 | 3966 | 1.04 ug/L | 98 |
| 29) methyl acetate | 6.46 | 74 | 448 | 0.95 ug/L # | 1 |
| 31) methyl tert butyl ether | 6.89 | 73 | 10313 | 1.14 ug/L | 85 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 4367 | 1.17 ug/L | 88 |
| 33) di-isopropyl ether | 7.42 | 45 | 13716 | 0.98 ug/L | 75 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 6746 | 1.11 ug/L | 98 |
| 36) chloroprene | 7.54 | 53 | 5523 | 1.17 ug/L | 93 |
| 37) acrylonitrile | 6.93 | 53 | 7280 | 6.58 ug/L | 86 |
| 38) vinyl acetate | 7.43 | 86 | 455 | 0.91 ug/L # | 1 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 11692 | 0.94 ug/L | 94 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 3273 | 1.08 ug/L | 82 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 4154 | 1.21 ug/L | 83 |
| 44) propionitrile | 8.19 | 54 | 5545 | 10.32 ug/L | 97 |
| 45) bromochloromethane | 8.40 | 128 | 1933 | 1.07 ug/L | 91 |
| 46) tetrahydrofuran | 8.43 | 42 | 1471 | 1.07 ug/L | 97 |
| 47) chloroform | 8.44 | 85 | 4552 | 1.13 ug/L | 94 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 2382 | 1.01 ug/L # | 77 |
| 51) freon 113 | 5.97 | 151 | 2213 | 0.98 ug/L | 91 |
| 52) methacrylonitrile | 8.34 | 41 | 2492 | 1.03 ug/L | 90 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 4307 | 1.07 ug/L | 75 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54244.D
Acq On : 5 Aug 2015 10:35 am
Operator : TOANP
Sample : ic2289-1
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 10 08:18:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 54) cyclohexane | 8.73 | 84 | 4874 | 1.12 ug/L # | 74 |
| 57) epichlorohydrin | 10.63 | 57 | 2058 | 5.33 ug/L | 90 |
| 58) n-butyl alcohol | 9.54 | 56 | 5784 | 44.30 ug/L | 97 |
| 59) carbon tetrachloride | 8.86 | 117 | 4461 | 1.11 ug/L | 90 |
| 60) 1,1-dichloropropene | 8.84 | 75 | 5058 | 1.20 ug/L | 97 |
| 61) hexane | 7.20 | 57 | 4109 | 1.19 ug/L | 80 |
| 63) benzene | 9.08 | 78 | 15599 | 1.09 ug/L | 100 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 2145 | 0.91 ug/L # | 81 |
| 66) heptane | 9.21 | 57 | 2628 | 1.13 ug/L | 94 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 5033 | 1.17 ug/L | 94 |
| 69) trichloroethene | 9.74 | 95 | 4058 | 1.19 ug/L | 88 |
| 72) 2-nitropropane | 10.50 | 41 | 1692 | 1.10 ug/L # | 63 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 11570 | 5.35 ug/L | 99 |
| 74) methyl methacrylate | 9.99 | 100 | 864 | 1.01 ug/L # | 44 |
| 75) 1,2-dichloropropane | 10.01 | 63 | 4019 | 1.05 ug/L | 93 |
| 76) dibromomethane | 10.16 | 93 | 2526 | 1.11 ug/L | 91 |
| 77) methylcyclohexane | 9.94 | 83 | 4903 | 1.10 ug/L | 96 |
| 78) bromodichloromethane | 10.28 | 83 | 5244 | 1.13 ug/L | 92 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 6576 | 1.10 ug/L | 92 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 1463 | 1.03 ug/L | 91 |
| 82) toluene | 11.09 | 92 | 9587 | 1.18 ug/L | 89 |
| 83) 3-methyl-1-butanol | 10.84 | 55 | 3741 | 18.41 ug/L | 83 |
| 84) trans-1,3-dichloropropene | 11.30 | 75 | 5852 | 1.12 ug/L | 93 |
| 85) ethyl methacrylate | 11.27 | 69 | 4537 | 1.13 ug/L | 84 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 3232 | 1.11 ug/L | 98 |
| 87) 2-hexanone | 11.70 | 58 | 1424 | 1.15 ug/L # | 61 |
| 89) tetrachloroethene | 11.70 | 164 | 4309 | 1.07 ug/L | 97 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 6104 | 1.17 ug/L | 97 |
| 91) butyl acetate | 11.77 | 56 | 2584 | 0.92 ug/L # | 84 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 4062 | 8.64 ug/L | 92 |
| 93) dibromochloromethane | 11.99 | 129 | 4516 | 1.11 ug/L | 92 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 3864 | 1.16 ug/L | 99 |
| 96) chlorobenzene | 12.64 | 112 | 11061 | 1.17 ug/L | 88 |
| 97) 1,1,1,2-tetrachloroethane | 12.69 | 131 | 3990 | 1.17 ug/L | 93 |
| 98) ethylbenzene | 12.69 | 91 | 18635 | 1.18 ug/L | 99 |
| 99) m,p-xylene | 12.80 | 106 | 14263 | 2.41 ug/L | 81 |
| 100) o-xylene | 13.26 | 106 | 6866 | 1.15 ug/L | 87 |
| 101) styrene | 13.27 | 104 | 10951 | 1.14 ug/L | 91 |
| 102) bromoform | 13.57 | 173 | 3448 | 1.17 ug/L | 93 |
| 104) isopropylbenzene | 13.63 | 105 | 18302 | 1.22 ug/L | 93 |
| 107) bromobenzene | 14.07 | 156 | 5315 | 1.16 ug/L | 94 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 4998 | 1.11 ug/L | 87 |
| 109) trans-1,4-dichloro-2-buten | 14.03 | 53 | 1326 | 1.10 ug/L | 86 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 1091 | 0.97 ug/L | 89 |
| 111) n-propylbenzene | 14.08 | 91 | 20802 | 1.18 ug/L | 96 |
| 113) 2-chlorotoluene | 14.25 | 126 | 4472 | 1.19 ug/L # | 77 |
| 114) 4-chlorotoluene | 14.35 | 91 | 13383 | 1.15 ug/L | 92 |
| 115) 1,3,5-trimethylbenzene | 14.25 | 105 | 14996 | 1.18 ug/L | 98 |
| 116) tert-butylbenzene | 14.63 | 119 | 13117 | 1.15 ug/L | 98 |
| 117) pentachloroethane | 14.73 | 167 | 2665 | 1.07 ug/L | 92 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54244.D
Acq On : 5 Aug 2015 10:35 am
Operator : TOANP
Sample : ic2289-1
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 10 08:18:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 14265 | 1.12 ug/L | 98 |
| 119) sec-butylbenzene | 14.87 | 105 | 19440 | 1.18 ug/L | 98 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 9710 | 1.12 ug/L | 97 |
| 121) p-isopropyltoluene | 15.00 | 119 | 15860 | 1.14 ug/L | 97 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 9676 | 1.11 ug/L | 92 |
| 123) benzyl chloride | 15.30 | 91 | 9655 | 0.96 ug/L # | 95 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 9478 | 1.16 ug/L | 91 |
| 126) n-butylbenzene | 15.46 | 92 | 7635 | 1.16 ug/L | 87 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 826 | 1.07 ug/L # | 61 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 6998 | 1.10 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 5252 | 1.09 ug/L | 96 |
| 132) naphthalene | 17.62 | 128 | 8355 | 0.99 ug/L | 98 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 4266 | 1.02 ug/L | 93 |
| 134) hexachloroethane | 15.89 | 201 | 3324 | 1.12 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

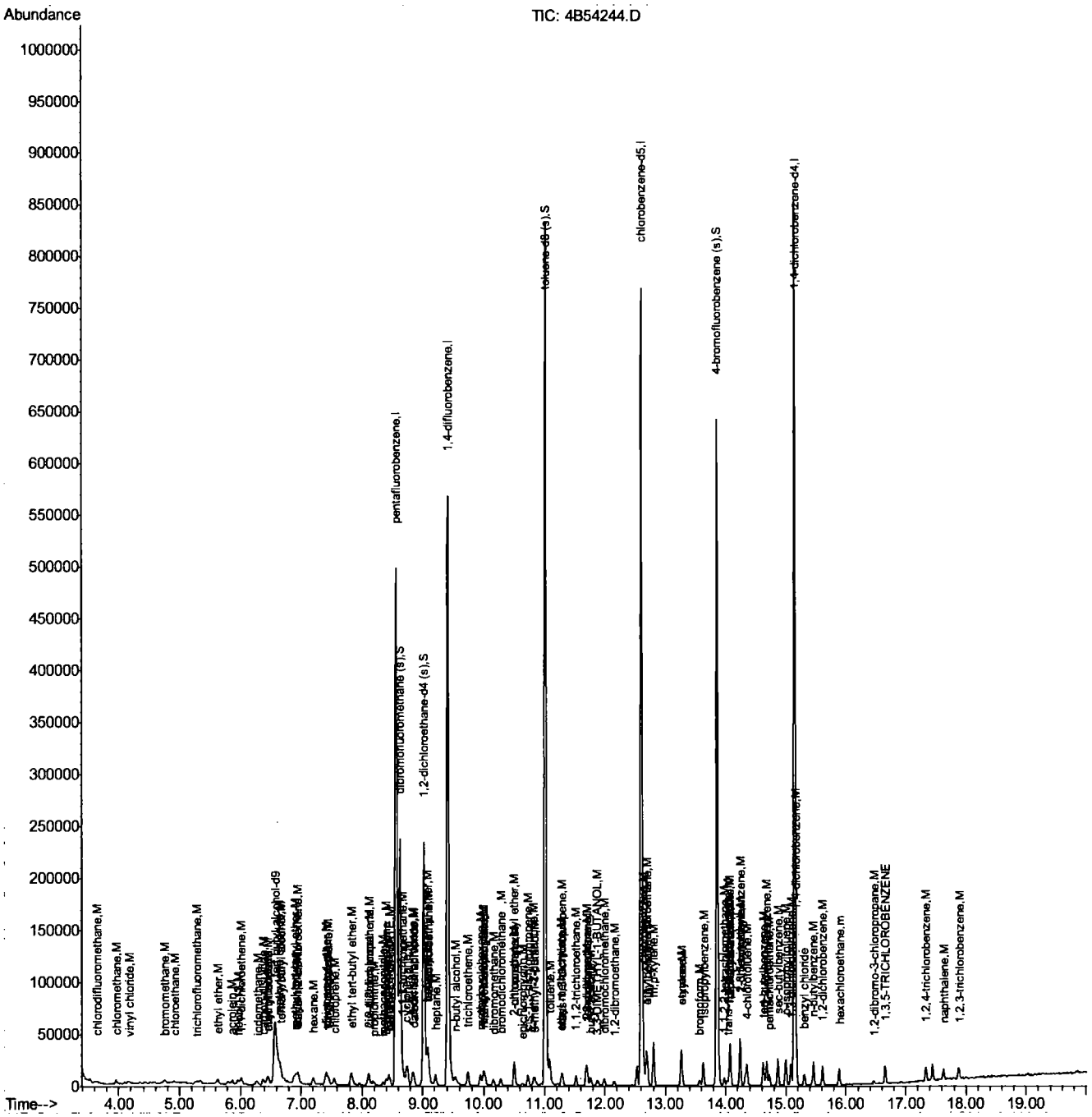
7.7.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54244.D
Acq On : 5 Aug 2015 10:35 am
Operator : TOANP
Sample : ic2289-1
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Aug 10 08:18:11 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:57:32 2015
Response via : Initial Calibration






ACCUTEST LABORATORIES JC1107

7.7.3

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54245.D
Acq On : 5 Aug 2015 11:03 am
Operator : TOANP
Sample : ic2289-2
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 06 08:44:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:53:30 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 154019 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 458246 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 533965 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 468820 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 253142 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 159550 | 48.62 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 76 - 120 Recovery = 97.24% | | | | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 183532 | 50.40 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 73 - 122 Recovery = 100.80% | | | | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 629388 | 50.06 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 84 - 119 Recovery = 100.12% | | | | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 222983 | 49.87 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 78 - 117 Recovery = 99.74% | | | | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.68 | 59 | 3724 | 9.82 | ug/L # | 69 |
| 3) 1,4-dioxane | 10.12 | 88 | 1411 | 47.92 | ug/L # | 71 |
| 7) chlorodifluoromethane | 3.65 | 51 | 9659 | 2.20 | ug/L | 95 |
| 8) dichlorodifluoromethane | 3.62 | 85 | 8686 | 2.24 | ug/L | 85 |
| 10) chloromethane | 3.96 | 52 | 3495 | 2.05 | ug/L # | 85 |
| 11) vinyl chloride | 4.17 | 62 | 10299 | 2.25 | ug/L | 98 |
| 12) bromomethane | 4.77 | 94 | 6188 | 1.92 | ug/L | 85 |
| 13) chloroethane | 4.91 | 64 | 3927 | 2.03 | ug/L | 80 |
| 15) trichlorofluoromethane | 5.28 | 101 | 9423 | 2.26 | ug/L | 93 |
| 19) ethyl ether | 5.63 | 74 | 3631 | 2.11 | ug/L # | 73 |
| 21) acrolein | 5.87 | 56 | 10833 | 19.45 | ug/L | 96 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 7880 | 2.13 | ug/L | 96 |
| 23) acetone | 6.06 | 58 | 601 | 2.03 | ug/L # | 36 |
| 24) allyl chloride | 6.46 | 76 | 4766 | 1.81 | ug/L # | 76 |
| 25) acetonitrile | 6.45 | 40 | 5650 | 19.53 | ug/L | 86 |
| 26) iodomethane | 6.28 | 142 | 14208 | 2.10 | ug/L | 99 |
| 27) carbon disulfide | 6.38 | 76 | 22838 | 2.15 | ug/L | 97 |
| 28) methylene chloride | 6.64 | 84 | 7908 | 2.07 | ug/L | 91 |
| 29) methyl acetate | 6.46 | 74 | 940 | 1.99 | ug/L # | 33 |
| 30) 1-chloropropane | 6.66 | 42 | 15074 | 2.01 | ug/L | 98 |
| 31) methyl tert butyl ether | 6.90 | 73 | 19863 | 2.20 | ug/L | 90 |
| 32) trans-1,2-dichloroethene | 6.96 | 96 | 7485 | 1.99 | ug/L | 96 |
| 33) di-isopropyl ether | 7.41 | 45 | 27204 | 1.95 | ug/L | 97 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 14169 | 2.33 | ug/L | 93 |
| 36) chloroprene | 7.55 | 53 | 10198 | 2.16 | ug/L | 95 |
| 37) acrylonitrile | 6.93 | 53 | 12330 | 11.09 | ug/L | 91 |
| 38) vinyl acetate | 7.44 | 86 | 1201 | 2.38 | ug/L # | 1 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 24165 | 1.93 | ug/L | 96 |
| 40) ethyl acetate | 8.09 | 45 | 1191 | 2.16 | ug/L # | 36 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 6636 | 2.18 | ug/L | 91 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 8200 | 2.39 | ug/L | 98 |
| 44) propionitrile | 8.19 | 54 | 10716 | 19.86 | ug/L | 98 |
| 45) bromochloromethane | 8.40 | 128 | 3878 | 2.15 | ug/L | 86 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54245.D
Acq On : 5 Aug 2015 11:03 am
Operator : TOANP
Sample : ic2289-2
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 06 08:44:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:53:30 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 46) tetrahydrofuran | 8.43 | 42 | 2774 | 2.02 ug/L | 92 |
| 47) chloroform | 8.44 | 85 | 8718 | 2.16 ug/L | 95 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 4749 | 2.01 ug/L | 85 |
| 51) freon 113 | 5.96 | 151 | 4410 | 1.95 ug/L | 88 |
| 52) methacrylonitrile | 8.35 | 41 | 5052 | 2.08 ug/L | 90 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 8807 | 2.18 ug/L | 96 |
| 54) cyclohexane | 8.74 | 84 | 9470 | 2.17 ug/L | 97 |
| 57) epichlorohydrin | 10.64 | 57 | 3465 | 8.87 ug/L | 89 |
| 58) n-butyl alcohol | 9.54 | 56 | 9630 | 72.95 ug/L | 89 |
| 59) carbon tetrachloride | 8.86 | 117 | 8815 | 2.17 ug/L | 97 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 9953 | 2.34 ug/L | 97 |
| 61) hexane | 7.20 | 57 | 7648 | 2.18 ug/L | 96 |
| 63) benzene | 9.08 | 78 | 30380 | 2.11 ug/L | 98 |
| 64) iso-octane | 9.05 | 57 | 24406 | 2.36 ug/L | 97 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 5012 | 2.11 ug/L # | 78 |
| 66) heptane | 9.21 | 57 | 5509 | 2.35 ug/L | 93 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 10057 | 2.31 ug/L | 94 |
| 69) trichloroethene | 9.74 | 95 | 7554 | 2.20 ug/L | 97 |
| 71) ethyl acrylate | 9.73 | 55 | 10852 | 2.18 ug/L | 98 |
| 72) 2-nitropropane | 10.51 | 41 | 3228 | 2.08 ug/L # | 80 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 23271 | 10.64 ug/L | 96 |
| 74) methyl methacrylate | 9.99 | 100 | 1658 | 1.92 ug/L # | 86 |
| 75) 1,2-dichloropropane | 10.01 | 63 | 8626 | 2.22 ug/L | 97 |
| 76) dibromomethane | 10.16 | 93 | 4555 | 1.97 ug/L | 84 |
| 77) methylcyclohexane | 9.94 | 83 | 9847 | 2.19 ug/L | 92 |
| 78) bromodichloromethane | 10.27 | 83 | 10576 | 2.26 ug/L | 92 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 13246 | 2.20 ug/L | 95 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 2863 | 2.00 ug/L # | 78 |
| 82) toluene | 11.09 | 92 | 18644 | 2.26 ug/L | 97 |
| 83) 3-methyl-1-butanol | 10.84 | 55 | 7245 | 35.27 ug/L | 90 |
| 84) trans-1,3-dichloropropene | 11.30 | 75 | 11430 | 2.16 ug/L | 98 |
| 85) ethyl methacrylate | 11.28 | 69 | 8731 | 2.15 ug/L | 97 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 6418 | 2.17 ug/L | 90 |
| 87) 2-hexanone | 11.70 | 58 | 2491 | 1.99 ug/L # | 72 |
| 89) tetrachloroethene | 11.69 | 164 | 8798 | 2.20 ug/L | 86 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 11870 | 2.29 ug/L | 97 |
| 91) butyl acetate | 11.76 | 56 | 4842 | 1.73 ug/L | 95 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.88 | 57 | 7873 | 16.79 ug/L | 94 |
| 93) dibromochloromethane | 11.99 | 129 | 8693 | 2.14 ug/L | 98 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 7294 | 2.20 ug/L | 93 |
| 96) chlorobenzene | 12.64 | 112 | 21905 | 2.32 ug/L | 91 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 7589 | 2.23 ug/L | 99 |
| 98) ethylbenzene | 12.68 | 91 | 35982 | 2.27 ug/L | 98 |
| 99) m,p-xylene | 12.80 | 106 | 26525 | 4.49 ug/L | 95 |
| 100) o-xylene | 13.25 | 106 | 13023 | 2.20 ug/L | 94 |
| 101) styrene | 13.27 | 104 | 20927 | 2.18 ug/L | 97 |
| 102) bromoform | 13.57 | 173 | 6228 | 2.12 ug/L | 92 |
| 104) isopropylbenzene | 13.63 | 105 | 33782 | 2.26 ug/L | 96 |
| 106) cyclohexanone | 13.83 | 55 | 9492 | 16.25 ug/L | 98 |
| 107) bromobenzene | 14.08 | 156 | 9969 | 2.19 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54245.D
Acq On : 5 Aug 2015 11:03 am
Operator : TOANP
Sample : ic2289-2
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 06 08:44:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:53:30 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 108) 1,1,2,2-tetrachloroethane | 13.97 | 83 | 9934 | 2.21 ug/L | 95 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 2262 | 1.88 ug/L | 91 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 2306 | 2.07 ug/L | 92 |
| 111) n-propylbenzene | 14.08 | 91 | 39209 | 2.23 ug/L | 98 |
| 113) 2-chlorotoluene | 14.24 | 126 | 8751 | 2.33 ug/L | 91 |
| 114) 4-chlorotoluene | 14.35 | 91 | 25519 | 2.21 ug/L | 98 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 28842 | 2.28 ug/L | 98 |
| 116) tert-butylbenzene | 14.62 | 119 | 24982 | 2.19 ug/L | 97 |
| 117) pentachloroethane | 14.72 | 167 | 5440 | 2.20 ug/L | 92 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 28044 | 2.22 ug/L | 98 |
| 119) sec-butylbenzene | 14.87 | 105 | 37382 | 2.27 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 18557 | 2.16 ug/L | 93 |
| 121) p-isopropyltoluene | 15.00 | 119 | 30933 | 2.24 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 18638 | 2.15 ug/L | 96 |
| 123) benzyl chloride | 15.30 | 91 | 17614 | 1.76 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 17338 | 2.13 ug/L | 97 |
| 126) n-butylbenzene | 15.46 | 92 | 14589 | 2.23 ug/L | 95 |
| 128) 1,2-dibromo-3-chloropropan | 16.47 | 75 | 1478 | 1.92 ug/L | 79 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 14190 | 2.25 ug/L | 95 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 10099 | 2.11 ug/L | 90 |
| 131) hexachlorobutadiene | 17.44 | 225 | 7220 | 2.16 ug/L | 93 |
| 132) naphthalene | 17.62 | 128 | 16981 | 2.03 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 8562 | 2.06 ug/L | 90 |
| 134) hexachloroethane | 15.89 | 201 | 6297 | 2.13 ug/L | 95 |

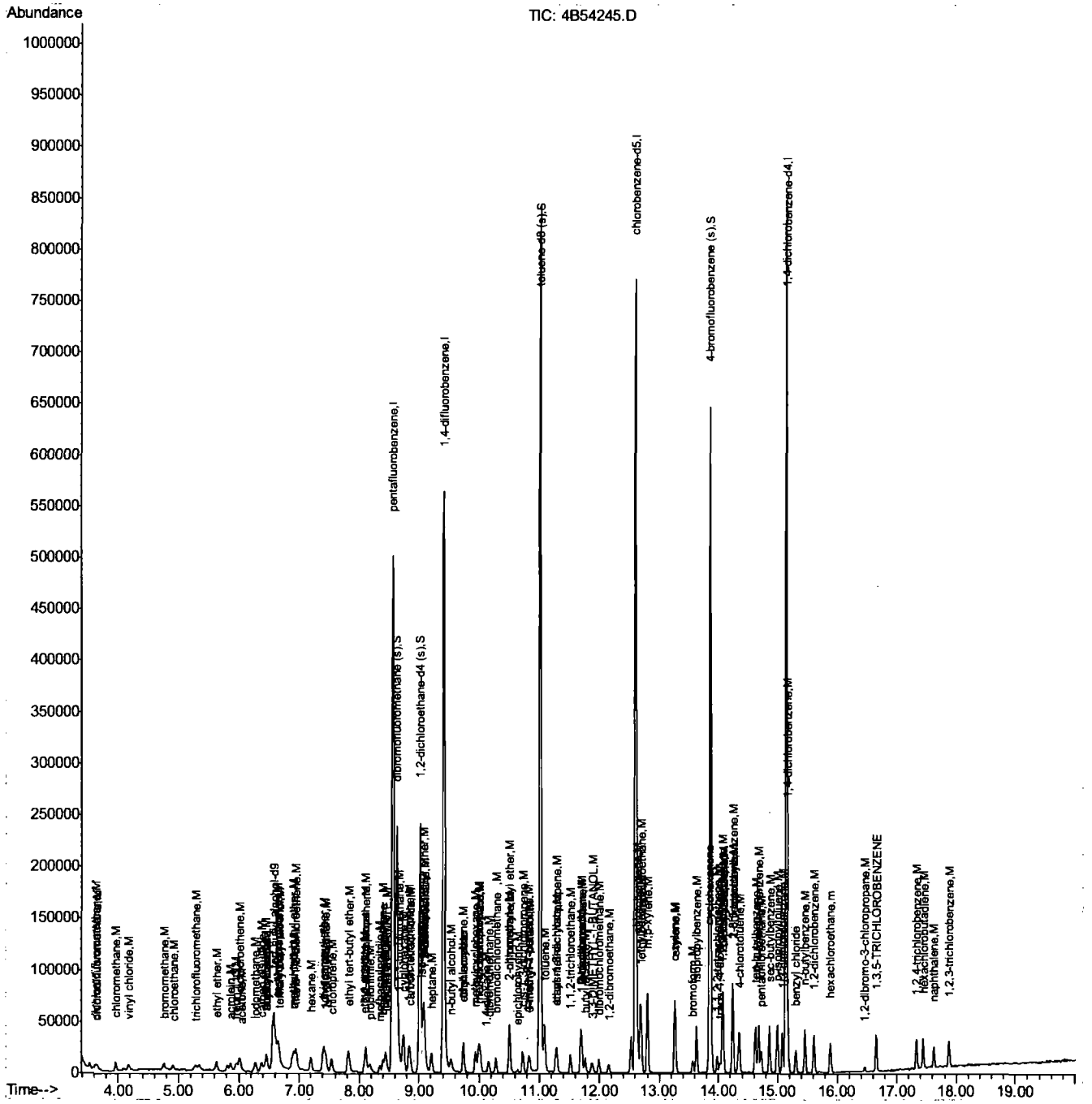
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.4

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54245.D
Acq On : 5 Aug 2015 11:03 am
Operator : TOANP
Sample : ic2289-2
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Aug 06 08:44:40 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:53:30 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54246.D
Acq On : 5 Aug 2015 11:31 am
Operator : TOANP
Sample : ic2289-5
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 05 13:55:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:53:30 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 162164 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 454275 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 525775 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 462724 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 255087 | 50.00 ug/L | 0.00 |

| System Monitoring Compounds | | | | | |
|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 163731 | 50.33 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 100.66% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 182681 | 50.60 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 101.20% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 616561 | 49.80 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.60% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 224431 | 49.81 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 99.62% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 9342 | 23.39 ug/L | 81 |
| 3) 1,4-dioxane | 10.12 | 88 | 4284 | 138.18 ug/L | 91 |
| 7) chlorodifluoromethane | 3.64 | 51 | 21460 | 4.93 ug/L | 97 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 22589 | 5.88 ug/L | 94 |
| 10) chloromethane | 3.96 | 52 | 8543 | 5.05 ug/L | 86 |
| 11) vinyl chloride | 4.17 | 62 | 24768 | 5.46 ug/L | 98 |
| 12) bromomethane | 4.75 | 94 | 14298 | 4.48 ug/L | 99 |
| 13) chloroethane | 4.91 | 64 | 9996 | 5.22 ug/L | 90 |
| 15) trichlorofluoromethane | 5.28 | 101 | 23817 | 5.76 ug/L | 92 |
| 19) ethyl ether | 5.62 | 74 | 8326 | 4.87 ug/L | 90 |
| 20) 2-chloropropane | 5.81 | 39 | 3012 | 4.32 ug/L | 86 |
| 21) acrolein | 5.87 | 56 | 27925 | 50.57 ug/L | 95 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 17826 | 4.86 ug/L | 90 |
| 23) acetone | 6.05 | 58 | 1487 | 5.08 ug/L # | 51 |
| 24) allyl chloride | 6.46 | 76 | 11576 | 4.42 ug/L | 96 |
| 25) acetonitrile | 6.45 | 40 | 13312 | 46.42 ug/L | 94 |
| 26) iodomethane | 6.28 | 142 | 33601 | 5.01 ug/L | 100 |
| 27) carbon disulfide | 6.38 | 76 | 51918 | 4.92 ug/L | 98 |
| 28) methylene chloride | 6.64 | 84 | 18751 | 4.95 ug/L | 97 |
| 29) methyl acetate | 6.44 | 74 | 2176 | 4.65 ug/L # | 90 |
| 30) 1-chloropropane | 6.66 | 42 | 34118 | 4.59 ug/L | 92 |
| 31) methyl tert butyl ether | 6.89 | 73 | 48034 | 5.36 ug/L | 98 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 17388 | 4.67 ug/L | 98 |
| 33) di-isopropyl ether | 7.41 | 45 | 61480 | 4.44 ug/L | 92 |
| 34) 2-butanone | 8.08 | 72 | 1802 | 5.51 ug/L # | 85 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 33333 | 5.53 ug/L | 98 |
| 36) chloroprene | 7.55 | 53 | 24327 | 5.19 ug/L | 95 |
| 37) acrylonitrile | 6.93 | 53 | 32842 | 29.81 ug/L | 94 |
| 38) vinyl acetate | 7.43 | 86 | 2329 | 4.66 ug/L | 55 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 53574 | 4.32 ug/L | 99 |
| 40) ethyl acetate | 8.09 | 45 | 2588 | 4.74 ug/L | 92 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 14526 | 4.81 ug/L | 92 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 18214 | 5.34 ug/L | 96 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54246.D
Acq On : 5 Aug 2015 11:31 am
Operator : TOANP
Sample : ic2289-5
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 05 13:55:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:53:30 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.17 | 85 | 2310 | 5.02 ug/L # | 65 |
| 44) propionitrile | 8.19 | 54 | 27841 | 52.04 ug/L | 97 |
| 45) bromochloromethane | 8.40 | 128 | 9368 | 5.23 ug/L | 94 |
| 46) tetrahydrofuran | 8.43 | 42 | 6501 | 4.77 ug/L | 92 |
| 47) chloroform | 8.44 | 85 | 19751 | 4.93 ug/L | 97 |
| 48) T-BUTYL FORMATE | 8.47 | 59 | 11385 | 4.87 ug/L | 88 |
| 51) freon 113 | 5.96 | 151 | 11367 | 5.06 ug/L | 96 |
| 52) methacrylonitrile | 8.35 | 41 | 11856 | 4.92 ug/L | 93 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 20376 | 5.08 ug/L | 98 |
| 54) cyclohexane | 8.74 | 84 | 22770 | 5.26 ug/L | 95 |
| 55) iso-butyl alcohol | 8.83 | 43 | 8121 | 47.70 ug/L | 94 |
| 57) epichlorohydrin | 10.64 | 57 | 9359 | 24.34 ug/L | 98 |
| 58) n-butyl alcohol | 9.53 | 56 | 26854 | 206.60 ug/L | 95 |
| 59) carbon tetrachloride | 8.86 | 117 | 20465 | 5.12 ug/L | 94 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 23325 | 5.57 ug/L | 96 |
| 61) hexane | 7.20 | 57 | 18603 | 5.40 ug/L | 94 |
| 63) benzene | 9.08 | 78 | 68859 | 4.85 ug/L | 98 |
| 64) iso-octane | 9.07 | 57 | 59474 | 5.84 ug/L | 98 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 10708 | 4.58 ug/L # | 86 |
| 66) heptane | 9.21 | 57 | 12942 | 5.60 ug/L | 96 |
| 67) isopropyl acetate | 8.99 | 61 | 10596 | 2.65 ug/L # | 67 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 23204 | 5.41 ug/L | 99 |
| 69) trichloroethene | 9.74 | 95 | 18278 | 5.40 ug/L | 99 |
| 71) ethyl acrylate | 9.73 | 55 | 32881 | 6.71 ug/L | 96 |
| 72) 2-nitropropane | 10.50 | 41 | 7628 | 5.00 ug/L | 96 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 54357 | 25.23 ug/L | 98 |
| 74) methyl methacrylate | 9.99 | 100 | 4362 | 5.12 ug/L # | 66 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 19175 | 5.01 ug/L | 99 |
| 76) dibromomethane | 10.16 | 93 | 11447 | 5.04 ug/L | 91 |
| 77) methylcyclohexane | 9.95 | 83 | 24696 | 5.58 ug/L | 94 |
| 78) bromodichloromethane | 10.28 | 83 | 25253 | 5.48 ug/L | 95 |
| 79) cis-1,3-dichloropropene | 10.73 | 75 | 31392 | 5.30 ug/L | 98 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 7935 | 5.62 ug/L # | 81 |
| 82) toluene | 11.09 | 92 | 43511 | 5.37 ug/L | 99 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 17788 | 87.95 ug/L | 98 |
| 84) trans-1,3-dichloropropene | 11.30 | 75 | 28985 | 5.56 ug/L | 90 |
| 85) ethyl methacrylate | 11.28 | 69 | 22111 | 5.54 ug/L | 94 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 14633 | 5.03 ug/L | 99 |
| 87) 2-hexanone | 11.70 | 58 | 7235 | 5.86 ug/L | 84 |
| 89) tetrachloroethene | 11.69 | 164 | 20781 | 5.26 ug/L | 93 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 28621 | 5.59 ug/L | 96 |
| 91) butyl acetate | 11.76 | 56 | 12776 | 4.63 ug/L | 94 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 19357 | 41.84 ug/L | 97 |
| 93) dibromochloromethane | 11.99 | 129 | 20497 | 5.12 ug/L | 99 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 17981 | 5.49 ug/L | 99 |
| 96) chlorobenzene | 12.64 | 112 | 48909 | 5.24 ug/L | 97 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 18650 | 5.55 ug/L | 94 |
| 98) ethylbenzene | 12.69 | 91 | 83346 | 5.34 ug/L | 96 |
| 99) m,p-xylene | 12.80 | 106 | 62446 | 10.70 ug/L | 100 |
| 100) o-xylene | 13.25 | 106 | 31758 | 5.43 ug/L | 98 |

7.7.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54246.D
Acq On : 5 Aug 2015 11:31 am
Operator : TOANP
Sample : ic2289-5
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 05 13:55:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:53:30 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 101) styrene | 13.27 | 104 | 51009 | 5.40 ug/L | 96 |
| 102) bromoform | 13.57 | 173 | 15914 | 5.49 ug/L | 98 |
| 104) isopropylbenzene | 13.63 | 105 | 81026 | 5.38 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 26972 | 45.84 ug/L | 96 |
| 107) bromobenzene | 14.08 | 156 | 24320 | 5.29 ug/L | 99 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 24652 | 5.45 ug/L | 95 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 6398 | 5.29 ug/L | 97 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 6089 | 5.43 ug/L | 96 |
| 111) n-propylbenzene | 14.08 | 91 | 94454 | 5.32 ug/L | 98 |
| 113) 2-chlorotoluene | 14.24 | 126 | 20347 | 5.38 ug/L | 100 |
| 114) 4-chlorotoluene | 14.35 | 91 | 60152 | 5.16 ug/L | 97 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 67454 | 5.28 ug/L | 98 |
| 116) tert-butylbenzene | 14.63 | 119 | 59531 | 5.19 ug/L | 99 |
| 117) pentachloroethane | 14.72 | 167 | 12451 | 4.99 ug/L | 98 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 67240 | 5.29 ug/L | 98 |
| 119) sec-butylbenzene | 14.87 | 105 | 89332 | 5.39 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 44161 | 5.10 ug/L | 97 |
| 121) p-isopropyltoluene | 15.00 | 119 | 75077 | 5.40 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 43088 | 4.94 ug/L | 98 |
| 123) benzyl chloride | 15.30 | 91 | 43407 | 4.30 ug/L | 98 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 42296 | 5.15 ug/L | 98 |
| 126) n-butylbenzene | 15.46 | 92 | 36109 | 5.47 ug/L | 97 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 3677 | 4.75 ug/L | 82 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 33747 | 5.30 ug/L | 98 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 25250 | 5.22 ug/L | 94 |
| 131) hexachlorobutadiene | 17.44 | 225 | 17204 | 5.11 ug/L | 97 |
| 132) naphthalene | 17.62 | 128 | 43667 | 5.17 ug/L | 100 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 21445 | 5.12 ug/L | 97 |
| 134) hexachloroethane | 15.89 | 201 | 15447 | 5.20 ug/L | 99 |

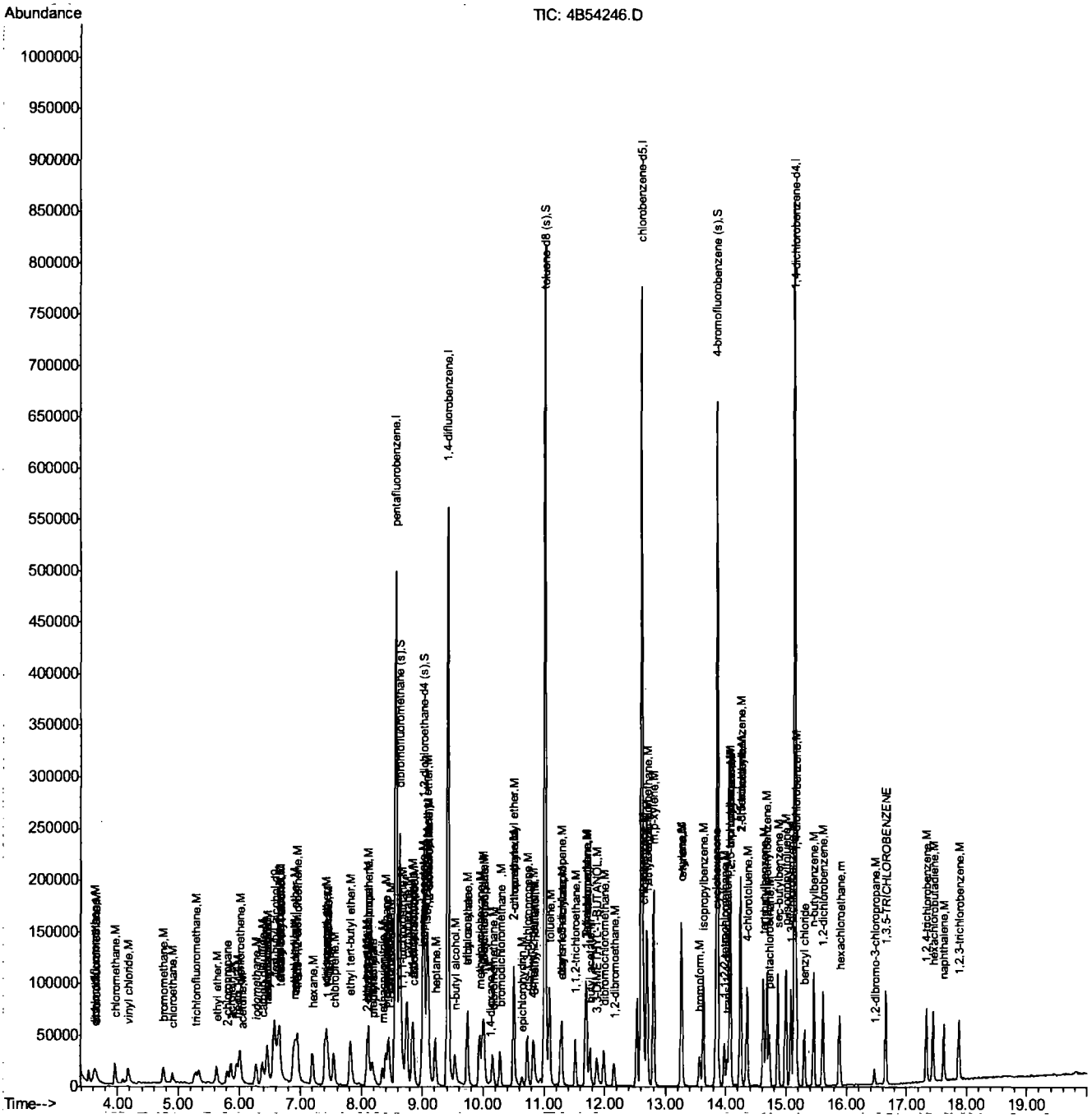
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.5 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54246.D
Acq On : 5 Aug 2015 11:31 am
Operator : TOANP
Sample : ic2289-5
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Aug 05 13:55:02 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:53:30 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54247.D
Acq On : 5 Aug 2015 11:59 am
Operator : TOANP
Sample : ic2289-10
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 05 13:46:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:44:20 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 156272 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 441872 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 519156 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 463675 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 259714 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 161777 | 51.12 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 102.24% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 176378 | 50.23 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 100.46% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 615564 | 50.36 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.72% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 225049 | 49.06 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 98.12% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.68 | 59 | 19388 | 50.38 ug/L | 85 |
| 3) 1,4-dioxane | 10.12 | 88 | 8688 | 290.80 ug/L | 92 |
| 7) chlorodifluoromethane | 3.64 | 51 | 43835 | 10.36 ug/L | 98 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 44521 | 11.91 ug/L | 95 |
| 10) chloromethane | 3.96 | 52 | 16125 | 9.80 ug/L | 96 |
| 11) vinyl chloride | 4.17 | 62 | 48692 | 11.04 ug/L | 98 |
| 12) bromomethane | 4.76 | 94 | 27980 | 9.02 ug/L | 99 |
| 13) chloroethane | 4.91 | 64 | 19384 | 10.41 ug/L | 99 |
| 15) trichlorofluoromethane | 5.28 | 101 | 46904 | 11.66 ug/L | 94 |
| 19) ethyl ether | 5.63 | 74 | 17070 | 10.27 ug/L | 96 |
| 20) 2-chloropropane | 5.82 | 39 | 6493 | 9.58 ug/L | 95 |
| 21) acrolein | 5.86 | 56 | 57328 | 106.72 ug/L | 99 |
| 22) 1,1-dichloroethene | 6.01 | 96 | 36664 | 10.28 ug/L | 97 |
| 23) acetone | 6.06 | 58 | 2758 | 9.68 ug/L # | 60 |
| 24) allyl chloride | 6.46 | 76 | 28061 | 11.02 ug/L # | 81 |
| 25) acetonitrile | 6.45 | 40 | 30542 | 109.50 ug/L | 97 |
| 26) iodomethane | 6.27 | 142 | 70690 | 10.83 ug/L | 99 |
| 27) carbon disulfide | 6.38 | 76 | 109861 | 10.71 ug/L | 97 |
| 28) methylene chloride | 6.65 | 84 | 39476 | 10.72 ug/L | 99 |
| 29) methyl acetate | 6.44 | 74 | 5110 | 11.22 ug/L # | 86 |
| 30) 1-chloropropane | 6.66 | 42 | 66479 | 9.20 ug/L | 90 |
| 31) methyl tert butyl ether | 6.89 | 73 | 96930 | 11.11 ug/L | 99 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 35968 | 9.94 ug/L | 87 |
| 33) di-isopropyl ether | 7.41 | 45 | 125477 | 9.31 ug/L | 98 |
| 34) 2-butanone | 8.09 | 72 | 3814 | 12.00 ug/L # | 79 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 68554 | 11.70 ug/L | 98 |
| 36) chloroprene | 7.55 | 53 | 48716 | 10.69 ug/L | 98 |
| 37) acrylonitrile | 6.92 | 53 | 66799 | 62.33 ug/L | 97 |
| 38) vinyl acetate | 7.43 | 86 | 4739 | 9.74 ug/L | 92 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 109885 | 9.11 ug/L | 97 |
| 40) ethyl acetate | 8.09 | 45 | 5446 | 10.25 ug/L | 65 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 29884 | 10.17 ug/L | 97 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 38288 | 11.55 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54247.D
Acq On : 5 Aug 2015 11:59 am
Operator : TOANP
Sample : ic2289-10
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 05 13:46:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:44:20 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.17 | 85 | 4945 | 11.04 ug/L # | 86 |
| 44) propionitrile | 8.19 | 54 | 55994 | 107.59 ug/L | 91 |
| 45) bromochloromethane | 8.40 | 128 | 19683 | 11.29 ug/L | 92 |
| 46) tetrahydrofuran | 8.43 | 42 | 12786 | 9.64 ug/L | 97 |
| 47) chloroform | 8.44 | 85 | 41508 | 10.66 ug/L | 96 |
| 48) T-BUTYL FORMATE | 8.47 | 59 | 23667 | 10.40 ug/L | 96 |
| 51) freon 113 | 5.96 | 151 | 22630 | 10.35 ug/L | 96 |
| 52) methacrylonitrile | 8.34 | 41 | 24067 | 10.27 ug/L | 94 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 43974 | 11.27 ug/L | 96 |
| 54) cyclohexane | 8.74 | 84 | 47618 | 11.31 ug/L # | 82 |
| 55) iso-butyl alcohol | 8.84 | 43 | 14607 | 88.20 ug/L | 99 |
| 57) epichlorohydrin | 10.64 | 57 | 18910 | 49.80 ug/L | 95 |
| 58) n-butyl alcohol | 9.53 | 56 | 51734 | 403.09 ug/L | 99 |
| 59) carbon tetrachloride | 8.86 | 117 | 44023 | 11.15 ug/L | 95 |
| 60) 1,1-dichloropropene | 8.84 | 75 | 49092 | 11.87 ug/L | 98 |
| 61) hexane | 7.20 | 57 | 36571 | 10.75 ug/L | 97 |
| 63) benzene | 9.08 | 78 | 143094 | 10.21 ug/L | 100 |
| 64) iso-octane | 9.07 | 57 | 114940 | 11.43 ug/L | 98 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 22078 | 9.57 ug/L | 94 |
| 66) heptane | 9.21 | 57 | 23430 | 10.27 ug/L | 96 |
| 67) isopropyl acetate | 8.99 | 61 | 17962 | 4.55 ug/L | 92 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 48963 | 11.56 ug/L | 97 |
| 69) trichloroethene | 9.74 | 95 | 38485 | 11.51 ug/L | 96 |
| 71) ethyl acrylate | 9.73 | 55 | 52003 | 10.75 ug/L | 100 |
| 72) 2-nitropropane | 10.50 | 41 | 15536 | 10.31 ug/L # | 85 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 113330 | 53.28 ug/L | 99 |
| 74) methyl methacrylate | 9.99 | 100 | 8470 | 10.07 ug/L # | 92 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 41602 | 11.01 ug/L | 97 |
| 76) dibromomethane | 10.16 | 93 | 24416 | 10.89 ug/L | 97 |
| 77) methylcyclohexane | 9.94 | 83 | 48507 | 11.10 ug/L | 96 |
| 78) bromodichloromethane | 10.28 | 83 | 51739 | 11.37 ug/L | 96 |
| 79) cis-1,3-dichloropropene | 10.73 | 75 | 65515 | 11.19 ug/L | 98 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 15353 | 11.01 ug/L # | 84 |
| 82) toluene | 11.09 | 92 | 89345 | 11.16 ug/L | 99 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 33955 | 170.02 ug/L | 98 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 58598 | 11.39 ug/L | 97 |
| 85) ethyl methacrylate | 11.28 | 69 | 46162 | 11.71 ug/L | 99 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 30525 | 10.63 ug/L | 98 |
| 87) 2-hexanone | 11.69 | 58 | 13613 | 11.16 ug/L | 96 |
| 89) tetrachloroethene | 11.70 | 164 | 42406 | 10.72 ug/L | 92 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 57169 | 11.14 ug/L | 97 |
| 91) butyl acetate | 11.76 | 56 | 25650 | 9.28 ug/L | 89 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 37965 | 81.88 ug/L | 99 |
| 93) dibromochloromethane | 11.99 | 129 | 43061 | 10.73 ug/L | 97 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 36547 | 11.14 ug/L | 99 |
| 96) chlorobenzene | 12.63 | 112 | 102463 | 10.96 ug/L | 99 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 39056 | 11.60 ug/L | 96 |
| 98) ethylbenzene | 12.69 | 91 | 172101 | 11.00 ug/L | 100 |
| 99) m,p-xylene | 12.80 | 106 | 130958 | 22.40 ug/L | 99 |
| 100) o-xylene | 13.26 | 106 | 65798 | 11.22 ug/L | 100 |

7.7.6 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54247.D
Acq On : 5 Aug 2015 11:59 am
Operator : TOANP
Sample : ic2289-10
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 05 13:46:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:44:20 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 101) styrene | 13.27 | 104 | 109974 | 11.61 ug/L | 96 |
| 102) bromoform | 13.57 | 173 | 32898 | 11.33 ug/L | 94 |
| 104) isopropylbenzene | 13.63 | 105 | 172120 | 11.22 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 51662 | 86.23 ug/L | 99 |
| 107) bromobenzene | 14.07 | 156 | 50522 | 10.80 ug/L | 91 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 50647 | 11.00 ug/L | 98 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 13345 | 10.83 ug/L | 93 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 12435 | 10.89 ug/L | 99 |
| 111) n-propylbenzene | 14.08 | 91 | 198532 | 10.99 ug/L | 99 |
| 113) 2-chlorotoluene | 14.24 | 126 | 44347 | 11.52 ug/L | 97 |
| 114) 4-chlorotoluene | 14.35 | 91 | 127261 | 10.73 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 144636 | 11.12 ug/L | 100 |
| 116) tert-butylbenzene | 14.62 | 119 | 126427 | 10.82 ug/L | 99 |
| 117) pentachloroethane | 14.72 | 167 | 25449 | 10.02 ug/L | 96 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 145042 | 11.20 ug/L | 98 |
| 119) sec-butylbenzene | 14.87 | 105 | 191619 | 11.36 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 95046 | 10.78 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 159749 | 11.29 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 92282 | 10.39 ug/L | 100 |
| 123) benzyl chloride | 15.30 | 91 | 85386 | 8.30 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 91280 | 10.92 ug/L | 98 |
| 126) n-butylbenzene | 15.46 | 92 | 80220 | 11.95 ug/L | 96 |
| 128) 1,2-dibromo-3-chloropropan | 16.47 | 75 | 8051 | 10.21 ug/L | 80 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 72920 | 11.25 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 55206 | 11.22 ug/L | 97 |
| 131) hexachlorobutadiene | 17.44 | 225 | 37662 | 10.99 ug/L | 99 |
| 132) naphthalene | 17.62 | 128 | 95648 | 11.13 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 46835 | 10.99 ug/L | 98 |
| 134) hexachloroethane | 15.89 | 201 | 33253 | 10.98 ug/L | 98 |

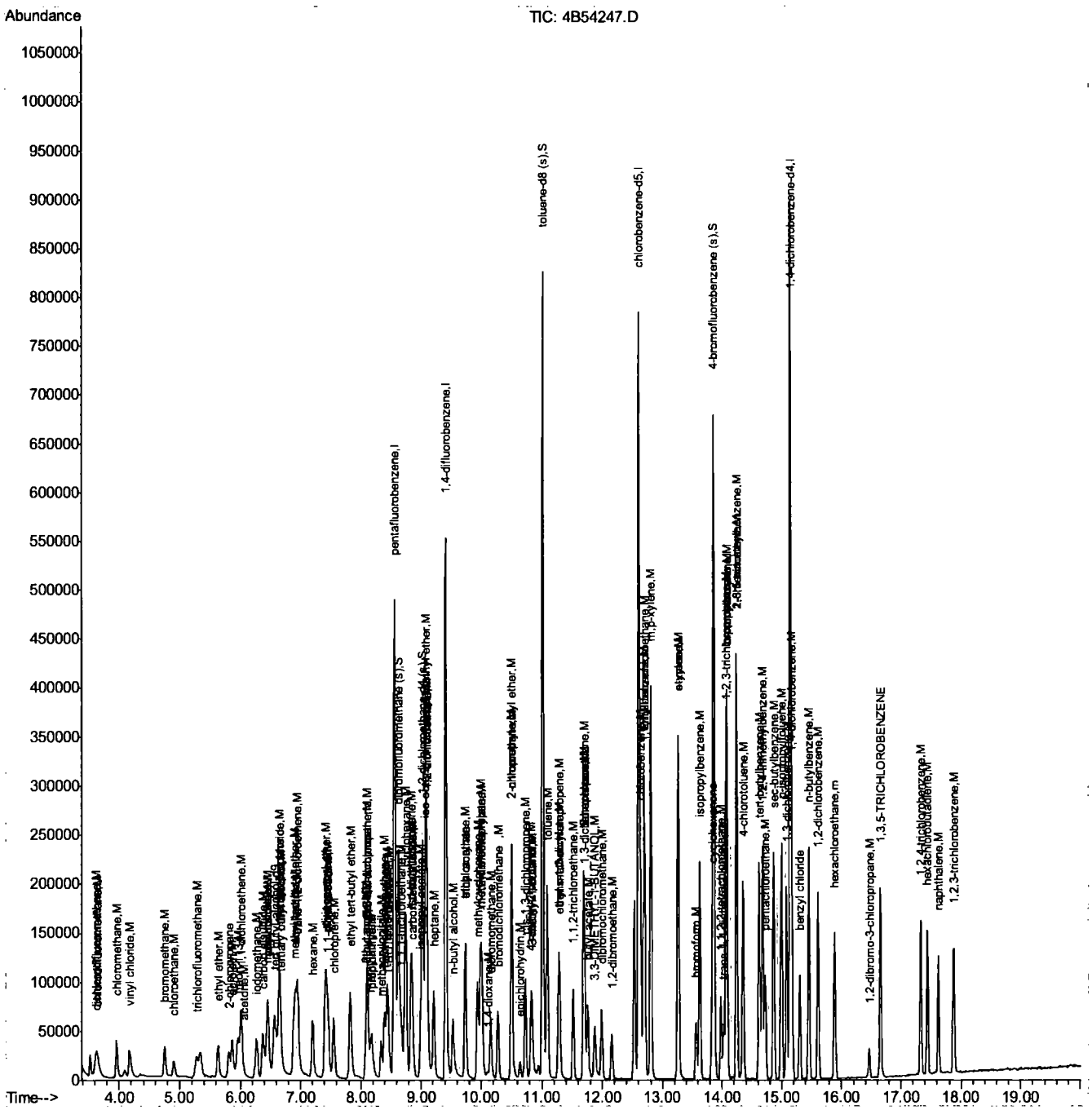
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.6 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54247.D
Acq On : 5 Aug 2015 11:59 am
Operator : TOANP
Sample : ic2289-10
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Aug 05 13:46:01 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:44:20 2015
Response via : Initial Calibration




7.7.6



ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54248.D
Acq On : 5 Aug 2015 12:27 pm
Operator : TOANP
Sample : ic2289-20
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 05 13:44:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:42:40 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.57 | 65 | 149949 | 500.00 ug/L | -0.01 |
| 5) pentafluorobenzene | 8.56 | 168 | 438540 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 518317 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 458544 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 262344 | 50.00 ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 161373 | 51.38 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 102.76% | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 177356 | 50.89 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 101.78% | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 609847 | 49.97 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.94% | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 227455 | 49.08 ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 98.16% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 37464 | 101.45 ug/L | 97 |
| 3) 1,4-dioxane | 10.11 | 88 | 17935 | 625.63 ug/L | 93 |
| 7) chlorodifluoromethane | 3.64 | 51 | 85293 | 20.30 ug/L | 99 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 80693 | 21.75 ug/L | 94 |
| 10) chloromethane | 3.96 | 52 | 30540 | 18.70 ug/L | 97 |
| 11) vinyl chloride | 4.17 | 62 | 90837 | 20.75 ug/L | 98 |
| 12) bromomethane | 4.76 | 94 | 50648 | 16.46 ug/L | 99 |
| 13) chloroethane | 4.91 | 64 | 36225 | 19.61 ug/L | 99 |
| 15) trichlorofluoromethane | 5.28 | 101 | 86196 | 21.60 ug/L | 99 |
| 19) ethyl ether | 5.63 | 74 | 32937 | 19.96 ug/L | 94 |
| 20) 2-chloropropane | 5.80 | 39 | 11535 | 17.15 ug/L | 99 |
| 21) acrolein | 5.87 | 56 | 109348 | 205.11 ug/L | 98 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 66579 | 18.81 ug/L | 94 |
| 23) acetone | 6.06 | 58 | 5809 | 20.54 ug/L | 93 |
| 24) allyl chloride | 6.46 | 76 | 45175 | 17.88 ug/L | 88 |
| 25) acetonitrile | 6.46 | 40 | 58922 | 212.85 ug/L # | 78 |
| 26) iodomethane | 6.28 | 142 | 127887 | 19.74 ug/L | 99 |
| 27) carbon disulfide | 6.38 | 76 | 203132 | 19.95 ug/L | 99 |
| 28) methylene chloride | 6.65 | 84 | 71427 | 19.54 ug/L | 97 |
| 29) methyl acetate | 6.44 | 74 | 10394 | 23.00 ug/L | 94 |
| 30) 1-chloropropane | 6.66 | 42 | 117234 | 16.35 ug/L | 99 |
| 31) methyl tert butyl ether | 6.89 | 73 | 182935 | 21.14 ug/L | 98 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 62927 | 17.52 ug/L | 99 |
| 33) di-isopropyl ether | 7.41 | 45 | 240795 | 18.00 ug/L | 84 |
| 34) 2-butanone | 8.08 | 72 | 7779 | 24.65 ug/L # | 91 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 125912 | 21.65 ug/L | 99 |
| 36) chloroprene | 7.55 | 53 | 92024 | 20.34 ug/L | 97 |
| 37) acrylonitrile | 6.92 | 53 | 128033 | 120.37 ug/L | 97 |
| 38) vinyl acetate | 7.43 | 86 | 10022 | 20.75 ug/L | 69 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 213311 | 17.82 ug/L | 100 |
| 40) ethyl acetate | 8.09 | 45 | 10168 | 19.28 ug/L | 95 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 52937 | 18.15 ug/L | 98 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 69985 | 21.27 ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54248.D
Acq On : 5 Aug 2015 12:27 pm
Operator : TOANP
Sample : ic2289-20
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 05 13:44:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:42:40 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 9823 | 22.09 ug/L | 95 |
| 44) propionitrile | 8.19 | 54 | 105304 | 203.88 ug/L | 96 |
| 45) bromochloromethane | 8.40 | 128 | 37367 | 21.60 ug/L | 98 |
| 46) tetrahydrofuran | 8.43 | 42 | 24872 | 18.90 ug/L | 94 |
| 47) chloroform | 8.44 | 85 | 74533 | 19.28 ug/L | 98 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 49010 | 21.70 ug/L | 97 |
| 51) freon 113 | 5.97 | 151 | 41465 | 19.11 ug/L | 94 |
| 52) methacrylonitrile | 8.34 | 41 | 45468 | 19.56 ug/L | 94 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 79828 | 20.62 ug/L | 98 |
| 54) cyclohexane | 8.74 | 84 | 84445 | 20.21 ug/L | 98 |
| 55) iso-butyl alcohol | 8.83 | 43 | 27489 | 167.25 ug/L | 99 |
| 57) epichlorohydrin | 10.64 | 57 | 32595 | 85.98 ug/L | 96 |
| 58) n-butyl alcohol | 9.53 | 56 | 98594 | 769.45 ug/L | 97 |
| 59) carbon tetrachloride | 8.86 | 117 | 80738 | 20.48 ug/L | 99 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 89819 | 21.75 ug/L | 98 |
| 61) hexane | 7.20 | 57 | 65776 | 19.36 ug/L | 99 |
| 63) benzene | 9.08 | 78 | 259291 | 18.54 ug/L | 99 |
| 64) iso-octane | 9.06 | 57 | 210051 | 20.93 ug/L | 100 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 42400 | 18.41 ug/L | 99 |
| 66) heptane | 9.21 | 57 | 46675 | 20.48 ug/L | 98 |
| 67) isopropyl acetate | 8.99 | 61 | 30472 | 7.73 ug/L | 97 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 90113 | 21.31 ug/L | 99 |
| 69) trichloroethene | 9.74 | 95 | 69249 | 20.75 ug/L | 98 |
| 71) ethyl acrylate | 9.73 | 55 | 94791 | 19.62 ug/L | 100 |
| 72) 2-nitropropane | 10.50 | 41 | 28999 | 19.28 ug/L # | 88 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 218618 | 102.95 ug/L | 99 |
| 74) methyl methacrylate | 9.99 | 100 | 17369 | 20.69 ug/L | 96 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 76735 | 20.34 ug/L | 100 |
| 76) dibromomethane | 10.16 | 93 | 44981 | 20.09 ug/L | 98 |
| 77) methylcyclohexane | 9.94 | 83 | 90932 | 20.85 ug/L | 99 |
| 78) bromodichloromethane | 10.28 | 83 | 96423 | 21.23 ug/L | 98 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 122438 | 20.95 ug/L | 99 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 30533 | 21.92 ug/L | 97 |
| 82) toluene | 11.09 | 92 | 162561 | 20.34 ug/L | 97 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 65120 | 326.60 ug/L | 98 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 111342 | 21.68 ug/L | 97 |
| 85) ethyl methacrylate | 11.27 | 69 | 88641 | 22.53 ug/L | 99 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 56822 | 19.82 ug/L | 98 |
| 87) 2-hexanone | 11.69 | 58 | 26570 | 21.82 ug/L | 91 |
| 89) tetrachloroethene | 11.69 | 164 | 76677 | 19.59 ug/L | 98 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 106519 | 20.99 ug/L | 98 |
| 91) butyl acetate | 11.76 | 56 | 47568 | 17.40 ug/L | 89 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 72862 | 158.91 ug/L | 99 |
| 93) dibromochloromethane | 11.99 | 129 | 80482 | 20.28 ug/L | 97 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 69496 | 21.41 ug/L | 100 |
| 96) chlorobenzene | 12.64 | 112 | 188554 | 20.39 ug/L | 99 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 71720 | 21.54 ug/L | 98 |
| 98) ethylbenzene | 12.69 | 91 | 315714 | 20.41 ug/L | 99 |
| 99) m,p-xylene | 12.80 | 106 | 239973 | 41.51 ug/L | 98 |
| 100) o-xylene | 13.26 | 106 | 122336 | 21.09 ug/L | 98 |

7.7.7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54248.D
Acq On : 5 Aug 2015 12:27 pm
Operator : TOANP
Sample : ic2289-20
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 05 13:44:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:42:40 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 101) styrene | 13.27 | 104 | 206596 | 22.05 ug/L | 99 |
| 102) bromoform | 13.57 | 173 | 63173 | 22.00 ug/L | 97 |
| 104) isopropylbenzene | 13.63 | 105 | 312620 | 20.18 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 96749 | 159.87 ug/L | 98 |
| 107) bromobenzene | 14.07 | 156 | 94149 | 19.92 ug/L | 95 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 95080 | 20.45 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 24658 | 19.82 ug/L | 95 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 23951 | 20.76 ug/L | 98 |
| 111) n-propylbenzene | 14.08 | 91 | 359488 | 19.70 ug/L | 99 |
| 113) 2-chlorotoluene | 14.24 | 126 | 80714 | 20.77 ug/L | 98 |
| 114) 4-chlorotoluene | 14.35 | 91 | 232703 | 19.42 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 264712 | 20.15 ug/L | 99 |
| 116) tert-butylbenzene | 14.62 | 119 | 231944 | 19.64 ug/L | 99 |
| 117) pentachloroethane | 14.72 | 167 | 47764 | 18.62 ug/L | 98 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 263513 | 20.14 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 350667 | 20.58 ug/L | 98 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 174107 | 19.55 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 296957 | 20.77 ug/L | 98 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 171579 | 19.13 ug/L | 97 |
| 123) benzyl chloride | 15.30 | 91 | 168222 | 16.20 ug/L | 100 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 171237 | 20.29 ug/L | 99 |
| 126) n-butylbenzene | 15.46 | 92 | 149839 | 22.09 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 15204 | 19.08 ug/L | 84 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 138324 | 21.13 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 108772 | 21.88 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 67180 | 19.41 ug/L | 99 |
| 132) naphthalene | 17.62 | 128 | 195876 | 22.57 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 95267 | 22.12 ug/L | 96 |
| 134) hexachloroethane | 15.89 | 201 | 60845 | 19.90 ug/L | 99 |

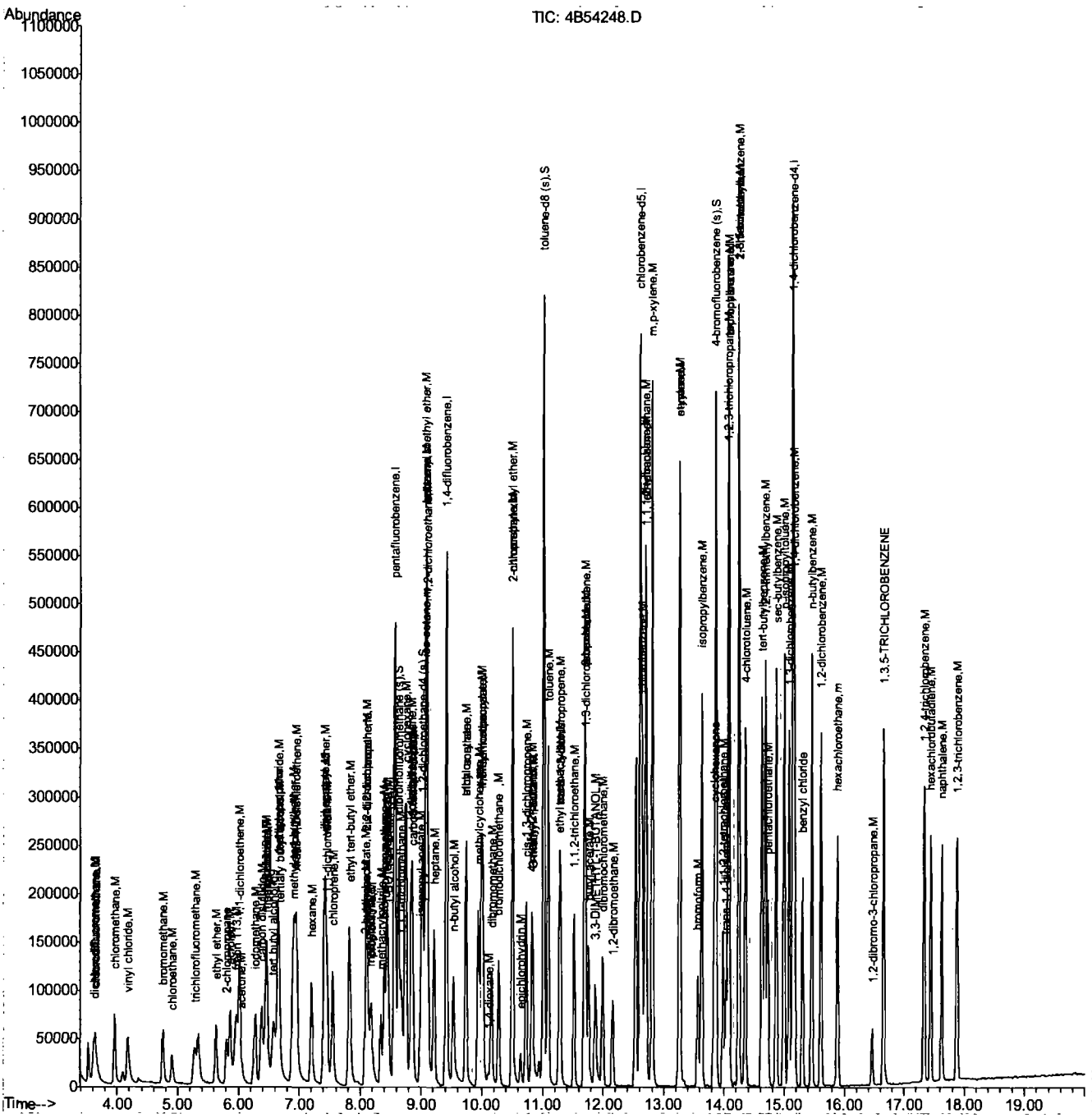
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54248.D
Acq On : 5 Aug 2015 12:27 pm
Operator : TOANP
Sample : ic2289-20
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 05 13:44:07 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 13:42:40 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54249.D
Acq On : 5 Aug 2015 12:54 pm
Operator : TOANP
Sample : icc2289-50
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 05 14:13:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:12:09 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 142044 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 427186 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 505017 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 457920 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 269700 | 50.00 | ug/L | 0.00 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 155259 | 50.55 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 101.10% | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 169612 | 49.53 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 99.06% | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 598236 | 50.31 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 100.62% | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 230299 | 48.47 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 96.94% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 80079 | 227.25 | ug/L | 98 |
| 3) 1,4-dioxane | 10.11 | 88 | 40249 | 1411.24 | ug/L | 97 |
| 7) chlorodifluoromethane | 3.64 | 51 | 204610 | 49.35 | ug/L | 98 |
| 8) dichlorodifluoromethane | 3.62 | 85 | 202349 | 55.18 | ug/L | 99 |
| 10) chloromethane | 3.96 | 52 | 75060 | 47.70 | ug/L | 98 |
| 11) vinyl chloride | 4.17 | 62 | 225178 | 52.52 | ug/L | 96 |
| 12) bromomethane | 4.75 | 94 | 128108 | 47.69 | ug/L | 100 |
| 13) chloroethane | 4.91 | 64 | 89843 | 50.09 | ug/L | 96 |
| 15) trichlorofluoromethane | 5.28 | 101 | 217084 | 55.10 | ug/L | 95 |
| 19) ethyl ether | 5.63 | 74 | 80145 | 49.88 | ug/L | 99 |
| 20) 2-chloropropane | 5.81 | 39 | 23988 | 37.96 | ug/L | 84 |
| 21) acrolein | 5.86 | 56 | 285912 | 548.23 | ug/L | 98 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 156381 | 45.81 | ug/L | 99 |
| 23) acetone | 6.05 | 58 | 14461 | 52.14 | ug/L # | 84 |
| 24) allyl chloride | 6.46 | 76 | 115265 | 47.86 | ug/L # | 66 |
| 25) acetonitrile | 6.46 | 40 | 132992 | 485.39 | ug/L # | 77 |
| 26) iodomethane | 6.27 | 142 | 313347 | 49.75 | ug/L | 98 |
| 27) carbon disulfide | 6.38 | 76 | 472706 | 47.68 | ug/L | 99 |
| 28) methylene chloride | 6.64 | 84 | 176519 | 49.76 | ug/L | 97 |
| 29) methyl acetate | 6.44 | 74 | 25462 | 56.16 | ug/L | 95 |
| 30) 1-chloropropane | 6.66 | 42 | 278651 | 41.14 | ug/L | 99 |
| 31) methyl tert butyl ether | 6.89 | 73 | 441852 | 51.99 | ug/L | 98 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 147473 | 43.05 | ug/L | 97 |
| 33) di-isopropyl ether | 7.41 | 45 | 584015 | 45.46 | ug/L | 98 |
| 34) 2-butanone | 8.08 | 72 | 18580 | 57.13 | ug/L # | 76 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 291836 | 50.92 | ug/L | 99 |
| 36) chloroprene | 7.55 | 53 | 213013 | 48.22 | ug/L | 98 |
| 37) acrylonitrile | 6.92 | 53 | 316441 | 296.77 | ug/L | 99 |
| 38) vinyl acetate | 7.43 | 86 | 23849 | 50.31 | ug/L | 89 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 524283 | 45.68 | ug/L | 100 |
| 40) ethyl acetate | 8.09 | 45 | 25157 | 49.32 | ug/L | 91 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 115985 | 41.45 | ug/L | 97 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 170444 | 52.70 | ug/L | 99 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54249.D
Acq On : 5 Aug 2015 12:54 pm
Operator : TOANP
Sample : icc2289-50
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 05 14:13:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:12:09 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.17 | 85 | 24493 | 55.11 ug/L | 97 |
| 44) propionitrile | 8.18 | 54 | 252936 | 501.11 ug/L | 89 |
| 45) bromochloromethane | 8.40 | 128 | 91577 | 53.62 ug/L | 100 |
| 46) tetrahydrofuran | 8.43 | 42 | 57255 | 45.15 ug/L | 95 |
| 47) chloroform | 8.44 | 85 | 181475 | 48.44 ug/L | 99 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 126667 | 56.88 ug/L | 99 |
| 51) freon 113 | 5.96 | 151 | 96902 | 46.27 ug/L | 97 |
| 52) methacrylonitrile | 8.34 | 41 | 109367 | 48.47 ug/L | 98 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 185743 | 49.00 ug/L | 99 |
| 54) cyclohexane | 8.74 | 84 | 196417 | 48.17 ug/L | 98 |
| 55) iso-butyl alcohol | 8.83 | 43 | 64292 | 412.83 ug/L | 98 |
| 57) epichlorohydrin | 10.63 | 57 | 86302 | 252.74 ug/L | 99 |
| 58) n-butyl alcohol | 9.53 | 56 | 223927 | 2257.95 ug/L | 99 |
| 59) carbon tetrachloride | 8.86 | 117 | 187904 | 48.72 ug/L | 100 |
| 60) 1,1-dichloropropene | 8.84 | 75 | 203280 | 49.90 ug/L | 100 |
| 61) hexane | 7.20 | 57 | 150307 | 45.65 ug/L | 99 |
| 63) benzene | 9.08 | 78 | 611437 | 45.34 ug/L | 100 |
| 64) iso-octane | 9.07 | 57 | 484301 | 46.40 ug/L | 99 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 103480 | 46.63 ug/L | 95 |
| 66) heptane | 9.21 | 57 | 105867 | 47.49 ug/L | 98 |
| 67) isopropyl acetate | 8.99 | 61 | 69968 | 20.29 ug/L | 96 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 213481 | 51.32 ug/L | 100 |
| 69) trichloroethene | 9.74 | 95 | 167725 | 51.31 ug/L | 98 |
| 71) ethyl acrylate | 9.73 | 55 | 241438 | 51.43 ug/L | 99 |
| 72) 2-nitropropane | 10.50 | 41 | 68646 | 47.13 ug/L | 96 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 542897 | 261.29 ug/L | 100 |
| 74) methyl methacrylate | 9.99 | 100 | 42697 | 51.84 ug/L # | 83 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 182101 | 49.40 ug/L | 99 |
| 76) dibromomethane | 10.16 | 93 | 111215 | 50.94 ug/L | 96 |
| 77) methylcyclohexane | 9.94 | 83 | 210115 | 49.10 ug/L | 97 |
| 78) bromodichloromethane | 10.28 | 83 | 238567 | 53.44 ug/L | 99 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 298139 | 52.00 ug/L | 99 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 71442 | 51.82 ug/L | 98 |
| 82) toluene | 11.09 | 92 | 389476 | 49.90 ug/L | 99 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 146795 | 775.95 ug/L | 93 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 273734 | 54.05 ug/L | 97 |
| 85) ethyl methacrylate | 11.27 | 69 | 226985 | 58.15 ug/L | 99 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 142996 | 51.28 ug/L | 99 |
| 87) 2-hexanone | 11.69 | 58 | 64172 | 53.28 ug/L | 91 |
| 89) tetrachloroethene | 11.69 | 164 | 179864 | 46.18 ug/L | 99 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 263602 | 51.65 ug/L | 97 |
| 91) butyl acetate | 11.76 | 56 | 118066 | 44.07 ug/L | 97 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 162954 | 366.64 ug/L | 99 |
| 93) dibromochloromethane | 11.99 | 129 | 203519 | 51.24 ug/L | 100 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 175035 | 53.47 ug/L | 99 |
| 96) chlorobenzene | 12.63 | 112 | 458187 | 49.48 ug/L | 98 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 176304 | 52.45 ug/L | 99 |
| 98) ethylbenzene | 12.69 | 91 | 762305 | 49.20 ug/L | 99 |
| 99) m,p-xylene | 12.80 | 106 | 584841 | 100.75 ug/L | 97 |
| 100) o-xylene | 13.26 | 106 | 304539 | 52.17 ug/L | 98 |

7.7.8

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54249.D
Acq On : 5 Aug 2015 12:54 pm
Operator : TOANP
Sample : icc2289-50
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 05 14:13:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:12:09 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 101) styrene | 13.27 | 104 | 514613 | 54.21 ug/L | 98 |
| 102) bromoform | 13.57 | 173 | 162530 | 55.88 ug/L | 98 |
| 104) isopropylbenzene | 13.63 | 105 | 768394 | 48.19 ug/L | 100 |
| 106) cyclohexanone | 13.83 | 55 | 209172 | 346.13 ug/L | 99 |
| 107) bromobenzene | 14.07 | 156 | 235895 | 48.59 ug/L | 95 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 240168 | 50.08 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 62608 | 49.02 ug/L | 98 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 57598 | 48.25 ug/L | 96 |
| 111) n-propylbenzene | 14.08 | 91 | 878004 | 46.90 ug/L | 99 |
| 113) 2-chlorotoluene | 14.24 | 126 | 198745 | 49.47 ug/L | 97 |
| 114) 4-chlorotoluene | 14.35 | 91 | 583335 | 47.55 ug/L | 100 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 655685 | 48.49 ug/L | 99 |
| 116) tert-butylbenzene | 14.62 | 119 | 578217 | 47.75 ug/L | 98 |
| 117) pentachloroethane | 14.72 | 167 | 120723 | 46.31 ug/L | 97 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 658527 | 48.92 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 869543 | 49.43 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 442128 | 48.44 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 736660 | 49.85 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 436957 | 47.69 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 440384 | 42.39 ug/L | 100 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 433270 | 49.83 ug/L | 100 |
| 126) n-butylbenzene | 15.46 | 92 | 374005 | 52.85 ug/L | 98 |
| 128) 1,2-dibromo-3-chloropropan | 16.47 | 75 | 37702 | 46.46 ug/L | 93 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 352015 | 51.88 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 288084 | 55.62 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 156639 | 44.21 ug/L | 98 |
| 132) naphthalene | 17.62 | 128 | 516010 | 56.79 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 241392 | 53.71 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 151665 | 48.29 ug/L | 99 |

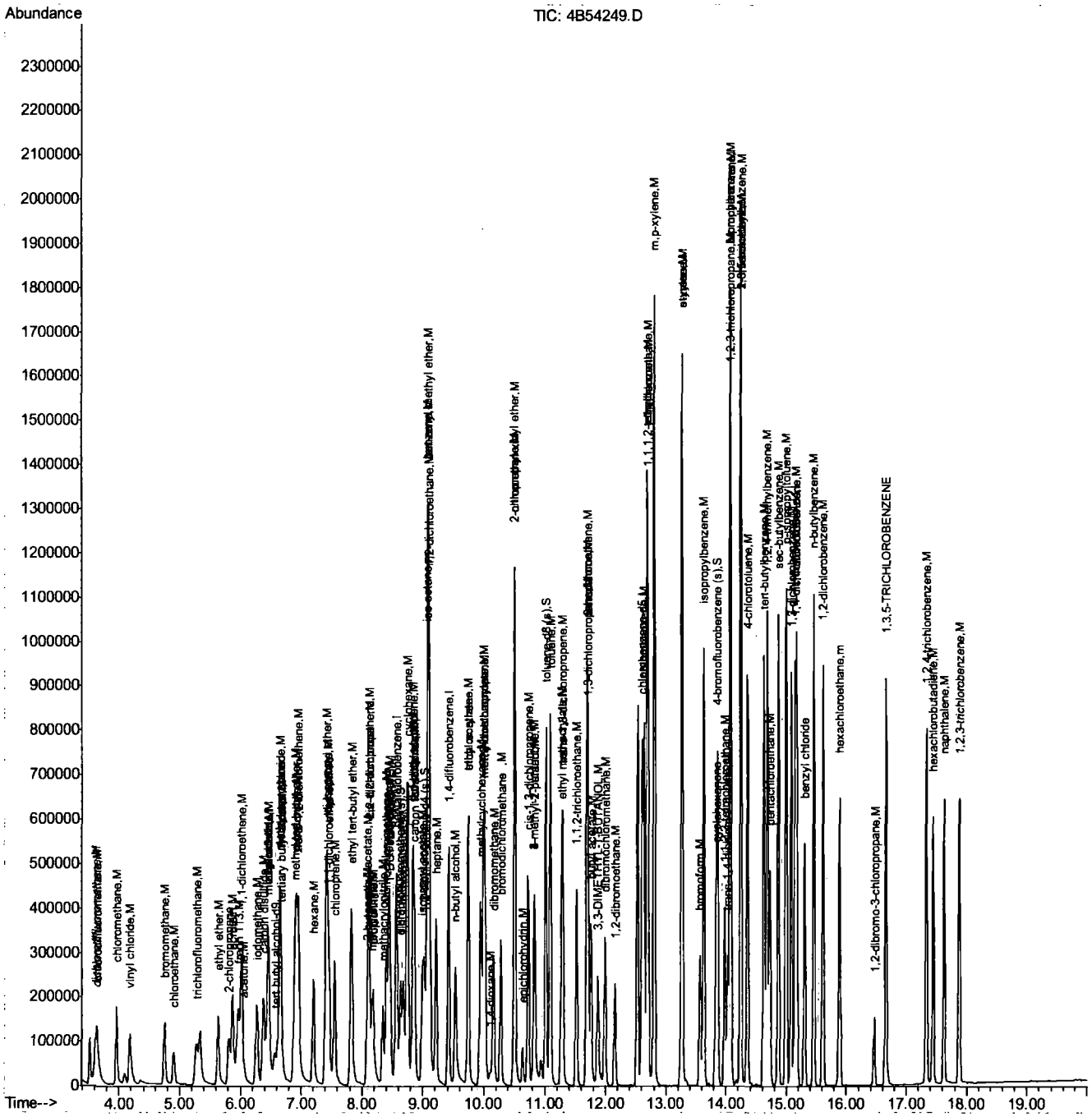
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.8 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54249.D
Acq On : 5 Aug 2015 12:54 pm
Operator : TOANP
Sample : icc2289-50
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Aug 05 14:13:42 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:12:09 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54250.D
Acq On : 5 Aug 2015 1:22 pm
Operator : TOANP
Sample : ic2289-100
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 05 14:09:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:07:53 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 152324 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 440342 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 524938 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 475546 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 278457 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 162090 | 51.40 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 76 - 120 Recovery = 102.80% | | | | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 172177 | 49.20 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 73 - 122 Recovery = 98.40% | | | | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 618173 | 50.01 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 84 - 119 Recovery = 100.02% | | | | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 237181 | 48.22 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 78 - 117 Recovery = 96.44% | | | | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.69 | 59 | 183377 | 488.82 | ug/L # | 58 |
| 3) 1,4-dioxane | 10.11 | 88 | 93245 | 3201.99 | ug/L | 97 |
| 7) chlorodifluoromethane | 3.64 | 51 | 444171 | 105.30 | ug/L | 99 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 444112 | 119.20 | ug/L | 100 |
| 10) chloromethane | 3.96 | 52 | 169765 | 103.54 | ug/L | 99 |
| 11) vinyl chloride | 4.18 | 62 | 503146 | 114.47 | ug/L | 97 |
| 12) bromomethane | 4.74 | 94 | 270335 | 87.48 | ug/L | 98 |
| 13) chloroethane | 4.90 | 64 | 194231 | 104.70 | ug/L | 98 |
| 15) trichlorofluoromethane | 5.28 | 101 | 482379 | 120.37 | ug/L | 97 |
| 19) ethyl ether | 5.63 | 74 | 174510 | 105.32 | ug/L | 100 |
| 20) 2-chloropropane | 5.81 | 39 | 48196 | 71.34 | ug/L | 80 |
| 21) acrolein | 5.86 | 56 | 624684 | 1166.98 | ug/L | 99 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 340104 | 95.70 | ug/L | 99 |
| 23) acetone | 6.06 | 58 | 30926 | 108.91 | ug/L | 99 |
| 24) allyl chloride | 6.46 | 76 | 274071 | 108.05 | ug/L | 91 |
| 25) acetonitrile | 6.45 | 40 | 280810 | 1010.23 | ug/L | 94 |
| 26) iodomethane | 6.27 | 142 | 676656 | 104.00 | ug/L | 98 |
| 27) carbon disulfide | 6.38 | 76 | 1031150 | 100.85 | ug/L | 98 |
| 28) methylene chloride | 6.64 | 84 | 374677 | 102.08 | ug/L | 98 |
| 29) methyl acetate | 6.44 | 74 | 54327 | 119.73 | ug/L | 96 |
| 30) 1-chloropropane | 6.66 | 42 | 599198 | 83.21 | ug/L | 97 |
| 31) methyl tert butyl ether | 6.89 | 73 | 946343 | 108.89 | ug/L | 98 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 324123 | 89.89 | ug/L | 95 |
| 33) di-isopropyl ether | 7.41 | 45 | 1227486 | 91.36 | ug/L | 83 |
| 34) 2-butanone | 8.08 | 72 | 42130 | 132.98 | ug/L # | 86 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 627638 | 107.49 | ug/L | 99 |
| 36) chloroprene | 7.55 | 53 | 467988 | 103.04 | ug/L | 99 |
| 37) acrylonitrile | 6.92 | 53 | 668696 | 626.09 | ug/L | 98 |
| 38) vinyl acetate | 7.43 | 86 | 51509 | 106.21 | ug/L | 78 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 1108286 | 92.23 | ug/L | 99 |
| 40) ethyl acetate | 8.08 | 45 | 53614 | 101.24 | ug/L # | 88 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 239671 | 81.82 | ug/L | 95 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 368672 | 111.60 | ug/L | 95 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54250.D
Acq On : 5 Aug 2015 1:22 pm
Operator : TOANP
Sample : ic2289-100
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 05 14:09:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:07:53 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 53820 | 120.55 ug/L | 97 |
| 44) propionitrile | 8.19 | 54 | 552171 | 1064.70 ug/L | 97 |
| 45) bromochloromethane | 8.40 | 128 | 197037 | 113.42 ug/L | 98 |
| 46) tetrahydrofuran | 8.43 | 42 | 123798 | 93.67 ug/L | 98 |
| 47) chloroform | 8.44 | 85 | 379546 | 97.77 ug/L | 99 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 270320 | 119.19 ug/L | 99 |
| 51) freon 113 | 5.96 | 151 | 204380 | 93.83 ug/L | 99 |
| 52) methacrylonitrile | 8.34 | 41 | 240185 | 102.89 ug/L | 96 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 402495 | 103.55 ug/L | 99 |
| 54) cyclohexane | 8.74 | 84 | 440505 | 105.00 ug/L | 96 |
| 55) iso-butyl alcohol | 8.83 | 43 | 150898 | 914.33 ug/L | 98 |
| 57) epichlorohydrin | 10.64 | 57 | 188130 | 489.98 ug/L | 98 |
| 58) n-butyl alcohol | 9.53 | 56 | 519748 | 4005.05 ug/L | 99 |
| 59) carbon tetrachloride | 8.86 | 117 | 414271 | 103.74 ug/L | 100 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 451545 | 107.97 ug/L | 99 |
| 61) hexane | 7.20 | 57 | 336409 | 97.76 ug/L | 99 |
| 63) benzene | 9.08 | 78 | 1326122 | 93.61 ug/L | 99 |
| 64) iso-octane | 9.07 | 57 | 1059788 | 104.26 ug/L | 99 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 206475 | 88.50 ug/L | 93 |
| 66) heptane | 9.21 | 57 | 236489 | 102.47 ug/L | 97 |
| 67) isopropyl acetate | 8.99 | 61 | 146886 | 36.79 ug/L | 97 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 440523 | 102.84 ug/L | 99 |
| 69) trichloroethene | 9.74 | 95 | 364370 | 107.81 ug/L | 98 |
| 71) ethyl acrylate | 9.73 | 55 | 519917 | 106.25 ug/L | 99 |
| 72) 2-nitropropane | 10.50 | 41 | 145742 | 95.70 ug/L | 92 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 1145967 | 532.84 ug/L | 99 |
| 74) methyl methacrylate | 9.99 | 100 | 92959 | 109.32 ug/L # | 84 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 384852 | 100.73 ug/L | 100 |
| 76) dibromomethane | 10.16 | 93 | 237351 | 104.67 ug/L | 99 |
| 77) methylcyclohexane | 9.94 | 83 | 478713 | 108.38 ug/L | 97 |
| 78) bromodichloromethane | 10.28 | 83 | 509811 | 110.83 ug/L | 99 |
| 79) cis-1,3-dichloropropene | 10.73 | 75 | 645764 | 109.10 ug/L | 98 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 155389 | 110.17 ug/L | 98 |
| 82) toluene | 11.09 | 92 | 856288 | 105.80 ug/L | 99 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 327046 | 1619.54 ug/L | 99 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 584815 | 112.41 ug/L | 97 |
| 85) ethyl methacrylate | 11.27 | 69 | 500966 | 125.70 ug/L | 98 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 308391 | 106.24 ug/L | 98 |
| 87) 2-hexanone | 11.69 | 58 | 148631 | 120.51 ug/L | 98 |
| 89) tetrachloroethene | 11.69 | 164 | 396281 | 97.64 ug/L | 98 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 558281 | 106.09 ug/L | 98 |
| 91) butyl acetate | 11.76 | 56 | 257559 | 90.86 ug/L | 94 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 364614 | 766.78 ug/L | 98 |
| 93) dibromochloromethane | 11.99 | 129 | 444726 | 108.08 ug/L | 100 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 383789 | 114.03 ug/L | 99 |
| 96) chlorobenzene | 12.64 | 112 | 1008232 | 105.13 ug/L | 100 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 376160 | 108.95 ug/L | 98 |
| 98) ethylbenzene | 12.69 | 91 | 1665552 | 103.81 ug/L | 99 |
| 99) m,p-xylene | 12.80 | 106 | 1296761 | 216.27 ug/L | 96 |
| 100) o-xylene | 13.26 | 106 | 674677 | 112.17 ug/L | 96 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54250.D
Acq On : 5 Aug 2015 1:22 pm
Operator : TOANP
Sample : ic2289-100
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 05 14:09:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:07:53 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 101) styrene | 13.27 | 104 | 1140164 | 117.34 ug/L | 98 |
| 102) bromoform | 13.57 | 173 | 358118 | 120.26 ug/L | 100 |
| 104) isopropylbenzene | 13.63 | 105 | 1686948 | 102.61 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 514116 | 800.37 ug/L | 98 |
| 107) bromobenzene | 14.07 | 156 | 515647 | 102.81 ug/L | 97 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 515882 | 104.52 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 137862 | 104.39 ug/L | 99 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 122399 | 99.93 ug/L | 97 |
| 111) n-propylbenzene | 14.08 | 91 | 1945144 | 100.42 ug/L | 100 |
| 113) 2-chlorotoluene | 14.24 | 126 | 439544 | 106.54 ug/L | 95 |
| 114) 4-chlorotoluene | 14.35 | 91 | 1270141 | 99.87 ug/L | 100 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 1437181 | 103.06 ug/L | 100 |
| 116) tert-butylbenzene | 14.63 | 119 | 1258947 | 100.45 ug/L | 96 |
| 117) pentachloroethane | 14.72 | 167 | 257405 | 94.53 ug/L | 98 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 1412075 | 101.70 ug/L | 100 |
| 119) sec-butylbenzene | 14.87 | 105 | 1902828 | 105.19 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 950076 | 100.49 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 1607909 | 105.97 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 943626 | 99.13 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 931217 | 84.47 ug/L | 100 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 927595 | 103.54 ug/L | 99 |
| 126) n-butylbenzene | 15.46 | 92 | 825537 | 114.67 ug/L | 97 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 83271 | 98.47 ug/L | 90 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 747739 | 107.59 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 622234 | 117.93 ug/L | 100 |
| 131) hexachlorobutadiene | 17.44 | 225 | 320403 | 87.22 ug/L | 97 |
| 132) naphthalene | 17.62 | 128 | 1142135 | 123.99 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 519343 | 113.62 ug/L | 97 |
| 134) hexachloroethane | 15.89 | 201 | 333252 | 102.68 ug/L | 99 |

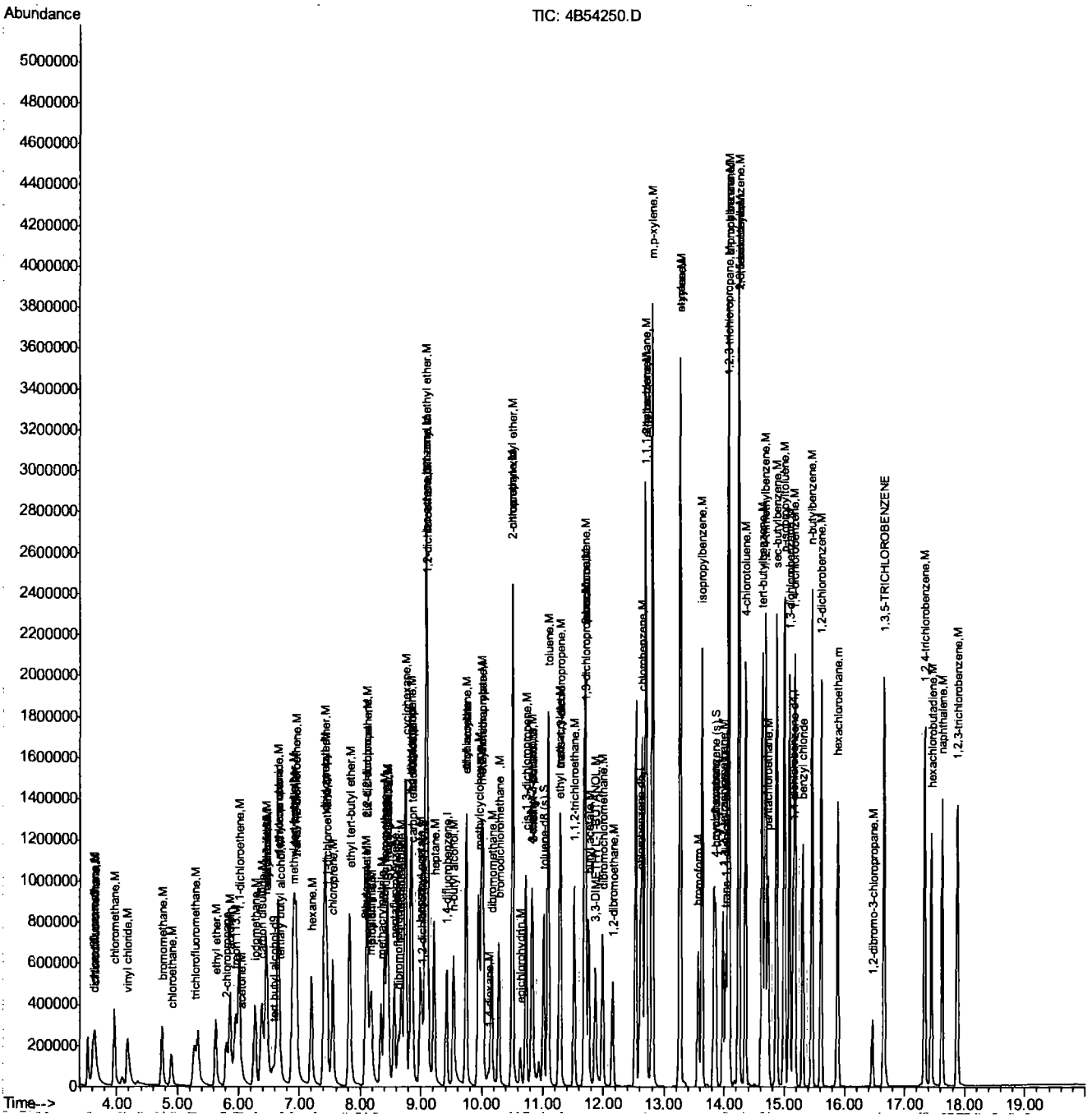
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.9 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54250.D
Acq On : 5 Aug 2015 1:22 pm
Operator : TOANP
Sample : ic2289-100
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 05 14:09:33 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:07:53 2015
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54251.D
Acq On : 5 Aug 2015 1:50 pm
Operator : TOANP
Sample : ic2289-200
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 05 14:17:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:15:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.59 | 65 | 161277 | 500.00 | ug/L | 0.02 |
| 5) pentafluorobenzene | 8.56 | 168 | 446123 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 534451 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 480789 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 280134 | 50.00 | ug/L | 0.00 |

| System Monitoring Compounds | | | | | | |
|---|---|---|---|---|---|---|
| 49) dibromofluoromethane (s) | 8.63 | 113 | 163959 | 50.92 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 101.84% | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 169371 | 47.54 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 95.08% | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 624262 | 49.57 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.14% | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 240197 | 49.02 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 98.04% | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.69 | 59 | 368528 | 937.24 | ug/L # | 53 |
| 3) 1,4-dioxane | 10.11 | 88 | 191696 | 5639.08 | ug/L | 96 |
| 7) chlorodifluoromethane | 3.64 | 51 | 901529 | 207.52 | ug/L | 99 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 850435 | 214.60 | ug/L | 97 |
| 10) chloromethane | 3.96 | 52 | 344977 | 209.92 | ug/L | 96 |
| 11) vinyl chloride | 4.18 | 62 | 985164 | 215.52 | ug/L | 98 |
| 12) bromomethane | 4.74 | 94 | 451750 | 162.44 | ug/L | 97 |
| 13) chloroethane | 4.90 | 64 | 343959 | 182.43 | ug/L | 95 |
| 15) trichlorofluoromethane | 5.27 | 101 | 916972 | 215.08 | ug/L | 97 |
| 19) ethyl ether | 5.63 | 74 | 357920 | 211.93 | ug/L | 94 |
| 20) 2-chloropropane | 5.81 | 39 | 84550 | 139.78 | ug/L | 87 |
| 21) acrolein | 5.87 | 56 | 1250055 | 2223.36 | ug/L | 98 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 720334 | 205.07 | ug/L | 93 |
| 23) acetone | 6.06 | 58 | 60091 | 203.25 | ug/L # | 81 |
| 24) allyl chloride | 6.46 | 76 | 573944 | 226.20 | ug/L # | 81 |
| 25) acetonitrile | 6.46 | 40 | 558194 | 1962.22 | ug/L | 99 |
| 26) iodomethane | 6.27 | 142 | 1400146 | 211.88 | ug/L | 98 |
| 27) carbon disulfide | 6.38 | 76 | 2117922 | 205.50 | ug/L | 99 |
| 28) methylene chloride | 6.64 | 84 | 774609 | 208.59 | ug/L | 95 |
| 29) methyl acetate | 6.44 | 74 | 113584 | 230.48 | ug/L | 90 |
| 30) 1-chloropropane | 6.66 | 42 | 1193835 | 175.78 | ug/L | 99 |
| 31) methyl tert butyl ether | 6.89 | 73 | 1907117 | 212.03 | ug/L | 99 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 670424 | 192.72 | ug/L | 97 |
| 33) di-isopropyl ether | 7.41 | 45 | 2414584 | 183.30 | ug/L | 88 |
| 34) 2-butanone | 8.08 | 72 | 83894 | 231.59 | ug/L # | 87 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 1253371 | 207.54 | ug/L | 99 |
| 36) chloroprene | 7.54 | 53 | 928786 | 201.52 | ug/L | 98 |
| 37) acrylonitrile | 6.93 | 53 | 1365697 | 1173.75 | ug/L | 98 |
| 38) vinyl acetate | 7.43 | 86 | 105799 | 211.90 | ug/L | 95 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 2228734 | 189.10 | ug/L | 100 |
| 40) ethyl acetate | 8.09 | 45 | 105610 | 198.09 | ug/L | 87 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 435580 | 155.69 | ug/L | 94 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 751583 | 218.65 | ug/L | 94 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54251.D
Acq On : 5 Aug 2015 1:50 pm
Operator : TOANP
Sample : ic2289-200
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 05 14:17:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:15:54 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.17 | 85 | 111432 | 229.48 ug/L | 95 |
| 44) propionitrile | 8.19 | 54 | 1125606 | 2118.56 ug/L | 92 |
| 45) bromochloromethane | 8.40 | 128 | 407776 | 223.29 ug/L | 95 |
| 46) tetrahydrofuran | 8.43 | 42 | 241984 | 186.73 ug/L | 99 |
| 47) chloroform | 8.44 | 85 | 785999 | 201.97 ug/L | 96 |
| 48) T-BUTYL FORMATE | 8.47 | 59 | 555520 | 230.79 ug/L | 97 |
| 51) freon 113 | 5.96 | 151 | 415553 | 193.53 ug/L | 98 |
| 52) methacrylonitrile | 8.34 | 41 | 480235 | 203.75 ug/L | 98 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 799081 | 201.61 ug/L | 99 |
| 54) cyclohexane | 8.74 | 84 | 919328 | 215.59 ug/L | 90 |
| 55) iso-butyl alcohol | 8.84 | 43 | 295848 | 1873.94 ug/L | 98 |
| 57) epichlorohydrin | 10.64 | 57 | 385542 | 1057.50 ug/L | 99 |
| 58) n-butyl alcohol | 9.53 | 56 | 1060475 | 10217.23 ug/L | 98 |
| 59) carbon tetrachloride | 8.86 | 117 | 847352 | 207.39 ug/L | 98 |
| 60) 1,1-dichloropropene | 8.84 | 75 | 917331 | 211.27 ug/L | 98 |
| 61) hexane | 7.20 | 57 | 668510 | 194.37 ug/L | 98 |
| 63) benzene | 9.08 | 78 | 2704139 | 192.62 ug/L | 99 |
| 64) iso-octane | 9.07 | 57 | 2126092 | 194.81 ug/L | 95 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 436196 | 189.37 ug/L | 95 |
| 66) heptane | 9.21 | 57 | 472770 | 201.14 ug/L | 99 |
| 67) isopropyl acetate | 8.99 | 61 | 296166 | 95.26 ug/L | 100 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 864345 | 195.38 ug/L | 98 |
| 69) trichloroethene | 9.74 | 95 | 743930 | 212.71 ug/L | 98 |
| 71) ethyl acrylate | 9.73 | 55 | 1020839 | 203.34 ug/L | 98 |
| 72) 2-nitropropane | 10.50 | 41 | 279130 | 183.27 ug/L | 92 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 2272973 | 1021.62 ug/L | 97 |
| 74) methyl methacrylate | 9.99 | 100 | 193525 | 218.20 ug/L | 94 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 769783 | 197.52 ug/L | 99 |
| 76) dibromomethane | 10.16 | 93 | 484947 | 208.21 ug/L | 98 |
| 77) methylcyclohexane | 9.94 | 83 | 962349 | 210.96 ug/L | 98 |
| 78) bromodichloromethane | 10.28 | 83 | 1040096 | 216.14 ug/L | 99 |
| 79) cis-1,3-dichloropropene | 10.73 | 75 | 1308146 | 212.69 ug/L | 97 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 315959 | 213.34 ug/L | 96 |
| 82) toluene | 11.09 | 92 | 1779838 | 214.20 ug/L | 97 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 654036 | 3415.76 ug/L | 96 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 1178558 | 215.29 ug/L | 99 |
| 85) ethyl methacrylate | 11.28 | 69 | 1020068 | 236.49 ug/L | 96 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 626099 | 209.81 ug/L | 98 |
| 87) 2-hexanone | 11.69 | 58 | 295973 | 225.08 ug/L | 95 |
| 89) tetrachloroethene | 11.69 | 164 | 795453 | 196.89 ug/L | 99 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 1120916 | 207.21 ug/L | 98 |
| 91) butyl acetate | 11.76 | 56 | 526564 | 191.31 ug/L | 97 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 730469 | 1652.93 ug/L | 97 |
| 93) dibromochloromethane | 11.99 | 129 | 921933 | 218.27 ug/L | 99 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 793606 | 225.91 ug/L | 99 |
| 96) chlorobenzene | 12.64 | 112 | 2088368 | 213.89 ug/L | 98 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 785333 | 219.45 ug/L | 99 |
| 98) ethylbenzene | 12.69 | 91 | 3409958 | 209.17 ug/L | 98 |
| 99) m,p-xylene | 12.80 | 106 | 2688195 | 437.04 ug/L | 96 |
| 100) o-xylene | 13.26 | 106 | 1392519 | 223.33 ug/L | 96 |

7.7.10

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54251.D
Acq On : 5 Aug 2015 1:50 pm
Operator : TOANP
Sample : ic2289-200
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 05 14:17:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:15:54 2015
Response via : Initial Calibration

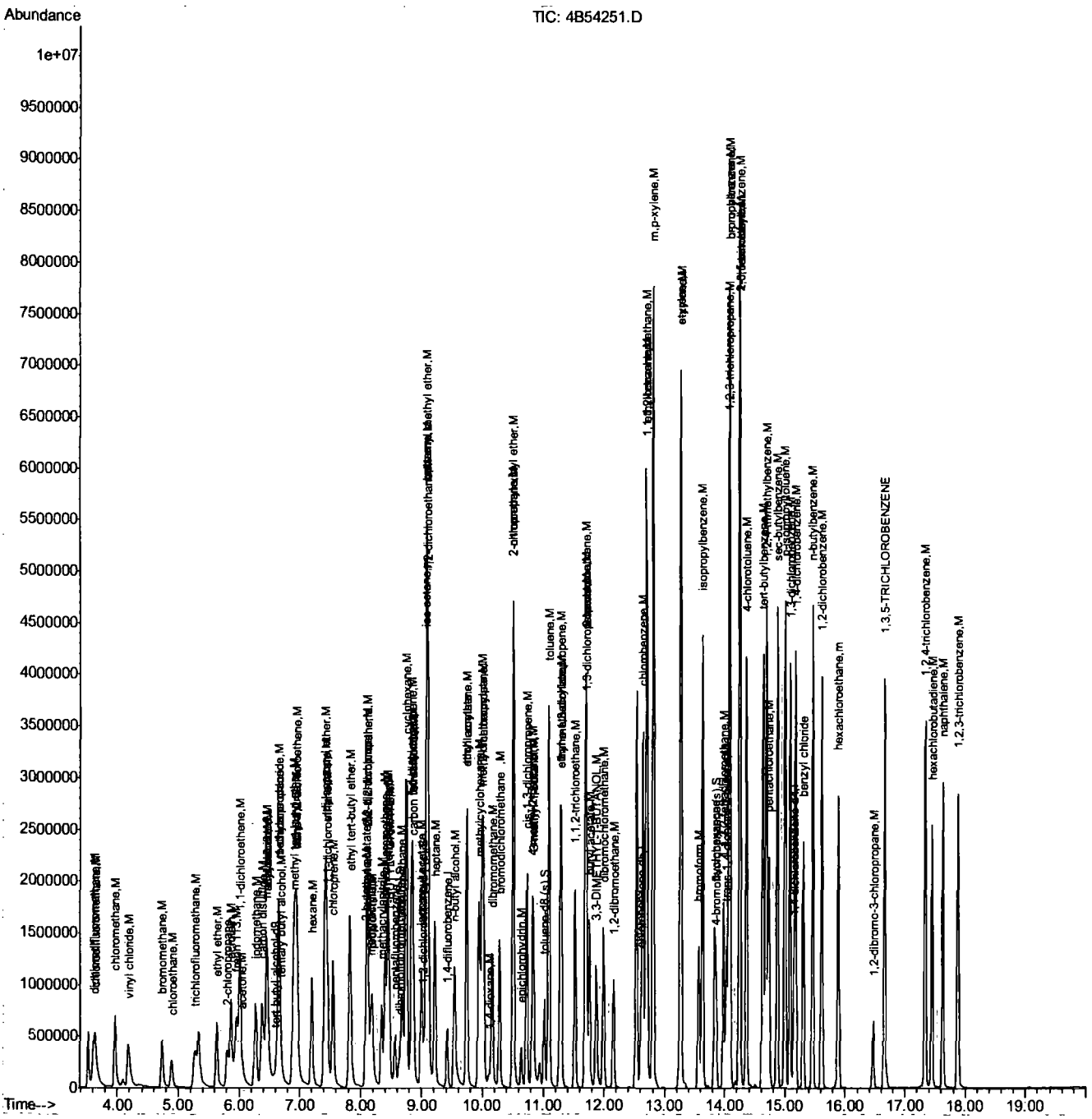
| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 101) styrene | 13.27 | 104 | 2357594 | 230.36 ug/L | 97 |
| 102) bromoform | 13.57 | 173 | 745935 | 236.30 ug/L | 99 |
| 104) isopropylbenzene | 13.63 | 105 | 3487739 | 210.86 ug/L | 98 |
| 106) cyclohexanone | 13.83 | 55 | 817403 | 1376.21 ug/L | 99 |
| 107) bromobenzene | 14.08 | 156 | 1078873 | 213.92 ug/L | 89 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 1058293 | 211.44 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 280808 | 210.99 ug/L | 97 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 247600 | 200.74 ug/L | 97 |
| 111) n-propylbenzene | 14.08 | 91 | 3994495 | 206.71 ug/L | 97 |
| 113) 2-chlorotoluene | 14.24 | 126 | 914110 | 217.86 ug/L | 94 |
| 114) 4-chlorotoluene | 14.35 | 91 | 2630615 | 207.52 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 2932524 | 208.82 ug/L | 100 |
| 116) tert-butylbenzene | 14.63 | 119 | 2566897 | 204.97 ug/L | 98 |
| 117) pentachloroethane | 14.72 | 167 | 568321 | 213.00 ug/L | 96 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 2903953 | 207.81 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 3910378 | 213.14 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 1969144 | 208.24 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 3266745 | 211.63 ug/L | 98 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 1956832 | 206.73 ug/L | 98 |
| 123) benzyl chloride | 15.30 | 91 | 1889010 | 180.78 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 1883480 | 207.86 ug/L | 99 |
| 126) n-butylbenzene | 15.46 | 92 | 1662661 | 221.58 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 170232 | 204.20 ug/L | 99 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 1514507 | 212.41 ug/L | 98 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 1292871 | 233.18 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 666903 | 186.18 ug/L | 98 |
| 132) naphthalene | 17.62 | 128 | 2426040 | 247.36 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 1088592 | 228.29 ug/L | 98 |
| 134) hexachloroethane | 15.89 | 201 | 697707 | 214.04 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54251.D
Acq On : 5 Aug 2015 1:50 pm
Operator : TOANP
Sample : ic2289-200
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Aug 05 14:17:08 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Wed Aug 05 14:15:54 2015
Response via : Initial Calibration



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Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54254.D
Acq On : 5 Aug 2015 3:20 pm
Operator : TOANP
Sample : icv2289-50
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 10 08:21:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.57 | 65 | 142025 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 440912 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 520562 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 462444 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 265659 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 159564 | 50.05 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 76 - 120 | | Recovery = 100.10% | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 167138 | 47.70 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 73 - 122 | | Recovery = 95.40% | | | |
| 80) toluene-d8 (s) | 11.01 | 98 | 608517 | 49.65 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 84 - 119 | | Recovery = 99.30% | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 229251 | 49.43 | ug/L | 0.00 |
| Spiked Amount 50.000 | Range 78 - 117 | | Recovery = 98.86% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) tertiary butyl alcohol | 6.67 | 59 | 87967 | 256.05 | ug/L | 76 |
| 3) 1,4-dioxane | 10.11 | 88 | 44745 | 1408.78 | ug/L | 96 |
| 7) chlorodifluoromethane | 3.63 | 51 | 197661 | 44.33 | ug/L | 99 |
| 8) dichlorodifluoromethane | 3.60 | 85 | 167005 | 39.11 | ug/L | 99 |
| 10) chloromethane | 3.96 | 52 | 74950 | 45.89 | ug/L | 97 |
| 11) vinyl chloride | 4.17 | 62 | 205845 | 43.86 | ug/L | 100 |
| 12) bromomethane | 4.76 | 94 | 136246 | 50.63 | ug/L | 98 |
| 13) chloroethane | 4.92 | 64 | 106922 | 57.94 | ug/L | 94 |
| 15) trichlorofluoromethane | 5.27 | 101 | 204231 | 46.07 | ug/L | 97 |
| 19) ethyl ether | 5.63 | 74 | 83783 | 49.87 | ug/L | 97 |
| 20) 2-chloropropane | 5.81 | 39 | 17729 | 33.16 | ug/L | 82 |
| 21) acrolein | 5.86 | 56 | 351480 | 624.78 | ug/L | 98 |
| 22) 1,1-dichloroethene | 6.03 | 96 | 170623 | 49.01 | ug/L | 98 |
| 23) acetone | 6.05 | 58 | 15821 | 54.02 | ug/L | 87 |
| 24) allyl chloride | 6.45 | 76 | 162777 | 63.87 | ug/L | 81 |
| 25) acetonitrile | 6.45 | 40 | 137193 | 489.30 | ug/L | 92 |
| 26) iodomethane | 6.28 | 142 | 302743 | 46.05 | ug/L | 100 |
| 27) carbon disulfide | 6.39 | 76 | 476624 | 46.65 | ug/L | 100 |
| 28) methylene chloride | 6.65 | 84 | 185683 | 50.35 | ug/L | 96 |
| 29) methyl acetate | 6.44 | 74 | 24423 | 49.21 | ug/L # | 87 |
| 30) 1-chloropropane | 6.65 | 42 | 286588 | 45.54 | ug/L | 97 |
| 31) methyl tert butyl ether | 6.89 | 73 | 878876 | 94.61 | ug/L | 92 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 153059 | 44.70 | ug/L | 94 |
| 33) di-isopropyl ether | 7.41 | 45 | 588209 | 48.28 | ug/L | 95 |
| 34) 2-butanone | 8.08 | 72 | 19634 | 50.31 | ug/L # | 91 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 304088 | 47.26 | ug/L | 100 |
| 36) chloroprene | 7.54 | 53 | 214783 | 45.07 | ug/L | 97 |
| 37) acrylonitrile | 6.92 | 53 | 333935 | 254.82 | ug/L | 98 |
| 38) vinyl acetate | 7.43 | 86 | 26891 | 54.09 | ug/L | 92 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 534086 | 49.35 | ug/L | 100 |
| 40) ethyl acetate | 8.08 | 45 | 25023 | 47.24 | ug/L | 81 |
| 41) 2,2-dichloropropane | 8.10 | 77 | 105621 | 38.82 | ug/L | 97 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 174961 | 47.04 | ug/L | 94 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54254.D
Acq On : 5 Aug 2015 3:20 pm
Operator : TOANP
Sample : icv2289-50
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 10 08:21:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 25186 | 49.86 ug/L | 99 |
| 44) propionitrile | 8.18 | 54 | 251570 | 475.95 ug/L | 94 |
| 45) bromochloromethane | 8.40 | 128 | 94204 | 49.35 ug/L | 98 |
| 46) tetrahydrofuran | 8.43 | 42 | 59813 | 47.09 ug/L | 98 |
| 47) chloroform | 8.44 | 85 | 188129 | 48.86 ug/L | 96 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 123560 | 50.21 ug/L | 97 |
| 51) freon 113 | 5.97 | 151 | 97918 | 46.33 ug/L | 100 |
| 52) methacrylonitrile | 8.34 | 41 | 114391 | 49.00 ug/L | 99 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 184506 | 45.32 ug/L | 99 |
| 54) cyclohexane | 8.73 | 84 | 173386 | 38.87 ug/L | 92 |
| 55) iso-butyl alcohol | 8.82 | 43 | 68583 | 472.12 ug/L | 97 |
| 57) epichlorohydrin | 10.63 | 57 | 90757 | 253.96 ug/L | 98 |
| 58) n-butyl alcohol | 9.53 | 56 | 242937 | 2397.26 ug/L | 100 |
| 59) carbon tetrachloride | 8.86 | 117 | 183882 | 44.14 ug/L | 97 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 218404 | 47.19 ug/L | 100 |
| 61) hexane | 7.20 | 57 | 190194 | 54.10 ug/L | 98 |
| 63) benzene | 9.08 | 78 | 638426 | 46.86 ug/L | 99 |
| 64) iso-octane | 9.07 | 57 | 384768 | 35.16 ug/L | 96 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 100495 | 46.40 ug/L | 96 |
| 66) heptane | 9.21 | 57 | 126451 | 52.25 ug/L | 96 |
| 67) isopropyl acetate | 8.99 | 61 | 70195 | 43.10 ug/L | 92 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 213155 | 47.49 ug/L | 99 |
| 69) trichloroethene | 9.74 | 95 | 172718 | 47.11 ug/L | 98 |
| 71) ethyl acrylate | 9.73 | 55 | 241314 | 45.80 ug/L | 99 |
| 72) 2-nitropropane | 10.50 | 41 | 72108 | 49.06 ug/L | 96 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 606109 | 279.09 ug/L | 99 |
| 74) methyl methacrylate | 9.99 | 100 | 46233 | 52.92 ug/L | 98 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 188043 | 48.05 ug/L | 99 |
| 76) dibromomethane | 10.16 | 93 | 111139 | 48.77 ug/L | 98 |
| 77) methylcyclohexane | 9.94 | 83 | 206332 | 43.76 ug/L | 99 |
| 78) bromodichloromethane | 10.28 | 83 | 243498 | 49.69 ug/L | 100 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 303936 | 47.87 ug/L | 99 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 76491 | 50.85 ug/L | 96 |
| 82) toluene | 11.09 | 92 | 404953 | 46.64 ug/L | 99 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 157924 | 940.34 ug/L | 96 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 261048 | 46.95 ug/L | 98 |
| 85) ethyl methacrylate | 11.27 | 69 | 230523 | 50.11 ug/L | 99 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 146584 | 48.50 ug/L | 97 |
| 87) 2-hexanone | 11.69 | 58 | 68053 | 49.55 ug/L | 95 |
| 89) tetrachloroethene | 11.69 | 164 | 184446 | 45.91 ug/L | 99 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 264286 | 48.56 ug/L | 99 |
| 91) butyl acetate | 11.76 | 56 | 120141 | 48.39 ug/L | 98 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 160602 | 440.84 ug/L | 100 |
| 93) dibromochloromethane | 11.99 | 129 | 207803 | 48.82 ug/L | 99 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 178097 | 49.95 ug/L | 99 |
| 96) chlorobenzene | 12.63 | 112 | 477070 | 48.78 ug/L | 100 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 174915 | 46.79 ug/L | 98 |
| 98) ethylbenzene | 12.69 | 91 | 768867 | 47.20 ug/L | 99 |
| 99) m,p-xylene | 12.80 | 106 | 598309 | 96.38 ug/L | 98 |
| 100) o-xylene | 13.25 | 106 | 313035 | 50.02 ug/L | 97 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54254.D
Acq On : 5 Aug 2015 3:20 pm
Operator : TOANP
Sample : icv2289-50
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 10 08:21:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 101) styrene | 13.27 | 104 | 522540 | 48.90 ug/L | 98 |
| 102) bromoform | 13.57 | 173 | 165988 | 50.18 ug/L | 98 |
| 104) isopropylbenzene | 13.63 | 105 | 773119 | 45.84 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 168326 | 349.81 ug/L | 99 |
| 107) bromobenzene | 14.07 | 156 | 235975 | 47.70 ug/L | 99 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 236372 | 47.86 ug/L | 97 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 60439 | 47.60 ug/L | 98 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 56748 | 48.49 ug/L | 98 |
| 111) n-propylbenzene | 14.08 | 91 | 930222 | 48.80 ug/L | 99 |
| 113) 2-chlorotoluene | 14.24 | 126 | 198113 | 45.85 ug/L | 95 |
| 114) 4-chlorotoluene | 14.35 | 91 | 576327 | 46.76 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 655414 | 46.17 ug/L | 99 |
| 116) tert-butylbenzene | 14.62 | 119 | 585576 | 47.55 ug/L | 98 |
| 117) pentachloroethane | 14.72 | 167 | 125448 | 49.22 ug/L | 98 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 683004 | 49.95 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 858564 | 45.88 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 438486 | 48.70 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 736359 | 47.07 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 433803 | 48.16 ug/L | 98 |
| 123) benzyl chloride | 15.30 | 91 | 423232 | 47.02 ug/L | 100 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 434616 | 49.43 ug/L | 100 |
| 126) n-butylbenzene | 15.46 | 92 | 371034 | 47.82 ug/L | 98 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 39033 | 49.24 ug/L | 98 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 357544 | 50.99 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 277819 | 49.46 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 150966 | 44.16 ug/L | 98 |
| 132) naphthalene | 17.62 | 128 | 521854 | 52.85 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 240865 | 50.84 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 157343 | 48.51 ug/L | 99 |

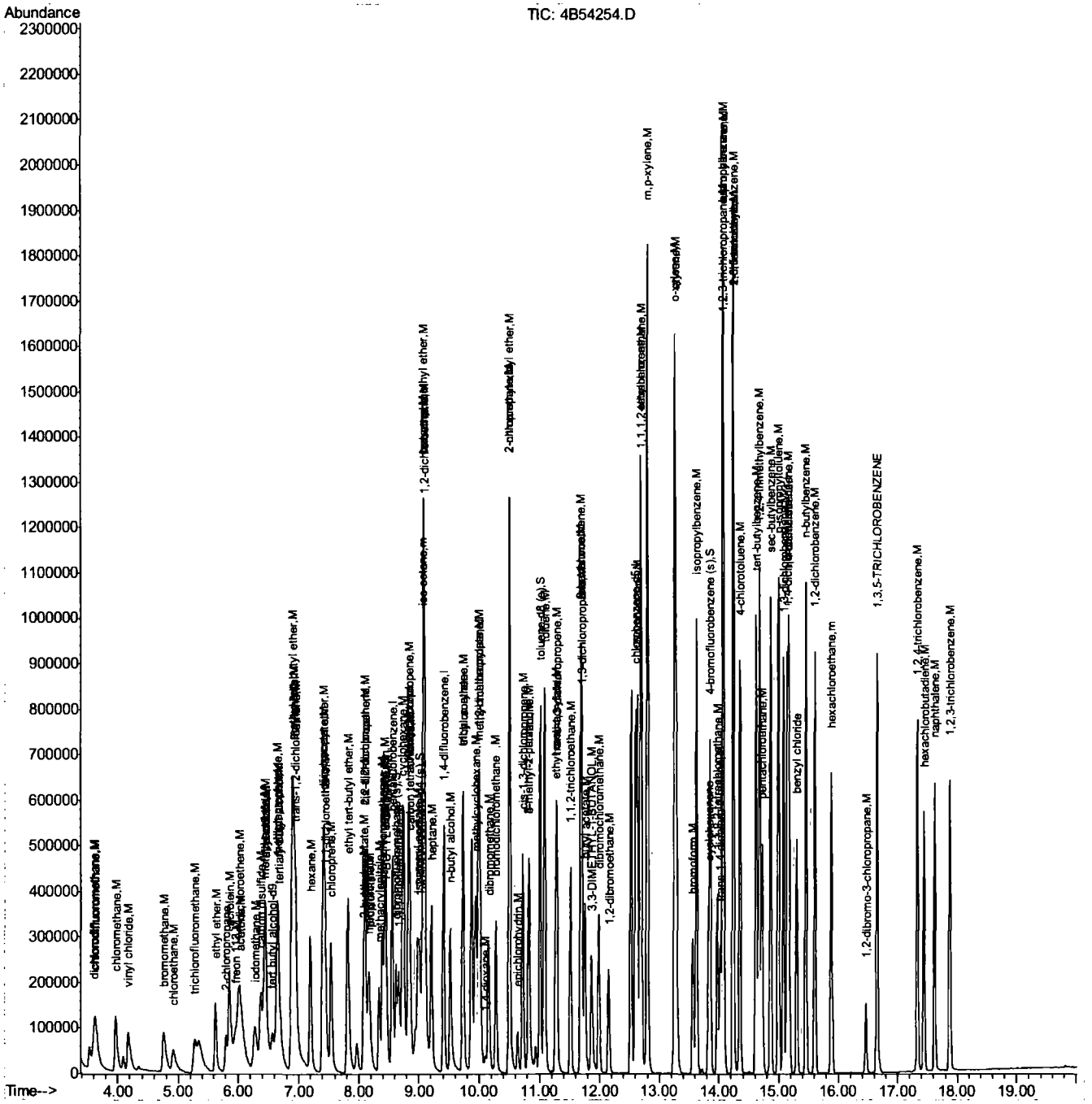
(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.11 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54254.D
Acq On : 5 Aug 2015 3:20 pm
Operator : TOANP
Sample : icv2289-50
Misc : MS88663,V4B2289,w,,,,1
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Aug 10 08:21:56 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration






ACCUTEST LABORATORIES JC1107

7.7.11 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54407.D
Acq On : 12 Aug 2015 10:09 am
Operator : TOANP
Sample : CC2289-20
Misc : MS89342,V4B2296,w,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 12 17:18:21 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 140756 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 435392 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 495542 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 438556 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 244012 | 50.00 | ug/L | 0.00 |
| System Monitoring Compounds | | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 154824 | 49.18 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 76 - 120 Recovery = 98.36% | | | | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 159525 | 46.11 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 73 - 122 Recovery = 92.22% | | | | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 574436 | 49.24 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 84 - 119 Recovery = 98.48% | | | | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 208750 | 49.00 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 78 - 117 Recovery = 98.00% | | | | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.68 | 59 | 32411 | 95.19 | ug/L # | 63 |
| 3) 1,4-dioxane | 10.11 | 88 | 18001 | 571.87 | ug/L | 89 |
| 7) chlorodifluoromethane | 3.63 | 51 | 78536 | 17.84 | ug/L | 97 |
| 8) dichlorodifluoromethane | 3.61 | 85 | 74045 | 17.56 | ug/L | 98 |
| 10) chloromethane | 3.97 | 52 | 30047 | 18.63 | ug/L | 95 |
| 11) vinyl chloride | 4.17 | 62 | 79691 | 17.20 | ug/L | 97 |
| 12) bromomethane | 4.76 | 94 | 55553 | 20.90 | ug/L | 96 |
| 13) chloroethane | 4.92 | 64 | 38221 | 20.98 | ug/L | 97 |
| 15) trichlorofluoromethane | 5.28 | 101 | 87270 | 19.94 | ug/L | 97 |
| 19) ethyl ether | 5.63 | 74 | 28463 | 17.16 | ug/L | 92 |
| 20) 2-chloropropane | 5.81 | 39 | 9743 | 18.45 | ug/L | 79 |
| 21) acrolein | 5.86 | 56 | 91752 | 165.16 | ug/L | 94 |
| 22) 1,1-dichloroethene | 6.03 | 96 | 65076 | 18.93 | ug/L | 96 |
| 23) acetone | 6.05 | 58 | 4993 | 17.26 | ug/L # | 75 |
| 24) allyl chloride | 6.46 | 76 | 46531 | 18.49 | ug/L | 93 |
| 25) acetonitrile | 6.45 | 40 | 46949 | 169.57 | ug/L # | 70 |
| 26) iodomethane | 6.28 | 142 | 121113 | 18.66 | ug/L | 100 |
| 27) carbon disulfide | 6.38 | 76 | 192311 | 19.06 | ug/L | 98 |
| 28) methylene chloride | 6.65 | 84 | 67996 | 18.67 | ug/L | 91 |
| 29) methyl acetate | 6.44 | 74 | 8834 | 18.02 | ug/L # | 79 |
| 30) 1-chloropropane | 6.66 | 42 | 107359 | 17.28 | ug/L | 97 |
| 31) methyl tert butyl ether | 6.89 | 73 | 168557 | 18.38 | ug/L | 98 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 59183 | 17.50 | ug/L | 96 |
| 33) di-isopropyl ether | 7.41 | 45 | 198729 | 16.52 | ug/L | 97 |
| 34) 2-butanone | 8.08 | 72 | 6298 | 16.34 | ug/L # | 94 |
| 35) 1,1-dichloroethane | 7.46 | 63 | 110612 | 17.41 | ug/L | 98 |
| 36) chloroprene | 7.55 | 53 | 84661 | 17.99 | ug/L | 99 |
| 37) acrylonitrile | 6.93 | 53 | 109907 | 84.93 | ug/L | 99 |
| 38) vinyl acetate | 7.43 | 86 | 8917 | 18.16 | ug/L | 84 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 192034 | 17.97 | ug/L | 96 |
| 40) ethyl acetate | 8.08 | 45 | 8595 | 16.43 | ug/L # | 86 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 49695 | 18.50 | ug/L | 92 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 66171 | 18.02 | ug/L | 93 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54407.D
Acq On : 12 Aug 2015 10:09 am
Operator : TOANP
Sample : CC2289-20
Misc : MS89342,V4B2296,w,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 12 17:18:21 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 8773 | 17.59 ug/L # | 89 |
| 44) propionitrile | 8.19 | 54 | 87507 | 167.66 ug/L | 89 |
| 45) bromochloromethane | 8.40 | 128 | 35744 | 18.96 ug/L | 87 |
| 46) tetrahydrofuran | 8.43 | 42 | 20463 | 16.32 ug/L | 95 |
| 47) chloroform | 8.44 | 85 | 69826 | 18.37 ug/L | 96 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 44553 | 18.33 ug/L | 97 |
| 51) freon 113 | 5.97 | 151 | 38032 | 18.22 ug/L | 94 |
| 52) methacrylonitrile | 8.34 | 41 | 36616 | 15.88 ug/L | 98 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 75033 | 18.67 ug/L | 99 |
| 54) cyclohexane | 8.74 | 84 | 69428 | 15.76 ug/L # | 83 |
| 55) iso-butyl alcohol | 8.83 | 43 | 23688 | 165.14 ug/L | 94 |
| 57) epichlorohydrin | 10.64 | 57 | 29391 | 86.39 ug/L | 100 |
| 58) n-butyl alcohol | 9.53 | 56 | 96335 | 998.61 ug/L | 96 |
| 59) carbon tetrachloride | 8.86 | 117 | 71408 | 18.01 ug/L | 98 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 79539 | 18.05 ug/L | 97 |
| 61) hexane | 7.20 | 57 | 56149 | 16.78 ug/L | 94 |
| 63) benzene | 9.08 | 78 | 239816 | 18.49 ug/L | 98 |
| 64) iso-octane | 9.07 | 57 | 161230 | 15.48 ug/L | 99 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 36924 | 17.91 ug/L | 97 |
| 66) heptane | 9.21 | 57 | 39904 | 17.32 ug/L | 98 |
| 67) isopropyl acetate | 8.99 | 61 | 25790 | 16.64 ug/L # | 86 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 82048 | 19.20 ug/L | 93 |
| 69) trichloroethene | 9.74 | 95 | 67521 | 19.35 ug/L | 99 |
| 72) 2-nitropropane | 10.50 | 41 | 24219 | 17.31 ug/L # | 76 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 174685 | 84.50 ug/L | 98 |
| 74) methyl methacrylate | 9.99 | 100 | 15646 | 18.81 ug/L | 96 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 66617 | 17.88 ug/L | 98 |
| 76) dibromomethane | 10.16 | 93 | 41401 | 19.08 ug/L | 97 |
| 77) methylcyclohexane | 9.94 | 83 | 78127 | 17.41 ug/L | 96 |
| 78) bromodichloromethane | 10.28 | 83 | 89666 | 19.22 ug/L | 100 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 107643 | 17.81 ug/L | 97 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 25135 | 17.55 ug/L | 98 |
| 82) toluene | 11.09 | 92 | 153089 | 18.52 ug/L | 98 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 60866 | 380.72 ug/L | 91 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 96087 | 18.15 ug/L | 97 |
| 85) ethyl methacrylate | 11.27 | 69 | 77985 | 17.81 ug/L | 96 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 52613 | 18.29 ug/L | 97 |
| 87) 2-hexanone | 11.69 | 58 | 21928 | 16.77 ug/L | 89 |
| 89) tetrachloroethene | 11.69 | 164 | 74355 | 19.52 ug/L | 96 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 95390 | 18.48 ug/L | 97 |
| 91) butyl acetate | 11.76 | 56 | 38462 | 16.34 ug/L | 92 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 70834 | 205.02 ug/L | 99 |
| 93) dibromochloromethane | 11.99 | 129 | 76537 | 18.96 ug/L | 98 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 65690 | 19.43 ug/L | 99 |
| 96) chlorobenzene | 12.63 | 112 | 180201 | 19.43 ug/L | 97 |
| 97) 1,1,1,2-tetrachloroethane | 12.69 | 131 | 68537 | 19.33 ug/L | 99 |
| 98) ethylbenzene | 12.68 | 91 | 297416 | 19.25 ug/L | 100 |
| 99) m,p-xylene | 12.80 | 106 | 228496 | 38.81 ug/L | 96 |
| 100) o-xylene | 13.26 | 106 | 118583 | 19.98 ug/L | 97 |
| 101) styrene | 13.27 | 104 | 192333 | 18.98 ug/L | 98 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54407.D
Acq On : 12 Aug 2015 10:09 am
Operator : TOANP
Sample : CC2289-20
Misc : MS89342,V4B2296,w,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 12 17:18:21 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 102) bromoform | 13.57 | 173 | 55977 | 17.84 ug/L | 99 |
| 104) isopropylbenzene | 13.63 | 105 | 297794 | 19.23 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 85294 | 192.98 ug/L | 98 |
| 107) bromobenzene | 14.07 | 156 | 90966 | 20.02 ug/L | 95 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 86876 | 19.15 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 12970 | 11.12 ug/L | 96 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 21298 | 19.81 ug/L | 91 |
| 111) n-propylbenzene | 14.08 | 91 | 337920 | 19.30 ug/L | 99 |
| 113) 2-chlorotoluene | 14.24 | 126 | 76782 | 19.35 ug/L | 97 |
| 114) 4-chlorotoluene | 14.35 | 91 | 213465 | 18.86 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 253047 | 19.41 ug/L | 96 |
| 116) tert-butylbenzene | 14.62 | 119 | 225930 | 19.97 ug/L | 98 |
| 117) pentachloroethane | 14.72 | 167 | 49325 | 21.07 ug/L | 98 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 248088 | 19.75 ug/L | 98 |
| 119) sec-butylbenzene | 14.87 | 105 | 329668 | 19.18 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 163564 | 19.78 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 283787 | 19.75 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 161786 | 19.56 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 146343 | 17.70 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 162295 | 20.10 ug/L | 98 |
| 126) n-butylbenzene | 15.46 | 92 | 135214 | 18.97 ug/L | 98 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 13367 | 18.36 ug/L | 98 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 129430 | 20.09 ug/L | 99 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 96340 | 18.67 ug/L | 96 |
| 131) hexachlorobutadiene | 17.44 | 225 | 69047 | 21.99 ug/L | 96 |
| 132) naphthalene | 17.62 | 128 | 167117 | 18.43 ug/L | 97 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 82679 | 19.00 ug/L | 95 |
| 134) hexachloroethane | 15.89 | 201 | 57045 | 19.15 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

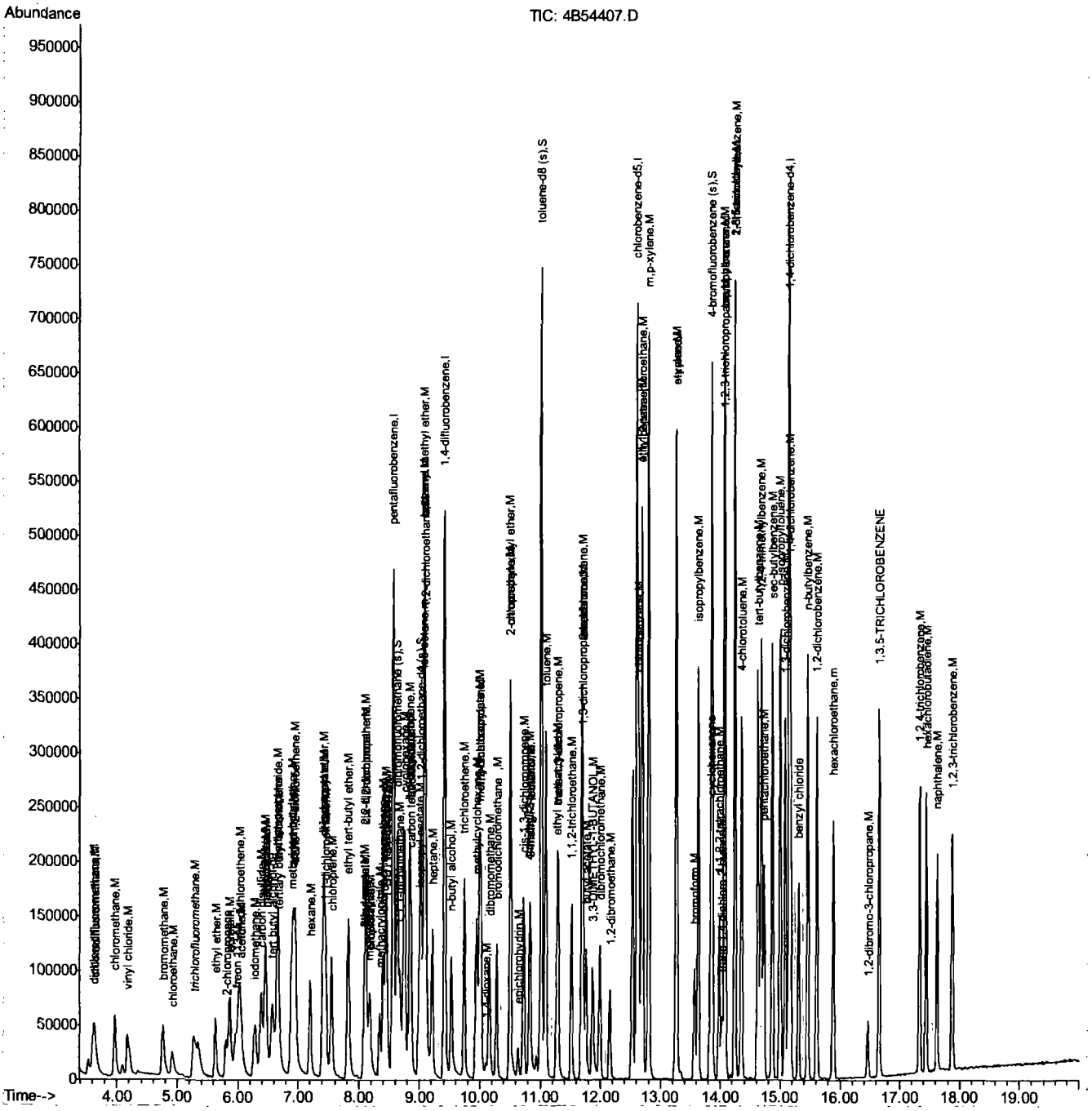
7.7.12

7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54407.D
Acq On : 12 Aug 2015 10:09 am
Operator : TOANP
Sample : CC2289-20
Misc : MS89342,V4B2296,w,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Aug 12 17:18:21 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration










ACCUTEST LABORATORIES JC1107

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54431.D
Acq On : 12 Aug 2015 9:35 pm
Operator : TOANP
Sample : cc2289-50
Misc : MS89499,V4B2297,w,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 13 12:17:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.58 | 65 | 129429 | 500.00 ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 415468 | 50.00 ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.42 | 114 | 477620 | 50.00 ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 432693 | 50.00 ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 251516 | 50.00 ug/L | 0.00 |
| System Monitoring Compounds | | | | | |
| 49) dibromofluoromethane (s) | 8.63 | 113 | 148780 | 49.52 ug/L | 0.00 |
| Spiked Amount 50.000 Range 76 - 120 Recovery = 99.04% | | | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.02 | 65 | 159182 | 48.21 ug/L | 0.00 |
| Spiked Amount 50.000 Range 73 - 122 Recovery = 96.42% | | | | | |
| 80) toluene-d8 (s) | 11.02 | 98 | 556205 | 49.47 ug/L | 0.00 |
| Spiked Amount 50.000 Range 84 - 119 Recovery = 98.94% | | | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 213058 | 48.52 ug/L | 0.00 |
| Spiked Amount 50.000 Range 78 - 117 Recovery = 97.04% | | | | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.68 | 59 | 84461 | 269.77 ug/L # | 60 |
| 3) 1,4-dioxane | 10.11 | 88 | 39527 | 1365.61 ug/L | 96 |
| 7) chlorodifluoromethane | 3.64 | 51 | 186424 | 44.37 ug/L | 96 |
| 8) dichlorodifluoromethane | 3.60 | 85 | 188678 | 46.89 ug/L | 98 |
| 10) chloromethane | 3.96 | 52 | 65673 | 42.68 ug/L | 94 |
| 11) vinyl chloride | 4.18 | 62 | 192470 | 43.53 ug/L | 98 |
| 12) bromomethane | 4.75 | 94 | 122829 | 48.44 ug/L | 98 |
| 13) chloroethane | 4.91 | 64 | 81645 | 46.96 ug/L | 97 |
| 15) trichlorofluoromethane | 5.28 | 101 | 218002 | 52.19 ug/L | 95 |
| 19) ethyl ether | 5.62 | 74 | 69516 | 43.91 ug/L | 87 |
| 20) 2-chloropropane | 5.81 | 39 | 26758 | 53.11 ug/L | 76 |
| 21) acrolein | 5.86 | 56 | 251766 | 474.94 ug/L | 98 |
| 22) 1,1-dichloroethene | 6.02 | 96 | 147705 | 45.03 ug/L | 94 |
| 23) acetone | 6.05 | 58 | 13391 | 48.52 ug/L | 92 |
| 24) allyl chloride | 6.46 | 76 | 85345 | 35.54 ug/L # | 59 |
| 25) acetonitrile | 6.44 | 40 | 115220 | 436.10 ug/L # | 58 |
| 26) iodomethane | 6.27 | 142 | 299889 | 48.41 ug/L | 99 |
| 27) carbon disulfide | 6.38 | 76 | 455752 | 47.34 ug/L | 99 |
| 28) methylene chloride | 6.64 | 84 | 157523 | 45.33 ug/L | 91 |
| 29) methyl acetate | 6.44 | 74 | 23826 | 50.94 ug/L | 92 |
| 30) 1-chloropropane | 6.66 | 42 | 232053 | 39.13 ug/L | 98 |
| 31) methyl tert butyl ether | 6.89 | 73 | 405737 | 46.35 ug/L | 98 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 140402 | 43.51 ug/L | 94 |
| 33) di-isopropyl ether | 7.41 | 45 | 490391 | 42.72 ug/L | 97 |
| 34) 2-butanone | 8.08 | 72 | 16704 | 45.43 ug/L # | 71 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 258391 | 42.62 ug/L | 98 |
| 36) chloroprene | 7.55 | 53 | 208247 | 46.38 ug/L | 97 |
| 37) acrylonitrile | 6.92 | 53 | 269252 | 218.05 ug/L | 100 |
| 38) vinyl acetate | 7.43 | 86 | 22797 | 48.67 ug/L | 99 |
| 39) ethyl tert-butyl ether | 7.83 | 59 | 475652 | 46.64 ug/L | 99 |
| 40) ethyl acetate | 8.08 | 45 | 21027 | 42.13 ug/L | 84 |
| 41) 2,2-dichloropropane | 8.11 | 77 | 110438 | 43.08 ug/L | 94 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 157278 | 44.87 ug/L | 93 |

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54431.D
Acq On : 12 Aug 2015 9:35 pm
Operator : TOANP
Sample : cc2289-50
Misc : MS89499,V4B2297,w,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 13 12:17:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.17 | 85 | 22590 | 47.46 ug/L # | 88 |
| 44) propionitrile | 8.18 | 54 | 219489 | 440.69 ug/L | 99 |
| 45) bromochloromethane | 8.40 | 128 | 88131 | 48.99 ug/L | 87 |
| 46) tetrahydrofuran | 8.43 | 42 | 47797 | 39.94 ug/L | 95 |
| 47) chloroform | 8.44 | 85 | 168508 | 46.45 ug/L | 95 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 119052 | 51.34 ug/L | 95 |
| 51) freon 113 | 5.96 | 151 | 98037 | 49.22 ug/L | 100 |
| 52) methacrylonitrile | 8.34 | 41 | 90451 | 41.12 ug/L | 92 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 188639 | 49.18 ug/L | 98 |
| 54) cyclohexane | 8.74 | 84 | 177367 | 42.19 ug/L | 95 |
| 55) iso-butyl alcohol | 8.82 | 43 | 58940 | 430.59 ug/L | 98 |
| 57) epichlorohydrin | 10.63 | 57 | 76038 | 231.90 ug/L | 99 |
| 58) n-butyl alcohol | 9.53 | 56 | 221461 | 2381.82 ug/L | 98 |
| 59) carbon tetrachloride | 8.86 | 117 | 189343 | 49.54 ug/L | 99 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 188316 | 44.35 ug/L | 97 |
| 61) hexane | 7.20 | 57 | 136418 | 42.30 ug/L | 95 |
| 63) benzene | 9.08 | 78 | 555115 | 44.41 ug/L | 99 |
| 64) iso-octane | 9.06 | 57 | 395449 | 39.39 ug/L | 98 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 99518 | 50.08 ug/L | 96 |
| 66) heptane | 9.21 | 57 | 117599 | 52.96 ug/L | 98 |
| 67) isopropyl acetate | 8.99 | 61 | 61778 | 41.35 ug/L | 96 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 195027 | 47.35 ug/L | 95 |
| 69) trichloroethene | 9.74 | 95 | 158154 | 47.01 ug/L | 98 |
| 72) 2-nitropropane | 10.50 | 41 | 61902 | 45.91 ug/L # | 84 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 466275 | 234.00 ug/L | 97 |
| 74) methyl methacrylate | 9.99 | 100 | 40103 | 50.03 ug/L # | 89 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 156488 | 43.58 ug/L | 99 |
| 76) dibromomethane | 10.16 | 93 | 102771 | 49.15 ug/L | 96 |
| 77) methylcyclohexane | 9.94 | 83 | 208042 | 48.09 ug/L | 94 |
| 78) bromodichloromethane | 10.28 | 83 | 217752 | 48.43 ug/L | 97 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 263266 | 45.19 ug/L | 98 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 63265 | 45.84 ug/L | 97 |
| 82) toluene | 11.09 | 92 | 368320 | 46.23 ug/L | 100 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 136861 | 888.19 ug/L | 95 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 242636 | 47.56 ug/L | 98 |
| 85) ethyl methacrylate | 11.27 | 69 | 204459 | 48.44 ug/L | 96 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 129964 | 46.86 ug/L | 99 |
| 87) 2-hexanone | 11.69 | 58 | 54986 | 43.63 ug/L | 95 |
| 89) tetrachloroethene | 11.69 | 164 | 181202 | 48.20 ug/L | 99 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 236590 | 46.46 ug/L | 97 |
| 91) butyl acetate | 11.76 | 56 | 102266 | 44.02 ug/L | 96 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 146511 | 429.81 ug/L | 98 |
| 93) dibromochloromethane | 11.99 | 129 | 194839 | 48.93 ug/L | 100 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 165820 | 49.71 ug/L | 100 |
| 96) chlorobenzene | 12.63 | 112 | 438940 | 47.97 ug/L | 98 |
| 97) 1,1,1,2-tetrachloroethane | 12.70 | 131 | 168561 | 48.20 ug/L | 99 |
| 98) ethylbenzene | 12.69 | 91 | 720583 | 47.27 ug/L | 99 |
| 99) m,p-xylene | 12.80 | 106 | 551842 | 95.01 ug/L | 98 |
| 100) o-xylene | 13.25 | 106 | 289410 | 49.42 ug/L | 97 |
| 101) styrene | 13.27 | 104 | 481307 | 48.13 ug/L | 97 |

7.7.13 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54431.D
Acq On : 12 Aug 2015 9:35 pm
Operator : TOANP
Sample : cc2289-50
Misc : MS89499,V4B2297,w,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 13 12:17:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 102) bromoform | 13.57 | 173 | 151179 | 48.84 ug/L | 99 |
| 104) isopropylbenzene | 13.63 | 105 | 729179 | 45.67 ug/L | 99 |
| 106) cyclohexanone | 13.83 | 55 | 94188 | 206.75 ug/L | 97 |
| 107) bromobenzene | 14.07 | 156 | 224944 | 48.03 ug/L | 94 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 218683 | 46.77 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 37297 | 31.02 ug/L | 93 |
| 110) 1,2,3-trichloropropane | 14.06 | 110 | 54081 | 48.81 ug/L | 95 |
| 111) n-propylbenzene | 14.08 | 91 | 824563 | 45.69 ug/L | 99 |
| 113) 2-chlorotoluene | 14.24 | 126 | 187490 | 45.84 ug/L | 96 |
| 114) 4-chlorotoluene | 14.35 | 91 | 531006 | 45.50 ug/L | 99 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 622184 | 46.29 ug/L | 100 |
| 116) tert-butylbenzene | 14.62 | 119 | 560881 | 48.11 ug/L | 99 |
| 117) pentachloroethane | 14.72 | 167 | 118734 | 49.21 ug/L | 98 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 616669 | 47.63 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 827056 | 46.68 ug/L | 100 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 419961 | 49.26 ug/L | 100 |
| 121) p-isopropyltoluene | 15.00 | 119 | 708109 | 47.81 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 410032 | 48.09 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 367792 | 43.15 ug/L | 99 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 415526 | 49.92 ug/L | 98 |
| 126) n-butylbenzene | 15.46 | 92 | 345918 | 47.09 ug/L | 98 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 35456 | 47.25 ug/L | 95 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 346698 | 52.22 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 269455 | 50.67 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 167408 | 51.72 ug/L | 98 |
| 132) naphthalene | 17.62 | 128 | 470602 | 50.34 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 231318 | 51.57 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 144789 | 47.15 ug/L | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

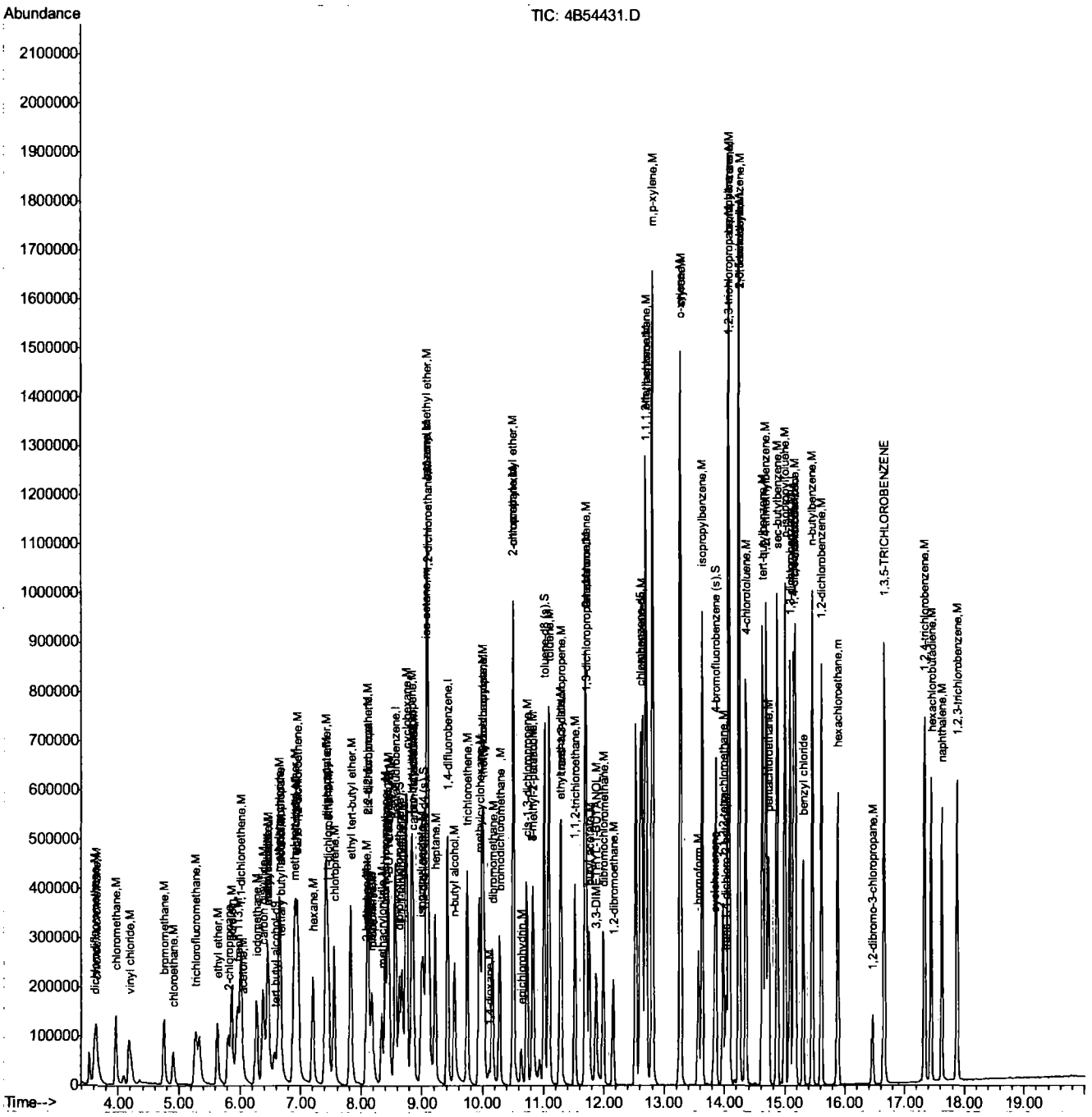
7.7.13 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDChem\1\DATA\
Data File : 4B54431.D
Acq On : 12 Aug 2015 9:35 pm
Operator : TOANP
Sample : cc2289-50
Misc : MS89499,V4B2297,w,,,,1
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Aug 13 12:17:10 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

7.7.13






ACCUTEST LABORATORIES JC1107

Manual Integrations APPROVED (compounds with "m" flag)
Kanya Veerawat
08/13/15 16:53

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54455.D
Acq On : 13 Aug 2015 9:46 am
Operator : TOANP
Sample : cc2289-20
Misc : MS89470,V4B2298,w,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 16:12:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 1) tert butyl alcohol-d9 | 6.57 | 65 | 150330 | 500.00 | ug/L | 0.00 |
| 5) pentafluorobenzene | 8.56 | 168 | 418083 | 50.00 | ug/L | 0.00 |
| 56) 1,4-difluorobenzene | 9.41 | 114 | 472304 | 50.00 | ug/L | 0.00 |
| 88) chlorobenzene-d5 | 12.60 | 117 | 415435 | 50.00 | ug/L | 0.00 |
| 103) 1,4-dichlorobenzene-d4 | 15.14 | 152 | 226426 | 50.00 | ug/L | 0.00 |
| **System Monitoring Compounds** | | | | | | |
| 49) dibromofluoromethane (s) | 8.62 | 113 | 148535 | 49.13 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 76 - 120 Recovery = 98.26% | | | | | | |
| 50) 1,2-dichloroethane-d4 (s) | 9.01 | 65 | 157884 | 47.52 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 73 - 122 Recovery = 95.04% | | | | | | |
| 80) toluene-d8 (s) | 11.01 | 98 | 546541 | 49.15 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 84 - 119 Recovery = 98.30% | | | | | | |
| 105) 4-bromofluorobenzene (s) | 13.86 | 95 | 198566 | 50.23 | ug/L | 0.00 |
| Spiked Amount 50.000 Range 78 - 117 Recovery = 100.46% | | | | | | |

| Target Compounds | | | | | | Qvalue |
|---|---|---|---|---|---|---|
| 2) tertiary butyl alcohol | 6.67 | 59 | 39410 | 108.38 | ug/L # | 63 |
| 3) 1,4-dioxane | 10.10 | 88 | 16946 | 504.06 | ug/L | 90 |
| 7) chlorodifluoromethane | 3.64 | 51 | 76602 | 18.12 | ug/L | 94 |
| 8) dichlorodifluoromethane | 3.60 | 85 | 94062 | 23.23 | ug/L | 97 |
| 10) chloromethane | 3.97 | 52 | 30085 | 19.43 | ug/L | 88 |
| 11) vinyl chloride | 4.17 | 62 | 79325 | 17.83 | ug/L | 96 |
| 12) bromomethane | 4.77 | 94 | 57575 | 22.56 | ug/L | 96 |
| 13) chloroethane | 4.92 | 64 | 38696 | 22.12 | ug/L | 98 |
| 15) trichlorofluoromethane | 5.28 | 101 | 107238 | 25.51 | ug/L | 96 |
| 19) ethyl ether | 5.63 | 74 | 29915 | 18.78 | ug/L | 96 |
| 20) 2-chloropropane | 5.81 | 39 | 8541 | 16.85 | ug/L | 75 |
| 21) acrolein | 5.86 | 56 | 98349 | 184.37 | ug/L | 94 |
| 22) 1,1-dichloroethene | 6.03 | 96 | 67280 | 20.38 | ug/L | 95 |
| 23) acetone | 6.05 | 58 | 6060 | 21.82 | ug/L | 94 |
| 24) allyl chloride | 6.46 | 76 | 52998m | 21.93 | ug/L | |
| 25) acetonitrile | 6.45 | 40 | 56108 | 211.03 | ug/L # | 69 |
| 26) iodomethane | 6.28 | 142 | 118018 | 18.93 | ug/L | 99 |
| 27) carbon disulfide | 6.38 | 76 | 181898 | 18.78 | ug/L | 98 |
| 28) methylene chloride | 6.66 | 84 | 71545 | 20.46 | ug/L | 94 |
| 29) methyl acetate | 6.44 | 74 | 9659 | 20.52 | ug/L # | 76 |
| 30) 1-chloropropane | 6.65 | 42 | 107150 | 17.96 | ug/L | 95 |
| 31) methyl tert butyl ether | 6.89 | 73 | 177561 | 20.16 | ug/L | 100 |
| 32) trans-1,2-dichloroethene | 6.95 | 96 | 59900 | 18.45 | ug/L | 98 |
| 33) di-isopropyl ether | 7.41 | 45 | 199338 | 17.26 | ug/L | 89 |
| 34) 2-butanone | 8.08 | 72 | 7286 | 19.69 | ug/L # | 59 |
| 35) 1,1-dichloroethane | 7.45 | 63 | 115504 | 18.93 | ug/L | 99 |
| 36) chloroprene | 7.54 | 53 | 85663 | 18.96 | ug/L | 95 |
| 37) acrylonitrile | 6.92 | 53 | 120628 | 97.08 | ug/L | 97 |
| 38) vinyl acetate | 7.43 | 86 | 9093 | 19.29 | ug/L | 69 |
| 39) ethyl tert-butyl ether | 7.82 | 59 | 193506 | 18.86 | ug/L | 99 |
| 40) ethyl acetate | 8.08 | 45 | 9056 | 18.03 | ug/L # | 85 |
| 41) 2,2-dichloropropane | 8.10 | 77 | 49026 | 19.01 | ug/L | 97 |
| 42) cis-1,2-dichloroethene | 8.11 | 96 | 69104 | 19.59 | ug/L | 93 |

7.7.14 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54455.D
Acq On : 13 Aug 2015 9:46 am
Operator : TOANP
Sample : cc2289-20
Misc : MS89470,V4B2298,w,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 16:12:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 43) methylacrylate | 8.16 | 85 | 9310 | 19.44 ug/L | 97 |
| 44) propionitrile | 8.18 | 54 | 98385 | 196.30 ug/L | 87 |
| 45) bromochloromethane | 8.40 | 128 | 38299 | 21.16 ug/L | 86 |
| 46) tetrahydrofuran | 8.42 | 42 | 21940 | 18.22 ug/L | 96 |
| 47) chloroform | 8.44 | 85 | 73808 | 20.22 ug/L | 93 |
| 48) T-BUTYL FORMATE | 8.46 | 59 | 45007 | 19.29 ug/L | 98 |
| 51) freon 113 | 5.97 | 151 | 46751 | 23.33 ug/L | 83 |
| 52) methacrylonitrile | 8.34 | 41 | 39353 | 17.78 ug/L | 95 |
| 53) 1,1,1-trichloroethane | 8.67 | 97 | 76830 | 19.90 ug/L | 97 |
| 54) cyclohexane | 8.74 | 84 | 81645 | 19.30 ug/L | 88 |
| 55) iso-butyl alcohol | 8.82 | 43 | 30283 | 219.85 ug/L | 97 |
| 57) epichlorohydrin | 10.63 | 57 | 31372 | 96.75 ug/L | 98 |
| 58) n-butyl alcohol | 9.52 | 56 | 95710 | 1040.95 ug/L | 97 |
| 59) carbon tetrachloride | 8.85 | 117 | 79436 | 21.02 ug/L | 96 |
| 60) 1,1-dichloropropene | 8.83 | 75 | 85160 | 20.28 ug/L | 99 |
| 61) hexane | 7.20 | 57 | 73728 | 23.12 ug/L | 97 |
| 63) benzene | 9.08 | 78 | 244527 | 19.78 ug/L | 98 |
| 64) iso-octane | 9.06 | 57 | 192670 | 19.41 ug/L | 99 |
| 65) tert-amyl methyl ether | 9.09 | 87 | 39108 | 19.90 ug/L | 90 |
| 66) heptane | 9.21 | 57 | 65607 | 29.88 ug/L | 89 |
| 67) isopropyl acetate | 8.99 | 61 | 26711 | 18.08 ug/L | 91 |
| 68) 1,2-dichloroethane | 9.10 | 62 | 87600 | 21.51 ug/L | 97 |
| 69) trichloroethene | 9.73 | 95 | 68429 | 20.57 ug/L | 98 |
| 72) 2-nitropropane | 10.50 | 41 | 26812 | 20.11 ug/L # | 72 |
| 73) 2-chloroethyl vinyl ether | 10.50 | 63 | 175981 | 89.31 ug/L | 96 |
| 74) methyl methacrylate | 9.98 | 100 | 17067 | 21.53 ug/L # | 84 |
| 75) 1,2-dichloropropane | 10.00 | 63 | 67550 | 19.02 ug/L | 99 |
| 76) dibromomethane | 10.16 | 93 | 44549 | 21.55 ug/L | 96 |
| 77) methylcyclohexane | 9.94 | 83 | 98294 | 22.98 ug/L | 95 |
| 78) bromodichloromethane | 10.27 | 83 | 93624 | 21.06 ug/L | 99 |
| 79) cis-1,3-dichloropropene | 10.72 | 75 | 112370 | 19.51 ug/L | 96 |
| 81) 4-methyl-2-pentanone | 10.82 | 58 | 26880 | 19.69 ug/L | 98 |
| 82) toluene | 11.09 | 92 | 160732 | 20.40 ug/L | 97 |
| 83) 3-methyl-1-butanol | 10.83 | 55 | 62035 | 407.12 ug/L | 92 |
| 84) trans-1,3-dichloropropene | 11.29 | 75 | 101607 | 20.14 ug/L | 98 |
| 85) ethyl methacrylate | 11.27 | 69 | 83292 | 19.96 ug/L | 96 |
| 86) 1,1,2-trichloroethane | 11.52 | 83 | 55387 | 20.20 ug/L | 96 |
| 87) 2-hexanone | 11.69 | 58 | 23241 | 18.65 ug/L | 87 |
| 89) tetrachloroethene | 11.69 | 164 | 75007 | 20.78 ug/L | 99 |
| 90) 1,3-dichloropropane | 11.71 | 76 | 101948 | 20.85 ug/L | 99 |
| 91) butyl acetate | 11.76 | 56 | 38982 | 17.48 ug/L | 96 |
| 92) 3,3-DIMETHYL-1-BUTANOL | 11.87 | 57 | 65631 | 200.54 ug/L | 97 |
| 93) dibromochloromethane | 11.99 | 129 | 82270 | 21.52 ug/L | 94 |
| 94) 1,2-dibromoethane | 12.15 | 107 | 69485 | 21.70 ug/L | 98 |
| 96) chlorobenzene | 12.63 | 112 | 185858 | 21.15 ug/L | 97 |
| 97) 1,1,1,2-tetrachloroethane | 12.69 | 131 | 72080 | 21.47 ug/L | 99 |
| 98) ethylbenzene | 12.68 | 91 | 304923 | 20.84 ug/L | 98 |
| 99) m,p-xylene | 12.80 | 106 | 237472 | 42.58 ug/L | 100 |
| 100) o-xylene | 13.25 | 106 | 121567 | 21.62 ug/L | 99 |
| 101) styrene | 13.27 | 104 | 198537 | 20.68 ug/L | 96 |

7.7.14 7

Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54455.D
Acq On : 13 Aug 2015 9:46 am
Operator : TOANP
Sample : cc2289-20
Misc : MS89470,V4B2298,w,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Aug 13 16:12:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration

| Internal Standards | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 102) bromoform | 13.57 | 173 | 62053 | 20.88 ug/L | 98 |
| 104) isopropylbenzene | 13.63 | 105 | 309817 | 21.55 ug/L | 98 |
| 106) cyclohexanone | 13.82 | 55 | 39660 | 96.70 ug/L | 97 |
| 107) bromobenzene | 14.07 | 156 | 94748 | 22.47 ug/L | 94 |
| 108) 1,1,2,2-tetrachloroethane | 13.98 | 83 | 91641 | 21.77 ug/L | 99 |
| 109) trans-1,4-dichloro-2-buten | 14.02 | 53 | 16407 | 15.16 ug/L | 96 |
| 110) 1,2,3-trichloropropane | 14.05 | 110 | 23675 | 23.74 ug/L | 89 |
| 111) n-propylbenzene | 14.08 | 91 | 338064 | 20.81 ug/L | 98 |
| 113) 2-chlorotoluene | 14.24 | 126 | 78090 | 21.21 ug/L | 96 |
| 114) 4-chlorotoluene | 14.35 | 91 | 217681 | 20.72 ug/L | 98 |
| 115) 1,3,5-trimethylbenzene | 14.24 | 105 | 257573 | 21.29 ug/L | 98 |
| 116) tert-butylbenzene | 14.62 | 119 | 230775 | 21.99 ug/L | 98 |
| 117) pentachloroethane | 14.72 | 167 | 54920 | 25.28 ug/L | 97 |
| 118) 1,2,4-trimethylbenzene | 14.68 | 105 | 252059 | 21.63 ug/L | 99 |
| 119) sec-butylbenzene | 14.87 | 105 | 334274 | 20.96 ug/L | 99 |
| 120) 1,3-dichlorobenzene | 15.08 | 146 | 169306 | 22.06 ug/L | 99 |
| 121) p-isopropyltoluene | 15.00 | 119 | 283683 | 21.28 ug/L | 99 |
| 122) 1,4-dichlorobenzene | 15.17 | 146 | 161965 | 21.10 ug/L | 99 |
| 123) benzyl chloride | 15.30 | 91 | 157573 | 20.54 ug/L | 98 |
| 124) 1,2-dichlorobenzene | 15.61 | 146 | 166428 | 22.21 ug/L | 98 |
| 126) n-butylbenzene | 15.46 | 92 | 129900 | 19.64 ug/L | 99 |
| 128) 1,2-dibromo-3-chloropropan | 16.46 | 75 | 14402 | 21.32 ug/L | 93 |
| 129) 1,3,5-TRICHLOROBENZENE | 16.65 | 180 | 130956 | 21.91 ug/L | 100 |
| 130) 1,2,4-trichlorobenzene | 17.33 | 180 | 95782 | 20.01 ug/L | 99 |
| 131) hexachlorobutadiene | 17.44 | 225 | 69583 | 23.88 ug/L | 100 |
| 132) naphthalene | 17.62 | 128 | 171611 | 20.39 ug/L | 99 |
| 133) 1,2,3-trichlorobenzene | 17.88 | 180 | 83561 | 20.70 ug/L | 99 |
| 134) hexachloroethane | 15.89 | 201 | 61838 | 22.37 ug/L | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

7.7.14

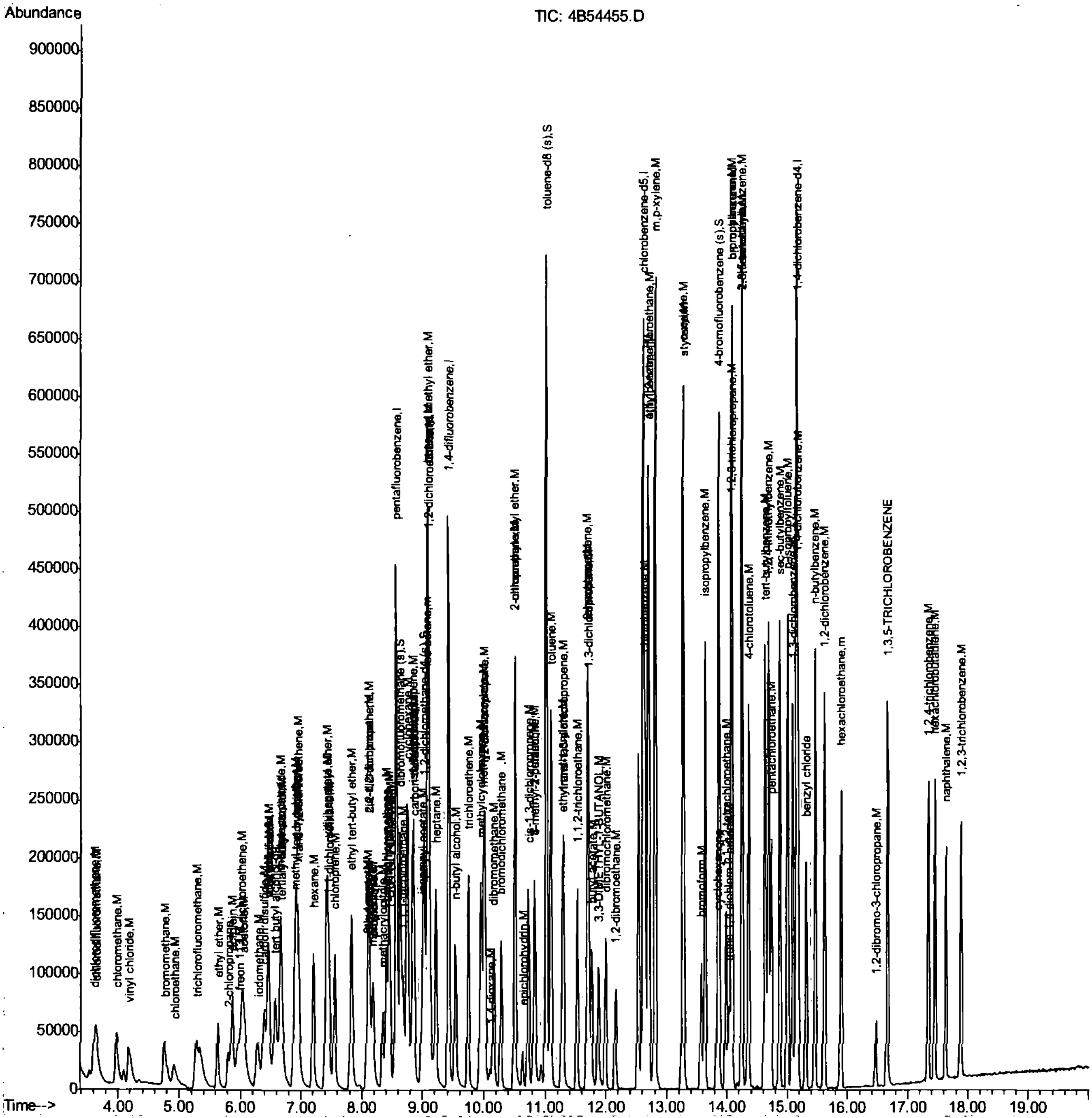
Cal Report: 4B54455.D

Quantitation Report    (QT Reviewed)

```
Data Path : C:\MSDCHEM\1\DATA\
Data File : 4B54455.D
Acq On    : 13 Aug 2015   9:46 am
Operator  : TOANP
Sample    : cc2289-20
Misc      : MS89470,V4B2298,w,,,,1
ALS Vial  : 2   Sample Multiplier: 1

Quant Time: Aug 13 16:12:44 2015
Quant Method : C:\MSDCHEM\1\METHODS\M4B2289.M
Quant Title  : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
QLast Update : Mon Aug 10 08:19:32 2015
Response via : Initial Calibration
```

7.7.14







ACCUTEST LABORATORIES
JC1107

# Manual Integration Approval Summary



| | | | |
|---|---|---|---|
| **Sample Number:** | V4B2298-CC2289 | **Method:** | SW846 8260C |
| **Lab FileID:** | 4B54455.D | **Analyst approved:** | 08/13/15 16:31 Dong, Mei |
| **Injection Time:** | 08/13/15 09:46 | **Supervisor approved:** | 08/13/15 16:53 Kanya Veerawat |

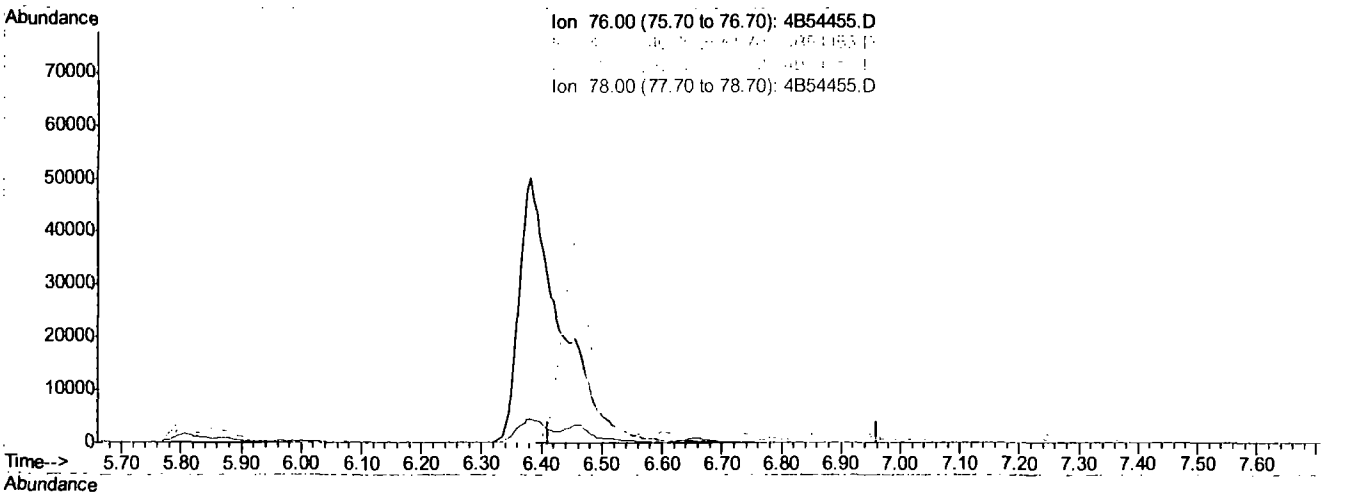
| Parameter | CAS | Sig# | R.T. (min.) | Reason |
|---|---|---|---|---|
| Allyl chloride | 107-05-1 | | 6.46 | Poor instrument integration |

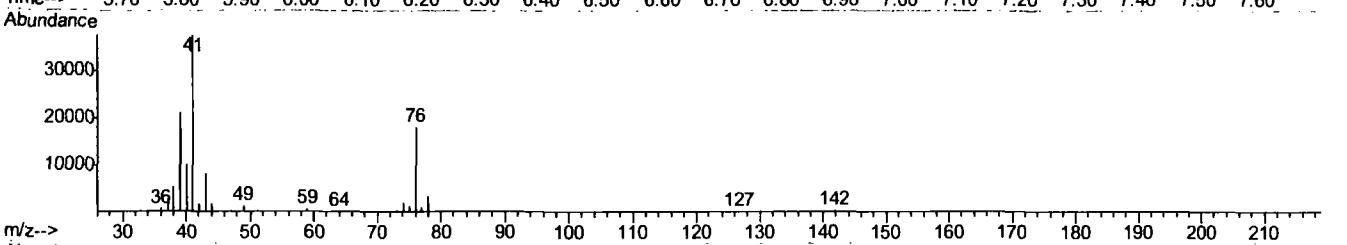
Quantitation Report (Qedit)

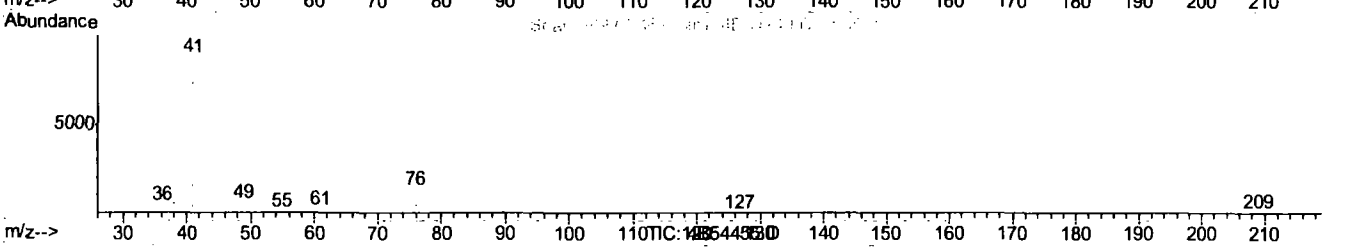
Data File : C:\MSDCHEM\1\DATA\4B54455.D Vial: 2
Acq On : 13 Aug 2015 9:46 am Operator: TOANP
Sample : cc2289-20 Inst : MS4B
Misc : MS89470,V4B2298,w,,,,1 Multiplr: 1.00
MS Integration Params: RTEINT.P

Quant Time: Aug 13 10:27:09 2015 Results File: M4B2289.RES

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Mon Aug 10 08:19:32 2015
Response via : Multiple Level Calibration




(24) allyl chloride (M)

6.46min 0.00ug/L

response 0

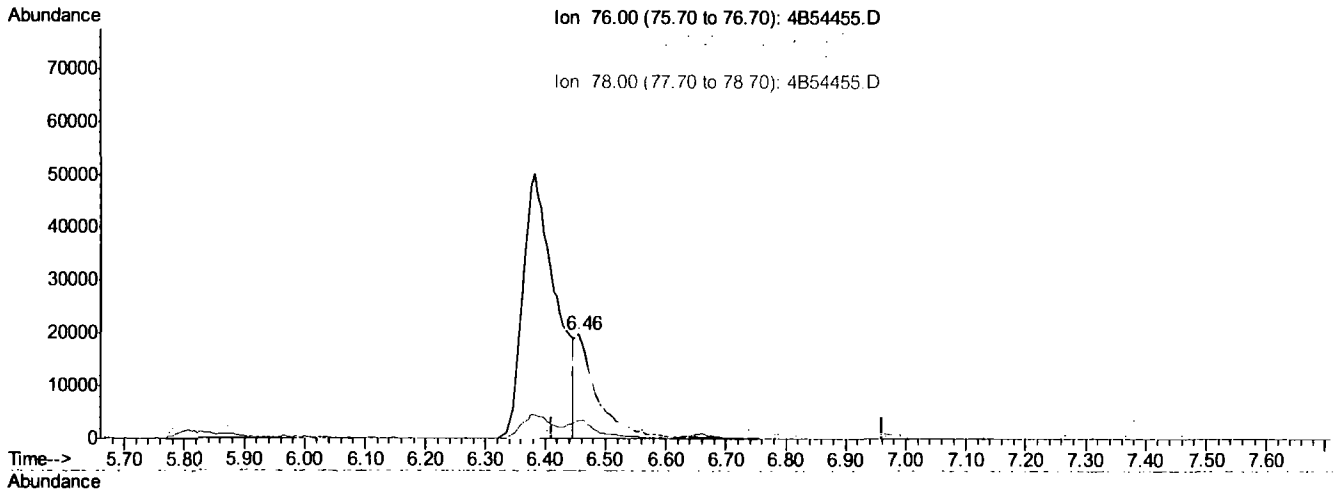
| Ion | Exp% | Act% |
|---|---|---|
| 76.00 | 100 | 0.00 |
| 41.00 | 208.30 | 0.00# |
| 39.00 | 110.00 | 0.00# |
| 78.00 | 18.00 | 0.00 |

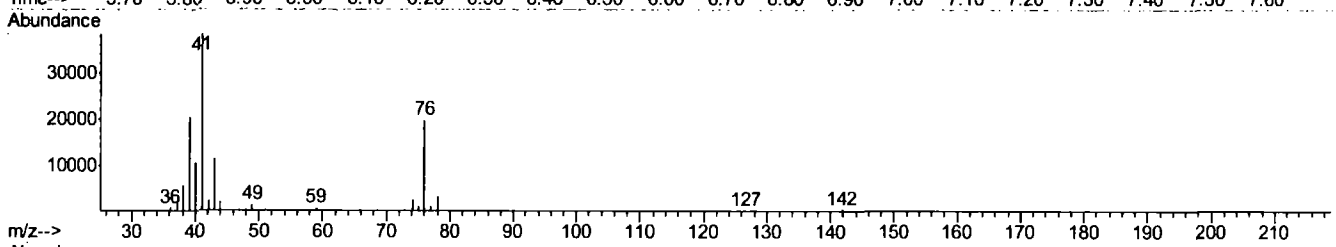
Quantitation Report (Qedit)

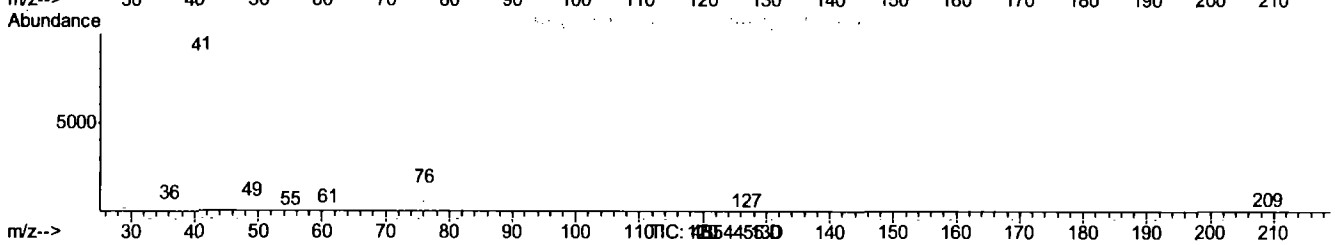
Data File : C:\MSDCHEM\1\DATA\4B54455.D  Vial: 2
Acq On : 13 Aug 2015 9:46 am  Operator: TOANP
Sample : cc2289-20  Inst : MS4B
Misc : MS89470,V4B2298,w,,,,1  Multiplr: 1.00
MS Integration Params: RTEINT.P

Quant Time: Aug 13 10:27:09 2015  Results File: M4B2289.RES

Method : C:\MSDCHEM\1\METHODS\M4B2289.M (RTE Integrator)
Title : Method SW846 V8260C, ZB624 60mx0.25mmx1.4um
Last Update : Mon Aug 10 08:19:32 2015
Response via : Multiple Level Calibration




(24) allyl chloride (M)

6.46min 21.93ug/L m

response 52998

| Ion | Exp% | Act% |
|---|---|---|
| 76.00 | 100 | 100 |
| 41.00 | 208.30 | 194.73 |
| 39.00 | 110.00 | 103.89 |
| 78.00 | 18.00 | 17.39 |

ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B 2289

**Print Analyst Name:** Tuan Pham

**Date:** 8/5/15

**Analyst Signature:** [signature]

**Columns:** 8x24 (60m x 0.25mm x 1.4µm)

**Method** Above

**Initial Cal. Method** V4B 2289

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 93.14 A | 100 ppm |
| V015-2114 | 72.45 B | 100 ppm |
| V015-2114 | 96.11 C | 100 ppm |
| V015-2114 | 82 E. acrylate | 100 ppm |
| V015-2114 | 54.46 Acr | 1000 ppm |
| V015-2114 | [illegible] | 100 ppm |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| V015-2114 | 95.4 Ext A | 100 ppm |
| V015-2114 | 73.17 Ext B | 100 ppm |
| V015-2114 | 94.5 Ext C | 100 ppm |
| V015-2114 | 92.4 Hex | 100 ppm |
| V015-2114 | Ext E. acrylate | 100 ppm |
| V015-2114 | [illegible] Acr | 1000 ppm |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** [signature] **Date:** 8/6/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* < 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4B54241 | DFB | | | | | | | | | | | ok | | |
| | 54242 | IC2289-0.2 | 8260 | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 1µl/500ml | |
| | 54243 | IC2289-0.5 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 2.5µl/500ml | |
| | 54244 | IC2289-1 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 5µl/500ml | |
| | 54245 | IC2289-2 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 10µl/500ml | |
| | 54246 | IC2289-5 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 10µl/200ml | |
| | 54247 | IC2289-10 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 10µl/100ml | |
| | 54248 | IC2289-20 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 10µl/50ml | |
| | 54249 | IC2289-50 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 25µl/50ml | |
| | 54250 | IC2289-100 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 50µl/50ml | |
| | 54251 | IC2289-200 | ✓ | W | | | 5 | | | | | | ok | A, B, C, Acr, E. acrylate 100µl/10ml | |
| | 54252 | IB | | | | | | | | | | | | | |
| | 54253 | IB | | | | | | | | | | | | | |
| | 54254 | IC2289-50 | 8260 | W | | | 5 | | | | | | ok | Ext A, B, C, Acr, 2µl Hex 25µl/10ml | |
| | 54255 | IB | | | | | | | | | | | | | |
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MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

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7.8.1

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ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B 2296

**Print Analyst Name:** Tuan Phan

**Date:** 8/12/15

**Analyst Signature:** [signature]

**Columns:** 7.8.2 [illegible]

**Method** 8260C

**Initial Cal. Method** M4B2284

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| 1015-244 | -93.25 A | 100 ppm |
| 1015-244 | -72.53 B | 100 ppm |
| 1015-244 | -106.2 C | 100 ppm |
| 1015-244 | -101.9 AV | 1000 ppm |
| 216814 | PH paper exp 6/15/17 | |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| 1015-244 | -95.17 Ext A | 100 ppm |
| ~~1015-244~~ | ~~[illegible] Ext B~~ | 100 ppm |
| 1015-244 | -114.1 Ext C | 100 ppm |
| 1015-244 | -107.1 Ext AV | 1000 ppm |
| 1015-244 | -89 IS 2701200 | ppm |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** [signature] **Date:** 8/18/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4B54405 | MFB | | | | | | | | | | | ok | | |
| | 54406 | LL 2284-20 | | | | | 5 | | | | | | ok | A, B, C, AV | |
| | 54407 | LL2289-20 | | | | | 5 | | | | | | ok | 2 dry some 54#↓ | |
| | 54408 | IB | | | | | | | | | ✓ | ✓ | ok | | |
| | 54409 | MB | | | | | 5 | | | | ✓ | ✓ | ok | | |
| | 54410 | BS | | | | | 5 | | | | ✓ | ✓ | ok | Ext A, B, C, AV 2 dry some B | |
| | 54411 | IB | | | | | | | | | ✓ | ✓ | ok | [illegible] | |
| R | 54412 | TC870-2 | 89345 TCL20T TBH | GW | 1 | | 5 | | 1x | | ✓ | ✓ | [illegible] | chk 54#↓ | ✓ |
| R | 54413 | TC960-3 | 89378 [illegible] NJTCL14 | GW | 7 | | 5 [illegible] | | 1x | | ✓ | ✓ | ok | for [illegible] 43 [illegible] 8/12/15 | ✓ |
| R | 54414 | TC960-3 | ✓ | GW | 7 | | 5/10 | | 10x | | ✓ | ✓ | ok | | ✓ |
| F/R | 54415 | TC870-1 | 89345 TCL20T TBH | GW | 2 | | 5/10 | | 10x | | ✓ | ✓ | ok | | ✓ |
| | 54416 | TC1107-3 | 89470 SL | GW | 3 | | 5 | | 1x | | ✓ | ✓ | ok | VTCQC | ✓ |
| | 54417 | TC1024-1 | 89494 TCL20 TBH | GW | 4 | | 5 | | 1x | | ✓ | ✓ | RR | chk fail | ✓ |
| | 54418 | TC1024-2 | ✓ | GW | 4 | | 5 | | 1x | | ✓ | ✓ | RR | chk fail | ✓ |
| | 54419 | TC1024-3 | ✓ | GW | 4 | | 5 | | 1x | | ✓ | ✓ | RR | chk fail | ✓ |
| | 54420 | TC1107-3 mg | 89470 SL | GW | | | | | | | ✓ | ✓ | ok | VTCQC | ✓ |
| | 54421 | TC1107-3 mgd | ✓ | GW | | | | | | | ✓ | ✓ | ok | VTCQC | ✓ |

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1

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ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B 2296

**Print Analyst Name:** Tom Pham

**Date:** 8/12/15

**Analyst Signature:** [signature]

**Columns:** 23624 (60m x 0.25mm x 1.4µm)

**Method** 8260C

**Initial Cal. Method** M4B2259

| Standard Data | | | Standard Data | | |
|---|---|---|---|---|---|
| Lot # | Description | Conc. | Lot # | Description | Conc. |
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See page

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** [signature] **Date:** 8/18/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4B54422 | IB | | | | | | | | | ✓ | ✓ | ok | | |
| | 54423 | TC 1107-11 | 54449 SL | WEB | 2 | | 5 | | 1x | | ✓ | ✓ | ok | VTCQC | ✓ |
| | 54424 | TC1107-12 | ✓ | WTB | 2 | | 5 | | 1x | | ✓ | ✓ | ok | VTCQC | ✓ |
| | 54425 | TC1107-1 ~~TC1024-16~~ | ~~54449~~ ~~TC1024~~ | GW | 2 | | 5 | | 1x | | ✓ | ✓ | ok | VTCQC | ✓ |
| | 54426 | TC1107-2 ~~TC1024-4~~ 4 | ✓ | GW | 4 | | 5 | | 1x | | ✓ | ✓ | ok | VTCQC | ✓ |
| | 54427 | TC1107-4 ~~TC1024-5~~ | ✓ | GW | 4 | | 5 | | 1x | | ✓ | ✓ | ok | VTCQC | ✓ |
| | 54428 | TC1107-5 ~~TC1024-14~~ | ✓ | GW | 5 | | 5 | | 1x | | ✓ | ✓ | ok | VTCQC | ✓ |
| | 54429 | TC1107-6 ~~TC1024-15~~ | ✓ | GW | 5 | | 5 | | 1x | | ✓ | ✓ | ok | VTCQC 8:30pm | ✓ |
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MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
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ACCUTEST

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B2297

**Print Analyst Name:** Tocin Pham

**Date:** 8/13/15

**Analyst Signature:** [signature]

**Columns:** 7362xp 60m x 0.25mm x 1.4µm

**Method** 8260C

**Initial Cal. Method** M4B2289

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| 1015-244 | -93.15 A | 100ppm |
| 1015-244 | -72.53 B | 100ppm |
| 1015-244 | -106.2 C | 100 ppm |
| 1015-244 | -101.9 Acr | 1000 ppm |
| 216814 | pH paper exp 6/15/17 | |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| 1015-244 | -95.17 Ext A | 100ppm |
| ~~1015-244~~ | ~~-[illegible] Ext B~~ | ~~100 ppm~~ |
| 1015-244 | -111.1 Ext C | 100 ppm |
| 1015-244 | -107.1 Ext Acr | 1000 ppm |
| 1015-244 | -89 IS 250 | 2500 ppm |

**Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.**

**Supervisor Signature:** [signature] **Date:** 8/18/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* < 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 54430 | BFB | | | | | | | | | | | ok | | |
| | 54431 | CC2289-50 | | | | | 5 | | | | | | ok | A, B, C, Acr 25µg/ione | |
| | 54432 | IB | | | | | | | | | ✓ | ✓ | ok | | |
| | 54433 | MB | | | | | 5 | | | | ✓ | ✓ | ok | | |
| | 54434 | MS | | | | | 5 | | | | ✓ | ✓ | ok | 25µg/ione B Ext A, B, C, Acr | |
| | 54435 | TC869-1 M | 89344 TCL2+TBA | GW | 2 | | 5/10 | | 10x | | ✓ | ✓ | [illegible] | [illegible] | ✓ |
| | 54436 | TC869-1 MSL | ✓ | GW | 2 | | 5/10 | | 10x | | ✓ | ✓ | [illegible] | A, B, C, Acr 25µg/ione | ✓ |
| | 54437 | IB | | | | | | | | | ✓ | ✓ | ok | | |
| | 54438 | TC869-5 | 89344 TCL2+TBA | WFB | 2 | | 5 | | 1x | | ✓ | ✓ | ok | | ✓ |
| | 54439 | TC869-6 | ✓ | WFB | 2 | | 5 | | 1x | | ✓ | ✓ | ok | | |
| | 54440 | TC869-1 | ✓ | GW | 2 | | 5/10 | | 10x | | ✓ | ✓ | ok RR | RR1x [illegible] | ✓ |
| | 54441 | TC869-3 | ✓ | GW | 1 | | 5 | | 1x | | ✓ | ✓ | ok | | ✓ |
| | 54442 | TC869-4 | ✓ | GW | 2 | | 5 | | 1x | | ✓ | ✓ | ok | | ✓ |
| | 54443 | TC869-2 | ✓ | GW | 2 | | 5 | | 1x | | ✓ | ✓ | ok | | ✓ |
| | 54444 | TC869-2 | ✓ | GW | 2 | | 5/10 | | 10x | | ✓ | ✓ | ok | 2/3 + 54443 | ✓ |
| | 54445 | TC1024-16 ~~TC1107-1~~ | 89470 FB ~~S69~~ | GW | 1 | | 5 | | 1x | | ✓ | ✓ | ok | 89499 TCL2+TBA ~~VTCOL~~ Not | ✓ |
| | 54446 | TC1024-4 ~~TC1107-2~~ | ✓ | GW | 1 | | 5 | | 1x | | ✓ | ✓ | ok | ~~VTCOL~~ [illegible] 8/12/15 | ✓ |

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ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B2297

**Print Analyst Name:** Tuan Pham

**Date:** 8/12/15

**Analyst Signature:**

**Columns:** 624 (60m x 0.25mm x 1.4u)

**Method** 8260C

**Initial Cal. Method** V4B2289

| Standard Data | | |
|---|---|---|
| Lot # | Description | Conc. |
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| Standard Data | | |
|---|---|---|
| Lot # | Description | Conc. |
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Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** _____ **Date:** 8/18/15

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Matrix | TC1024-5 TC1107-4 | 8/9/15 TC1024 TC1107 SL9 | GW | 1 | | 5 | | 1x | | ✓ | ✓ | ok | VTCAC | ✓ |
| | 54448 | TC1024-14 TC1107-5 | ✓ | GW | 2 | | 5 | | 1x | | ✓ | ✓ | ok | VTCAC | ✓ |
| | 54449 | TC1024-15 TC1107-6 | ✓ | GW | 2 | | 5 | | 1x | | ✓ | ✓ | RR | VTCAC 1x matrix up | ✓ |
| | 54450 | TC1107-8 | 8/9/15 SL | GW | 2 | | 5 | | 1x | | ✓ | ✓ | ok | VTCAC | ✓ |
| | 54451 | TC1107-7 | ✓ | GW | 2 | | 5 | | 1x | | ✓ | ✓ | ok | VTCAC | ✓ |
| | 54452 | TC1107-9 | ✓ | GW | 2 | | 5 | | 1x | | ✓ | ✓ | ok | VTCAC | ✓ |
| | 54453 | TC1107-10 | ✓ | GW | 2 | | 5 | | 1x | | ✓ | ✓ | ok | VTCAC 7:48am | ✓ |

ZM 8/13/15

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

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7.8.3

ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B2297/V2B2298

**Print Analyst Name:** Jean Zobel Williams

**Date:** 8/13/15

**Analyst Signature:**

**Columns:** ZB624

**Method:** V8260C

**Initial Cal. Method** ~~MB2~~ 4B2289 EH 8/13/15

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| VOA 2414 | 95.19 BHA | 100 ppm |
| VOA 2414 | 120.1 BHB | 100 ppm |
| VOA 2414 | 111.1 BHC | 100 ppm |
| VOA 2414 | 107.1 BHMXD | 1000 ppm |
| VOA 2414 | 92.2 HCA | 100 ppm |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| VOA 2414 | 93.25 A | 100 ppm |
| VOA 2414 | 78.53 B | 100 ppm |
| VOA 2414 | 106.2 C | 100 ppm |
| VOA 2414 | 101.9 AUD | 1000 ppm |
| VOA 2414 | 89 IS | 25/200 ppm |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** 21684 pH 8/14 **Date:** 8/14/2015

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4B54454 | BFB | | | | | | | | | | | ok | 9.00am | |
| | 54455 | CC 2289-20 | | | | | | | | | | | ok | 10ml 50ml HIST AIBICIAUD | |
| | 54456 | IB | | | | | | | | | | | ok | | |
| | 54457 | MB2 | | | | | | | | | ✓ | | ok | | |
| | 54458 | JC 869-3 DUP | B9341 TCL20+TBR | GW | 2 | | | | | | ✓ | | ok | | ✓ |
| | 54459 | JC 869-4 MS | ✓ | GW | 1 | | | | | | ✓ | | ok | 21.5ml 14.5ml AIBICIA CID | ✓ |
| | 54460 | IB | | | | | | | | | | | | | |
| | 54461 | MB1 | | | | | | | | | ✓ | | ok | | |
| | 54462 | BS | | | | | | | | | ✓ | | ok | 25ml 50ml STD D EH AIBICI HCA IBLA | |
| DILR | 54463 | JC979-B | B9406 TCL20 | GW | 4 | | (100ml)/50 | | 500X | | ✓ | | NOT USED ok | ~~Vial difference~~ ok. Auto e. After | ✓ |
| | 54464 | JC1045-1S | B9449 SC9 | GW | 3 | | 5 | | 1X | | ✓ | | ok | | ✓ |
| R | 54465 | JC1024-1 | B9499 TCL20+TBR | GW | 5 | | 5 | | 1X | + | ✓ | | ok | | ✓ |
| R | 54466 | JC1024-2 | ✓ | GW | 5 | | 5 | | 1X | T | ✓ | | ok | | ✓ |
| | 54467 | JC1045-1SMS | B9449 SC9 | GW | 1 | | 5 | | 1X | | ✓ | | ok | | ✓ |
| | 54468 | JC1045-1SMSD | ✓ | GW | 4 | | 5 | | 1X | | ✓ | | ok | | ✓ |
| DILR | 54469 | JC 979-B TB | B9406 TCL20 | GW | 3 | | (200ml)/10 | | 250X | | ✓ | | NOT USED | Vial difference | ✓ |
| | 54470 | JC1024-3 | B9499 TCL20+TBR | GW | 5 | | 5 | | 1X | ✓ | ✓ | | ok | | ✓ |

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Rev. Date: 2/14/2007

ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B2297/V2B2298

**Print Analyst Name:** Joan Johnson

**Date:** 8/13/15

**Analyst Signature:**

**Columns:** ZB624

**Method** V8260C

**Initial Cal. Method** ~~MB~~ 4B2289 EM 8/13/15

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| VOT 2444 | 95.19 EHB | 100 ppm |
| VOT 2444 | 120.1 EHB | 100 ppm |
| VOT 2444 | 111.1 EHL | 100 ppm |
| VOT 2444 | 107.1 EHBCM | 1000 ppm |
| VOT 2444 | 92.2 Hex | 100 ppm |

**Standard Data**

| Lot # | Description | Conc. |
|---|---|---|
| VOT 2444 | 93.25 A | 100 ppm |
| VOT 2444 | 75.53 B | 100 ppm |
| VOT 2444 | 106.2 C | 100 ppm |
| VOT 2444 | 101.9 ALL | 1000 ppm |
| VOT 2444 | 89 IS | 25/200 ppm |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** 216814 pH ok **Date:** 8/14/2015

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 4B54454 | BFB | | | | | | | | | | | ok | 9.00am | |
| | 54455 | CC 2289-20 | | | | | | | | | | | ok | 10ml 50ml HIST ABICIAHO | |
| | 54456 | IB | | | | | | | | | | | ok | | |
| | 54457 | MB2 | | | | | | | | | ✓ | | ok | | |
| | 54458 | JC860-3DUP | B9341 TCL20+IBM | GW | 2 | | | | | | ✓ | | ok | | ✓ |
| | 54459 | JC860-4MS | ✓ | GW | 1 | | | | | | ✓ | | ok | 21.5ml 14.5ml ABICIA CTO | ✓ |
| | 54460 | IB | | | | | | | | | | | | | |
| | 54461 | MB1 | | | | | | | | | ✓ | | ok | | |
| | 54462 | BS | | | | | | | | | ✓ | | ok | 25ml 50ml STOD EH ABICI HEX IBM | |
| DIL R | 54463 | JC979-B | B9406 TCL20 | GW | 4 | | (100ml)/50 | | 500X | | ✓ | | NOT USED ok | ~~Vial difference~~ ok ~~Auto e. Inter~~ | approved on log |
| | 54464 | JC1045-1S | B9449 SC9 | GW | 3 | | 5 | | 1X | | ✓ | | ok | | ✓ |
| R | 54465 | JC1024-1 | B9499 TCL20+IBM | GW | 5 | | 5 | | 1X | + | ✓ | | ok | | ✓ |
| R | 54466 | JC1024-2 | ✓ | GW | 5 | | 5 | | 1X | T | ✓ | | ok | | ✓ |
| | 54467 | JC1045-1SMS | B9449 SC9 | GW | 1 | | 5 | | 1X | | ✓ | | ok | | ✓ |
| | 54468 | JC1045-1SMSD | ✓ | GW | 4 | | 5 | | 1X | | ✓ | | ok | | ✓ |
| DIL R | 54469 | JC979-B +B | B9406 TCL20 | GW | 3 | | (200ml)/50 | | 250X | | ✓ | | NOT USED | Vial difference | ✓ |
| | 54470 | JC1024-3 | B9499 TCL20+IBM | GW | 5 | | 5 | | 1X | ✓ | ✓ | | ok | | ✓ |

MTX = Matrix Designate W for water, S for soil, O for oil. L+ = Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt. = volume (ul) extract injected * IF pH > 2, comment on sample result.
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ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B2298

**Print Analyst Name:** Zoblil H Ann 1

**Analyst Signature:**

**Columns:** ZB624

**Method** V8260DC

**Initial Cal. Method** M3B2289

**Date:** 8/18/15

| Standard Data | | |
|---|---|---|
| Lot # | Description | Conc. |
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| Standard Data | | |
|---|---|---|
| Lot # | Description | Conc. |
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| | ref pg 13 | |
| | | |

**Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.**

**Supervisor Signature:** **Date:** 8/19/2015

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* < 2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 54471 | JC1024-15 | 89449 TCLZOL TOP | G W | 4 | | 5 | | 1x | + | ✓ | | ok | | ✓ |
| | 54472 | JC1045-1 | 89449 SCG | G W | 1 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54473 | JC1045-2 | ✓ | G W | 1 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54474 | JC1045-3 | ✓ | G W | 1 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54475 | JC1045-4 | ✓ | G W | 2 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54476 | JC1045-5 | ✓ | G W | 2 | | 5 | | 1x | | ✓ | | ok | 8:15 pm | ✓ |
| | 54477 | BFB2 | | | | | | | | | | | ok | 8:43 pm | |
| | 54478 | CC2289-50 | | | | | | | | | ✓ | | ok | 25ml 50mL A1B1C1ACN | |
| | 54479 | IB | | | | | | | | | ✓ | | clip | | |
| | 54480 | MB2 | | | | | | | | ✓ | ✓ | | ok | | |
| | 54481 | JC1045-6 | 89449 SCG | G W | 1 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54482 | JC1045-7 | ✓ | G W | 2 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54483 | JC1045-8 | ✓ | G W | 2 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54484 | JC1045-9 | ✓ | G W | 2 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54485 | JC1045-10 | ✓ | G W | 1 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54486 | JC1045-11 | ✓ | G W | 1 | | 5 | | 1x | | ✓ | | ok | | ✓ |
| | 54487 | JC1045-12 | ✓ | G W | 2 | | 5 | | 1x | | ✓ | | ok | | ✓ |

MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007

ACCUTEST.

# VOLATILE ANALYSIS LOG

**Batch ID:** V4B 2298

**Print Analyst Name:** [illegible]

**Date:** 8/13/15

**Analyst Signature:** [signature]

**Columns:** ZB624

**Method** V8260C

**Initial Cal. Method** [illegible] 2289 2/1, 8/18/23

| Standard Data | | |
|---|---|---|
| Lot # | Description | Conc. |
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| Standard Data | | |
|---|---|---|
| Lot # | Description | Conc. |
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| | | |
| | ref pg 13 | |
| | | |

Manually integrated chromatographic peaks in the following reportable files have been reviewed and verified to comply with the criteria of Accutest SOP EQA044.

**Supervisor Signature:** [signature] **Date:** 8/14/2015

| R | Data File | Sample ID | Test | MTX | Vial # | ALS # | Samp. Amt (ml or g) | MOH amt. (ul) | Secondary dilution | L+ | IS | SU | Status (Data) | Comments | pH* <2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 54488 | JC1045-14 | 8944A SCA | G W | 1 | | 5 | | 1X | | W | | OK | | ✓ |
| | 54489 | JC1045-16 | V | G | 1 | | 5 | | 1X | | W | | Hot ok | Cut up 20 Sample 2:1 Lam KRW RAIX | ✓ |
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MTX = Matrix Designate W for water, S for soil, O for oil. L+ =Library Search. IS = Internal Standard Area. SU = Surrogate.
Sample Amt = Volume (ML) or Weight (g); MOH amt.= volume (ul) extract injected * IF pH > 2, comment on sample result.
All strike outs must be initialed, dated and reason code applied as follows: 1 = reviewer correction error; 2 = transcription error; 3 = computer miscalculation; 4 = analyst's correction error

Form: OR001-9
Rev. Date: 2/14/2007



7.8.4

B

B

# Appendix B

# Third Quarter 2015 Effluent Air Laboratory Analytical Reports

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7/30/2015
Mr. Peter Hollatz
AECOM Environment
27755 Diehl Road
Suite 100
Warrenville IL 60555

Project Name: UTC-SER-9/10
Project #: 60339110
Workorder #: 1507260

Dear Mr. Peter Hollatz

The following report includes the data for the above referenced project for sample(s) received on 7/17/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Air Toxics Ltd. for your air analysis needs. Air Toxics Ltd. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott
Project Manager

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# WORK ORDER #: 1507260

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Mr. Peter Hollatz<br>AECOM Environment<br>27755 Diehl Road<br>Suite 100<br>Warrenville, IL 60555 | **BILL TO:** | Accounts Payable-Warrenville<br>AECOM Environment<br>27755 Diehl Road<br>Suite 100<br>Warrenville, IL 60555 |
| **PHONE:** | 630-836-1700 | **P.O. #** | 60339110 |
| **FAX:** | 630-836-1711 | **PROJECT #** | 60339110 UTC-SER-9/10 |
| **DATE RECEIVED:** | 07/17/2015 | **CONTACT:** | Ausha Scott |
| **DATE COMPLETED:** | 07/30/2015 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 01A | P1SVE-EFFC2-0716/15 | Modified TO-14A | 3.9 "Hg | 14.7 psi |
| 02A | P1SVE-EFFC3-0716/15 | Modified TO-14A | 5.5 "Hg | 15 psi |
| 03A | P1SVE-EFFC1-0716/15 | Modified TO-14A | 3.3 "Hg | 14.9 psi |
| 04A | P2SVE-EFFC4-0716/15 | Modified TO-14A | 5.1 "Hg | 15.1 psi |
| 05A | P2SVE-EFFC5-0716/15 | Modified TO-14A | 4.1 "Hg | 14.9 psi |
| 06A | Lab Blank | Modified TO-14A | NA | NA |
| 07A | CCV | Modified TO-14A | NA | NA |
| 08A | LCS | Modified TO-14A | NA | NA |
| 08AA | LCSD | Modified TO-14A | NA | NA |

CERTIFIED BY: Heidi Hayes DATE: 07/30/15

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 956:
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**
**Modified TO-14A**
**AECOM Environment**
**Workorder# 1507260**

Five 1 Liter Summa Canister samples were received on July 17, 2015. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications. Please note that TO-14A was validated for specially treated canisters, and the use of Tedlar bags for sample collection is outside the scope of the method.

| *Requirement* | *TO-14A* | *ATL Modifications* |
|---|---|---|
| Initial Calibration criteria | RSD</=30% | Follow TO-15 requirements of RSD</=30% with two compounds allowed out to </=40%RSD. |
| BFB absolute abundance criteria | Within 10% of that from previous day | CCV internal standard area counts are compared to ICAL, corrective action when recovery is less than 60%. |
| Blank acceptance criteria | <0.20 ppbv | <Reporting Limit |
| Sample Drying System | Nafion Dryer | Multibed hydrophobic sorbent |
| BFB ion abundance criteria | Ion abundance listed in Table 4 of TO-14A | Follow ion abundance criteria listed in Method TO-15 |

**Receiving Notes**

There were no receiving discrepancies.

**Analytical Notes**

There were no analytical discrepancies.

**Definition of Data Qualifying Flags**

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction no performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.
C - Estimated calculation due to estimated sampling rate.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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# Summary of Detected Compounds
# MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

**Client Sample ID: P1SVE-EFFC2-0716/15**

**Lab ID#: 1507260-01A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.2 | 1.7 | 4.6 | 6.9 |
| 1,1-Dichloroethane | 1.2 | 17 | 4.6 | 71 |
| cis-1,2-Dichloroethene | 1.2 | 4.2 | 4.6 | 17 |
| 1,1,1-Trichloroethane | 1.2 | 64 | 6.3 | 350 |
| Trichloroethene | 1.2 | 18 | 6.2 | 98 |
| Tetrachloroethene | 1.2 | 8.6 | 7.8 | 58 |

**Client Sample ID: P1SVE-EFFC3-0716/15**

**Lab ID#: 1507260-02A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.2 | 2.3 | 4.9 | 9.0 |
| 1,1-Dichloroethane | 1.2 | 6.5 | 5.0 | 26 |
| cis-1,2-Dichloroethene | 1.2 | 19 | 4.9 | 77 |
| 1,1,1-Trichloroethane | 1.2 | 180 | 6.7 | 980 |
| Trichloroethene | 1.2 | 12 | 6.6 | 63 |
| Tetrachloroethene | 1.2 | 6.0 | 8.4 | 41 |

**Client Sample ID: P1SVE-EFFC1-0716/15**

**Lab ID#: 1507260-03A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.1 | 3.1 | 4.5 | 12 |
| 1,1-Dichloroethane | 1.1 | 32 | 4.6 | 130 |
| cis-1,2-Dichloroethene | 1.1 | 6.7 | 4.5 | 27 |
| 1,1,1-Trichloroethane | 1.1 | 110 | 6.2 | 590 |
| Trichloroethene | 1.1 | 19 | 6.1 | 100 |
| Tetrachloroethene | 1.1 | 170 | 7.7 | 1200 |

**Client Sample ID: P2SVE-EFFC4-0716/15**

**Lab ID#: 1507260-04A**

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# Summary of Detected Compounds
# MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

**Client Sample ID: P2SVE-EFFC4-0716/15**

**Lab ID#: 1507260-04A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.2 | 4.0 | 4.8 | 16 |
| 1,1-Dichloroethane | 1.2 | 7.7 | 4.9 | 31 |
| cis-1,2-Dichloroethene | 1.2 | 13 | 4.8 | 52 |
| 1,1,1-Trichloroethane | 1.2 | 270 | 6.6 | 1500 |
| Trichloroethene | 1.2 | 27 | 6.6 | 140 |
| Tetrachloroethene | 1.2 | 130 | 8.3 | 880 |

**Client Sample ID: P2SVE-EFFC5-0716/15**

**Lab ID#: 1507260-05A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.2 | 3.5 | 4.6 | 14 |
| 1,1-Dichloroethane | 1.2 | 22 | 4.7 | 89 |
| cis-1,2-Dichloroethene | 1.2 | 12 | 4.6 | 47 |
| 1,1,1-Trichloroethane | 1.2 | 260 | 6.4 | 1400 |
| Trichloroethene | 1.2 | 14 | 6.3 | 78 |
| Tetrachloroethene | 1.2 | 54 | 7.9 | 370 |

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**Client Sample ID: P1SVE-EFFC2-0716/15**

**Lab ID#: 1507260-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17072008** | **Date of Collection:** | **7/16/15 9:00:00 AM** |
| **Dil. Factor:** | **2.30** | **Date of Analysis:** | **7/20/15 03:40 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.2 | Not Detected | 2.9 | Not Detected |
| Chloroethane | 4.6 | Not Detected | 12 | Not Detected |
| 1,1-Dichloroethene | 1.2 | 1.7 | 4.6 | 6.9 |
| Acetone | 12 | Not Detected | 27 | Not Detected |
| Methylene Chloride | 12 | Not Detected | 40 | Not Detected |
| trans-1,2-Dichloroethene | 1.2 | Not Detected | 4.6 | Not Detected |
| 1,1-Dichloroethane | 1.2 | 17 | 4.6 | 71 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.6 | Not Detected | 14 | Not Detected |
| cis-1,2-Dichloroethene | 1.2 | 4.2 | 4.6 | 17 |
| Chloroform | 1.2 | Not Detected | 5.6 | Not Detected |
| 1,1,1-Trichloroethane | 1.2 | 64 | 6.3 | 350 |
| Carbon Tetrachloride | 1.2 | Not Detected | 7.2 | Not Detected |
| Benzene | 1.2 | Not Detected | 3.7 | Not Detected |
| 1,2-Dichloroethane | 1.2 | Not Detected | 4.6 | Not Detected |
| Trichloroethene | 1.2 | 18 | 6.2 | 98 |
| Toluene | 1.2 | Not Detected | 4.3 | Not Detected |
| 1,1,2-Trichloroethane | 1.2 | Not Detected | 6.3 | Not Detected |
| Tetrachloroethene | 1.2 | 8.6 | 7.8 | 58 |
| Ethyl Benzene | 1.2 | Not Detected | 5.0 | Not Detected |
| m,p-Xylene | 1.2 | Not Detected | 5.0 | Not Detected |
| o-Xylene | 1.2 | Not Detected | 5.0 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 116 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 82 | 70-130 |

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**Client Sample ID: P1SVE-EFFC3-0716/15**

**Lab ID#: 1507260-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17072009** | **Date of Collection:** | **7/16/15 9:25:00 AM** |
| **Dil. Factor:** | **2.47** | **Date of Analysis:** | **7/20/15 04:17 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.2 | Not Detected | 3.2 | Not Detected |
| Chloroethane | 4.9 | Not Detected | 13 | Not Detected |
| 1,1-Dichloroethene | 1.2 | 2.3 | 4.9 | 9.0 |
| Acetone | 12 | Not Detected | 29 | Not Detected |
| Methylene Chloride | 12 | Not Detected | 43 | Not Detected |
| trans-1,2-Dichloroethene | 1.2 | Not Detected | 4.9 | Not Detected |
| 1,1-Dichloroethane | 1.2 | 6.5 | 5.0 | 26 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.9 | Not Detected | 14 | Not Detected |
| cis-1,2-Dichloroethene | 1.2 | 19 | 4.9 | 77 |
| Chloroform | 1.2 | Not Detected | 6.0 | Not Detected |
| 1,1,1-Trichloroethane | 1.2 | 180 | 6.7 | 980 |
| Carbon Tetrachloride | 1.2 | Not Detected | 7.8 | Not Detected |
| Benzene | 1.2 | Not Detected | 3.9 | Not Detected |
| 1,2-Dichloroethane | 1.2 | Not Detected | 5.0 | Not Detected |
| Trichloroethene | 1.2 | 12 | 6.6 | 63 |
| Toluene | 1.2 | Not Detected | 4.6 | Not Detected |
| 1,1,2-Trichloroethane | 1.2 | Not Detected | 6.7 | Not Detected |
| Tetrachloroethene | 1.2 | 6.0 | 8.4 | 41 |
| Ethyl Benzene | 1.2 | Not Detected | 5.4 | Not Detected |
| m,p-Xylene | 1.2 | Not Detected | 5.4 | Not Detected |
| o-Xylene | 1.2 | Not Detected | 5.4 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 113 | 70-130 |
| Toluene-d8 | 104 | 70-130 |
| 4-Bromofluorobenzene | 82 | 70-130 |

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**Client Sample ID: P1SVE-EFFC1-0716/15**

**Lab ID#: 1507260-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17072010** | **Date of Collection:** | **7/16/15 9:55:00 AM** |
| **Dil. Factor:** | **2.26** | **Date of Analysis:** | **7/20/15 04:40 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.1 | Not Detected | 2.9 | Not Detected |
| Chloroethane | 4.5 | Not Detected | 12 | Not Detected |
| 1,1-Dichloroethene | 1.1 | 3.1 | 4.5 | 12 |
| Acetone | 11 | Not Detected | 27 | Not Detected |
| Methylene Chloride | 11 | Not Detected | 39 | Not Detected |
| trans-1,2-Dichloroethene | 1.1 | Not Detected | 4.5 | Not Detected |
| 1,1-Dichloroethane | 1.1 | 32 | 4.6 | 130 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.5 | Not Detected | 13 | Not Detected |
| cis-1,2-Dichloroethene | 1.1 | 6.7 | 4.5 | 27 |
| Chloroform | 1.1 | Not Detected | 5.5 | Not Detected |
| 1,1,1-Trichloroethane | 1.1 | 110 | 6.2 | 590 |
| Carbon Tetrachloride | 1.1 | Not Detected | 7.1 | Not Detected |
| Benzene | 1.1 | Not Detected | 3.6 | Not Detected |
| 1,2-Dichloroethane | 1.1 | Not Detected | 4.6 | Not Detected |
| Trichloroethene | 1.1 | 19 | 6.1 | 100 |
| Toluene | 1.1 | Not Detected | 4.2 | Not Detected |
| 1,1,2-Trichloroethane | 1.1 | Not Detected | 6.2 | Not Detected |
| Tetrachloroethene | 1.1 | 170 | 7.7 | 1200 |
| Ethyl Benzene | 1.1 | Not Detected | 4.9 | Not Detected |
| m,p-Xylene | 1.1 | Not Detected | 4.9 | Not Detected |
| o-Xylene | 1.1 | Not Detected | 4.9 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 112 | 70-130 |
| Toluene-d8 | 104 | 70-130 |
| 4-Bromofluorobenzene | 82 | 70-130 |

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**Client Sample ID: P2SVE-EFFC4-0716/15**

**Lab ID#: 1507260-04A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17072013** | **Date of Collection:** | **7/16/15 10:05:00 AM** |
| **Dil. Factor:** | **2.44** | **Date of Analysis:** | **7/20/15 06:17 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.2 | Not Detected | 3.1 | Not Detected |
| Chloroethane | 4.9 | Not Detected | 13 | Not Detected |
| 1,1-Dichloroethene | 1.2 | 4.0 | 4.8 | 16 |
| Acetone | 12 | Not Detected | 29 | Not Detected |
| Methylene Chloride | 12 | Not Detected | 42 | Not Detected |
| trans-1,2-Dichloroethene | 1.2 | Not Detected | 4.8 | Not Detected |
| 1,1-Dichloroethane | 1.2 | 7.7 | 4.9 | 31 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.9 | Not Detected | 14 | Not Detected |
| cis-1,2-Dichloroethene | 1.2 | 13 | 4.8 | 52 |
| Chloroform | 1.2 | Not Detected | 6.0 | Not Detected |
| 1,1,1-Trichloroethane | 1.2 | 270 | 6.6 | 1500 |
| Carbon Tetrachloride | 1.2 | Not Detected | 7.7 | Not Detected |
| Benzene | 1.2 | Not Detected | 3.9 | Not Detected |
| 1,2-Dichloroethane | 1.2 | Not Detected | 4.9 | Not Detected |
| Trichloroethene | 1.2 | 27 | 6.6 | 140 |
| Toluene | 1.2 | Not Detected | 4.6 | Not Detected |
| 1,1,2-Trichloroethane | 1.2 | Not Detected | 6.6 | Not Detected |
| Tetrachloroethene | 1.2 | 130 | 8.3 | 880 |
| Ethyl Benzene | 1.2 | Not Detected | 5.3 | Not Detected |
| m,p-Xylene | 1.2 | Not Detected | 5.3 | Not Detected |
| o-Xylene | 1.2 | Not Detected | 5.3 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 114 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 82 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: P2SVE-EFFC5-0716/15**

**Lab ID#: 1507260-05A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17072014** | **Date of Collection:** | **7/16/15 10:10:00 AM** |
| **Dil. Factor:** | **2.33** | **Date of Analysis:** | **7/20/15 06:41 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.2 | Not Detected | 3.0 | Not Detected |
| Chloroethane | 4.7 | Not Detected | 12 | Not Detected |
| 1,1-Dichloroethene | 1.2 | 3.5 | 4.6 | 14 |
| Acetone | 12 | Not Detected | 28 | Not Detected |
| Methylene Chloride | 12 | Not Detected | 40 | Not Detected |
| trans-1,2-Dichloroethene | 1.2 | Not Detected | 4.6 | Not Detected |
| 1,1-Dichloroethane | 1.2 | 22 | 4.7 | 89 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.7 | Not Detected | 14 | Not Detected |
| cis-1,2-Dichloroethene | 1.2 | 12 | 4.6 | 47 |
| Chloroform | 1.2 | Not Detected | 5.7 | Not Detected |
| 1,1,1-Trichloroethane | 1.2 | 260 | 6.4 | 1400 |
| Carbon Tetrachloride | 1.2 | Not Detected | 7.3 | Not Detected |
| Benzene | 1.2 | Not Detected | 3.7 | Not Detected |
| 1,2-Dichloroethane | 1.2 | Not Detected | 4.7 | Not Detected |
| Trichloroethene | 1.2 | 14 | 6.3 | 78 |
| Toluene | 1.2 | Not Detected | 4.4 | Not Detected |
| 1,1,2-Trichloroethane | 1.2 | Not Detected | 6.4 | Not Detected |
| Tetrachloroethene | 1.2 | 54 | 7.9 | 370 |
| Ethyl Benzene | 1.2 | Not Detected | 5.0 | Not Detected |
| m,p-Xylene | 1.2 | Not Detected | 5.0 | Not Detected |
| o-Xylene | 1.2 | Not Detected | 5.0 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 114 | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 86 | 70-130 |

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**Client Sample ID: Lab Blank**

**Lab ID#: 1507260-06A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17072005** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 7/20/15 10:39 AM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 0.50 | Not Detected | 1.3 | Not Detected |
| Chloroethane | 2.0 | Not Detected | 5.3 | Not Detected |
| 1,1-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Acetone | 5.0 | Not Detected | 12 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| trans-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| 1,1-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 2.0 | Not Detected | 5.9 | Not Detected |
| cis-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Chloroform | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,1-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Carbon Tetrachloride | 0.50 | Not Detected | 3.1 | Not Detected |
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| 1,2-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| Trichloroethene | 0.50 | Not Detected | 2.7 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| 1,1,2-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Tetrachloroethene | 0.50 | Not Detected | 3.4 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 114 | 70-130 |
| Toluene-d8 | 104 | 70-130 |
| 4-Bromofluorobenzene | 84 | 70-130 |

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**Client Sample ID: CCV**

**Lab ID#: 1507260-07A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | |
|---|---|---|
| **File Name:** | **17072002** | **Date of Collection: NA** |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 7/20/15 08:40 AM** |

| Compound | %Recovery |
|---|---|
| Vinyl Chloride | 119 |
| Chloroethane | 120 |
| 1,1-Dichloroethene | 101 |
| Acetone | 123 |
| Methylene Chloride | 125 |
| trans-1,2-Dichloroethene | 104 |
| 1,1-Dichloroethane | 116 |
| 2-Butanone (Methyl Ethyl Ketone) | 111 |
| cis-1,2-Dichloroethene | 98 |
| Chloroform | 106 |
| 1,1,1-Trichloroethane | 99 |
| Carbon Tetrachloride | 96 |
| Benzene | 112 |
| 1,2-Dichloroethane | 112 |
| Trichloroethene | 99 |
| Toluene | 106 |
| 1,1,2-Trichloroethane | 110 |
| Tetrachloroethene | 93 |
| Ethyl Benzene | 105 |
| m,p-Xylene | 105 |
| o-Xylene | 102 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 117 | 70-130 |
| Toluene-d8 | 108 | 70-130 |
| 4-Bromofluorobenzene | 87 | 70-130 |

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**Client Sample ID: LCS**

**Lab ID#: 1507260-08A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17072003** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 7/20/15 09:14 AM** | |

| Compound | %Recovery | Method Limits |
|---|---|---|
| Vinyl Chloride | 124 | 70-130 |
| Chloroethane | 127 | 70-130 |
| 1,1-Dichloroethene | 103 | 70-130 |
| Acetone | 124 | 70-130 |
| Methylene Chloride | 125 | 70-130 |
| trans-1,2-Dichloroethene | 90 | 70-130 |
| 1,1-Dichloroethane | 116 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 113 | 70-130 |
| cis-1,2-Dichloroethene | 107 | 70-130 |
| Chloroform | 108 | 70-130 |
| 1,1,1-Trichloroethane | 98 | 70-130 |
| Carbon Tetrachloride | 98 | 70-130 |
| Benzene | 114 | 70-130 |
| 1,2-Dichloroethane | 114 | 70-130 |
| Trichloroethene | 101 | 70-130 |
| Toluene | 108 | 70-130 |
| 1,1,2-Trichloroethane | 112 | 70-130 |
| Tetrachloroethene | 94 | 70-130 |
| Ethyl Benzene | 109 | 70-130 |
| m,p-Xylene | 106 | 70-130 |
| o-Xylene | 106 | 70-130 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 116 | 70-130 |
| Toluene-d8 | 109 | 70-130 |
| 4-Bromofluorobenzene | 89 | 70-130 |

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**Client Sample ID: LCSD**

**Lab ID#: 1507260-08AA**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17072004** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 7/20/15 09:49 AM** | |

| **Compound** | **%Recovery** | **Method Limits** |
|---|---|---|
| Vinyl Chloride | 125 | 70-130 |
| Chloroethane | 127 | 70-130 |
| 1,1-Dichloroethene | 104 | 70-130 |
| Acetone | 124 | 70-130 |
| Methylene Chloride | 128 | 70-130 |
| trans-1,2-Dichloroethene | 92 | 70-130 |
| 1,1-Dichloroethane | 115 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 114 | 70-130 |
| cis-1,2-Dichloroethene | 109 | 70-130 |
| Chloroform | 109 | 70-130 |
| 1,1,1-Trichloroethane | 98 | 70-130 |
| Carbon Tetrachloride | 98 | 70-130 |
| Benzene | 112 | 70-130 |
| 1,2-Dichloroethane | 112 | 70-130 |
| Trichloroethene | 101 | 70-130 |
| Toluene | 106 | 70-130 |
| 1,1,2-Trichloroethane | 108 | 70-130 |
| Tetrachloroethene | 92 | 70-130 |
| Ethyl Benzene | 104 | 70-130 |
| m,p-Xylene | 103 | 70-130 |
| o-Xylene | 104 | 70-130 |

**Container Type: NA - Not Applicable**

| **Surrogates** | **%Recovery** | **Method Limits** |
|---|---|---|
| 1,2-Dichloroethane-d4 | 105 | 70-130 |
| Toluene-d8 | 109 | 70-130 |
| 4-Bromofluorobenzene | 88 | 70-130 |

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10/6/2015
Mr. Peter Hollatz
AECOM Environment
27755 Diehl Road
Suite 100
Warrenville IL 60555

Project Name: UTC-HS-PLT 1
Project #: 60339110
Workorder #: 1509395

Dear Mr. Peter Hollatz

The following report includes the data for the above referenced project for sample(s) received on 9/23/2015 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-14A are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free the Project Manager: Ausha Scott at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Ausha Scott
Project Manager

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# WORK ORDER #: 1509395

Work Order Summary

| | | | |
|---|---|---|---|
| **CLIENT:** | Mr. Peter Hollatz<br>AECOM Environment<br>27755 Diehl Road<br>Suite 100<br>Warrenville, IL 60555 | **BILL TO:** | Accounts Payable-Warrenville<br>AECOM Environment<br>27755 Diehl Road<br>Suite 100<br>Warrenville, IL 60555 |
| **PHONE:** | 630-836-1700 | **P.O. #** | 58743ACM |
| **FAX:** | 630-836-1711 | **PROJECT #** | 60339110 UTC-HS-PLT 1 |
| **DATE RECEIVED:** | 09/23/2015 | **CONTACT:** | Ausha Scott |
| **DATE COMPLETED:** | 10/05/2015 | | |

| FRACTION # | NAME | TEST | RECEIPT VAC./PRES. | FINAL PRESSURE |
|---|---|---|---|---|
| 01A | P1SVE-EFFC1-092215 | Modified TO-14A | 8 "Hg | 14.8 psi |
| 01AA | P1SVE-EFFC1-092215 Lab Duplicate | Modified TO-14A | 8 "Hg | 14.8 psi |
| 02A | P2SVE-EFFC4-092215 | Modified TO-14A | 2.2 "Hg | 14.9 psi |
| 03A | P2SVE-EFFC5-092215 | Modified TO-14A | 5.1 "Hg | 15.3 psi |
| 04A | P1SVE-EFFC2-092215 | Modified TO-14A | 3.5 "Hg | 14.6 psi |
| 05A | P1SVE-EFFC2-092215 DUP | Modified TO-14A | 4.9 "Hg | 14.8 psi |
| 06A | P1SVE-EFFC3-092215 | Modified TO-14A | 3.9 "Hg | 14.9 psi |
| 07A | FIELD BLANK-092215 | Modified TO-14A | 2.2 "Hg | 15 psi |
| 08A | Lab Blank | Modified TO-14A | NA | NA |
| 09A | CCV | Modified TO-14A | NA | NA |
| 10A | LCS | Modified TO-14A | NA | NA |
| 10AA | LCSD | Modified TO-14A | NA | NA |

CERTIFIED BY: Heidi Hayes DATE: 10/06/15

Technical Director

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704343-14-7, UT NELAP CA009332014-5, VA NELAP - 460197, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2014, Expiration date: 10/17/2015.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 9563
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

**LABORATORY NARRATIVE**
**Modified TO-14A**
**AECOM Environment**
**Workorder# 1509395**

Seven 1 Liter Summa Canister samples were received on September 23, 2015. The laboratory performed analysis via modified EPA Method TO-14A using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the ATL modifications. Please note that TO-14A was validated for specially treated canisters, and the use of Tedlar bags for sample collection is outside the scope of the method.

| *Requirement* | *TO-14A* | *ATL Modifications* |
|---|---|---|
| Initial Calibration criteria | RSD</=30% | Follow TO-15 requirements of RSD</=30% with two compounds allowed out to </=40%RSD. |
| BFB absolute abundance criteria | Within 10% of that from previous day | CCV internal standard area counts are compared to ICAL, corrective action when recovery is less than 60%. |
| Blank acceptance criteria | <0.20 ppbv | <Reporting Limit |
| Sample Drying System | Nafion Dryer | Multibed hydrophobic sorbent |
| BFB ion abundance criteria | Ion abundance listed in Table 4 of TO-14A | Follow ion abundance criteria listed in Method TO-15 |

**Receiving Notes**

The Chain of Custody (COC) information for sample P1SVE-EFFC1-092215 did not match the information on the canister with regard to canister identification. The client was notified of the discrepancy and the information on the canister was used to process and report the sample.

**Analytical Notes**

Dilution was performed on sample P1SVE-EFFC3-092215 due to the presence of high level target species.

The field blank sample FIELD BLANK-092215 has reportable levels of target compounds present.

**Definition of Data Qualifying Flags**

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

C - Estimated calculation due to estimated sampling rate.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

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# Summary of Detected Compounds
# MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

**Client Sample ID: P1SVE-EFFC1-092215**

**Lab ID#: 1509395-01A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethane | 1.4 | 29 | 5.5 | 120 |
| cis-1,2-Dichloroethene | 1.4 | 5.6 | 5.4 | 22 |
| 1,1,1-Trichloroethane | 1.4 | 150 | 7.5 | 840 |
| Trichloroethene | 1.4 | 20 | 7.4 | 110 |
| Tetrachloroethene | 1.4 | 250 | 9.3 | 1700 |
| Ethyl Benzene | 1.4 | 2.2 | 5.9 | 9.5 |
| m,p-Xylene | 1.4 | 3.4 | 5.9 | 15 |

**Client Sample ID: P1SVE-EFFC1-092215 Lab Duplicate**

**Lab ID#: 1509395-01AA**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethane | 1.4 | 28 | 5.5 | 110 |
| cis-1,2-Dichloroethene | 1.4 | 5.2 | 5.4 | 20 |
| 1,1,1-Trichloroethane | 1.4 | 150 | 7.5 | 820 |
| Trichloroethene | 1.4 | 21 | 7.4 | 110 |
| Tetrachloroethene | 1.4 | 250 | 9.3 | 1700 |
| Ethyl Benzene | 1.4 | 2.0 | 5.9 | 8.7 |
| m,p-Xylene | 1.4 | 3.6 | 5.9 | 16 |

**Client Sample ID: P2SVE-EFFC4-092215**

**Lab ID#: 1509395-02A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.1 | 2.1 | 4.3 | 8.2 |
| 1,1-Dichloroethane | 1.1 | 6.3 | 4.4 | 26 |
| cis-1,2-Dichloroethene | 1.1 | 11 | 4.3 | 45 |
| 1,1,1-Trichloroethane | 1.1 | 200 | 5.9 | 1100 |
| Trichloroethene | 1.1 | 36 | 5.8 | 190 |
| Tetrachloroethene | 1.1 | 200 | 7.4 | 1400 |

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# Summary of Detected Compounds
# MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

**Client Sample ID: P2SVE-EFFC5-092215**

**Lab ID#: 1509395-03A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.2 | 1.2 | 4.9 | 5.0 |
| 1,1-Dichloroethane | 1.2 | 4.2 | 5.0 | 17 |
| cis-1,2-Dichloroethene | 1.2 | 2.4 | 4.9 | 9.7 |
| 1,1,1-Trichloroethane | 1.2 | 150 | 6.7 | 810 |
| Trichloroethene | 1.2 | 11 | 6.6 | 61 |
| Tetrachloroethene | 1.2 | 47 | 8.3 | 320 |

**Client Sample ID: P1SVE-EFFC2-092215**

**Lab ID#: 1509395-04A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.1 | 3.4 | 4.5 | 14 |
| 1,1-Dichloroethane | 1.1 | 210 | 4.6 | 860 |
| cis-1,2-Dichloroethene | 1.1 | 9.6 | 4.5 | 38 |
| 1,1,1-Trichloroethane | 1.1 | 450 | 6.2 | 2500 |
| Trichloroethene | 1.1 | 30 | 6.1 | 160 |
| Tetrachloroethene | 1.1 | 28 | 7.7 | 190 |

**Client Sample ID: P1SVE-EFFC2-092215 DUP**

**Lab ID#: 1509395-05A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 1.2 | 3.8 | 4.8 | 15 |
| 1,1-Dichloroethane | 1.2 | 210 | 4.8 | 840 |
| cis-1,2-Dichloroethene | 1.2 | 9.2 | 4.8 | 37 |
| 1,1,1-Trichloroethane | 1.2 | 440 | 6.5 | 2400 |
| Trichloroethene | 1.2 | 31 | 6.4 | 170 |
| Tetrachloroethene | 1.2 | 19 | 8.1 | 130 |

**Client Sample ID: P1SVE-EFFC3-092215**

**Lab ID#: 1509395-06A**

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# Summary of Detected Compounds
# MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN

**Client Sample ID: P1SVE-EFFC3-092215**

**Lab ID#: 1509395-06A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1-Dichloroethene | 2.3 | 2.6 | 9.2 | 10 |
| 1,1-Dichloroethane | 2.3 | 11 | 9.4 | 43 |
| cis-1,2-Dichloroethene | 2.3 | 10 | 9.2 | 41 |
| 1,1,1-Trichloroethane | 2.3 | 530 | 13 | 2900 |
| Trichloroethene | 2.3 | 14 | 12 | 73 |
| Tetrachloroethene | 2.3 | 18 | 16 | 120 |

**Client Sample ID: FIELD BLANK-092215**

**Lab ID#: 1509395-07A**

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| 1,1,1-Trichloroethane | 1.1 | 1.2 | 5.9 | 6.7 |

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**Client Sample ID: P1SVE-EFFC1-092215**

**Lab ID#: 1509395-01A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092809** | **Date of Collection:** | **9/22/15 9:05:00 AM** |
| **Dil. Factor:** | **2.74** | **Date of Analysis:** | **9/28/15 02:49 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.4 | Not Detected | 3.5 | Not Detected |
| Chloroethane | 5.5 | Not Detected | 14 | Not Detected |
| 1,1-Dichloroethene | 1.4 | Not Detected | 5.4 | Not Detected |
| Acetone | 14 | Not Detected | 32 | Not Detected |
| Methylene Chloride | 14 | Not Detected | 48 | Not Detected |
| trans-1,2-Dichloroethene | 1.4 | Not Detected | 5.4 | Not Detected |
| 1,1-Dichloroethane | 1.4 | 29 | 5.5 | 120 |
| 2-Butanone (Methyl Ethyl Ketone) | 5.5 | Not Detected | 16 | Not Detected |
| cis-1,2-Dichloroethene | 1.4 | 5.6 | 5.4 | 22 |
| Chloroform | 1.4 | Not Detected | 6.7 | Not Detected |
| 1,1,1-Trichloroethane | 1.4 | 150 | 7.5 | 840 |
| Carbon Tetrachloride | 1.4 | Not Detected | 8.6 | Not Detected |
| Benzene | 1.4 | Not Detected | 4.4 | Not Detected |
| 1,2-Dichloroethane | 1.4 | Not Detected | 5.5 | Not Detected |
| Trichloroethene | 1.4 | 20 | 7.4 | 110 |
| Toluene | 1.4 | Not Detected | 5.2 | Not Detected |
| 1,1,2-Trichloroethane | 1.4 | Not Detected | 7.5 | Not Detected |
| Tetrachloroethene | 1.4 | 250 | 9.3 | 1700 |
| Ethyl Benzene | 1.4 | 2.2 | 5.9 | 9.5 |
| m,p-Xylene | 1.4 | 3.4 | 5.9 | 15 |
| o-Xylene | 1.4 | Not Detected | 5.9 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 93 | 70-130 |

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**Client Sample ID: P1SVE-EFFC1-092215 Lab Duplicate**

**Lab ID#: 1509395-01AA**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092810** | **Date of Collection:** | **9/22/15 9:05:00 AM** |
| **Dil. Factor:** | **2.74** | **Date of Analysis:** | **9/28/15 03:12 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.4 | Not Detected | 3.5 | Not Detected |
| Chloroethane | 5.5 | Not Detected | 14 | Not Detected |
| 1,1-Dichloroethene | 1.4 | Not Detected | 5.4 | Not Detected |
| Acetone | 14 | Not Detected | 32 | Not Detected |
| Methylene Chloride | 14 | Not Detected | 48 | Not Detected |
| trans-1,2-Dichloroethene | 1.4 | Not Detected | 5.4 | Not Detected |
| 1,1-Dichloroethane | 1.4 | 28 | 5.5 | 110 |
| 2-Butanone (Methyl Ethyl Ketone) | 5.5 | Not Detected | 16 | Not Detected |
| cis-1,2-Dichloroethene | 1.4 | 5.2 | 5.4 | 20 |
| Chloroform | 1.4 | Not Detected | 6.7 | Not Detected |
| 1,1,1-Trichloroethane | 1.4 | 150 | 7.5 | 820 |
| Carbon Tetrachloride | 1.4 | Not Detected | 8.6 | Not Detected |
| Benzene | 1.4 | Not Detected | 4.4 | Not Detected |
| 1,2-Dichloroethane | 1.4 | Not Detected | 5.5 | Not Detected |
| Trichloroethene | 1.4 | 21 | 7.4 | 110 |
| Toluene | 1.4 | Not Detected | 5.2 | Not Detected |
| 1,1,2-Trichloroethane | 1.4 | Not Detected | 7.5 | Not Detected |
| Tetrachloroethene | 1.4 | 250 | 9.3 | 1700 |
| Ethyl Benzene | 1.4 | 2.0 | 5.9 | 8.7 |
| m,p-Xylene | 1.4 | 3.6 | 5.9 | 16 |
| o-Xylene | 1.4 | Not Detected | 5.9 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| Toluene-d8 | 103 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |

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**Client Sample ID: P2SVE-EFFC4-092215**

**Lab ID#: 1509395-02A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092811** | **Date of Collection:** | **9/22/15 9:25:00 AM** |
| **Dil. Factor:** | **2.17** | **Date of Analysis:** | **9/28/15 03:41 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.1 | Not Detected | 2.8 | Not Detected |
| Chloroethane | 4.3 | Not Detected | 11 | Not Detected |
| 1,1-Dichloroethene | 1.1 | 2.1 | 4.3 | 8.2 |
| Acetone | 11 | Not Detected | 26 | Not Detected |
| Methylene Chloride | 11 | Not Detected | 38 | Not Detected |
| trans-1,2-Dichloroethene | 1.1 | Not Detected | 4.3 | Not Detected |
| 1,1-Dichloroethane | 1.1 | 6.3 | 4.4 | 26 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.3 | Not Detected | 13 | Not Detected |
| cis-1,2-Dichloroethene | 1.1 | 11 | 4.3 | 45 |
| Chloroform | 1.1 | Not Detected | 5.3 | Not Detected |
| 1,1,1-Trichloroethane | 1.1 | 200 | 5.9 | 1100 |
| Carbon Tetrachloride | 1.1 | Not Detected | 6.8 | Not Detected |
| Benzene | 1.1 | Not Detected | 3.5 | Not Detected |
| 1,2-Dichloroethane | 1.1 | Not Detected | 4.4 | Not Detected |
| Trichloroethene | 1.1 | 36 | 5.8 | 190 |
| Toluene | 1.1 | Not Detected | 4.1 | Not Detected |
| 1,1,2-Trichloroethane | 1.1 | Not Detected | 5.9 | Not Detected |
| Tetrachloroethene | 1.1 | 200 | 7.4 | 1400 |
| Ethyl Benzene | 1.1 | Not Detected | 4.7 | Not Detected |
| m,p-Xylene | 1.1 | Not Detected | 4.7 | Not Detected |
| o-Xylene | 1.1 | Not Detected | 4.7 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 105 | 70-130 |
| Toluene-d8 | 103 | 70-130 |
| 4-Bromofluorobenzene | 91 | 70-130 |

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**Client Sample ID: P2SVE-EFFC5-092215**

**Lab ID#: 1509395-03A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092812** | **Date of Collection:** | **9/22/15 9:30:00 AM** |
| **Dil. Factor:** | **2.46** | **Date of Analysis:** | **9/28/15 04:17 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.2 | Not Detected | 3.1 | Not Detected |
| Chloroethane | 4.9 | Not Detected | 13 | Not Detected |
| 1,1-Dichloroethene | 1.2 | 1.2 | 4.9 | 5.0 |
| Acetone | 12 | Not Detected | 29 | Not Detected |
| Methylene Chloride | 12 | Not Detected | 43 | Not Detected |
| trans-1,2-Dichloroethene | 1.2 | Not Detected | 4.9 | Not Detected |
| 1,1-Dichloroethane | 1.2 | 4.2 | 5.0 | 17 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.9 | Not Detected | 14 | Not Detected |
| cis-1,2-Dichloroethene | 1.2 | 2.4 | 4.9 | 9.7 |
| Chloroform | 1.2 | Not Detected | 6.0 | Not Detected |
| 1,1,1-Trichloroethane | 1.2 | 150 | 6.7 | 810 |
| Carbon Tetrachloride | 1.2 | Not Detected | 7.7 | Not Detected |
| Benzene | 1.2 | Not Detected | 3.9 | Not Detected |
| 1,2-Dichloroethane | 1.2 | Not Detected | 5.0 | Not Detected |
| Trichloroethene | 1.2 | 11 | 6.6 | 61 |
| Toluene | 1.2 | Not Detected | 4.6 | Not Detected |
| 1,1,2-Trichloroethane | 1.2 | Not Detected | 6.7 | Not Detected |
| Tetrachloroethene | 1.2 | 47 | 8.3 | 320 |
| Ethyl Benzene | 1.2 | Not Detected | 5.3 | Not Detected |
| m,p-Xylene | 1.2 | Not Detected | 5.3 | Not Detected |
| o-Xylene | 1.2 | Not Detected | 5.3 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 70-130 |
| Toluene-d8 | 103 | 70-130 |
| 4-Bromofluorobenzene | 94 | 70-130 |

eurofins | Air Toxics

**Client Sample ID: P1SVE-EFFC2-092215**

**Lab ID#: 1509395-04A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092813** | **Date of Collection:** | **9/22/15 9:50:00 AM** |
| **Dil. Factor:** | **2.26** | **Date of Analysis:** | **9/28/15 04:40 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.1 | Not Detected | 2.9 | Not Detected |
| Chloroethane | 4.5 | Not Detected | 12 | Not Detected |
| 1,1-Dichloroethene | 1.1 | 3.4 | 4.5 | 14 |
| Acetone | 11 | Not Detected | 27 | Not Detected |
| Methylene Chloride | 11 | Not Detected | 39 | Not Detected |
| trans-1,2-Dichloroethene | 1.1 | Not Detected | 4.5 | Not Detected |
| 1,1-Dichloroethane | 1.1 | 210 | 4.6 | 860 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.5 | Not Detected | 13 | Not Detected |
| cis-1,2-Dichloroethene | 1.1 | 9.6 | 4.5 | 38 |
| Chloroform | 1.1 | Not Detected | 5.5 | Not Detected |
| 1,1,1-Trichloroethane | 1.1 | 450 | 6.2 | 2500 |
| Carbon Tetrachloride | 1.1 | Not Detected | 7.1 | Not Detected |
| Benzene | 1.1 | Not Detected | 3.6 | Not Detected |
| 1,2-Dichloroethane | 1.1 | Not Detected | 4.6 | Not Detected |
| Trichloroethene | 1.1 | 30 | 6.1 | 160 |
| Toluene | 1.1 | Not Detected | 4.2 | Not Detected |
| 1,1,2-Trichloroethane | 1.1 | Not Detected | 6.2 | Not Detected |
| Tetrachloroethene | 1.1 | 28 | 7.7 | 190 |
| Ethyl Benzene | 1.1 | Not Detected | 4.9 | Not Detected |
| m,p-Xylene | 1.1 | Not Detected | 4.9 | Not Detected |
| o-Xylene | 1.1 | Not Detected | 4.9 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 94 | 70-130 |

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**Client Sample ID: P1SVE-EFFC2-092215 DUP**

**Lab ID#: 1509395-05A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092814** | **Date of Collection:** | **9/22/15 9:50:00 AM** |
| **Dil. Factor:** | **2.40** | **Date of Analysis:** | **9/28/15 05:16 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.2 | Not Detected | 3.1 | Not Detected |
| Chloroethane | 4.8 | Not Detected | 13 | Not Detected |
| 1,1-Dichloroethene | 1.2 | 3.8 | 4.8 | 15 |
| Acetone | 12 | Not Detected | 28 | Not Detected |
| Methylene Chloride | 12 | Not Detected | 42 | Not Detected |
| trans-1,2-Dichloroethene | 1.2 | Not Detected | 4.8 | Not Detected |
| 1,1-Dichloroethane | 1.2 | 210 | 4.8 | 840 |
| 2-Butanone (Methyl Ethyl Ketone) | 4.8 | Not Detected | 14 | Not Detected |
| cis-1,2-Dichloroethene | 1.2 | 9.2 | 4.8 | 37 |
| Chloroform | 1.2 | Not Detected | 5.8 | Not Detected |
| 1,1,1-Trichloroethane | 1.2 | 440 | 6.5 | 2400 |
| Carbon Tetrachloride | 1.2 | Not Detected | 7.6 | Not Detected |
| Benzene | 1.2 | Not Detected | 3.8 | Not Detected |
| 1,2-Dichloroethane | 1.2 | Not Detected | 4.8 | Not Detected |
| Trichloroethene | 1.2 | 31 | 6.4 | 170 |
| Toluene | 1.2 | Not Detected | 4.5 | Not Detected |
| 1,1,2-Trichloroethane | 1.2 | Not Detected | 6.5 | Not Detected |
| Tetrachloroethene | 1.2 | 19 | 8.1 | 130 |
| Ethyl Benzene | 1.2 | Not Detected | 5.2 | Not Detected |
| m,p-Xylene | 1.2 | Not Detected | 5.2 | Not Detected |
| o-Xylene | 1.2 | Not Detected | 5.2 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 98 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 92 | 70-130 |

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**Client Sample ID: P1SVE-EFFC3-092215**

**Lab ID#: 1509395-06A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092817** | **Date of Collection:** | **9/22/15 10:25:00 AM** |
| **Dil. Factor:** | **4.63** | **Date of Analysis:** | **9/28/15 06:51 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 2.3 | Not Detected | 5.9 | Not Detected |
| Chloroethane | 9.3 | Not Detected | 24 | Not Detected |
| 1,1-Dichloroethene | 2.3 | 2.6 | 9.2 | 10 |
| Acetone | 23 | Not Detected | 55 | Not Detected |
| Methylene Chloride | 23 | Not Detected | 80 | Not Detected |
| trans-1,2-Dichloroethene | 2.3 | Not Detected | 9.2 | Not Detected |
| 1,1-Dichloroethane | 2.3 | 11 | 9.4 | 43 |
| 2-Butanone (Methyl Ethyl Ketone) | 9.3 | Not Detected | 27 | Not Detected |
| cis-1,2-Dichloroethene | 2.3 | 10 | 9.2 | 41 |
| Chloroform | 2.3 | Not Detected | 11 | Not Detected |
| 1,1,1-Trichloroethane | 2.3 | 530 | 13 | 2900 |
| Carbon Tetrachloride | 2.3 | Not Detected | 14 | Not Detected |
| Benzene | 2.3 | Not Detected | 7.4 | Not Detected |
| 1,2-Dichloroethane | 2.3 | Not Detected | 9.4 | Not Detected |
| Trichloroethene | 2.3 | 14 | 12 | 73 |
| Toluene | 2.3 | Not Detected | 8.7 | Not Detected |
| 1,1,2-Trichloroethane | 2.3 | Not Detected | 13 | Not Detected |
| Tetrachloroethene | 2.3 | 18 | 16 | 120 |
| Ethyl Benzene | 2.3 | Not Detected | 10 | Not Detected |
| m,p-Xylene | 2.3 | Not Detected | 10 | Not Detected |
| o-Xylene | 2.3 | Not Detected | 10 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| Toluene-d8 | 101 | 70-130 |
| 4-Bromofluorobenzene | 91 | 70-130 |

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**Client Sample ID: FIELD BLANK-092215**

**Lab ID#: 1509395-07A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092816** | **Date of Collection:** | **9/22/15 10:30:00 AM** |
| **Dil. Factor:** | **2.18** | **Date of Analysis:** | **9/28/15 06:16 PM** |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 1.1 | Not Detected | 2.8 | Not Detected |
| Chloroethane | 4.4 | Not Detected | 12 | Not Detected |
| 1,1-Dichloroethene | 1.1 | Not Detected | 4.3 | Not Detected |
| Acetone | 11 | Not Detected | 26 | Not Detected |
| Methylene Chloride | 11 | Not Detected | 38 | Not Detected |
| trans-1,2-Dichloroethene | 1.1 | Not Detected | 4.3 | Not Detected |
| 1,1-Dichloroethane | 1.1 | Not Detected | 4.4 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 4.4 | Not Detected | 13 | Not Detected |
| cis-1,2-Dichloroethene | 1.1 | Not Detected | 4.3 | Not Detected |
| Chloroform | 1.1 | Not Detected | 5.3 | Not Detected |
| 1,1,1-Trichloroethane | 1.1 | 1.2 | 5.9 | 6.7 |
| Carbon Tetrachloride | 1.1 | Not Detected | 6.8 | Not Detected |
| Benzene | 1.1 | Not Detected | 3.5 | Not Detected |
| 1,2-Dichloroethane | 1.1 | Not Detected | 4.4 | Not Detected |
| Trichloroethene | 1.1 | Not Detected | 5.8 | Not Detected |
| Toluene | 1.1 | Not Detected | 4.1 | Not Detected |
| 1,1,2-Trichloroethane | 1.1 | Not Detected | 5.9 | Not Detected |
| Tetrachloroethene | 1.1 | Not Detected | 7.4 | Not Detected |
| Ethyl Benzene | 1.1 | Not Detected | 4.7 | Not Detected |
| m,p-Xylene | 1.1 | Not Detected | 4.7 | Not Detected |
| o-Xylene | 1.1 | Not Detected | 4.7 | Not Detected |

**Container Type: 1 Liter Summa Canister**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 103 | 70-130 |
| 4-Bromofluorobenzene | 91 | 70-130 |

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**Client Sample ID: Lab Blank**

**Lab ID#: 1509395-08A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092807** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 9/28/15 01:23 PM** | |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---|---|---|---|---|
| Vinyl Chloride | 0.50 | Not Detected | 1.3 | Not Detected |
| Chloroethane | 2.0 | Not Detected | 5.3 | Not Detected |
| 1,1-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Acetone | 5.0 | Not Detected | 12 | Not Detected |
| Methylene Chloride | 5.0 | Not Detected | 17 | Not Detected |
| trans-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| 1,1-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| 2-Butanone (Methyl Ethyl Ketone) | 2.0 | Not Detected | 5.9 | Not Detected |
| cis-1,2-Dichloroethene | 0.50 | Not Detected | 2.0 | Not Detected |
| Chloroform | 0.50 | Not Detected | 2.4 | Not Detected |
| 1,1,1-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Carbon Tetrachloride | 0.50 | Not Detected | 3.1 | Not Detected |
| Benzene | 0.50 | Not Detected | 1.6 | Not Detected |
| 1,2-Dichloroethane | 0.50 | Not Detected | 2.0 | Not Detected |
| Trichloroethene | 0.50 | Not Detected | 2.7 | Not Detected |
| Toluene | 0.50 | Not Detected | 1.9 | Not Detected |
| 1,1,2-Trichloroethane | 0.50 | Not Detected | 2.7 | Not Detected |
| Tetrachloroethene | 0.50 | Not Detected | 3.4 | Not Detected |
| Ethyl Benzene | 0.50 | Not Detected | 2.2 | Not Detected |
| m,p-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |
| o-Xylene | 0.50 | Not Detected | 2.2 | Not Detected |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| Toluene-d8 | 102 | 70-130 |
| 4-Bromofluorobenzene | 94 | 70-130 |

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**Client Sample ID: CCV**

**Lab ID#: 1509395-09A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | |
|---|---|---|
| **File Name:** | **17092802** | **Date of Collection: NA** |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 9/28/15 09:56 AM** |

| Compound | %Recovery |
|---|---|
| Vinyl Chloride | 99 |
| Chloroethane | 100 |
| 1,1-Dichloroethene | 97 |
| Acetone | 93 |
| Methylene Chloride | 103 |
| trans-1,2-Dichloroethene | 101 |
| 1,1-Dichloroethane | 103 |
| 2-Butanone (Methyl Ethyl Ketone) | 102 |
| cis-1,2-Dichloroethene | 100 |
| Chloroform | 98 |
| 1,1,1-Trichloroethane | 99 |
| Carbon Tetrachloride | 99 |
| Benzene | 99 |
| 1,2-Dichloroethane | 100 |
| Trichloroethene | 101 |
| Toluene | 101 |
| 1,1,2-Trichloroethane | 99 |
| Tetrachloroethene | 94 |
| Ethyl Benzene | 104 |
| m,p-Xylene | 108 |
| o-Xylene | 108 |

**Container Type: NA - Not Applicable**

| Surrogates | %Recovery | Method Limits |
|---|---|---|
| 1,2-Dichloroethane-d4 | 103 | 70-130 |
| Toluene-d8 | 103 | 70-130 |
| 4-Bromofluorobenzene | 98 | 70-130 |

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**Client Sample ID: LCS**

**Lab ID#: 1509395-10A**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092803** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 9/28/15 10:33 AM** | |

| **Compound** | **%Recovery** | **Method Limits** |
|---|---|---|
| Vinyl Chloride | 90 | 70-130 |
| Chloroethane | 92 | 70-130 |
| 1,1-Dichloroethene | 85 | 70-130 |
| Acetone | 82 | 70-130 |
| Methylene Chloride | 90 | 70-130 |
| trans-1,2-Dichloroethene | 79 | 70-130 |
| 1,1-Dichloroethane | 91 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 90 | 70-130 |
| cis-1,2-Dichloroethene | 98 | 70-130 |
| Chloroform | 88 | 70-130 |
| 1,1,1-Trichloroethane | 87 | 70-130 |
| Carbon Tetrachloride | 88 | 70-130 |
| Benzene | 86 | 70-130 |
| 1,2-Dichloroethane | 87 | 70-130 |
| Trichloroethene | 94 | 70-130 |
| Toluene | 86 | 70-130 |
| 1,1,2-Trichloroethane | 84 | 70-130 |
| Tetrachloroethene | 79 | 70-130 |
| Ethyl Benzene | 89 | 70-130 |
| m,p-Xylene | 91 | 70-130 |
| o-Xylene | 92 | 70-130 |

**Container Type: NA - Not Applicable**

| **Surrogates** | **%Recovery** | **Method Limits** |
|---|---|---|
| 1,2-Dichloroethane-d4 | 103 | 70-130 |
| Toluene-d8 | 103 | 70-130 |
| 4-Bromofluorobenzene | 95 | 70-130 |

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**Client Sample ID: LCSD**

**Lab ID#: 1509395-10AA**

**MODIFIED EPA METHOD TO-14A GC/MS FULL SCAN**

| | | | |
|---|---|---|---|
| **File Name:** | **17092804** | **Date of Collection: NA** | |
| **Dil. Factor:** | **1.00** | **Date of Analysis: 9/28/15 10:56 AM** | |

| **Compound** | **%Recovery** | **Method Limits** |
|---|---|---|
| Vinyl Chloride | 91 | 70-130 |
| Chloroethane | 95 | 70-130 |
| 1,1-Dichloroethene | 88 | 70-130 |
| Acetone | 87 | 70-130 |
| Methylene Chloride | 91 | 70-130 |
| trans-1,2-Dichloroethene | 78 | 70-130 |
| 1,1-Dichloroethane | 92 | 70-130 |
| 2-Butanone (Methyl Ethyl Ketone) | 89 | 70-130 |
| cis-1,2-Dichloroethene | 97 | 70-130 |
| Chloroform | 88 | 70-130 |
| 1,1,1-Trichloroethane | 87 | 70-130 |
| Carbon Tetrachloride | 89 | 70-130 |
| Benzene | 88 | 70-130 |
| 1,2-Dichloroethane | 87 | 70-130 |
| Trichloroethene | 94 | 70-130 |
| Toluene | 88 | 70-130 |
| 1,1,2-Trichloroethane | 87 | 70-130 |
| Tetrachloroethene | 82 | 70-130 |
| Ethyl Benzene | 90 | 70-130 |
| m,p-Xylene | 92 | 70-130 |
| o-Xylene | 92 | 70-130 |

**Container Type: NA - Not Applicable**

| **Surrogates** | **%Recovery** | **Method Limits** |
|---|---|---|
| 1,2-Dichloroethane-d4 | 102 | 70-130 |
| Toluene-d8 | 104 | 70-130 |
| 4-Bromofluorobenzene | 95 | 70-130 |

C

C

# Appendix C

## Third Quarter 2015 Phase1/Phase 2 AS/SVE System Operations Data Sheets

# DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DATE | 7-14-15 | 7-15-15 | 7-16-15 | 09/22/15 | 9-25-15 | 9-26-15 | 9-27-15 | 9-28-15 | 9-29-15 | 9-30-15 |
| TIME | 8:25 Am | 8:19 Am | 0836 | 1265 | 7:26 Am | 9:15 Am | 5:42 Am | 7:48 Am | 7:37 Am | 9:02 Am |
| OBSERVER'S INITIALS | RC | RC | A.H. | NP | RC | KA | RC | RC | RC | RC |
| **ALARMS** | | | | | | | | | | |
| Shut Down Alarm Code | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Non-critical Alarm Code | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **HOURS METERS** | | | | | | | | | | |
| B-701 SVE (hrs) | 36651 | 36675 | 36699 | 36702 | 36772 | 36798 | 36818 | 36844 | 36868 | 36894 |
| C-2201 SPRG (hrs) | 31287 | 31312 | 31336 | 31339 | 31410 | 31436 | 31456 | 31483 | 31507 | 31532 |
| F-2501 H-XCH (hrs) | 31287 | 31312 | 31336 | 31339 | 31410 | 31436 | 31456 | 31483 | 31507 | 31532 |
| **ANALOGS** | | | | | | | | | | |
| MV-701 SVE POS (%) | 26 | 26 | 26 | 26 | 28 | 26 | 26 | 26 | 26 | 26 |
| PT-701 SVE (-wc) | 81.6 | 81.6 | 81.6 | 81.6 | 68.0 | 81.6 | 81.6 | 81.6 | 81.6 | 81.6 |
| PT-2501 SPRG (psi) | 13.0 | 13.2 | 12.7 | 11.5 | 12.7 | 13.0 | 12.9 | 12.8 | 12.8 | 12.7 |
| **SET POINTS** | | | | | | | | | | |
| PTLA-2501 SPRG (psi) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| PTHA-2501 SPRG (psi) | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 |
| **SET POINTS 2** | | | | | | | | | | |
| SVON-101 SVE (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-102 SVE (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-103 SVE (min) | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| **SET POINTS 3** | | | | | | | | | | |
| SVON-2801 SPRG (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-2802 SPRG (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-2803 SPRG (min) | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| SPRG DELAY (min) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **SET POINTS 4** | | | | | | | | | | |
| MV-701 SVE POS (%) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

# DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

| DATE | 7-4-15 | 7-5-15 | 7-6-15 | 7-7-15 | 7-8-15 | 7-9-15 | 7-10-15 | 7-11-15 | 7-12-15 | 7-13-15 |
|---|---|---|---|---|---|---|---|---|---|---|
| TIME | 9:30AM | 11:15AM | 8:02AM | 8:20AM | 2:00 Pm | 7:57 AM | 10:10AM | 7:40AM | 10:20AM | 1:53PM |
| OBSERVER'S INITIALS | DL | DL | RK | RK | PA | RK | RK | DE | KA | DE |
| **ALARMS** | | | | | | | | | | |
| Shut Down Alarm Code | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| Non-critical Alarm Code | NA | NA | NA | NA | NA | NA | NA | NA | NA | NA |
| **HOURS METERS** | | | | | | | | | | |
| B-701 SVE (hrs) | 36413 | 36439 | 36459 | 36483 | 36512 | 36531 | 36557 | 36579 | 36605 | 36633 |
| C-2201 SPRG (hrs) | 31046 | 31072 | 31093 | 31118 | 31147 | 31166 | 31192 | 31214 | 31241 | 31269 |
| F-2501 H-XCH (hrs) | 31046 | 31072 | 31093 | 31118 | 31147 | 31166 | 31192 | 31214 | 31241 | 31269 |
| **ANALOGS** | | | | | | | | | | |
| MV-701 SVE POS (%) | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 |
| PT-701 SVE (-wc) | -81.6 | -81.6 | 81.6 | 81.6 | 81.5 | 68.0 | 81.6 | 81.6 | 68.0 | 81.6 |
| PT-2501 SPRG (psi) | 13.3 | 11.9 | 12.9 | 12.9 | 12.9 | 12.7 | 12.9 | 13.0 | 12.8 | 12.9 |
| **SET POINTS** | | | | | | | | | | |
| PTLA-2501 SPRG (psi) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| PTHA-2501 SPRG (psi) | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 |
| **SET POINTS 2** | | | | | | | | | | |
| SVON-101 SVE (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-102 SVE (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-103 SVE (min) | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| **SET POINTS 3** | | | | | | | | | | |
| SVON-2801 SPRG (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-2802 SPRG (min) | 60 | 60 | 60 | 60 | 80 | 60 | 60 | 60 | 60 | 60 |
| SVON-2803 SPRG (min) | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| SPRG DELAY (min) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **SET POINTS 4** | | | | | | | | | | |
| MV-701 SVE POS (%) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

# DAILY DOCUMENTATION SHEET

Control Panel Touch Screen

| DATE | 6-24-15 | 6-25-15 | 6-26-15 | 6-27-15 | 6-28-15 | 6-29-15 | 6-30-15 | 7-1-15 | 7-2-15 | 7-3-15 |
|---|---|---|---|---|---|---|---|---|---|---|
| TIME | 1:31 P.M. | 8:22 AM | 8:23 AM | 9:13 A.M. | 10:00 AM | 0845 | 8:19 AM | 855 | 8:19 AM | 8:25 AM |
| OBSERVER'S INITIALS | DE | RK | RK | DE | DL | A.H. | RK | ND | RK | KA |
| **ALARMS** | | | | | | | | | | |
| Shut Down Alarm Code | NA | NA | NA | NA | NA | N/A | NA | N/A | NA | NA |
| Non-critical Alarm Code | NA | NA | NA | NA | NA | N/A | NA | N/A | NA | NA |
| **HOURS METERS** | | | | | | | | | | |
| B-701 SVE (hrs) | 36177 | 36196 | 36220 | 36245 | 36269 | 36292 | 36316 | 36340 | 36364 | 36388 |
| C-2201 SPRG (hrs) | 30808 | 30827 | 30852 | 30877 | 30902 | 30925 | 30949 | 30973 | 30997 | 31021 |
| F-2501 H-XCH (hrs) | 30808 | 30827 | 30852 | 30877 | 30902 | 30925 | 30949 | 30973 | 3097 | 31021 |
| **ANALOGS** | | | | | | | | | | |
| MV-701 SVE POS (%) | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 | 26 |
| PT-701 SVE (-wc) | 81.6 | 81.6 | 81.6 | 81.6 | -81.6 | -81.6 | 81.6 | 81.6 | 81.6 | 68.0 |
| PT-2501 SPRG (psi) | 12.9 | 12.9 | 13.1 | 13.0 | 12.9 | 16.7 | 12.9 | 13.0 | 12.9 | 12.6 |
| **SET POINTS** | | | | | | | | | | |
| PTLA-2501 SPRG (psi) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| PTHA-2501 SPRG (psi) | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 | 17.0 |
| **SET POINTS 2** | | | | | | | | | | |
| SVON-101 SVE (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-102 SVE (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-103 SVE (min) | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| **SET POINTS 3** | | | | | | | | | | |
| SVON-2801 SPRG (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-2802 SPRG (min) | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| SVON-2803 SPRG (min) | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 | 180 |
| SPRG DELAY (min) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **SET POINTS 4** | | | | | | | | | | |
| MV-701 SVE POS (%) | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 | 30 |

# WEEKLY DOCUMENTATION SHEET

## SYSTEM COMPONENTS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DATE | 6-8-15 | 6-15-15 | 6-22-15 | 6-29-15 | 7-6-15 | 7-14-15 | 9/22/15 | 9-28-15 | 10-5-15 |
| TIME | 8:43 Am | 2:40pm | 8:16 Am | 0845 | 8:04 Am | 8:26 Am | 1255 | 7:30 Am | 8:11 Am |
| OBSERVER'S INITIALS | RL | KA | RL | A.H. | RK | RK | NP | RK | RK |

**SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Comments and Notes | NA | NA | NA | N/A | NA | NA | N/A | NA | NA |

**SOIL VAPOR EXTRACTION (SVE)**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hours of Operation (hrs) | 35790 | 35964 | 36124 | 36292 | 36459 | 36651 | 36702 | 36844 | 37012 |
| Inlet Vacuum (-wc) | 88 | 88 | 89 | 90 | 90 | 89 | 84 | 92 | 92 |
| Pre-Filter Vacuum (-wc) | 76.2 | 76 | 75.7 | 76.0 | 78.9 | 78.5 | 2.75 | 78.2 | 80.3 |
| Post-Filter Vacuum (-wc) | 78 | 78 | 78 | 76 | 80 | 80 | 70 | 79 | 80 |
| Outlet Pressure (wc) | 7 | 7 | 7 | 6.0 | 6.0 | 6.0 | 7.0 | 6.0 | 6.0 |
| Outlet Temperature (°F) | 160 | 164 | 162 | 160 | 175 | 170 | 150 | 164 | 158 |
| Outlet Magnehelic* (in $H_2O$) | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| Water Level Sight Glass (in) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**AIR SPARGE (SPRG)**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hours Operation (hrs) | 30418 | 30593 | 30755 | 30925 | 31093 | 31287 | 31339 | 31483 | 31652 |
| Oil Sight Glass (half pt.) | OK | OK | OK | OK | OK | OK | OK | OK | OK |

**HEAT EXCHANGER (H-XCH)**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Hours Operation (hrs) | 30418 | 30593 | 30755 | 30925 | 31093 | 31287 | 31339 | 31483 | 31652 |
| Inlet Temperature (°F) | 205 | 216 | 205 | 200 | 210 | 215 | 205 | 210 | 200 |
| Inlet Pressure (psi) | 16 | 16 | 15.5 | 16.0 | 17.0 | 16 | 12 | 16 | 16.5 |
| Outlet Temperature (°F) | 110 | 112 | 110 | 105 | 129 | 130 | 112 | 109 | 100 |
| Outlet Pressure (psi) | 13.5 | 13 | 12 | 12.5 | 14.0 | 13.5 | 14.0 | 13.5 | 14 |
| Outlet Magnehelic* (in $H_2O$) | 4.0+ | 4.0+ | 4.0+ | 4.0+ | 4+ | 4+ | 4+ | 4+ | 4+ |

**ELECTRICAL USAGE** (see display panel below main breaker and next to control panel)

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Kilowatts (kwh) | 173 [illegible] | 174700 | 175543 | 176829 | 177305 | 178320 | 178919 | 179629 | 180563 |

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when [illegible]ng a reading.

# MONTHLY DOCUMENTATION SHEET

SVE MANIFOLD

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE | | 11/14/14 | 1-9-15 | 1-29-15 | 2-25-15 | 3-13-15 | 5-15-15 | 6-29-15 | 7-16-15 | 9/22/15 | |
| TIME | | 1055 | 0955 | 0850 | 1000 | 1045 | 0945 | 0845 | 0835 | 1255 | |
| INITIALS | | NP/AS | A.H. | A.H. | A.H. | A.H. | A.H. | A.H. | A.H. | NP | |
| **MAGNEHELIC GAUGE*** | | | | | | | | | | | |
| CELL 1 | SVE-1 (in $H_2O$) | 1.1 | 1.1 | 1.1 | 1.1 | 1.0 | 1.0 | 1.2 | 1.2 | 1.2 | |
| | SVE-2 (in $H_2O$) | 1.5 | 1.6 | 1.5 | 1.5 | 1.4 | 1.5 | 1.5 | ~~1.0~~ 1.5 AH | 1.5 | |
| CELL 2 | SVE-3 (in $H_2O$) | 1.2 | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 | 1.3 | 1.3 | 1.3 | |
| | SVE-4 (in $H_2O$) | 1.4 | 1.4 | 1.3 | 1.4 | 2.6 | 1.0 | 1.3 | 1.3 | 1.3 | |
| CELL 3 | SVE-5 (in $H_2O$) | 1.1 | 1.2 | 1.0 | 0.9 | 1.0 | 0.9 | 1.2 | 1.2 | 1.1 | |
| | SVE-6 (in $H_2O$) | 0.7 | 1.0 | 0.9 | 0.3 | 0.5 | 0.6 | 1.0 | 1.0 | 1.0 | |
| **VACUUM GAUGE** | | | | | | | | | | | |
| CELL 1 | SVE-1 (-wc) | 30 | 30 | 30 | 30 | 32 | 28 | 32 | 33 | 32 | |
| | SVE-2 (-wc) | 30 | 28 | 30 | 30 | 30 | 26 | 30 | 30 | 30 | |
| CELL 2 | SVE-3 (-wc) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | |
| | SVE-4 (-wc) | 20 | 20 | 18 | 18 | 20 | 18 | 20 | 20 | 20 | |
| CELL 3 | SVE-5 (-wc) | 36 | 36 | 36 | 36 | 36 | 36 | 36 | 37 | 36 | |
| | SVE-6 (-wc) | 40 | 40 | 38 | 38 | 38 | 38 | 38 | 38 | 38 | |

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

# MONTHLY DOCUMENTATION SHEET

## AIR SPARGE MANIFOLD

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DATE | 11/14/14 | 1-9-15 | 1-29-15 | 2-25-15 | 3-12-15 | 5-15-15 | 6-24-15 | 7-16-15 | 9/22/15 | |
| TIME | 1055 | 0955 | 0850 | 1000 | 1045 | 0945 | 0845 | 0835 | 1200 | |
| INITIALS | NMAS | A.H. | A.H. | A.H. | A.H. | A.H. | A.H. | A.H. | NP | |

**ROTOMETER**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CELL 1 | AS-1 (scfm) | 17 | 21 | 20 | 19 | 20 | 20 | 20 | 20 | 20 | |
| | AS-2 (scfm) | 20.5 | 21 | 21 | 21 | 21 | 21 | 20 | 21 | 21 | |
| | AS-3 (scfm) | 21 | 21 | 20 | 20.5 | 20 | 20 | 20 | 20 | 20 | |
| | AS-4 (scfm) | 19 | 19 | 20 | 19 | 20 | 20 | 19 | 20 | 19 | |
| | AS-5 (scfm) | 18 | 20 | 20 | 19 | 20 | 20 | 20 | 20 | 20 | |
| CELL 2 | AS-6 (scfm) | 16.5 | 16.5 | 17 | 16 | 17 | 17 | 16.5 | 16 | 16 | |
| | AS-7 (scfm) | 16 | 16.5 | 17 | 16 | 16.5 | 17 | 16.5 | 16 | 16 | |
| | AS-8 (scfm) | 22 | 22.5 | 22 | 22 | 23 | 22 | 22 | 21 | 22 | |
| | AS-9 (scfm) | 20 | 21.0 | 17 | 17 | 20 | 18 | 20 | 20 | 18 | |
| | AS-10 (scfm) | 25 | 25 | 24 | 24 | 24 | 24 | 24 | 24 | 25 | |
| CELL 3 | AS-11 (scfm) | 17 | 16 | 20 | 18 | 21 | 16 | 16 | 17 | 18 | |
| | AS-12 (scfm) | 16 | 16 | 24 | 23.5 | 24 | 19 | 19 | 19 | 18 | |
| | AS-13 (scfm) | 15.5 | 16 | 22 | 21 | 22 | 17.5 | 18 | 17 | 16.5 | |
| | AS-14 (scfm) | 21.5 | 23 | 30 | 26 | 27.5 | 22.5 | 22.5 | 22 | 21.5 | |
| | AS-15 (scfm) | 20.5 | 21.5 | Not working | 10.5 | 10.5 | 23.0 | 23.0 | 23 | 23 | |

**PRESSURE GAUGE**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CELL 1 | AS-1 (psi) | 11.5 | 11 | 10.0 | 10.5 | 9.5 | 10 | 10 | 10.5 | 10.5 | |
| | AS-2 (psi) | 11 | 11 | 10.0 | 10.5 | 10 | 10 | 10 | 10.5 | 10.5 | |
| | AS-3 (psi) | 10 | 10.5 | 9.5 | 10 | 9.0 | 10 | 10 | 10.0 | 10.0 | |
| | AS-4 (psi) | 11 | 11 | 10.0 | 10.5 | 10 | 10 | 10 | 10.5 | 10.5 | |
| | AS-5 (psi) | 11.5 | 11.5 | 10.0 | 10.5 | 10 | 10.5 | 10 | 10.5 | 10.5 | |
| CELL 2 | AS-6 (psi) | 10 | 11 | 10.0 | 10.5 | 10 | 10.5 | 10 | 10 | 10.5 | |
| | AS-7 (psi) | 12 | 12 | 10.0 | 12.0 | 11 | 13 | 13 | 13 | 12.5 | |
| | AS-8 (psi) | 11 | 11 | 11.0 | 11 | 11 | 12 | 11 | 11 | 11.0 | |
| | AS-9 (psi) | 11.5 | 11 | 12.0 | 12 | 11.5 | 12.5 | 11.5 | 11.5 | 12.0 | |
| | AS-10 (psi) | 12.5 | 12.5 | 12.0 | 12.5 | 10.0 | 12.5 | 12.5 | 12.5 | 11.0 | |
| CELL 3 | AS-11 (psi) | 11.5 | 11.5 | 9.5 | 16 | 9.5 | 10 | 9.5 | 10.5 | 10 | |
| | AS-12 (psi) | 13.5 | 13.5 | 10.5 | 14 | 11 | 13.5 | 13.5 | 13.5 | 13.5 | |
| | AS-13 (psi) | 13 | 13 | 10.0 | 16 | 11 | 13.5 | 11.5 | 13.0 | 12.0 | |
| | AS-14 (psi) | 13.5 | 14 | 10.5 | 12.5 | 11 | 12.5 | 13.5 | 12.0 | 12.0 | |
| | AS-15 (psi) | 13 | 13.5 | 13.0 | 13.5 | 13.5 | 13.5 | 13.5 | 13.5 | 12.5 | |

# MONTHLY DOCUMENTATION SHEET

## WELL HEAD GAUGES

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | DATE | 3-13-15 | 5-15-15 | 6-24-15 | 7-16-15 | 9/22/15 | | | | | |
| | TIME | 1045 | 0945 | 0845 | 0835 | 1255 | | | | | |
| | INITIALS | A.H. | A.H. | A.H. | A.H. | NP | | | | | |
| CELL 1 | AS-1 (psi) | Covered | 8.75 | 8.8 | 8.9 | 9.36 | | | | | |
| CELL 1 | AS-2 (psi) | 8.0 | 8.0 | 8.0 | 8.0 | 9.05 | | | | | |
| CELL 1 | AS-3 (psi) | 4.0 | 4.0 | 4.5 | 4.5 | 9.18 | | | | | |
| CELL 1 | AS-4 (psi) | 5.0 | 2.0 | 2.0 | 2.0 | 9.24 | | | | | |
| CELL 1 | AS-5 (psi) | 12.0 | 12.0 | 12.0 | 12.0 | 9.19 | | | | | |
| CELL 2 | AS-6 (psi) | 9.0 | 5.0 | 9.0 | 9.5 | 9.98 | | | | | |
| CELL 2 | AS-7 (psi) | 8.0 | 9.0 | 6.5 | 7.0 | 9.78 | | | | | |
| CELL 2 | AS-8 (psi) | covered | 0 | 0 | 0 | 9.84 | | | | | |
| CELL 2 | AS-9 (psi) | 10.5 | 10.5 | 10.5 | 10.5 | 10.84 | | | | | |
| CELL 2 | AS-10 (psi) | 3.0 | 0 | 0 | 0 | 9.76 | | | | | |
| CELL 3 | AS-11 (psi) | 8.0 | 6.0 | 5.0 | 9.0 | 8.84 | | | | | |
| CELL 3 | AS-12 (psi) | 10.5 | 10.5 | 10.0 | 10.5 | 9.54 | | | | | |
| CELL 3 | AS-13 (psi) | 7.0 | 4.0 | 2.5 | 7.0 | 9.56 | | | | | |
| CELL 3 | AS-14 (psi) | 10.5 | 10.5 | 10 | 10.5 | 9.48 | | | | | |
| CELL 3 | AS-15 (psi) | Broken | 10 | 9.53 | 9.95 | 9.55 | | | | | |
| CELL 1 | SVE-1 (in $H_2O$) | 6.5 | 6.5 | 6.5 | 6.5 | 0.01 | | | | | |
| CELL 1 | SVE-2 (in $H_2O$) | 2.0 | 2.0 | 1.0 | 1.5 | 0.01 | | | | | |
| CELL 2 | SVE-3 (in $H_2O$) | 2.0 | 7.0 | 7.5 | 2.5 | 0.01 | | | | | |
| CELL 2 | SVE-4 (in $H_2O$) | 1.0 | 0 | 0 | 0 | 0.01 | | | | | |
| CELL 3 | SVE-5 (in $H_2O$) | 2.5 | 10 | 10 | 2.5 | 0.34 | | | | | |
| CELL 3 | SVE-6 (in $H_2O$) | 1.0 | ~~0~~ 8 | ~~9.5~~ 8.1 | 8.3 | 0.27 | | | | | |

# DAILY DOCUMENTATION SHEET

## BUILDINGS 1 - 2

Control Panel Touch Screen

| DATE | 9-24-15 | 09-25-15 | 9-26-15 | 9-27-15 | 9-28-15 | 9-29-15 | 9-30-15 | 10-1-15 | 10-2-15 |
|---|---|---|---|---|---|---|---|---|---|
| TIME | | 1111 | 9:07Am | 5:39Am | 8:06Am | 7:44Am | 9:06Am | 8:56Am | 7:06Am |
| OBSERVER'S INITIALS | | AH | KA | RK | RK | RK | RK | RK | RK |
| **WEATHER CONDITIONS** | | | | | | | | | |
| Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.) | SYS | 80°F Sunny | 76 SUNNY | 80°F DARK | 76°F Cloudy | 74°F RAIN | 66°F CLEAR | 66°F CLEAR | 62°F CLEAR |
| **ALARMS** | | | | | | | | | |
| Alarm Code | TEM | none | NONE | NONE | N/A | NA | NA | NA | NA |
| **P&ID** | | | | | | | | | |
| PDT-701 SVE (-wc) | M | 0.06 | 0.13 | 0.13 | 0.29 | 0.25 | 0.14 | 0.11 | 0.11 |
| PT-701 SVE (-wc) | | -49 | -51 | -58 | -61 | -63 | -59 | -59 | -58 |
| PT-702 SVE (-wc) | | 60.1 | 59.9 | 58.5 | 57.4 | 57.6 | 57.8 | 58.0 | 59.0 |
| PT-2201 SPRG (psi) | D | 17.3 | 17.1 | 16.7 | 13.4 | 16.4 | 16.7 | 12.4 | 12.5 |
| P-401 PUMP (cycles) | O | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 |
| **P&ID2** | | | | | | | | | |
| PDT-801 SVE (-wc) | W | 0.29 | 0.31 | 0.28 | 0.32 | 0.32 | 0.34 | 0.35 | 0.38 |
| PT-801 SVE (-wc) | | -125 | -135 | -141 | -144 | -146 | -139 | -137 | -140 |
| PT-802 SVE (-wc) | N | 49.2 | 47.8 | 47.1 | 46.8 | 46.9 | 48.1 | 47.8 | 48.0 |
| PT-2301 SPRG (psi) | | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| P-501 PUMP (cycles) | | 225 | 225 | 227 | 229 | 232 | 235 | 238 | 241 |

## DAILY DOCUMENTATION SHEET

### BUILDINGS 1 - 2

Control Panel Touch Screen

| DATE | 9-24-15 | 9-25-15 | 9-26-15 | 9-27-15 | 9-28-15 | 9-29-15 | 9-30-15 | 10-1-15 | 10-2-15 |
|---|---|---|---|---|---|---|---|---|---|
| TIME | | 1111 | 9:07AM | 5:39AM | 8:06AM | 7:44AM | 9:06AM | 8:54AM | 7:06AM |
| OBSERVER'S INITIALS | | B.H | KA | RL | RL | RL | RL | RL | RL |
| **HOURS METERS** | | | | | | | | | |
| B-701 SVE (hrs) | | 6571 | 6593 | 6613 | 6640 | 6663 | 6689 | 6713 | 6735 |
| C-2201 SPRG (hrs) | | 6504 | 6525 | 6546 | 6572 | 6596 | 6621 | 6645 | 6667 |
| C-2202 SPRG (hrs) | | 6198 | 6220 | 6241 | 6267 | 6291 | 6316 | 6340 | 6362 |
| B-801 SVE (hrs) | | 6507 | 6529 | 6550 | 6576 | 6600 | 6625 | 6649 | 6671 |
| C-2301 SPRG (hrs) | | 6489 | 6511 | 6532 | 6558 | 6582 | 6607 | 6631 | 6653 |
| C-2302 SPRG (hrs) | | 6489 | 6511 | 6532 | 6558 | 6582 | 6607 | 6631 | 6653 |
| **SET POINTS** | | | | | | | | | |
| PAL-701 SVE (wc) | | -27 | -27 | -27 | -27 | -27 | -27 | -27 | -27 |
| PAH-702 SVE (wc) | | 100 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| PAL-702 SVE (wc) | | 10 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| PAH-2201 SPRG (psi) | | 30 | 30 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| PAL-2201 SPRG (psi) | | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| PAL-801 SVE (wc) | | -25 | -25 | -25 | -25 | -25 | -25 | -25 | -25 |
| PAH-802 SVE (wc) | | 100 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| PAL-802 SVE (wc) | | 10 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 |
| PAH-2301 SPRG (psi) | | 30 | 30 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 |
| PAL-2301 SPRG (psi) | | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| SV-2801 SPRG (min) | | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 |
| SV-2802 SPRG (min) | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| SV-2901 SPRG (min) | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |
| SV-2902 SPRG (min) | | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 |

S X S T I M D O W N

# DAILY DOCUMENTATION SHEET

## BUILDINGS 1 - 2

Control Panel Touch Screen

| DATE | 7-9-15 | 7-10-15 | 7-11-15 | 7-12-15 | 7-13-15 | 7-15-15 | 7-16-15 | 9/22/15 | 9-23-15 |
|---|---|---|---|---|---|---|---|---|---|
| TIME | 8:03AM | 1145 | 7:48AM | 10:27AM | 2:00PM | 8:34AM | 1030 | 1100 | |
| OBSERVER'S INITIALS | RL | A.H. | DE | KA | DE | RL | A.H. | NP | |
| **WEATHER CONDITIONS** | | | | | | | | | |
| Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.) | CLEAR 74°F | Clear 84°F | CLOUDY 76°F | Cloudy 80°F | CLEAR 90°F | CLEAR 74°F | Cloudy 76°F | CLEAR 78° | SYSTEM DOWN |
| **ALARMS** | | | | | | | | | |
| Alarm Code | NA | N/A. | NA | NA | NA | NA | NA. | N/A | |
| **P&ID** | | | | | | | | | |
| PDT-701 SVE (-wc) | 0.08 | 0.06 | 0.10 | 0.12 | 0.07 | 0.09 | 0.10 | 0.07 | |
| PT-701 SVE (-wc) | -64 | -57 | -60 | -63 | -70 | -64 | -55 | -49 | |
| PT-702 SVE (-wc) | 55.6 | 57.2 | 56.9 | 55.0 | 52.7 | 55.4 | 55.1 | 61.4 | |
| PT-2201 SPRG (psi) | 14.0 | 13.2 | 13.0 | 12.9 | 10.6 | 11.6 | 14.2 | 15.5 | |
| P-401 PUMP (cycles) | 49 | 49 | 49 | 49 | 49 | 49 | 49 | 49 | |
| **P&ID2** | | | | | | | | | |
| PDT-801 SVE (-wc) | 0.27 | 0.29 | 0.32 | 0.30 | 0.27 | 0.25 | 0.28 | 0.25 | |
| PT-801 SVE (-wc) | -140 | -138 | -132 | -135 | -145 | -139 | -136 | -122 | |
| PT-802 SVE (-wc) | 47.8 | 46.7 | 48.2 | 47.4 | 46.7 | 47.8 | 47.3 | 49.3 | |
| PT-2301 SPRG (psi) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| P-501 PUMP (cycles) | 219 | 220 | 220 | 220 | 220 | 220 | 220 | 223 | |

Transmitter not recording.

# DAILY DOCUMENTATION SHEET

## BUILDINGS 1 - 2

Control Panel Touch Screen

| DATE | 7-9-15 | 7-10-15 | 7-11-15 | 7-12-15 | 7-13-15 | 7-15-15 | 7-16-15 | 9/22/15 | 9-23-15 |
|---|---|---|---|---|---|---|---|---|---|
| TIME | 8:03 AM | 1145 | 7:48 AM | 15:27 PM | 2:00 P.M | 8:24 AM | 1030 | 1100 | |
| OBSERVER'S INITIALS | RK | A.H | DE | KA | DE | RK | A.H | NP | |
| **HOURS METERS** | | | | | | | | | |
| B-701 SVE (hrs) | 6361 | 6387 | 6403 | 6423 | 6451 | 6485 | 6504 | 6506 | S |
| C-2201 SPRG (hrs) | 6294 | 6320 | 6336 | 6356 | 6383 | 6418 | 6436 | 6439 | Y |
| C-2202 SPRG (hrs) | 6131 (OFF) | 6131 | 6131 | 6131 | 6131 | 6131 | 6131 | 6134 | S |
| B-801 SVE (hrs) | 6295 | 6323 | 6338 | 6359 | 6386 | 6421 | 6439 | 6442 | |
| C-2301 SPRG (hrs) | 6277 | 6305 | 6321 | 6341 | 6368 | 6403 | 6421 | 6424 | T |
| C-2302 SPRG (hrs) | 6277 | 6305 | 6320 | 6341 | 6368 | 6403 | 6421 | 6424 | C |
| **SET POINTS** | | | | | | | | | M |
| PAL-701 SVE (wc) | -27 | -27 | -27 | -27 | -27 | -27 | -27 | -27 | |
| PAH-702 SVE (wc) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | |
| PAL-702 SVE (wc) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | D |
| PAH-2201 SPRG (psi) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | |
| PAL-2201 SPRG (psi) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | O |
| PAL-801 SVE (wc) | -25 | -25 | -25 | -25 | -25 | -25 | -25 | -25 | W |
| PAH-802 SVE (wc) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | |
| PAL-802 SVE (wc) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | A |
| PAH-2301 SPRG (psi) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | |
| PAL-2301 SPRG (psi) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| SV-2801 SPRG (min) | 40 | 40 | 40 | 40 | 40 | 40 | 40 | 40 | |
| SV-2802 SPRG (min) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | |
| SV-2901 SPRG (min) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | |
| SV-2902 SPRG (min) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | 20 | |

# DAILY DOCUMENTATION SHEET

## BUILDINGS 1 - 2

Control Panel Touch Screen

| DATE | 6-30-15 | 7-1-15 | 7-2-15 | 7-3-15 | 7-4-15 | 7-5-15 | 7-6-15 | 7-7-15 | 7-8-15 |
|---|---|---|---|---|---|---|---|---|---|
| TIME | 8:58am | 0853 | 1230 | 8:15 | 9:35 | 11:00AM | 8:10 AM | — | 1330 |
| OBSERVER'S INITIALS | RK | A.H. | A.H. | KA | DL | DL | RK | A.H | A.H. |
| **WEATHER CONDITIONS** | | | | | | | | | |
| Indoor Room Temp (°F), Outdoor Conditions: (Rain, Snow, Clear, Overcast, etc.) | CLEAR 70° | Clear 60°F | Clear 70°F | SUNNY 72°F | SUNNY 70° | SUNNY 78° | PARTLY CLOUDY 81°F | System down | Partly Cloudy 79°F |
| **ALARMS** | | | | | | | | | |
| Alarm Code | NA | N/A | N/A | NA | NA | NA | NA | | N/A |
| **P&ID** | | | | | | | | | |
| PDT-701 SVE (-wc) | 0.12 | 0.10 | 0.05 | 0.07 | 0.08 | 0.09 | 0.09 | | 0.10 |
| PT-701 SVE (-wc) | -65 | -58 | -53 | -60 | -60 | -67 | -70 | | -58 |
| PT-702 SVE (-wc) | 55.9 | 58.9 | 59.3 | 56.9 | 54.4 | 53.6 | 53.5 | | 56.9 |
| PT-2201 SPRG (psi) | 13.2 | 14.8 | 14.5 | 13.9 | 10.8 | 13.4 | 13.5 | | 14.9 |
| P-401 PUMP (cycles) | 49 | 49 | 49 | 49 | 49 | 49 | 49 | | 49 |
| **P&ID2** | | | | | | | | | |
| PDT-801 SVE (-wc) | 0.29 | 0.32 | 0.29 | 0.23 | 0.29 | 0.29 | 0.31 | | 0.29 |
| PT-801 SVE (-wc) | -144 | -127 | -124 | -135 | -141 | -143 | -148 | | -129 |
| PT-802 SVE (-wc) | 47.3 | 49.7 | 49.6 | 48.6 | 47.0 | 45.0 | 45.8 | | 47.7 |
| PT-2301 SPRG (psi) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| P-501 PUMP (cycles) | 218 | 218 | 218 | 218 | 219 | 219 | 219 | | 219 |

Transmitter not recording.

# DAILY DOCUMENTATION SHEET

## BUILDINGS 1 - 2

Control Panel Touch Screen

| DATE | 6-30-15 | 7-1-15 | 7-2-15 | 7-3-15 | 7-4-15 | 7-5-15 | 7-6-15 | 7-7-15 | 7-8-15 |
|---|---|---|---|---|---|---|---|---|---|
| TIME | 8:36A | 0850 | 1230 | 8:15AM | 9:35AM | 11:00AM | 8:19AM | — | 1330 |
| OBSERVER'S INITIALS | RK | A.H. | A.H. | KA | DL | DL | RK | A.H. | A.H. |
| **HOURS METERS** | | | | | | | | | |
| B-701 SVE (hrs) | 6222 | 6223 | 6246 | 6266 | 6291 | 6317 | 6338 | S | 6343 |
| C-2201 SPRG (hrs) | 6155 | 6156 | 6179 | 6199 | 6224 | 6250 | 6271 | Y | 6275 |
| C-2202 SPRG (hrs) | 6130 | 6131 | 6131 | 6131 | 6131 | 6131 | 6131 | S | 6131 |
| B-801 SVE (hrs) | 6156 | 6157 | 6180 | 6200 | 6225 | 6251 | 6272 | T | 6276 |
| C-2301 SPRG (hrs) | 6138 | 6139 | 6162 | 6182 | 6207 | 6233 | 6274 | E | 6259 |
| C-2302 SPRG (hrs) | 6138 | 6139 | 6162 | 6182 | 6207 | 6233 | 6274 | M | 6258 |
| **SET POINTS** | | | | | | | | | |
| PAL-701 SVE (wc) | -27 | -27 | -27 | -27 | -27 | -27 | -27 | | -27 |
| PAH-702 SVE (wc) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | D | 100.0 |
| PAL-702 SVE (wc) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | O | 10.0 |
| PAH-2201 SPRG (psi) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | W | 30.0 |
| PAL-2201 SPRG (psi) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | N | 0.0 |
| PAL-801 SVE (wc) | -25 | -25 | -25 | -25 | -25 | -25 | -25 | | -25 |
| PAH-802 SVE (wc) | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | | 100.0 |
| PAL-802 SVE (wc) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | | 10.0 |
| PAH-2301 SPRG (psi) | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | 30.0 | | 30.0 |
| PAL-2301 SPRG (psi) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 |
| SV-2801 SPRG (min) | 40 | 40 | 40 | 40.0 | 40.0 | 40.0 | 40 | | 40 |
| SV-2802 SPRG (min) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | | 20 |
| SV-2901 SPRG (min) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | | 20 |
| SV-2902 SPRG (min) | 20 | 20 | 20 | 20 | 20 | 20 | 20 | | 20 |

# WEEKLY DOCUMENTATION SHEET
## BUILDING 1
SYSTEM COMPONENTS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DATE | 6-15-15 | 6-22-15 | 6-29-15 | 7-6-15 | 7-15-15 | ~~7-20-15~~ 9/22/15 | 9-28-15 | 10-5-15 | |
| TIME | 2:15PM | 8:31Am | 0930 | 8:16Am | 8:25Am | 1030 | 8:03Am | 8:23Am | |
| OBSERVER'S INITIALS | KH | RK | A.H | RK | RK | AH | RK | RK | |

**SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE; MOISTURE, ETC.**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Comments and Notes | NO | NA | N/A | NA | NA | N/A | NA | NA | |

**SOIL VAPOR EXTRACTION (SVE) BLOWER B-701**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Pre-Filter Vacuum (-wc) | 55 | 75 | 52 | 60 | 55 | 40 | 50 | 51 | |
| Post-Filter Vacuum (-wc) | 90 | 90 | 84 | 94 | 88 | 70 | 83 | 84 | |
| Inlet Magnehelic* (in $H_2O$) | .3 | .2 | 0.2 | 0.2 | 0.2 | 0.15 | 0.15 | 0.2 | |
| Inlet Vacuum (-wc) | 80 | -82 | 82 | -82 | GAUGE BROKE | GAUGE BROKE | GAUGE BROKE | BROKE | |

**SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Inlet Pressure (wc) | 22 | 22 | 23 | 18 | 20 | 28 | 20 | 20 | |
| Inlet Temperature (°F) | 140 | 102 | 125 | 130 | 125 | 125 | 125 | 115 | |
| Outlet Pressure (wc) | 9 | 8 | 5.5 | 6 | 8 | 8 | 9 | 8 | |
| Outlet Temperature (°F) | 109 | 102 | 94 | 95 | 90 | 98 | 92 | 74 | |
| Water Level Sight Glass (in) | 0 | 0 | 0 | 0 | 8" | 0 | Ø | Ø | |

**AIR SPARGE (SPRG) COMPRESSOR C-2201**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Upper Oil Sight Glass (half pt.) | OK | OK | OK | OK | OK | OK | OK | OK | |
| Lower Oil Sight Glass (half pt.) | OK | OK | OK | OK | OFF | OK | OK | OK | |

**AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Inlet Pressure (psi) | 25 | 15 | 15 | 14.5 | 160 | 2 | 17.5 | 13 | |
| Inlet Temperature (°F) | 250 | 255 | 195 | 200 | 189 | 135 | 205 | 190 | |
| Outlet Pressure (psi) | 24 | 14.5 | 15.5 | 15 | 15 | 2 | 18.0 | 12.5 | |
| Outlet Temperature (°F) | 122 | 118 | 82 | 86 | 80 | 95 | 98 | 90 | |

* K[illegible] plastic pinch valves on tubing to magnehelic gauge closed except whe[illegible]ng a reading.

# WEEKLY DOCUMENTATION SHEET
## BUILDING 2
SYSTEM COMPONENTS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| DATE | 6-29-15 | 7-6-15 | 7-14-15 | 9/22/15 | 9-22-15 | 10-5-15 | | | |
| TIME | 0905 | 8:10Am | 8:34Am | 1040 | 7:58Am | 8:18Am | | | |
| OBSERVER'S INITIALS | A.H | RK | RK | NP | RK | RK | | | |
| **SYSTEM LEAKS, EXCESSIVE OR UNFAMILAR NOISE, MOISTURE, ETC.** | | | | | | | | | |
| Comments and Notes | N/A. 74°F | NA 80°F | NA 82°F | N/A 78°F | NA 79°F | NA 66°F | | | |
| **SOIL VAPOR EXTRACTION (SVE) BLOWER B-801** | | | | | | | | | |
| Pre-Filter Vacuum (-wc) | 58 | 65 | 55 | 50 | 60 | 62 | | | |
| Post-Filter Vacuum (-wc) | 60 | 70 | 80 | 55 | 66 | 68 | | | |
| Inlet Magnehelic* (in $H_2O$) | 0.40 | 0.40 | 03.5 | 0.30 | 0.4 | 0.405 | | | |
| Inlet Vacuum (-wc) | 60 | -40 | -60 | -60 | -60 | -60 | | | |
| **SOIL VAPOR EXTRACTION (SVE) HEAT EXCHANGER (H-XCH)** | | | | | | | | | |
| Inlet Pressure (wc) | 48 | 46 | 48 | 52 | 47 | 48 | | | |
| Inlet Temperature (°F) | 125 | 125 | 130 | 125 | 126 | 124 | | | |
| Outlet Pressure (wc) | 1.0 | 1 | 1 | 2 | 2 | 2 | | | |
| Outlet Temperature (°F) | 96 | 98 | 100 | 100 | 98 | 86 | | | |
| Water Level Sight Glass (in) | ~~8~~ 0 | 0 | 9" | 0 | 24" | 20" | | | |
| **AIR SPARGE (SPRG) COMPRESSOR C-2301** | | | | | | | | | |
| Upper Oil Sight Glass (half pt.) | ok | ok | OK | OK | OK | OK | | | |
| Lower Oil Sight Glass (half pt.) | OK | OK | OK | OK | OK | OK | | | |
| **AIR SPARGE (SPRG) HEAT EXCHANGER (H-XCH)** | | | | | | | | | |
| Inlet Pressure (psi) | 18 | 17.5 | 16.5 | 18.0 | 17.5 | 16 | | | |
| Inlet Temperature (°F) | 210 | 212 | 220 | 215 | 215 | 198 | | | |
| Outlet Pressure (psi) | 16.5 | 16.5 | 16.5 | 16.5 | 16.0 | 15.5 | | | |
| Outlet Temperature (°F) | 118 | 118 | 126 | 120 | 119 | 108 | | | |

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

# MONTHLY DOCUMENTATION SHEET
## BUILDING 1
SVE MANIFOLD

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DATE | 6-24-15 | 7-16-15 | 9/22/15 | | | | | | | |
| TIME | 0930 | 1030 | 1100 | | | | | | | |
| INITIALS | AH | A.H. | NP | | | | | | | |

**MAGNEHELIC GAUGE***

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SVE-15 (in $H_2O$) | 0.0 | 0.0 | 0.0 | | | | | | | |
| SVE-14 (in $H_2O$) | 0.0 | 0.0 | 0.0 | | | | | | | |
| SVE-13 (in $H_2O$) | 0.0 | 0.0 | 0.0 | | | | | | | |
| SVE-11 (in $H_2O$) | 0.25 | 0.40 | 0.25 | | | | | | | |
| SVE-9 (in $H_2O$) | 0.55 | 0.40 | 0.40 | | | | | | | |

**VACUUM GAUGE**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SVE-15 (-wc) | 50 | 55 | 40 | | | | | | | |
| SVE-14 (-wc) | 53 | 55 | 40 | | | | | | | |
| SVE-13 (-wc) | 55 | 60 | 40 | | | | | | | |
| SVE-11 (-wc) | 18 | 20 | 14.5 | | | | | | | |
| SVE-9 (-wc) | 50 | 55 | 35 | | | | | | | |

* K[illegible] plastic pinch valves on tubing to magnehelic gauge closed except wh[illegible]ing a reading.

# MONTHLY DOCUMENTATION SHEET
## BUILDING 1 UPPER CELL
AIR SPARGE MANIFOLD

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DATE | | 5-15-15 | 6-29-15 | 7-16-15 | 9/22/15 | | | | | | |
| TIME | | 0906 | 0930 | 1030 | 1100 | | | | | | |
| INITIALS | | A.H. | A.H | A.H. | NP | | | | | | |
| | | | | ROTOMETER | | | | | | | |
| UPPER CELL | AS-47 (scfm) | 0 | 0 | 10 | 16 | | | | | | |
| | AS-38 (scfm) | 10 | 5 | 5 | 6 | | | | | | |
| | AS-37 (scfm) | 15 | 8 | 7 | 11 | | | | | | |
| | AS-23 (scfm) | 15 | 7.5 | 6 | 11 | | | | | | |
| | AS-24 (scfm) | 14 | 7.0 | 6.5 | 10 | | | | | | |
| | AS-39 (scfm) | 16 | 8.0 | 7 | 11 | | | | | | |
| | AS-48 (scfm) | 17.5 | 9.0 | 8.5 | 13 | | | | | | |
| | AS-52 (scfm) | 15 | 7.5 | 7 | 10.5 | | | | | | |
| | AS-56 (scfm) | 14 | 7.5 | 6.5 | 10 | | | | | | |
| | AS-54 (scfm) | 22 | 10 | 10 | 14.5 | | | | | | |
| | AS-58 (scfm) | 12.5 | 6.5 | 5.5 | 9 | | | | | | |
| | | | | PRESSURE GAUGE | | | | | | | |
| UPPER CELL | AS-47 (psi) | 11.5 | 0 | 12 | 17 | | | | | | |
| | AS-38 (psi) | 17 | 13 | 14 | 14 | | | | | | |
| | AS-37 (psi) | ~~8~~ 7.5 | 7.5 | 7 | 8 | | | | | | |
| | AS-23 (psi) | 13 | 11 | 10.5 | 12.5 | | | | | | |
| | AS-24 (psi) | 13 | 12 | 11 | 13 | | | | | | |
| | AS-39 (psi) | 12 | 11 | 10 | 12 | | | | | | |
| | AS-48 (psi) | 11.5 | 11 | 10 | 11.5 | | | | | | |
| | AS-52 (psi) | 11 | 10.5 | 9.5 | 11 | | | | | | |
| | AS-56 (psi) | 11 | 10.0 | 9.5 | 11 | | | | | | |
| | AS-54 (psi) | 14 | 13.0 | 14 | 13.5 | | | | | | |
| | AS-58 (psi) | 9.5 | 12.0 | 11.5 | 10 | | | | | | |

*Note: 6-29-15 reading low due to C-2207 not in operation,,
7-16-15 "

# MONTHLY DOCUMENTATION SHEET
## BUILDING 1 LOWER CELL
AIR SPARGE MANIFOLD

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DATE | 5-15-15 | 6-29-15 | 7-16-15 | 9/22/15 | | | | | | |
| TIME | 0905 | 0930 | 1030 | 1100 | | | | | | |
| INITIALS | A.H | A.H. | A.H. | NP | | | | | | |
| **ROTOMETER** | | | | | | | | | | |
| LOWER CELL AS-49 (scfm) | 15 | 8 | 7.5 | 11 | | | | | | |
| LOWER CELL AS-44 (scfm) | 14 | 8 | 7.5 | 12 | | | | | | |
| LOWER CELL AS-31 (scfm) | 12 | 7 | 7.5 | 10. | | | | | | |
| LOWER CELL AS-32 (scfm) | 12 | 7.5 | 7.5 | 10 | | | | | | |
| LOWER CELL AS-45 (scfm) | 14.5 | 6 | 6.5 | 11 | | | | | | |
| LOWER CELL AS-51 (scfm) | 15 | 7 | 7.5 | 11.5 | | | | | | |
| LOWER CELL AS-55 (scfm) | 18 | 10 | 10 | 14.5 | | | | | | |
| LOWER CELL AS-53 (scfm) | 17 | 8 | 7.5 | 12 | | | | | | |
| LOWER CELL AS-59 (scfm) | 14.5 | 8 | 7.5 | 11 | | | | | | |
| LOWER CELL AS-57 (scfm) | 16.5 | 6 | 6 | 11.5 | | | | | | |
| LOWER CELL AS-50 (scfm) | 22 | 10 | 9.5 | 17 | | | | | | |
| **PRESSURE GAUGE** | | | | | | | | | | |
| LOWER CELL AS-49 (psi) | 10.5 | 10 | 10 | 10.5 | | | | | | |
| LOWER CELL AS-44 (psi) | 12.5 | 10.5 | 11 | 12 | | | | | | |
| LOWER CELL AS-31 (psi) | 10 | 10 | 10 | 10 | | | | | | |
| LOWER CELL AS-32 (psi) | 9 | 10 | 10 | 9.5 | | | | | | |
| LOWER CELL AS-45 (psi) | 11.5 | 10.5 | 11 | 11.5 | | | | | | |
| LOWER CELL AS-51 (psi) | 10.5 | 10 | 10 | 10.5 | | | | | | |
| LOWER CELL AS-55 (psi) | 10.5 | 10 | 10 | 10.5 | | | | | | |
| LOWER CELL AS-53 (psi) | 11.5 | 10 | 10.5 | 11.5 | | | | | | |
| LOWER CELL AS-59 (psi) | 11 | 10 | 10.5 | 11 | | | | | | |
| LOWER CELL AS-57 (psi) | 12 | 10.5 | 11 | 12 | | | | | | |
| LOWER CELL AS-50 (psi) | 12 | 10.5 | 11 | 12 | | | | | | |

Note 6-29-15 reading low due to C-2202 not in operation
7-16-15 "

# MONTHLY DOCUMENTATION SHEET
## BUILDING 1
PID MEASUREMENTS

| DATE | 1-4-15 | 2-25-15 | 3-13-15 | 5-25-15 | 6-29-15 | 7-16-15 | 9/22/15 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | 1255 | 0930 | 0945 | 0905 | 0930 | 1030 | 1100 | | | | | |
| INITIALS | A.H | A.H. | A.H. | A.H. | A.H. | A.H. | AP | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVE Effluent | 0.9 | 0.4 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | |
| SVE - 15 | moisture | moisture | moisture | 0.0 | 0.0 | moisture | 0.0 | | | | | |
| SVE - 14 | | | | 0.0 | moisture | | 0.0 | | | | | |
| SVE - 13 | | | | 0.0 | 0.0 | | 0.0 | | | | | |
| SVE - 11 | | | | 0.0 | 0.0 | | 0.0 | | | | | |
| SVE - 9 | | | | 0.0 | 0.0 | | 0.0 | | | | | |
| Exhaust | 0.9 | 0.4 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | | | | | |

# MONTHLY DOCUMENTATION SHEET
## BUILDING 2
SVE MANIFOLD

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DATE | 6-24-15 | 7-16-15 | 9/22/15 | | | | | | | |
| TIME | 0905 | 1020 | 1040 | | | | | | | |
| INITIALS | A. H. | A. H. | MP | | | | | | | |

**MAGNEHELIC GAUGE***

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SVE-10 (in $H_2O$) | 0.35 | 0.25 | 0.25 | | | | | | | |
| SVE-12 (in $H_2O$) | 0.60 | 0.60 | 0.50 | | | | | | | |
| SVE-8 (in $H_2O$) | 0.60 | 0.70 | 0.50 | | | | | | | |
| SVE-7 (in $H_2O$) | 0.40 | 0.35 | 0.25 | | | | | | | |

**VACUUM GAUGE**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| SVE-10 (-wc) | 55 | 80 | 90 | | | | | | | |
| SVE-12 (-wc) | 55 | 55 | 48 | | | | | | | |
| SVE-8 (-wc) | 57 | 55 | 50 | | | | | | | |
| SVE-7 (-wc) | 65 | 68 | 65 | | | | | | | |

**ELECTRICAL USAGE**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Kilowatts (kwh) | 13386.60 | 36654.60 | 37152.70 | | | | | | | |

* Keep plastic pinch valves on tubing to magnehelic gauge closed except when taking a reading.

# MONTHLY DOCUMENTATION SHEET
## BUILDING 2 UPPER CELL
AIR SPARGE MANIFOLD

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DATE | 5-15-15 | 6-24-15 | 7-16-15 | 9/22/15 | | | | | | |
| TIME | 1076 | 0905 | 1020 | 1140 | | | | | | |
| INITIALS | A.H. | A.H. | A.H. | NP | | | | | | |
| **ROTOMETER** | | | | | | | | | | |
| UPPER CELL | | | | | | | | | | |
| AS-20 (scfm) | 15 | 15 | 15 | 15 | | | | | | |
| AS-26 (scfm) | 9 | 8 | 8.5 | 9 | | | | | | |
| AS-16 (scfm) | 17 | 16 | 17 | 17 | | | | | | |
| AS-18 (scfm) | 11 | 10 | 10 | 10 | | | | | | |
| AS-22 (scfm) | 13.5 | 13 | 13 | 13.5 | | | | | | |
| AS-28 (scfm) | 13 | 12 | 13 | 13.5 | | | | | | |
| AS-30 (scfm) | 20 | 18 | 19 | 19.5 | | | | | | |
| AS-36 (scfm) | 16 | 16 | 15.5 | 16 | | | | | | |
| AS-42 (scfm) | 15.5 | 16 | 10 | 10.5 | | | | | | |
| AS-40 (scfm) | 16 | 15.5 | 19 | 19.5 | | | | | | |
| AS-34 (scfm) | 17 | 27 | 27 | 29 | | | | | | |
| **PRESSURE GAUGE** | | | | | | | | | | |
| UPPER CELL | | | | | | | | | | |
| AS-20 (psi) | 10 | 10 | 10 | 10 | | | | | | |
| AS-26 (psi) | 10 | 10.5 | 10 | 10.5 | | | | | | |
| AS-16 (psi) | 10 | 10 | 10 | 10 | | | | | | |
| AS-18 (psi) | 14.5 | 14.5 | 15 | 15 | | | | | | |
| AS-22 (psi) | 10 | 10 | 10 | 10 | | | | | | |
| AS-28 (psi) | 10.5 | 10.5 | 10.5 | 10.5 | | | | | | |
| AS-30 (psi) | 10 | 10 | 10 | 10.5 | | | | | | |
| AS-36 (psi) | 11.5 | 11.0 | 11.5 | 12 | | | | | | |
| AS-42 (psi) | 10.5 | 10.5 | 10 | 10.5 | | | | | | |
| AS-40 (psi) | 10 | 10.5 | 10.5 | 11 | | | | | | |
| AS-34 (psi) | 10 | 11.0 | 11.5 | 11.5 | | | | | | |

# MONTHLY DOCUMENTATION SHEET
## BUILDING 2 LOWER CELL
AIR SPARGE MANIFOLD

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| DATE | 5-15-15 | 6-24-15 | 7-16-15 | 9/22/15 | | | | | | |
| TIME | 1030 | 0905 | 1020 | 1140 | | | | | | |
| INITIALS | A.H. | A.H. | A.H. | NP | | | | | | |

**ROTOMETER**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LOWER CELL | AS-27 (scfm) | 14 | 14 | 15 | 15.5 | | | | | | |
| | AS-25 (scfm) | 15.5 | 15 | 17 | 18 | | | | | | |
| | AS-17 (scfm) | 15 | 14 | 15 | 16 | | | | | | |
| | AS-19 (scfm) | 15 | 15 | 16 | 17 | | | | | | |
| | AS-21 (scfm) | 18 | 20 | 20 | 22 | | | | | | |
| | AS-29 (scfm) | 10.5 | 20 | 15 | 16.5 | | | | | | |
| | AS-43 (scfm) | 11.5 | 10 | 11 | 10.5 | | | | | | |
| | AS-46 (scfm) | 21 | 21 | 22 | 24 | | | | | | |
| | AS-41 (scfm) | 13 | 12 | 12.5 | 13 | | | | | | |
| | AS-33 (scfm) | 17 | 17 | 18 | 19.5 | | | | | | |
| | AS-35 (scfm) | 13.5 | 13 | 13.5 | 14.5 | | | | | | |

**PRESSURE GAUGE**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| LOWER CELL | AS-27 (psi) | 12 | 11.5 | 10.5 | 11 | | | | | | |
| | AS-25 (psi) | 11 | 10.5 | 10.5 | 10.5 | | | | | | |
| | AS-17 (psi) | 11 | 10.5 | 11.0 | 11.5 | | | | | | |
| | AS-19 (psi) | 13 | 12.5 | 13 | 12.5 | | | | | | |
| | AS-21 (psi) | 12.5 | 11.5 | 12 | 11.5 | | | | | | |
| | AS-29 (psi) | 14 | 12.5 | 13.5 | 13.5 | | | | | | |
| | AS-43 (psi) | 11 | 10.5 | 10.5 | 10.5 | | | | | | |
| | AS-46 (psi) | 12.5 | 12 | 12 | 12 | | | | | | |
| | AS-41 (psi) | 10.5 | 10 | 10.5 | 10 | | | | | | |
| | AS-33 (psi) | 11.5 | 11 | 11 | 11 | | | | | | |
| | AS-35 (psi) | 11.5 | 11 | 11 | 10.5 | | | | | | |

# MONTHLY DOCUMENTATION SHEET
## BUILDING 2
PID MEASUREMENTS

| DATE | 1-9-15 | 2-25-15 | 3-13-15 | 5-15-15 | 6-29-15 | 7-16-15 | 9/22/15 | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TIME | 1240 | 0960 | 1000 | 1070 | 0905 | 1020 | 1410 | | | | | |
| INITIALS | A.H. | A.H. | A.H. | A.H. | A.H. | A.H. | MP | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SVE Effluent | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.00 | | | | | |
| SVE - 10 | moisture | moisture | moisture | 0.00 | moisture | moisture | 0.0 | | | | | |
| SVE - 12 | | | | 0.00 | moisture | | 0.0 | | | | | |
| SVE - 8 | | | | 0.00 | moisture | | 0.0 | | | | | |
| SVE - 7 | | | | 0.00 | moisture | | 0.0 | | | | | |
| Exhaust | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.0 | 0.0 | | | | | |

D

D

# Appendix D

## Third Quarter 2015 Groundwater Sampling Data Sheets

AECOM

| Well ID: | GMZ-01 |
|---|---|



# Ground Water Sample Collection Record

| | | | | | |
|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: 8-4-15 | Time: | Start | 1235 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1345 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 70-80°F | Collector(s): | A. Hollatz | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 47.73 Screen interval(ft): 15 Approx. depth of pump intake(ft): 40
Water table depth (ft): 34.02 Casing type/diameter: 2" PVC Minimum purge volume: 6.70 (gals)
Water column length (ft): 13.71 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | ~~3512~~ 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 1240 | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1250 | 5000 | 16.73 | 7.06 | 1853 | 21.5 | 4.06 | 210 | 500 | 34.02 | Orange/none |
| 1255 | 7500 | 16.97 | 7.02 | 1837 | 21.3 | 3.38 | 98.3 | 500 | 34.08 | Cloudy/none |
| 1300 | 10,000 | 16.88 | 7.01 | 1823 | 22.0 | 3.04 | 76.7 | 500 | 34.08 | ↓ |
| 1305 | 12,500 | 17.12 | 7.01 | 1839 | 23.8 | 2.03 | 60.3 | 500 | 34.08 | ↓ |
| 1310 | 15,000 | 16.92 | 7.01 | 1839 | 27.5 | 2.97 | 44.7 | 500 | 34.08 | ↓ |
| 1315 | 17,500 | 17.09 | 7.01 | 1839 | 30.6 | 2.87 | 31.6 | 500 | 34.08 | Clear/none |
| 1320 | 20,000 | 17.56 | 7.01 | 1833 | 32.6 | 2.83 | 24.5 | 500 | 34.08 | ↓ |
| 1325 | 22,500 | 17.69 | 7.02 | 1833 | 34.2 | 2.77 | 18.7 | 500 | 34.08 | ↓ |
| 1330 | 25,000 | 17.45 | 7.02 | 1831 | 36.9 | 2.81 | 13.8 | 500 | 34.08 | ↓ |
| 1335 | 27,500 | 17.58 | 7.01 | 1829 | 40.4 | 2.75 | 11.45 | 500 | 34.08 | ↓ |
| | | | | | | | | | | |
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SAMPLE COLLECTION DATA

Well ID: **GMZ-01**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-GMZ01-080415 | VOC's | 3 - 40mL Clear Vials | 1335 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 4.61 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | GMZ-02 |
|---|---|



# Ground Water Sample Collection Record

| | | | | | |
|---|---|---|---|---|---|
| Client: UTAS Plants 1/2 Facility | Date: 8-5-15 | Time: | Start | 1540 | (24hr) |
| Project No: 60339110-4214 | | | Finish | 1645 | |
| Site Location: Rockford, Illinois | | | | | |
| Weather: Sunny 75-85°F | Collector(s): A. Hollatz | | | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 44.80 Screen interval(ft): 15 Approx. depth of pump intake(ft): 37

Water table depth (ft): 31.56 Casing type/diameter: 2" PVC Minimum purge volume: 6.10 (gals)

Water column length (ft): 12.44 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 1540 | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1550 | 5000 | 16.55 | 7.67 | 1098 | 221.4 | 9.36 | 14.5 | 500 | 31.56 | clear/none |
| 1555 | 7500 | 16.79 | 7.63 | 1017 | 193.0 | 8.50 | 7.47 | 500 | 31.65 | |
| 1600 | 10,000 | 16.66 | 7.61 | 1015 | 176.0 | 8.29 | 4.69 | 500 | 31.65 | |
| 1605 | 12,500 | 16.63 | 7.61 | 1014 | 163.1 | 8.29 | 3.78 | 500 | 31.65 | |
| 1610 | 15,000 | 16.41 | 7.61 | 1011 | 154.6 | 8.23 | 3.33 | 500 | 31.65 | |
| 1615 | 17,500 | 16.46 | 7.61 | 1009 | 147.2 | 8.18 | 2.99 | 500 | 31.65 | |
| 1620 | 20,000 | 16.36 | 7.61 | 1009 | 141.8 | 8.26 | 2.49 | 500 | 31.65 | |
| 1625 | 22,500 | 16.40 | 7.61 | 1008 | 149.7 | 8.23 | 1.98 | 500 | 31.65 | |
| 1630 | 25,000 | 16.43 | 7.61 | 1010 | 136.2 | 8.20 | 1.88 | 500 | 31.65 | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | *Turbidity not stable, removed 3 well volumes, collect sample. | | | | | | | | | |

(continued on back)

Sample Collector(s): [signature] Date: 8-5-15

SAMPLE COLLECTION DATA

Well ID: **GMZ-02**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-GMZ02-080515 | VOC's | 3 - 40mL Clear Vials | 1630 | 500 | |
| HSSER_MS01-080515 | VOC's | 3 - 40mL Clear Vials | 1630 | 500 | |
| HSSER-MSD01-080515 | VOC's | 3 - 40mL Clear Vials | 1630 | 500 | |
| | Ferrous Iron | 0.59 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | GMZ-03 |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility  Date: 8-5-15  Time: Start 1405 (24hr)
Project No: 60339110-4214  Finish 1515
Site Location: Rockford, Illinois
Weather: Sunny 75-85°F  Collector(s): A. Holgl3

1. **WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 44.60  Screen interval(ft): 15  Approx. depth of pump intake(ft): 37
Water table depth (ft): 30.95  Casing type/diameter: 2" PVC  Minimum purge volume: 6.70 (gals)
Water column length (ft): 13.65  (calculations on reverse)

2. ***WELL PURGE DATA***

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 1405 | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1405 | 5000 | 17.18 | 7.88 | 1016 | 123.7 | 8.69 | 20.8 | 500 | 30.95 | clear/none |
| 1420 | 7500 | 17.27 | 7.68 | 1019 | 113.9 | 7.52 | 9.87 | 500 | 31.05 | |
| 1425 | 10,000 | 17.13 | 7.73 | 1020 | 108.0 | 7.37 | 7.15 | 500 | 31.05 | |
| 1430 | 12,500 | 16.88 | 7.77 | 1022 | 105.8 | 7.32 | 5.71 | 500 | 31.05 | |
| 1435 | 15,000 | 16.85 | 7.75 | 1019 | 107.0 | 7.24 | 4.12 | 500 | 31.05 | |
| 1440 | 17,500 | 16.82 | 7.79 | 1019 | 106.7 | 7.28 | 3.61 | 500 | 31.05 | |
| 1445 | 20,000 | 17.02 | 7.74 | 1016 | 111.3 | 7.19 | 2.88 | 500 | 31.05 | |
| 1450 | 22,500 | 16.82 | 7.81 | 1020 | 115.3 | 7.24 | 2.74 | 500 | 31.05 | |
| 1455 | 25,000 | 16.90 | 7.81 | 1019 | 120.0 | 7.22 | 2.23 | 500 | 31.05 | |
| 1500 | 27,500 | 17.01 | 7.81 | 1019 | 123.9 | 7.19 | 2.13 | 500 | 31.05 | |

☆ Turbidity not stable, removed 3 well volumes, Collect Sample.

(continued on back)

Sample Collector(s): [signature]  Date: 8-5-15

SAMPLE COLLECTION DATA

Well ID: **GMZ-03**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-GMZ03-080515 | VOC's | 3 - 40mL Clear Vials | 1500 | 500 | |
| HSSER-Dup01- 080515 | VOC's | 3 - 40mL Clear Vials | 0000 | 500 | |
| | | | | | |
| | Ferrous Iron | 0.72 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | GMZ-04 |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility
Date: 8-5-15
Time: Start 0950 (24hr) Finish 1105
Project No: 60339110-4214
Site Location: Rockford, Illinois
Weather: Sunny 70-80°F
Collector(s): A. Hollatz

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 45.30
Screen interval(ft): 15
Approx. depth of pump intake(ft): 38
Water table depth (ft): 29.27
Casing type/diameter: 2" PVC
Minimum purge volume: 7.90 (gals)
Water column length (ft): 16.03
(calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 0955 | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1005 | 5000 | 17.18 | 8.09 | 1662 | 147 | 8.17 | 80.2 | 500 | 29.27 | cloudy/none |
| 1010 | 7500 | 17.30 | 8.06 | 1667 | 134.9 | 7.97 | 55.6 | 500 | 29.27 | ↓ |
| 1015 | 10,000 | 17.12 | 8.09 | 1656 | 124.9 | 7.86 | 33.1 | 500 | 29.27 | clear/none |
| 1020 | 12,500 | 17.02 | 8.12 | 1658 | 116.5 | 7.64 | 15.2 | 500 | 29.30 | |
| 1025 | 15,000 | 17.08 | 8.14 | 1652 | 110.5 | 7.26 | 9.66 | 500 | 29.30 | |
| 1030 | 17,500 | 17.10 | 8.16 | 1648 | 106.6 | 7.29 | 6.65 | 500 | 29.30 | |
| 1035 | 20,000 | 17.02 | 8.16 | 1647 | 103.5 | 7.13 | 5.10 | 500 | 29.30 | |
| 1040 | 22,500 | 17.19 | 8.17 | 1644 | 101.5 | 7.12 | 4.47 | 500 | 29.30 | |
| 1045 | 25,000 | 17.04 | 8.17 | 1645 | 100.6 | 7.12 | 3.36 | 500 | 29.30 | |
| 1050 | 27,500 | 16.95 | 8.17 | 1646 | 99.4 | 7.24 | 3.04 | 500 | 29.30 | |
| 1055 | 30,000 | 16.93 | 8.18 | 1647 | 97.7 | 7.25 | 2.93 | 500 | 29.30 | ↓ |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | * Turbidity not stable, removed 3 well volumes, collected sample | | | | | | | | | |

(continued on back)

Sample Collector(s): [signature]
Date: 8-5-15

SAMPLE COLLECTION DATA

Well ID: **GMZ-04**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-GMZ04-080515 | VOC's | 3 - 40mL Clear Vials | 1055 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 2.58 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | MW07FGA |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility
Date: 8-5-15
Time: Start 0730 (24hr) Finish 0840
Project No: 60339110-4214
Site Location: Rockford, Illinois
Weather: Sunny 66-70°F
Collector(s): A. Hollatz

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 46.79
Screen interval(ft): 15
Approx. depth of pump intake(ft): 39
Water table depth (ft): 29.33
Casing type/diameter: 4" 2" SS
Minimum purge volume: 34.20 (gals)
Water column length (ft): 17.46
(calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 0735 | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 0745 | 5000 | 15.69 | 6.80 | 2311 | 222.7 | 1.45 | 87.5 | 500 | 29.33 | cloudy/none |
| 0750 | 7500 | 15.55 | 6.77 | 2250 | 170.8 | 1.12 | 92.6 | 500 | 29.42 | |
| 0755 | 10,000 | 15.68 | 6.80 | 2242 | 148.3 | 1.11 | 78.6 | 500 | 29.42 | |
| 0800 | 12,500 | 15.70 | 6.82 | 2239 | 138.6 | 0.92 | 70.8 | 500 | 29.42 | |
| 0805 | 15,000 | 15.64 | 6.83 | 2238 | 134.3 | 0.86 | 55.2 | 500 | 29.42 | |
| 0810 | 17,500 | 15.82 | 6.84 | 2233 | 129.3 | 0.81 | 45.2 | 500 | 29.42 | |
| 0815 | 20,000 | 15.73 | 6.85 | 2232 | 126.6 | 0.80 | 35.1 | 500 | 29.42 | clear/none |
| 0820 | 22,500 | 15.75 | 6.87 | 2235 | 123.7 | 0.86 | 34.7 | 500 | 29.42 | |
| 0825 | 25,000 | 15.76 | 6.87 | 2232 | 120.0 | 0.86 | 32.6 | 500 | 29.42 | |

(continued on back)

Sample Collector(s): [signature]
Date: 8-5-15

SAMPLE COLLECTION DATA

Well ID: **MW-07FGA**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-MW07FGA-080515 | VOC's | 3 - 40mL Clear Vials | 0825 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 3.93 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | MW-203 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: 8-4-15 | Time: | Start | 1545 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1710 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 70-80°F | Collector(s): | A. Hollatz | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 47.50 Screen interval(ft): 15 Approx. depth of pump intake(ft): 40

Water table depth (ft): 30.12 Casing type/diameter: 2" SS Minimum purge volume: 8.50 (gals)

Water column length (ft): 17.38 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09566 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 1550 | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1600 | 5000 | 18.21 | 7.03 | 1063 | 22.1 | 0.74 | 24.6 | 500 | 30.12 | clear/none |
| 1605 | 7500 | 18.19 | 6.94 | 1028 | 29.7 | 0.57 | 15.3 | 500 | 30.14 | |
| 1610 | 10,000 | 18.24 | 6.94 | 1056 | 22.8 | 0.64 | 10.05 | 500 | 30.14 | |
| 1615 | 12,500 | 18.29 | 6.95 | 1064 | 23.5 | 0.52 | 8.71 | 500 | 30.14 | |
| 1620 | 15,000 | 18.28 | 6.95 | 1071 | 27.3 | 0.40 | 6.38 | 500 | 30.14 | |
| 1625 | 17,500 | 18.25 | 6.96 | 1075 | 35.1 | 0.29 | 4.98 | 500 | 30.14 | |
| 1630 | 20,000 | 18.46 | 6.95 | 1078 | 41.0 | 0.24 | 4.58 | 500 | 30.14 | |
| 1635 | 22,500 | 18.70 | 6.96 | 1081 | 46.8 | 0.25 | 4.02 | 500 | 30.14 | |
| 1640 | 25,000 | 18.26 | 6.96 | 1085 | 51.9 | 0.23 | 3.68 | 500 | 30.14 | |
| 1645 | 27,500 | 18.19 | 6.96 | 1087 | 54.8 | 0.20 | 3.65 | 500 | 30.14 | |
| 1650 | 30,000 | 17.67 | 6.95 | 1090 | 55.5 | 0.20 | 3.03 | 500 | 30.14 | |
| 1655 | 32,500 | 17.98 | 6.95 | 1090 | 58.2 | 0.20 | 3.45 | 500 | 30.14 | |
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| | * Turbidity not stable, removed 3 well volumes, sample collected | | | | | | | | | |

(continued on back)

Sample Collector(s): [signature] Date: 8-4-15

SAMPLE COLLECTION DATA

Well ID: **MW-203**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-MW203-080415 | VOC's | 3 - 40mL Clear Vials | 1655 | 500 | |
| | | | | | |
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| | Ferrous Iron | 1.17 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | PMW-01 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: | 8-6-15 | Time: Start | 0720 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 0830 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 60-70°F | Collector(s): | A. Aellal 2 | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 44.72 Screen interval(ft): 25 Approx. depth of pump intake(ft): 37

Water table depth (ft): 31.71 Casing type/diameter: 2" PVC Minimum purge volume: 6.4 (gals)

Water column length (ft): 13.01 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F166 |
| | Lamotte | 2020 | 2537-3512 |
| Begin purge at 0730 | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 0740 | 5000 | 15.70 | 6.48 | 1227 | 166.3 | 1.83 | 791 | 500 | 31.71 | orange/none |
| 0745 | 7500 | 15.59 | 6.28 | 1136 | 72.0 | 2.25 | 101.6 | 500 | 31.75 | cloudy/none |
| 0750 | 10,000 | 15.54 | 6.42 | 1125 | 71.4 | 2.65 | 70.4 | 500 | 31.75 | ↓ |
| 0755 | 12,500 | 15.50 | 6.52 | 1118 | 76.9 | 2.80 | 48.5 | 500 | 31.75 | ↓ |
| 0800 | 15,000 | 15.55 | 6.61 | 1113 | 78.2 | 2.95 | 33.9 | 500 | 31.75 | clear/none |
| 0805 | 17,500 | 15.54 | 6.67 | 1108 | 76.7 | 3.08 | 20.2 | 500 | 31.75 | ↓ |
| 0810 | 20,000 | 15.52 | 6.72 | 1109 | 77.2 | 3.21 | 21.2 | 500 | 31.75 | ↓ |
| 0815 | 22,500 | 15.56 | 6.75 | 1105 | 83.4 | 3.27 | 41.2 | 500 | 31.75 | ↓ |
| 0820 | 25,000 | 15.69 | 6.80 | 1104 | 80.2 | 3.31 | 16.0 | 500 | 31.75 | ↓ |
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| | * Turbidity not stable, remove 3 well volumes, collect sample | | | | | | | | | |
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Sample Collector(s): [signature] Date: 8-6-15

SAMPLE COLLECTION DATA

Well ID: **PMW-01**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-PMW01-080615 | VOC's | 3 - 40mL Clear Vials | 0820 | 500 | |
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| | Ferrous Iron | 4.84 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | PMW-02 |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility
Date: 8-6-15
Time: Start 0840 (24hr) Finish 0935
Project No: 60339110-4214
Site Location: Rockford, Illinois
Weather: Sunny 65-70 °F
Collector(s): A. Hollatz

## 1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.85
Screen Interval(ft): 25
Approx. depth of pump intake(ft): 37
Water table depth (ft): 31.64
Casing type/diameter: 2" PVC
Minimum purge volume: 56 (gals)
Water column length (ft): 10.21
(calculations on reverse)

## 2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 0845

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 0855 | 5000 | 16.02 | 6.82 | 1911 | 31.7 | 1.34 | 19.2 | 500 | 31.64 | clear/none |
| 0900 | 7500 | 15.83 | 6.77 | 1928 | 40.1 | 0.92 | 11.35 | 500 | 31.64 | ↓ |
| 0905 | 10,000 | 15.34 | 6.73 | 1930 | 43.7 | 0.73 | 5.12 | 500 | 31.64 | ↓ |
| 0910 | 12,500 | 15.29 | 6.75 | 1924 | 43.9 | 0.82 | 3.34 | 500 | 31.64 | ↓ |
| 0915 | 15,000 | 15.33 | 6.79 | 1918 | 45.6 | 0.70 | 2.56 | 500 | 31.64 | ↓ |
| 0920 | 17,500 | 15.34 | 6.80 | 1910 | 48.4 | 0.64 | 2.08 | 500 | 31.64 | ↓ |
| 0925 | 20,000 | 15.22 | 6.83 | 1910 | 49.2 | 0.59 | 1.76 | 500 | 31.64 | ↓ |
| | | | | | | | | | | |
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| | * Turbidity / DO not stable, removed 3 well volumes & collect sample. | | | | | | | | | |

(continued on back)

Sample Collector(s): [signature]
Date: 8-6-15

SAMPLE COLLECTION DATA

Well ID: **PMW-02**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-PMW02-080615 | VOC's | 3 - 40mL Clear Vials | 0925 | 500 | |
| HSSER-EBLK01-080615 | VOC's | 3 - 40mL Clear Vials | 0840 | — | |
| | | | | | |
| | Ferrous Iron | 0.38 mg/L | | | |

VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | SMW-01 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: | 8-4-15 | Time: Start | 1350 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1435 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny - 70-80°F | Collector(s): | A. Hollatz | | |

1. **WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 39.50 Screen interval(ft): 15 Approx. depth of pump intake(ft): 32
Water table depth (ft): 32.08 Casing type/diameter: 2" PVC Minimum purge volume: 3.60 (gals)
Water column length (ft): 7.42 (calculations on reverse)

2. **WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F606 |
| | Lamotte | 2020 | 2537-3572 |
| | Lamotte | Smart 2 Colorimeter | 0244-0202 |
| Begin purge at 1355 | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1405 | 5000 | 16.90 | 7.21 | 1297 | 115.4 | 6.44 | 28.9 | 500 | 32.08 | Clear/none |
| 1410 | 7500 | 16.59 | 7.14 | 1296 | 75.9 | 6.14 | 14.3 | 500 | 32.08 | ↓ |
| 1415 | 10000 | 16.50 | 7.13 | 1288 | 65.1 | 6.04 | 8.49 | 500 | 32.08 | ↓ |
| 1420 | 12,500 | 16.47 | 7.12 | 1292 | 60.2 | 6.06 | 4.76 | 500 | 32.08 | ↓ |
| 1425 | 15,000 | 16.47 | 7.12 | 1300 | 65.3 | 6.04 | 3.17 | 500 | 32.08 | ↓ |
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| | * Turbidity not stable, removed 3 well volumes, sample collected. | | | | | | | | | |

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Sample Collector(s): [signature] Date: 8-4-15

SAMPLE COLLECTION DATA

Well ID: **SMW-01**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-SMW01-080415 | VOC's | 3 - 40mL Clear Vials | 1425 | 500 | |
| | | | | | |
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| | Ferrous Iron | 1.12 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | SMW-02 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: 8-4-15 | Time: | Start | 1440 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1540 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 70-80F | Collector(s): | A. Hollatz | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 40.00 Screen interval(ft): 15 Approx. depth of pump intake(ft): 32

Water table depth (ft): 28.59 Casing type/diameter: 2" PVC Minimum purge volume: 5.60 (gals)

Water column length (ft): 11.41 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 1445 | | | |
| | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1455 | 5000 | 16.48 | 7.06 | 1524 | 60.1 | 4.63 | 21.6 | 500 | 28.59 | clear/none |
| 1500 | 7500 | 16.41 | 7.04 | 1523 | 54.9 | 4.13 | 17.9 | 500 | 28.59 | |
| 1505 | 10,000 | 16.43 | 7.03 | 1509 | 52.0 | 3.93 | 15.1 | 500 | 28.63 | |
| 1510 | 12,500 | 16.74 | 7.04 | 1494 | 47.5 | 3.79 | 11.36 | 500 | 28.63 | |
| 1515 | 15,000 | 16.71 | 7.03 | 1486 | 48.6 | 3.74 | 8.58 | 500 | 28.63 | |
| 1520 | 17,500 | 16.49 | 7.03 | 1485 | 48.4 | 3.82 | 7.23 | 500 | 28.63 | |
| 1525 | 20,000 | 16.59 | 7.03 | 1478 | 50.8 | 3.66 | 6.05 | 500 | 28.63 | |
| 1530 | 22,500 | 16.58 | 7.03 | 1473 | 52.8 | 3.70 | 5.07 | 500 | 28.63 | |
| | * Turbidity not stable, removed 3 well volumes, sample collected. | | | | | | | | | |

(continued on back)

Sample Collector(s): [signature] Date: 8-4-15

SAMPLE COLLECTION DATA

Well ID: **SMW-02**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-SMW02-080415 | VOC's | 3 - 40mL Clear Vials | 1530 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 2.16 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | SMW-04 |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility  Date: 8-6-15  Time: Start 0940 (24hr)
Project No: 60339110-4214  Finish 1040
Site Location: Rockford, Illinois
Weather: Sunny 65-75°F  Collector(s): A. Hollatz

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 42.50  Screen interval(ft): 15  Approx. depth of pump intake(ft): 35
Water table depth (ft): 31.22  Casing type/diameter: 2" PVC  Minimum purge volume: 5.60 (gals)
Water column length (ft): 11.28  (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 0945

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 0955 | 5000 | 16.75 | 7.02 | 1625 | 9.3 | 0.77 | 3.09 | 500 | 31.22 | Clear/none |
| 1000 | 7500 | 16.79 | 6.96 | 1623 | 9.1 | 0.45 | 1.95 | 500 | 31.26 | |
| 1005 | 10,000 | 16.76 | 6.93 | 1621 | 10.6 | 0.35 | 1.63 | 500 | 31.26 | |
| 1010 | 12,500 | 16.58 | 6.94 | 1615 | 7.8 | 0.25 | 1.58 | 500 | 31.26 | |
| 1015 | 15,000 | 16.76 | 6.98 | 1631 | 2.2 | 0.22 | 1.70 | 500 | 31.26 | |
| 1020 | 17,500 | 16.80 | 6.98 | 1630 | 1.8 | 0.18 | 1.24 | 500 | 31.26 | |
| 1025 | 20,000 | 17.09 | 6.98 | 1628 | 1.7 | 0.17 | 1.22 | 500 | 31.26 | |
| 1030 | 22,500 | 17.05 | 6.98 | 1622 | 7.6 | 0.19 | 1.20 | 500 | 31.26 | |
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| | * ORP, DO out of range, purge 3 well volumes. Sample collect. | | | | | | | | | |
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Sample Collector(s): [signature]  Date: 8-6-15

SAMPLE COLLECTION DATA

Well ID: **SMW-04**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-SMW04-080615 | VOC's | 3 - 40mL Clear Vials | 1030 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 0.85 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | SMW-08 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: 8-4-15 | Time: | Start | 1135 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1230 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 70-80°F | Collector(s): | A. Hollatz | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 41.85 Screen interval(ft): 15 Approx. depth of pump intake(ft): 34

Water table depth (ft): 31.42 Casing type/diameter: 2" PVC Minimum purge volume: 5.10 (gals)

Water column length (ft): 10.43 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals. If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 1140

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1150 | 5000 | 16.87 | 7.29 | 1494 | 225.7 | 6.07 | 824 | 500 | 31.42 | Orange/none |
| 1155 | 7500 | 16.83 | 6.45 | 1343 | 254.6 | 2.51 | 6.27 | 500 | 31.49 | ↓ |
| 1200 | 10,000 | 16.56 | 6.53 | 1330 | 175.2 | 2.34 | 92.6 | 500 | 31.49 | cloudy/none |
| 1205 | 12,500 | 16.55 | 6.62 | 1311 | 78.0 | 1.73 | 64.1 | 500 | 31.49 | ↓ |
| 1210 | 15,000 | 16.77 | 6.73 | 1357 | 51.2 | 1.25 | 37.2 | 500 | 31.49 | clear/none |
| 1215 | 17,500 | 16.45 | 6.78 | 1363 | 56.9 | 0.94 | 23.5 | 500 | 31.49 | ↓ |
| 1220 | 20,000 | 16.39 | 6.78 | 1366 | 38.6 | 0.78 | 17.3 | 500 | 31.49 | |
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| | * Turbidity, ORP, DO not stable, remove 3 well volumes collect sample. | | | | | | | | | |

(continued on back)

Sample Collector(s): allen Hollatz Date: 8-4-15

SAMPLE COLLECTION DATA

Well ID: **SMW-08**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-SMW08-080415 | VOC's | 3 - 40mL Clear Vials | 1220 | 500 | |
| HSSER-FBLK01-080415 | VOC's | 3 - 40mL Clear Vials | 1130 | 500 | |
| | | | | | |
| | Ferrous Iron | 9.68 mg/L | 9.6 | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | SMW-19 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: | 8-5-15 | Time: Start | 0845 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 0940 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 65-75°F | Collector(s): | A. Hollard | | |

1. **WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 41.16 Screen interval(ft): 15 Approx. depth of pump intake(ft): 35
Water table depth (ft): 30.31 Casing type/diameter: 2" SS Minimum purge volume: 5.30 (gals)
Water column length (ft): 10.85 (calculations on reverse)

2. **WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 8537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 0850

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 0900 | 5000 | 17.11 | 6.89 | 1257 | 135.4 | 2.25 | 11.63 | 500 | 30.31 | Clear/none |
| 0905 | 7500 | 17.15 | 6.86 | 1260 | 120.4 | 2.16 | 6.21 | 500 | 30.31 | ↓ |
| 0910 | 10 000 | 17.10 | 6.87 | 1262 | 111.5 | 2.04 | 3.46 | 500 | 30.31 | ↓ |
| 0915 | 12,500 | 17.30 | 6.88 | 1262 | 104.7 | 2.15 | 3.36 | 500 | 30.31 | ↓ |
| 0920 | 15,000 | 17.10 | 6.89 | 1262 | 99.5 | 2.06 | 3.57 | 500 | 30.31 | ↓ |
| 0925 | 17,500 | 17.20 | 6.88 | 1264 | 97.4 | 2.05 | 3.41 | 500 | 30.31 | ↓ |

(continued on back)

Sample Collector(s): [signature] Date: 8-5-15

SAMPLE COLLECTION DATA

Well ID: **SMW-19**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-SMW19-080515 | VOC's | 3 - 40mL Clear Vials | 0925 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 0.71 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | SMW-20 |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility  Date: 8-5-15  Time: Start 1300 (24hr)
Project No: 60339110-4214  Finish 1400
Site Location: Rockford, Illinois
Weather: Sunny 75-85°F  Collector(s): A. Hollatz

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 40.15  Screen interval(ft): 15  Approx. depth of pump intake(ft): 33
Water table depth (ft): 30.41  Casing type/diameter: 2" PVC  Minimum purge volume: 4.80 (gals)
Water column length (ft): 9.74  (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 1305 | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1315 | 5000 | 18.59 | 7.99 | 808 | 129.7 | 7.64 | 5.75 | 500 | 30.41 | clear/none. |
| 1320 | 7500 | 17.64 | 7.95 | 830 | 117.7 | 7.61 | 4.04 | 500 | 30.44 | ↓ |
| 1325 | 10,000 | 18.78 | 7.95 | 844 | 102.8 | 7.27 | 3.20 | 500 | 30.44 | ↓ |
| 1330 | 12,500 | 17.52 | 7.95 | 860 | 95.2 | 7.52 | 2.57 | 500 | 30.44 | ↓ |
| 1335 | 15,000 | 17.53 | 7.92 | 867 | 89.8 | 7.36 | 2.27 | 500 | 30.44 | ↓ |
| 1340 | 17,500 | 17.63 | 7.93 | 879 | 87.3 | 7.35 | 2.39 | 500 | 30.44 | ↓ |
| 1345 | 20,000 | 16.98 | 7.90 | 887 | 89.4 | 7.37 | 2.12 | 500 | 30.44 | ↓ |

*Turbidity not stable, removed 3 well volumes, collect sample

(continued on back)

Sample Collector(s): [signature]  Date: 8-5-15

SAMPLE COLLECTION DATA

Well ID: **SMW-20**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-SMW20-080515 | VOC's | 3 - 40mL Clear Vials | 1345 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 0.56 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | SMW-21 |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility
Date: 8-5-15
Time: Start 1110 (24hr) Finish 1215
Project No: 60339110-4214
Site Location: Rockford, Illinois
Weather: Sunny 70-80°F
Collector(s): A. Hellatz

## 1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 41.40
Screen Interval(ft): 15
Approx. depth of pump intake(ft): 34
Water table depth (ft): 29.88
Casing type/diameter: 2" PVC
Minimum purge volume: 5.20 (gals)
Water column length (ft): 11.52
(calculations on reverse)

## 2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3517 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 1115 | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor AH |
|---|---|---|---|---|---|---|---|---|---|---|
| 1125 | 5000 | 17.07 | 8.18 | 1311 | 129.2 | 7.88 | 46.2 | 500 | 29.88 | ~~Hard~~ clear/none |
| 1130 | 7500 | 16.70 | 8.10 | 1511 | 124.1 | 7.46 | 23.3 | 500 | 29.92 | clear/none |
| 1135 | 10,000 | 17.17 | 8.09 | 1642 | 114.2 | 7.29 | 13.7 | 500 | 29.92 | |
| 1140 | 12,500 | 16.89 | 8.09 | 1749 | 107.0 | 7.44 | 9.86 | 500 | 29.92 | |
| 1145 | 15,000 | 17.05 | 8.07 | 1868 | 100.5 | 7.18 | 6.62 | 500 | 29.92 | |
| 1150 | 17,500 | 17.11 | 8.07 | 1882 | 96.4 | 7.28 | 4.93 | 500 | 29.92 | |
| 1155 | 20,000 | 17.17 | 8.07 | 1916 | 93.3 | 7.39 | 8.15 | 500 | 29.92 | |
| 1200 | 22,500 | 17.74 | 8.07 | 1794 | 91.7 | 6.99 | 7.49 | 500 | 29.92 | |
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| | *Turbidity not stable, remove 3 well volumes, collect sample. | | | | | | | | | |

(continued on back)

Sample Collector(s): [signature]
Date: 8-5-15

SAMPLE COLLECTION DATA

Well ID: **SMW-21**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-SMW21-080515 | VOC's | 3 - 40mL Clear Vials | 1200 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 1.89 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | RAMW-01 |
|---|---|



# Ground Water Sample Collection Record

| | | | | | |
|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: | 8-6-15 | Time: Start | 1105 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1220 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 70-80°F | Collector(s): | A. Hollatz | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 46.00 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38
Water table depth (ft): 31.60 Casing type/diameter: 2" PVC Minimum purge volume: 7.10 (gals)
Water column length (ft): 14.40 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F100 |
| | Lamotte | 2020 | 2527-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0707 |
| | | | |
| | | | |

Begin purge at 1115

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1125 | 5000 | 16.52 | 7.00 | 822 | 163.4 | 4.92 | 11.52 | 500 | 31.60 | clear/none |
| 1130 | 7500 | 16.63 | 7.03 | 838 | 155.3 | 4.46 | 10.05 | 500 | 31.62 | |
| 1135 | 10,000 | 16.46 | 7.04 | 855 | 153.5 | 4.09 | 6.74 | 500 | 31.62 | |
| 1140 | 12,500 | 16.24 | 7.01 | 860 | 154.0 | 3.94 | 5.45 | 500 | 31.62 | |
| 1145 | 15,000 | 16.29 | 7.01 | 864 | 152.0 | 3.81 | 4.53 | 500 | 31.62 | |
| 1150 | 17,500 | 16.21 | 7.02 | 870 | 152.6 | 3.83 | 3.62 | 500 | 31.62 | |
| 1155 | 20,000 | 16.08 | 7.01 | 874 | 151.9 | 3.69 | 2.55 | 500 | 31.62 | |
| 1200 | 22,500 | 16.10 | 7.01 | 877 | 151.7 | 3.68 | 2.09 | 500 | 31.62 | |
| 1205 | 25,000 | 16.19 | 7.01 | 879 | 150.3 | 3.56 | 1.99 | 500 | 31.62 | |
| 1210 | 27,500 | 16.39 | 7.02 | 881 | 147.8 | 3.48 | 1.60 | 500 | 31.62 | |
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| | *Turbidity not stable, removed 3 well volumes, collect sample. | | | | | | | | | |
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Sample Collector(s): [signature] Date: 8-6-15

SAMPLE COLLECTION DATA

Well ID: **RAMW-01**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-RAMW01-080615 | VOC's | 3 - 40mL Clear Vials | 1210 | 500 | |
| HSSER-FBLK02- 080615 | VOC's | 3 - 40mL Clear Vials | 1105 | — | |
| | | | | | |
| | Ferrous Iron | 0.43 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | RAMW-02 |
|---|---|



# Ground Water Sample Collection Record

| | | | | | |
|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: | 8-6-15 | Time: Start | 1225 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1340 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 75-85°F | Collector(s): | A. Hollatz | | |

1. **WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 44.84 Screen Interval(ft): 15 Approx. depth of pump intake(ft): 37
Water table depth (ft): 31.48 Casing type/diameter: 2" PVC Minimum purge volume: 66 (gals)
Water column length (ft): 13.36 (calculations on reverse)

2. **WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 1230

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1240 | 5000 | 16.87 | 7.00 | 1244 | 165.4 | 2.40 | 8.40 | 500 | 31.48 | clear/none |
| 1245 | 7500 | 16.84 | 7.01 | 1265 | 147.3 | 1.84 | 6.48 | 500 | 31.50 | |
| 1250 | 10,000 | 16.65 | 7.01 | 1265 | 133.3 | 1.71 | 4.15 | 500 | 31.50 | |
| 1255 | 12,500 | 16.48 | 7.01 | 1244 | 118.9 | 1.65 | 3.50 | 500 | 31.50 | |
| 1300 | 15,000 | 16.56 | 7.00 | 1239 | 97.9 | 1.60 | 2.44 | 500 | 31.50 | |
| 1305 | 17,500 | 16.36 | 7.01 | 1236 | 81.9 | 1.50 | 1.87 | 500 | 31.50 | |
| 1310 | 20,000 | 16.53 | 7.02 | 1222 | 73.7 | 1.48 | 1.46 | 500 | 31.50 | |
| 1315 | 22,500 | 16.52 | 7.03 | 1220 | 59.6 | 1.41 | 1.35 | 500 | 31.50 | |
| 1320 | 25,000 | 16.50 | 7.03 | 1224 | 41.8 | 1.38 | 1.28 | 500 | 31.50 | |

* Turbidity, ORP not stable, Remove 3 well volumes
Collect Sample.

(continued on back)

Sample Collector(s): [signature] Date: ~~6-9-15~~ 8-6-15 AH

SAMPLE COLLECTION DATA

Well ID: **RAMW-02**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-RAMW02-080615 | VOC's | 3 - 40mL Clear Vials | 1320 | 500 | |
| HSSER-MS02- 080615 | VOC's | 3 - 40mL Clear Vials | 1320 | 500 | |
| HESSER-MSD02-080615 | VOC's | 3 - 40mL Clear Vials | 1320 | 500 | |
| | Ferrous Iron | 0.79 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | RAMW-03 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: | 8-6-15 | Time: Start | 1350 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1500 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Partly cloudy 75-85°F | Collector(s): | A. Hollatz | | |

1. **WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 45.30 Screen interval(ft): 15 Approx. depth of pump intake(ft): 38
Water table depth (ft): 31.29 Casing type/diameter: 2" PVC Minimum purge volume: 6.90 (gals)
Water column length (ft): 14.01 (calculations on reverse)

2. **WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F666 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 1355

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1405 | 5000 | 19.42 | 7.39 | 847 | 144.6 | 3.83 | 3.46 | 500 | 31.29 | clear/none |
| 1410 | 7500 | 19.41 | 7.26 | 852 | 130.1 | 3.30 | 3.14 | 500 | 31.30 | |
| 1415 | 10,000 | 19.37 | 7.26 | 851 | 120.2 | 3.27 | 2.52 | 500 | 31.30 | |
| 1420 | 12,500 | 19.45 | 7.26 | 854 | 112.9 | 3.26 | 2.55 | 500 | 31.30 | |
| 1425 | 15,000 | 19.44 | 7.27 | 855 | 105.1 | 3.29 | 3.05 | 500 | 31.30 | |
| 1430 | 17,500 | 19.07 | 7.27 | 861 | 102.7 | 3.35 | 3.35 | 500 | 31.30 | |
| 1435 | 20,000 | 18.84 | 7.27 | 859 | 104.0 | 3.34 | 2.42 | 500 | 31.30 | |
| 1440 | 22,500 | 18.87 | 7.27 | 863 | 107.8 | 3.35 | 2.06 | 500 | 31.30 | |
| 1445 | 25,000 | 18.53 | 7.26 | 864 | 112.4 | 3.37 | 1.94 | 500 | 31.30 | |
| 1450 | 27,500 | 18.43 | 7.26 | 867 | 116.0 | 3.39 | 1.67 | 500 | 31.30 | |

* Turbidity not stable, removed 3 well volumes, collect sample.

(continued on back)

Sample Collector(s): [signature] Date: 8-6-15

SAMPLE COLLECTION DATA

Well ID: **RAMW-03**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-RAMW03-080605 | VOC's | 3 - 40mL Clear Vials | 1450 | 500 | |
| HSSER-Dup02- 080605 | VOC's | 3 - 40mL Clear Vials | 0000 | 500 | |
| | | | | | |
| | Ferrous Iron | 0.33 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | RAMW-04 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: 8-7-15 | Time: | Start | 1115 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1205 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 70-80°F | Collector(s): | A. Hollatz | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 45.00 Screen interval(ft): 15 Approx. depth of pump intake(ft): 41
Water table depth (ft): 31.14 Casing type/diameter: 2" PVC Minimum purge volume: 6.8 (gals)
Water column length (ft): 13.86 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F166 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 1120

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1130 | 5000 | 18.25 | 7.45 | 783 | 155.7 | 5.46 | 1.88 | 500 | 31.14 | clear/none |
| 1135 | 7500 | 18.23 | 7.43 | 779 | 144.4 | 5.11 | 2.46 | 500 | 31.14 | |
| 1140 | 10,000 | 18.65 | 7.43 | 779 | 139.5 | 4.91 | 1.77 | 500 | 31.14 | |
| 1146 | 12,500 | 18.36 | 7.41 | 777 | 137.5 | 4.95 | 1.60 | 500 | 31.14 | |
| 1150 | 15,000 | 18.50 | 7.42 | 781 | 136.1 | 4.94 | 1.53 | 500 | 31.14 | |
| 1155 | 17,500 | 18.19 | 7.40 | 782 | 132.6 | 4.84 | 1.65 | 500 | 31.14 | |

(continued on back)

Sample Collector(s): [signature] Date: 8-7-15

SAMPLE COLLECTION DATA

Well ID: **RAMW-04**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-RAMW04- 080715 | VOC's | 3 - 40mL Clear Vials | 1155 | 500 | |
| HSSER-EBLK02- 080715 | VOC's | 3 - 40mL Clear Vials | 1115 | — | |
| | | | | | |
| | Ferrous Iron | 0.38 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | RAMW-05 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: 8-7-15 | Time: | Start | 0955 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 1110 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 65-75°F | Collector(s): | A. Hallal | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 43.85 Screen interval(ft): 15 Approx. depth of pump intake(ft): 36
Water table depth (ft): 30.02 Casing type/diameter: 2" PVC Minimum purge volume: 6.18 (gals)
Water column length (ft): 13.83 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3572 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 1000 | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1010 | 5000 | 16.83 | 7.84 | 1445 | 186.4 | 8.78 | 10.29 | 500 | 30.02 | clear/none |
| 1015 | 7500 | 16.90 | 7.73 | 1407 | 173.2 | 8.45 | 5.76 | 500 | 30.06 | |
| 1020 | 10,000 | 17.09 | 7.79 | 1386 | 157.7 | 8.32 | 4.99 | 500 | 30.06 | |
| 1025 | 12,500 | 17.18 | 7.80 | 1371 | 148.1 | 8.16 | 4.23 | 500 | 30.06 | |
| 1030 | 15,000 | 17.75 | 7.83 | 1356 | 142.6 | 7.73 | 3.52 | 500 | 30.06 | |
| 1035 | 17,500 | 17.40 | 7.82 | 1350 | 142.3 | 7.95 | 3.05 | 500 | 30.06 | |
| 1040 | 20,000 | 17.21 | 7.82 | 1344 | 141.2 | 7.84 | 2.64 | 500 | 30.06 | |
| 1045 | 22,500 | 17.52 | 7.83 | 1333 | 141.6 | 7.75 | 2.08 | 500 | 30.06 | |
| 1050 | 25,000 | 17.83 | 7.83 | 1322 | 142.8 | 7.35 | 1.82 | 500 | 30.06 | |
| 1055 | 27,500 | 17.53 | 7.82 | 1322 | 143.3 | 7.55 | 1.66 | 500 | 30.06 | |
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| | * Turbidity not in range, removed 3 well volumes, collect sample. | | | | | | | | | |
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(continued on back)

Sample Collector(s): [signature] Date: 8-7-15

SAMPLE COLLECTION DATA

Well ID: **RAMW-05**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-RAMW05-080715 | VOC's | 3 - 40mL Clear Vials | 1055 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 0.34 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | RAMW-06 |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility
Date: 8-7-15
Time: Start 0850 (24hr) Finish 0950
Project No: 60339110-4214
Site Location: Rockford, Illinois
Weather: Sunny 65-75°F
Collector(s): A. Hollatz

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 44.27
Screen interval(ft): 15
Approx. depth of pump intake(ft): 37
Water table depth (ft): 30.07
Casing type/diameter: 2" PVC
Minimum purge volume: 7.0 (gals)
Water column length (ft): 14.20
(calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| Begin purge at 0855 | | | |
| | | | |
| | | | |

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 0905 | 5000 | 16.82 | 7.69 | 910 | 193.4 | 8.97 | 1.67 | 500 | 30.07 | clear/none |
| 0910 | 7500 | 16.85 | 7.61 | 849 | 178.3 | 8.46 | 1.82 | 500 | 30.12 | |
| 0915 | 10,000 | 16.73 | 7.66 | 817 | 165.8 | 8.39 | 1.24 | 500 | 30.12 | |
| 0920 | 12,500 | 16.74 | 7.68 | 792 | 159.9 | 8.37 | 1.40 | 500 | 30.12 | |
| 0925 | 15,000 | 16.79 | 7.71 | 787 | 153.4 | 8.34 | 1.06 | 500 | 30.12 | |
| 0930 | 17,500 | 16.78 | 7.72 | 779 | 149.6 | 8.32 | 1.10 | 500 | 30.12 | |
| 0935 | 20,000 | 16.81 | 7.74 | 773 | 147.5 | 8.29 | 1.03 | 500 | 30.12 | |

(continued on back)

Sample Collector(s): [signature]
Date: 8-7-15

SAMPLE COLLECTION DATA

Well ID: **RAMW-06**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-RAMW06-0607/5 | VOC's | 3 - 40mL Clear Vials | 0935 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 0.30 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | RAMW-07 |
|---|---|



# Ground Water Sample Collection Record

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|---|---|---|---|---|---|
| Client: | UTAS Plants 1/2 Facility | Date: 8-7-15 | Time: | Start | 0715 (24hr) |
| Project No: | 60339110-4214 | | | Finish | 0820 |
| Site Location: | Rockford, Illinois | | | | |
| Weather: | Sunny 60-70°F | Collector(s): | A. Hollatz | | |

**1. WELL and WATER LEVEL DATA: (measured from Top of Casing)**

Total well length (ft): 48.60 Screen interval(ft): 15 Approx. depth of pump intake(ft): 41
Water table depth (ft): 34.53 Casing type/diameter: 2" PVC Minimum purge volume: 6.9 (gals)
Water column length (ft): 14.07 (calculations on reverse)

**2. WELL PURGE DATA**

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F66 |
| | Lamotte | 2020 | 2537-3512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 0720

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 0730 | 5000 | 17.68 | 6.66 | 2434 | 255.0 | 1.54 | 4.79 | 500 | 34.53 | Clear/none |
| 0735 | 7500 | 17.70 | 6.65 | 2415 | 246.4 | 1.11 | 1.74 | 500 | 34.57 | |
| 0740 | 10,000 | 17.76 | 6.69 | 2407 | 230.7 | 1.08 | 1.51 | 500 | 34.57 | |
| 0745 | 12,500 | 17.78 | 6.71 | 2407 | 226.7 | 0.89 | 1.38 | 500 | 34.57 | |
| 0750 | 15,000 | 17.77 | 6.72 | 2402 | 228.1 | 0.86 | 1.14 | 500 | 34.57 | |
| 0755 | 17,500 | 17.83 | 6.74 | 2392 | 227.6 | 0.80 | 1.03 | 500 | 34.57 | |
| 0800 | 20,000 | 17.87 | 6.75 | 2384 | 229.5 | 0.69 | 1.03 | 500 | 34.57 | |
| 0805 | 22,500 | 17.89 | 6.77 | 2374 | 229.9 | 0.65 | 0.97 | 500 | 34.57 | |
| 0810 | 25,000 | 17.87 | 6.78 | 2367 | 233.1 | 0.68 | 1.02 | 500 | 34.57 | |

(continued on back)

Sample Collector(s): [signature] Date: 8-7-15

SAMPLE COLLECTION DATA

Well ID: **RAMW-07**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-RAMW07-080715 | VOC's | 3 - 40mL Clear Vials | 0810 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | 0.18 mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

AECOM

| Well ID: | RAMW-08 |
|---|---|



# Ground Water Sample Collection Record

Client: UTAS Plants 1/2 Facility
Date: 8-6-15
Time: Start 1510 (24hr) Finish 1625
Project No: 60339110-4214
Site Location: Rockford, Illinois
Weather: Sunny 75-85°F
Collector(s): A. Hollatz

## 1. WELL and WATER LEVEL DATA: (measured from Top of Casing)

Total well length (ft): 44.29
Screen interval(ft): 15
Approx. depth of pump intake(ft): 37
Water table depth (ft): 30.64
Casing type/diameter: 2" PVC
Minimum purge volume: 6.70 (gals)
Water column length (ft): 13.65
(calculations on reverse)

## 2. WELL PURGE DATA

Purge/Sample Method: Proactive SS Monsoon Pump

Well is stable when readings stabilize to +/- 10% over three (3) consecutive readings collected at 5-minute intervals.
If three (3) well volumes have been removed, and the readings have not stabilized, a sample shall be collected.

| Field Testing Equipment Used: | Make | Model | Serial Number(s) |
|---|---|---|---|
| | YSI | 556 MPS | 09F-66 |
| | Lamotte | 2020 | 2537-2512 |
| | Lamotte | Smart 2 Colorimeter | 0244-0702 |
| | | | |
| | | | |

Begin purge at 1515 ~~1545~~ AH

| Time (24hr) | Purge Vol. (ml) | Temp. (°C) | pH | Spec. Cond. (µS/cm) | ORP (mV) | DO (mg/L) | Turbidity (NTU) | Flow Rate (ml/min) | Drawdown (feet) | Color/Odor |
|---|---|---|---|---|---|---|---|---|---|---|
| 1525 | 5000 | 18.91 | 7.28 | 1645 | -190.3 | 1.59 | 28.4 | 500 | 30.64 | Clear/none |
| 1530 | 7500 | 18.92 | 7.31 | 1545 | -181.3 | 0.50 | 24.5 | 500 | 30.94 | |
| 1535 | 10,000 | 18.88 | 7.30 | 1447 | -165.3 | 0.35 | 15.7 | 500 | 30.94 | |
| 1540 | 12,500 | 18.88 | 7.27 | 1398 | -134.5 | 0.32 | 12.3 | 500 | 30.94 | |
| 1545 | 15,000 | 18.68 | 7.25 | 1376 | -134.7 | 0.37 | 10.14 | 500 | 30.94 | |
| 1550 | 17,500 | 18.64 | 7.24 | 1359 | -130.3 | 0.29 | 9.53 | 500 | 30.94 | |
| 1555 | 20,000 | 18.69 | 7.23 | 1362 | -129.8 | 0.25 | 7.26 | 500 | 30.94 | |
| 1600 | 22,500 | 18.73 | 7.22 | 1366 | -127.5 | 0.24 | 6.83 | 500 | 30.94 | |
| 1605 | 25,000 | 18.81 | 7.21 | 1372 | -125.9 | 0.24 | 6.37 | 500 | 30.94 | |
| 1610 | 27,500 | 18.84 | 7.20 | 1383 | -122.9 | 0.23 | 5.77 | 500 | 30.94 | |

* Turbidity not stable, remove 3 well volumes, collect sample.

(continued on back)

Sample Collector(s): [signature]
Date: 8-6-15

SAMPLE COLLECTION DATA

Well ID: **RAMW-08**



| Sample ID | Parameters | Bottles/Preservatives | Time (24 hr) | Flow Rate (ml/min) | Comments |
|---|---|---|---|---|---|
| HSSER-RAMW08-080605 | VOC's | 3 - 40mL Clear Vials | 1610 | 500 | |
| | | | | | |
| | | | | | |
| | Ferrous Iron | Overrange (0-10) mg/L | | | |
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VOCs - Volatile organic compounds

G - Glass
HCl - Hydrchloric acid

Project Name: UTAS Plants 1/2 Facility

Project Number: 60339110

Date: 8-4-15

## Calibration Form

| Parameter | Instrument Manf/Model | Instrument Serial No. | Standard Manf/Model | Standard SN/Exp. Date | Standard Value @ C | Ambient Temp. C | Initial Value | Adjusted Value | Initials & Time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| pH 4.00 | YSI 556 MPS | 09F66 | NCL Lab | B441502106 1-26-17 | 4.00 @ 25C | 23.45 | 4.01 | 4.00 | AH 1047 | |
| | | | | | | | | — | | Post Cal |
| pH 7.00 | | | NCL Lab | B347140805 8-5-16 | 7.00 @ 25C | 24.01 | 7.03 | 7.00 | AH 1045 | |
| | | | | | | | | — | | Post Cal |
| pH 10.00 | | | NCL Lab | B5G14D811 8-11-16 | 10.00 @ 25C | 23.95 | 10.01 | 10.00 | AH 1049 | |
| | | | | | | | | — | | Post Cal |
| Specific Cond. | | | YSI | 15E100303 11-16 | 1,000 uS/cm @ 25C | 23.92 | 1047 | 1000 | AH 1043 | |
| | | | | | | | | — | | Post Cal |
| ORP | | | YSI | 14J100415 9-16 | 244 mV @ 15 C | 24.01 | 239.1 | 244.0 | 1051 | |
| | | | | | | | | — | | Post Cal |
| DO | | | H2O Saturated Air | — | 100% H20 Sat. Air | 24.20 | 113.0 | 96.2 | AH 1041 | BP = |
| | | | | | | | | — | | Post Cal. BP = |
| Turbidity | LaMotte 2020 | 2537-3512 | — | — | 0 NTU | NA | 0.00 | 0.00 | AH 1053 | |
| | | | | | | NA | | — | | Post Cal |
| | | | | | 10 NTU | NA | 10.04 | 10.01 | AH 1053 | |
| | | | | | | NA | | — | | Post Cal |

BP = Barometric Pressure (mmHg)

Project Name: UTAS Plants V2 Facility

Project Number: 60339110

Date: 8-5-15

## Calibration Form

| Parameter | Instrument Manf/Model | Instrument Serial No. | Standard Manf/Model | Standard SN/Exp. Date | Standard Value @ C | Ambient Temp. C | Initial Value | Adjusted Value | Initials & Time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| pH 4.00 | YSI 556MPS | 09F66 | NCL Lab | B441502206 1-26-17 | 4.00 @ 25C | 23.80 | 4.06 | 4.00 | AH0706 | |
| | | | | | | | | — | | Post Cal |
| pH 7.00 | | | ↓ | B471408045 8-5-16 | 7.00 @ 25C | 23.70 | 7.06 | 7.00 | AH0704 | |
| | | | | | | | | — | | Post Cal |
| pH 10.00 | | | ↓ | B501417811 | 10.00 @ 25C | 23.85 | 10.03 | 10.00 | AH0708 | |
| | | | | | | | | — | | Post Cal |
| Specific Cond. | | | YSI | 15E100303 11-16 | 1,000 uS/cm @ 25C | 23.45 | 1004 | 1000 | AH0702 | |
| | | | ↓ | | | | | — | | Post Cal |
| ORP | | | ↓ | 145100415 9-16 | 244 mV @ 15 C | 23.46 | 239.5 | 244.0 | AH0710 | |
| | | | | | | | | — | | Post Cal |
| DO | | | H2O Saturated Air | — | 100% H20 Sat. Air | 22.87 | 91.6 | 96.2 | AH0700 | BP = |
| | | | | | | | | — | | Post Cal, BP = |
| Turbidity | LaMotte 2020 | 2537-3512 | — | — | 0 NTU | NA | 0.02 | 0.00 | AH0658 | |
| | | | | | | NA | | — | | Post Cal |
| | | | | | 10 NTU | NA | 9.93 | 10.01 | AH0658 | |
| | | | | | | NA | | — | | Post Cal |

BP = Barometric Pressure (mmHg)

Project Name: UTAS ~~Fac~~ Plants 1/2 Facility

Project Number: 60339110

Date: 8-5-15

## Calibration Form

| Parameter | Instrument Manf/Model | Instrument Serial No. | Standard Manf/Model | Standard SN/Exp. Date | Standard Value @ C | Ambient Temp. C | Initial Value | Adjusted Value | Initials & Time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| pH 4.00 | YSI 556MPS | 09F66 | NCL Lab | D441503126 1-26-17 | 4.00 @ 25C | 25.40 | 4.07 | 4.00 | AH1526 | |
| | | | | | | | | — | | Post Cal |
| pH 7.00 | | | ↓ | B471408005 8-5-16 | 7.00 @ 25C | 25.24 | 7.00 | 7.00 | AH1524 | |
| | | | | | | | | — | | Post Cal |
| pH 10.00 | | | ↓ | B501408 11 8-11-16 | 10.00 @ 25C | 25.43 | 10.04 | 10.01 | AH1528 | |
| | | | | | | | | — | | Post Cal |
| Specific Cond. | | | YSI | 15E100303 11-16 | 1,000 uS/cm @ 25C | 25.18 | 1009 | 1000 | 1522AH | |
| | | | | | | | | — | | Post Cal |
| ORP | | | ↓ | 145100415 9-16 | 244 mV @ 15 C | 25.56 | 235.5 | 244.0 | AH1530 | |
| | | | | | | | | — | | Post Cal |
| DO | | | H2O Saturated Air | — | 100% H20 Sat. Air | 25.05 | 85.4 | 96.2 | AH1520 | BP = |
| | | | | | | | | — | | Post Cal, BP = |
| Turbidity | LaMotte 2020 | 2537 3512 | — | — | 0 NTU | NA | 0.00 | 0.00 | AH1530 | |
| | | | | | | NA | | — | | Post Cal |
| | | | | | 10 NTU | NA | 9.93 | 10.01 | AH1530 | |
| | | | | | | NA | | — | | Post Cal |

BP = Barometric Pressure (mmHg)

Project Name: UTAS Plant 1/2 Facility

Project Number: 60339110

Date: 8-6-15

## Calibration Form

| Parameter | Instrument Manf/Model | Instrument Serial No. | Standard Manf/Model | Standard SN/Exp. Date | Standard Value @ C | Ambient Temp. C | Initial Value | Adjusted Value | Initials & Time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| pH 4.00 | YSI 556MPS | 09F66 | NCC Lab | B4113021260 1-26-17 | 4.00 @ 25C | 24.62 | 4.00 | 4.00 | AH0700 | |
| | | | | | | | | — | | Post Cal |
| pH 7.00 | | | ↓ | B4714080505 8-5-16 | 7.00 @ 25C | 24.76 | 7.01 | 7.00 | AH0658 | |
| | | | | | | | | — | | Post Cal |
| pH 10.00 | | | ↓ | B5014D8611 8-11-16 | 10.00 @ 25C | 24.49 | 10.04 | 10.01 | AH0702 | |
| | | | | | | | | — | | Post Cal |
| Specific Cond. | | | YSI | 15E100303 11-16 | 1,000 uS/cm @ 25C | 24.64 | 1035 | 1000 | AH0656 | |
| | | | | | | | | — | | Post Cal |
| ORP | | | ↓ | 14J100415 4-16 | 244 mV @ 15 C | 24.10 | 237.1 | 244.0 | AH0704 | |
| | | | | | | | | — | | Post Cal |
| DO | | | H2O Saturated Air | — | 100% H20 Sat. Air | 23.20 | 99.9 | 96.2 | AH0654 | BP = |
| | | | | | | | | — | | Post Cal, BP = |
| Turbidity | LaMotte 2020 | 2537 3512 | — | — | 0 NTU | NA | 0.02 | 0.00 | AH0706 | |
| | | | | | | NA | | — | | Post Cal |
| | | | | | 10 NTU | NA | 10.08 | 10.00 | AH0706 | |
| | | | | | | NA | | — | | Post Cal |

BP = Barometric Pressure (mmHg)

Project Name: UTAS Plants 1/2 Facility

Project Number: 60339110

Date: 8-7-15

## Calibration Form

| Parameter | Instrument Manf/Model | Instrument Serial No. | Standard Manf/Model | Standard SN/Exp. Date | Standard Value @ C | Ambient Temp. C | Initial Value | Adjusted Value | Initials & Time | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| pH 4.00 | YSI 556MPS | 09F66 | NCL Lab | B-1415 02226 1-26-17 | 4.00 @ 25C | 24.77 | 4.03 | 4.00 | AH 0701 | |
| | | | | | | | | — | | Post Cal |
| pH 7.00 | | | ↓ | B4714 0805 8-5-16 | 7.00 @ 25C | 24.89 | 6.96 | 7.00 | AH 0659 | |
| | | | | | | | | — | | Post Cal |
| pH 10.00 | | | ↓ | B5 0141 0811 8-11-16 | 10.00 @ 25C | 24.72 | 10.05 | 10.01 | AH 0703 | |
| | | | | | | | | — | | Post Cal |
| Specific Cond. | | | YSI | 15E 100203 11-16 | 1,000 uS/cm @ 25C | 24.62 | 1013 | 1000 | AH 0657 | |
| | | | | | | | | — | | Post Cal |
| ORP | | | ↓ | 145100415 9-16 | 244 mV @ 15 C | 24.30 | 226.8 | 244.0 | AH 0705 | |
| | | | | | | | | — | | Post Cal |
| DO | | | H2O Saturated Air | — | 100% H20 Sat. Air | 33.35 | 95.5 | 96.1 | AH 0655 | BP = |
| | | | | | | | | — | | Post Cal, BP = |
| Turbidity | LaMotte | 2537 | — | — | 0 NTU | NA | 0.00 | 0.00 | AH 0705 | |
| | | 3512 | | | | NA | | — | | Post Cal |
| | | | | | 10 NTU | NA | 9.87 | 10.01 | AH 0705 | |
| | | | | | | NA | | — | | Post Cal |

BP = Barometric Pressure (mmHg)

ACCUTEST LABORATORIES

# CHAIN OF CUSTODY



2235 Route 130, Dayton, NJ 08810
TEL 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # 6349406164 10
Bottle Order Control #
Accutest Quote #
Accutest Job #

**Client / Reporting Information**

Company Name: AECOM
Street Address: 27756 Diehl Rd Suite 100
City / State / Zip: Warrenville IL 60555
Project Contact / E-mail: Peter Hellatz Peter.Hellatz@aecom.com
Phone # / Fax #: 630-839-5386 630-836-1711
Sampler(s) Name(s) / Phone #: Alan Hellatz 630-836-1700

**Project Information**

Project Name: UTAS Plants 1/2 Facility
Street:
City / State: Rockford IL
Project #: 60339110
Client Purchase Order #: 59048 ACM
Project Manager: Peter Hellatz

**Billing Information ( if different from Report to)**

Company Name:
Street Address:
City / State / Zip:
Attention:

**Requested Analysis ( see TEST CODE sheet)**

**Matrix Codes**

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

| Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | * VOC | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HSSER-SMW08-080415 | | 8-4-15 | 1220 | AH | GW | 3 | X | | | | | | | | X | |
| | HSSER-GMZ01-080415 | | | 1335 | | | 3 | X | | | | | | | | X | |
| | HSSER-SMW01-080415 | | | 1425 | | | 3 | X | | | | | | | | X | |
| | HSSER-SMW02-080415 | | | 1530 | | | 3 | X | | | | | | | | X | |
| | HSSER-MW03-080415 | | | 1655 | | | 3 | X | | | | | | | | X | |
| | HSSER-MW07FGA-080515 | | 8-5-15 | 0825 | | | 3 | X | | | | | | | | X | |
| | HSSER-FBLK01-080415 | | 8-4-15 | 1130 | | | 3 | X | | | | | | | | X | |
| | HSSER-SMW19-080515 | | 8-5-15 | 0925 | | | 3 | X | | | | | | | | X | |
| | HSSER-SMGMZ04-080515 | | 8-5-15 | 1055 | | | 3 | X | | | | | | | | X | |
| | HSSER-SMW21-080515 | | 8-5-15 | 1200 | | | 3 | X | | | | | | | | X | |
| | HSSER-SMW20-080515 | | 8-5-15 | 1345 | | | 3 | X | | | | | | | | X | |
| | HSSER-GMZ03-080515 | | 8-5-15 | 1500 | | | 3 | X | | | | | | | | X | |

**Turnaround Time ( Business days)**

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other _____

Emergency & Rush T/A data available VIA Lablink

Approved By (Accutest PM): / Date:

**Data Deliverable Information**

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" ( Level 2)
- ☐ FULLT1 ( Level 3+4 )
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NJ Data of Known Quality Protocol Reporting
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____
- ☐ Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

**Comments / Special Instructions**

* List 13 VOC
Level IV Data

**Sample Custody must be documented below each time samples change possession, including courier delivery.**

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 [signature] | 8-7-15 1800 | 1 | 2 | | 2 |
| 3 | | 3 | 4 | | 4 |
| 5 | | 5 | | | |

Custody Seal # ☐ Intact ☐ Not intact — Preserved where applicable ☐ — On Ice ☐ — Temp.

ACCUTEST LABORATORIES

# CHAIN OF CUSTODY



2235 Route 130, Dayton, NJ 08810
TEL: 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking #: 6349 4061 6410
Bottle Order Control #:
Accutest Quote #:
Accutest Job #:

**Client / Reporting Information**

Company Name: AECOM
Street Address: 27755 Diehl Rd Suite 100
City / State / Zip: Warrenville IL 60555
Project Contact / E-mail: Peter Hollatz Peter.Hollatz@aecom.com
Phone # / Fax #: 630-839-5336 630-836-1711
Sampler(s) Name(s) / Phone #: Alan Hollatz 630-836-1700

**Project Information**

Project Name: UTAS Plants 1/3 Facility
Street:
City / State: Rockford IL
Project #: 60339110
Client Purchase Order #: 59048 ACM
Project Manager: Peter Hollatz
Attention:

Billing Information (if different from Report to)
Company Name:
Street Address:
City / State / Zip:

**Requested Analysis (see TEST CODE sheet)**

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL - Sludge; SED - Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB - Field Blank; EB - Equipment Blank; RB - Rinse Blank; TB - Trip Blank

| Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | VOC | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HSSER-GM202-080515 | | 8-5-15 | 1630 | AH | GW | 3 | X | | | | | | | | X | |
| | HSSER-MJ01-080515 | | 8-5-15 | 1630 | | | 3 | X | | | | | | | | X | |
| | HSSER-MSD01-080515 | | 8-5-15 | 1630 | | | 3 | X | | | | | | | | X | |
| | HSSER-DUP01-080515 | | 8-5-15 | 0000 | | | 3 | X | | | | | | | | X | |
| | HSSER-PMW01-080615 | | 8-6-15 | 0820 | | | 3 | X | | | | | | | | X | |
| | HSSER-PMW02-080615 | | 8-6-15 | 0925 | | | 3 | X | | | | | | | | X | |
| | HSSER-EBLK01-080615 | | 8-6-15 | 0840 | | | 3 | X | | | | | | | | X | |
| | HSSER-SMW04-080615 | | 8-6-15 | 1030 | | | 3 | X | | | | | | | | X | |
| | HSSER-TRP01-080415 | | 8-4-15 | — | | | 2 | X | | | | | | | | X | |

**Turnaround Time (Business days)**

Approved By (Accutest PM): / Date:

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Emergency & Rush T/A data available VIA Lablink

**Data Deliverable Information**

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NJ Data of Known Quality Protocol Reporting
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

**Comments / Special Instructions**

List of 13 VOC
Level 1 Data

**Sample Custody must be documented below each time samples change possession, including courier delivery.**

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 [signature] | 8-7-15 1800 | 1 | 2 | | 2 |
| Relinquished by Sampler: 3 | Date Time: | Received By: 3 | Relinquished By: 4 | Date Time: | Received By: 4 |
| Relinquished by: 5 | Date Time: | Received By: 5 | Custody Seal # ☐ Intact ☐ Not intact | Preserved where applicable ☐ | On Ice ☐ Cooler Temp. |

# CHAIN OF CUSTODY



ACCUTEST LABORATORIES

2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # 6349 4061 6410
Bottle Order Control #
Accutest Quote #
Accutest Job #

**Client / Reporting Information**

Company Name: AECOM
Street Address: 27755 Diehl Rd Suite 100
City / State / Zip: Warrenville IL 60555
Project Contact / E-mail: Peter Hollatz Peter.Hollatz@aecom.com
Phone # / Fax #: 630-834-5366 630-836-1711
Sampler(s) Name(s) / Phone #: Allan Hollatz 630-836-1700

**Project Information**

Project Name: UTAS Plants 1/2 Facilities.
Street:
City / State: Rockford IL
Project #: 60339110
Client Purchase Order #: 59048 ACM
Project Manager: Peter Hollatz

Billing Information ( if different from Report to)
Company Name:
Street Address:
City / State / Zip:
Attention:

Requested Analysis ( see TEST CODE sheet): VOC

Matrix Codes: DW - Drinking Water; GW - Ground Water; WW - Water; SW - Surface Water; SO - Soil; SL- Sludge; SED-Sediment; OI - Oil; LIQ - Other Liquid; AIR - Air; SOL - Other Solid; WP - Wipe; FB-Field Blank; EB-Equipment Blank; RB- Rinse Blank; TB-Trip Blank

| Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | VOC | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HSSER-RAMW01-080615 | | 8-6-15 | 1210 | AH | GW | 3 | X | | | | | | | | X | |
| | HSSER-FBLK02-080615 | | 8-6-15 | 1105 | | | 3 | X | | | | | | | | X | |
| | HSSER-RAMW02-080615 | | 8-6-15 | 1320 | | | 3 | X | | | | | | | | X | |
| | HSSER-MSD02-080615 | | 8-6-15 | 1320 | | | 3 | X | | | | | | | | X | |
| | HSSER-MSD02-080615 | | 8-6-15 | 1320 | | | 3 | X | | | | | | | | X | |
| | HSSER-RAMW03-080615 | | 8-6-15 | 1450 | | | 3 | X | | | | | | | | X | |
| | HSSER-RAMW08-080615 | | 8-6-15 | 1610 | | | 3 | X | | | | | | | | X | |
| | HSSER-DUP02-080615 | | 8-6-15 | 0000 | | | 3 | X | | | | | | | | X | |
| | HSSER-RAMW07-080715 | | 8-7-15 | 0810 | | | 3 | X | | | | | | | | X | |
| | HSSER-RAMW06-080715 | | 8-7-15 | 0925 | | | 3 | X | | | | | | | | X | |
| | HSSER-RAMW05-080715 | | 8-7-15 | 1055 | | | 3 | X | | | | | | | | X | |
| | HSSER-RAMW04-080715 | | 8-7-15 | 1155 | | | 3 | X | | | | | | | | X | |

**Turnaround Time ( Business days)**

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other _____

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

**Data Deliverable Information**

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" ( Level 2)
- ☐ FULLT1 ( Level 3+4 )
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NJ Data of Known Quality Protocol Reporting
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format _____
- ☐ Other _____

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

**Comments / Special Instructions**

List of 13 VOC
Level IV Data

**Sample Custody must be documented below each time samples change possession, including courier delivery.**

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 Allan Hollatz | 8-7-15 1800 | 1 | 2 | | 2 |
| 3 | | 3 | 4 | | 4 |
| 5 | | 5 | | | |

Custody Seal # ☐ Intact ☐ Not intact — Preserved where applicable ☐ — On Ice ☐ — Cooler Temp.

ACCUTEST LABORATORIES

# CHAIN OF CUSTODY



2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX: 732-329-3499/3480
www.accutest.com

FED-EX Tracking # 6349406164 10
Bottle Order Control #
Accutest Quote #
Accutest Job #

**Client / Reporting Information**

Company Name: AECOM
Street Address: 27755 Diehl Rd Suite 100
City / State / Zip: Warrenville IL 60555
Project Contact: Peter Hollatz
E-mail: Peter.Hollatz@aecom.com
Phone #: 630 839 5386
Fax #: 630 836 1711
Sampler(s) Name(s): Allen Hollatz
Phone #: 630-836-1700

**Project Information**

Project Name: UTAS Plants 1/2 Facility
Street:
City / State: Rockford IL
Project #: 60339110
Client Purchase Order #: 59048 ACM
Project Manager: Peter Hollatz

**Billing Information (if different from Report to)**

Company Name:
Street Address:
City / State / Zip:
Attention:

**Requested Analysis (see TEST CODE sheet)**

| Accutest Sample # | Field ID / Point of Collection | MEOH/DI Vial # | Collection Date | Collection Time | Sampled by | Matrix | # of bottles | HCl | NaOH | HNO3 | H2SO4 | NONE | DI Water | MEOH | ENCORE | * VOC | LAB USE ONLY |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HSSER-EBLK02-080715 | | 8-7-15 | 1115 | AH | GW | 3 | X | | | | | | | | X | |
| | HSSER-Trip02-080415 | | 8-4-15 | — | | | 2 | X | | | | | | | | X | |

**Matrix Codes**

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL- Sludge
SED-Sediment
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe
FB-Field Blank
EB-Equipment Blank
RB- Rinse Blank
TB-Trip Blank

**Turnaround Time (Business days)**

- ☐ Std. 10 Business Days
- ☐ 5 Day RUSH
- ☐ 3 Day RUSH
- ☐ 2 Day RUSH
- ☐ 1 Day RUSH
- ☐ other

Approved By (Accutest PM): / Date:

Emergency & Rush T/A data available VIA Lablink

**Data Deliverable Information**

- ☐ Commercial "A" (Level 1)
- ☐ Commercial "B" (Level 2)
- ☐ FULLT1 (Level 3+4)
- ☐ NJ Reduced
- ☐ Commercial "C"
- ☐ NYASP Category A
- ☐ NYASP Category B
- ☐ State Forms
- ☐ EDD Format
- ☐ Other
- ☐ *NJ Data of Known Quality Protocol Reporting*

Commercial "A" = Results Only, Commercial "B" = Results + QC Summary
NJ Reduced = Results + QC Summary + Partial Raw data

**Comments / Special Instructions**

* List of 13 VOC
Level IV Data

**Sample Custody must be documented below each time samples change possession, including courier delivery.**

| Relinquished by Sampler: | Date Time: | Received By: | Relinquished By: | Date Time: | Received By: |
|---|---|---|---|---|---|
| 1 [signature] | 8-7-15 1800 | 1 | 2 | | 2 |
| Relinquished by Sampler: 3 | Date Time: | Received By: 3 | Relinquished By: 4 | Date Time: | Received By: 4 |
| Relinquished by: 5 | Date Time: | Received By: 5 | Custody Seal # ☐ Intact ☐ Not intact | Preserved where applicable ☐ | On Ice ☐ Cooler Temp. |

E

E

# Appendix E

# Fourth Quarter 2015 Progress Report

AECOM

Submitted to:
UTC Aerospace Systems
Rockford, IL

Submitted by:
AECOM
Warrenville, IL
60339110
December 2015

# QUARTERLY PROGRESS REPORT – Fourth Quarter 2015 (September 2015 – November 2015)

UTC Aerospace Systems Plants 1/2 Facility
Southeast Rockford Groundwater Contamination
Superfund Site
2421 11th Street
Rockford, Illinois 61104
ILD981000417, ILD010219665
AECOM Project No. 60339110

This Quarterly Progress Report has been prepared on behalf of UTC Aerospace Systems (UTAS, fka Hamilton Sundstrand or HS) by AECOM Technical Services Inc. (AECOM). This report summarizes activities that occurred during the months of September, October, and November of the Fourth Quarter of 2015 at the above-referenced facility.

| Progress Report- Reporting Quarters | | | |
|---|---|---|---|
| Q1 | December | January | February |
| Q2 | March | April | May |
| Q3 | June | July | August |
| Q4 | September | October | November |

This report is the twenty-ninth in the series of Quarterly Progress Reports and consistent with United States Environmental Protection Agency (USEPA) approval of combining project reporting documents from a letter dated April 15, 2011. Quarterly Progress Reports are included as attachments to the Groundwater Management Zone (GMZ) Monitoring and System Performances Reports.

This Quarterly Progress Report follows the requirements outlined in Section X of the Consent Decree (CD) and includes the following:

Actions taken during the prior quarter to maintain compliance with the CD:

- Summaries of sampling results and tests.
- An identification of work plans and other deliverables completed in accordance with the CD.
- Actions scheduled for the next quarter.
- Information on the progress, percentage of completion, delays, and efforts to mitigate delays.
- Modifications to Work Plans and/or schedules.
- Activities undertaken in support of the Community Relations Plan.

Tasks completed during this period to fulfill each of these actions are summarized (by action) below.

**Actions Taken During the Fourth Quarter to Achieve Compliance with the Consent Decree**

The following actions were taken during September, October, and November of the Fourth Quarter of 2015:

- On September 8, 2015, AECOM submitted to the USEPA the Second Quarter GMZ Monitoring and System Performance Report.
- Phase 1 and Phase 2 air sparge/soil vapor extraction (AS/SVE) system air sampling of the SVE system effluent after being reactivated (switched to the pulse-on mode). SVE process air effluent sampling was conducted on September 22, 2015.
- Phase 1 and Phase 2 AS/SVE system air sampling of the SVE system effluent prior to the system being deactivated (switched to the pulse-off mode). SVE process air effluent sampling was conducted on November 20, 2015.

- Phase 2 SVE system water sample was collected from the Phase 2 Cell 4 and Cell 5 moisture separators. The moisture separator water samples were collected on November 20, 2015.

**Summary of Sampling and Tests**

- Three process air samples were collected from the Phase 1 AS/SVE system effluent during the September 22, 2015, and November 20, 2015, sampling events.
- Two process air samples were collected from the Phase 2 AS/SVE system effluent during the September 22, 2015 and November 20, 2015 sampling events.

**Work Plans and Other Deliverables Completed In Accordance With the CD**

- The *Second Quarter GMZ Monitoring and System Performance Report, Area 9/10 Remedial Action* (September 2015) was submitted in accordance with Section X, paragraph 30, of the CD and consistent with Section V of the Statement of Work (SOW).

**Actions Scheduled for Next Quarter**

The following actions are scheduled for the next quarter:

- Operation of the Phase 1 and Phase 2 AS/SVE systems will be in pulse-off mode (system not in operation) from November 20, 2015, to approximately January 18, 2016.
- Completion of the Fourth Quarter 2015 Groundwater Monitoring event in December 2015. The monitoring event will include the GMZ monitoring well network (which includes the Phase 1 AS/SVE performance monitoring network) and the Phase 2 AS/SVE performance monitoring network.
- Operation of the Phase 1 and Phase 2 AS/SVE systems will be in pulse-on mode (system in run mode) from approximately January 18, 2016, until approximately March 18, 2016.
- Completion of the First Quarter 2016 Groundwater Monitoring event in February 2016. The monitoring event will include the GMZ monitoring well network (which includes the Phase 1 AS/SVE performance monitoring network) and the Phase 2 AS/SVE performance monitoring network.

**Percentage of Completion/Anticipated Delays**

There are 39 specific deliverables or activities required to be completed as part of the CD. Some of these are ongoing activities and others, such as submittal of documents, require approval by the USEPA/Illinois Environmental Protection Agency to fulfill the requirements of the CD. To date, UTAS has completed their current obligations for 28 of the 39 items, or 72 percent of the CD requirements. There are currently no anticipated delays to the schedule.

**Modifications to Work Plans/Schedules Proposed**

None

**Activities Undertaken In Support of Community Relations Plan**

No activities are required with regard to the Community Relations Plan at this time.