CH2M
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Cincinnati, OH 45240
513-530-5520
www.ch2m.com

Mr. Gregory Rudloff
United States Environmental Protection Agency (USEPA)
Region 5
77 W. Jackson Blvd. LU-9J
Chicago, IL 60604

April 26, 2018

Subject: One-Week Post Interim Measures Indoor Air Analytical Data Submittal for the Hanging Rock Plant, Ironton, OH EPA ID# OHR 000 157 727 and OHD 039 128 913

Dear Mr. Rudloff,

On behalf of Mr. Timothy King of The Dow Chemical Company, CH2M HILL, Inc. is submitting the 1-week post short-term interim measures completed indoor air sampling analytical results at Building 505, Hanging Rock Plant in Ironton, Ohio.

The 1-week post indoor air detections were below the Ohio Environmental Protection Agency response guidance accelerated response and chronic response action levels and below the USEPA vapor intrusion screening levels.

The indoor air sampling was conducted on April 12, 2018, within 10 days of the interim measures being completed on April 5, 2018. Six indoor air samples, one duplicate, and one outside/ambient air sample were collected. Four of the six indoor air samples were collected from previous sampling locations. The other two samples were collected in the rooms where the cracks were sealed, aerosol cans were placed for use, and APUs were operating – the southwest corner storage room and the interior electronic parts maintenance/storage room. The canisters were shipped to Alpha Analytical located in Mansfield, Massachusetts, and analyzed for PCE, TCE, 1,1-DCE, trans-1,2-DCE, cis-1,2-DCE, and vinyl chloride by USEPA Method TO-15 SIM. The 1-month post-sampling event will be conducted the week of April 30, 2018.

Attached are the laboratory analytical data package, the unvalidated data tabulated with previous results, and a figure showing the data and sample locations within the building.

Please contact me at (513) 673-2201 or Mr. King at (304) 747-3763 should you have any questions or comments.

Sincerely,

Marie W. Chiller, CH2M HILL Inc.
Site Manager

Attachments

cc: Timothy King/The Dow Chemical Company

Table 1. Building 505 September 2017 and April 2018 Outdoor and Indoor Air Analytical Results

*Vapor Intrusion Investigation Summary, Dow Hanging Rock, Ironton, Ohio*

| | | | | | | | | Building 505 | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | *Indoor Air* | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | *Outdoor Air* | | | | IA-06 | | | | IA-07 | | | | IA-08 | | IA-09 | | | | | | IA-10 | | | | IA-11 | | IA-12 | | | |
| **Analyte** | **Unit** | **Ohio EPA Response Action Level[a]** | **Indoor Air RSL[b]** | S01-HGR-OA01-090817 | | S01-HGR-OA02-041218 | | S01-B505- IA06-090817 | | S01-B505- IA06-041218 | | S01-B505- IA07-090817 | | S01-B505- IA07-041218 | | S01-B505- IA08-090817 | | S01-B505- IA09-090817 | | S01-HGR-090817-FD02 Duplicate | | S01-B505- IA09-041218 | | S01-B505- IA10-090817 | | S01-B505- IA10-041218 | | S01-B505-IA11-041218 | | S01-B505-IA12-041218 | | S01-B505-IA12-041218-FD01 (Duplicate) | |
| Tetrachloroethylene | µg/m$^3$ | 180 | 175 | **0.068** | J | 0.136 | U | **326** | = | **30.2** | = | **220** | = | **15.9** | = | **197** | = | **268** | = | **262** | = | **17.4** | = | **324** | = | **45.5** | = | **30.6** | = | **3.27** | = | **3.36** | = |
| Trichloroethylene | µg/m$^3$ | 8.8 | 9 | 0.038 | U | 0.107 | U | **1.04** | = | **0.559** | = | **0.451** | = | **0.597** | = | **0.403** | = | **0.543** | = | **0.527** | = | **0.532** | = | **1** | = | **0.736** | = | **0.376** | = | **0.161** | = | **0.167** | = |
| Dichloroethylene, 1,1- | µg/m$^3$ | NA | 876 | 0.028 | U | 0.079 | U | 0.028 | U | 0.079 | U | 0.028 | U | 0.079 | U | 0.028 | U | 0.028 | U | 0.028 | U | 0.079 | U | 0.028 | U | 0.079 | U | 0.079 | U | 0.079 | U | 0.079 | U |
| Dichloroethylene, 1,2-cis- | µg/m$^3$ | NA | NA | 0.026 | U | 0.079 | U | **0.079** | = | **0.170** | = | **0.06** | J | **0.111** | = | **0.052** | J | **0.067** | J | **0.071** | J | **0.159** | = | **0.099** | = | **0.297** | = | **0.297** | = | 0.079 | U | 0.079 | U |
| Dichloroethylene, 1,2-trans- | µg/m$^3$ | NA | NA | 0.024 | U | 0.079 | U | **0.024** | J | 0.079 | U | 0.024 | J | 0.079 | U | 0.024 | U | **0.028** | J | 0.024 | U | 0.079 | U | **0.024** | J | 0.079 | U | 0.079 | U | 0.079 | U | 0.079 | U |
| Vinyl Chloride | µg/m$^3$ | 28 | 28 | 0.018 | U | 0.051 | U | 0.018 | U | 0.051 | U | 0.018 | U | 0.051 | U | 0.018 | U | 0.018 | U | 0.018 | U | 0.051 | U | 0.018 | U | 0.051 | U | 0.051 | U | 0.051 | U | 0.051 | U |

Notes:

The April 2018 data are preliminary. This data has not yet been validated.

[a]: Ohio EPA response guidance provides an Accelerated Response Action Level for trichloroethylene (TCE) based on a THQ=1 and Chronic Response Action Levels for tetrachloroethylene (PCE )and vinyl chloride (based on a THQ=1 or TCR=1 x $10^{-5}$). Source - Ohio EPA Guidance Document Recommendations Reguarding Response Action Levels and Timeframes for Common Contaminants of Concern at Vapor Intrusion Sites in Ohio (Ohio EPA, August 2016).

[b]: RSL is a risk-based screening level derived from the lowest of the cancer-based (TCR = 1 x $10^{-5}$) or the noncancer-based (THQ = 1) industrial indoor air Regional Screening Levels (RSLs) [EPA, 2018], which ever is lower.

**Bold text indicates a detection**

Shading indicates a VISL exceedance

= - detected result

µg/m$^3$ - micrograms per cubic meter

J - estimated result

N/A - not applicable

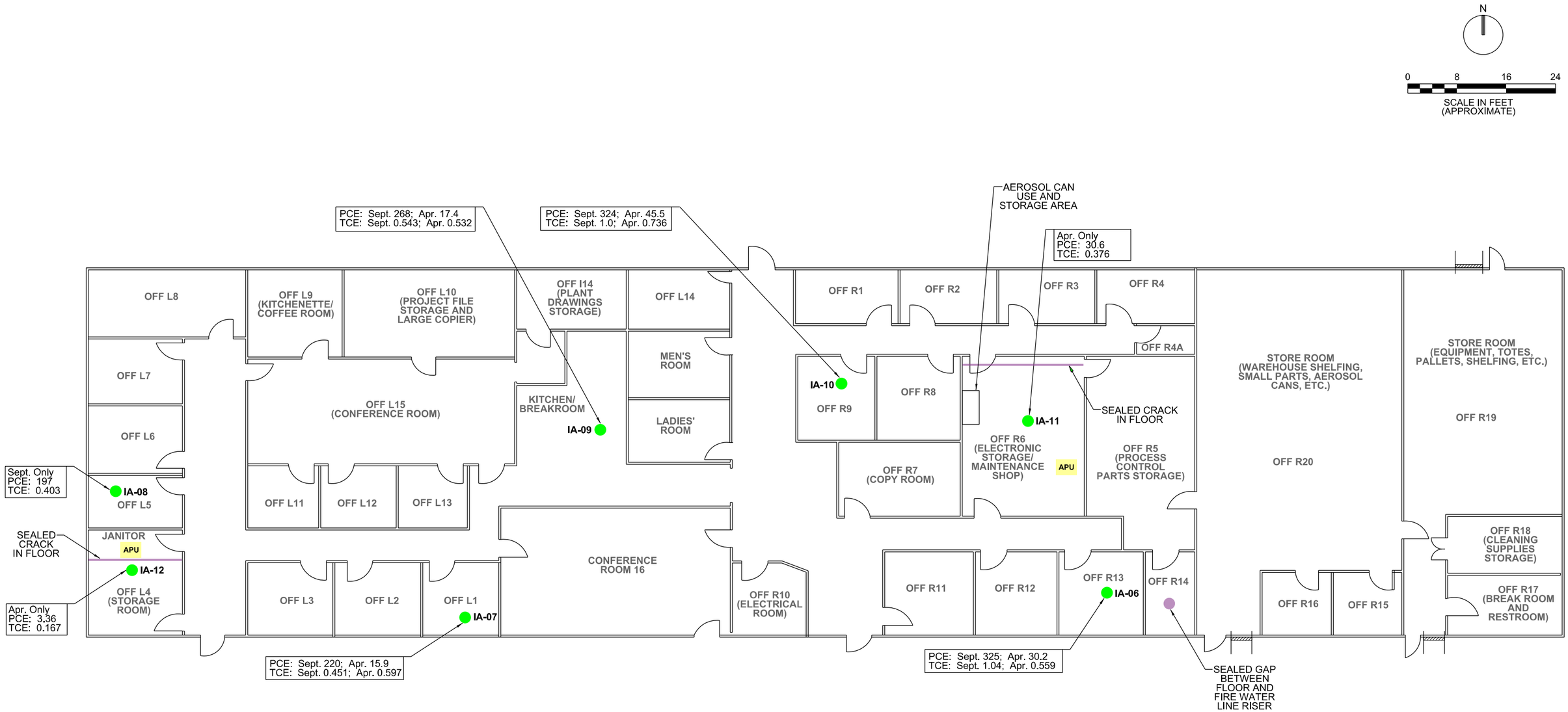
TCR - target risk for carcinogens

THQ - target hazard quotient for non-carcinogens

U - not detected, reporting limit shown

VISL = vapor intrusion screening level

EPA, 2017. Regoional Screening Levels (RSLs). November. https://www.epa.gov/risk/regional-screening-levels-rsls




## Legend

APU AIR PURIFYING UNIT

INDOOR AIR SAMPLE

GARAGE DOOR

| Analyte | Unit | Ohio EPA Response Action Level | USEPA Regional Screening Level |
|---|---|---|---|
| Tetrachloroethylene (PCE) | µg/m³ | 180 | 175 |
| Trichloroethylene (TCE) | µg/m³ | 8.8 | 9 |

Figure 1
**Building 505 Layout and PCE and TCE Indoor Sampling Air Results**
Hanging Rock Facility
Ironton, OH

JACOBS

ALPHA ANALYTICAL

World Class Chemistry

www.alphalab.com

Lab Number: L1812962

Client: Jacobs

ATTN: Marie Chiller

Project Name: DOW HANGING ROCK

Project Number: 693874.01.RR

*The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.*

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# Sample Delivery Group Information

# Sample Delivery Group Summary

Alpha Job Number : L1812962

Received : 13-APR-2018
Reviewer : Bethany Bedard

Account Name : CH2M / Dow Chemical Company
Project Number : 693874.01.RR
Project Name : DOW HANGING ROCK

## Delivery Information

Samples Delivered By : Express Ship
FedEx (780501168738)

Chain of Custody : Present

## Cooler Information

| Cooler | Seal/Seal# | Preservation | Temperature(°C) | Additional Information |
|---|---|---|---|---|
| N/A | Present/Intact/00 | | | |

## Condition Information

All samples on COC received? **YES**

Extra samples received? **NO**

Are there any sample container discrepancies? **NO**

Are there any discrepancies between sample labels & COC? **YES**
L1812962-05: FC 0946 vs. FC 0949

Are samples in appropriate containers for requested analysis? **YES**

Are samples properly preserved for requested analysis? **NO**

Are samples within holding time for requested analysis? **YES**

All sampling equipment returned? **YES**

## Volatile Organics/VPH

Reagent Water Vials Frozen by Client? **NA**

# LIMS Chain of Custody

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Apr 24 2018, 03:31 pm

Login Number: L1812962
Account: DOW-CH2M CH2MHILLProject: 693874.01.RR
Received: 13APR18 Due Date: 23APR18

| Sample # | Client ID | Mat | PR | Collected |
|---|---|---|---|---|
| L1812962-01 | S01-HGR-OA02-041218 | 10 | S0 | 12APR18 16:12 |

Report: 1,1-DCE, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, VC. A2-DPKG-FULL Package Due Date: 04/20/18

A2-DPKG-FULL,CAN-CERT,CAN-RENT,FLOW-CERT,FLOW-RENT,TO15-SIM

| | | | | |
|---|---|---|---|---|
| L1812962-02 | S01-B505-IA06-041218 | 10 | S0 | 12APR18 16:15 |

Report: 1,1-DCE, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, VC. Package Due Date: 04/20/18

CAN-CERT,CAN-RENT,FLOW-CERT,FLOW-RENT,TO15-SIM

| | | | | |
|---|---|---|---|---|
| L1812962-03 | S01-B505-IA10-041218 | 10 | S0 | 12APR18 16:17 |

Report: 1,1-DCE, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, VC. Package Due Date: 04/20/18

CAN-CERT,CAN-RENT,FLOW-CERT,FLOW-RENT,TO15-SIM

| | | | | |
|---|---|---|---|---|
| L1812962-04 | S01-B505-IA11-041218 | 10 | S0 | 12APR18 16:18 |

Report: 1,1-DCE, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, VC. Package Due Date: 04/20/18

CAN-CERT,CAN-RENT,FLOW-CERT,FLOW-RENT,TO15-SIM

| | | | | |
|---|---|---|---|---|
| L1812962-05 | S01-B505-IA12-041218 | 10 | S0 | 12APR18 16:22 |

Report: 1,1-DCE, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, VC. Package Due Date: 04/20/18

CAN-CERT,CAN-RENT,FLOW-CERT,FLOW-RENT,TO15-SIM

| | | | | |
|---|---|---|---|---|
| L1812962-06 | S01-B505-IA12-041218-FD01 | 10 | S0 | 12APR18 16:22 |

Report: 1,1-DCE, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, VC. Package Due Date: 04/20/18

CAN-CERT,CAN-RENT,FLOW-CERT,FLOW-RENT,TO15-SIM

| | | | | |
|---|---|---|---|---|
| L1812962-07 | S01-B505-IA07-041218 | 10 | S0 | 12APR18 16:21 |

Report: 1,1-DCE, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, VC. Package Due Date: 04/20/18

ALPHA ANALYTICAL LABORATORIES, INC.
LOGIN CHAIN OF CUSTODY REPORT
Apr 24 2018, 03:31 pm

Login Number: L1812962
Account: DOW-CH2M CH2MHILLProject: 693874.01.RR
Received: 13APR18 Due Date: 23APR18

| Sample # | Client ID | Mat | PR | Collected |
|---|---|---|---|---|

CAN-CERT,CAN-RENT,FLOW-CERT,FLOW-RENT,TO15-SIM

L1812962-08 S01-B505-IA09-041218 10 S0 12APR18 16:19
Report: 1,1-DCE, cis-1,2-DCE, PCE, trans-1,2-DCE, TCE, VC. Package Due Date: 04/20/18

CAN-CERT,CAN-RENT,FLOW-CERT,FLOW-RENT,TO15-SIM



Logged By: Chris Anderson

# Container Tracking

# ALPHA ANALYTICAL LABORATORIES
## Container Tracking Report

| Container ID | Type | Status | Transaction Date | From Response | Location | Operator | To Response | Location | Operator |
|---|---|---|---|---|---|---|---|---|---|

# Chain of Custody

# AIR ANALYSIS

PAGE 1 OF 1

ALPHA ANALYTICAL

**CHAIN OF CUSTODY**

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/13/18

ALPHA Job #: L1812962

## Client Information

Client: Jacobs ~~CH2M~~ / Dow

Address: 1880 Waycross Rd
Cincinnati, OH 45420

Phone: 513-673-2201

Fax:

Email: Marie.Chiller@ch2m.com

☐ These samples have been previously analyzed by Alpha

## Project Information

Project Name: Dow Hanging Rock

Project Location: Ironton, OH

Project #: 643874.01.RR

Project Manager: Marie Chiller

ALPHA Quote #:

## Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved)

Date Due: Time:

## Report Information - Data Deliverables

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)

## Billing Information

☐ Same as Client info PO #:

## Regulatory Requirements/Report Limits

| State/Fed | Program | Res / Comm |
|---|---|---|
| | | |
| | | |
| | | |

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☒

**All Columns Below Must Be Filled Out**

| ALPHA Lab ID (Lab Use Only) | Sample ID | COLLECTION End Date | Start Time | End Time | Initial Vacuum | Final Vacuum | Sample Matrix* | Sampler's Initials | Can Size | ID Can | ID - Flow Controller | TO-15 | TO-15 SIM | APH Subtract Non-petroleum HCs ☐ | Fixed Gases | Sulfides & Mercaptans by TO-15 | Sample Comments (i.e. PID) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 812962-01 | S01-HGR-0A02-041218 | 4/12/18 | 0812 | | -29.50" | -6.03" | AA | PK | 6L | 602 | 0948 | | | | | | |
| -02 | S01-B505-IA06-041218 | | 0815 | | -29.16" | -6.07" | | | | 1533 | 0062 | | | | | | |
| -03 | S01-B505-IA10-041218 | | 0818 | | -29.05" | -5.71" | | | | 753 | 80 | | | | | | |
| -04 | S01-B505-IA11-041218 | | 0819 | | -29.32" | -5.81" | | | | 1551 | 0258 | | (PK) | | | | |
| | ~~S01-B505-IA04-041218~~ | | ~~0821~~ | | ~~29.13~~ | ~~-6.57"~~ | | | | ~~986~~ | ~~0968~~ | | | | | | |
| -05 | S01-B505-IA12-041218 | | 0825 | | -29.59 | | | | | 946 | 945 | | | | | | |
| -06 | S01-B505-IA12-041218-FD01 | | 0825 | | -29.70" | | | | | 594 | 618 | | | | | | |
| -07 | S01-B505-IA07-041218 | | 0824 | | -29.46" | -4.82" | | | | 986 | 0968 | | | | | | |
| -08 | S01-B505-IA09-041218 | | 0821 | | -29.13 | -6.57" | | | | 1634 | 341 | | | | | | |

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

| Relinquished By: | Date/Time | Received By: | Date/Time: |
|---|---|---|---|
| Patrick Kish FedEx | 4/12/18 | FedEx Ken Beals AAC | 4/13/18 10:14 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

Form No: 101-02 Rev: (25-Sep-15)

# Organics

# GC/MS VOA
# Air Analysis
# Selective Ion Monitoring

# Initial Calibration

# Response Factor Report Airpiano 2

Method Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Method File : TSIM180325.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Mon Mar 26 12:18:08 2018
Response Via : Initial Calibration

Calibration Files
0.02=R253194.D 0.04=R253195.D 0.1 =R253196.D 0.2 =R253197.D 0.5 =R253198.D 1.0 =R253199.D
5.0 =R253200.D 10.0=R253201.D 20.0=R253202.D 50.0=R253203.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ----------ISTD---------- | | | | | | | | | | | |
| 2) | | propylene | | | | 0.665 | 0.614 | 0.588 | 0.544 | 0.539 | 0.580 | 0.518 | 0.5783 | 8.66 |
| 3) | | dichlorodifluorome... | | | 1.960 | 2.299 | 2.137 | 1.968 | 1.925 | 1.803 | 2.048 | 1.820 | 1.9949 | 8.24 |
| 4) | C | chloromethane | | | 0.939 | 1.087 | 0.999 | 0.951 | 0.899 | 0.861 | 0.896 | 0.780 | 0.9265 | 9.92 |
| 5) | | Freon-114 | 2.860 | 2.682 | 2.557 | 3.083 | 2.838 | 2.745 | 2.626 | 2.519 | 2.683 | 2.334 | 2.6927 | 7.69 |
| 6) | C | vinyl chloride | 1.137 | 1.048 | 0.997 | 1.222 | 1.113 | 1.075 | 1.019 | 0.974 | 1.028 | 0.893 | 1.0505 | 8.78 |
| 7) | C | 1,3-butadiene | 0.750 | 0.730 | 0.639 | 0.800 | 0.743 | 0.702 | 0.673 | 0.654 | 0.691 | 0.597 | 0.6979 | 8.59 |
| 8) | C | bromomethane | 0.973 | 0.909 | 0.878 | 1.045 | 0.953 | 0.923 | 0.880 | 0.841 | 0.883 | 0.766 | 0.9051 | 8.40 |
| 9) | C | chloroethane | 0.583 | 0.539 | 0.489 | 0.592 | 0.547 | 0.524 | 0.496 | 0.476 | 0.498 | 0.429 | 0.5172 | 9.64 |
| 10) | | ethanol | | | | | 0.760 | 0.675 | 0.629 | 0.590 | 0.648 | 0.544 | 0.6408 | 11.59 |
| 11) | C | vinyl bromide | 0.882 | 0.831 | 0.794 | 0.978 | 0.884 | 0.864 | 0.827 | 0.790 | 0.839 | 0.731 | 0.8420 | 7.92 |
| 12) | C | acrolein | | 0.585 | 0.463 | 0.497 | 0.433 | 0.309 | 0.395 | 0.379 | 0.402 | 0.349 | 0.4237 | 19.58 |
| 13) | | acetone | | | | 1.245 | 1.441 | 1.002 | 1.160 | 0.872 | 1.246 | 1.048 | 1.1447 | 16.45 |
| 14) | | trichlorofluoromet... | 2.024 | 1.865 | 1.790 | 2.196 | 2.551 | 1.943 | 2.337 | 1.814 | 1.992 | 2.095 | 2.0605 | 11.77 |
| 15) | | isopropyl alcohol | | | | 1.902 | 1.885 | 1.121 | 0.966 | 0.907 | 1.107 | 1.012 | 1.2714 | 33.95# |
| 16) | C | acrylonitrile | | | 0.527 | 0.636 | 0.594 | 0.489 | 0.518 | 0.516 | 0.561 | 0.515 | 0.5445 | 9.00 |
| 17) | C | 1,1-dichloroethene | 1.473 | 1.308 | 1.253 | 1.552 | 1.412 | 1.380 | 1.313 | 1.281 | 1.378 | 1.271 | 1.3622 | 7.08 |
| 18) | | tertiary butyl alc... | | | | 1.460 | 1.338 | 1.238 | 1.262 | 1.204 | 1.413 | 1.328 | 1.3205 | 7.07 |
| 19) | C | methylene chloride | | | | | 1.086 | 1.049 | 0.981 | 0.953 | 1.019 | 0.937 | 1.0039 | 5.75 |
| 20) | C | 3-chloropropene | 1.024 | 0.845 | 0.827 | 0.995 | 0.921 | 0.902 | 0.879 | 0.872 | 0.950 | 0.880 | 0.9095 | 6.99 |
| 21) | C | carbon disulfide | | | 2.249 | 2.642 | 2.378 | 2.316 | 2.256 | 2.239 | 2.475 | 2.356 | 2.3639 | 5.82 |
| 22) | | Freon 113 | 1.663 | 1.530 | 1.438 | 1.760 | 1.609 | 1.573 | 1.514 | 1.502 | 1.655 | 1.576 | 1.5819 | 5.91 |
| 23) | | trans-1,2-dichloro... | 1.259 | 1.157 | 1.123 | 1.391 | 1.267 | 1.237 | 1.196 | 1.170 | 1.270 | 1.184 | 1.2253 | 6.28 |
| 24) | C | 1,1-dichloroethane | 1.608 | 1.496 | 1.428 | 1.764 | 1.619 | 1.576 | 1.512 | 1.464 | 1.581 | 1.449 | 1.5497 | 6.54 |
| 25) | C | MTBE | 1.891 | 1.754 | 1.667 | 2.073 | 1.909 | 1.859 | 1.831 | 1.811 | 1.983 | 1.857 | 1.8634 | 6.08 |
| 26) | C | vinyl acetate | | | | | 1.420 | 1.373 | 1.442 | 1.505 | 1.782 | 1.702 | 1.5374 | 10.80 |
| 27) | C | 2-butanone | | | | 1.802 | 1.653 | 1.587 | 1.574 | 1.540 | 1.679 | 1.552 | 1.6267 | 5.71 |
| 28) | | cis-1,2-dichloroet... | 1.220 | 1.125 | 1.078 | 1.325 | 1.217 | 1.180 | 1.145 | 1.115 | 1.204 | 1.114 | 1.1722 | 6.19 |
| 29) | | Ethyl Acetate | | | | 0.236 | 0.237 | 0.228 | 0.249 | 0.250 | 0.282 | 0.268 | 0.2501 | 7.71 |
| 30) | C | chloroform | 1.827 | 1.660 | 1.568 | 1.944 | 1.788 | 1.744 | 1.685 | 1.651 | 1.814 | 1.693 | 1.7375 | 6.25 |
| 31) | | Tetrahydrofuran | | | | 1.033 | 0.975 | 0.943 | 0.817 | 0.796 | 0.898 | 0.835 | 0.8995 | 9.85 |

Response Factor Report Airpiano 2

Method Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Method File : TSIM180325.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Mon Mar 26 12:18:08 2018
Response Via : Initial Calibration

Calibration Files
0.02=R253194.D 0.04=R253195.D 0.1 =R253196.D 0.2 =R253197.D 0.5 =R253198.D 1.0 =R253199.D
5.0 =R253200.D 10.0=R253201.D 20.0=R253202.D 50.0=R253203.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32) | C | 1,2-dichloroethane | 1.290 | 1.196 | 1.130 | 1.351 | 1.243 | 1.202 | 1.169 | 1.127 | 1.212 | 1.128 | 1.2047 | 6.14 |
| 33) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | | | |
| 34) | C | hexane | | | 0.475 | 0.576 | 0.526 | 0.514 | 0.506 | 0.500 | 0.553 | 0.541 | 0.5238 | 6.14 |
| 35) | s | 1,2-dichloroethane-D4 | 0.322 | 0.322 | 0.321 | 0.321 | 0.318 | 0.317 | 0.315 | 0.313 | 0.309 | 0.309 | 0.3168 | 1.61 |
| 36) | C | 1,1,1-trichloroethane | 0.728 | 0.688 | 0.640 | 0.793 | 0.731 | 0.710 | 0.686 | 0.673 | 0.730 | 0.710 | 0.7089 | 5.85 |
| 37) | C | benzene | | 1.124 | 1.008 | 1.224 | 1.119 | 1.082 | 1.040 | 1.017 | 1.088 | 1.022 | 1.0806 | 6.41 |
| 38) | C | carbon tetrachloride | 0.713 | 0.647 | 0.626 | 0.774 | 0.716 | 0.700 | 0.686 | 0.678 | 0.755 | 0.743 | 0.7039 | 6.60 |
| 39) | | cyclohexane | | | 0.483 | 0.591 | 0.546 | 0.529 | 0.509 | 0.500 | 0.542 | 0.519 | 0.5275 | 6.29 |
| 40) | | dibromomethane | 0.687 | 0.532 | 0.433 | 0.506 | 0.450 | 0.432 | 0.421 | 0.411 | 0.453 | 0.442 | 0.4767 | 17.39 |
| 41) | C | 1,2-dichloropropane | 0.490 | 0.436 | 0.404 | 0.485 | 0.443 | 0.432 | 0.422 | 0.410 | 0.450 | 0.437 | 0.4409 | 6.43 |
| 42) | | bromodichloromethane | 0.865 | 0.747 | 0.742 | 0.913 | 0.845 | 0.825 | 0.805 | 0.792 | 0.865 | 0.841 | 0.8241 | 6.51 |
| 43) | C | 1,4-dioxane | | | 0.187 | 0.237 | 0.218 | 0.211 | 0.220 | 0.217 | 0.254 | 0.244 | 0.2236 | 9.51 |
| 44) | C | trichloroethene | 0.461 | 0.414 | 0.392 | 0.474 | 0.440 | 0.431 | 0.425 | 0.428 | 0.479 | 0.466 | 0.4410 | 6.47 |
| 45) | C | 2,2,4-trimethylpen... | | | 1.539 | 1.879 | 1.742 | 1.703 | 1.677 | 1.652 | 1.817 | 1.735 | 1.7179 | 6.02 |
| 46) | | heptane | | | 0.558 | 0.678 | 0.634 | 0.608 | 0.601 | 0.589 | 0.650 | 0.629 | 0.6184 | 6.09 |
| 47) | C | cis-1,3-dichloropr... | 0.568 | 0.529 | 0.509 | 0.633 | 0.589 | 0.575 | 0.585 | 0.584 | 0.646 | 0.628 | 0.5846 | 7.50 |
| 48) | C | 4-methyl-2-pentanone | | | | 0.879 | 0.841 | 0.833 | 0.849 | 0.836 | 0.929 | 0.904 | 0.8674 | 4.35 |
| 49) | | trans-1,3-dichloro... | 0.549 | 0.503 | 0.491 | 0.606 | 0.575 | 0.558 | 0.574 | 0.577 | 0.653 | 0.637 | 0.5724 | 9.03 |
| 50) | C | 1,1,2-trichloroethane | 0.440 | 0.423 | 0.386 | 0.488 | 0.448 | 0.437 | 0.429 | 0.422 | 0.463 | 0.449 | 0.4386 | 6.17 |
| 51) | I | chlorobenzene-D5 | ----------ISTD---------- | | | | | | | | | | | |
| 52) | C | toluene | | 5.376 | 5.011 | 6.127 | 5.601 | 5.510 | 5.404 | 5.314 | 5.721 | 5.277 | 5.4823 | 5.76 |
| 53) | s | toluene-D8 | 3.828 | 3.783 | 3.792 | 3.811 | 3.797 | 3.788 | 3.768 | 3.761 | 3.673 | 3.570 | 3.7570 | 2.07 |
| 54) | | 2-hexanone | | | | 3.310 | 3.255 | 3.315 | 3.529 | 3.546 | 4.006 | 3.791 | 3.5359 | 7.87 |
| 55) | | dibromochloromethane | 3.108 | 2.861 | 2.700 | 3.397 | 3.141 | 3.080 | 3.124 | 3.155 | 3.538 | 3.356 | 3.1460 | 7.84 |
| 56) | C | 1,2-dibromoethane | 2.981 | 2.785 | 2.660 | 3.309 | 3.069 | 2.979 | 3.000 | 2.998 | 3.291 | 3.108 | 3.0180 | 6.59 |
| 57) | C | tetrachloroethene | 2.294 | 2.119 | 1.999 | 2.490 | 2.283 | 2.235 | 2.245 | 2.279 | 2.593 | 2.549 | 2.3087 | 8.10 |
| 58) | | 1,1,1,2-tetrachlor... | 2.118 | 2.016 | 1.873 | 2.386 | 2.179 | 2.147 | 2.174 | 2.180 | 2.441 | 2.372 | 2.1885 | 7.95 |
| 59) | C | chlorobenzene | 4.486 | 3.956 | 3.727 | 4.764 | 4.377 | 4.282 | 4.295 | 4.268 | 4.664 | 4.411 | 4.3230 | 7.08 |
| 60) | C | ethylbenzene | 6.597 | 6.258 | 5.912 | 7.464 | 6.914 | 6.852 | 6.863 | 6.858 | 7.446 | 6.858 | 6.8022 | 6.94 |
| 61) | C | m+p-xylene | 5.224 | 4.751 | 4.492 | 5.672 | 5.295 | 5.281 | 5.459 | 5.459 | 6.044 | 5.536 | 5.3213 | 8.30 |

Response Factor Report Airpiano 2

Method Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Method File : TSIM180325.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Mon Mar 26 12:18:08 2018
Response Via : Initial Calibration

Calibration Files
0.02=R253194.D 0.04=R253195.D 0.1 =R253196.D 0.2 =R253197.D 0.5 =R253198.D 1.0 =R253199.D
5.0 =R253200.D 10.0=R253201.D 20.0=R253202.D 50.0=R253203.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62) | C | bromoform | 2.604 | 2.424 | 2.260 | 2.901 | 2.725 | 2.699 | 2.883 | 3.043 | 3.537 | 3.421 | 2.8497 | 14.17 |
| 63) | C | styrene | 3.647 | 3.343 | 3.156 | 4.030 | 3.827 | 3.831 | 4.041 | 4.078 | 4.475 | 4.162 | 3.8590 | 10.18 |
| 64) | C | 1,1,2,2-tetrachlor... | 4.299 | 4.072 | 3.886 | 4.932 | 4.623 | 4.508 | 4.708 | 4.786 | 5.388 | 4.618 | 4.5820 | 9.38 |
| 65) | C | o-xylene | 5.307 | 4.917 | 4.684 | 5.880 | 5.438 | 5.441 | 5.673 | 5.778 | 6.463 | 5.602 | 5.5182 | 9.03 |
| 66) | | 1,2,3-trichloropro... | 3.182 | 3.136 | 2.794 | 3.620 | 3.377 | 3.304 | 3.340 | 3.343 | 3.665 | 3.483 | 3.3244 | 7.56 |
| 67) | s | bromofluorobenzene | 1.890 | 1.905 | 1.928 | 1.945 | 1.968 | 1.992 | 2.033 | 2.039 | 2.038 | 2.004 | 1.9741 | 2.83 |
| 68) | C | isopropylbenzene | | | | 7.127 | 6.686 | 6.675 | 6.893 | 6.881 | 7.504 | 6.781 | 6.9353 | 4.24 |
| 69) | | bromobenzene | 3.848 | 3.384 | 3.327 | 4.145 | 3.869 | 3.797 | 3.924 | 3.932 | 4.361 | 4.153 | 3.8740 | 8.34 |
| 70) | | 4-ethyl toluene | 5.152 | 5.163 | 5.173 | 6.983 | 6.844 | 7.006 | 7.644 | 7.740 | 8.342 | 7.552 | 6.7599 | 17.53 |
| 71) | | 1,3,5-trimethylben... | 4.394 | 4.339 | 4.358 | 6.175 | 5.839 | 5.776 | 6.250 | 6.325 | 6.840 | 6.296 | 5.6592 | 16.60 |
| 72) | | tert-butylbenzene | | | | 6.040 | 5.745 | 5.805 | 6.446 | 6.627 | 7.351 | 5.978 | 6.2847 | 9.08 |
| 73) | | 1,2,4-trimethylben... | 4.102 | 4.086 | 4.228 | 5.755 | 5.692 | 5.783 | 6.512 | 6.733 | 7.560 | 6.172 | 5.6623 | 21.01 |
| 74) | C | Benzyl Chloride | | | | 3.804 | 3.962 | 4.240 | 5.424 | 5.657 | 6.471 | 6.189 | 5.1066 | 21.44 |
| 75) | | 1,3-dichlorobenzene | 3.002 | 2.922 | 2.999 | 4.023 | 3.958 | 4.026 | 4.565 | 4.707 | 5.206 | 4.828 | 4.0236 | 20.49 |
| 76) | C | 1,4-dichlorobenzene | 3.242 | 2.959 | 3.092 | 4.004 | 4.085 | 4.127 | 4.693 | 4.874 | 5.418 | 4.855 | 4.1350 | 20.25 |
| 77) | | sec-butylbenzene | | | | 0.840 | 0.815 | 0.828 | 0.919 | 0.928 | 1.012 | 0.859 | 0.8859 | 7.99 |
| 78) | | p-isopropyltoluene | | | | 6.709 | 6.575 | 6.733 | 7.680 | 7.809 | 8.535 | 7.520 | 7.3658 | 9.83 |
| 79) | | 1,2-dichlorobenzene | 2.981 | 2.854 | 2.871 | 3.796 | 3.790 | 3.779 | 4.279 | 4.413 | 4.821 | 4.517 | 3.8102 | 18.74 |
| 80) | | n-butylbenzene | | | | 5.787 | 6.221 | 6.916 | 7.839 | 7.933 | 8.440 | 7.484 | 7.2314 | 13.35 |
| 81) | C | 1,2,4-trichloroben... | | 1.456 | 1.887 | 2.592 | 3.004 | 2.989 | 4.018 | 4.358 | 4.642 | 4.308 | 3.2507 | 35.26# |
| 82) | | naphthalene | | 2.509 | 3.480 | 5.642 | 7.127 | 7.058 | 8.519 | 8.899 | 8.748 | 8.346 | 6.7032 | 35.15# |
| 83) | | 1,2,3-trichloroben... | | 0.799 | 1.444 | 1.847 | 2.593 | 2.506 | 3.546 | 3.795 | 3.863 | 3.969 | 2.7069 | 43.01# |
| 84) | C | hexachlorobutadiene | | 1.832 | 1.863 | 2.403 | 2.416 | 2.402 | 3.108 | 3.378 | 3.594 | 3.646 | 2.7380 | 25.89 |

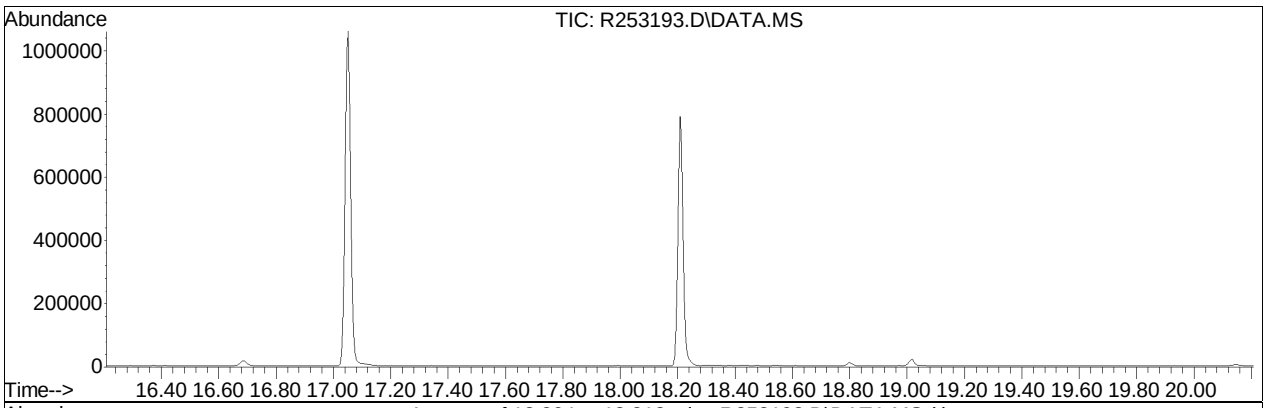
(#) = Out of Range

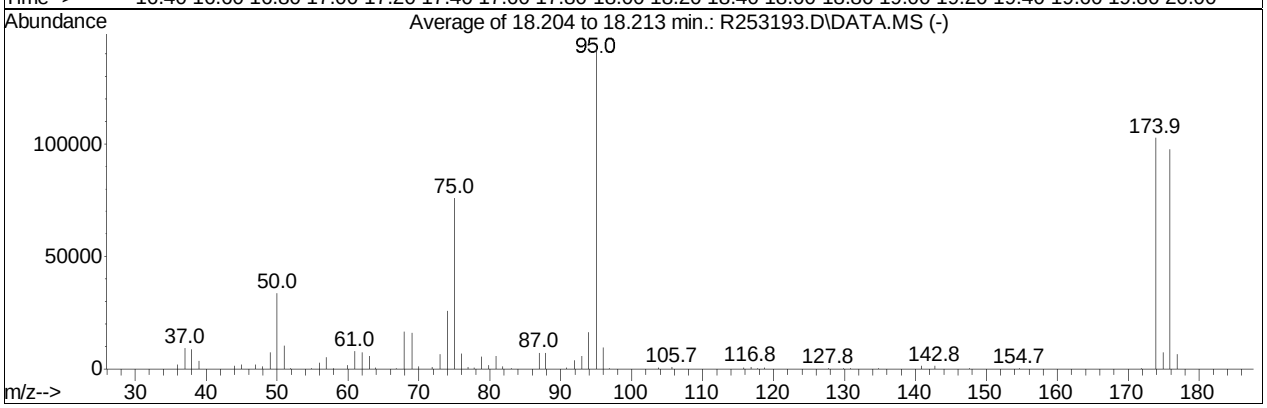
BFB

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253193.D
Acq On : 25 Mar 2018 9:42 pm
Operator : AIRPIANO2:AR
Sample : WG1100531-1
Misc : WG1100531
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Mon Mar 26 12:18:08 2018




AutoFind: Scans 1812, 1813, 1814; Background Corrected with Scan 1805

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 23.7 | 33656 | PASS |
| 75 | 95 | 30 | 66 | 53.5 | 75832 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 141829 | PASS |
| 96 | 95 | 5 | 9 | 6.7 | 9553 | PASS |
| 173 | 174 | 0.00 | 2 | 0.0 | 0 | PASS |
| 174 | 95 | 50 | 120 | 72.5 | 102760 | PASS |
| 175 | 174 | 4 | 9 | 7.1 | 7334 | PASS |
| 176 | 174 | 93 | 101 | 94.9 | 97517 | PASS |
| 177 | 176 | 5 | 9 | 6.8 | 6644 | PASS |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253194.D
Acq On : 25 Mar 2018 10:16 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.02
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 07:46:43 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 274523 | 10.000 ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery | = 100.49% | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 623210 | 10.000 ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery | = 99.51% | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 141893 | 10.000 ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery | = 98.58% | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 200583 | 10.205 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 102.05% | |
| 53) toluene-D8 | 15.410 | 98 | 543179 | 10.160 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 101.60% | |
| 67) bromofluorobenzene | 18.210 | 95 | 268124 | 9.295 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 92.95% | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 590M6 | 0.039 ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 1143 | 0.022 ppbV | 92 |
| 4) chloromethane | 4.627 | 50 | 619M6 | 0.025 ppbV | |
| 5) Freon-114 | 4.785 | 85 | 1570 | 0.022 ppbV | 97 |
| 6) vinyl chloride | 4.952 | 62 | 624 | 0.022 ppbV # | 56 |
| 7) 1,3-butadiene | 5.169 | 54 | 412 | 0.022 ppbV # | 42 |
| 8) bromomethane | 5.560 | 94 | 534 | 0.022 ppbV | 82 |
| 9) chloroethane | 5.823 | 64 | 320M4 | 0.024 ppbV | |
| 10) ethanol | 6.071 | 31 | 8761 | 0.508 ppbV | 97 |
| 11) vinyl bromide | 6.327 | 106 | 484M4 | 0.021 ppbV | |
| 12) acrolein | 6.535 | 56 | 413 | 0.038 ppbV # | 1 |
| 13) acetone | 6.751 | 43 | 11494 | 0.361 ppbV # | 97 |
| 14) trichlorofluoromethane | 6.910 | 101 | 1111 | 0.017 ppbV | 98 |
| 15) isopropyl alcohol | 7.110 | 45 | 12175 | 0.459 ppbV | 98 |
| 16) acrylonitrile | 7.358 | 53 | 387 | 0.027 ppbV # | 85 |
| 17) 1,1-dichloroethene | 7.766 | 61 | 809 | 0.022 ppbV # | 88 |
| 18) tertiary butyl alcohol | 7.950 | 59 | 951 | 0.027 ppbV # | 83 |
| 19) methylene chloride | 7.934 | 49 | 833 | 0.031 ppbV | 97 |
| 20) 3-chloropropene | 8.086 | 41 | 562M4 | 0.023 ppbV | |
| 21) carbon disulfide | 8.277 | 76 | 1869 | 0.030 ppbV # | 1 |
| 22) Freon 113 | 8.277 | 101 | 913 | 0.022 ppbV | 94 |
| 23) trans-1,2-dichloroethene | 9.106 | 61 | 691 | 0.021 ppbV # | 89 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 883 | 0.021 ppbV # | 82 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253194.D
Acq On : 25 Mar 2018 10:16 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.02
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 07:46:43 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) | MTBE | 9.502 | 73 | 1038 | 0.021 ppbV # | 45 |
| 26) | vinyl acetate | 9.570 | 43 | 1264 | 0.032 ppbV # | 80 |
| 27) | 2-butanone | 9.912 | 43 | 1523 | 0.035 ppbV # | 89 |
| 28) | cis-1,2-dichloroethene | 10.344 | 61 | 670 | 0.021 ppbV # | 87 |
| 29) | Ethyl Acetate | 10.672 | 61 | 121 | 0.018 ppbV # | 49 |
| 30) | chloroform | 10.691 | 83 | 1003 | 0.022 ppbV # | 92 |
| 31) | Tetrahydrofuran | 11.264 | 42 | 449 | 0.020 ppbV | 97 |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 708 | 0.022 ppbV # | 65 |
| 34) | hexane | 10.588 | 57 | 733 | 0.023 ppbV # | 55 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 908 | 0.021 ppbV # | 88 |
| 37) | benzene | 12.335 | 78 | 1645 | 0.025 ppbV # | 87 |
| 38) | carbon tetrachloride | 12.509 | 117 | 889 | 0.021 ppbV # | 91 |
| 39) | cyclohexane | 12.651 | 56 | 725 | 0.023 ppbV # | 80 |
| 40) | dibromomethane | 13.238 | 93 | 856 | 0.033 ppbV | 96 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 611M4 | 0.023 ppbV | |
| 42) | bromodichloromethane | 13.478 | 83 | 1078 | 0.021 ppbV # | 93 |
| 43) | 1,4-dioxane | 13.630 | 88 | 246 | 0.018 ppbV | 92 |
| 44) | trichloroethene | 13.532 | 130 | 575 | 0.022 ppbV | 94 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 2099 | 0.020 ppbV # | 76 |
| 46) | heptane | 13.837 | 43 | 867 | 0.023 ppbV # | 93 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 708 | 0.019 ppbV # | 56 |
| 48) | 4-methyl-2-pentanone | 14.587 | 43 | 948 | 0.018 ppbV # | 93 |
| 49) | trans-1,3-dichloropropene | 15.057 | 75 | 684 | 0.019 ppbV # | 53 |
| 50) | 1,1,2-trichloroethane | 15.238 | 97 | 549 | 0.021 ppbV | 99 |
| 52) | toluene | 15.500 | 91 | 1704 | 0.022 ppbV | 96 |
| 54) | 2-hexanone | 15.789 | 43 | 836 | 0.017 ppbV # | 82 |
| 55) | dibromochloromethane | 15.916 | 129 | 882 | 0.020 ppbV # | 92 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 846 | 0.020 ppbV | 99 |
| 57) | tetrachloroethene | 16.530 | 166 | 651 | 0.020 ppbV | 98 |
| 58) | 1,1,1,2-tetrachloroethane | 17.072 | 131 | 601 | 0.019 ppbV # | 95 |
| 59) | chlorobenzene | 17.086 | 112 | 1273 | 0.021 ppbV # | 86 |
| 60) | ethylbenzene | 17.372 | 91 | 1872 | 0.019 ppbV | 94 |
| 61) | m+p-xylene | 17.505 | 91 | 2965 | 0.038 ppbV | 98 |
| 62) | bromoform | 17.596 | 173 | 739 | 0.018 ppbV | 94 |
| 63) | styrene | 17.786 | 104 | 1035 | 0.018 ppbV | 96 |
| 64) | 1,1,2,2-tetrachloroethane | 17.867 | 83 | 1220 | 0.018 ppbV | 97 |
| 65) | o-xylene | 17.867 | 91 | 1506 | 0.019 ppbV | 92 |
| 66) | 1,2,3-trichloropropane | 17.967 | 75 | 903M3 | 0.019 ppbV | |
| 68) | isopropylbenzene | 18.296 | 105 | 1754 | 0.018 ppbV | 97 |
| 69) | bromobenzene | 18.386 | 77 | 1092 | 0.020 ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253194.D
Acq On : 25 Mar 2018 10:16 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.02
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 07:46:43 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

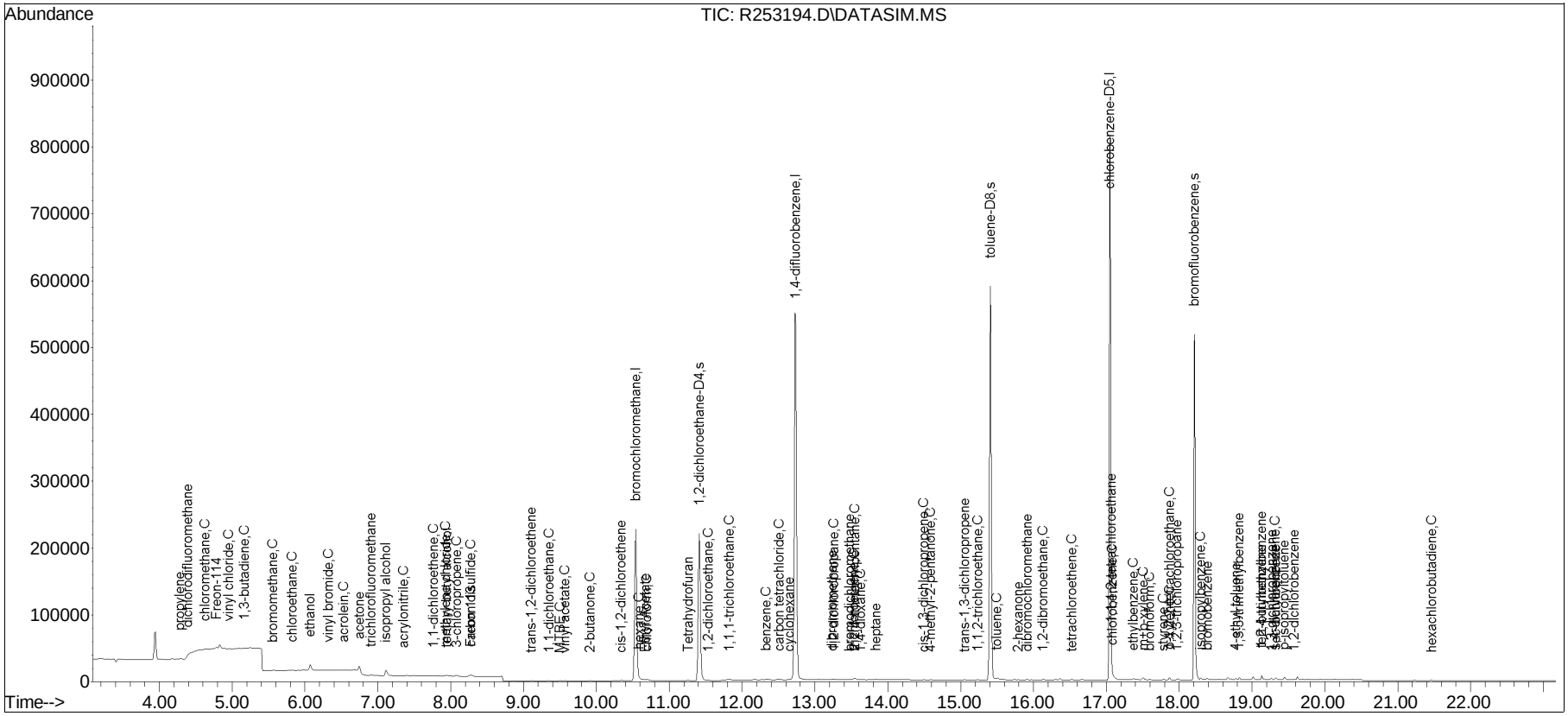
| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.777 | 105 | 1462 | 0.013 ppbV # | 94 |
| 71) 1,3,5-trimethylbenzene | 18.825 | 105 | 1247 | 0.014 ppbV # | 94 |
| 72) tert-butylbenzene | 19.134 | 119 | 1371 | 0.015 ppbV | 92 |
| 73) 1,2,4-trimethylbenzene | 19.134 | 105 | 1164M3 | 0.013 ppbV | |
| 74) Benzyl Chloride | 19.253 | | 0 | N.D. | |
| 75) 1,3-dichlorobenzene | 19.272 | 146 | 852 | 0.013 ppbV # | 85 |
| 76) 1,4-dichlorobenzene | 19.320 | 146 | 920 | 0.014 ppbV # | 81 |
| 77) sec-butylbenzene | 19.329 | 105 | 1740 | 0.013 ppbV | 96 |
| 78) p-isopropyltoluene | 19.439 | 119 | 1346 | 0.012 ppbV | 98 |
| 79) 1,2-dichlorobenzene | 19.582 | 146 | 846 | 0.014 ppbV # | 87 |
| 80) n-butylbenzene | 19.763 | | 0 | N.D. | |
| 81) 1,2,4-trichlorobenzene | 21.041 | | 0 | N.D. | |
| 82) naphthalene | 21.159 | | 0 | N.D. | |
| 83) 1,2,3-trichlorobenzene | 21.416 | | 0 | N.D. | |
| 84) hexachlorobutadiene | 21.470 | 225 | 511 | 0.012 ppbV # | 83 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253194.D
Acq On : 25 Mar 2018 10:16 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.02
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 07:46:43 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

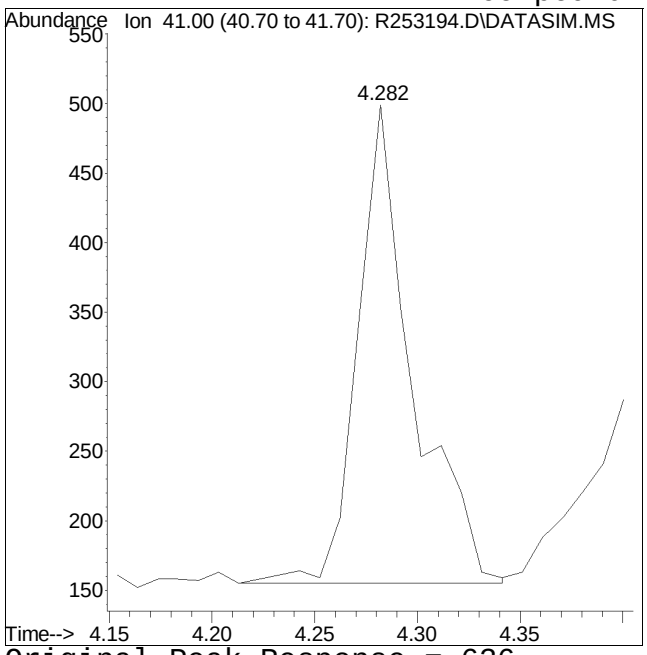


Manual Integration/Negative Proof Report

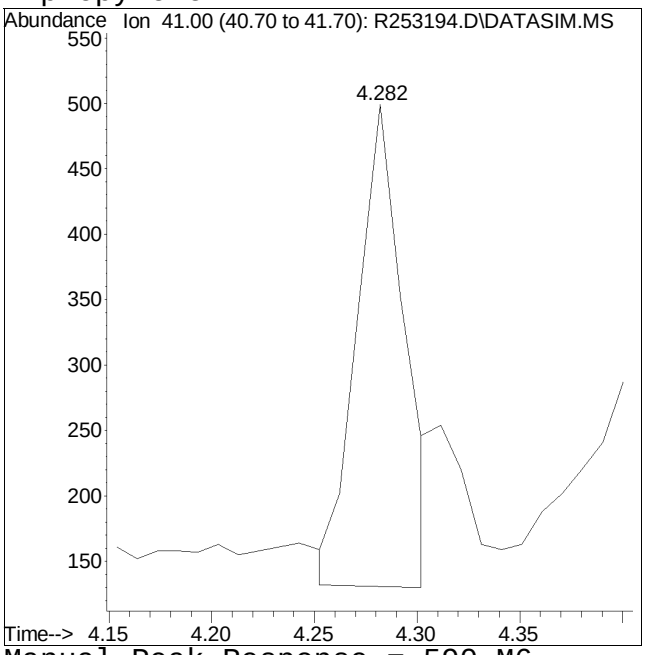
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 636




Manual Peak Response = 590 M6

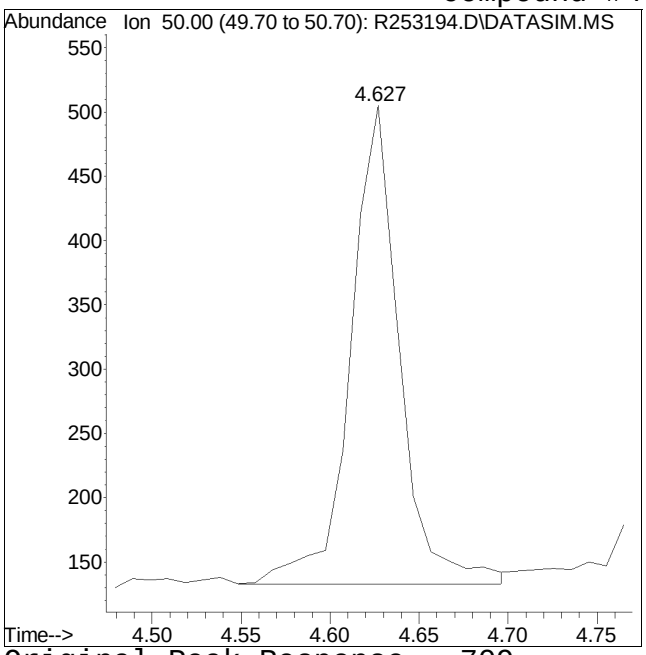
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

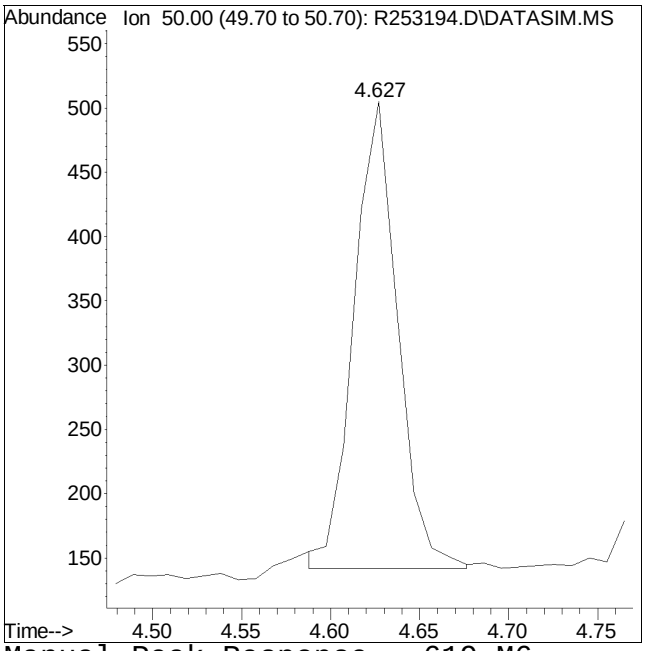
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #4: chloromethane




Original Peak Response = 709




Manual Peak Response = 619 M6

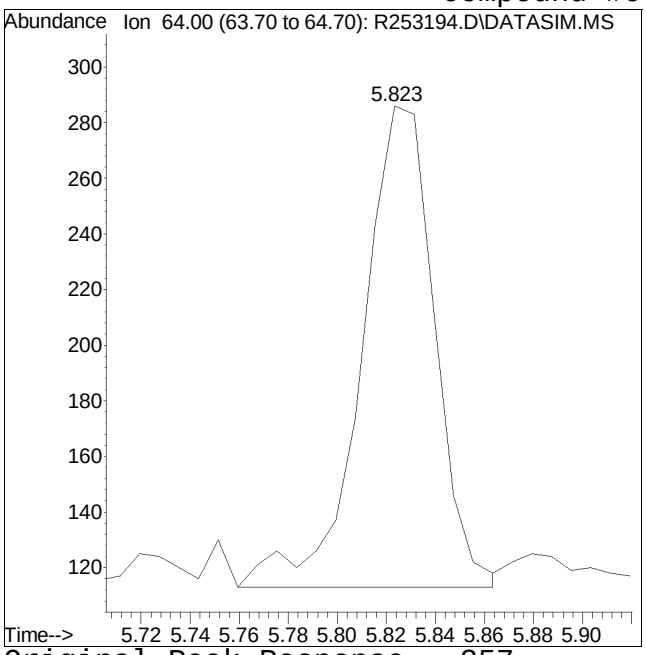
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

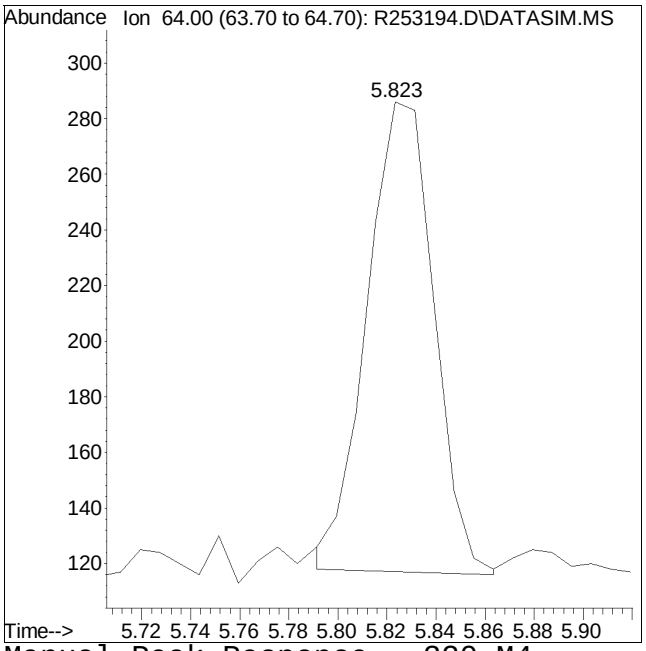
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #9: chloroethane




Original Peak Response = 357




Manual Peak Response = 320 M4

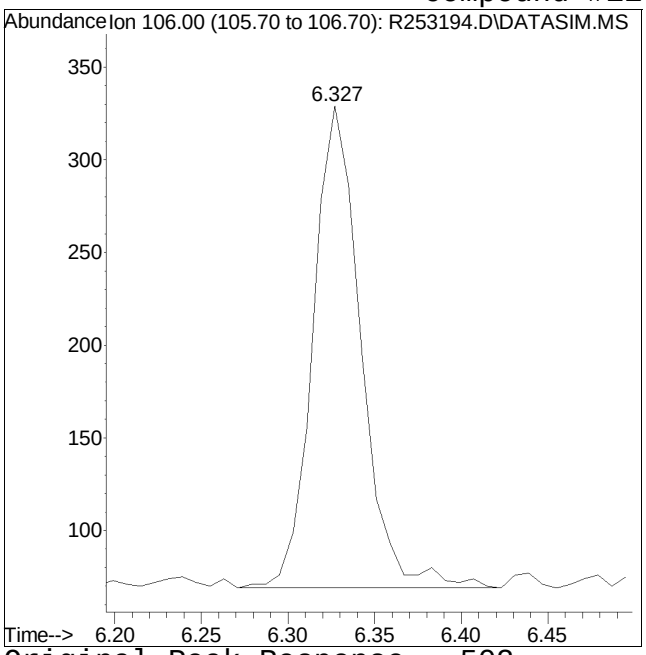
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

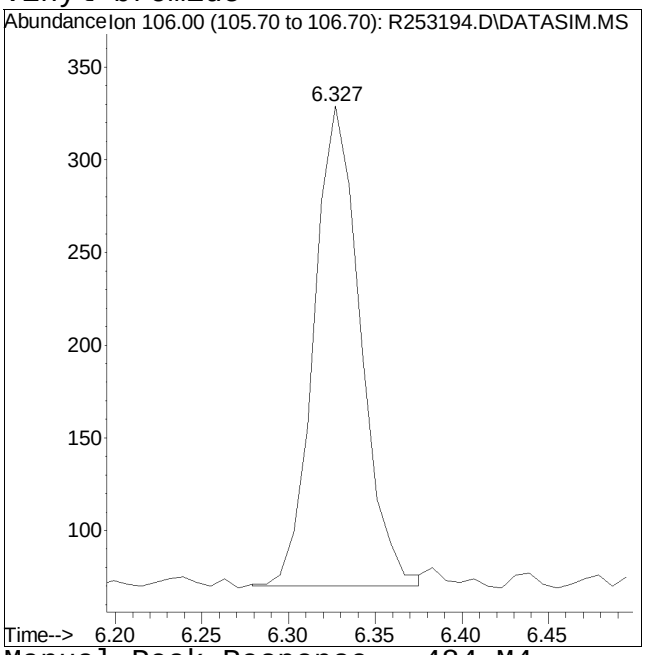
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #11: vinyl bromide




Original Peak Response = 502




Manual Peak Response = 484 M4

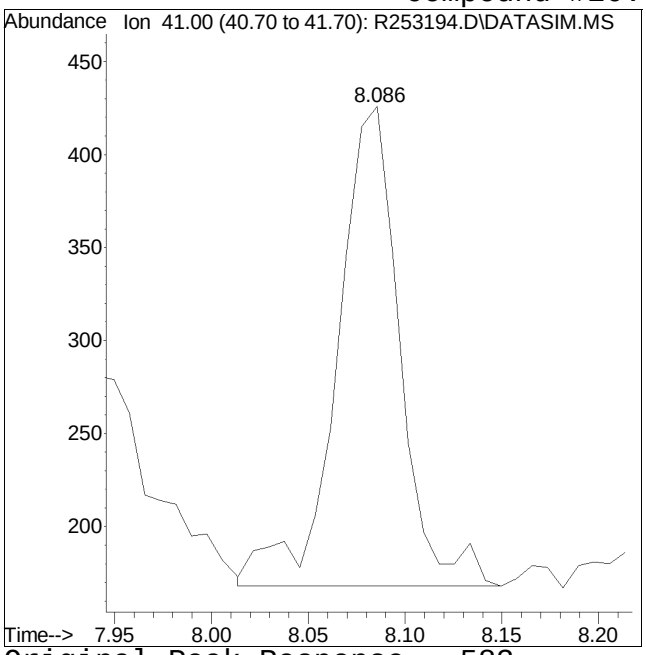
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

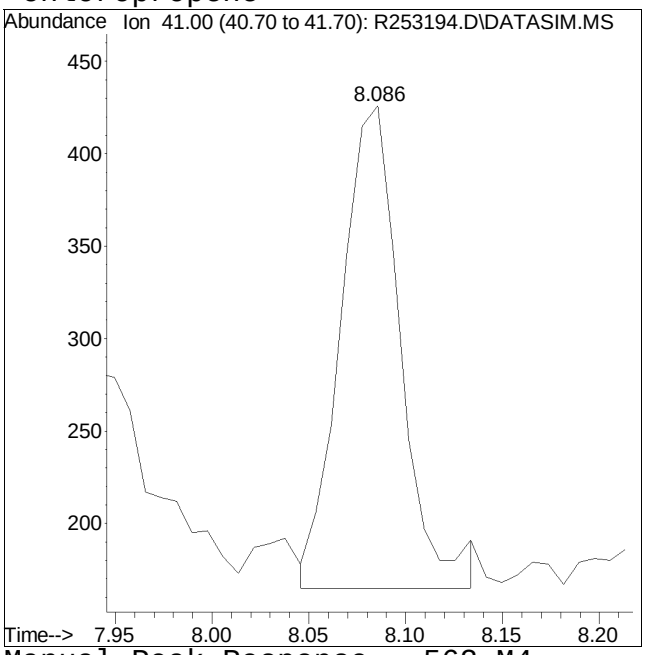
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #20: 3-chloropropene




Original Peak Response = 583




Manual Peak Response = 562 M4

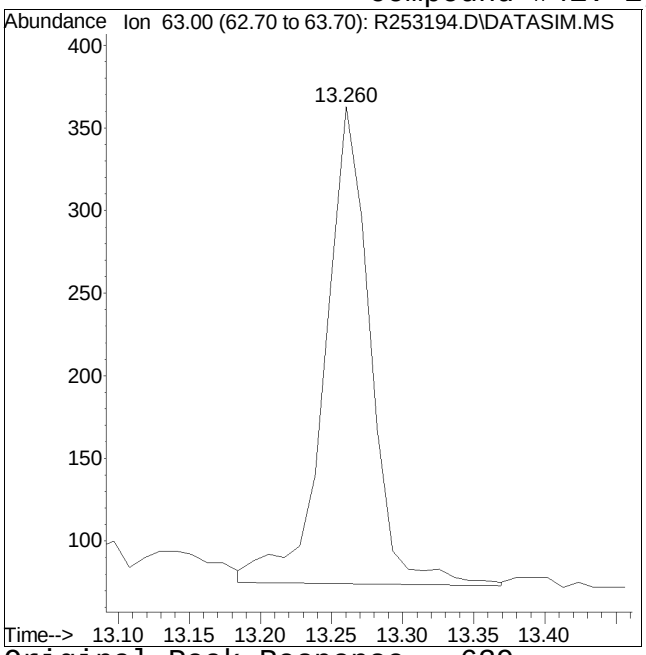
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

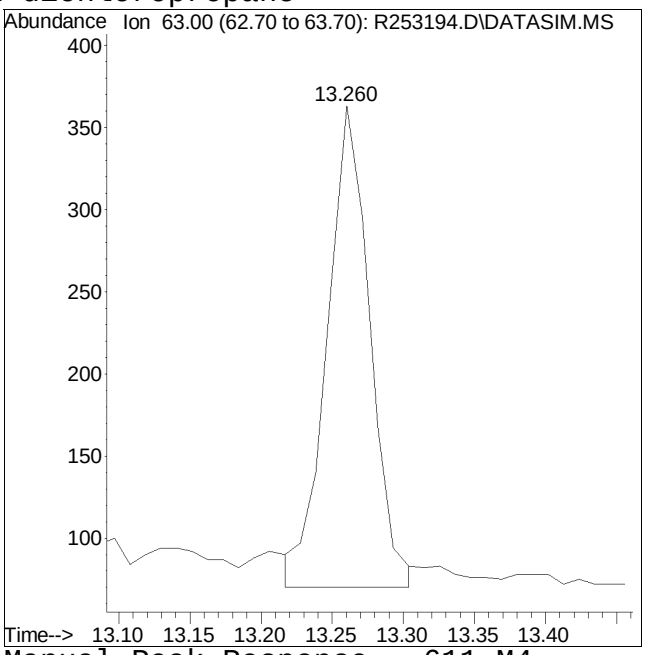
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #41: 1,2-dichloropropane




Original Peak Response = 639




Manual Peak Response = 611 M4

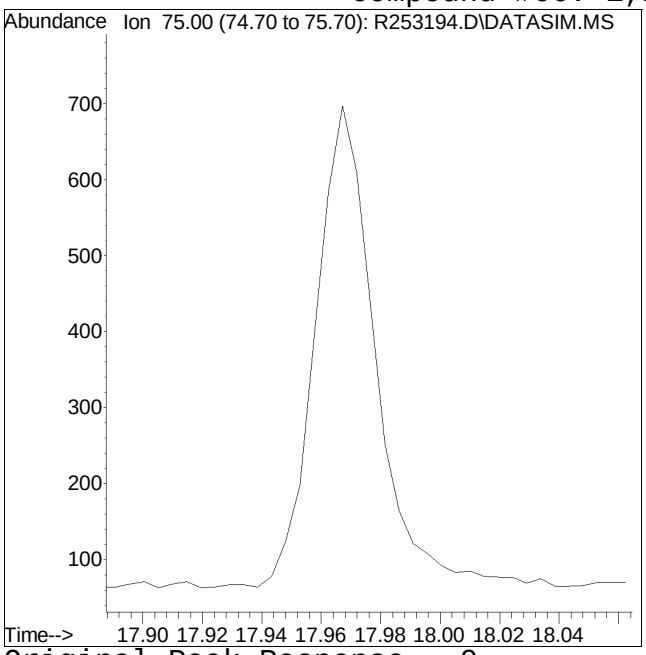
M4 = Poor automated baseline construction.

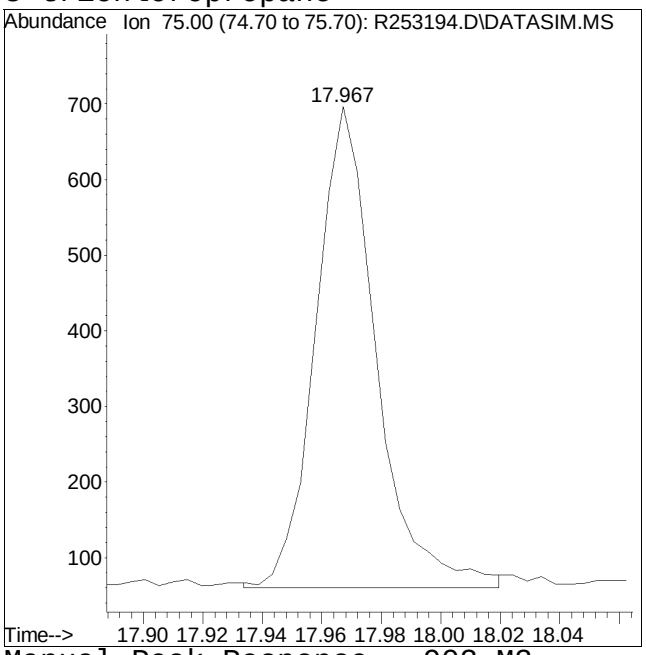
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #66: 1,2,3-trichloropropane




Original Peak Response = 0 Manual Peak Response = 903 M3

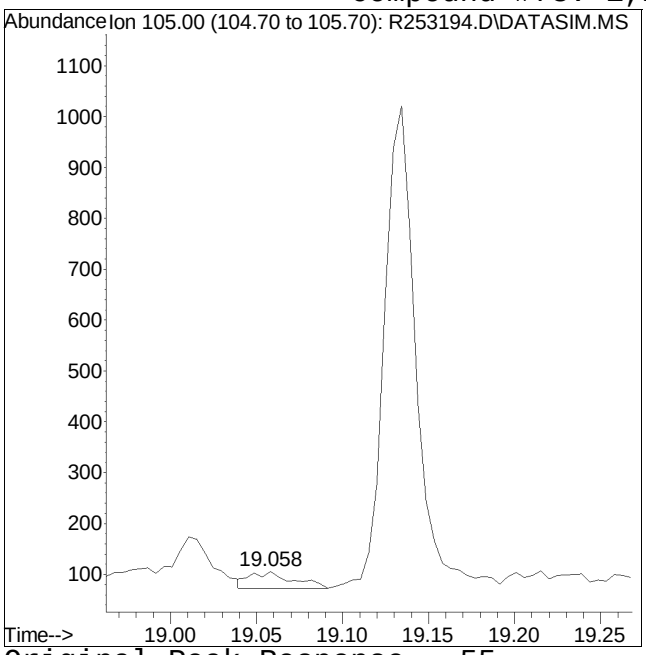
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

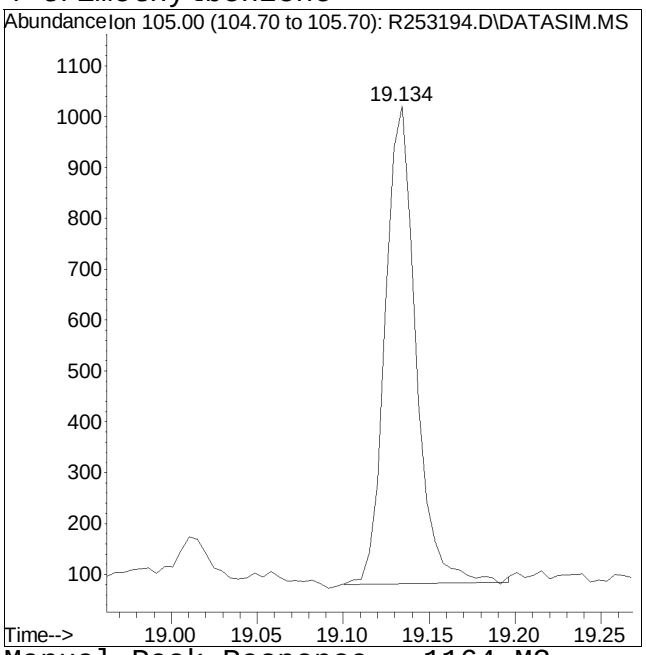
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #73: 1,2,4-trimethylbenzene




Original Peak Response = 55 Manual Peak Response = 1164 M3

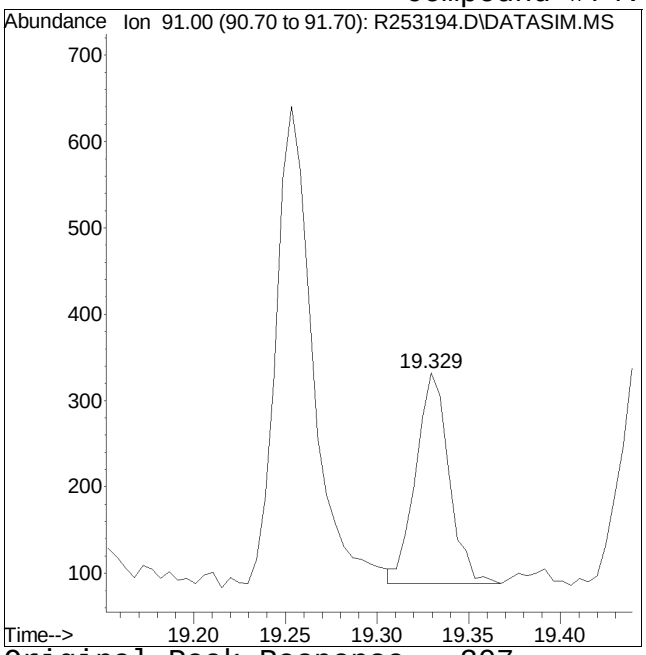
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

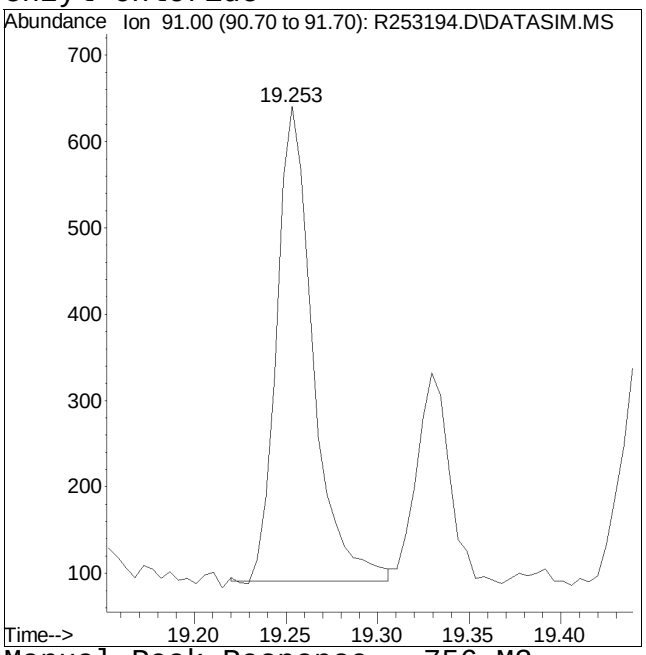
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253194.D
Date Inj'd : 3/25/2018 10:16 pm
Sample : ITO15-SIMSTD0.02

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #74: Benzyl Chloride




Original Peak Response = 307 Manual Peak Response = 756 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253195.D
Acq On : 25 Mar 2018 10:50 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.04
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 07:54:31 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 273792 | 10.000 | ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 100.23% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 619703 | 10.000 | ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 98.95% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 141101 | 10.000 | ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 98.03% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 199670 | 10.216 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.16% | | | |
| 53) toluene-D8 | 15.410 | 98 | 533764 | 10.040 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.40% | | | |
| 67) bromofluorobenzene | 18.210 | 95 | 268728 | 9.368 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 93.68% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 830M6 | 0.056 | ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 2261 | 0.043 | ppbV | 98 |
| 4) chloromethane | 4.627 | 50 | 1289 | 0.052 | ppbV # | 84 |
| 5) Freon-114 | 4.785 | 85 | 2937 | 0.041 | ppbV | 98 |
| 6) vinyl chloride | 4.962 | 62 | 1148 | 0.041 | ppbV # | 73 |
| 7) 1,3-butadiene | 5.169 | 54 | 800 | 0.043 | ppbV # | 68 |
| 8) bromomethane | 5.568 | 94 | 996 | 0.041 | ppbV | 86 |
| 9) chloroethane | 5.823 | 64 | 590 | 0.043 | ppbV # | 78 |
| 10) ethanol | 6.071 | 31 | 10209 | 0.593 | ppbV | 97 |
| 11) vinyl bromide | 6.327 | 106 | 910 | 0.040 | ppbV | 95 |
| 12) acrolein | 6.535 | 56 | 641 | 0.059 | ppbV # | 1 |
| 13) acetone | 6.751 | 43 | 14402 | 0.454 | ppbV # | 97 |
| 14) trichlorofluoromethane | 6.910 | 101 | 2042 | 0.032 | ppbV | 98 |
| 15) isopropyl alcohol | 7.110 | 45 | 13482 | 0.510 | ppbV # | 97 |
| 16) acrylonitrile | 7.358 | 53 | 613 | 0.043 | ppbV # | 90 |
| 17) 1,1-dichloroethene | 7.758 | 61 | 1433 | 0.040 | ppbV | 91 |
| 18) tertiary butyl alcohol | 7.942 | 59 | 1607 | 0.047 | ppbV # | 90 |
| 19) methylene chloride | 7.934 | 49 | 1326 | 0.049 | ppbV | 99 |
| 20) 3-chloropropene | 8.086 | 41 | 925 | 0.038 | ppbV | 91 |
| 21) carbon disulfide | 8.277 | 76 | 2860 | 0.046 | ppbV # | 1 |
| 22) Freon 113 | 8.277 | 101 | 1676 | 0.040 | ppbV | 95 |
| 23) trans-1,2-dichloroethene | 9.113 | 61 | 1267 | 0.039 | ppbV # | 88 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 1638 | 0.040 | ppbV | 88 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253195.D
Acq On : 25 Mar 2018 10:50 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.04
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 07:54:31 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) | MTBE | 9.495 | 73 | 1921 | 0.038 ppbV # | 66 |
| 26) | vinyl acetate | 9.570 | 43 | 1966 | 0.050 ppbV # | 88 |
| 27) | 2-butanone | 9.905 | 43 | 2081 | 0.048 ppbV # | 93 |
| 28) | cis-1,2-dichloroethene | 10.344 | 61 | 1232 | 0.039 ppbV | 96 |
| 29) | Ethyl Acetate | 10.672 | 61 | 221 | 0.032 ppbV # | 59 |
| 30) | chloroform | 10.691 | 83 | 1818 | 0.039 ppbV # | 94 |
| 31) | Tetrahydrofuran | 11.254 | 42 | 972 | 0.043 ppbV | 98 |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 1310 | 0.041 ppbV # | 84 |
| 34) | hexane | 10.588 | 57 | 1264 | 0.040 ppbV # | 49 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 1705 | 0.040 ppbV # | 94 |
| 37) | benzene | 12.335 | 78 | 2787 | 0.043 ppbV # | 88 |
| 38) | carbon tetrachloride | 12.509 | 117 | 1605 | 0.038 ppbV # | 96 |
| 39) | cyclohexane | 12.651 | 56 | 1311 | 0.042 ppbV # | 91 |
| 40) | dibromomethane | 13.238 | 93 | 1319 | 0.051 ppbV | 99 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 1080 | 0.041 ppbV # | 80 |
| 42) | bromodichloromethane | 13.478 | 83 | 1852 | 0.037 ppbV # | 96 |
| 43) | 1,4-dioxane | 13.619 | 88 | 459 | 0.034 ppbV | 94 |
| 44) | trichloroethene | 13.532 | 130 | 1025 | 0.039 ppbV | 97 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 3998 | 0.038 ppbV # | 86 |
| 46) | heptane | 13.837 | 43 | 1512 | 0.041 ppbV # | 97 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 1311 | 0.036 ppbV # | 71 |
| 48) | 4-methyl-2-pentanone | 14.587 | 43 | 1815 | 0.034 ppbV # | 93 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 1248 | 0.035 ppbV # | 67 |
| 50) | 1,1,2-trichloroethane | 15.238 | 97 | 1049 | 0.039 ppbV | 95 |
| 52) | toluene | 15.500 | 91 | 3034 | 0.040 ppbV | 98 |
| 54) | 2-hexanone | 15.780 | 43 | 1431 | 0.029 ppbV # | 88 |
| 55) | dibromochloromethane | 15.907 | 129 | 1615 | 0.037 ppbV | 98 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 1572 | 0.037 ppbV | 97 |
| 57) | tetrachloroethene | 16.530 | 166 | 1196 | 0.038 ppbV | 94 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 1138 | 0.037 ppbV | 94 |
| 59) | chlorobenzene | 17.086 | 112 | 2233 | 0.037 ppbV | 93 |
| 60) | ethylbenzene | 17.372 | 91 | 3532 | 0.036 ppbV | 98 |
| 61) | m+p-xylene | 17.500 | 91 | 5363 | 0.070 ppbV | 100 |
| 62) | bromoform | 17.596 | 173 | 1368 | 0.034 ppbV | 93 |
| 63) | styrene | 17.786 | 104 | 1887 | 0.033 ppbV | 94 |
| 64) | 1,1,2,2-tetrachloroethane | 17.867 | 83 | 2298 | 0.035 ppbV | 96 |
| 65) | o-xylene | 17.867 | 91 | 2775 | 0.035 ppbV | 100 |
| 66) | 1,2,3-trichloropropane | 17.967 | 75 | 1770M2 | 0.038 ppbV | |
| 68) | isopropylbenzene | 18.296 | 105 | 3217 | 0.033 ppbV | 98 |
| 69) | bromobenzene | 18.386 | 77 | 1910 | 0.034 ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253195.D
Acq On : 25 Mar 2018 10:50 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.04
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 07:54:31 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

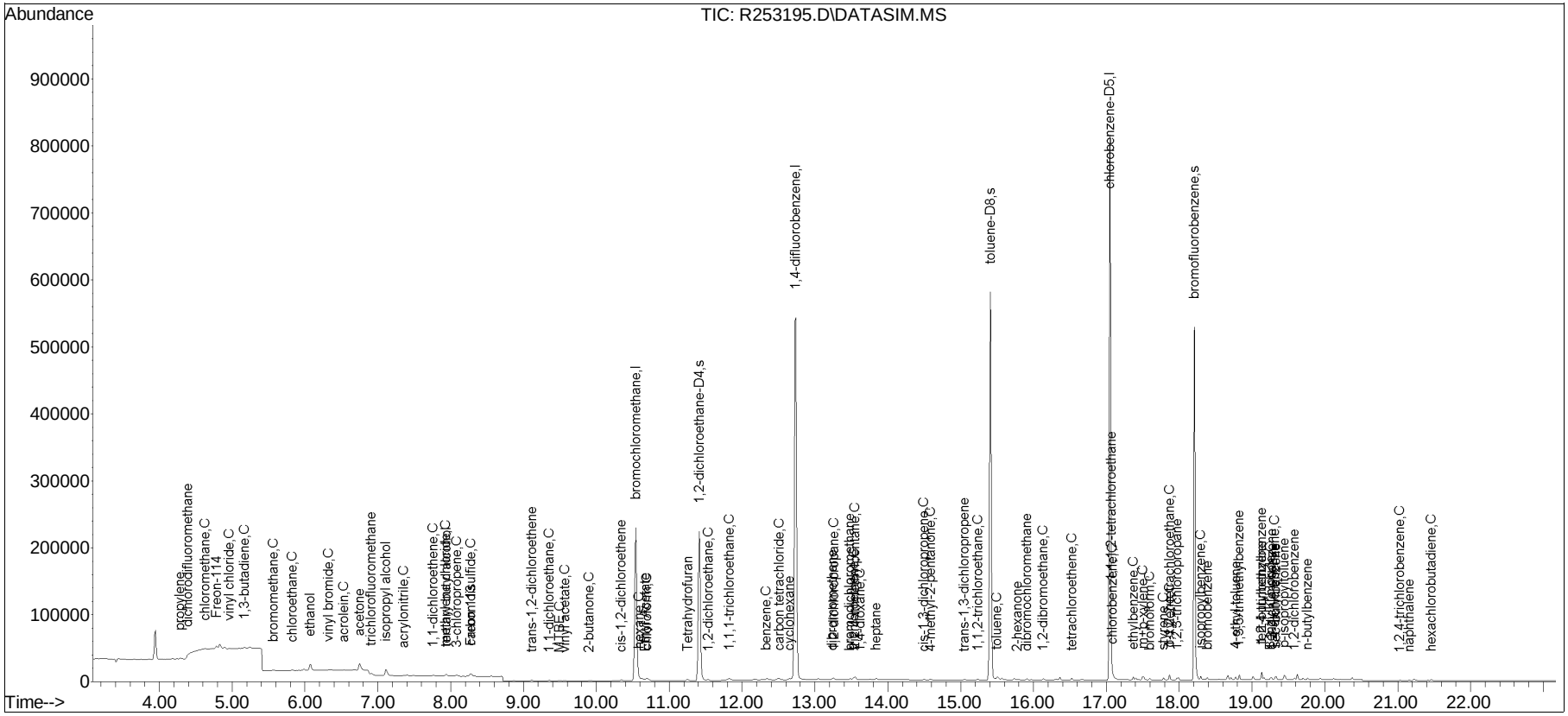
| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.777 | 105 | 2914 | 0.027 ppbV # | 95 |
| 71) 1,3,5-trimethylbenzene | 18.825 | 105 | 2449 | 0.028 ppbV # | 99 |
| 72) tert-butylbenzene | 19.134 | 119 | 2611 | 0.029 ppbV | 94 |
| 73) 1,2,4-trimethylbenzene | 19.134 | 105 | 2306 | 0.025 ppbV | 94 |
| 74) Benzyl Chloride | 19.253 | 91 | 1541 | 0.020 ppbV | 91 |
| 75) 1,3-dichlorobenzene | 19.268 | 146 | 1649 | 0.026 ppbV # | 89 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 1670 | 0.025 ppbV # | 81 |
| 77) sec-butylbenzene | 19.329 | 105 | 3436 | 0.026 ppbV | 99 |
| 78) p-isopropyltoluene | 19.439 | 119 | 2570 | 0.024 ppbV | 96 |
| 79) 1,2-dichlorobenzene | 19.582 | 146 | 1611 | 0.027 ppbV # | 92 |
| 80) n-butylbenzene | 19.763 | 91 | 1936M4 | 0.018 ppbV | |
| 81) 1,2,4-trichlorobenzene | 21.030 | 180 | 822M1 | 0.014 ppbV | |
| 82) naphthalene | 21.159 | 128 | 1416M1 | 0.012 ppbV | |
| 83) 1,2,3-trichlorobenzene | 21.416 | | 0 | N.D. | |
| 84) hexachlorobutadiene | 21.459 | 225 | 1034 | 0.024 ppbV # | 77 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253195.D
Acq On : 25 Mar 2018 10:50 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.04
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 07:54:31 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

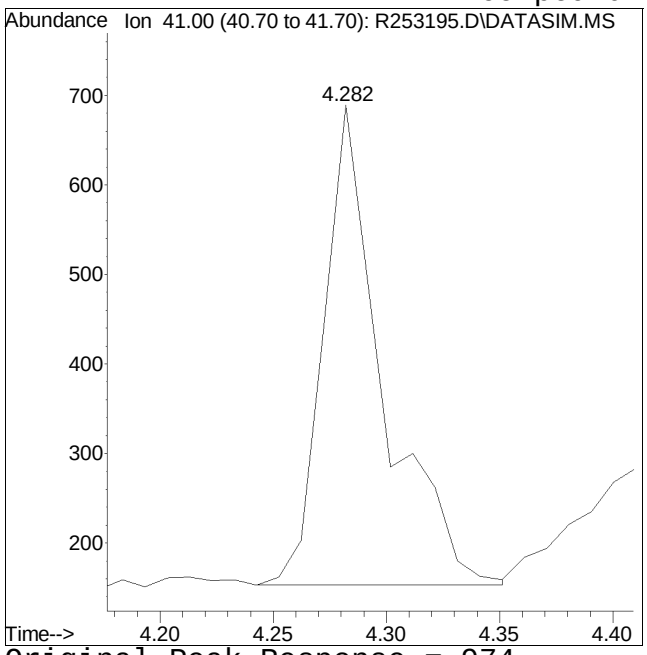


Manual Integration/Negative Proof Report

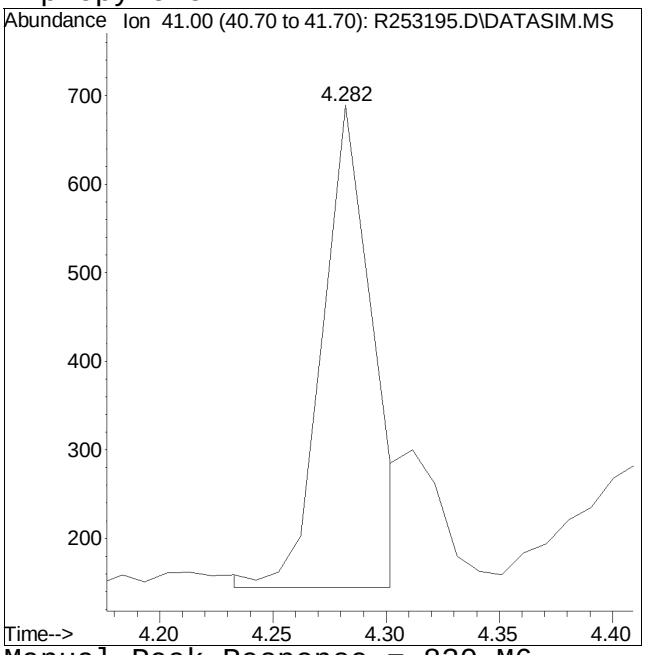
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253195.D
Date Inj'd : 3/25/2018 10:50 pm
Sample : ITO15-SIMSTD0.04

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 974




Manual Peak Response = 830 M6

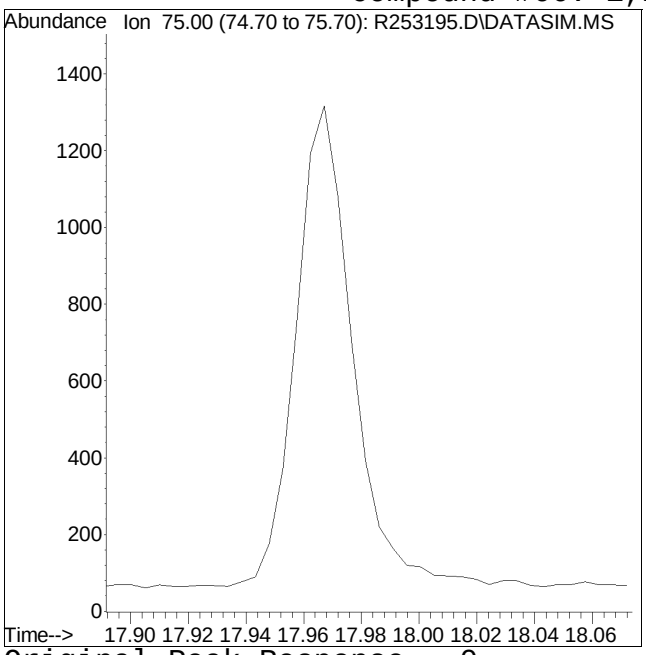
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

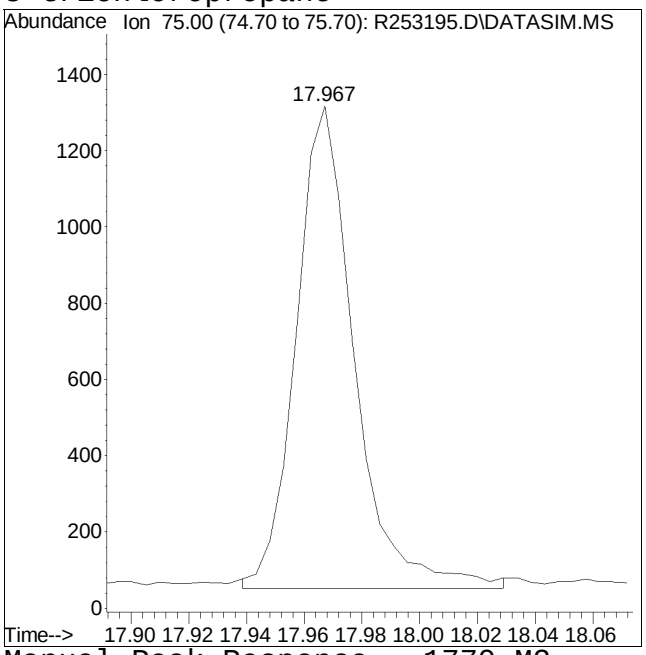
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253195.D
Date Inj'd : 3/25/2018 10:50 pm
Sample : ITO15-SIMSTD0.04

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #66: 1,2,3-trichloropropane



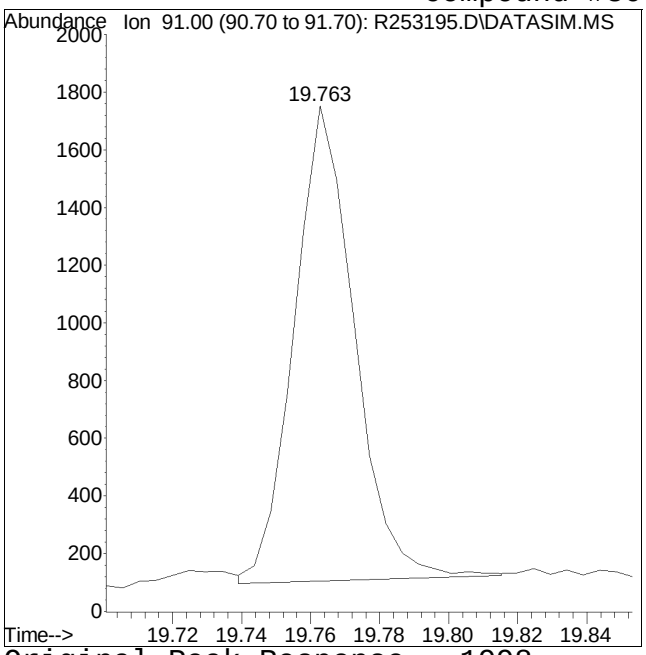

Original Peak Response = 0 Manual Peak Response = 1770 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

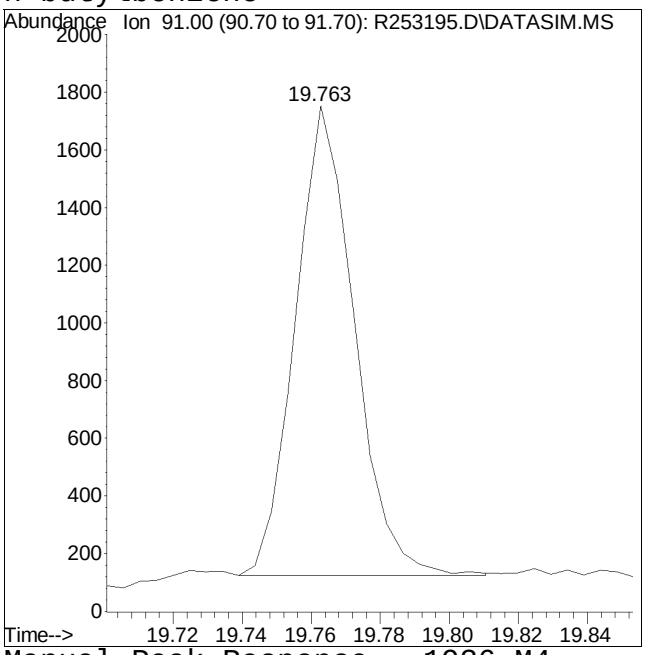
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253195.D
Date Inj'd : 3/25/2018 10:50 pm
Sample : ITO15-SIMSTD0.04

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #80: n-butylbenzene




Original Peak Response = 1998




Manual Peak Response = 1936 M4

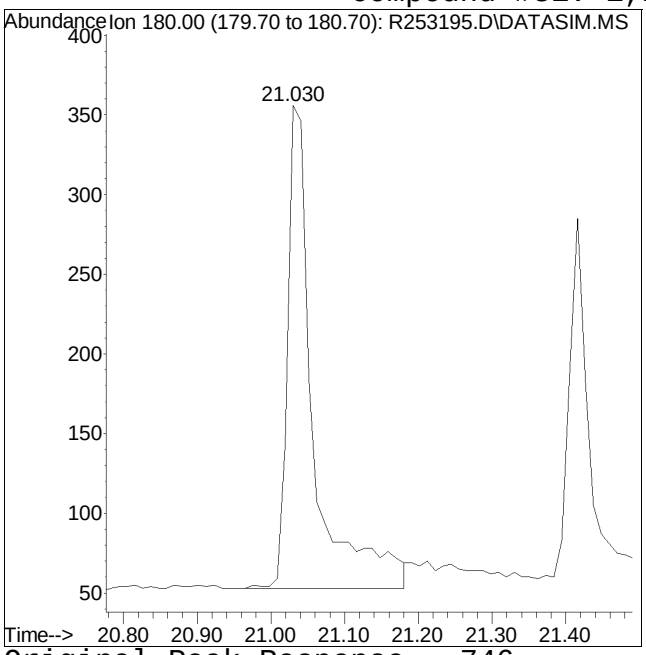
M4 = Poor automated baseline construction.

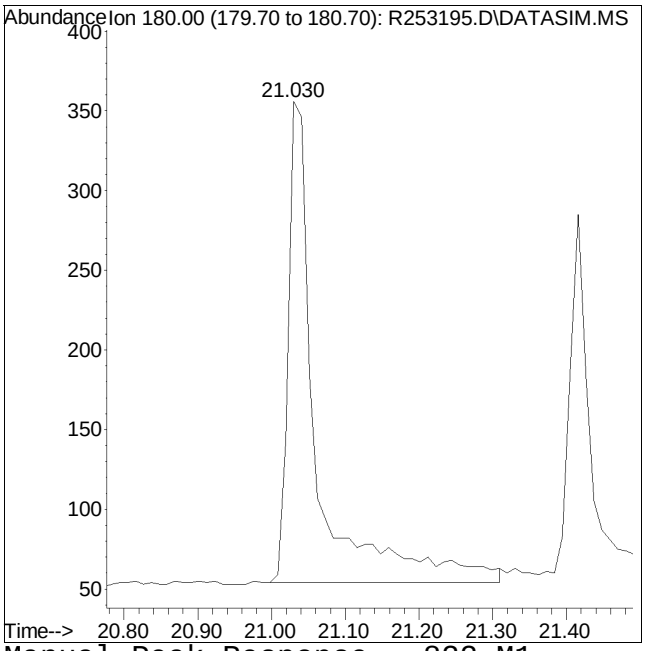
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253195.D
Date Inj'd : 3/25/2018 10:50 pm
Sample : ITO15-SIMSTD0.04

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #81: 1,2,4-trichlorobenzene




Original Peak Response = 746 Manual Peak Response = 822 M1

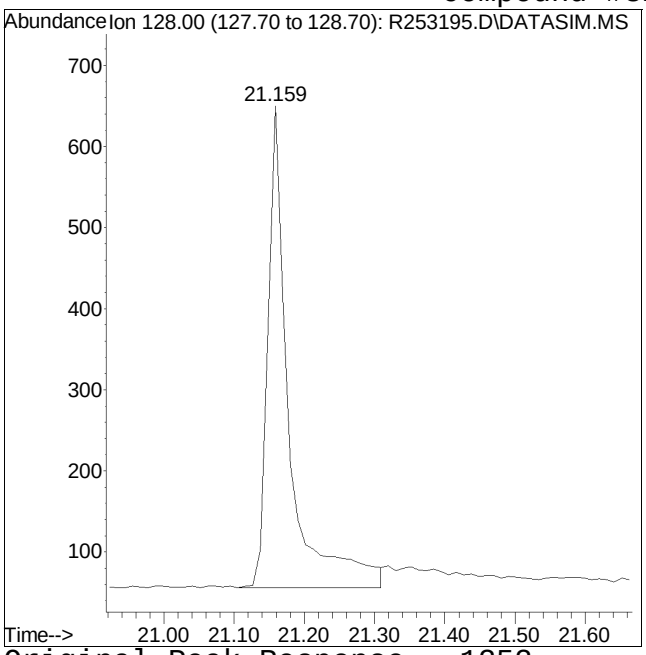
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

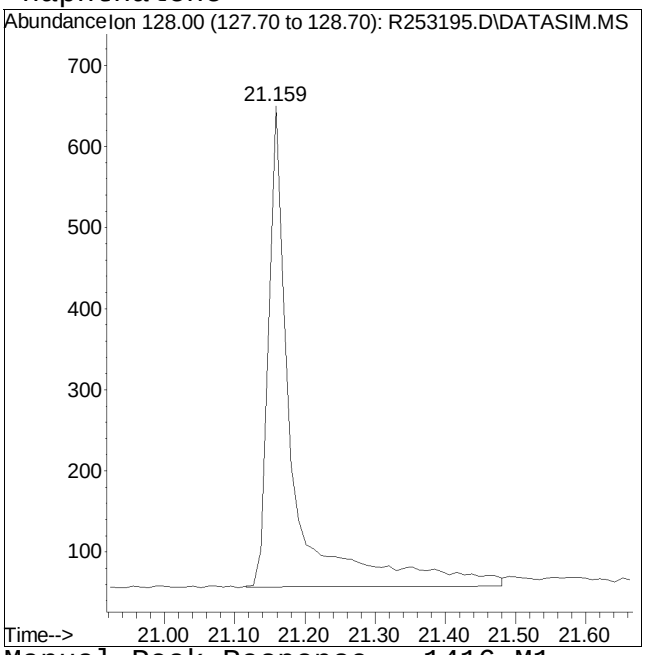
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253195.D
Date Inj'd : 3/25/2018 10:50 pm
Sample : ITO15-SIMSTD0.04

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #82: naphthalene




Original Peak Response = 1252 Manual Peak Response = 1416 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253196.D
Acq On : 25 Mar 2018 11:28 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.1
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 12:06:01 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 271595 | 10.000 | ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 99.42% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 616369 | 10.000 | ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 98.42% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 140719 | 10.000 | ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 97.77% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 197940 | 10.182 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.82% | | | |
| 53) toluene-D8 | 15.410 | 98 | 533634 | 10.065 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.65% | | | |
| 67) bromofluorobenzene | 18.210 | 95 | 271259 | 9.482 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 94.82% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 1684M6 | 0.114 | ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 5324 | 0.102 | ppbV | 99 |
| 4) chloromethane | 4.627 | 50 | 2550 | 0.104 | ppbV | 89 |
| 5) Freon-114 | 4.785 | 85 | 6944 | 0.097 | ppbV | 99 |
| 6) vinyl chloride | 4.952 | 62 | 2707 | 0.098 | ppbV # | 88 |
| 7) 1,3-butadiene | 5.169 | 54 | 1735 | 0.095 | ppbV | 94 |
| 8) bromomethane | 5.567 | 94 | 2384 | 0.100 | ppbV | 94 |
| 9) chloroethane | 5.823 | 64 | 1328 | 0.099 | ppbV | 91 |
| 10) ethanol | 6.071 | 31 | 14545 | 0.852 | ppbV | 95 |
| 11) vinyl bromide | 6.327 | 106 | 2157 | 0.096 | ppbV | 96 |
| 12) acrolein | 6.535 | 56 | 1258 | 0.117 | ppbV # | 1 |
| 13) acetone | 6.743 | 43 | 25245 | 0.802 | ppbV # | 99 |
| 14) trichlorofluoromethane | 6.910 | 101 | 4861 | 0.077 | ppbV | 99 |
| 15) isopropyl alcohol | 7.102 | 45 | 16902 | 0.645 | ppbV | 98 |
| 16) acrylonitrile | 7.350 | 53 | 1432 | 0.102 | ppbV # | 95 |
| 17) 1,1-dichloroethene | 7.758 | 61 | 3403 | 0.095 | ppbV | 96 |
| 18) tertiary butyl alcohol | 7.926 | 59 | 3577 | 0.104 | ppbV | 92 |
| 19) methylene chloride | 7.934 | 49 | 2857 | 0.107 | ppbV | 98 |
| 20) 3-chloropropene | 8.085 | 41 | 2246 | 0.094 | ppbV | 96 |
| 21) carbon disulfide | 8.277 | 76 | 6109 | 0.100 | ppbV # | 1 |
| 22) Freon 113 | 8.277 | 101 | 3905 | 0.095 | ppbV | 99 |
| 23) trans-1,2-dichloroethene | 9.113 | 61 | 3049 | 0.094 | ppbV | 92 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 3879 | 0.094 | ppbV | 95 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253196.D
Acq On : 25 Mar 2018 11:28 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.1
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 12:06:01 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.488 | 73 | 4527 | 0.091 | ppbV | # | 90 |
| 26) | vinyl acetate | 9.570 | 43 | 3792 | 0.097 | ppbV | # | 92 |
| 27) | 2-butanone | 9.898 | 43 | 4353 | 0.102 | ppbV | # | 96 |
| 28) | cis-1,2-dichloroethene | 10.344 | 61 | 2927 | 0.094 | ppbV | | 98 |
| 29) | Ethyl Acetate | 10.663 | 61 | 560 | 0.083 | ppbV | | 82 |
| 30) | chloroform | 10.691 | 83 | 4259 | 0.093 | ppbV | | 96 |
| 31) | Tetrahydrofuran | 11.245 | 42 | 2247 | 0.101 | ppbV | | 96 |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 3068 | 0.097 | ppbV | # | 92 |
| 34) | hexane | 10.588 | 57 | 2929 | 0.094 | ppbV | # | 40 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 3944 | 0.093 | ppbV | | 96 |
| 37) | benzene | 12.346 | 78 | 6214 | 0.097 | ppbV | | 99 |
| 38) | carbon tetrachloride | 12.509 | 117 | 3861 | 0.091 | ppbV | | 97 |
| 39) | cyclohexane | 12.651 | 56 | 2980 | 0.095 | ppbV | | 93 |
| 40) | dibromomethane | 13.238 | 93 | 2668 | 0.103 | ppbV | | 100 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 2492 | 0.096 | ppbV | # | 90 |
| 42) | bromodichloromethane | 13.489 | 83 | 4576 | 0.092 | ppbV | # | 92 |
| 43) | 1,4-dioxane | 13.608 | 88 | 1150M1 | 0.085 | ppbV | | |
| 44) | trichloroethene | 13.532 | 130 | 2415 | 0.092 | ppbV | | 98 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 9486 | 0.092 | ppbV | | 93 |
| 46) | heptane | 13.837 | 43 | 3438 | 0.093 | ppbV | # | 97 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 3135 | 0.087 | ppbV | # | 86 |
| 48) | 4-methyl-2-pentanone | 14.569 | 43 | 4183 | 0.080 | ppbV | # | 99 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 3024 | 0.086 | ppbV | # | 82 |
| 50) | 1,1,2-trichloroethane | 15.238 | 97 | 2380 | 0.090 | ppbV | | 94 |
| 52) | toluene | 15.500 | 91 | 7052 | 0.093 | ppbV | | 99 |
| 54) | 2-hexanone | 15.771 | 43 | 3584 | 0.072 | ppbV | # | 95 |
| 55) | dibromochloromethane | 15.907 | 129 | 3799 | 0.086 | ppbV | | 98 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 3743 | 0.089 | ppbV | | 98 |
| 57) | tetrachloroethene | 16.530 | 166 | 2813 | 0.089 | ppbV | | 93 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 2636 | 0.086 | ppbV | | 98 |
| 59) | chlorobenzene | 17.086 | 112 | 5245 | 0.087 | ppbV | | 94 |
| 60) | ethylbenzene | 17.372 | 91 | 8320 | 0.086 | ppbV | | 97 |
| 61) | m+p-xylene | 17.510 | 91 | 12641 | 0.165 | ppbV | | 99 |
| 62) | bromoform | 17.596 | 173 | 3180 | 0.078 | ppbV | | 96 |
| 63) | styrene | 17.786 | 104 | 4441 | 0.078 | ppbV | | 98 |
| 64) | 1,1,2,2-tetrachloroethane | 17.867 | 83 | 5468 | 0.083 | ppbV | | 99 |
| 65) | o-xylene | 17.867 | 91 | 6591 | 0.083 | ppbV | | 99 |
| 66) | 1,2,3-trichloropropane | 17.967 | 75 | 3932M2 | 0.084 | ppbV | | |
| 68) | isopropylbenzene | 18.296 | 105 | 7907 | 0.082 | ppbV | | 99 |
| 69) | bromobenzene | 18.386 | 77 | 4682 | 0.085 | ppbV | | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253196.D
Acq On : 25 Mar 2018 11:28 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.1
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 12:06:01 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

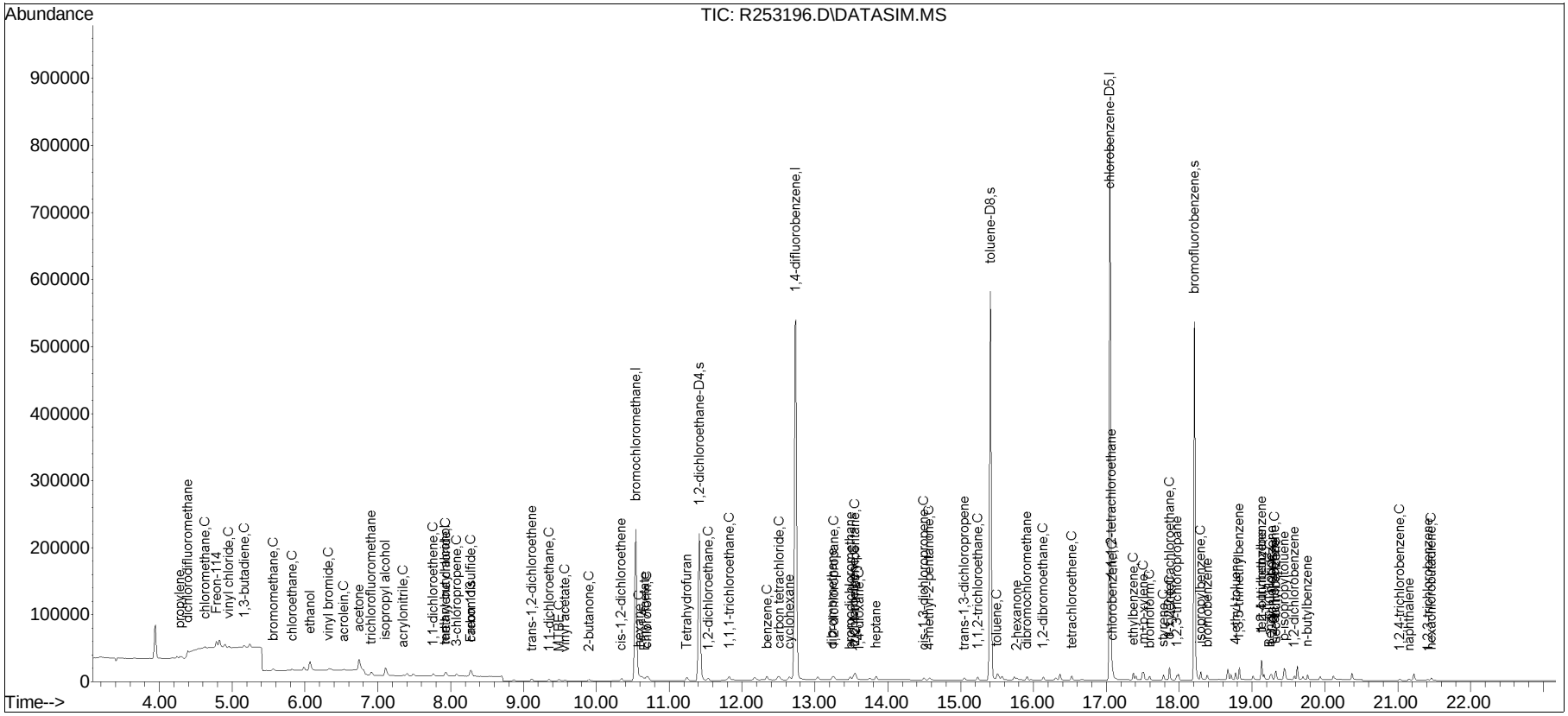
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.777 | 105 | 7280 | 0.068 | ppbV # | 96 |
| 71) 1,3,5-trimethylbenzene | 18.825 | 105 | 6133 | 0.070 | ppbV # | 94 |
| 72) tert-butylbenzene | 19.129 | 119 | 6585 | 0.073 | ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 19.129 | 105 | 5950 | 0.065 | ppbV | 94 |
| 74) Benzyl Chloride | 19.248 | 91 | 3921 | 0.051 | ppbV | 98 |
| 75) 1,3-dichlorobenzene | 19.267 | 146 | 4220 | 0.066 | ppbV | 97 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 4351M3 | 0.066 | ppbV | |
| 77) sec-butylbenzene | 19.329 | 105 | 8690 | 0.067 | ppbV | 99 |
| 78) p-isopropyltoluene | 19.439 | 119 | 6595 | 0.061 | ppbV | 97 |
| 79) 1,2-dichlorobenzene | 19.582 | 146 | 4040 | 0.067 | ppbV | 96 |
| 80) n-butylbenzene | 19.763 | 91 | 5396 | 0.049 | ppbV | 100 |
| 81) 1,2,4-trichlorobenzene | 21.030 | 180 | 2656M1 | 0.047 | ppbV | |
| 82) naphthalene | 21.159 | 128 | 4897M1 | 0.041 | ppbV | |
| 83) 1,2,3-trichlorobenzene | 21.416 | 180 | 2032M1 | 0.041 | ppbV | |
| 84) hexachlorobutadiene | 21.459 | 225 | 2622 | 0.060 | ppbV # | 84 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253196.D
Acq On : 25 Mar 2018 11:28 pm
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.1
Misc : WG1100531
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 26 12:06:01 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

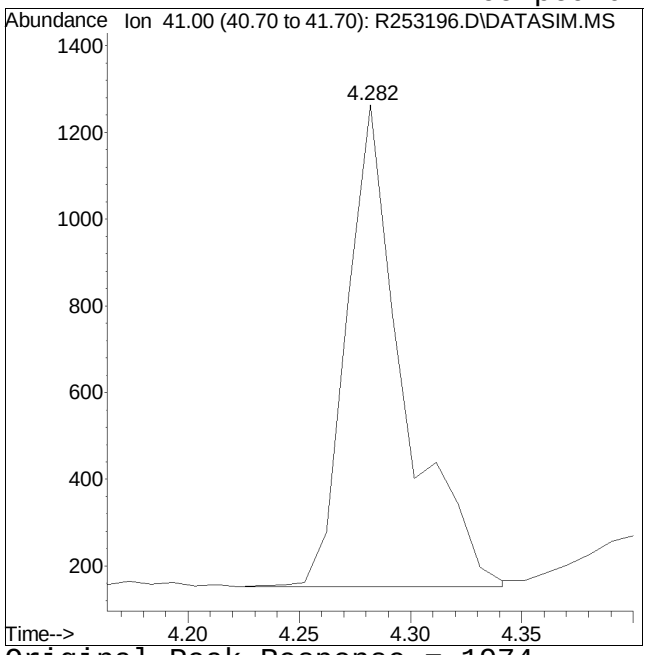


Manual Integration/Negative Proof Report

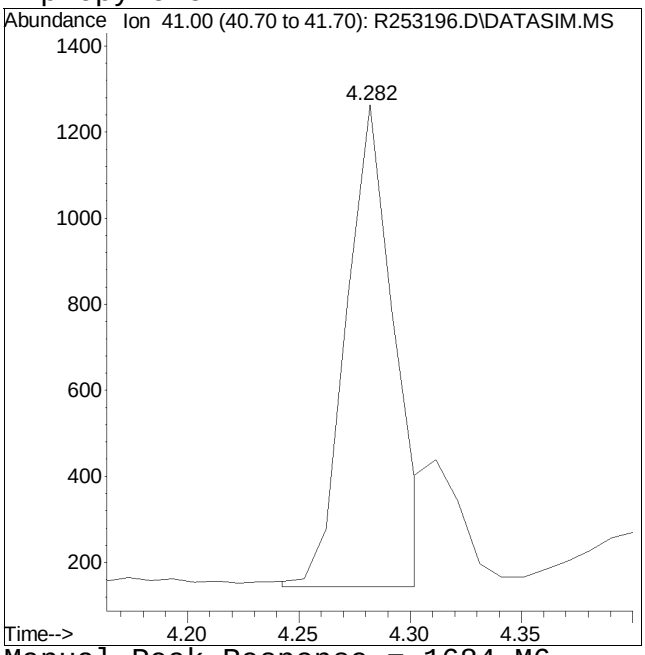
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253196.D
Date Inj'd : 3/25/2018 11:28 pm
Sample : ITO15-SIMSTD0.1

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 1974




Manual Peak Response = 1684 M6

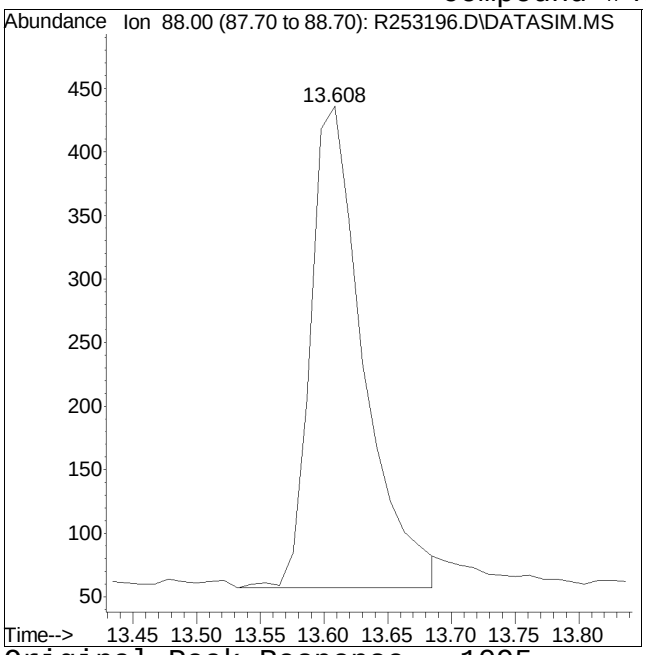
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

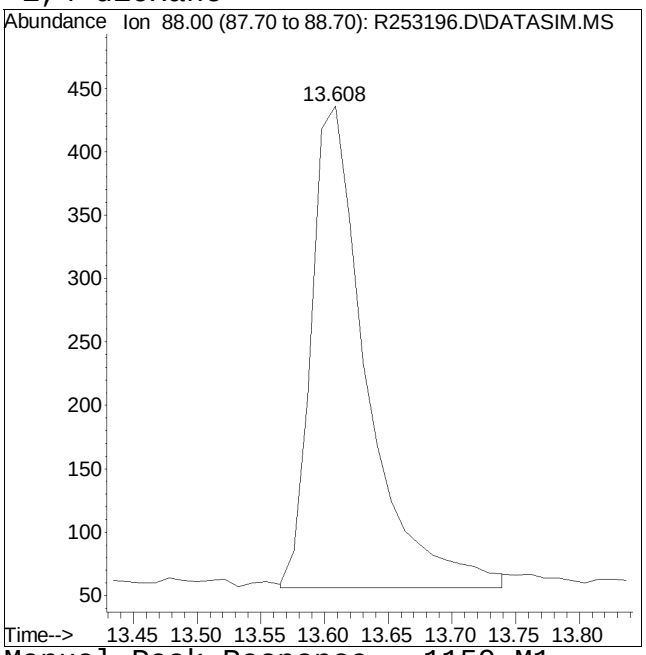
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253196.D
Date Inj'd : 3/25/2018 11:28 pm
Sample : ITO15-SIMSTD0.1

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #43: 1,4-dioxane




Original Peak Response = 1095 Manual Peak Response = 1150 M1

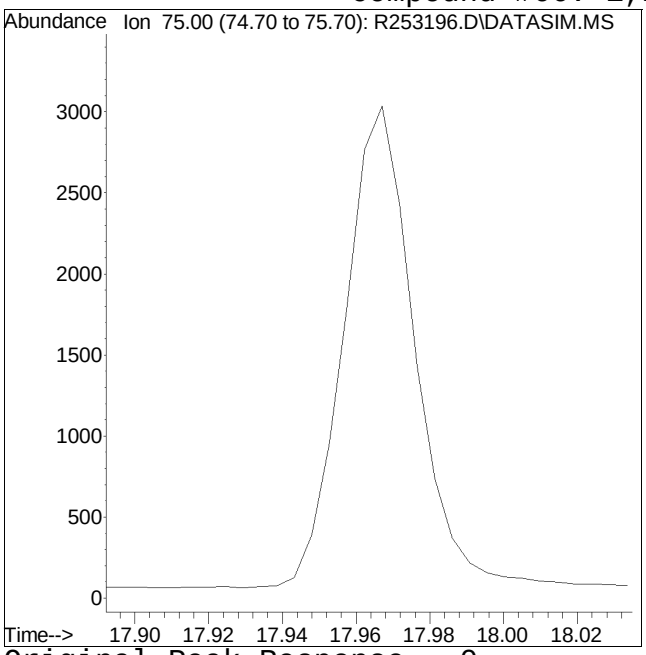
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

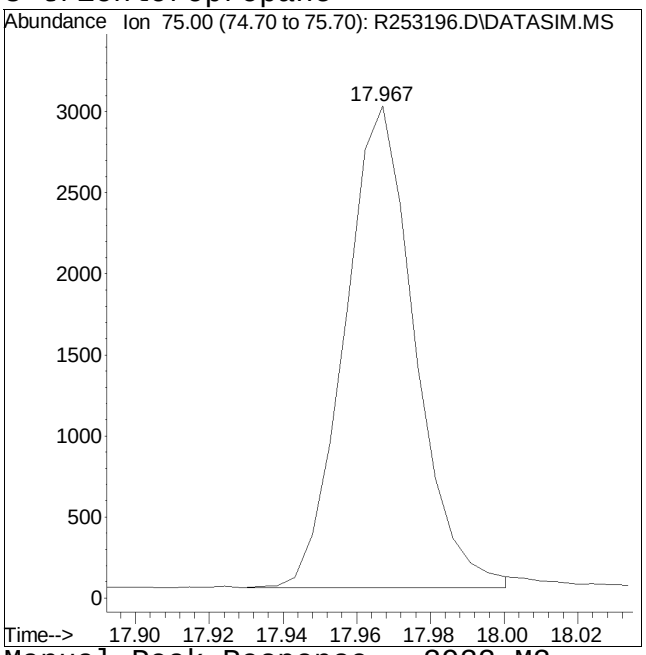
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253196.D
Date Inj'd : 3/25/2018 11:28 pm
Sample : ITO15-SIMSTD0.1

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #66: 1,2,3-trichloropropane



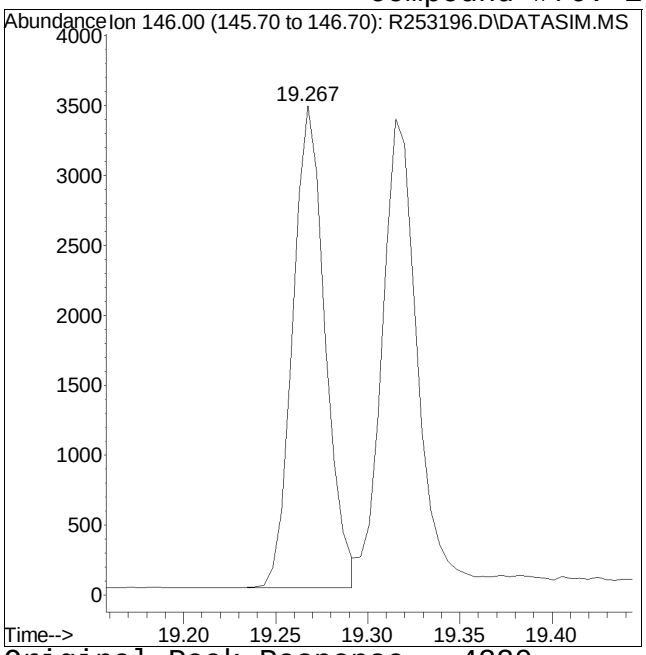

Original Peak Response = 0 Manual Peak Response = 3932 M2
M2 = Peak not found by automatic integration algorithm.

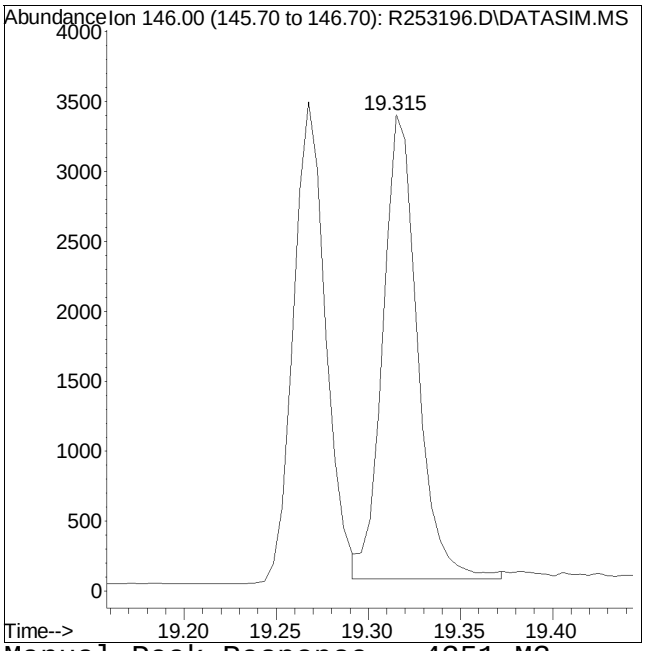
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253196.D
Date Inj'd : 3/25/2018 11:28 pm
Sample : ITO15-SIMSTD0.1

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #76: 1,4-dichlorobenzene




Original Peak Response = 4220 Manual Peak Response = 4351 M3

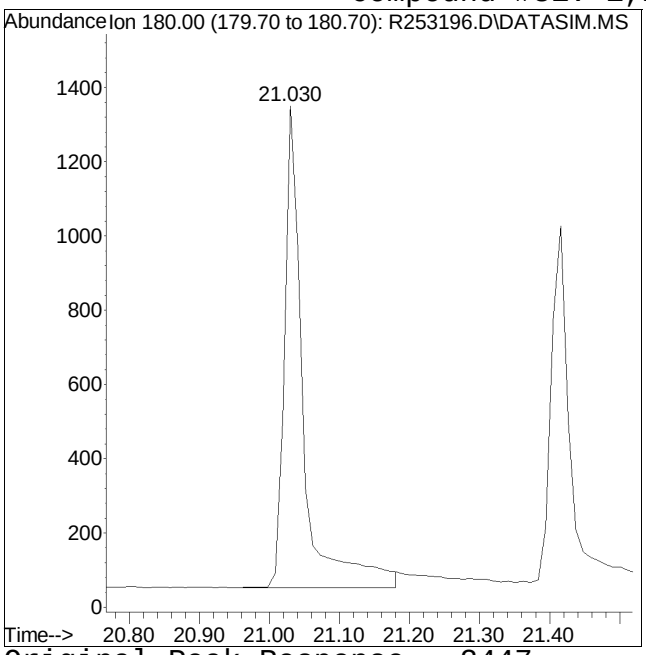
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

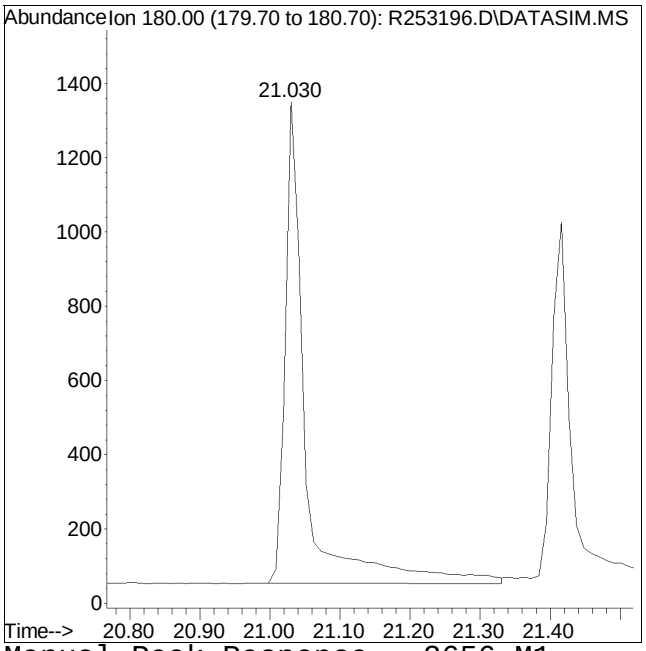
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253196.D
Date Inj'd : 3/25/2018 11:28 pm
Sample : ITO15-SIMSTD0.1

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #81: 1,2,4-trichlorobenzene




Original Peak Response = 2447 Manual Peak Response = 2656 M1

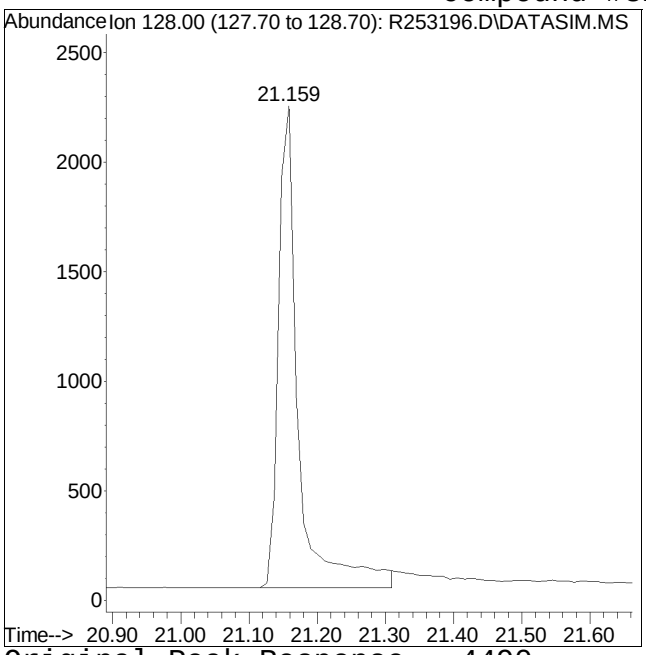
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

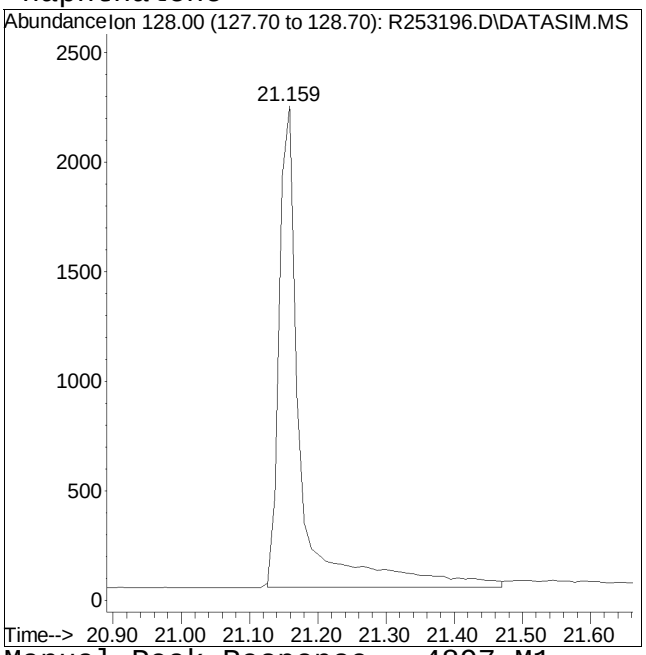
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253196.D
Date Inj'd : 3/25/2018 11:28 pm
Sample : ITO15-SIMSTD0.1

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #82: naphthalene




Original Peak Response = 4490 Manual Peak Response = 4897 M1

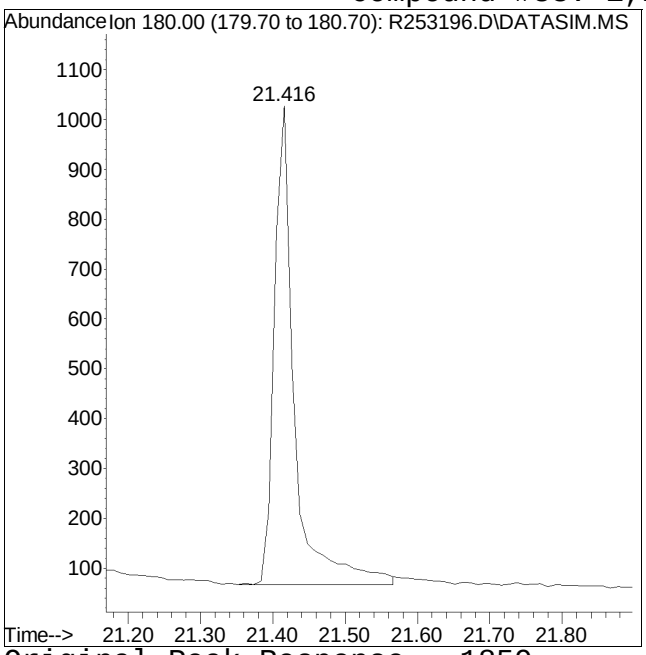
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

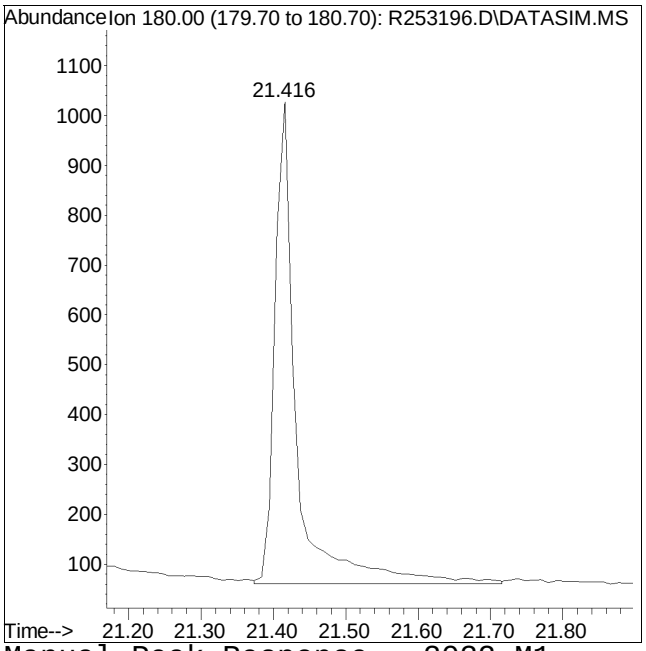
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253196.D
Date Inj'd : 3/25/2018 11:28 pm
Sample : ITO15-SIMSTD0.1

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #83: 1,2,3-trichlorobenzene




Original Peak Response = 1859 Manual Peak Response = 2032 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253197.D
Acq On : 26 Mar 2018 12:02 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.2
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:07:34 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 269601 | 10.000 | ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 98.69% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 614874 | 10.000 | ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 98.18% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 140230 | 10.000 | ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 97.43% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 197478 | 10.183 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.83% | | | |
| 53) toluene-D8 | 15.410 | 98 | 534366 | 10.114 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.14% | | | |
| 67) bromofluorobenzene | 18.210 | 95 | 272732 | 9.567 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.67% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 3583M6 | 0.244 | ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 12395 | 0.239 | ppbV | 100 |
| 4) chloromethane | 4.627 | 50 | 5859 | 0.242 | ppbV | 92 |
| 5) Freon-114 | 4.785 | 85 | 16623 | 0.235 | ppbV | 99 |
| 6) vinyl chloride | 4.952 | 62 | 6589 | 0.240 | ppbV | 96 |
| 7) 1,3-butadiene | 5.169 | 54 | 4311 | 0.238 | ppbV | 89 |
| 8) bromomethane | 5.560 | 94 | 5633 | 0.237 | ppbV | 98 |
| 9) chloroethane | 5.823 | 64 | 3193 | 0.239 | ppbV | 95 |
| 10) ethanol | 6.063 | 31 | 26264 | 1.549 | ppbV | 99 |
| 11) vinyl bromide | 6.327 | 106 | 5276 | 0.237 | ppbV | 99 |
| 12) acrolein | 6.527 | 56 | 2681 | 0.252 | ppbV # | 1 |
| 13) acetone | 6.735 | 43 | 33572 | 1.074 | ppbV # | 98 |
| 14) trichlorofluoromethane | 6.910 | 101 | 11839 | 0.188 | ppbV | 99 |
| 15) isopropyl alcohol | 7.102 | 45 | 25640 | 0.985 | ppbV | 98 |
| 16) acrylonitrile | 7.350 | 53 | 3429 | 0.246 | ppbV | 96 |
| 17) 1,1-dichloroethene | 7.766 | 61 | 8371 | 0.236 | ppbV | 96 |
| 18) tertiary butyl alcohol | 7.918 | 59 | 7875 | 0.231 | ppbV # | 90 |
| 19) methylene chloride | 7.934 | 49 | 6546 | 0.248 | ppbV | 99 |
| 20) 3-chloropropene | 8.086 | 41 | 5364 | 0.226 | ppbV | 95 |
| 21) carbon disulfide | 8.277 | 76 | 14244 | 0.234 | ppbV # | 50 |
| 22) Freon 113 | 8.277 | 101 | 9488 | 0.232 | ppbV | 99 |
| 23) trans-1,2-dichloroethene | 9.113 | 61 | 7501 | 0.233 | ppbV | 94 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 9512 | 0.233 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253197.D
Acq On : 26 Mar 2018 12:02 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.2
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:07:34 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.475 | 73 | 11179 | 0.226 | ppbV | | 96 |
| 26) | vinyl acetate | 9.564 | 43 | 8509 | 0.219 | ppbV | | 97 |
| 27) | 2-butanone | 9.884 | 43 | 9717 | 0.229 | ppbV | # | 99 |
| 28) | cis-1,2-dichloroethene | 10.344 | 61 | 7144 | 0.231 | ppbV | | 97 |
| 29) | Ethyl Acetate | 10.653 | 61 | 1273 | 0.190 | ppbV | | 96 |
| 30) | chloroform | 10.691 | 83 | 10484 | 0.231 | ppbV | | 99 |
| 31) | Tetrahydrofuran | 11.226 | 42 | 5570 | 0.253 | ppbV | | 92 |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 7286 | 0.231 | ppbV | | 96 |
| 34) | hexane | 10.588 | 57 | 7083 | 0.228 | ppbV | # | 45 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 9758 | 0.231 | ppbV | | 98 |
| 37) | benzene | 12.335 | 78 | 15057 | 0.235 | ppbV | | 98 |
| 38) | carbon tetrachloride | 12.509 | 117 | 9519 | 0.226 | ppbV | | 99 |
| 39) | cyclohexane | 12.651 | 56 | 7268 | 0.232 | ppbV | | 96 |
| 40) | dibromomethane | 13.238 | 93 | 6224 | 0.240 | ppbV | | 99 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 5964 | 0.230 | ppbV | | 96 |
| 42) | bromodichloromethane | 13.478 | 83 | 11227 | 0.227 | ppbV | | 100 |
| 43) | 1,4-dioxane | 13.587 | 88 | 2913 | 0.216 | ppbV | | 92 |
| 44) | trichloroethene | 13.532 | 130 | 5833 | 0.223 | ppbV | | 99 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 23109 | 0.224 | ppbV | | 97 |
| 46) | heptane | 13.837 | 43 | 8341 | 0.226 | ppbV | | 99 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 7785 | 0.216 | ppbV | | 94 |
| 48) | 4-methyl-2-pentanone | 14.560 | 43 | 10815 | 0.207 | ppbV | | 98 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 7447 | 0.211 | ppbV | # | 91 |
| 50) | 1,1,2-trichloroethane | 15.229 | 97 | 5997 | 0.227 | ppbV | | 98 |
| 52) | toluene | 15.500 | 91 | 17184 | 0.227 | ppbV | | 99 |
| 54) | 2-hexanone | 15.762 | 43 | 9284 | 0.188 | ppbV | # | 98 |
| 55) | dibromochloromethane | 15.907 | 129 | 9526 | 0.217 | ppbV | | 99 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 9280 | 0.221 | ppbV | | 100 |
| 57) | tetrachloroethene | 16.521 | 166 | 6983 | 0.222 | ppbV | | 97 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 6691 | 0.220 | ppbV | | 98 |
| 59) | chlorobenzene | 17.086 | 112 | 13361 | 0.222 | ppbV | | 98 |
| 60) | ethylbenzene | 17.367 | 91 | 20933 | 0.218 | ppbV | | 99 |
| 61) | m+p-xylene | 17.510 | 91 | 31818 | 0.416 | ppbV | | 98 |
| 62) | bromoform | 17.591 | 173 | 8136 | 0.201 | ppbV | | 100 |
| 63) | styrene | 17.786 | 104 | 11303 | 0.199 | ppbV | | 99 |
| 64) | 1,1,2,2-tetrachloroethane | 17.867 | 83 | 13832 | 0.209 | ppbV | | 98 |
| 65) | o-xylene | 17.862 | 91 | 16491 | 0.207 | ppbV | | 97 |
| 66) | 1,2,3-trichloropropane | 17.962 | 75 | 10152 | 0.217 | ppbV | | 98 |
| 68) | isopropylbenzene | 18.296 | 105 | 19989 | 0.207 | ppbV | | 100 |
| 69) | bromobenzene | 18.381 | 77 | 11625 | 0.211 | ppbV | | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253197.D
Acq On : 26 Mar 2018 12:02 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.2
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:07:34 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

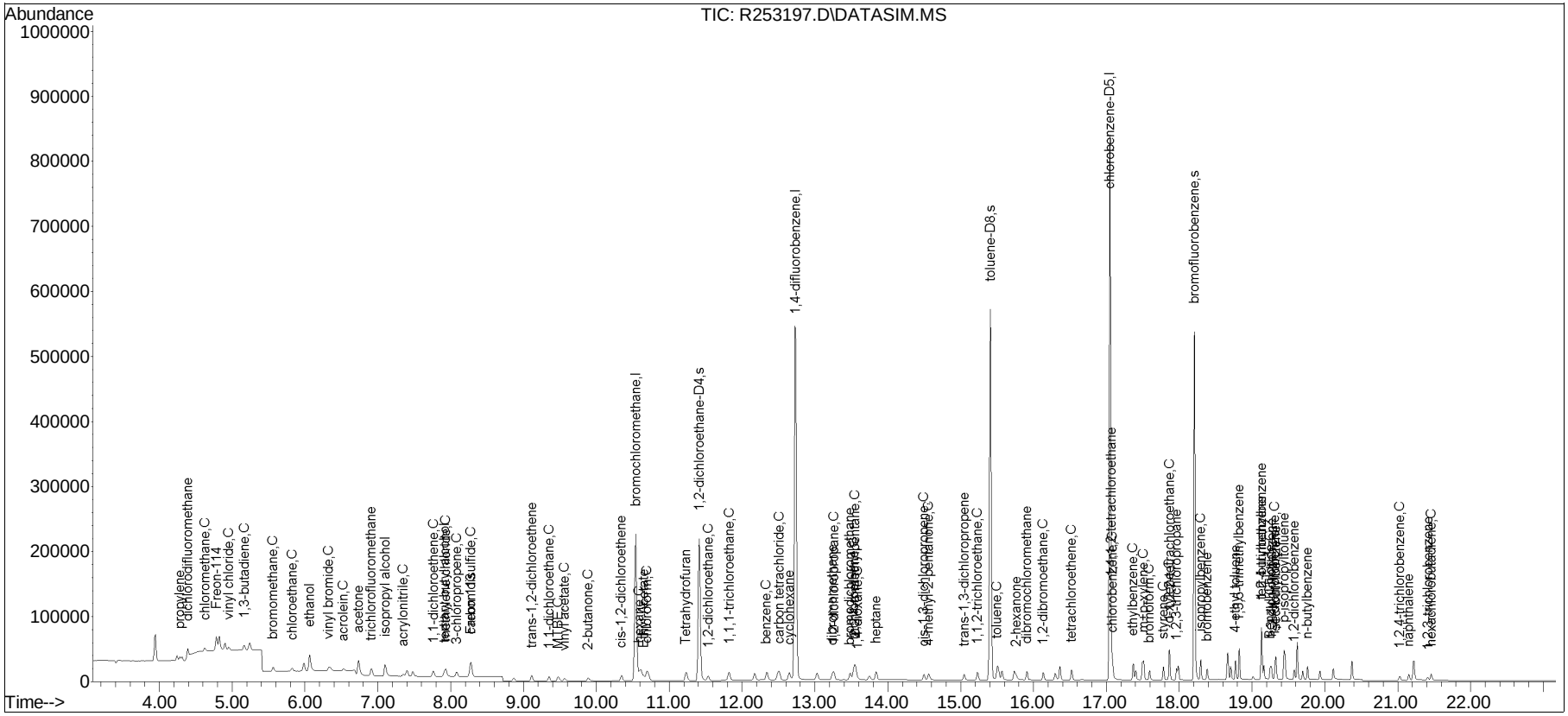
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.772 | 105 | 19584 | 0.183 | ppbV # | 98 |
| 71) 1,3,5-trimethylbenzene | 18.825 | 105 | 17319 | 0.198 | ppbV | 93 |
| 72) tert-butylbenzene | 19.129 | 119 | 16941 | 0.187 | ppbV | 100 |
| 73) 1,2,4-trimethylbenzene | 19.129 | 105 | 16140 | 0.177 | ppbV | 96 |
| 74) Benzyl Chloride | 19.249 | 91 | 10668 | 0.140 | ppbV | 100 |
| 75) 1,3-dichlorobenzene | 19.268 | 146 | 11284 | 0.176 | ppbV | 98 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 11230 | 0.171 | ppbV | 93 |
| 77) sec-butylbenzene | 19.329 | 105 | 23555 | 0.183 | ppbV | 98 |
| 78) p-isopropyltoluene | 19.439 | 119 | 18815 | 0.175 | ppbV | 97 |
| 79) 1,2-dichlorobenzene | 19.582 | 146 | 10646 | 0.177 | ppbV | 98 |
| 80) n-butylbenzene | 19.763 | 91 | 16231 | 0.148 | ppbV | 100 |
| 81) 1,2,4-trichlorobenzene | 21.030 | 180 | 7269M1 | 0.129 | ppbV | |
| 82) naphthalene | 21.148 | 128 | 15823M1 | 0.132 | ppbV | |
| 83) 1,2,3-trichlorobenzene | 21.416 | 180 | 5181 | 0.104 | ppbV | 98 |
| 84) hexachlorobutadiene | 21.459 | 225 | 6739 | 0.155 | ppbV # | 90 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253197.D
Acq On : 26 Mar 2018 12:02 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.2
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:07:34 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

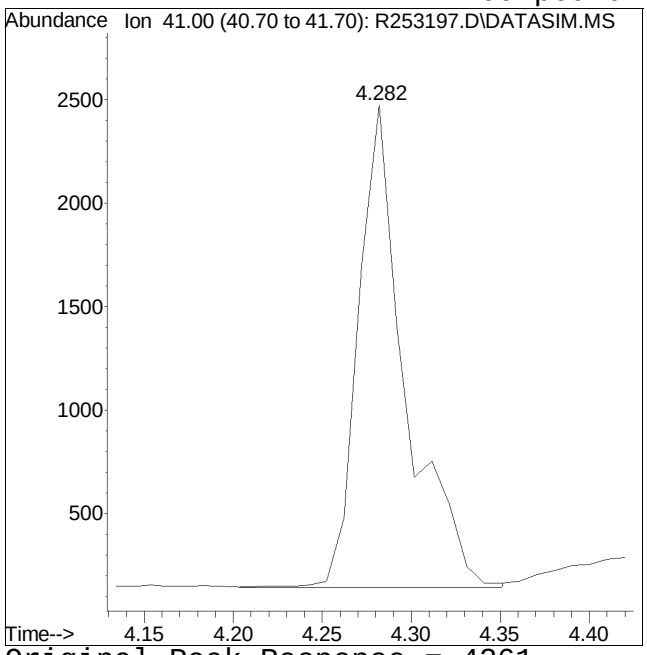


Manual Integration/Negative Proof Report

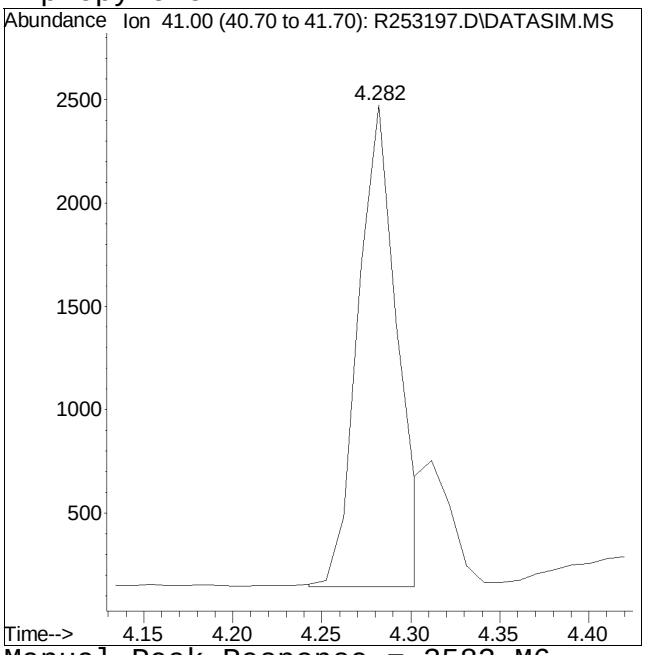
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253197.D
Date Inj'd : 3/26/2018 12:02 am
Sample : ITO15-SIMSTD0.2

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 4261




Manual Peak Response = 3583 M6

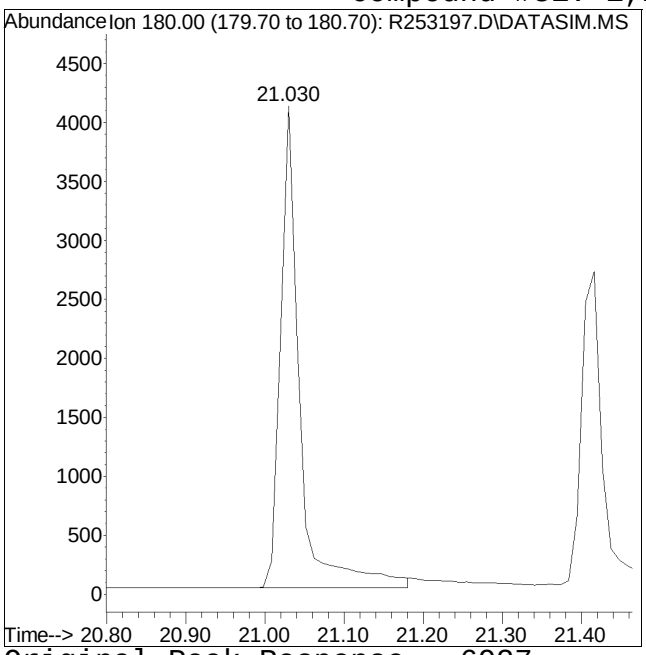
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

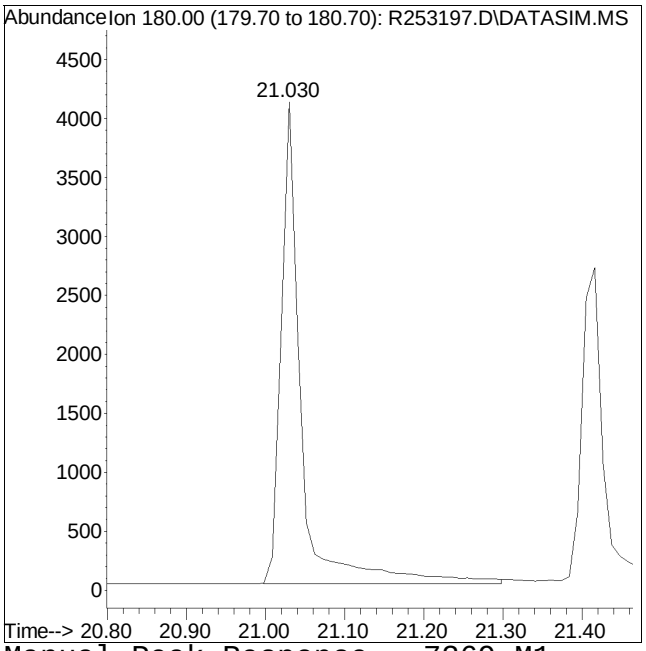
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253197.D
Date Inj'd : 3/26/2018 12:02 am
Sample : ITO15-SIMSTD0.2

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #81: 1,2,4-trichlorobenzene




Original Peak Response = 6927 Manual Peak Response = 7269 M1

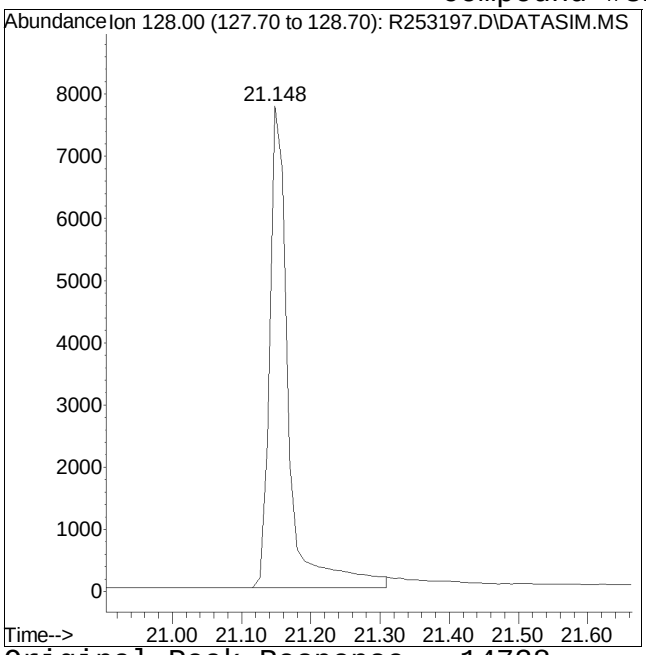
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

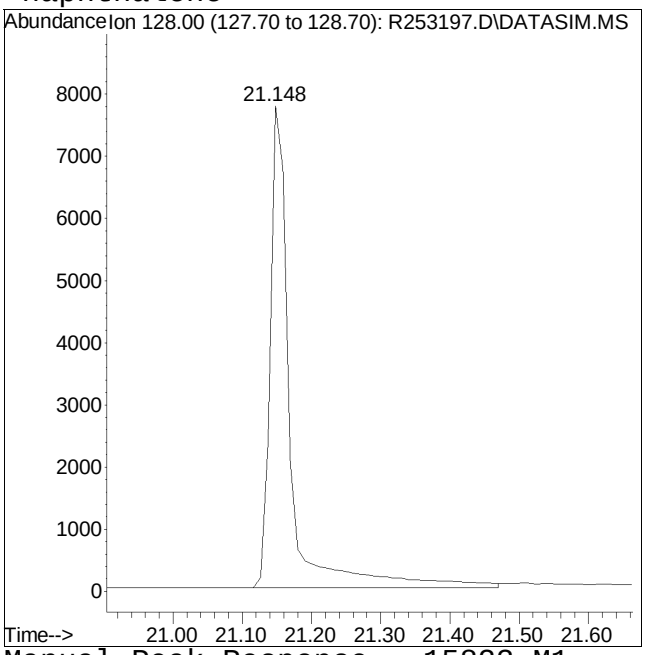
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253197.D
Date Inj'd : 3/26/2018 12:02 am
Sample : ITO15-SIMSTD0.2

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #82: naphthalene




Original Peak Response = 14738 Manual Peak Response = 15823 M1

M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253198.D
Acq On : 26 Mar 2018 12:37 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.5
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:09:27 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 268569 | 10.000 | ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 98.31% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 614223 | 10.000 | ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 98.08% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 140697 | 10.000 | ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 97.75% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 195543 | 10.094 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.94% | | | |
| 53) toluene-D8 | 15.409 | 98 | 534194 | 10.077 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.77% | | | |
| 67) bromofluorobenzene | 18.210 | 95 | 276924 | 9.682 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 96.82% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 8239M6 | 0.564 | ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 28691 | 0.555 | ppbV | 100 |
| 4) chloromethane | 4.627 | 50 | 13413 | 0.556 | ppbV | 95 |
| 5) Freon-114 | 4.785 | 85 | 38115 | 0.540 | ppbV | 99 |
| 6) vinyl chloride | 4.952 | 62 | 14949 | 0.546 | ppbV | 99 |
| 7) 1,3-butadiene | 5.169 | 54 | 9974 | 0.552 | ppbV | 82 |
| 8) bromomethane | 5.559 | 94 | 12791 | 0.541 | ppbV | 99 |
| 9) chloroethane | 5.823 | 64 | 7339 | 0.551 | ppbV | 95 |
| 10) ethanol | 6.055 | 31 | 51015 | 3.021 | ppbV | 99 |
| 11) vinyl bromide | 6.327 | 106 | 11868 | 0.534 | ppbV | 99 |
| 12) acrolein | 6.519 | 56 | 5813 | 0.548 | ppbV # | 44 |
| 13) acetone | 6.718 | 43 | 96754 | 3.107 | ppbV # | 98 |
| 14) trichlorofluoromethane | 6.910 | 101 | 34261 | 0.546 | ppbV | 100 |
| 15) isopropyl alcohol | 7.086 | 45 | 63291 | 2.441 | ppbV | 100 |
| 16) acrylonitrile | 7.342 | 53 | 7974 | 0.573 | ppbV | 98 |
| 17) 1,1-dichloroethene | 7.758 | 61 | 18957 | 0.538 | ppbV | 99 |
| 18) tertiary butyl alcohol | 7.901 | 59 | 17962 | 0.530 | ppbV | 95 |
| 19) methylene chloride | 7.933 | 49 | 14585 | 0.554 | ppbV | 97 |
| 20) 3-chloropropene | 8.077 | 41 | 12372 | 0.524 | ppbV | 98 |
| 21) carbon disulfide | 8.277 | 76 | 31929 | 0.527 | ppbV # | 82 |
| 22) Freon 113 | 8.277 | 101 | 21607 | 0.531 | ppbV | 99 |
| 23) trans-1,2-dichloroethene | 9.113 | 61 | 17010 | 0.530 | ppbV | 92 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 21741 | 0.535 | ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253198.D
Acq On : 26 Mar 2018 12:37 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.5
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:09:27 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.468 | 73 | 25634 | 0.521 | ppbV | | 100 |
| 26) | vinyl acetate | 9.557 | 43 | 19071 | 0.493 | ppbV | | 100 |
| 27) | 2-butanone | 9.871 | 43 | 22193 | 0.525 | ppbV | | 99 |
| 28) | cis-1,2-dichloroethene | 10.343 | 61 | 16342 | 0.531 | ppbV | | 99 |
| 29) | Ethyl Acetate | 10.644 | 61 | 3183 | 0.476 | ppbV | | 94 |
| 30) | chloroform | 10.691 | 83 | 24013 | 0.530 | ppbV | | 99 |
| 31) | Tetrahydrofuran | 11.207 | 42 | 13096 | 0.597 | ppbV | | 92 |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 16697 | 0.532 | ppbV | | 99 |
| 34) | hexane | 10.588 | 57 | 16140 | 0.519 | ppbV | # | 60 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 22444 | 0.532 | ppbV | | 98 |
| 37) | benzene | 12.335 | 78 | 34362 | 0.538 | ppbV | | 99 |
| 38) | carbon tetrachloride | 12.509 | 117 | 21989 | 0.522 | ppbV | | 99 |
| 39) | cyclohexane | 12.650 | 56 | 16765 | 0.536 | ppbV | | 99 |
| 40) | dibromomethane | 13.238 | 93 | 13811 | 0.534 | ppbV | | 99 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 13615 | 0.525 | ppbV | | 97 |
| 42) | bromodichloromethane | 13.489 | 83 | 25941 | 0.524 | ppbV | # | 95 |
| 43) | 1,4-dioxane | 13.576 | 88 | 6706 | 0.497 | ppbV | | 93 |
| 44) | trichloroethene | 13.532 | 130 | 13513 | 0.518 | ppbV | | 99 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 53511 | 0.520 | ppbV | | 98 |
| 46) | heptane | 13.837 | 43 | 19483M4 | 0.528 | ppbV | | |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 18089 | 0.503 | ppbV | | 96 |
| 48) | 4-methyl-2-pentanone | 14.551 | 43 | 25828 | 0.495 | ppbV | | 98 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 17673 | 0.502 | ppbV | | 94 |
| 50) | 1,1,2-trichloroethane | 15.229 | 97 | 13773 | 0.522 | ppbV | | 96 |
| 52) | toluene | 15.500 | 91 | 39399 | 0.518 | ppbV | | 100 |
| 54) | 2-hexanone | 15.753 | 43 | 22899 | 0.461 | ppbV | # | 99 |
| 55) | dibromochloromethane | 15.907 | 129 | 22099 | 0.503 | ppbV | | 99 |
| 56) | 1,2-dibromoethane | 16.132 | 107 | 21593 | 0.512 | ppbV | | 100 |
| 57) | tetrachloroethene | 16.521 | 166 | 16063 | 0.508 | ppbV | | 97 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 15327 | 0.501 | ppbV | | 98 |
| 59) | chlorobenzene | 17.086 | 112 | 30791 | 0.510 | ppbV | | 98 |
| 60) | ethylbenzene | 17.367 | 91 | 48640 | 0.504 | ppbV | | 100 |
| 61) | m+p-xylene | 17.510 | 91 | 74500 | 0.970 | ppbV | | 97 |
| 62) | bromoform | 17.595 | 173 | 19173 | 0.473 | ppbV | | 98 |
| 63) | styrene | 17.781 | 104 | 26919 | 0.473 | ppbV | | 99 |
| 64) | 1,1,2,2-tetrachloroethane | 17.867 | 83 | 32520 | 0.491 | ppbV | | 100 |
| 65) | o-xylene | 17.867 | 91 | 38252 | 0.479 | ppbV | | 99 |
| 66) | 1,2,3-trichloropropane | 17.962 | 75 | 23755 | 0.506 | ppbV | | 99 |
| 68) | isopropylbenzene | 18.295 | 105 | 47032 | 0.485 | ppbV | | 99 |
| 69) | bromobenzene | 18.386 | 77 | 27218 | 0.493 | ppbV | | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253198.D
Acq On : 26 Mar 2018 12:37 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.5
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:09:27 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

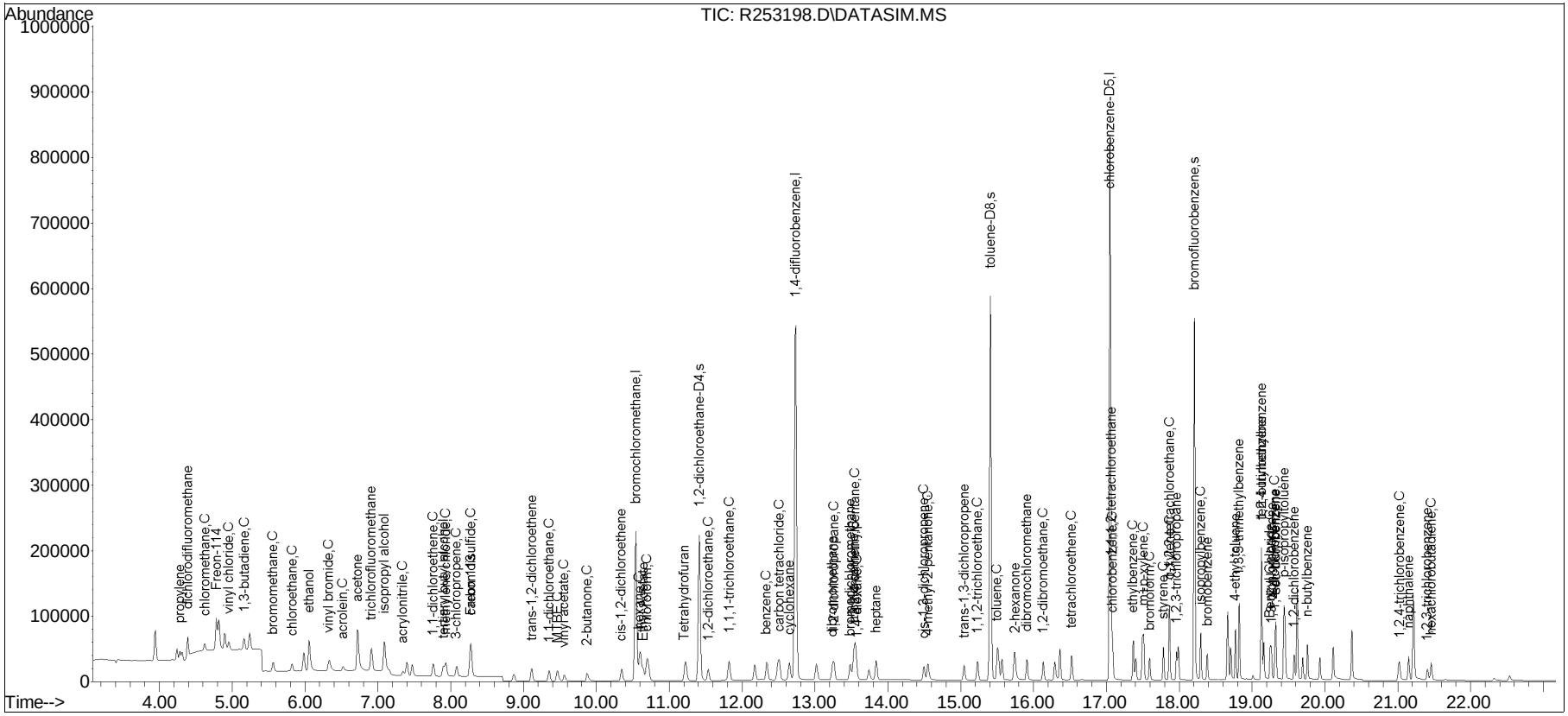
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.772 | 105 | 48149 | 0.448 | ppbV | 98 |
| 71) 1,3,5-trimethylbenzene | 18.825 | 105 | 41075 | 0.467 | ppbV | 95 |
| 72) tert-butylbenzene | 19.129 | 119 | 40416 | 0.446 | ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 19.129 | 105 | 40039 | 0.437 | ppbV | 94 |
| 74) Benzyl Chloride | 19.248 | 91 | 27869 | 0.365 | ppbV | 99 |
| 75) 1,3-dichlorobenzene | 19.267 | 146 | 27841 | 0.433 | ppbV | 98 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 28736 | 0.435 | ppbV | 95 |
| 77) sec-butylbenzene | 19.324 | 105 | 57304 | 0.443 | ppbV | 97 |
| 78) p-isopropyltoluene | 19.439 | 119 | 46255 | 0.428 | ppbV | 98 |
| 79) 1,2-dichlorobenzene | 19.582 | 146 | 26664 | 0.443 | ppbV | 97 |
| 80) n-butylbenzene | 19.758 | 91 | 43761 | 0.397 | ppbV | 95 |
| 81) 1,2,4-trichlorobenzene | 21.030 | 180 | 21136M1 | 0.374 | ppbV | |
| 82) naphthalene | 21.148 | 128 | 50140M1 | 0.418 | ppbV | |
| 83) 1,2,3-trichlorobenzene | 21.405 | 180 | 18240M1 | 0.366 | ppbV | |
| 84) hexachlorobutadiene | 21.459 | 225 | 16997 | 0.389 | ppbV # | 92 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253198.D
Acq On : 26 Mar 2018 12:37 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD0.5
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

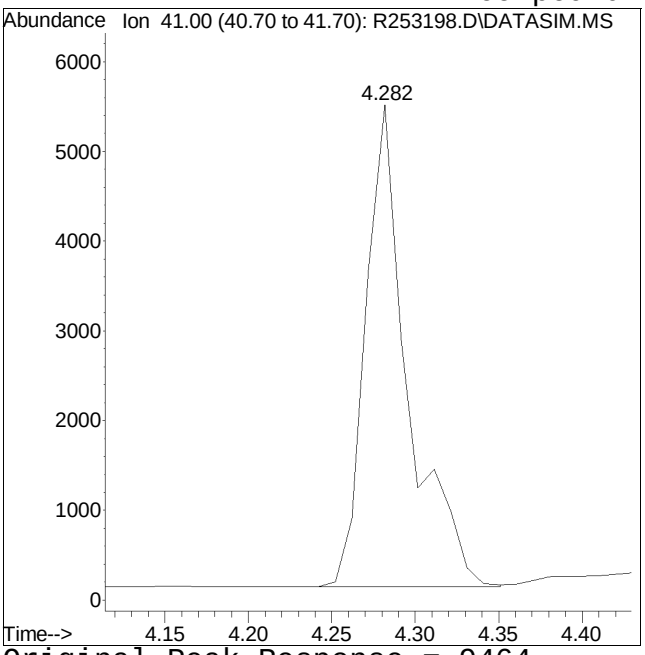
Quant Time: Mar 26 12:09:27 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration



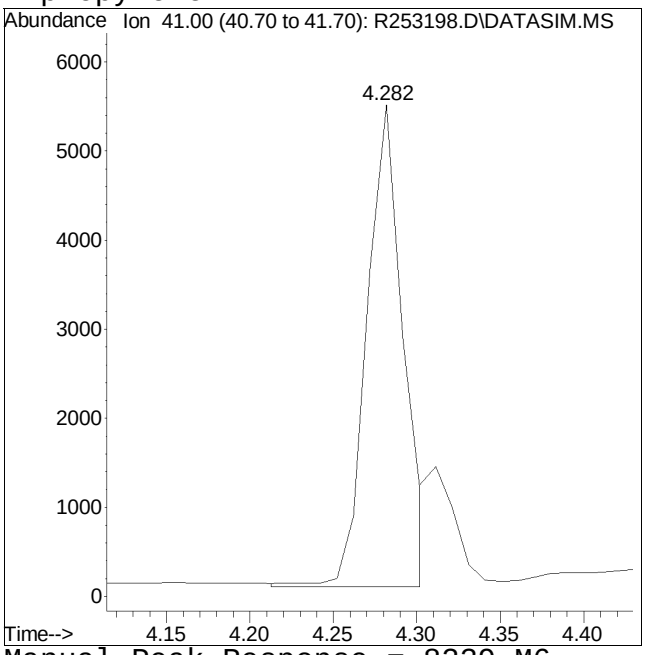
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253198.D
Date Inj'd : 3/26/2018 12:37 am
Sample : ITO15-SIMSTD0.5
Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 9464




Manual Peak Response = 8239 M6

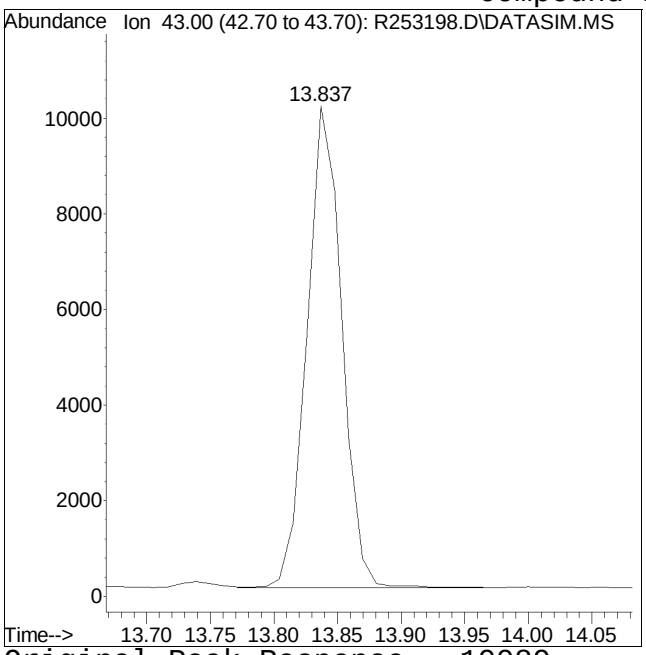
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

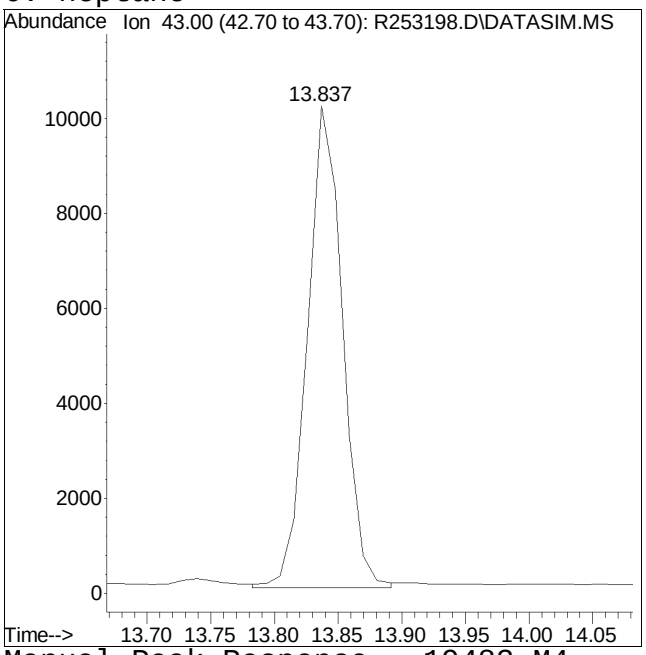
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253198.D
Date Inj'd : 3/26/2018 12:37 am
Sample : ITO15-SIMSTD0.5

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #46: heptane




Original Peak Response = 19089




Manual Peak Response = 19483 M4

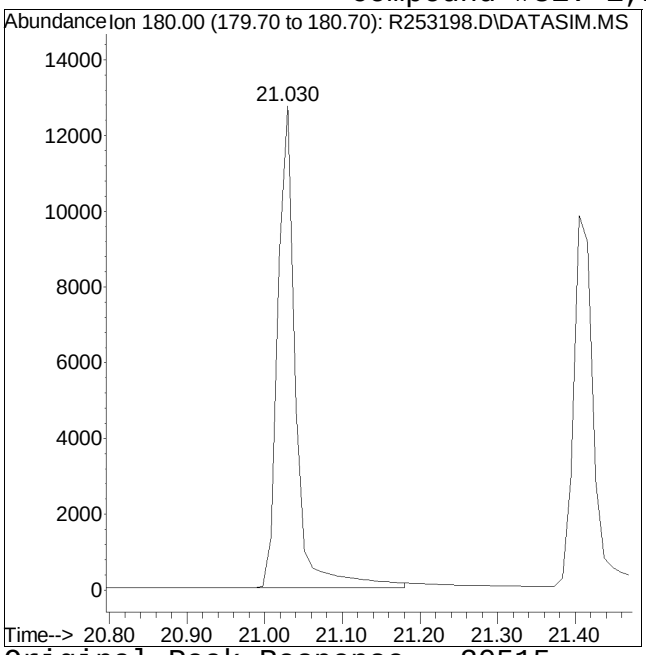
M4 = Poor automated baseline construction.

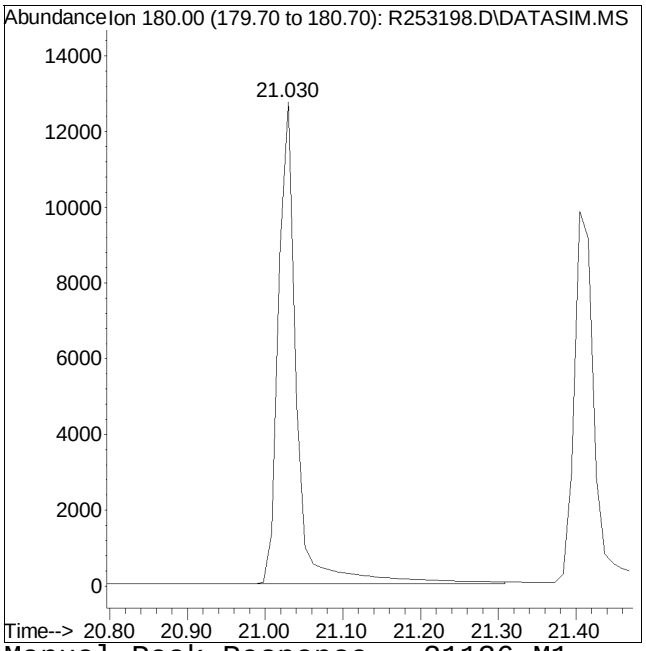
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253198.D
Date Inj'd : 3/26/2018 12:37 am
Sample : ITO15-SIMSTD0.5

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #81: 1,2,4-trichlorobenzene




Original Peak Response = 20515 Manual Peak Response = 21136 M1

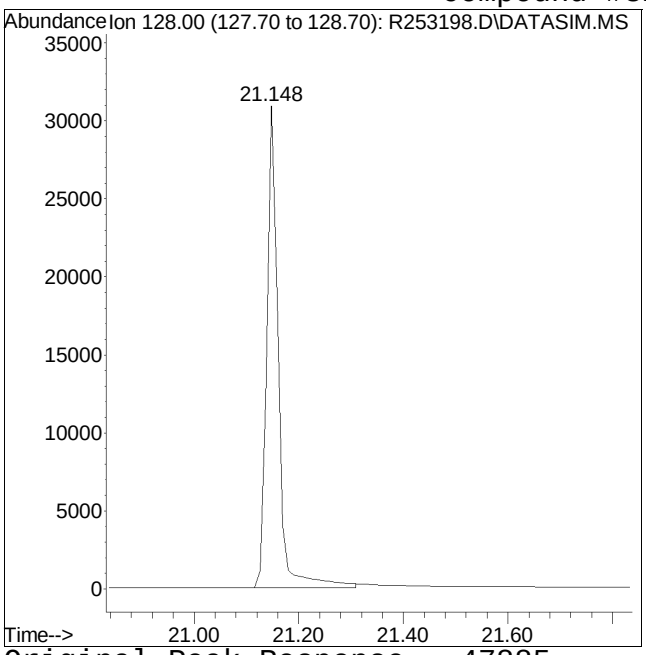
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

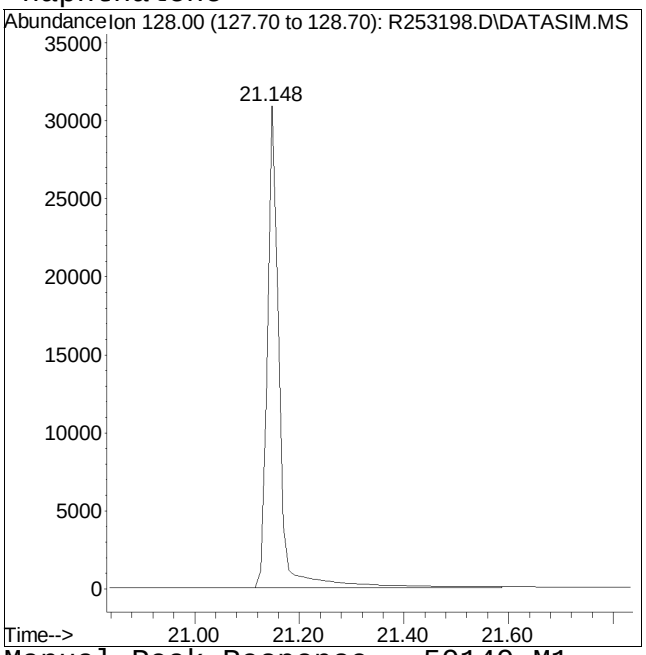
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253198.D
Date Inj'd : 3/26/2018 12:37 am
Sample : ITO15-SIMSTD0.5

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #82: naphthalene



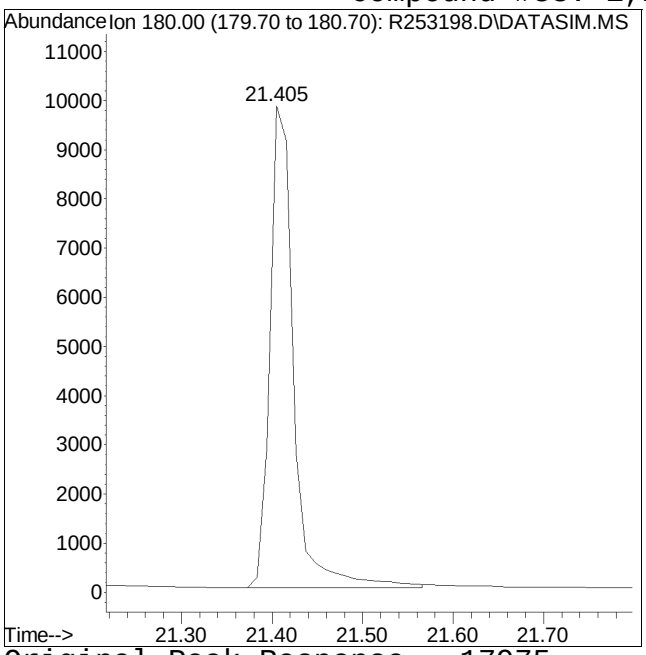

Original Peak Response = 47885 Manual Peak Response = 50140 M1
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

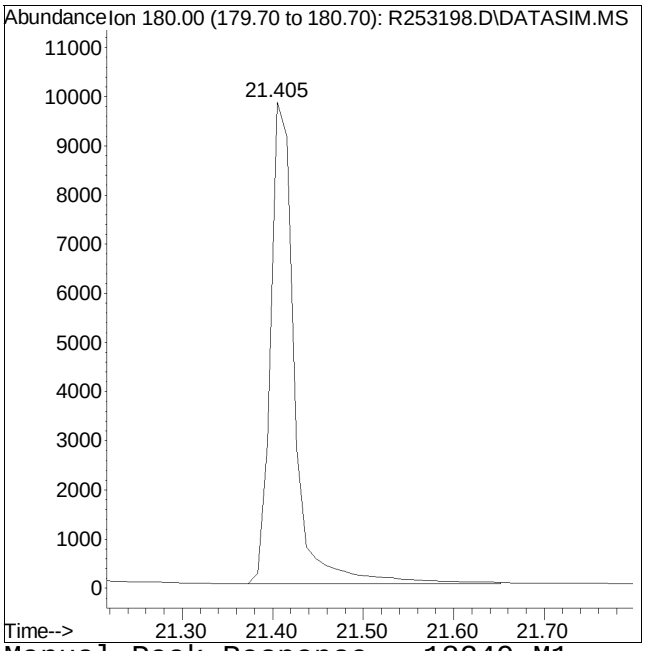
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253198.D
Date Inj'd : 3/26/2018 12:37 am
Sample : ITO15-SIMSTD0.5

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #83: 1,2,3-trichlorobenzene




Original Peak Response = 17975 Manual Peak Response = 18240 M1
M1 = Split or tailing peak, auto integration stopped early resulting in false low area count.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253199.D
Acq On : 26 Mar 2018 1:14 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD1.0
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:10:05 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.531 | 49 | 270190 | 10.000 | ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 98.91% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 618035 | 10.000 | ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 98.69% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 141310 | 10.000 | ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 98.18% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 195794 | 10.045 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.45% | | | |
| 53) toluene-D8 | 15.410 | 98 | 535253 | 10.053 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.53% | | | |
| 67) bromofluorobenzene | 18.205 | 95 | 281526 | 9.800 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 98.00% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 15890M6 | 1.081 | ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 53166 | 1.022 | ppbV | 99 |
| 4) chloromethane | 4.617 | 50 | 25708 | 1.058 | ppbV | 99 |
| 5) Freon-114 | 4.785 | 85 | 74178 | 1.045 | ppbV | 100 |
| 6) vinyl chloride | 4.952 | 62 | 29047 | 1.055 | ppbV | 99 |
| 7) 1,3-butadiene | 5.159 | 54 | 18959 | 1.042 | ppbV | 99 |
| 8) bromomethane | 5.559 | 94 | 24945 | 1.049 | ppbV | 100 |
| 9) chloroethane | 5.823 | 64 | 14165 | 1.058 | ppbV | 99 |
| 10) ethanol | 6.047 | 31 | 91143 | 5.365 | ppbV | 98 |
| 11) vinyl bromide | 6.327 | 106 | 23337 | 1.044 | ppbV | 100 |
| 12) acrolein | 6.519 | 56 | 8360 | 0.783 | ppbV # | 81 |
| 13) acetone | 6.711 | 43 | 135334 | 4.319 | ppbV | 98 |
| 14) trichlorofluoromethane | 6.910 | 101 | 52494 | 0.831 | ppbV | 100 |
| 15) isopropyl alcohol | 7.078 | 45 | 75717 | 2.902 | ppbV | 100 |
| 16) acrylonitrile | 7.334 | 53 | 13212M6 | 0.944 | ppbV | |
| 17) 1,1-dichloroethene | 7.758 | 61 | 37284 | 1.051 | ppbV | 99 |
| 18) tertiary butyl alcohol | 7.878 | 59 | 33461 | 0.981 | ppbV | 93 |
| 19) methylene chloride | 7.934 | 49 | 28333 | 1.069 | ppbV | 97 |
| 20) 3-chloropropene | 8.077 | 41 | 24377 | 1.027 | ppbV | 99 |
| 21) carbon disulfide | 8.269 | 76 | 62566 | 1.027 | ppbV # | 90 |
| 22) Freon 113 | 8.277 | 101 | 42510 | 1.039 | ppbV | 100 |
| 23) trans-1,2-dichloroethene | 9.106 | 61 | 33424 | 1.035 | ppbV | 98 |
| 24) 1,1-dichloroethane | 9.345 | 63 | 42582 | 1.042 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253199.D
Acq On : 26 Mar 2018 1:14 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD1.0
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:10:05 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.454 | 73 | 50240 | 1.016 | ppbV | | 99 |
| 26) | vinyl acetate | 9.557 | 43 | 37106 | 0.953 | ppbV | | 98 |
| 27) | 2-butanone | 9.864 | 43 | 42879 | 1.008 | ppbV | | 99 |
| 28) | cis-1,2-dichloroethene | 10.344 | 61 | 31888 | 1.031 | ppbV | | 96 |
| 29) | Ethyl Acetate | 10.635 | 61 | 6167 | 0.917 | ppbV | | 89 |
| 30) | chloroform | 10.691 | 83 | 47109 | 1.034 | ppbV | | 99 |
| 31) | Tetrahydrofuran | 11.198 | 42 | 25468 | 1.154 | ppbV | | 98 |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 32489 | 1.029 | ppbV | | 99 |
| 34) | hexane | 10.588 | 57 | 31754 | 1.015 | ppbV | | 83 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 43859 | 1.034 | ppbV | | 99 |
| 37) | benzene | 12.335 | 78 | 66869 | 1.040 | ppbV | | 100 |
| 38) | carbon tetrachloride | 12.509 | 117 | 43283 | 1.021 | ppbV | | 99 |
| 39) | cyclohexane | 12.651 | 56 | 32724 | 1.040 | ppbV | | 99 |
| 40) | dibromomethane | 13.238 | 93 | 26673 | 1.024 | ppbV | | 100 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 26673 | 1.023 | ppbV | | 99 |
| 42) | bromodichloromethane | 13.478 | 83 | 51002 | 1.025 | ppbV | | 99 |
| 43) | 1,4-dioxane | 13.554 | 88 | 13061 | 0.962 | ppbV | # | 62 |
| 44) | trichloroethene | 13.532 | 130 | 26632 | 1.014 | ppbV | | 99 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 105230 | 1.015 | ppbV | | 100 |
| 46) | heptane | 13.837 | 43 | 37567 | 1.012 | ppbV | | 100 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 35549 | 0.983 | ppbV | | 98 |
| 48) | 4-methyl-2-pentanone | 14.542 | 43 | 51465 | 0.981 | ppbV | | 97 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 34517 | 0.974 | ppbV | | 97 |
| 50) | 1,1,2-trichloroethane | 15.229 | 97 | 26998 | 1.017 | ppbV | | 100 |
| 52) | toluene | 15.500 | 91 | 77868 | 1.020 | ppbV | | 100 |
| 54) | 2-hexanone | 15.744 | 43 | 46840 | 0.939 | ppbV | # | 95 |
| 55) | dibromochloromethane | 15.907 | 129 | 43529 | 0.986 | ppbV | | 99 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 42101 | 0.993 | ppbV | | 99 |
| 57) | tetrachloroethene | 16.521 | 166 | 31584 | 0.995 | ppbV | | 98 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 30333 | 0.988 | ppbV | | 99 |
| 59) | chlorobenzene | 17.086 | 112 | 60512 | 0.997 | ppbV | | 99 |
| 60) | ethylbenzene | 17.367 | 91 | 96822 | 0.998 | ppbV | | 100 |
| 61) | m+p-xylene | 17.510 | 91 | 149245 | 1.935 | ppbV | | 99 |
| 62) | bromoform | 17.591 | 173 | 38138 | 0.936 | ppbV | | 100 |
| 63) | styrene | 17.781 | 104 | 54137 | 0.948 | ppbV | | 99 |
| 64) | 1,1,2,2-tetrachloroethane | 17.862 | 83 | 63704 | 0.957 | ppbV | | 100 |
| 65) | o-xylene | 17.862 | 91 | 76885 | 0.959 | ppbV | | 99 |
| 66) | 1,2,3-trichloropropane | 17.962 | 75 | 46687 | 0.989 | ppbV | | 99 |
| 68) | isopropylbenzene | 18.296 | 105 | 94323 | 0.968 | ppbV | | 99 |
| 69) | bromobenzene | 18.381 | 77 | 53649 | 0.967 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253199.D
Acq On : 26 Mar 2018 1:14 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD1.0
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Mar 26 12:10:05 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

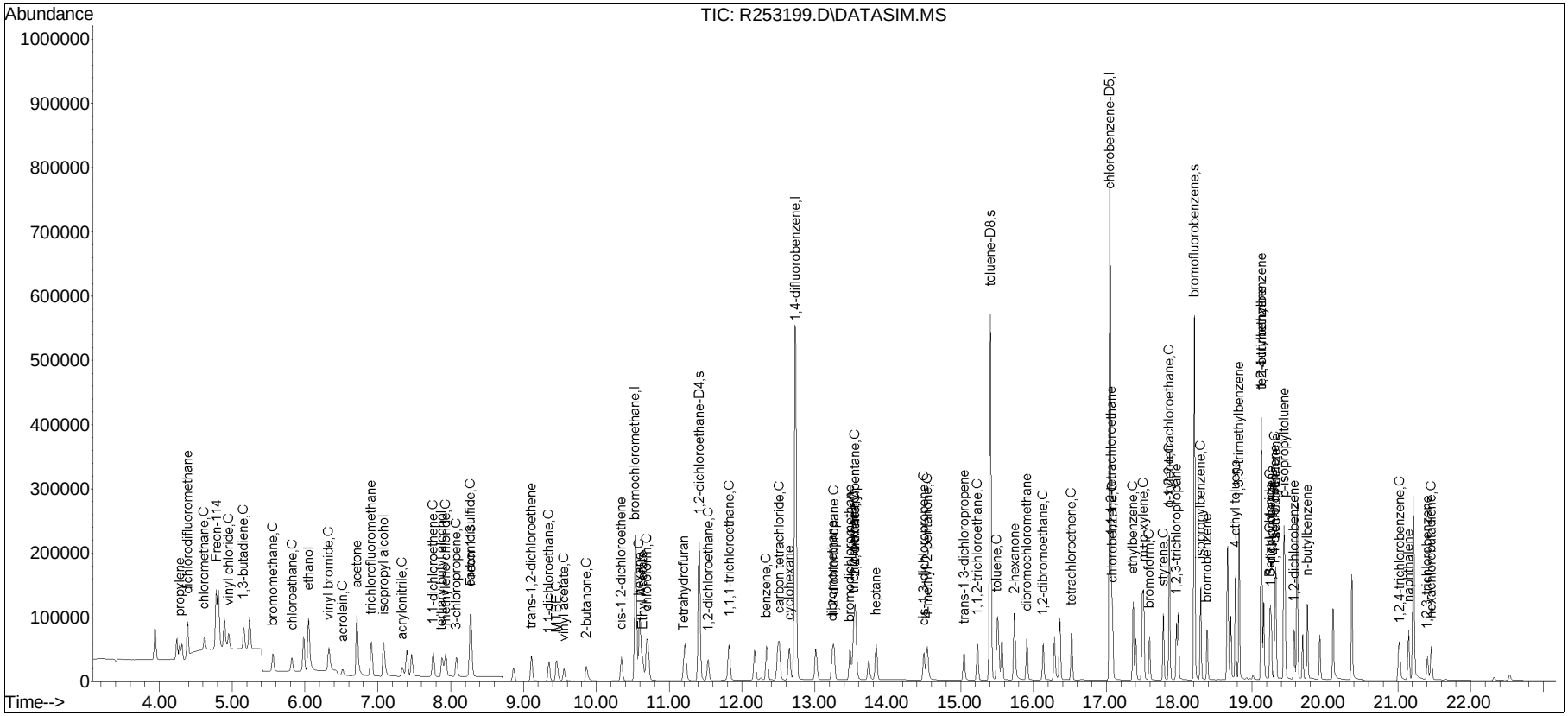
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.772 | 105 | 99004 | 0.917 | ppbV | 98 |
| 71) 1,3,5-trimethylbenzene | 18.820 | 105 | 81618 | 0.924 | ppbV | 99 |
| 72) tert-butylbenzene | 19.129 | 119 | 82032 | 0.901 | ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 19.129 | 105 | 81724 | 0.888 | ppbV | 98 |
| 74) Benzyl Chloride | 19.248 | 91 | 59921 | 0.782 | ppbV | 98 |
| 75) 1,3-dichlorobenzene | 19.263 | 146 | 56896 | 0.882 | ppbV | 96 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 58323 | 0.879 | ppbV | 97 |
| 77) sec-butylbenzene | 19.325 | 105 | 117039 | 0.901 | ppbV | 98 |
| 78) p-isopropyltoluene | 19.439 | 119 | 95147 | 0.877 | ppbV | 99 |
| 79) 1,2-dichlorobenzene | 19.577 | 146 | 53398 | 0.883 | ppbV | 96 |
| 80) n-butylbenzene | 19.758 | 91 | 97732 | 0.882 | ppbV | 96 |
| 81) 1,2,4-trichlorobenzene | 21.030 | 180 | 42242 | 0.744 | ppbV # | 84 |
| 82) naphthalene | 21.148 | 128 | 99736 | 0.829 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.405 | 180 | 35416 | 0.707 | ppbV # | 91 |
| 84) hexachlorobutadiene | 21.459 | 225 | 33937 | 0.773 | ppbV # | 92 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253199.D
Acq On : 26 Mar 2018 1:14 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD1.0
Misc : WG1100531
ALS Vial : 6 Sample Multiplier: 1

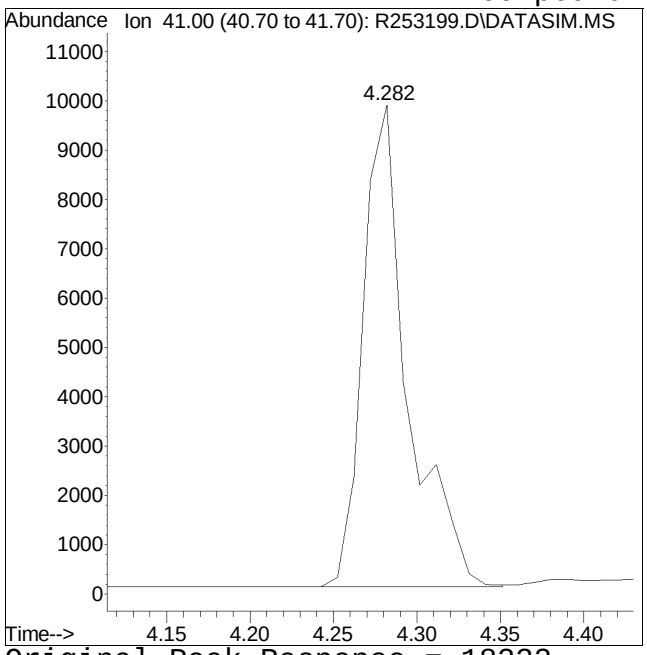
Quant Time: Mar 26 12:10:05 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration



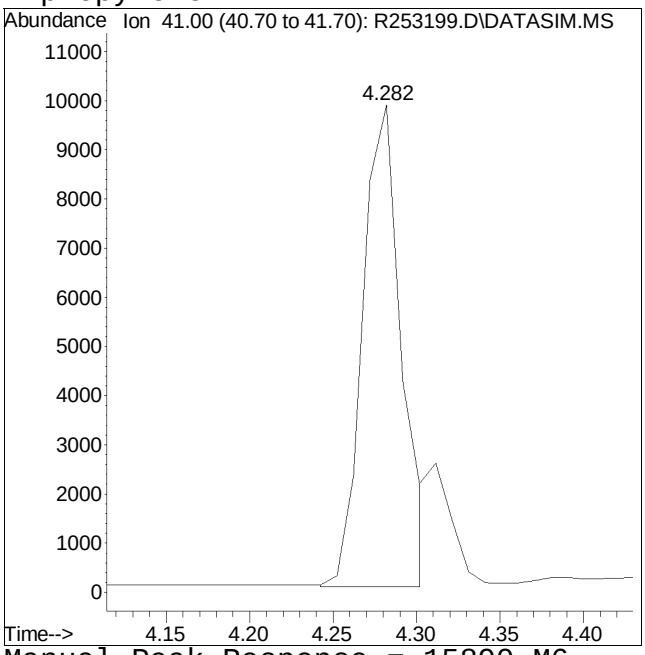
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253199.D
Date Inj'd : 3/26/2018 1:14 am
Sample : ITO15-SIMSTD1.0
Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 18232




Manual Peak Response = 15890 M6

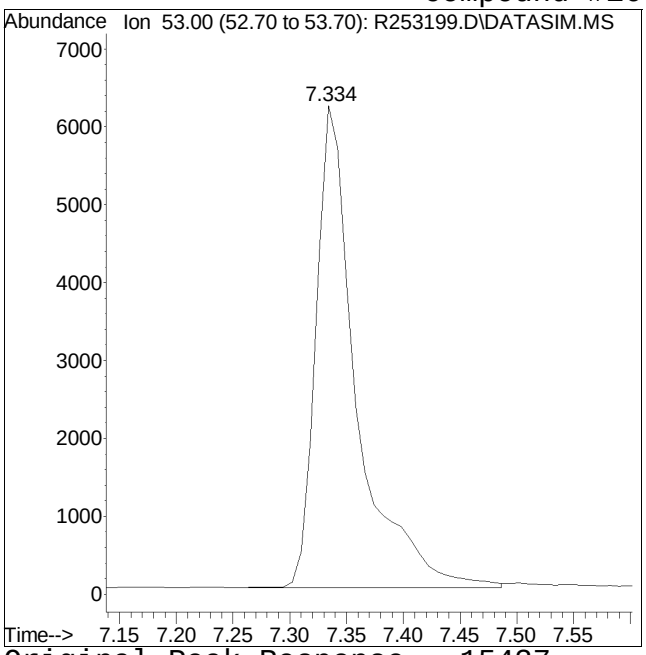
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

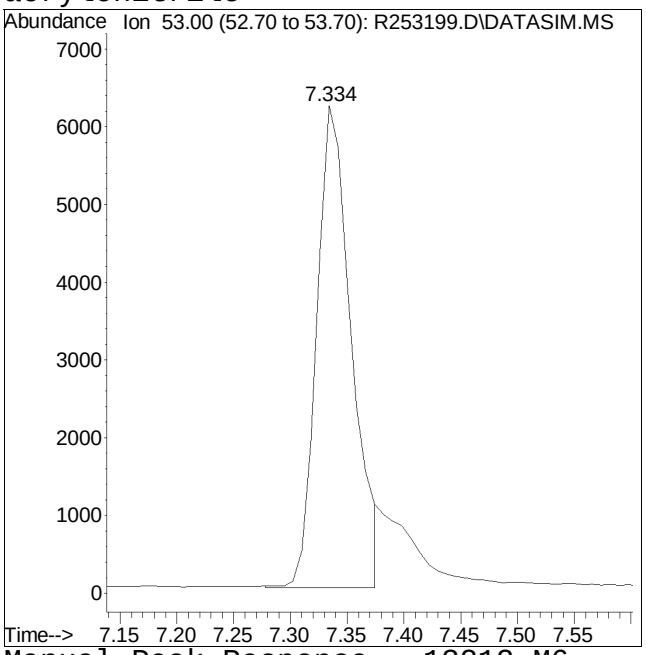
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253199.D
Date Inj'd : 3/26/2018 1:14 am
Sample : ITO15-SIMSTD1.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #16: acrylonitrile




Original Peak Response = 15437




Manual Peak Response = 13212 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253200.D
Acq On : 26 Mar 2018 1:49 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 26 07:23:23 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Mar 24 10:11:49 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 273176 | 10.000 ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 100.00% | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 626263 | 10.000 ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 100.00% | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 143934 | 10.000 ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 100.00% | | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 197517 | 9.380 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 93.80% | | |
| 53) toluene-D8 | 15.410 | 98 | 542322 | 10.093 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.93% | | |
| 67) bromofluorobenzene | 18.205 | 95 | 292611 | 10.514 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 105.14% | | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 74320M6 | 4.660 ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 262946 | 5.406 ppbV | 99 |
| 4) chloromethane | 4.617 | 50 | 122798 | 5.341 ppbV | 99 |
| 5) Freon-114 | 4.785 | 85 | 358694 | 5.782 ppbV | 96 |
| 6) vinyl chloride | 4.952 | 62 | 139185 | 5.615 ppbV | 100 |
| 7) 1,3-butadiene | 5.159 | 54 | 91941 | 5.853 ppbV | 92 |
| 8) bromomethane | 5.560 | 94 | 120253 | 5.553 ppbV | 99 |
| 9) chloroethane | 5.823 | 64 | 67684 | 5.512 ppbV | 95 |
| 10) ethanol | 6.039 | 31 | 429373 | 29.705 ppbV | 96 |
| 11) vinyl bromide | 6.327 | 106 | 113013 | 5.868 ppbV | 99 |
| 12) acrolein | 6.511 | 56 | 53975 | 5.648 ppbV | 97 |
| 13) acetone | 6.695 | 43 | 791981 | 26.656 ppbV | 98 |
| 14) trichlorofluoromethane | 6.910 | 101 | 319188 | 6.381 ppbV | 99 |
| 15) isopropyl alcohol | 7.062 | 45 | 329694 | 11.166 ppbV | 100 |
| 16) acrylonitrile | 7.334 | 53 | 70756 | 5.238 ppbV | 99 |
| 17) 1,1-dichloroethene | 7.758 | 61 | 179362 | 5.704 ppbV | 99 |
| 18) tertiary butyl alcohol | 7.862 | 59 | 172374 | 6.091 ppbV # | 86 |
| 19) methylene chloride | 7.934 | 49 | 133978 | 4.832 ppbV | 95 |
| 20) 3-chloropropene | 8.077 | 41 | 120049 | 5.336 ppbV | 90 |
| 21) carbon disulfide | 8.269 | 76 | 308121 | 5.304 ppbV | 97 |
| 22) Freon 113 | 8.277 | 101 | 206811 | 5.236 ppbV | 97 |
| 23) trans-1,2-dichloroethene | 9.106 | 61 | 163303 | 5.674 ppbV | 98 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 206532 | 5.243 ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253200.D
Acq On : 26 Mar 2018 1:49 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 26 07:23:23 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Mar 24 10:11:49 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.441 | 73 | 250056 | 7.050 | ppbV | | 99 |
| 26) | vinyl acetate | 9.550 | 43 | 196930 | 5.236 | ppbV | | 99 |
| 27) | 2-butanone | 9.843 | 43 | 214982 | 5.280 | ppbV | | 94 |
| 28) | cis-1,2-dichloroethene | 10.344 | 61 | 156393 | 5.968 | ppbV | | 95 |
| 29) | Ethyl Acetate | 10.625 | 61 | 33995 | 5.671 | ppbV | | 85 |
| 30) | chloroform | 10.691 | 83 | 230212 | 5.383 | ppbV | | 100 |
| 31) | Tetrahydrofuran | 11.170 | 42 | 111532M6 | 4.926 | ppbV | | |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 159606 | 5.301 | ppbV | | 99 |
| 34) | hexane | 10.588 | 57 | 158472 | 5.081 | ppbV | | 93 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 214960 | 4.832 | ppbV | | 96 |
| 37) | benzene | 12.335 | 78 | 325623 | 5.014 | ppbV | | 95 |
| 38) | carbon tetrachloride | 12.509 | 117 | 214840 | 4.814 | ppbV | | 100 |
| 39) | cyclohexane | 12.651 | 56 | 159438 | 5.205 | ppbV | | 93 |
| 40) | dibromomethane | 13.238 | 93 | 131921 | 4.397 | ppbV | | 97 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 132141 | 4.568 | ppbV | | 99 |
| 42) | bromodichloromethane | 13.478 | 83 | 252206 | 4.862 | ppbV | | 100 |
| 43) | 1,4-dioxane | 13.532 | 88 | 68761 | 5.695 | ppbV | | 87 |
| 44) | trichloroethene | 13.532 | 130 | 133110 | 4.948 | ppbV | | 99 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 525022 | 5.019 | ppbV | | 99 |
| 46) | heptane | 13.837 | 43 | 188147 | 4.857 | ppbV | # | 94 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 183283 | 5.691 | ppbV | | 99 |
| 48) | 4-methyl-2-pentanone | 14.524 | 43 | 265855 | 5.024 | ppbV | # | 95 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 179598 | 5.730 | ppbV | | 98 |
| 50) | 1,1,2-trichloroethane | 15.229 | 97 | 134455 | 4.816 | ppbV | | 97 |
| 52) | toluene | 15.500 | 91 | 388902 | 5.074 | ppbV | | 100 |
| 54) | 2-hexanone | 15.726 | 43 | 253952 | 4.988 | ppbV | # | 93 |
| 55) | dibromochloromethane | 15.907 | 129 | 224816 | 5.026 | ppbV | | 100 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 215871 | 5.127 | ppbV | | 100 |
| 57) | tetrachloroethene | 16.521 | 166 | 161599 | 4.689 | ppbV | | 95 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 156422 | 4.770 | ppbV | | 99 |
| 59) | chlorobenzene | 17.086 | 112 | 309075 | 4.784 | ppbV | | 98 |
| 60) | ethylbenzene | 17.367 | 91 | 493921 | 5.814 | ppbV | | 100 |
| 61) | m+p-xylene | 17.510 | 91 | 785669 | 11.777 | ppbV | | 99 |
| 62) | bromoform | 17.591 | 173 | 207493 | 4.985 | ppbV | | 100 |
| 63) | styrene | 17.781 | 104 | 290819 | 6.265 | ppbV | | 99 |
| 64) | 1,1,2,2-tetrachloroethane | 17.862 | 83 | 338854 | 4.925 | ppbV | | 99 |
| 65) | o-xylene | 17.862 | 91 | 408292 | 5.983 | ppbV | | 97 |
| 66) | 1,2,3-trichloropropane | 17.962 | 75 | 240363 | 4.777 | ppbV | | 97 |
| 68) | isopropylbenzene | 18.296 | 105 | 496065 | 5.036 | ppbV | | 100 |
| 69) | bromobenzene | 18.381 | 77 | 282414 | 5.097 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253200.D
Acq On : 26 Mar 2018 1:49 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 26 07:23:23 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Mar 24 10:11:49 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

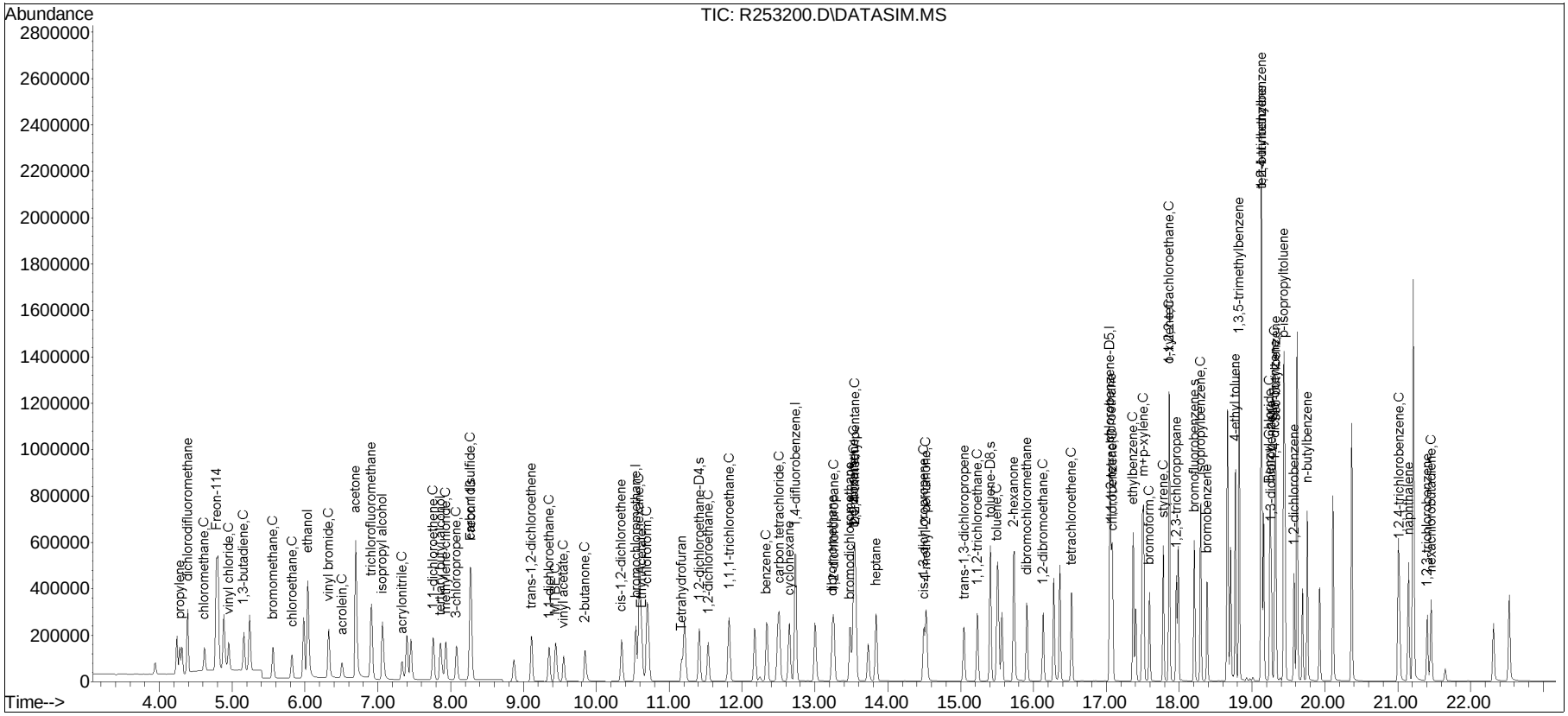
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.772 | 105 | 550086 | 6.336 | ppbV | 100 |
| 71) 1,3,5-trimethylbenzene | 18.820 | 105 | 449803 | 6.130 | ppbV | 99 |
| 72) tert-butylbenzene | 19.129 | 119 | 463886 | 5.212 | ppbV | 100 |
| 73) 1,2,4-trimethylbenzene | 19.129 | 105 | 468665 | 6.529 | ppbV | 99 |
| 74) Benzyl Chloride | 19.244 | 91 | 390346 | 5.202 | ppbV | 95 |
| 75) 1,3-dichlorobenzene | 19.263 | 146 | 328507 | 5.457 | ppbV | 99 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 337764 | 5.663 | ppbV | 100 |
| 77) sec-butylbenzene | 19.325 | 105 | 661540 | 5.212 | ppbV | 99 |
| 78) p-isopropyltoluene | 19.434 | 119 | 552690 | 5.289 | ppbV | 97 |
| 79) 1,2-dichlorobenzene | 19.577 | 146 | 307977 | 5.525 | ppbV | 100 |
| 80) n-butylbenzene | 19.758 | 91 | 564158 | 5.500 | ppbV | 98 |
| 81) 1,2,4-trichlorobenzene | 21.019 | 180 | 289165 | 6.172 | ppbV # | 76 |
| 82) naphthalene | 21.148 | 128 | 613081 | 6.843 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.405 | 180 | 255209 | 6.349 | ppbV | 99 |
| 84) hexachlorobutadiene | 21.459 | 225 | 223657 | 5.153 | ppbV | 98 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253200.D
Acq On : 26 Mar 2018 1:49 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 7 Sample Multiplier: 1

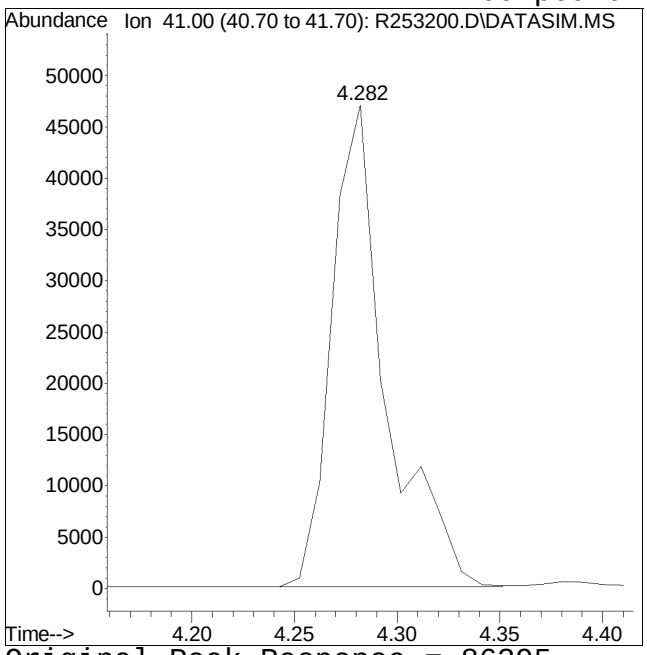
Quant Time: Mar 26 07:23:23 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Sat Mar 24 10:11:49 2018
Response via : Initial Calibration



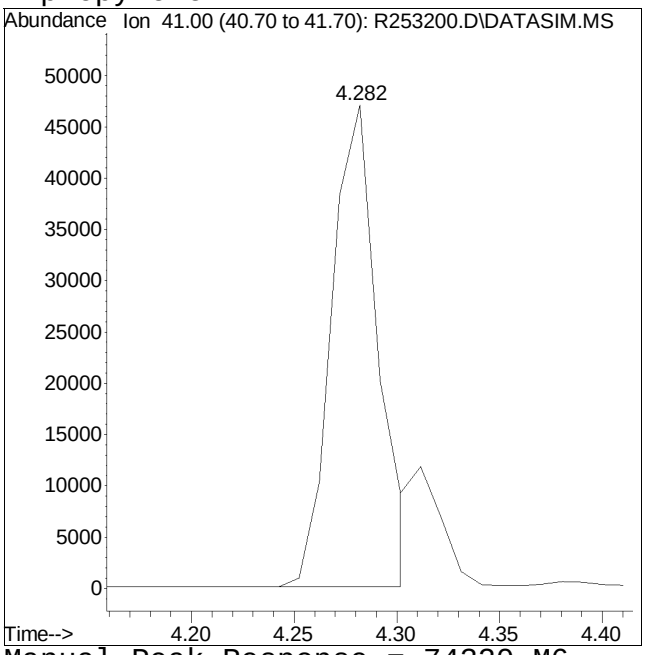
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253200.D
Date Inj'd : 3/26/2018 1:49 am
Sample : ITO15-SIMSTD5.0
Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:22 am

Compound #2: propylene




Original Peak Response = 86395




Manual Peak Response = 74320 M6

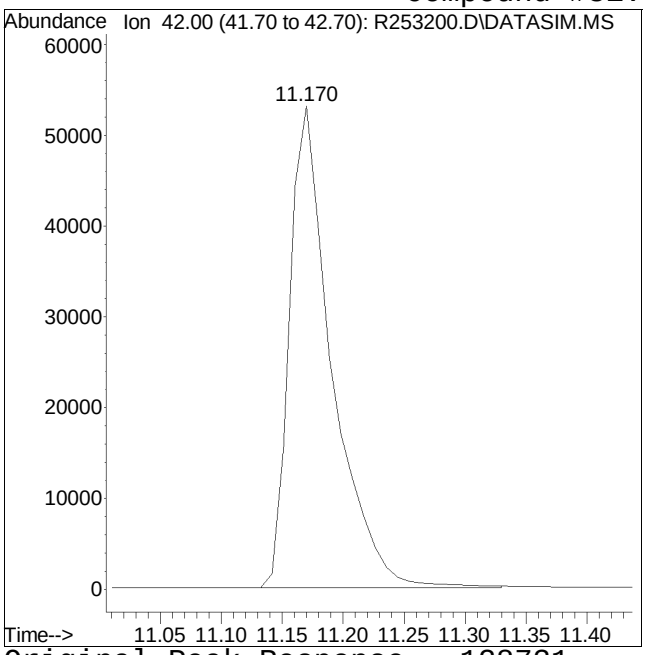
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

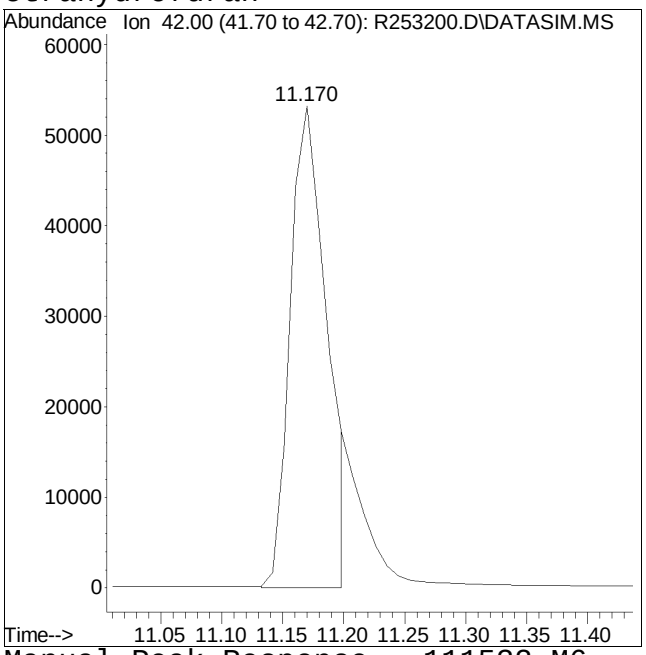
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253200.D
Date Inj'd : 3/26/2018 1:49 am
Sample : ITO15-SIMSTD5.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:22 am

Compound #31: Tetrahydrofuran




Original Peak Response = 128731




Manual Peak Response = 111532 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253201.D
Acq On : 26 Mar 2018 2:26 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD10.0
Misc : WG1100531
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 26 12:11:17 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 277624 | 10.000 ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 101.63% | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 636575 | 10.000 ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 101.65% | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 146089 | 10.000 ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 101.50% | | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 199297 | 9.927 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.27% | | |
| 53) toluene-D8 | 15.410 | 98 | 549417 | 9.981 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.81% | | |
| 67) bromofluorobenzene | 18.205 | 95 | 297830 | 10.028 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.28% | | |

| Target Compounds | | | | | Qvalue |
|---|---|---|---|---|---|
| 2) propylene | 4.282 | 41 | 149751M6 | 9.913 ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 500583 | 9.366 ppbV | 100 |
| 4) chloromethane | 4.617 | 50 | 239120 | 9.580 ppbV | 100 |
| 5) Freon-114 | 4.785 | 85 | 699382 | 9.593 ppbV | 99 |
| 6) vinyl chloride | 4.952 | 62 | 270321 | 9.555 ppbV | 100 |
| 7) 1,3-butadiene | 5.159 | 54 | 181589 | 9.717 ppbV | 96 |
| 8) bromomethane | 5.559 | 94 | 233351 | 9.547 ppbV | 100 |
| 9) chloroethane | 5.823 | 64 | 132142 | 9.605 ppbV | 99 |
| 10) ethanol | 6.039 | 31 | 818343 | 46.884 ppbV | 99 |
| 11) vinyl bromide | 6.327 | 106 | 219351 | 9.549 ppbV | 100 |
| 12) acrolein | 6.503 | 56 | 105092 | 9.579 ppbV | 99 |
| 13) acetone | 6.687 | 43 | 1210085 | 37.586 ppbV | 98 |
| 14) trichlorofluoromethane | 6.910 | 101 | 503497 | 7.761 ppbV | 100 |
| 15) isopropyl alcohol | 7.054 | 45 | 629168 | 23.472 ppbV | 100 |
| 16) acrylonitrile | 7.326 | 53 | 143322 | 9.966 ppbV | 99 |
| 17) 1,1-dichloroethene | 7.758 | 61 | 355647 | 9.755 ppbV | 99 |
| 18) tertiary butyl alcohol | 7.854 | 59 | 334241 | 9.540 ppbV | 99 |
| 19) methylene chloride | 7.934 | 49 | 264456 | 9.711 ppbV | 99 |
| 20) 3-chloropropene | 8.077 | 41 | 242191 | 9.926 ppbV | 99 |
| 21) carbon disulfide | 8.269 | 76 | 621723 | 9.927 ppbV | 98 |
| 22) Freon 113 | 8.277 | 101 | 416860 | 9.917 ppbV | 99 |
| 23) trans-1,2-dichloroethene | 9.106 | 61 | 324871 | 9.788 ppbV | 100 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 406574 | 9.685 ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253201.D
Acq On : 26 Mar 2018 2:26 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD10.0
Misc : WG1100531
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 26 12:11:17 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.434 | 73 | 502698 | 9.891 | ppbV | 100 |
| 26) | vinyl acetate | 9.550 | 43 | 417833 | 10.439 | ppbV | 99 |
| 27) | 2-butanone | 9.837 | 43 | 427454 | 9.782 | ppbV | 100 |
| 28) | cis-1,2-dichloroethene | 10.344 | 61 | 309485 | 9.736 | ppbV | 100 |
| 29) | Ethyl Acetate | 10.616 | 61 | 69354 | 10.037 | ppbV | 70 |
| 30) | chloroform | 10.691 | 83 | 458397 | 9.796 | ppbV | 100 |
| 31) | Tetrahydrofuran | 11.160 | 42 | 221075M6 | 9.752 | ppbV | |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 312756 | 9.641 | ppbV | 100 |
| 34) | hexane | 10.588 | 57 | 317990 | 9.870 | ppbV | 93 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 428336 | 9.802 | ppbV | 98 |
| 37) | benzene | 12.335 | 78 | 647705 | 9.785 | ppbV | 99 |
| 38) | carbon tetrachloride | 12.509 | 117 | 431754 | 9.885 | ppbV | 100 |
| 39) | cyclohexane | 12.651 | 56 | 318156 | 9.816 | ppbV | 100 |
| 40) | dibromomethane | 13.238 | 93 | 261937 | 9.767 | ppbV | 99 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 261131 | 9.721 | ppbV | 100 |
| 42) | bromodichloromethane | 13.478 | 83 | 504181 | 9.834 | ppbV | 100 |
| 43) | 1,4-dioxane | 13.532 | 88 | 138169 | 9.884 | ppbV | 89 |
| 44) | trichloroethene | 13.532 | 130 | 272227 | 10.060 | ppbV | 100 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 1051360 | 9.850 | ppbV | 99 |
| 46) | heptane | 13.837 | 43 | 374740 | 9.797 | ppbV | 99 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 371546 | 9.972 | ppbV | 99 |
| 48) | 4-methyl-2-pentanone | 14.524 | 43 | 532390 | 9.851 | ppbV | 97 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 367497 | 10.065 | ppbV | 100 |
| 50) | 1,1,2-trichloroethane | 15.229 | 97 | 268334 | 9.817 | ppbV | 99 |
| 52) | toluene | 15.500 | 91 | 776276 | 9.833 | ppbV | 99 |
| 54) | 2-hexanone | 15.726 | 43 | 518045 | 10.049 | ppbV | 97 |
| 55) | dibromochloromethane | 15.907 | 129 | 460856 | 10.098 | ppbV | 100 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 438026 | 9.996 | ppbV | 100 |
| 57) | tetrachloroethene | 16.521 | 166 | 332918 | 10.149 | ppbV | 100 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 318507 | 10.031 | ppbV | 100 |
| 59) | chlorobenzene | 17.086 | 112 | 623472 | 9.937 | ppbV | 99 |
| 60) | ethylbenzene | 17.367 | 91 | 1001816 | 9.992 | ppbV | 99 |
| 61) | m+p-xylene | 17.510 | 91 | 1594861 | 20.000 | ppbV | 100 |
| 62) | bromoform | 17.591 | 173 | 444559 | 10.555 | ppbV | 99 |
| 63) | styrene | 17.781 | 104 | 595679 | 10.090 | ppbV | 99 |
| 64) | 1,1,2,2-tetrachloroethane | 17.862 | 83 | 699170 | 10.165 | ppbV | 100 |
| 65) | o-xylene | 17.862 | 91 | 844075 | 10.184 | ppbV | 99 |
| 66) | 1,2,3-trichloropropane | 17.962 | 75 | 488400 | 10.010 | ppbV | 100 |
| 68) | isopropylbenzene | 18.296 | 105 | 1005256 | 9.983 | ppbV | 99 |
| 69) | bromobenzene | 18.381 | 77 | 574380 | 10.019 | ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253201.D
Acq On : 26 Mar 2018 2:26 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD10.0
Misc : WG1100531
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 26 12:11:17 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

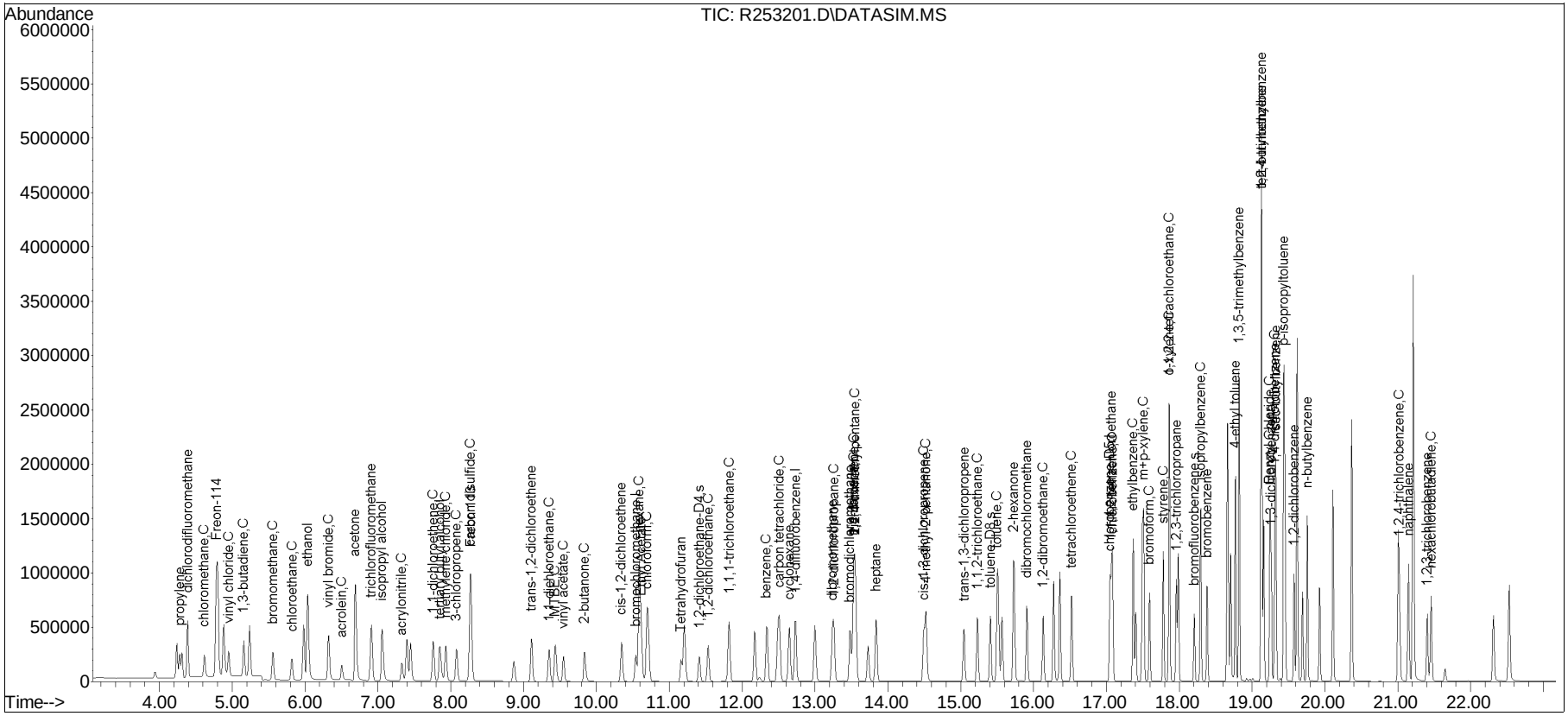
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.772 | 105 | 1130677 | 10.126 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.820 | 105 | 923969 | 10.119 | ppbV | 98 |
| 72) tert-butylbenzene | 19.129 | 119 | 968182 | 10.282 | ppbV | 100 |
| 73) 1,2,4-trimethylbenzene | 19.129 | 105 | 983594 | 10.339 | ppbV | 99 |
| 74) Benzyl Chloride | 19.244 | 91 | 826399 | 10.429 | ppbV | 99 |
| 75) 1,3-dichlorobenzene | 19.263 | 146 | 687706 | 10.313 | ppbV | 99 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 711990 | 10.384 | ppbV | 100 |
| 77) sec-butylbenzene | 19.325 | 105 | 1355457 | 10.094 | ppbV | 99 |
| 78) p-isopropyltoluene | 19.434 | 119 | 1140817 | 10.168 | ppbV | 99 |
| 79) 1,2-dichlorobenzene | 19.577 | 146 | 644742 | 10.313 | ppbV | 100 |
| 80) n-butylbenzene | 19.758 | 91 | 1158993 | 10.120 | ppbV | 99 |
| 81) 1,2,4-trichlorobenzene | 21.019 | 180 | 636697 | 10.847 | ppbV | 98 |
| 82) naphthalene | 21.148 | 128 | 1300080 | 10.446 | ppbV | 100 |
| 83) 1,2,3-trichlorobenzene | 21.405 | 180 | 554382 | 10.701 | ppbV | 99 |
| 84) hexachlorobutadiene | 21.459 | 225 | 493537 | 10.871 | ppbV | 98 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253201.D
Acq On : 26 Mar 2018 2:26 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD10.0
Misc : WG1100531
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Mar 26 12:11:17 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

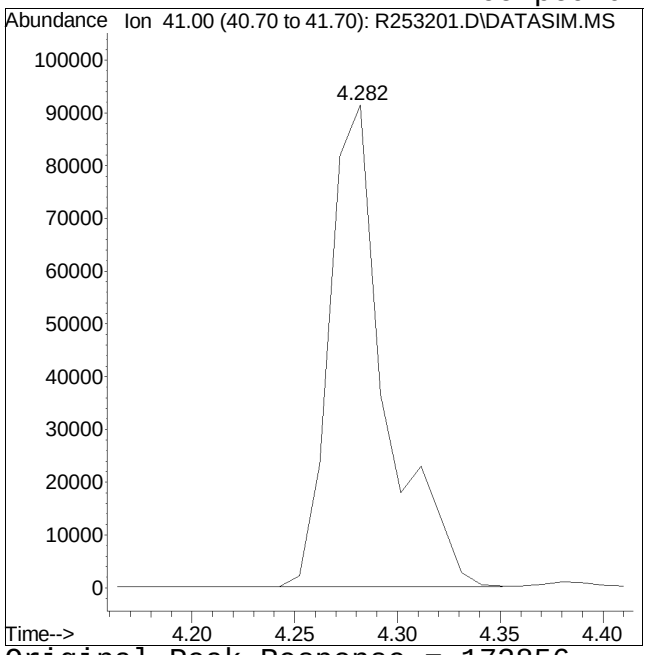


Manual Integration/Negative Proof Report

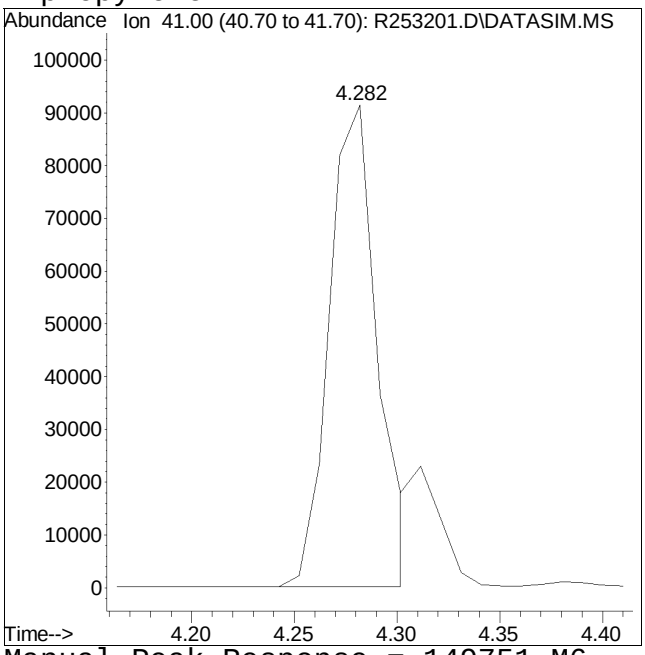
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253201.D
Date Inj'd : 3/26/2018 2:26 am
Sample : ITO15-SIMSTD10.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 172856




Manual Peak Response = 149751 M6

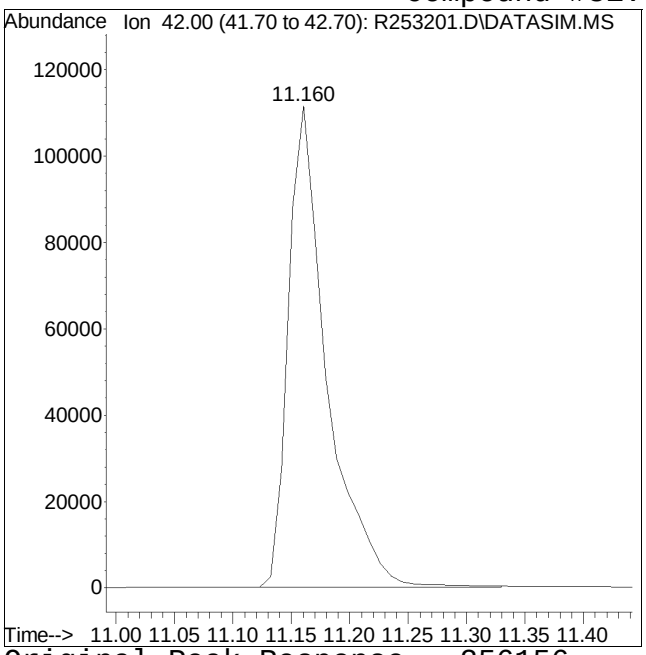
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

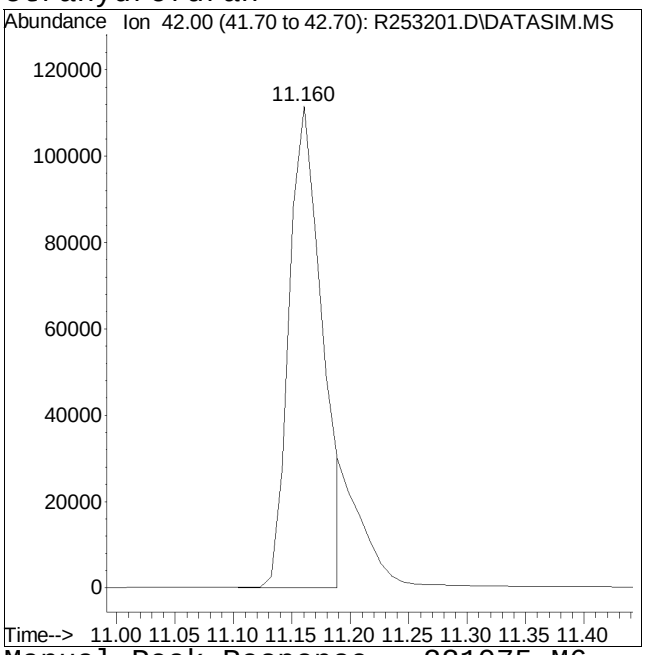
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253201.D
Date Inj'd : 3/26/2018 2:26 am
Sample : ITO15-SIMSTD10.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #31: Tetrahydrofuran




Original Peak Response = 256156




Manual Peak Response = 221075 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253202.D
Acq On : 26 Mar 2018 3:00 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD20.0
Misc : WG1100531
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 26 12:13:20 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 284741 | 10.000 | ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 104.23% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 652246 | 10.000 | ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 104.15% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 151803 | 10.000 | ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 105.47% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 201242 | 9.783 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.83% | | | |
| 53) toluene-D8 | 15.410 | 98 | 557592 | 9.749 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.49% | | | |
| 67) bromofluorobenzene | 18.205 | 95 | 309427 | 10.027 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.27% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 330542M6 | 21.335 | ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 1166042 | 21.272 | ppbV | 99 |
| 4) chloromethane | 4.617 | 50 | 510205 | 19.930 | ppbV | 99 |
| 5) Freon-114 | 4.785 | 85 | 1527834 | 20.432 | ppbV | 98 |
| 6) vinyl chloride | 4.952 | 62 | 585415 | 20.176 | ppbV | 100 |
| 7) 1,3-butadiene | 5.159 | 54 | 393453 | 20.528 | ppbV | 93 |
| 8) bromomethane | 5.560 | 94 | 503091 | 20.068 | ppbV | 99 |
| 9) chloroethane | 5.823 | 64 | 283352 | 20.082 | ppbV | 99 |
| 10) ethanol | 6.039 | 31 | 1845481 | 103.088 | ppbV | 100 |
| 11) vinyl bromide | 6.327 | 106 | 477660 | 20.275 | ppbV | 100 |
| 12) acrolein | 6.503 | 56 | 228909 | 20.344 | ppbV | 97 |
| 13) acetone | 6.687 | 43 | 3547338 | 107.429 | ppbV | 99 |
| 14) trichlorofluoromethane | 6.910 | 101 | 1134484 | 17.050 | ppbV | 100 |
| 15) isopropyl alcohol | 7.062 | 45 | 1576494 | 57.343 | ppbV | 100 |
| 16) acrylonitrile | 7.334 | 53 | 319555 | 21.664 | ppbV | 100 |
| 17) 1,1-dichloroethene | 7.758 | 61 | 784484 | 20.981 | ppbV | 100 |
| 18) tertiary butyl alcohol | 7.854 | 59 | 804603 | 22.391 | ppbV | 97 |
| 19) methylene chloride | 7.934 | 49 | 580230 | 20.774 | ppbV | 98 |
| 20) 3-chloropropene | 8.078 | 41 | 541267 | 21.628 | ppbV | 99 |
| 21) carbon disulfide | 8.269 | 76 | 1409672 | 21.946 | ppbV | 98 |
| 22) Freon 113 | 8.277 | 101 | 942274 | 21.856 | ppbV | 99 |
| 23) trans-1,2-dichloroethene | 9.106 | 61 | 722968 | 21.237 | ppbV | 98 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 900117 | 20.906 | ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253202.D
Acq On : 26 Mar 2018 3:00 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD20.0
Misc : WG1100531
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 26 12:13:20 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.434 | 73 | 1129383 | 21.665 | ppbV | | 100 |
| 26) | vinyl acetate | 9.550 | 43 | 1014919 | 24.722 | ppbV | | 99 |
| 27) | 2-butanone | 9.837 | 43 | 956368 | 21.340 | ppbV | | 99 |
| 28) | cis-1,2-dichloroethene | 10.344 | 61 | 685521 | 21.026 | ppbV | | 97 |
| 29) | Ethyl Acetate | 10.616 | 61 | 160866 | 22.699 | ppbV | | 71 |
| 30) | chloroform | 10.700 | 83 | 1033145 | 21.528 | ppbV | | 97 |
| 31) | Tetrahydrofuran | 11.151 | 42 | 511479M6 | 21.998 | ppbV | | |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 690262 | 20.746 | ppbV | | 99 |
| 34) | hexane | 10.588 | 57 | 720939 | 21.840 | ppbV | | 91 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 952667 | 21.276 | ppbV | | 100 |
| 37) | benzene | 12.346 | 78 | 1419783 | 20.933 | ppbV | | 94 |
| 38) | carbon tetrachloride | 12.509 | 117 | 984790 | 22.006 | ppbV | | 99 |
| 39) | cyclohexane | 12.651 | 56 | 706999 | 21.288 | ppbV | | 98 |
| 40) | dibromomethane | 13.238 | 93 | 590538 | 21.491 | ppbV | | 98 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 587275 | 21.336 | ppbV | | 99 |
| 42) | bromodichloromethane | 13.489 | 83 | 1128690 | 21.485 | ppbV | # | 95 |
| 43) | 1,4-dioxane | 13.521 | 88 | 331914 | 23.174 | ppbV | | 90 |
| 44) | trichloroethene | 13.532 | 130 | 625146 | 22.547 | ppbV | | 99 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 2369715 | 21.669 | ppbV | | 98 |
| 46) | heptane | 13.837 | 43 | 848019 | 21.638 | ppbV | | 98 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 843218 | 22.087 | ppbV | | 98 |
| 48) | 4-methyl-2-pentanone | 14.524 | 43 | 1212266 | 21.891 | ppbV | # | 96 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 851877 | 22.771 | ppbV | | 99 |
| 50) | 1,1,2-trichloroethane | 15.229 | 97 | 604413 | 21.581 | ppbV | | 100 |
| 52) | toluene | 15.500 | 91 | 1736905 | 21.173 | ppbV | | 99 |
| 54) | 2-hexanone | 15.726 | 43 | 1216189 | 22.704 | ppbV | | 96 |
| 55) | dibromochloromethane | 15.907 | 129 | 1074055 | 22.649 | ppbV | | 99 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 999082 | 21.941 | ppbV | | 100 |
| 57) | tetrachloroethene | 16.521 | 166 | 787239 | 23.095 | ppbV | | 100 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 740979 | 22.457 | ppbV | | 99 |
| 59) | chlorobenzene | 17.086 | 112 | 1416033 | 21.720 | ppbV | | 98 |
| 60) | ethylbenzene | 17.367 | 91 | 2260797 | 21.700 | ppbV | | 98 |
| 61) | m+p-xylene | 17.510 | 91 | 3670119 | 44.292 | ppbV | | 100 |
| 62) | bromoform | 17.596 | 173 | 1073812 | 24.535 | ppbV | | 99 |
| 63) | styrene | 17.781 | 104 | 1358719 | 22.149 | ppbV | | 98 |
| 64) | 1,1,2,2-tetrachloroethane | 17.862 | 83 | 1635928 | 22.888 | ppbV | | 100 |
| 65) | o-xylene | 17.867 | 91 | 1962165 | 22.783 | ppbV | | 97 |
| 66) | 1,2,3-trichloropropane | 17.962 | 75 | 1112818 | 21.949 | ppbV | | 99 |
| 68) | isopropylbenzene | 18.296 | 105 | 2278331 | 21.774 | ppbV | | 99 |
| 69) | bromobenzene | 18.386 | 77 | 1323975 | 22.225 | ppbV | | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253202.D
Acq On : 26 Mar 2018 3:00 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD20.0
Misc : WG1100531
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 26 12:13:20 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

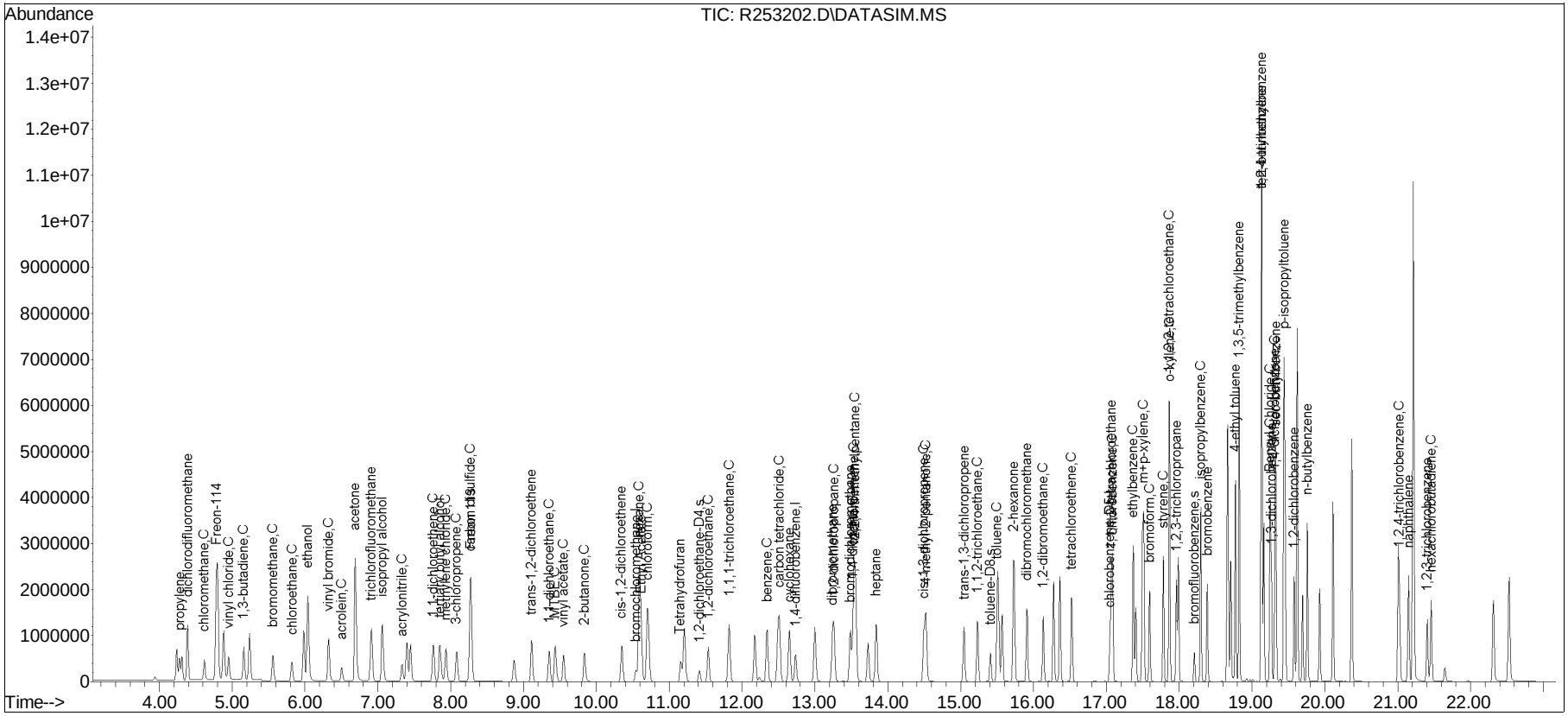
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.772 | 105 | 2532552 | 21.826 | ppbV | 98 |
| 71) 1,3,5-trimethylbenzene | 18.820 | 105 | 2076684 | 21.888 | ppbV | 99 |
| 72) tert-butylbenzene | 19.129 | 119 | 2231754 | 22.808 | ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 19.129 | 105 | 2295349 | 23.219 | ppbV | 95 |
| 74) Benzyl Chloride | 19.248 | 91 | 1964516 | 23.859 | ppbV | 91 |
| 75) 1,3-dichlorobenzene | 19.268 | 146 | 1580520 | 22.809 | ppbV | 95 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 1644998 | 23.089 | ppbV | 96 |
| 77) sec-butylbenzene | 19.325 | 105 | 3073285 | 22.024 | ppbV | 99 |
| 78) p-isopropyltoluene | 19.439 | 119 | 2591372 | 22.228 | ppbV | 95 |
| 79) 1,2-dichlorobenzene | 19.577 | 146 | 1463714 | 22.532 | ppbV | 97 |
| 80) n-butylbenzene | 19.758 | 91 | 2562337 | 21.532 | ppbV | 98 |
| 81) 1,2,4-trichlorobenzene | 21.019 | 180 | 1409320 | 23.106 | ppbV | 99 |
| 82) naphthalene | 21.148 | 128 | 2656074 | 20.539 | ppbV | 98 |
| 83) 1,2,3-trichlorobenzene | 21.405 | 180 | 1172749 | 21.785 | ppbV | 98 |
| 84) hexachlorobutadiene | 21.459 | 225 | 1091165 | 23.129 | ppbV | 98 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253202.D
Acq On : 26 Mar 2018 3:00 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD20.0
Misc : WG1100531
ALS Vial : 8 Sample Multiplier: 1

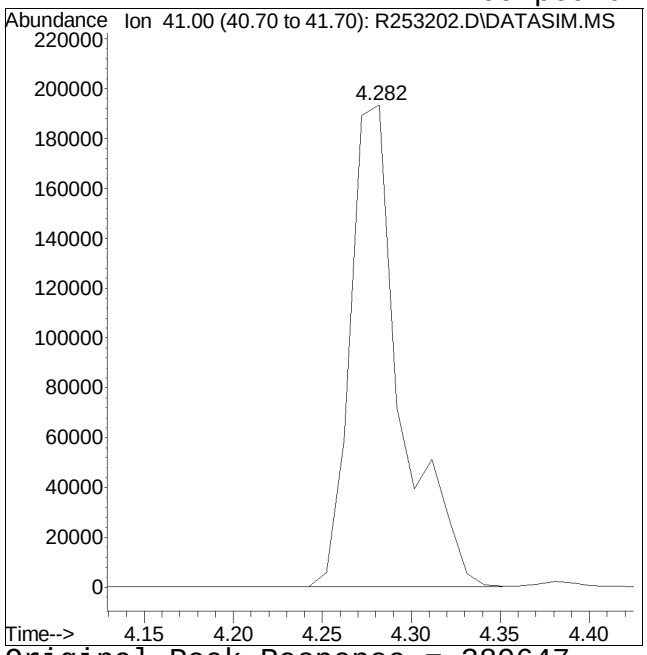
Quant Time: Mar 26 12:13:20 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration



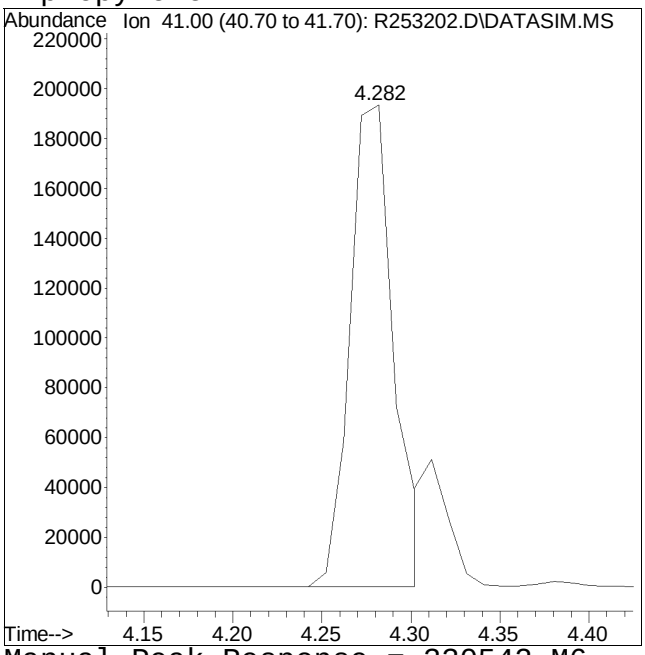
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253202.D
Date Inj'd : 3/26/2018 3:00 am
Sample : ITO15-SIMSTD20.0
Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 380647




Manual Peak Response = 330542 M6

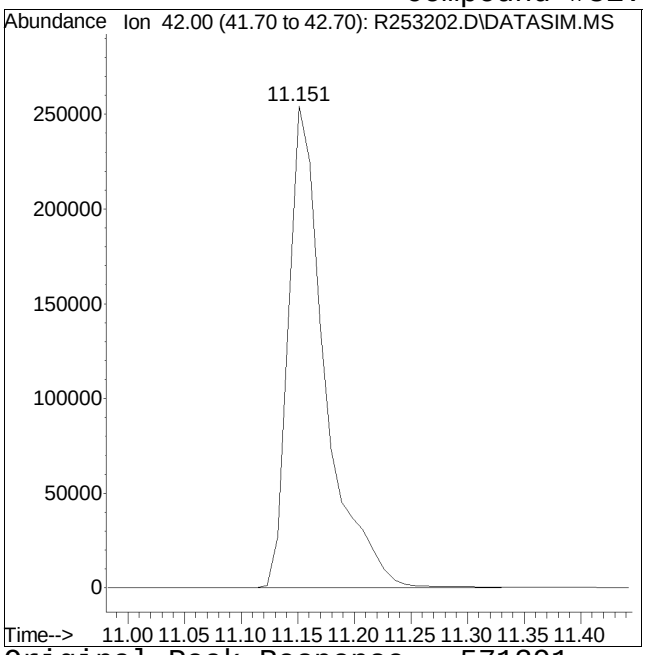
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

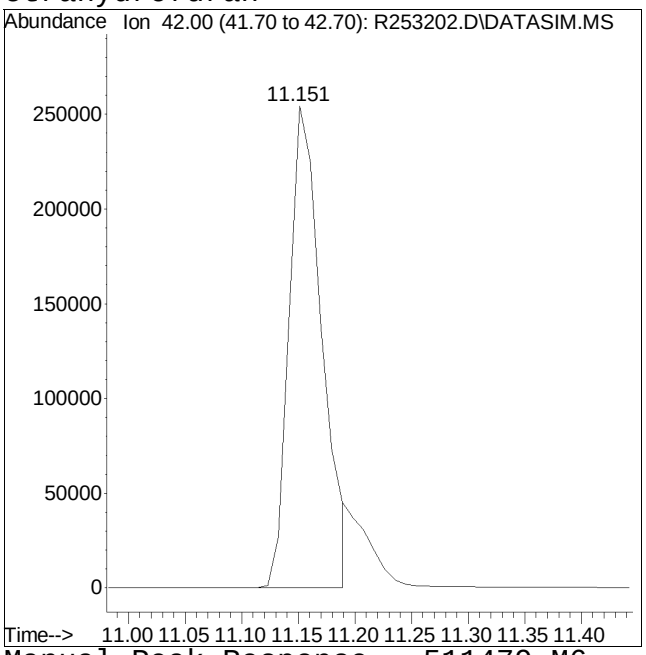
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253202.D
Date Inj'd : 3/26/2018 3:00 am
Sample : ITO15-SIMSTD20.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #31: Tetrahydrofuran




Original Peak Response = 571391




Manual Peak Response = 511479 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253203.D
Acq On : 26 Mar 2018 3:35 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD50.0
Misc : WG1100531
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 26 12:14:18 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 305602 | 10.000 ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery | = 111.87% | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 679249 | 10.000 ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery | = 108.46% | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 162726 | 10.000 ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery | = 113.06% | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 210087 | 9.807 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 98.07% | |
| 53) toluene-D8 | 15.410 | 98 | 580971 | 9.476 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 94.76% | |
| 67) bromofluorobenzene | 18.205 | 95 | 326140 | 9.859 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 98.59% | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 791907M6 | 47.624 ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 2781593 | 47.281 ppbV | 99 |
| 4) chloromethane | 4.617 | 50 | 1191245 | 43.358 ppbV | 100 |
| 5) Freon-114 | 4.785 | 85 | 3567047 | 44.447 ppbV | 97 |
| 6) vinyl chloride | 4.952 | 62 | 1364131 | 43.805 ppbV | 100 |
| 7) 1,3-butadiene | 5.159 | 54 | 912649 | 44.366 ppbV | 99 |
| 8) bromomethane | 5.560 | 94 | 1170344 | 43.498 ppbV | 100 |
| 9) chloroethane | 5.823 | 64 | 655994 | 43.318 ppbV | 98 |
| 10) ethanol | 6.055 | 31 | 4153717 | 216.186 ppbV | 96 |
| 11) vinyl bromide | 6.327 | 106 | 1117313 | 44.188 ppbV | 99 |
| 12) acrolein | 6.503 | 56 | 533834 | 44.205 ppbV | 97 |
| 13) acetone | 6.695 | 43 | 8006197 | 225.911 ppbV | 94 |
| 14) trichlorofluoromethane | 6.918 | 101 | 3200911 | 44.821 ppbV | 99 |
| 15) isopropyl alcohol | 7.070 | 45 | 3865941 | 131.021 ppbV | 100 |
| 16) acrylonitrile | 7.334 | 53 | 786627 | 49.689 ppbV | 99 |
| 17) 1,1-dichloroethene | 7.766 | 61 | 1942017 | 48.393 ppbV | 97 |
| 18) tertiary butyl alcohol | 7.854 | 59 | 2029348 | 52.619 ppbV | 96 |
| 19) methylene chloride | 7.934 | 49 | 1431130 | 47.742 ppbV | 93 |
| 20) 3-chloropropene | 8.085 | 41 | 1344889 | 50.071 ppbV | 97 |
| 21) carbon disulfide | 8.277 | 76 | 3600133 | 52.222 ppbV | 92 |
| 22) Freon 113 | 8.277 | 101 | 2407813 | 52.036 ppbV | 98 |
| 23) trans-1,2-dichloroethene | 9.113 | 61 | 1809692 | 49.530 ppbV | 96 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 2213563 | 47.903 ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253203.D
Acq On : 26 Mar 2018 3:35 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD50.0
Misc : WG1100531
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 26 12:14:18 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.434 | 73 | 2837104 | 50.710 | ppbV | | 99 |
| 26) | vinyl acetate | 9.550 | 43 | 2600451 | 59.019 | ppbV | | 100 |
| 27) | 2-butanone | 9.837 | 43 | 2371917 | 49.312 | ppbV | | 99 |
| 28) | cis-1,2-dichloroethene | 10.353 | 61 | 1701591 | 48.629 | ppbV | | 93 |
| 29) | Ethyl Acetate | 10.616 | 61 | 410220 | 53.933 | ppbV | # | 47 |
| 30) | chloroform | 10.700 | 83 | 2587352 | 50.232 | ppbV | | 100 |
| 31) | Tetrahydrofuran | 11.151 | 42 | 1275635M6 | 51.119 | ppbV | | |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 1722996 | 48.249 | ppbV | | 98 |
| 34) | hexane | 10.597 | 57 | 1838720 | 53.489 | ppbV | | 80 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 2409636 | 51.676 | ppbV | | 97 |
| 37) | benzene | 12.346 | 78 | 3470907 | 49.139 | ppbV | | 97 |
| 38) | carbon tetrachloride | 12.520 | 117 | 2522283 | 54.122 | ppbV | | 97 |
| 39) | cyclohexane | 12.651 | 56 | 1762231 | 50.953 | ppbV | | 96 |
| 40) | dibromomethane | 13.238 | 93 | 1502719 | 52.512 | ppbV | | 97 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 1484045 | 51.773 | ppbV | | 98 |
| 42) | bromodichloromethane | 13.489 | 83 | 2855467 | 52.194 | ppbV | | 97 |
| 43) | 1,4-dioxane | 13.521 | 88 | 829584 | 55.618 | ppbV | | 89 |
| 44) | trichloroethene | 13.532 | 130 | 1583384 | 54.837 | ppbV | | 97 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 5891730 | 51.732 | ppbV | | 96 |
| 46) | heptane | 13.848 | 43 | 2135942 | 52.335 | ppbV | # | 97 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 2133310 | 53.657 | ppbV | | 96 |
| 48) | 4-methyl-2-pentanone | 14.524 | 43 | 3071019 | 53.252 | ppbV | | 97 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 2164719 | 55.565 | ppbV | | 97 |
| 50) | 1,1,2-trichloroethane | 15.238 | 97 | 1523515 | 52.236 | ppbV | | 91 |
| 52) | toluene | 15.509 | 91 | 4293890 | 48.830 | ppbV | | 97 |
| 54) | 2-hexanone | 15.726 | 43 | 3084331 | 53.714 | ppbV | | 99 |
| 55) | dibromochloromethane | 15.916 | 129 | 2730659 | 53.718 | ppbV | | 99 |
| 56) | 1,2-dibromoethane | 16.133 | 107 | 2528612 | 51.804 | ppbV | | 99 |
| 57) | tetrachloroethene | 16.530 | 166 | 2074014 | 56.761 | ppbV | # | 91 |
| 58) | 1,1,1,2-tetrachloroethane | 17.072 | 131 | 1929838 | 54.563 | ppbV | | 100 |
| 59) | chlorobenzene | 17.086 | 112 | 3589147 | 51.357 | ppbV | | 94 |
| 60) | ethylbenzene | 17.372 | 91 | 5580060 | 49.964 | ppbV | | 95 |
| 61) | m+p-xylene | 17.515 | 91 | 9009320 | 101.428 | ppbV | | 99 |
| 62) | bromoform | 17.596 | 173 | 2783058 | 59.319 | ppbV | | 98 |
| 63) | styrene | 17.786 | 104 | 3386031 | 51.493 | ppbV | | 97 |
| 64) | 1,1,2,2-tetrachloroethane | 17.867 | 83 | 3757454 | 49.041 | ppbV | | 99 |
| 65) | o-xylene | 17.867 | 91 | 4558126 | 49.373 | ppbV | | 96 |
| 66) | 1,2,3-trichloropropane | 17.962 | 75 | 2833680 | 52.139 | ppbV | | 97 |
| 68) | isopropylbenzene | 18.296 | 105 | 5517442 | 49.190 | ppbV | | 97 |
| 69) | bromobenzene | 18.386 | 77 | 3379279 | 52.919 | ppbV | | 97 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253203.D
Acq On : 26 Mar 2018 3:35 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD50.0
Misc : WG1100531
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 26 12:14:18 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

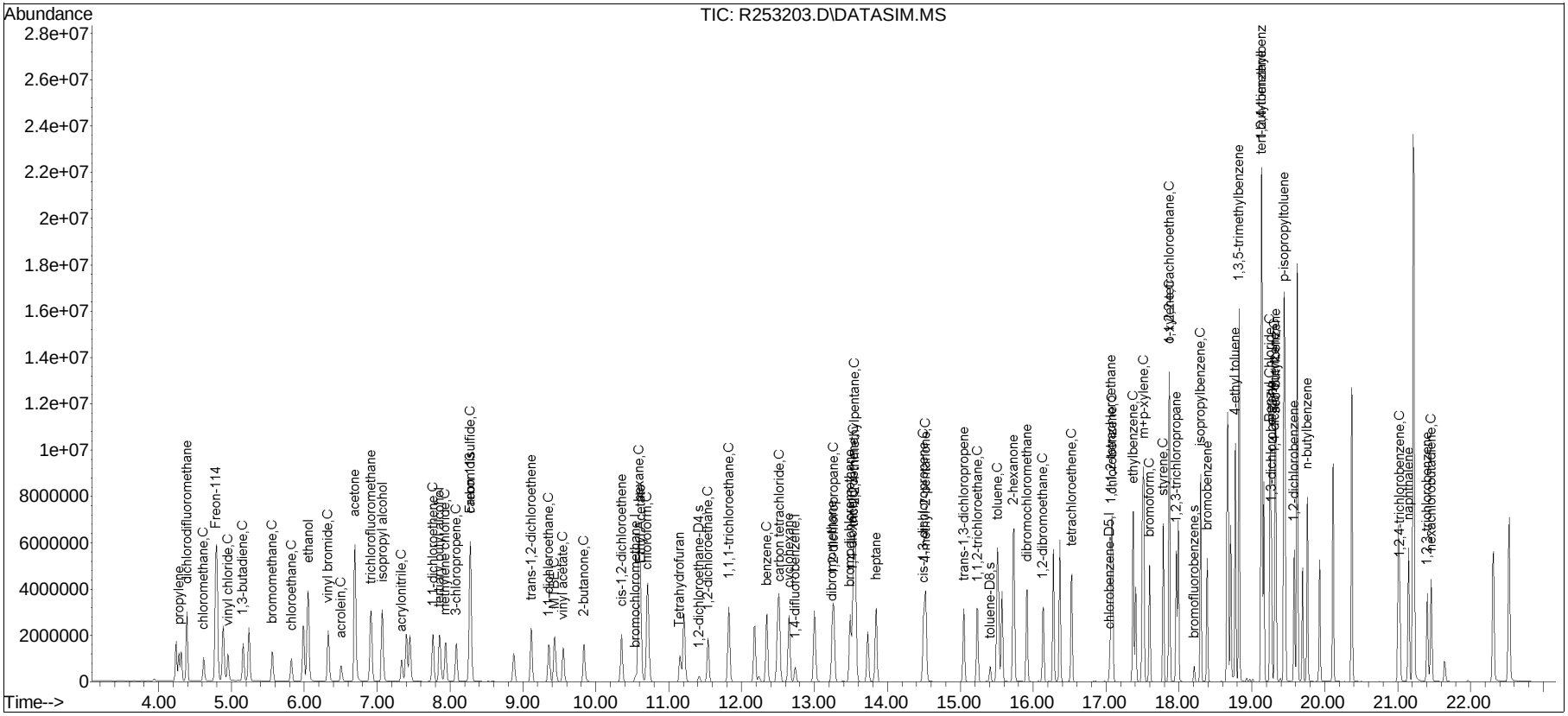
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.772 | 105 | 6144766 | 49.403 | ppbV | 95 |
| 71) 1,3,5-trimethylbenzene | 18.825 | 105 | 5122516 | 50.366 | ppbV | 90 |
| 72) tert-butylbenzene | 19.129 | 119 | 4864045 | 46.373 | ppbV | 96 |
| 73) 1,2,4-trimethylbenzene | 19.134 | 105 | 5021607 | 47.387 | ppbV | 98 |
| 74) Benzyl Chloride | 19.249 | 91 | 5035729 | 57.054 | ppbV | 93 |
| 75) 1,3-dichlorobenzene | 19.268 | 146 | 3927964 | 52.881 | ppbV | 96 |
| 76) 1,4-dichlorobenzene | 19.315 | 146 | 3950534 | 51.727 | ppbV | 89 |
| 77) sec-butylbenzene | 19.329 | 105 | 6992775 | 46.749 | ppbV # | 91 |
| 78) p-isopropyltoluene | 19.439 | 119 | 6118160 | 48.957 | ppbV | 93 |
| 79) 1,2-dichlorobenzene | 19.582 | 146 | 3675150 | 52.776 | ppbV | 97 |
| 80) n-butylbenzene | 19.763 | 91 | 6089089 | 47.734 | ppbV # | 90 |
| 81) 1,2,4-trichlorobenzene | 21.030 | 180 | 3505449 | 53.614 | ppbV # | 87 |
| 82) naphthalene | 21.148 | 128 | 6790632 | 48.986 | ppbV # | 93 |
| 83) 1,2,3-trichlorobenzene | 21.405 | 180 | 3229398 | 55.963 | ppbV | 94 |
| 84) hexachlorobutadiene | 21.459 | 225 | 2966705 | 58.664 | ppbV | 98 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253203.D
Acq On : 26 Mar 2018 3:35 am
Operator : AIRPIANO2:AR
Sample : ITO15-SIMSTD50.0
Misc : WG1100531
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Mar 26 12:14:18 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 07:24:41 2018
Response via : Initial Calibration

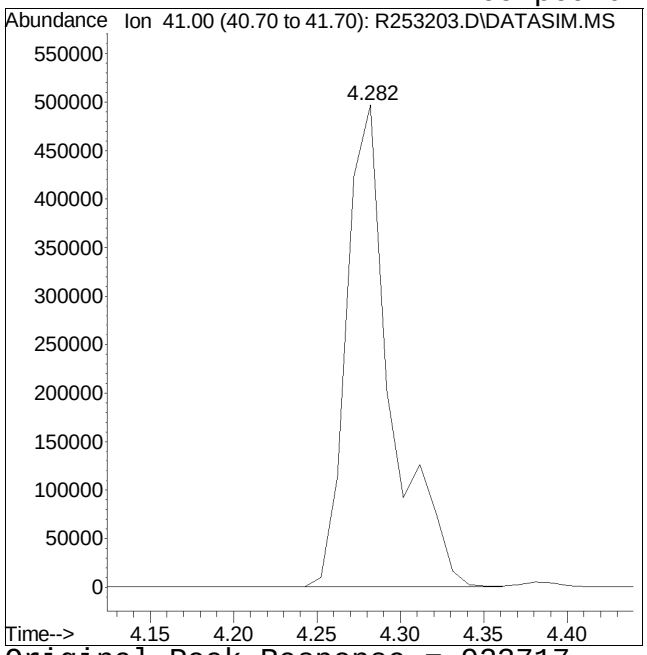


Manual Integration/Negative Proof Report

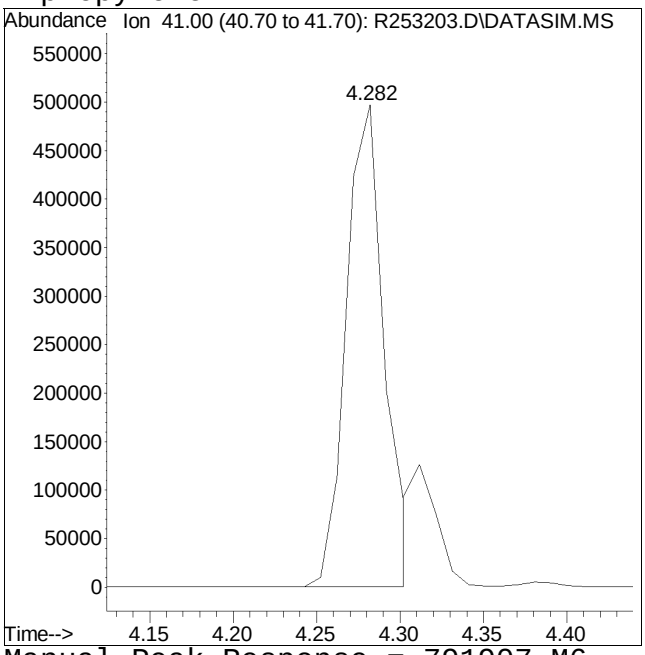
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253203.D
Date Inj'd : 3/26/2018 3:35 am
Sample : ITO15-SIMSTD50.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #2: propylene




Original Peak Response = 923717




Manual Peak Response = 791907 M6

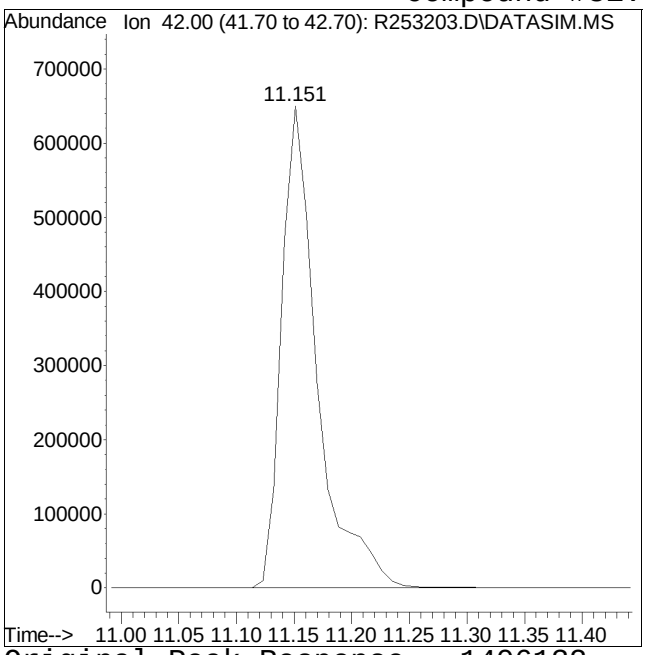
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

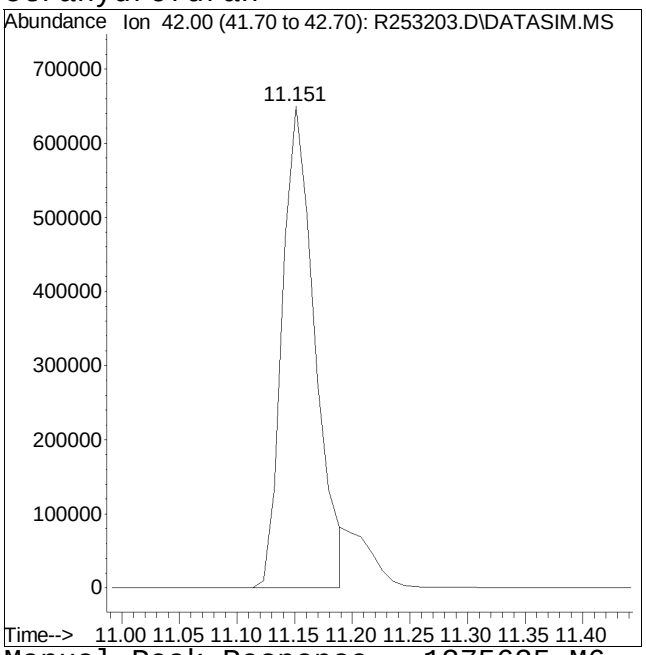
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253203.D
Date Inj'd : 3/26/2018 3:35 am
Sample : ITO15-SIMSTD50.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 7:25 am

Compound #31: Tetrahydrofuran




Original Peak Response = 1406132




Manual Peak Response = 1275635 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253208.D
Acq On : 26 Mar 2018 10:23 am
Operator : AIRPIANO2:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 26 12:19:00 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 106 | 0.00 |
| 2 | | propylene | 0.578 | 0.588 | -1.7 | 115 | 0.00 |
| 3 | | dichlorodifluoromethane | 1.995 | 1.900 | 4.8 | 105 | 0.00 |
| 4 | C | chloromethane | 0.926 | 0.798 | 13.8 | 94 | 0.00 |
| 5 | | Freon-114 | 2.693 | 2.443 | 9.3 | 99 | 0.00 |
| 6 | C | vinyl chloride | 1.051 | 0.931 | 11.4 | 97 | 0.00 |
| 7 | C | 1,3-butadiene | 0.698 | 0.689 | 1.3 | 109 | 0.00 |
| 8 | C | bromomethane | 0.905 | 0.824 | 9.0 | 99 | 0.00 |
| 9 | C | chloroethane | 0.517 | 0.454 | 12.2 | 97 | 0.00 |
| 10 | | ethanol | 0.641 | 0.560 | 12.6 | 95 | 0.00 |
| 11 | C | vinyl bromide | 0.842 | 0.813 | 3.4 | 104 | 0.00 |
| 12 | C | acrolein | 0.424 | 0.341 | 19.6 | 92 | 0.00 |
| 13 | | acetone | 1.145 | 1.317 | -15.0 | 121 | 0.00 |
| 14 | | trichlorofluoromethane | 2.061 | 1.914 | 7.1 | 87 | 0.00 |
| 15 | | isopropyl alcohol | 1.271 | 1.186 | 6.7 | 131 | 0.00 |
| 16 | C | acrylonitrile | 0.545 | 0.489 | 10.3 | 100 | 0.00 |
| 17 | C | 1,1-dichloroethene | 1.362 | 1.306 | 4.1 | 106 | 0.00 |
| 18 | | tertiary butyl alcohol | 1.320 | 1.303 | 1.3 | 110 | 0.00 |
| 19 | C | methylene chloride | 1.004 | 0.951 | 5.3 | 103 | 0.00 |
| 20 | C | 3-chloropropene | 0.910 | 0.999 | -9.8 | 121 | 0.00 |
| 21 | C | carbon disulfide | 2.364 | 2.230 | 5.7 | 105 | 0.00 |
| 22 | | Freon 113 | 1.582 | 1.559 | 1.5 | 109 | 0.00 |
| 23 | | trans-1,2-dichloroethene | 1.225 | 1.210 | 1.2 | 108 | 0.00 |
| 24 | C | 1,1-dichloroethane | 1.550 | 1.479 | 4.6 | 104 | 0.00 |
| 25 | C | MTBE | 1.863 | 2.051 | -10.1 | 119 | 0.00 |
| 26 | C | vinyl acetate | 1.537 | 1.706 | -11.0 | 126 | 0.00 |
| 27 | C | 2-butanone | 1.627 | 1.668 | -2.5 | 113 | 0.00 |
| 28 | | cis-1,2-dichloroethene | 1.172 | 1.147 | 2.1 | 106 | 0.00 |
| 29 | | Ethyl Acetate | 0.250 | 0.271 | -8.4 | 116 | 0.00 |
| 30 | C | chloroform | 1.738 | 1.721 | 1.0 | 108 | 0.00 |
| 31 | | Tetrahydrofuran | 0.900 | 0.845 | 6.1 | 110 | 0.00 |
| 32 | C | 1,2-dichloroethane | 1.205 | 1.160 | 3.7 | 106 | 0.00 |
| 33 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 115 | 0.00 |
| 34 | C | hexane | 0.524 | 0.487 | 7.1 | 110 | 0.00 |
| 35 | s | 1,2-dichloroethane-D4 | 0.317 | 0.308 | 2.8 | 112 | 0.00 |
| 36 | C | 1,1,1-trichloroethane | 0.709 | 0.663 | 6.5 | 111 | 0.00 |
| 37 | C | benzene | 1.081 | 0.951 | 12.0 | 105 | 0.01 |
| 38 | C | carbon tetrachloride | 0.704 | 0.663 | 5.8 | 111 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253208.D
Acq On : 26 Mar 2018 10:23 am
Operator : AIRPIANO2:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 26 12:19:00 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 39 | | cyclohexane | 0.527 | 0.507 | 3.8 | 114 | 0.00 |
| 40 | | dibromomethane | 0.477 | 0.376 | 21.2 | 102 | 0.00 |
| 41 | C | 1,2-dichloropropane | 0.441 | 0.387 | 12.2 | 105 | 0.00 |
| 42 | | bromodichloromethane | 0.824 | 0.816 | 1.0 | 116 | 0.00 |
| 43 | C | 1,4-dioxane | 0.224 | 0.232 | -3.6 | 121 | 0.00 |
| 44 | C | trichloroethene | 0.441 | 0.417 | 5.4 | 112 | 0.00 |
| 45 | C | 2,2,4-trimethylpentane | 1.718 | 1.655 | 3.7 | 113 | 0.00 |
| 46 | | heptane | 0.618 | 0.595 | 3.7 | 113 | 0.00 |
| 47 | C | cis-1,3-dichloropropene | 0.585 | 0.582 | 0.5 | 114 | 0.00 |
| 48 | C | 4-methyl-2-pentanone | 0.867 | 0.854 | 1.5 | 115 | 0.00 |
| 49 | | trans-1,3-dichloropropene | 0.572 | 0.493 | 13.8 | 98 | 0.00 |
| 50 | C | 1,1,2-trichloroethane | 0.439 | 0.417 | 5.0 | 111 | 0.00 |
| 51 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 109 | 0.00 |
| 52 | C | toluene | 5.482 | 5.366 | 2.1 | 108 | 0.00 |
| 53 | s | toluene-D8 | 3.757 | 3.922 | -4.4 | 113 | 0.00 |
| 54 | | 2-hexanone | 3.536 | 3.708 | -4.9 | 114 | 0.00 |
| 55 | | dibromochloromethane | 3.146 | 3.519 | -11.9 | 123 | 0.00 |
| 56 | C | 1,2-dibromoethane | 3.018 | 3.036 | -0.6 | 110 | 0.00 |
| 57 | C | tetrachloroethene | 2.309 | 2.379 | -3.0 | 115 | 0.00 |
| 58 | | 1,1,1,2-tetrachloroethane | 2.188 | 2.106 | 3.7 | 105 | 0.00 |
| 59 | C | chlorobenzene | 4.323 | 4.348 | -0.6 | 110 | 0.00 |
| 60 | C | ethylbenzene | 6.802 | 6.886 | -1.2 | 109 | 0.00 |
| 61 | C | m+p-xylene | 5.321 | 5.407 | -1.6 | 108 | 0.00 |
| 62 | C | bromoform | 2.850 | 3.329 | -16.8 | 126 | 0.00 |
| 63 | C | styrene | 3.859 | 4.090 | -6.0 | 110 | 0.00 |
| 64 | C | 1,1,2,2-tetrachloroethane | 4.582 | 4.626 | -1.0 | 107 | 0.00 |
| 65 | C | o-xylene | 5.518 | 5.699 | -3.3 | 109 | 0.00 |
| 66 | | 1,2,3-trichloropropane | 3.324 | 3.130 | 5.8 | 102 | 0.00 |
| 67 | s | bromofluorobenzene | 1.974 | 2.108 | -6.8 | 113 | 0.00 |
| 68 | C | isopropylbenzene | 6.935 | 6.820 | 1.7 | 108 | 0.00 |
| 69 | | bromobenzene | 3.874 | 3.694 | 4.6 | 102 | 0.00 |
| 70 | | 4-ethyl toluene | 6.760 | 7.808 | -15.5 | 111 | 0.00 |
| 71 | | 1,3,5-trimethylbenzene | 5.659 | 6.163 | -8.9 | 107 | 0.00 |
| 72 | | tert-butylbenzene | 6.285 | 6.101 | 2.9 | 103 | 0.00 |
| 73 | | 1,2,4-trimethylbenzene | 5.662 | 6.467 | -14.2 | 108 | 0.00 |
| 74 | C | Benzyl Chloride | 5.107 | 5.798 | -13.5 | 116 | 0.00 |
| 75 | | 1,3-dichlorobenzene | 4.024 | 4.643 | -15.4 | 111 | 0.00 |
| 76 | C | 1,4-dichlorobenzene | 4.135 | 4.764 | -15.2 | 110 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253208.D
Acq On : 26 Mar 2018 10:23 am
Operator : AIRPIANO2:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 26 12:19:00 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 77 | sec-butylbenzene | 8.859 | 8.588 | 3.1 | 102 | 0.00 |
| 78 | p-isopropyltoluene | 7.366 | 6.843 | 7.1 | 97 | 0.00 |
| 79 | 1,2-dichlorobenzene | 3.810 | 4.393 | -15.3 | 112 | 0.00 |
| 80 | n-butylbenzene | 7.231 | 7.380 | -2.1 | 102 | 0.00 |
| 81 C | 1,2,4-trichlorobenzene | 3.251 | 3.933 | -21.0 | 106 | 0.00 |
| 82 | naphthalene | 6.703 | 7.884 | -17.6 | 101 | 0.00 |
| 83 | 1,2,3-trichlorobenzene | 2.707 | 3.287 | -21.4 | 101 | 0.00 |
| 84 C | hexachlorobutadiene | 2.738 | 3.126 | -14.2 | 109 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253208.D
Acq On : 26 Mar 2018 10:23 am
Operator : AIRPIANO2:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 26 12:19:00 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 290282 | 10.000 | ppbV | 0.00 |
| Standard Area = 273176 | | | Recovery = 106.26% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 717903 | 10.000 | ppbV | 0.00 |
| Standard Area = 626263 | | | Recovery = 114.63% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 156587 | 10.000 | ppbV | 0.00 |
| Standard Area = 143934 | | | Recovery = 108.79% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 11.414 | 65 | 220796 | 9.709 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 97.09% | | | |
| 53) toluene-D8 | 15.409 | 98 | 614063 | 10.438 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 104.38% | | | |
| 67) bromofluorobenzene | 18.205 | 95 | 330141 | 10.680 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 106.80% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 4.282 | 41 | 85408M6 | 5.087 | ppbV | |
| 3) dichlorodifluoromethane | 4.390 | 85 | 275794 | 4.763 | ppbV | 100 |
| 4) chloromethane | 4.617 | 50 | 115885 | 4.309 | ppbV | 100 |
| 5) Freon-114 | 4.785 | 85 | 354611 | 4.537 | ppbV | 98 |
| 6) vinyl chloride | 4.952 | 62 | 135188 | 4.433 | ppbV | 100 |
| 7) 1,3-butadiene | 5.159 | 54 | 100005 | 4.936 | ppbV | 99 |
| 8) bromomethane | 5.559 | 94 | 119586 | 4.552 | ppbV | 99 |
| 9) chloroethane | 5.823 | 64 | 65961 | 4.394 | ppbV | 99 |
| 10) ethanol | 6.039 | 31 | 406284 | 21.843 | ppbV | 100 |
| 11) vinyl bromide | 6.327 | 106 | 118065 | 4.830 | ppbV | 100 |
| 12) acrolein | 6.511 | 56 | 49449 | 4.021 | ppbV | 100 |
| 13) acetone | 6.694 | 43 | 955511 | 28.755 | ppbV | 100 |
| 14) trichlorofluoromethane | 6.910 | 101 | 277803 | 4.645 | ppbV | 100 |
| 15) isopropyl alcohol | 7.062 | 45 | 430375 | 11.661 | ppbV | 100 |
| 16) acrylonitrile | 7.334 | 53 | 70982 | 4.491 | ppbV | 99 |
| 17) 1,1-dichloroethene | 7.758 | 61 | 189518 | 4.793 | ppbV | 99 |
| 18) tertiary butyl alcohol | 7.861 | 59 | 189178 | 4.935 | ppbV | 96 |
| 19) methylene chloride | 7.933 | 49 | 138070 | 4.738 | ppbV | 99 |
| 20) 3-chloropropene | 8.077 | 41 | 145015 | 5.492 | ppbV | 99 |
| 21) carbon disulfide | 8.277 | 76 | 323650 | 4.717 | ppbV | 94 |
| 22) Freon 113 | 8.277 | 101 | 226342 | 4.929 | ppbV | 97 |
| 23) trans-1,2-dichloroethene | 9.106 | 61 | 175642 | 4.938 | ppbV | 99 |
| 24) 1,1-dichloroethane | 9.352 | 63 | 214663 | 4.772 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253208.D
Acq On : 26 Mar 2018 10:23 am
Operator : AIRPIANO2:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 26 12:19:00 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) | MTBE | 9.440 | 73 | 297746 | 5.504 | ppbV | 99 |
| 26) | vinyl acetate | 9.550 | 43 | 247561 | 5.547 | ppbV | 100 |
| 27) | 2-butanone | 9.843 | 43 | 242127 | 5.128 | ppbV | 99 |
| 28) | cis-1,2-dichloroethene | 10.343 | 61 | 166459 | 4.892 | ppbV | 100 |
| 29) | Ethyl Acetate | 10.625 | 61 | 39310 | 5.414 | ppbV | 98 |
| 30) | chloroform | 10.691 | 83 | 249779 | 4.952 | ppbV | 100 |
| 31) | Tetrahydrofuran | 11.170 | 42 | 122588M6 | 4.695 | ppbV | |
| 32) | 1,2-dichloroethane | 11.536 | 62 | 168430 | 4.816 | ppbV | 99 |
| 34) | hexane | 10.588 | 57 | 174909 | 4.652 | ppbV | 94 |
| 36) | 1,1,1-trichloroethane | 11.823 | 97 | 238126 | 4.679 | ppbV | 99 |
| 37) | benzene | 12.346 | 78 | 341378 | 4.400 | ppbV | 92 |
| 38) | carbon tetrachloride | 12.509 | 117 | 237822 | 4.706 | ppbV | 99 |
| 39) | cyclohexane | 12.650 | 56 | 181993 | 4.806 | ppbV | 99 |
| 40) | dibromomethane | 13.238 | 93 | 135018 | 3.945 | ppbV | 97 |
| 41) | 1,2-dichloropropane | 13.260 | 63 | 138820 | 4.385 | ppbV | 100 |
| 42) | bromodichloromethane | 13.478 | 83 | 293065 | 4.954 | ppbV | 99 |
| 43) | 1,4-dioxane | 13.532 | 88 | 83274 | 5.189 | ppbV | 97 |
| 44) | trichloroethene | 13.532 | 130 | 149677 | 4.728 | ppbV | 98 |
| 45) | 2,2,4-trimethylpentane | 13.554 | 57 | 594201 | 4.818 | ppbV | 100 |
| 46) | heptane | 13.837 | 43 | 213496 | 4.809 | ppbV | 99 |
| 47) | cis-1,3-dichloropropene | 14.497 | 75 | 208933 | 4.978 | ppbV | 99 |
| 48) | 4-methyl-2-pentanone | 14.524 | 43 | 306600 | 4.923 | ppbV | 99 |
| 49) | trans-1,3-dichloropropene | 15.048 | 75 | 176852 | 4.304 | ppbV | 99 |
| 50) | 1,1,2-trichloroethane | 15.229 | 97 | 149783 | 4.757 | ppbV | 97 |
| 52) | toluene | 15.500 | 91 | 420095 | 4.894 | ppbV | 99 |
| 54) | 2-hexanone | 15.726 | 43 | 290292 | 5.243 | ppbV | 96 |
| 55) | dibromochloromethane | 15.907 | 129 | 275505 | 5.593 | ppbV | 100 |
| 56) | 1,2-dibromoethane | 16.132 | 107 | 237735 | 5.031 | ppbV | 99 |
| 57) | tetrachloroethene | 16.521 | 166 | 186251 | 5.152 | ppbV | 96 |
| 58) | 1,1,1,2-tetrachloroethane | 17.067 | 131 | 164892 | 4.812 | ppbV | 99 |
| 59) | chlorobenzene | 17.086 | 112 | 340431 | 5.029 | ppbV | 98 |
| 60) | ethylbenzene | 17.367 | 91 | 539168 | 5.062 | ppbV | 98 |
| 61) | m+p-xylene | 17.510 | 91 | 846677 | 10.161 | ppbV | 100 |
| 62) | bromoform | 17.591 | 173 | 260626 | 5.841 | ppbV | 100 |
| 63) | styrene | 17.781 | 104 | 320184 | 5.299 | ppbV | 99 |
| 64) | 1,1,2,2-tetrachloroethane | 17.862 | 83 | 362197 | 5.048 | ppbV | 100 |
| 65) | o-xylene | 17.862 | 91 | 446223 | 5.164 | ppbV | 98 |
| 66) | 1,2,3-trichloropropane | 17.962 | 75 | 245055 | 4.708 | ppbV | 99 |
| 68) | isopropylbenzene | 18.295 | 105 | 533984 | 4.917 | ppbV | 99 |
| 69) | bromobenzene | 18.381 | 77 | 289241 | 4.768 | ppbV | 95 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253208.D
Acq On : 26 Mar 2018 10:23 am
Operator : AIRPIANO2:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 26 12:19:00 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\R253200.D
Sub List : Default - All compounds listed

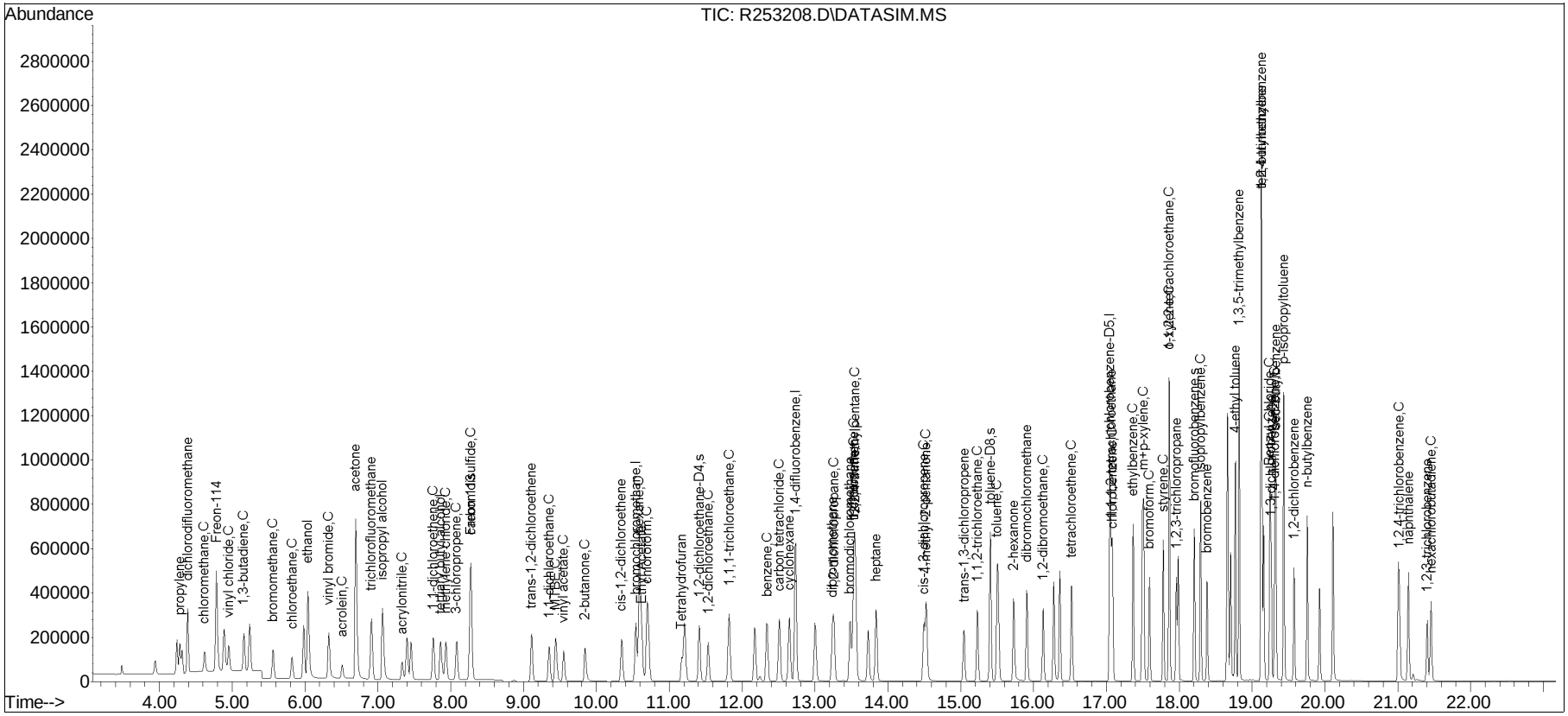
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.772 | 105 | 611354 | 5.776 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.820 | 105 | 482520 | 5.445 | ppbV | 97 |
| 72) tert-butylbenzene | 19.129 | 119 | 477631 | 4.853 | ppbV | 100 |
| 73) 1,2,4-trimethylbenzene | 19.129 | 105 | 506307 | 5.710 | ppbV | 98 |
| 74) Benzyl Chloride | 19.244 | 91 | 453934 | 5.677 | ppbV | 98 |
| 75) 1,3-dichlorobenzene | 19.263 | 146 | 363533 | 5.770 | ppbV | 98 |
| 76) 1,4-dichlorobenzene | 19.310 | 146 | 372979 | 5.760 | ppbV | 95 |
| 77) sec-butylbenzene | 19.324 | 105 | 672381 | 4.847 | ppbV | 99 |
| 78) p-isopropyltoluene | 19.434 | 119 | 535748 | 4.645 | ppbV | 99 |
| 79) 1,2-dichlorobenzene | 19.577 | 146 | 343934 | 5.765 | ppbV | 98 |
| 80) n-butylbenzene | 19.758 | 91 | 577803 | 5.103 | ppbV | 97 |
| 81) 1,2,4-trichlorobenzene | 21.019 | 180 | 307950 | 6.050 | ppbV | 97 |
| 82) naphthalene | 21.148 | 128 | 617235 | 5.880 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.405 | 180 | 257384 | 6.072 | ppbV | 98 |
| 84) hexachlorobutadiene | 21.459 | 225 | 244744 | 5.708 | ppbV | 95 |

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

Sub List : Default - All compounds listed0325SIM_ICAL\R253200.D

Data Path : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\
Data File : R253208.D
Acq On : 26 Mar 2018 10:23 am
Operator : AIRPIANO2:AR
Sample : CTO15-SIMSTD5.0
Misc : WG1100531
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Mar 26 12:19:00 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180325SIM_ICAL\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

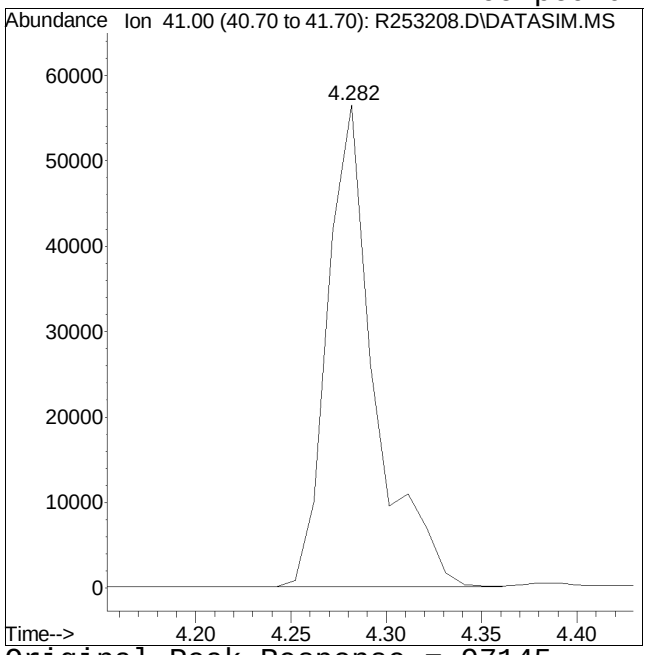


Manual Integration/Negative Proof Report

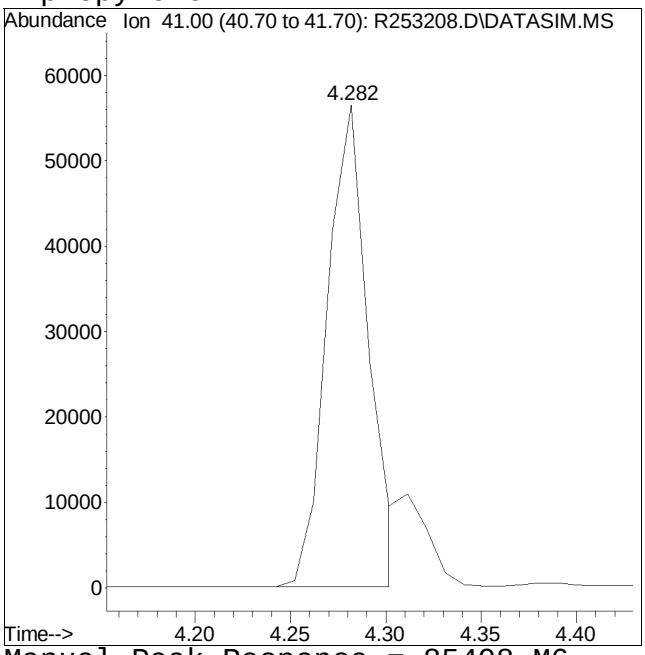
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253208.D
Date Inj'd : 3/26/2018 10:23 am
Sample : CTO15-SIMSTD5.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 12:18 pm

Compound #2: propylene




Original Peak Response = 97145




Manual Peak Response = 85408 M6

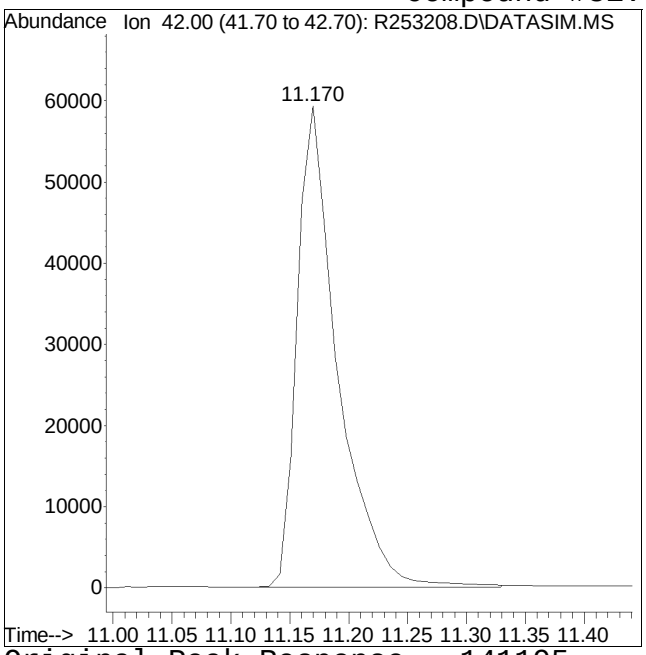
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

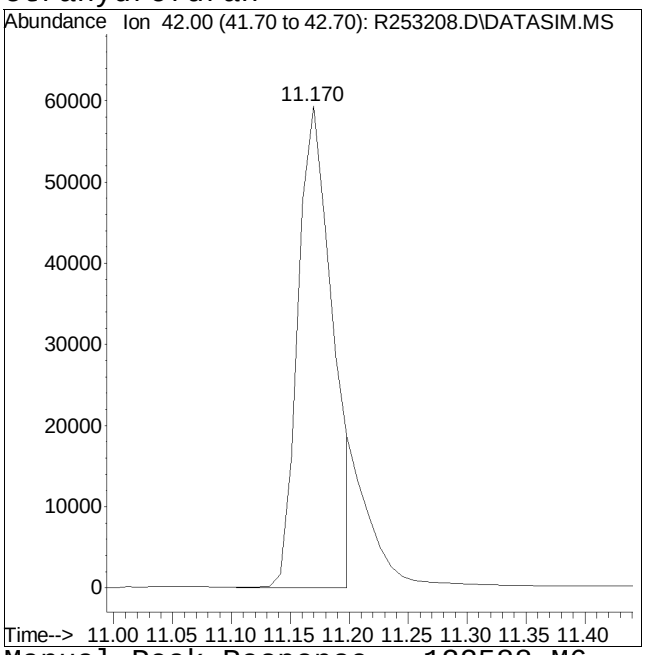
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253208.D
Date Inj'd : 3/26/2018 10:23 am
Sample : CTO15-SIMSTD5.0

Method : TSIM180325.M
Operator : AIRPIANO2:AR
Instrument : Airpiano 2
Quant Date : 3/26/2018 12:18 pm

Compound #31: Tetrahydrofuran




Original Peak Response = 141195




Manual Peak Response = 122588 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Response Factor Report

Method Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Method File : TSIM180404.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Apr 05 10:02:48 2018
Response Via : Initial Calibration

Calibration Files
0.02=r156844_Ev2.D 0.04=r156845_Ev2.D 0.1 =r156846_Ev2.D 0.2 =r156847_Ev2.D 0.5 =r156848_Ev2.D
1.0 =r156849_Ev2.D 5.0 =r156850_Ev2.D 10.0=r156851_Ev2.D 20.0=r156852_Ev2.D 50.0=r156853_Ev2.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ----------ISTD---------- | | | | | | | | | | | |
| 2) | | propylene | | | 0.808 | 0.869 | 0.806 | 0.793 | 0.724 | 0.715 | 0.699 | 0.530 | 0.7430 | 13.93 |
| 3) | | dichlorodifluorome... | 1.557 | 1.386 | 1.305 | 1.523 | 1.414 | 1.388 | 1.279 | 1.301 | 1.288 | 0.993 | 1.3434 | 11.64 |
| 4) | C | chloromethane | | 0.849 | 0.762 | 0.885 | 0.822 | 0.801 | 0.755 | 0.857 | 0.856 | 0.676 | 0.8071 | 8.18 |
| 5) | | Freon-114 | 1.648 | 1.616 | 1.558 | 1.797 | 1.699 | 1.653 | 1.530 | 1.667 | 1.727 | 1.379 | 1.6274 | 7.18 |
| 6) | C | vinyl chloride | 0.903 | 0.830 | 0.762 | 0.893 | 0.832 | 0.817 | 0.757 | 0.784 | 0.794 | 0.660 | 0.8033 | 8.74 |
| 7) | C | 1,3-butadiene | 0.685 | 0.711 | 0.585 | 0.698 | 0.645 | 0.636 | 0.601 | 0.662 | 0.699 | 0.572 | 0.6493 | 7.73 |
| 8) | C | bromomethane | 0.576 | 0.784 | 0.638 | 0.751 | 0.690 | 0.665 | 0.621 | 0.621 | 0.648 | 0.544 | 0.6537 | 11.23 |
| 9) | C | chloroethane | 0.579 | 0.418 | 0.351 | 0.463 | 0.424 | 0.423 | 0.272 | 0.400 | 0.419 | 0.347 | 0.4096 | 19.70 |
| 10) | | ethanol | | | | | 0.706 | 0.655 | 0.613 | 0.604 | 0.644 | 0.514 | 0.6226 | 10.33 |
| 11) | C | vinyl bromide | 0.831 | 0.705 | 0.619 | 0.704 | 0.667 | 0.642 | 0.609 | 0.613 | 0.636 | 0.515 | 0.6543 | 12.63 |
| 12) | | acrolein | 0.658 | 0.456 | 0.304 | 0.384 | 0.349 | 0.321 | 0.317 | 0.321 | 0.352 | 0.305 | 0.3769 | 28.96 |
| 13) | | acetone | | | | 1.303 | 1.169 | 1.073 | 0.904 | 0.855 | 0.842 | 0.599 | 0.9634 | 24.41 |
| 14) | | trichlorofluoromet... | 1.369 | 1.345 | 1.251 | 1.473 | 1.401 | 1.335 | 1.237 | 1.176 | 1.099 | 0.850 | 1.2536 | 14.36 |
| 15) | | isopropyl alcohol | | | | 2.101 | 1.512 | 1.294 | 1.143 | 1.062 | 1.150 | 0.865 | 1.3039 | 30.99# |
| 16) | C | acrylonitrile | 0.677 | 0.650 | 0.522 | 0.656 | 0.616 | 0.605 | 0.595 | 0.598 | 0.656 | 0.565 | 0.6141 | 7.75 |
| 17) | C | 1,1-dichloroethene | 1.155 | 1.090 | 1.083 | 1.252 | 1.168 | 1.131 | 1.056 | 1.013 | 1.006 | 0.830 | 1.0783 | 10.64 |
| 18) | | tertiary butyl alc... | 1.497 | 1.409 | 1.232 | 1.344 | 1.203 | 1.107 | 1.140 | 1.054 | 1.164 | 0.995 | 1.2145 | 13.12 |
| 19) | C | methylene chloride | | | | | 1.108 | 1.078 | 0.998 | 0.977 | 1.015 | 0.827 | 1.0003 | 9.86 |
| 20) | C | 3-chloropropene | | | | 1.297 | 1.238 | 1.231 | 1.377 | 1.130 | 1.102 | 0.869 | 1.1776 | 14.03 |
| 21) | C | carbon disulfide | | | | 2.189 | 2.112 | 2.077 | 2.047 | 2.062 | 2.195 | 1.846 | 2.0754 | 5.65 |
| 22) | | Freon 113 | 1.565 | 1.338 | 1.307 | 1.508 | 1.386 | 1.367 | 1.258 | 1.222 | 1.226 | 1.021 | 1.3199 | 11.68 |
| 23) | | trans-1,2-dichloro... | 1.159 | 1.079 | 1.016 | 1.247 | 1.170 | 1.137 | 1.068 | 1.027 | 1.021 | 0.847 | 1.0771 | 10.27 |
| 24) | C | 1,1-dichloroethane | 1.591 | 1.332 | 1.388 | 1.641 | 1.457 | 1.431 | 1.325 | 1.289 | 1.256 | 1.015 | 1.3725 | 12.91 |
| 25) | C | MTBE | 1.922 | 1.867 | 1.662 | 1.927 | 2.006 | 1.922 | 1.805 | 1.765 | 1.781 | 1.401 | 1.8056 | 9.63 |
| 26) | C | vinyl acetate | | | 1.835 | 2.004 | 2.049 | 2.037 | 1.825 | 2.106 | 1.780 | 1.388 | 1.8779 | 12.35 |
| 27) | C | 2-butanone | | | | 2.192 | 2.075 | 2.010 | 1.786 | 1.904 | 1.957 | 1.243 | 1.8809 | 16.43 |
| 28) | | cis-1,2-dichloroet... | 1.132 | 1.060 | 0.966 | 1.160 | 1.086 | 1.100 | 1.031 | 1.011 | 1.016 | 0.844 | 1.0408 | 8.74 |
| 29) | | Ethyl Acetate | | | | 0.295 | 0.281 | 0.268 | 0.263 | 0.256 | 0.267 | 0.239 | 0.2669 | 6.75 |
| 30) | C | chloroform | 1.452 | 1.244 | 1.201 | 1.399 | 1.333 | 1.325 | 1.242 | 1.202 | 1.217 | 1.032 | 1.2646 | 9.39 |
| 31) | | Tetrahydrofuran | | | 1.110 | 1.281 | 1.238 | 1.220 | 1.202 | 1.192 | 1.224 | 1.037 | 1.1880 | 6.55 |

Response Factor Report

Method Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Method File : TSIM180404.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Apr 05 10:02:48 2018
Response Via : Initial Calibration

Calibration Files
0.02=r156844_Ev2.D 0.04=r156845_Ev2.D 0.1 =r156846_Ev2.D 0.2 =r156847_Ev2.D 0.5 =r156848_Ev2.D
1.0 =r156849_Ev2.D 5.0 =r156850_Ev2.D 10.0=r156851_Ev2.D 20.0=r156852_Ev2.D 50.0=r156853_Ev2.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 32) | C | 1,2-dichloroethane | 1.016 | 0.995 | 0.917 | 1.063 | 0.988 | 0.956 | 0.893 | 0.853 | 0.831 | 0.649 | 0.9160 | 12.99 |
| 33) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | | | |
| 34) | C | hexane | | | 0.595 | 0.658 | 0.635 | 0.649 | 0.622 | 0.608 | 0.622 | 0.534 | 0.6154 | 6.30 |
| 35) | s | 1,2-dichloroethane-D4 | 0.273 | 0.278 | 0.272 | 0.275 | 0.272 | 0.274 | 0.272 | 0.267 | 0.249 | 0.204 | 0.2634 | 8.53 |
| 36) | C | 1,1,1-trichloroethane | 0.530 | 0.395 | 0.380 | 0.509 | 0.538 | 0.560 | 0.491 | 0.547 | 0.554 | 0.433 | 0.4937 | 13.66 |
| 37) | C | benzene | | 1.163 | 1.106 | 1.257 | 1.172 | 1.187 | 1.118 | 1.109 | 1.175 | 1.053 | 1.1490 | 5.15 |
| 38) | C | carbon tetrachloride | 0.510 | 0.471 | 0.424 | 0.483 | 0.469 | 0.472 | 0.456 | 0.457 | 0.470 | 0.387 | 0.4598 | 7.29 |
| 39) | | cyclohexane | 0.606 | 0.645 | 0.617 | 0.663 | 0.657 | 0.678 | 0.651 | 0.638 | 0.672 | 0.594 | 0.6421 | 4.44 |
| 40) | | Dibromomethane | 0.556 | 0.493 | 0.385 | 0.408 | 0.373 | 0.373 | 0.351 | 0.343 | 0.353 | 0.300 | 0.3935 | 19.32 |
| 41) | C | 1,2-dichloropropane | 0.448 | 0.512 | 0.452 | 0.507 | 0.493 | 0.474 | 0.450 | 0.439 | 0.453 | 0.383 | 0.4611 | 8.20 |
| 42) | | bromodichloromethane | 0.523 | 0.483 | 0.553 | 0.600 | 0.589 | 0.595 | 0.599 | 0.603 | 0.632 | 0.538 | 0.5715 | 8.01 |
| 43) | C | 1,4-dioxane | | 0.246 | 0.199 | 0.269 | 0.230 | 0.233 | 0.233 | 0.225 | 0.253 | 0.232 | 0.2357 | 8.26 |
| 44) | C | trichloroethene | 0.547 | 0.419 | 0.428 | 0.472 | 0.445 | 0.428 | 0.419 | 0.423 | 0.445 | 0.401 | 0.4427 | 9.35 |
| 45) | C | 2,2,4-trimethylpen... | 2.055 | 1.938 | 1.857 | 2.229 | 2.132 | 2.115 | 2.023 | 1.991 | 2.072 | 1.801 | 2.0212 | 6.41 |
| 46) | | heptane | 1.042 | 0.983 | 0.869 | 1.021 | 1.013 | 1.027 | 0.983 | 0.973 | 1.000 | 0.808 | 0.9718 | 7.71 |
| 47) | C | cis-1,3-dichloropr... | 0.527 | 0.478 | 0.438 | 0.524 | 0.512 | 0.532 | 0.555 | 0.574 | 0.626 | 0.549 | 0.5315 | 9.61 |
| 48) | C | 4-methyl-2-pentanone | 0.976 | 0.912 | 0.903 | 1.087 | 1.077 | 1.139 | 1.101 | 1.119 | 1.169 | 0.928 | 1.0412 | 9.71 |
| 49) | | trans-1,3-dichloro... | 0.486 | 0.378 | 0.403 | 0.487 | 0.463 | 0.502 | 0.523 | 0.544 | 0.591 | 0.516 | 0.4893 | 12.90 |
| 50) | C | 1,1,2-trichloroethane | 0.506 | 0.431 | 0.406 | 0.451 | 0.421 | 0.429 | 0.414 | 0.411 | 0.436 | 0.382 | 0.4289 | 7.71 |
| 51) | I | chlorobenzene-D5 | ----------ISTD---------- | | | | | | | | | | | |
| 52) | C | toluene | 7.240 | 6.641 | 6.015 | 7.047 | 6.683 | 6.547 | 6.218 | 6.171 | 6.338 | 5.938 | 6.4839 | 6.63 |
| 53) | s | toluene-D8 | 4.517 | 4.452 | 4.493 | 4.556 | 4.540 | 4.397 | 4.416 | 4.383 | 4.476 | 4.541 | 4.4772 | 1.40 |
| 54) | | 2-hexanone | 4.011 | 3.838 | 4.141 | 4.778 | 4.939 | 5.055 | 5.184 | 5.008 | 5.071 | 4.377 | 4.6402 | 10.79 |
| 55) | | dibromochloromethane | 1.872 | 2.386 | 2.066 | 2.461 | 2.397 | 2.429 | 2.522 | 2.602 | 2.762 | 2.556 | 2.4052 | 10.78 |
| 56) | C | 1,2-dibromoethane | 3.514 | 3.034 | 2.691 | 3.116 | 3.003 | 2.991 | 2.906 | 2.981 | 3.182 | 2.999 | 3.0416 | 6.92 |
| 57) | C | tetrachloroethene | 2.041 | 2.372 | 2.131 | 2.473 | 2.263 | 2.267 | 2.161 | 2.137 | 2.277 | 2.219 | 2.2341 | 5.65 |
| 58) | | 1,1,1,2-tetrachlor... | 2.271 | 1.484 | 1.670 | 2.071 | 1.929 | 1.930 | 1.946 | 1.991 | 2.100 | 1.961 | 1.9354 | 11.38 |
| 59) | C | chlorobenzene | 5.412 | 4.682 | 4.403 | 5.200 | 4.895 | 4.889 | 4.655 | 4.709 | 5.052 | 4.788 | 4.8685 | 6.01 |
| 60) | C | ethylbenzene | 7.471 | 7.246 | 6.861 | 8.294 | 8.011 | 8.115 | 8.039 | 8.033 | 8.300 | 7.510 | 7.7880 | 6.25 |
| 61) | C | m+p-xylene | 6.131 | 5.866 | 5.663 | 7.030 | 6.800 | 6.820 | 6.589 | 6.678 | 6.751 | 5.973 | 6.4300 | 7.41 |

Response Factor Report

Method Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Method File : TSIM180404.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Apr 05 10:02:48 2018
Response Via : Initial Calibration

Calibration Files
0.02=r156844_Ev2.D 0.04=r156845_Ev2.D 0.1 =r156846_Ev2.D 0.2 =r156847_Ev2.D 0.5 =r156848_Ev2.D
1.0 =r156849_Ev2.D 5.0 =r156850_Ev2.D 10.0=r156851_Ev2.D 20.0=r156852_Ev2.D 50.0=r156853_Ev2.D

| | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 62) C | bromoform | 2.183 | 1.502 | 1.471 | 1.790 | 1.757 | 1.803 | 1.999 | 2.124 | 2.294 | 2.193 | 1.9116 | 15.25 |
| 63) C | styrene | 4.632 | 4.100 | 4.100 | 4.869 | 4.890 | 4.928 | 5.141 | 5.345 | 5.709 | 5.239 | 4.8954 | 10.50 |
| 64) C | 1,1,2,2-tetrachlor... | 4.445 | 4.065 | 3.970 | 4.811 | 4.698 | 4.624 | 4.685 | 4.730 | 5.017 | 4.491 | 4.5535 | 7.14 |
| 65) C | o-xylene | 6.451 | 5.722 | 5.700 | 6.990 | 6.798 | 6.881 | 6.866 | 6.790 | 6.944 | 5.996 | 6.5138 | 7.91 |
| 66) | 1,2,3-Trichloropro... | 3.718 | 3.647 | 3.382 | 4.047 | 3.858 | 3.718 | 3.667 | 3.781 | 3.962 | 3.592 | 3.7371 | 5.08 |
| 67) s | bromofluorobenzene | 1.378 | 2.084 | 1.991 | 2.343 | 2.457 | 2.370 | 2.451 | 2.743 | 2.443 | 2.532 | 2.2791 | 16.75 |
| 68) C | isopropylbenzene | 7.870 | 7.232 | 6.924 | 8.500 | 8.201 | 8.169 | 8.379 | 8.457 | 8.756 | 7.726 | 8.0215 | 7.29 |
| 69) | Bromobenzene | 5.120 | 4.447 | 4.061 | 4.831 | 4.585 | 4.540 | 4.683 | 4.790 | 5.066 | 4.539 | 4.6661 | 6.63 |
| 70) | 4-ethyl toluene | 7.542 | 6.983 | 7.146 | 8.994 | 8.843 | 8.928 | 9.376 | 9.570 | 9.800 | 8.592 | 8.5774 | 11.75 |
| 71) | 1,3,5-trimethylben... | 6.326 | 6.210 | 6.185 | 7.928 | 7.805 | 7.896 | 8.125 | 8.189 | 8.389 | 7.327 | 7.4379 | 11.73 |
| 72) | tert-butylbenzene | | | | 7.578 | 7.494 | 7.610 | 7.840 | 8.036 | 8.161 | 6.750 | 7.6383 | 6.06 |
| 73) | 1,2,4-trimethylben... | 5.829 | 6.002 | 5.907 | 7.573 | 7.574 | 7.735 | 8.039 | 8.223 | 8.368 | 6.843 | 7.2092 | 13.71 |
| 74) C | Benzyl Chloride | 3.026 | 3.003 | 2.981 | 3.575 | 3.832 | 4.038 | 4.819 | 5.219 | 5.977 | 5.637 | 4.2107 | 26.84 |
| 75) | 1,3-dichlorobenzene | 3.993 | 3.998 | 4.031 | 4.853 | 4.813 | 4.698 | 4.992 | 5.227 | 5.519 | 4.893 | 4.7017 | 11.31 |
| 76) C | 1,4-dichlorobenzene | 4.144 | 4.127 | 3.894 | 4.727 | 4.610 | 4.640 | 4.914 | 5.191 | 5.391 | 4.848 | 4.6487 | 10.29 |
| 77) | sec-butylbenzene | 0.907 | 0.830 | 0.849 | 1.068 | 1.044 | 1.074 | 1.151 | 1.151 | 1.160 | 0.992 | 1.0225 | 12.14 |
| 78) | p-isopropyltoluene | 7.160 | 6.903 | 7.204 | 8.977 | 8.843 | 9.101 | 9.667 | 9.808 | 9.796 | 8.108 | 8.5567 | 13.27 |
| 79) | 1,2-dichlorobenzene | 3.798 | 3.923 | 3.752 | 4.443 | 4.390 | 4.443 | 4.777 | 4.967 | 5.168 | 4.624 | 4.4284 | 10.94 |
| 80) | n-butylbenzene | 5.661 | 6.428 | 6.632 | 8.392 | 8.556 | 8.882 | 9.539 | 9.466 | 9.291 | 8.005 | 8.0852 | 17.08 |
| 81) C | 1,2,4-trichloroben... | | 1.617 | 1.937 | 2.718 | 2.948 | 3.205 | 4.017 | 4.252 | 4.071 | 3.675 | 3.1600 | 29.89 |
| 82) | naphthalene | | 0.549 | 0.594 | 0.929 | 1.013 | 1.101 | 1.142 | 1.181 | 1.097 | 0.964 | 0.9523 | 24.25 |
| 83) | 1,2,3-trichloroben... | | 2.159 | 2.085 | 2.698 | 2.837 | 3.060 | 3.809 | 3.973 | 3.637 | 3.312 | 3.0633 | 22.30 |
| 84) C | hexachlorobutadiene | 2.245 | 2.203 | 2.247 | 2.730 | 2.679 | 2.767 | 3.359 | 3.400 | 3.009 | 2.697 | 2.7338 | 15.78 |

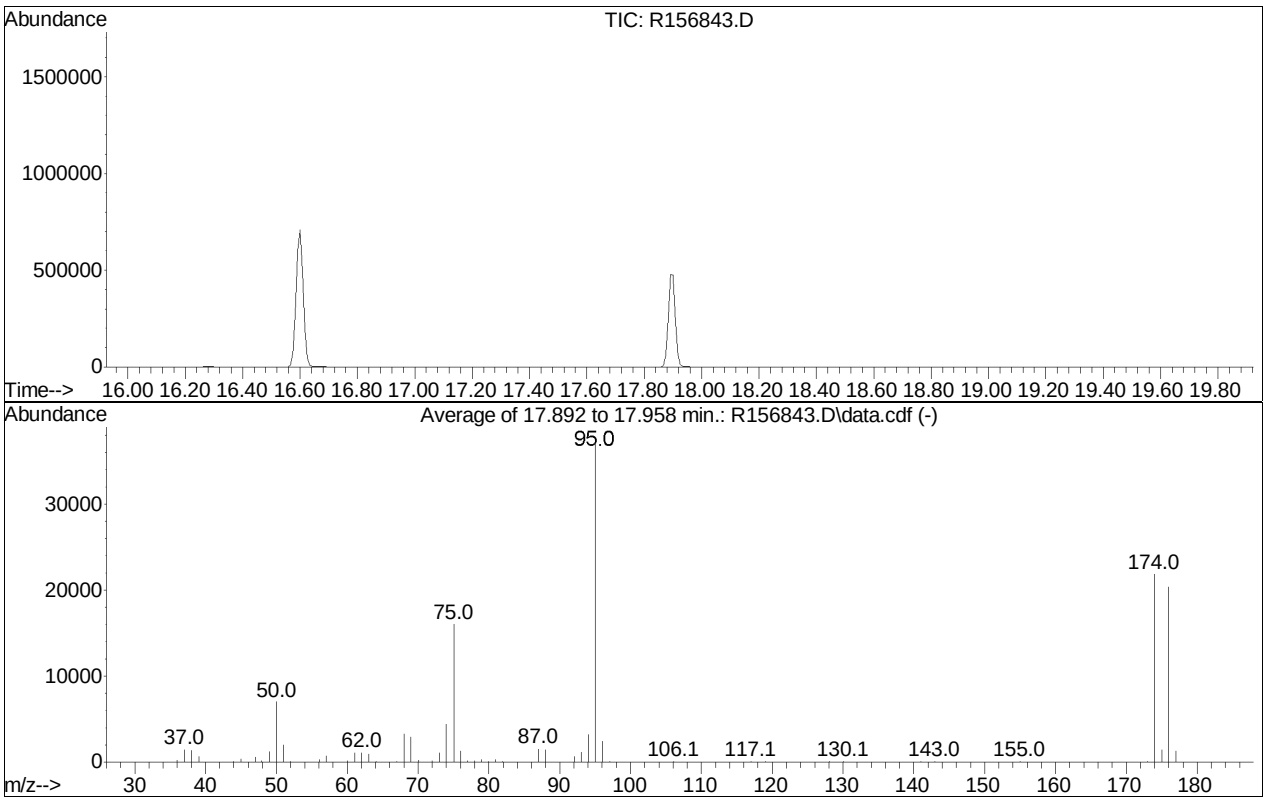
(#) = Out of Range

BFB

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : R156843.D
Acq On : 4 Apr 2018 5:34 PM
Operator : AIRLAB15:RY
Sample : WG1103790-1,3,250,250
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Apr 05 10:02:48 2018




Spectrum Information: Average of 17.892 to 17.958 min.

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 18.9 | 7016 | PASS |
| 75 | 95 | 30 | 66 | 43.1 | 16016 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 37135 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 2386 | PASS |
| 173 | 174 | 0.00 | 2 | 0.5 | 109 | PASS |
| 174 | 95 | 50 | 120 | 58.8 | 21841 | PASS |
| 175 | 174 | 4 | 9 | 6.7 | 1458 | PASS |
| 176 | 174 | 93 | 101 | 93.4 | 20397 | PASS |
| 177 | 176 | 5 | 9 | 6.2 | 1270 | PASS |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156844_Ev2.D
Acq On : 4 Apr 2018 6:10 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.02
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:02:37 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.67 | 49 | 132911 | 10.000 | ppbV | # 0.00 |
| Standard Area = 133810 | | | Recovery | = | 99.33% | |
| 33) 1,4-difluorobenzene | 11.94 | 114 | 272498 | 10.000 | ppbV | 0.01 |
| Standard Area = 280369 | | | Recovery | = | 97.19% | |
| 51) chlorobenzene-D5 | 16.59 | 54 | 56352 | 10.000 | ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery | = | 95.42% | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.56 | 65 | 74380 | 10.047 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 100.47% | |
| 53) toluene-D8 | 14.77 | 98 | 254561 | 10.228 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 102.28% | |
| 67) bromofluorobenzene | 17.89 | 95 | 77661 | 5.623 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 56.23%# | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.91 | 41 | 301M6 | 0.031 | ppbV | |
| 3) dichlorodifluoromethane | 3.99 | 85 | 414 | 0.024 | ppbV | 92 |
| 4) chloromethane | 4.18 | 50 | 253 | 0.025 | ppbV # | 75 |
| 5) Freon-114 | 4.31 | 85 | 438 | 0.022 | ppbV | 95 |
| 6) vinyl chloride | 4.45 | 62 | 240 | 0.024 | ppbV # | 71 |
| 7) 1,3-butadiene | 4.62 | 54 | 182 | 0.023 | ppbV # | 71 |
| 8) bromomethane | 4.95 | 94 | 153 | 0.019 | ppbV | 90 |
| 9) chloroethane | 5.17 | 64 | 154 | 0.043 | ppbV # | 37 |
| 10) ethanol | 5.37 | 31 | 3585 | 0.440 | ppbV | 98 |
| 11) vinyl bromide | 5.63 | 106 | 221M2 | 0.027 | ppbV | |
| 12) acrolein | 5.80 | 56 | 175M4 | 0.042 | ppbV | |
| 13) acetone | 5.97 | 43 | 5209 | 0.434 | ppbV # | 98 |
| 14) trichlorofluoromethane | 6.15 | 101 | 364 | 0.022 | ppbV | 98 |
| 15) isopropyl alcohol | 6.30 | 45 | 5576 | 0.367 | ppbV # | 95 |
| 16) acrylonitrile | 6.55 | 53 | 180M2 | 0.023 | ppbV | |
| 17) 1,1-dichloroethene | 6.93 | 61 | 307 | 0.022 | ppbV | 88 |
| 18) tertiary butyl alcohol | 7.06 | 59 | 398 | 0.026 | ppbV # | 1 |
| 19) methylene chloride | 7.10 | 49 | 395 | 0.030 | ppbV | 100 |
| 20) 3-chloropropene | 7.24 | 41 | 357 | 0.020 | ppbV # | 77 |
| 21) carbon disulfide | 7.40 | 76 | 484 | 0.018 | ppbV # | 1 |
| 22) Freon 113 | 7.44 | 101 | 416 | 0.025 | ppbV # | 87 |
| 23) trans-1,2-dichloroethene | 8.24 | 61 | 308 | 0.022 | ppbV # | 84 |
| 24) 1,1-dichloroethane | 8.47 | 63 | 423 | 0.024 | ppbV | 90 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156844_Ev2.D
Acq On : 4 Apr 2018 6:10 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.02
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:02:37 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 25) MTBE | 8.60 | 73 | 511 | 0.021 ppbV # | 63 |
| 26) vinyl acetate | 8.71 | 43 | 528 | 0.022 ppbV # | 71 |
| 27) 2-butanone | 9.00 | 43 | 689 | 0.029 ppbV # | 91 |
| 28) cis-1,2-dichloroethene | 9.47 | 61 | 301 | 0.022 ppbV | 94 |
| 29) Ethyl Acetate | 9.81 | 61 | 98 | 0.028 ppbV # | 1 |
| 30) chloroform | 9.83 | 83 | 386 | 0.023 ppbV # | 82 |
| 31) Tetrahydrofuran | 10.35 | 42 | 317 | 0.020 ppbV # | 87 |
| 32) 1,2-dichloroethane | 10.68 | 62 | 270 | 0.023 ppbV # | 69 |
| 34) hexane | 9.75 | 57 | 347 | 0.020 ppbV # | 61 |
| 36) 1,1,1-trichloroethane | 10.98 | 97 | 289 | 0.022 ppbV # | 83 |
| 37) benzene | 11.51 | 78 | 747 | 0.025 ppbV # | 84 |
| 38) carbon tetrachloride | 11.68 | 117 | 278 | 0.022 ppbV # | 91 |
| 39) cyclohexane | 11.82 | 56 | 330 | 0.019 ppbV | 96 |
| 40) Dibromomethane | 12.43 | 93 | 303M4 | 0.032 ppbV | |
| 41) 1,2-dichloropropane | 12.45 | 63 | 244 | 0.020 ppbV # | 76 |
| 42) bromodichloromethane | 12.69 | 83 | 285 | 0.017 ppbV # | 89 |
| 43) 1,4-dioxane | 0.00 | | 0 | N.D. | |
| 44) trichloroethene | 12.73 | 130 | 298M3 | 0.026 ppbV | |
| 45) 2,2,4-trimethylpentane | 12.79 | 57 | 1120 | 0.020 ppbV # | 89 |
| 46) heptane | 13.11 | 43 | 568 | 0.021 ppbV # | 95 |
| 47) cis-1,3-dichloropropene | 13.75 | 75 | 287 | 0.019 ppbV # | 70 |
| 48) 4-methyl-2-pentanone | 13.83 | 43 | 532 | 0.018 ppbV # | 85 |
| 49) trans-1,3-dichloropropene | 14.37 | 75 | 265 | 0.019 ppbV # | 66 |
| 50) 1,1,2-trichloroethane | 14.57 | 97 | 276 | 0.024 ppbV | 94 |
| 52) toluene | 14.88 | 91 | 816 | 0.023 ppbV | 100 |
| 54) 2-hexanone | 15.20 | 43 | 452 | 0.015 ppbV # | 89 |
| 55) dibromochloromethane | 15.32 | 129 | 211 | 0.015 ppbV # | 87 |
| 56) 1,2-dibromoethane | 15.57 | 107 | 396 | 0.024 ppbV | 99 |
| 57) tetrachloroethene | 16.01 | 166 | 230 | 0.019 ppbV | 92 |
| 58) 1,1,1,2-tetrachloroethane | 16.62 | 131 | 256 | 0.023 ppbV # | 94 |
| 59) chlorobenzene | 16.63 | 112 | 610 | 0.023 ppbV # | 91 |
| 60) ethylbenzene | 16.96 | 91 | 842 | 0.019 ppbV | 99 |
| 61) m+p-xylene | 17.12 | 91 | 1382 | 0.037 ppbV | 98 |
| 62) bromoform | 17.18 | 173 | 246 | 0.022 ppbV | 97 |
| 63) styrene | 17.43 | 104 | 522 | 0.018 ppbV | 96 |
| 64) 1,1,2,2-tetrachloroethane | 17.52 | 83 | 501 | 0.019 ppbV | 95 |
| 65) o-xylene | 17.51 | 91 | 727 | 0.019 ppbV | 92 |
| 66) 1,2,3-Trichloropropane | 17.63 | 75 | 419 | 0.020 ppbV # | 46 |
| 68) isopropylbenzene | 18.00 | 105 | 887 | 0.019 ppbV | 96 |
| 69) Bromobenzene | 18.07 | 77 | 577 | 0.022 ppbV # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156844_Ev2.D
Acq On : 4 Apr 2018 6:10 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.02
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:02:37 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.53 | 105 | 850 | 0.016 ppbV # | 90 |
| 71) 1,3,5-trimethylbenzene | 18.59 | 105 | 713 | 0.016 ppbV # | 90 |
| 72) tert-butylbenzene | 18.93 | 119 | 712 | 0.016 ppbV | 96 |
| 73) 1,2,4-trimethylbenzene | 18.93 | 105 | 657 | 0.015 ppbV | 93 |
| 74) Benzyl Chloride | 19.04 | 91 | 341M3 | 0.013 ppbV | |
| 75) 1,3-dichlorobenzene | 19.06 | 146 | 450 | 0.016 ppbV # | 84 |
| 76) 1,4-dichlorobenzene | 19.11 | 146 | 467 | 0.017 ppbV | 97 |
| 77) sec-butylbenzene | 19.13 | 105 | 1022 | 0.016 ppbV | 100 |
| 78) p-isopropyltoluene | 19.27 | 119 | 807 | 0.015 ppbV | 96 |
| 79) 1,2-dichlorobenzene | 19.39 | 146 | 428 | 0.016 ppbV # | 89 |
| 80) n-butylbenzene | 19.61 | 91 | 638 | 0.012 ppbV | 98 |
| 81) 1,2,4-trichlorobenzene | 20.94 | 180 | 211M4 | 0.009 ppbV | |
| 82) naphthalene | 21.08 | 128 | 568M4 | 0.009 ppbV | |
| 83) 1,2,3-trichlorobenzene | 21.32 | 180 | 231 | 0.011 ppbV # | 74 |
| 84) hexachlorobutadiene | 21.35 | 225 | 253 | 0.013 ppbV # | 77 |

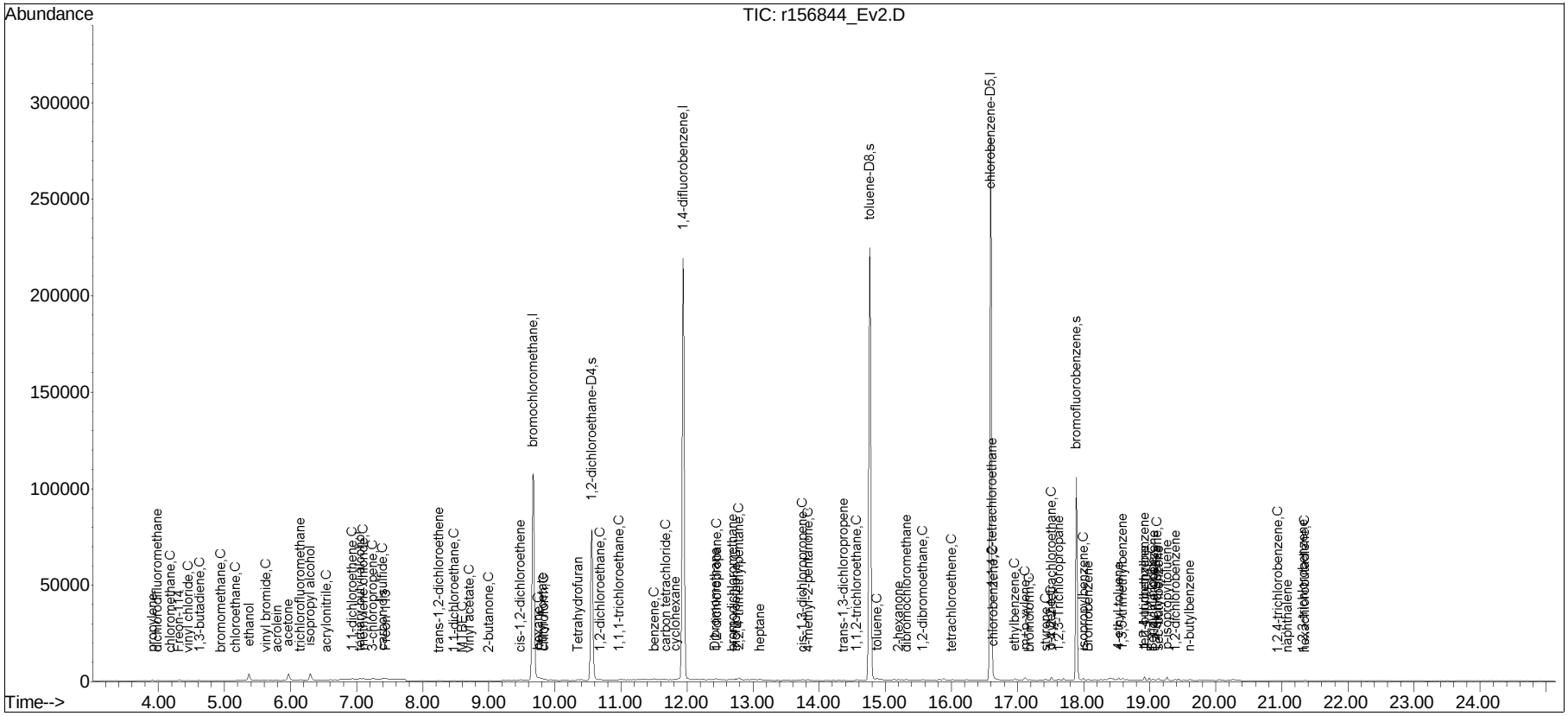
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156844_Ev2.D
Acq On : 4 Apr 2018 6:10 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.02
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:02:37 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

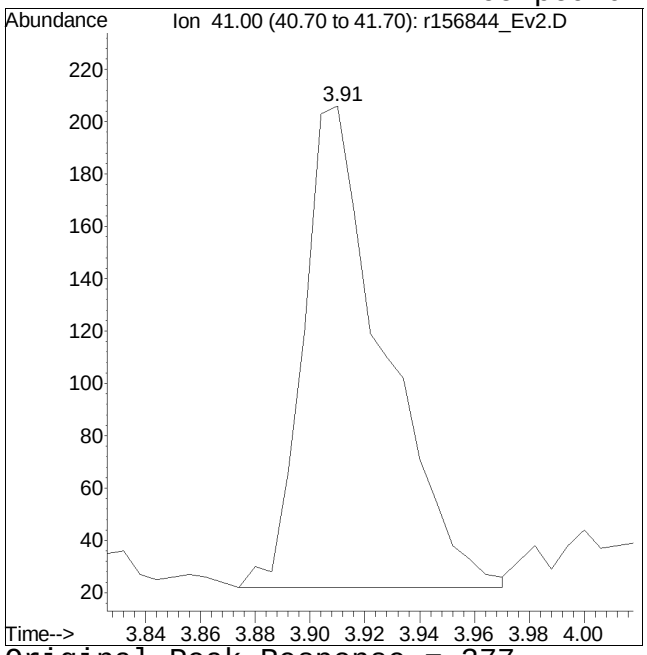
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



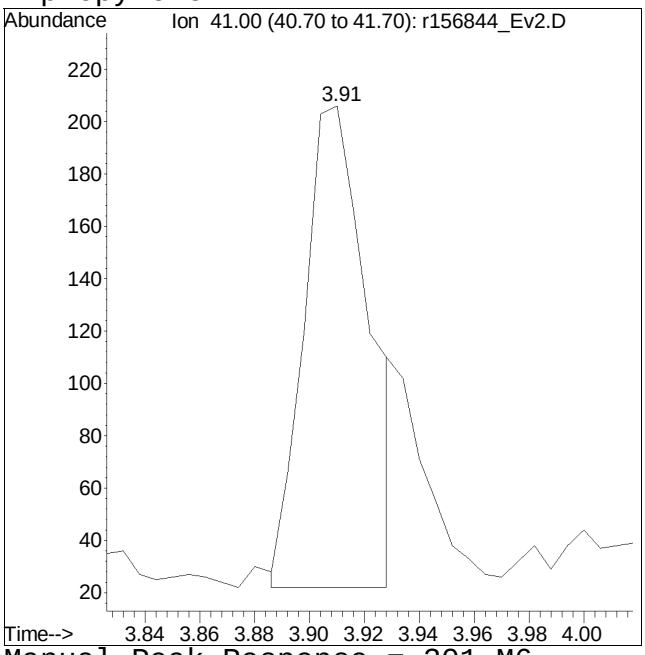
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #2: propylene




Original Peak Response = 377



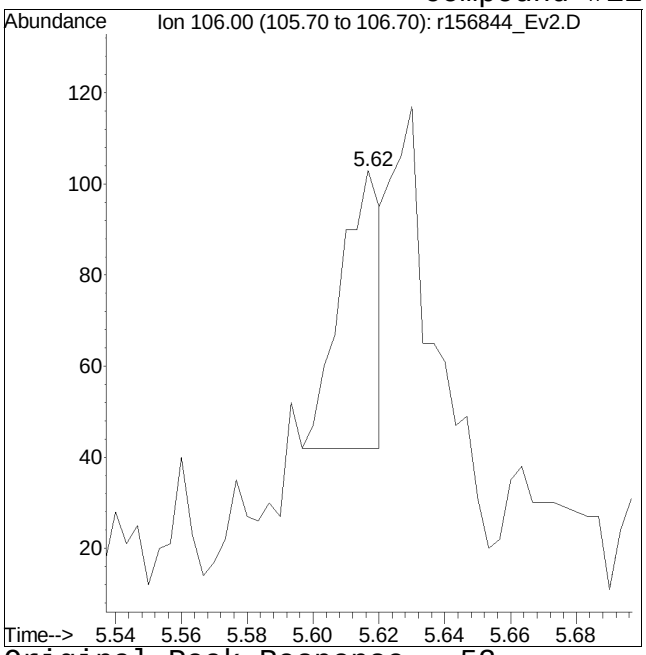

Manual Peak Response = 301 M6

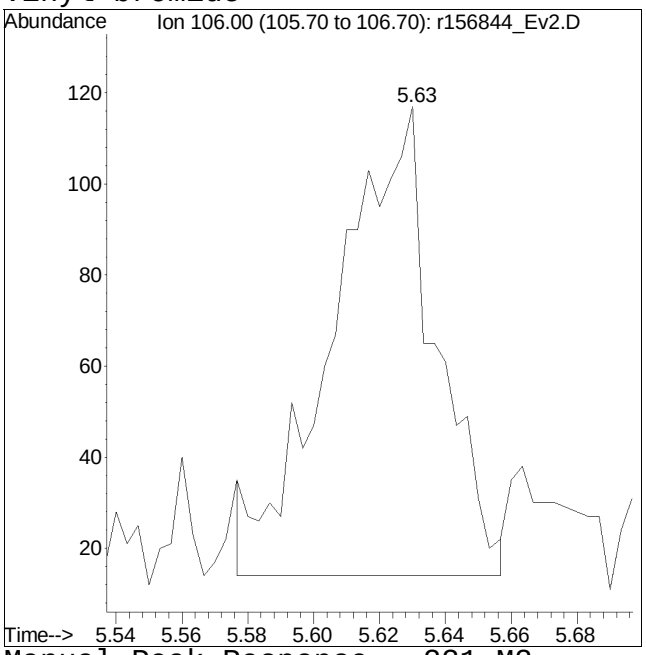
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #11: vinyl bromide



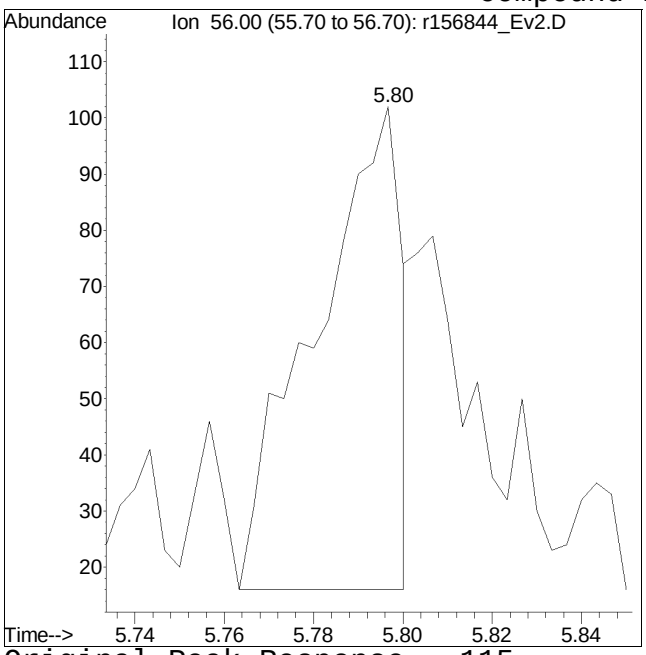




Original Peak Response = 52 Manual Peak Response = 221 M2
M2 = Peak not found by automatic integration algorithm.

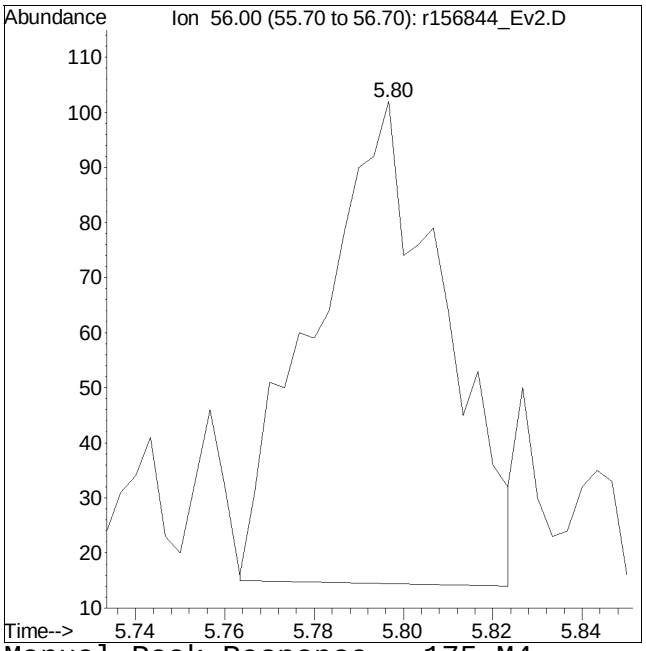
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\ QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #12: acrolein




Original Peak Response = 115



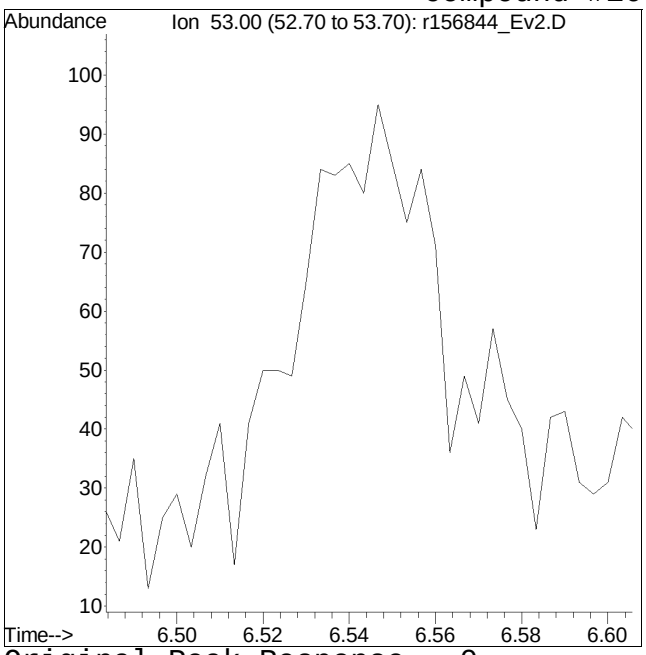

Manual Peak Response = 175 M4

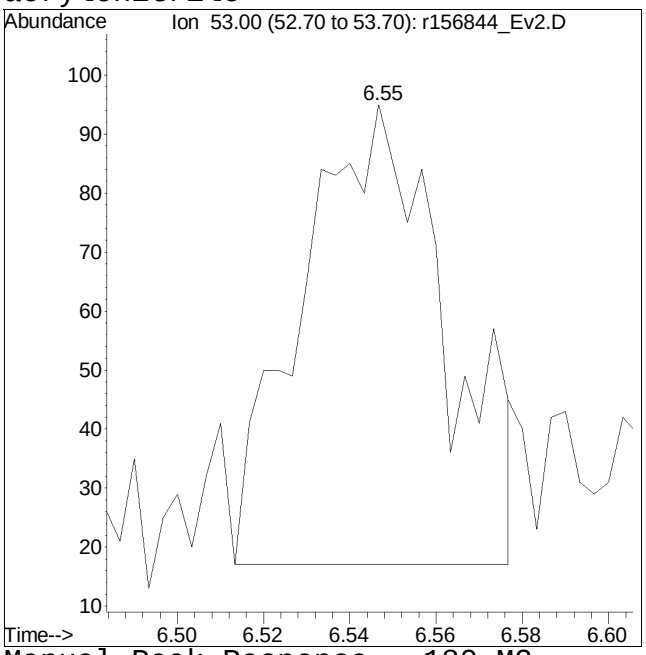
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #16: acrylonitrile



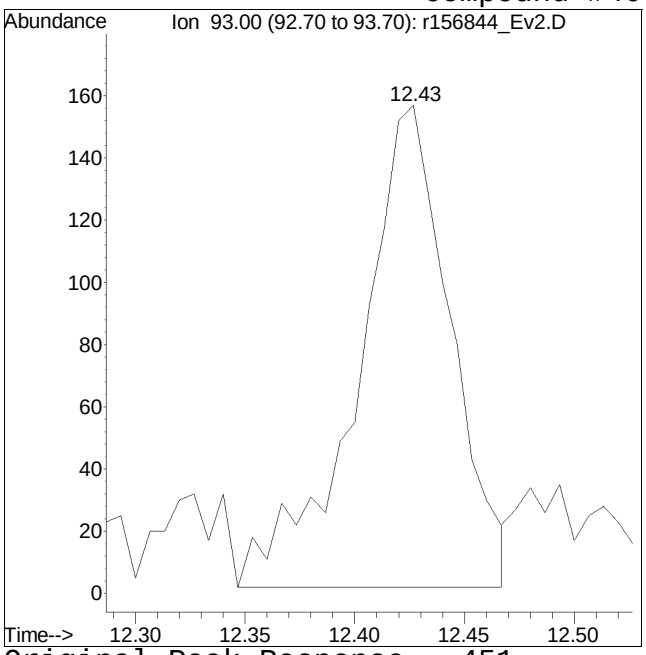




Original Peak Response = 0 Manual Peak Response = 180 M2
M2 = Peak not found by automatic integration algorithm.

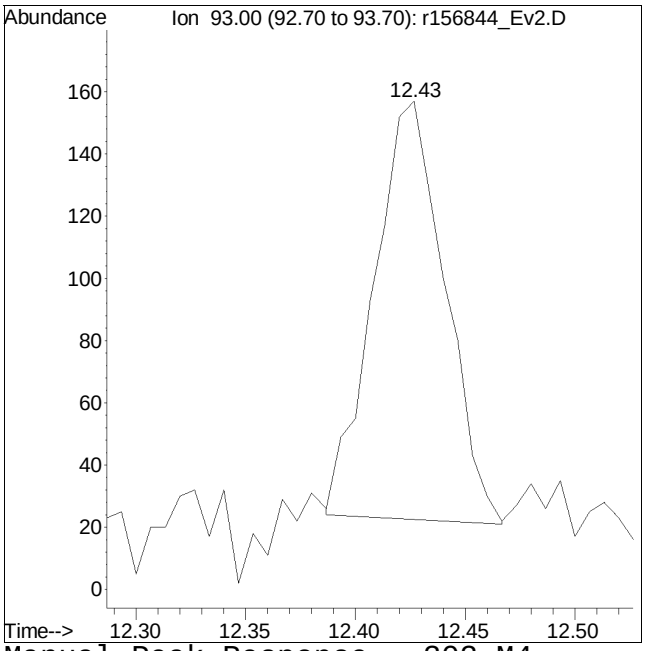
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #40: Dibromomethane




Original Peak Response = 451



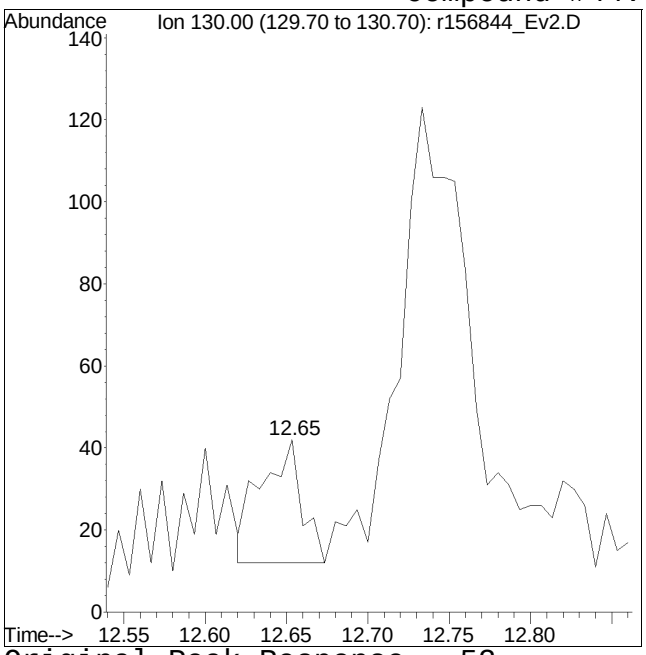

Manual Peak Response = 303 M4

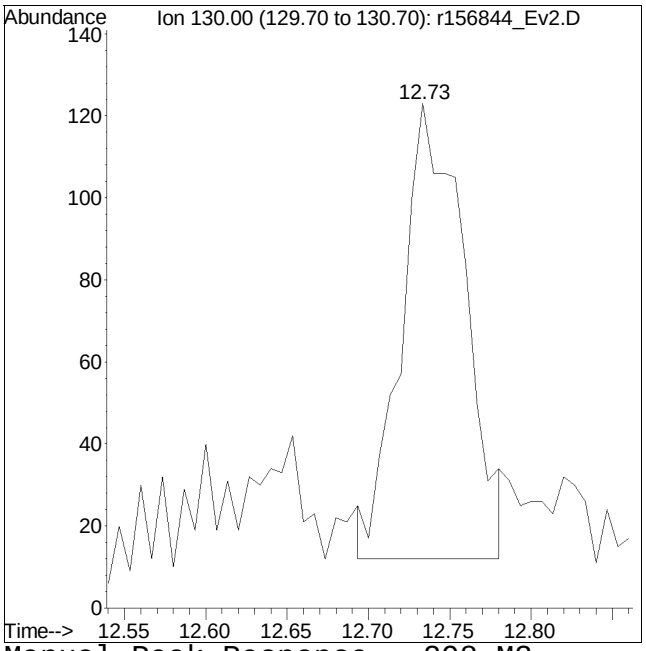
M4 = Poor automated baseline construction.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #44: trichloroethene



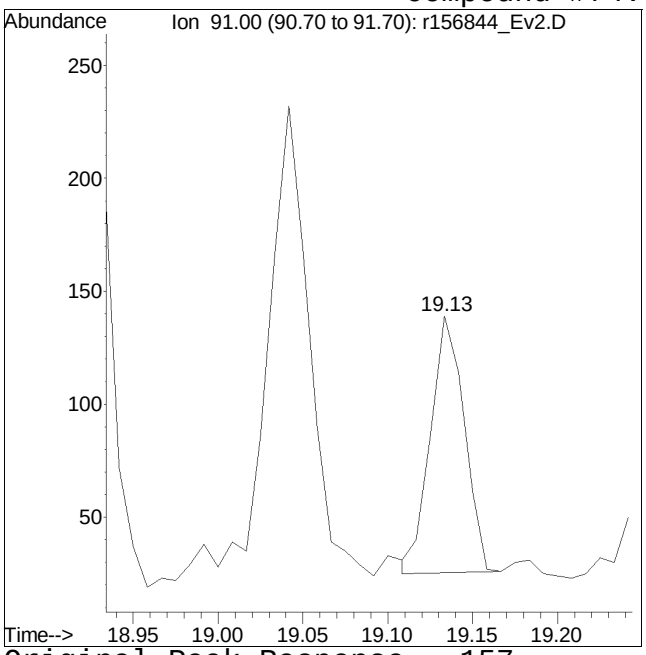

Original Peak Response = 52 Manual Peak Response = 298 M3

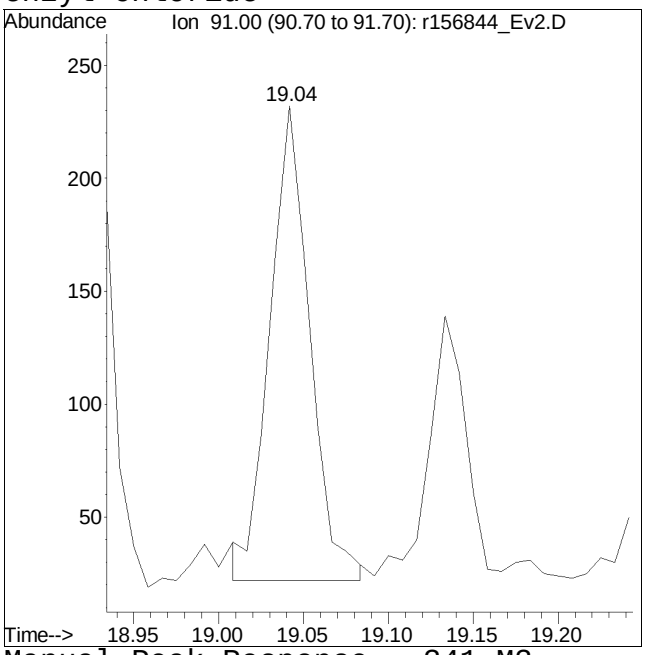
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #74: Benzyl Chloride



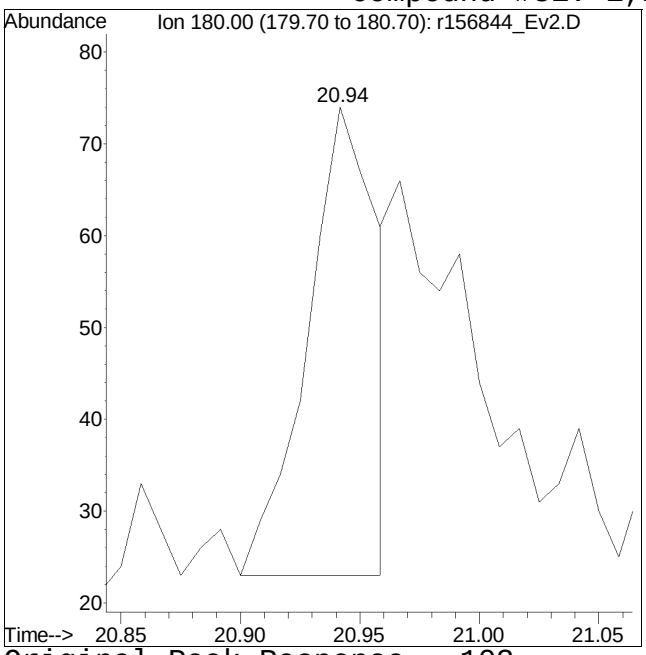

Original Peak Response = 157 Manual Peak Response = 341 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

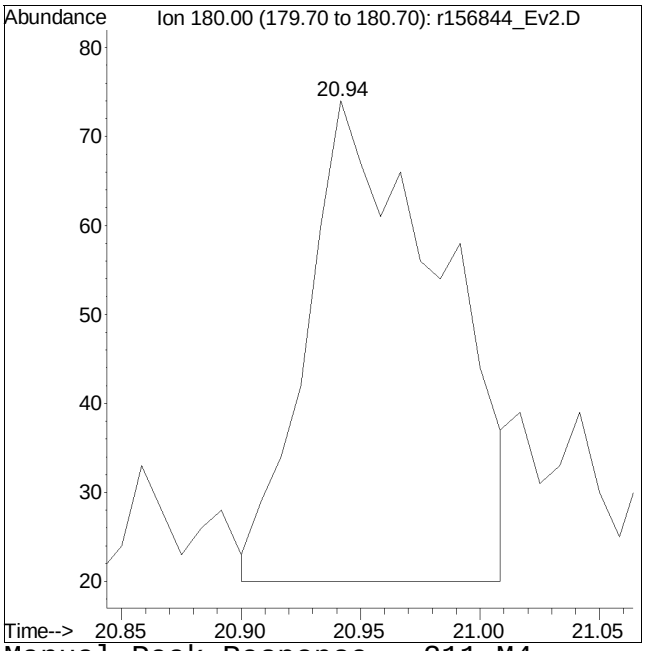
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #81: 1,2,4-trichlorobenzene




Original Peak Response = 103



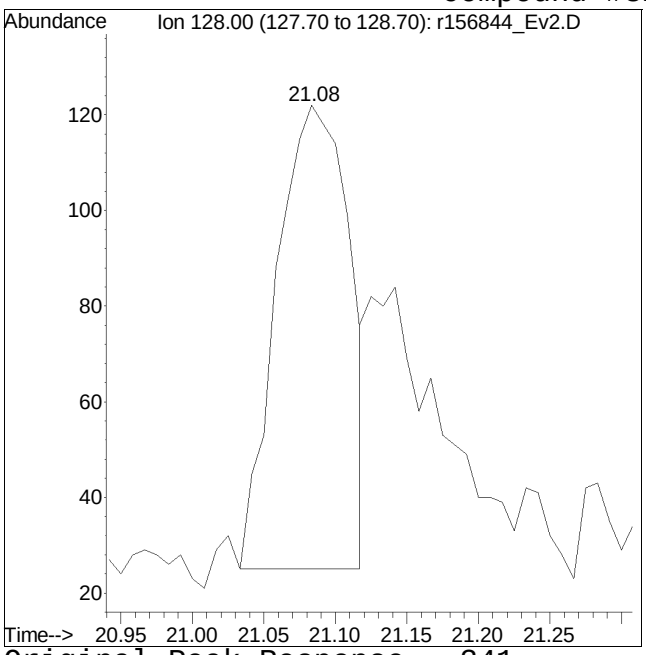

Manual Peak Response = 211 M4

M4 = Poor automated baseline construction.

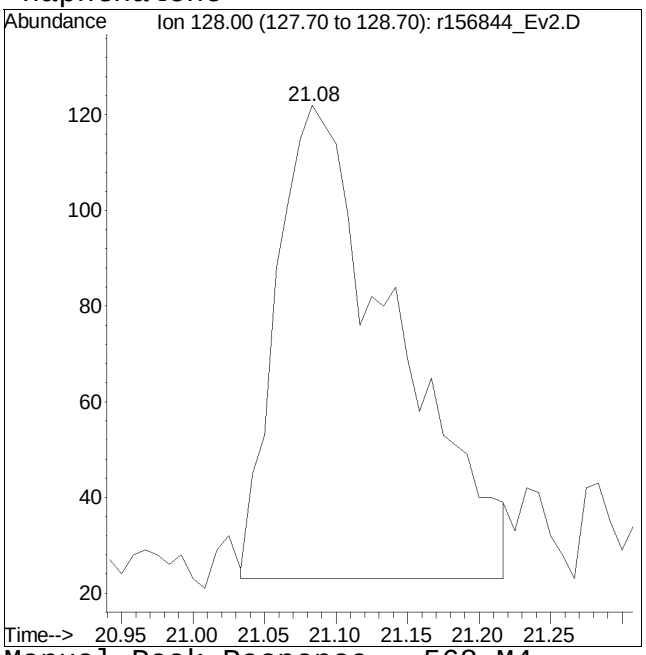
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156844_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:10 PM Instrument :
Sample : ITO15-SIMSTD0.02 Quant Date : 4/5/2018 9:48 am

Compound #82: naphthalene




Original Peak Response = 341




Manual Peak Response = 568 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156845_Ev2.D
Acq On : 4 Apr 2018 6:44 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.04
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:53:31 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.68 | 49 | 130449 | 10.000 | ppbV | # 0.02 |
| Standard Area = 133810 | | | Recovery | = | 97.49% | |
| 33) 1,4-difluorobenzene | 11.94 | 114 | 270939 | 10.000 | ppbV | 0.01 |
| Standard Area = 280369 | | | Recovery | = | 96.64% | |
| 51) chlorobenzene-D5 | 16.59 | 54 | 56276 | 10.000 | ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery | = | 95.29% | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.56 | 65 | 75262 | 10.224 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 102.24% | |
| 53) toluene-D8 | 14.77 | 98 | 250555 | 10.081 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 100.81% | |
| 67) bromofluorobenzene | 17.89 | 95 | 117268 | 8.503 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 85.03% | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.91 | 41 | 485M4 | 0.051 | ppbV | |
| 3) dichlorodifluoromethane | 3.99 | 85 | 723 | 0.043 | ppbV | 94 |
| 4) chloromethane | 4.18 | 50 | 443 | 0.045 | ppbV | 90 |
| 5) Freon-114 | 4.31 | 85 | 843 | 0.042 | ppbV | 96 |
| 6) vinyl chloride | 4.45 | 62 | 433 | 0.044 | ppbV # | 85 |
| 7) 1,3-butadiene | 4.62 | 54 | 371 | 0.047 | ppbV | 81 |
| 8) bromomethane | 4.95 | 94 | 409 | 0.050 | ppbV | 98 |
| 9) chloroethane | 5.17 | 64 | 218 | 0.061 | ppbV # | 84 |
| 10) ethanol | 5.37 | 31 | 4126 | 0.516 | ppbV | 99 |
| 11) vinyl bromide | 5.63 | 106 | 368M4 | 0.046 | ppbV | |
| 12) acrolein | 5.80 | 56 | 238M4 | 0.058 | ppbV | |
| 13) acetone | 5.97 | 43 | 5582 | 0.473 | ppbV # | 98 |
| 14) trichlorofluoromethane | 6.16 | 101 | 702 | 0.043 | ppbV | 97 |
| 15) isopropyl alcohol | 6.30 | 45 | 6214 | 0.417 | ppbV # | 96 |
| 16) acrylonitrile | 6.55 | 53 | 339M4 | 0.044 | ppbV | |
| 17) 1,1-dichloroethene | 6.94 | 61 | 569 | 0.041 | ppbV # | 83 |
| 18) tertiary butyl alcohol | 7.05 | 59 | 735 | 0.049 | ppbV # | 1 |
| 19) methylene chloride | 7.10 | 49 | 631 | 0.048 | ppbV | 95 |
| 20) 3-chloropropene | 7.25 | 41 | 611 | 0.034 | ppbV # | 75 |
| 21) carbon disulfide | 7.40 | 76 | 1014 | 0.038 | ppbV # | 1 |
| 22) Freon 113 | 7.45 | 101 | 698 | 0.043 | ppbV # | 94 |
| 23) trans-1,2-dichloroethene | 8.25 | 61 | 563 | 0.040 | ppbV # | 88 |
| 24) 1,1-dichloroethane | 8.48 | 63 | 695 | 0.040 | ppbV | 91 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156845_Ev2.D
Acq On : 4 Apr 2018 6:44 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.04
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:53:31 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) | MTBE | 8.60 | 73 | 974 | 0.041 ppbV # | 70 |
| 26) | vinyl acetate | 8.72 | 43 | 923 | 0.039 ppbV # | 84 |
| 27) | 2-butanone | 9.00 | 43 | 1150 | 0.049 ppbV # | 95 |
| 28) | cis-1,2-dichloroethene | 9.48 | 61 | 553 | 0.041 ppbV # | 80 |
| 29) | Ethyl Acetate | 9.82 | 61 | 150 | 0.044 ppbV # | 9 |
| 30) | chloroform | 9.83 | 83 | 649 | 0.040 ppbV # | 91 |
| 31) | Tetrahydrofuran | 10.35 | 42 | 538 | 0.034 ppbV # | 84 |
| 32) | 1,2-dichloroethane | 10.68 | 62 | 519 | 0.045 ppbV # | 81 |
| 34) | hexane | 9.76 | 57 | 696 | 0.041 ppbV # | 73 |
| 36) | 1,1,1-trichloroethane | 10.98 | 97 | 428 | 0.032 ppbV # | 83 |
| 37) | benzene | 11.51 | 78 | 1260 | 0.042 ppbV # | 91 |
| 38) | carbon tetrachloride | 11.68 | 117 | 510 | 0.041 ppbV # | 86 |
| 39) | cyclohexane | 11.82 | 56 | 699 | 0.040 ppbV | 94 |
| 40) | Dibromomethane | 12.43 | 93 | 534 | 0.056 ppbV # | 100 |
| 41) | 1,2-dichloropropane | 12.46 | 63 | 555 | 0.045 ppbV # | 72 |
| 42) | bromodichloromethane | 12.69 | 83 | 523 | 0.032 ppbV # | 78 |
| 43) | 1,4-dioxane | 12.81 | 88 | 267 | 0.042 ppbV # | 80 |
| 44) | trichloroethene | 12.74 | 130 | 454 | 0.040 ppbV | 91 |
| 45) | 2,2,4-trimethylpentane | 12.79 | 57 | 2100 | 0.038 ppbV # | 90 |
| 46) | heptane | 13.10 | 43 | 1065 | 0.040 ppbV | 96 |
| 47) | cis-1,3-dichloropropene | 13.75 | 75 | 518 | 0.034 ppbV # | 83 |
| 48) | 4-methyl-2-pentanone | 13.82 | 43 | 988 | 0.033 ppbV # | 87 |
| 49) | trans-1,3-dichloropropene | 14.38 | 75 | 410 | 0.029 ppbV # | 76 |
| 50) | 1,1,2-trichloroethane | 14.57 | 97 | 467 | 0.042 ppbV | 93 |
| 52) | toluene | 14.88 | 91 | 1495 | 0.043 ppbV | 97 |
| 54) | 2-hexanone | 15.19 | 43 | 864 | 0.030 ppbV # | 94 |
| 55) | dibromochloromethane | 15.32 | 129 | 537 | 0.038 ppbV # | 96 |
| 56) | 1,2-dibromoethane | 15.56 | 107 | 683 | 0.042 ppbV | 96 |
| 57) | tetrachloroethene | 16.02 | 166 | 534 | 0.044 ppbV | 95 |
| 58) | 1,1,1,2-tetrachloroethane | 16.62 | 131 | 334 | 0.031 ppbV # | 92 |
| 59) | chlorobenzene | 16.63 | 112 | 1054 | 0.040 ppbV | 97 |
| 60) | ethylbenzene | 16.96 | 91 | 1631 | 0.036 ppbV | 92 |
| 61) | m+p-xylene | 17.12 | 91 | 2641 | 0.071 ppbV | 100 |
| 62) | bromoform | 17.18 | 173 | 338 | 0.030 ppbV | 92 |
| 63) | styrene | 17.43 | 104 | 923 | 0.032 ppbV | 94 |
| 64) | 1,1,2,2-tetrachloroethane | 17.51 | 83 | 915 | 0.035 ppbV | 99 |
| 65) | o-xylene | 17.51 | 91 | 1288 | 0.033 ppbV | 97 |
| 66) | 1,2,3-Trichloropropane | 17.62 | 75 | 821 | 0.040 ppbV # | 62 |
| 68) | isopropylbenzene | 18.00 | 105 | 1628 | 0.035 ppbV | 93 |
| 69) | Bromobenzene | 18.07 | 77 | 1001 | 0.038 ppbV # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156845_Ev2.D
Acq On : 4 Apr 2018 6:44 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.04
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:53:31 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.53 | 105 | 1572 | 0.030 ppbV # | 96 |
| 71) 1,3,5-trimethylbenzene | 18.59 | 105 | 1398 | 0.031 ppbV # | 92 |
| 72) tert-butylbenzene | 18.92 | 119 | 1380 | 0.031 ppbV | 99 |
| 73) 1,2,4-trimethylbenzene | 18.93 | 105 | 1351 | 0.030 ppbV | 94 |
| 74) Benzyl Chloride | 19.04 | 91 | 676 | 0.025 ppbV | 92 |
| 75) 1,3-dichlorobenzene | 19.05 | 146 | 900 | 0.032 ppbV # | 85 |
| 76) 1,4-dichlorobenzene | 19.11 | 146 | 929 | 0.034 ppbV | 90 |
| 77) sec-butylbenzene | 19.13 | 105 | 1868 | 0.029 ppbV | 99 |
| 78) p-isopropyltoluene | 19.26 | 119 | 1554 | 0.029 ppbV | 98 |
| 79) 1,2-dichlorobenzene | 19.38 | 146 | 883 | 0.033 ppbV | 92 |
| 80) n-butylbenzene | 19.61 | 91 | 1447 | 0.027 ppbV | 94 |
| 81) 1,2,4-trichlorobenzene | 20.91 | 180 | 364 | 0.016 ppbV # | 77 |
| 82) naphthalene | 21.07 | 128 | 1236M4 | 0.019 ppbV | |
| 83) 1,2,3-trichlorobenzene | 21.31 | 180 | 486 | 0.023 ppbV # | 87 |
| 84) hexachlorobutadiene | 21.35 | 225 | 496 | 0.026 ppbV # | 88 |

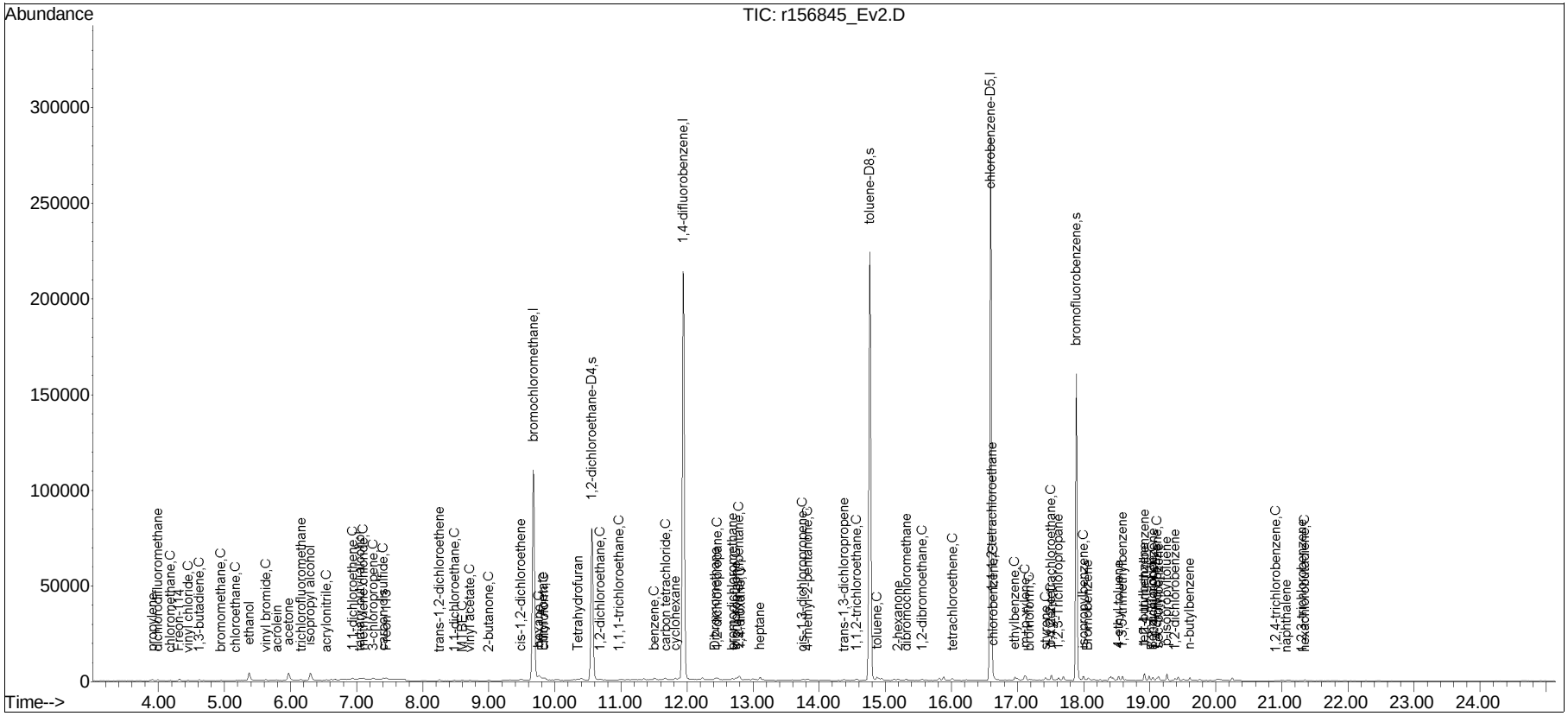
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156845_Ev2.D
Acq On : 4 Apr 2018 6:44 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.04
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:53:31 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

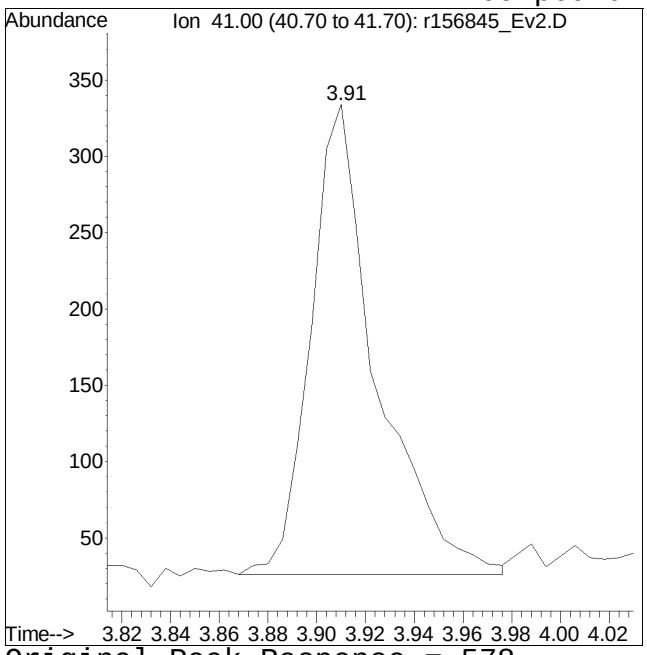
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



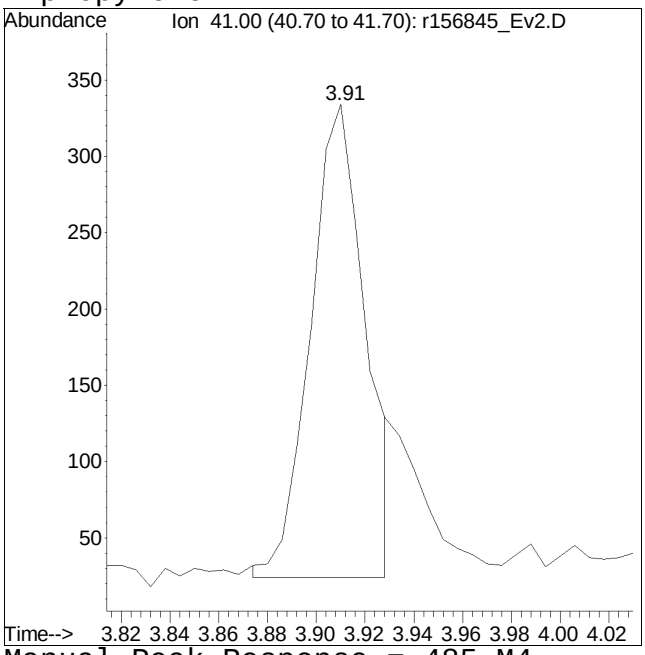
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156845_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:44 PM Instrument :
Sample : ITO15-SIMSTD0.04 Quant Date : 4/5/2018 9:48 am

Compound #2: propylene




Original Peak Response = 578



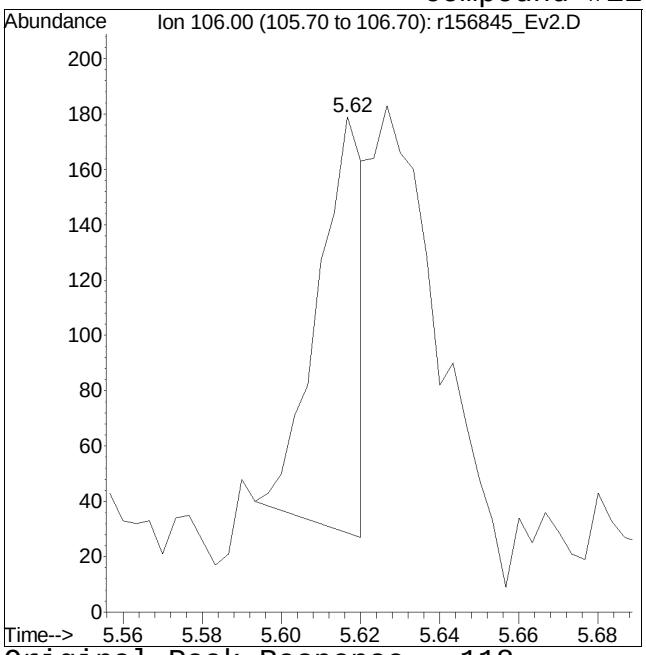

Manual Peak Response = 485 M4

M4 = Poor automated baseline construction.

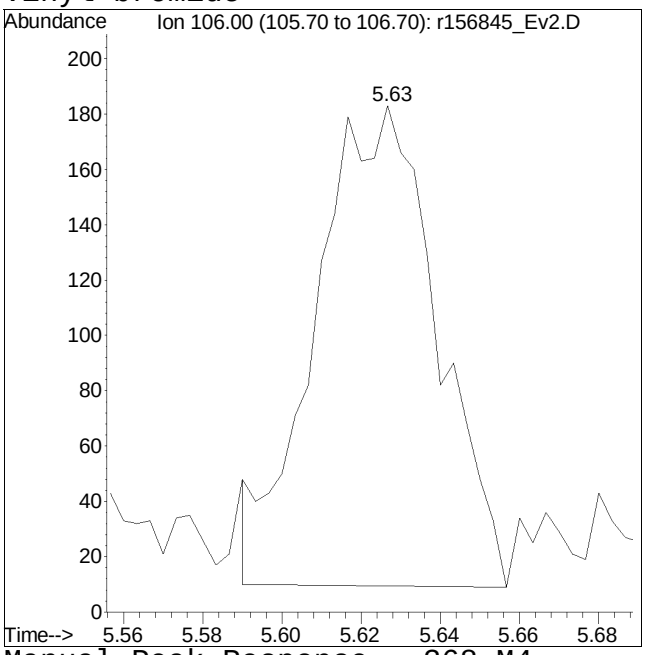
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156845_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:44 PM Instrument :
Sample : ITO15-SIMSTD0.04 Quant Date : 4/5/2018 9:48 am

Compound #11: vinyl bromide




Original Peak Response = 118



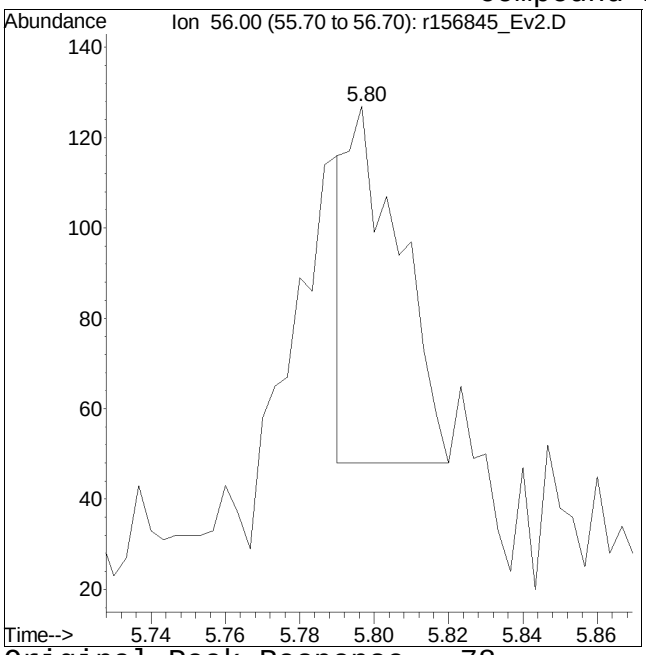

Manual Peak Response = 368 M4

M4 = Poor automated baseline construction.

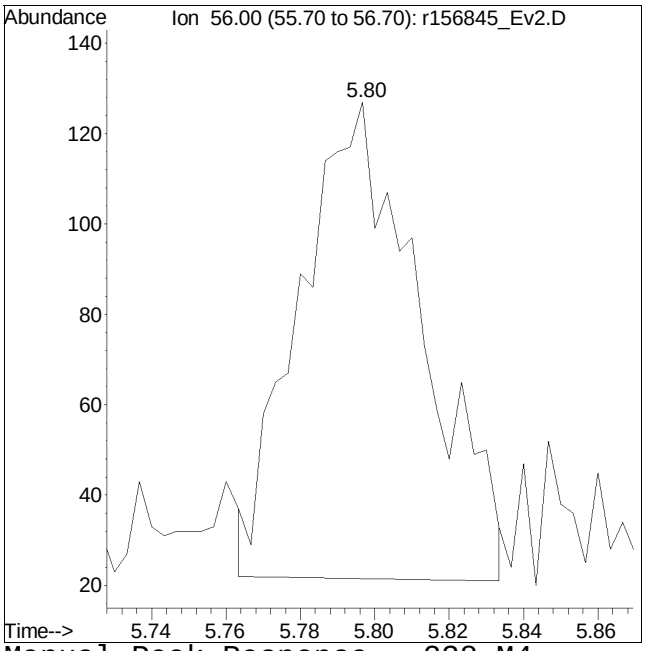
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156845_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:44 PM Instrument :
Sample : ITO15-SIMSTD0.04 Quant Date : 4/5/2018 9:48 am

Compound #12: acrolein




Original Peak Response = 78



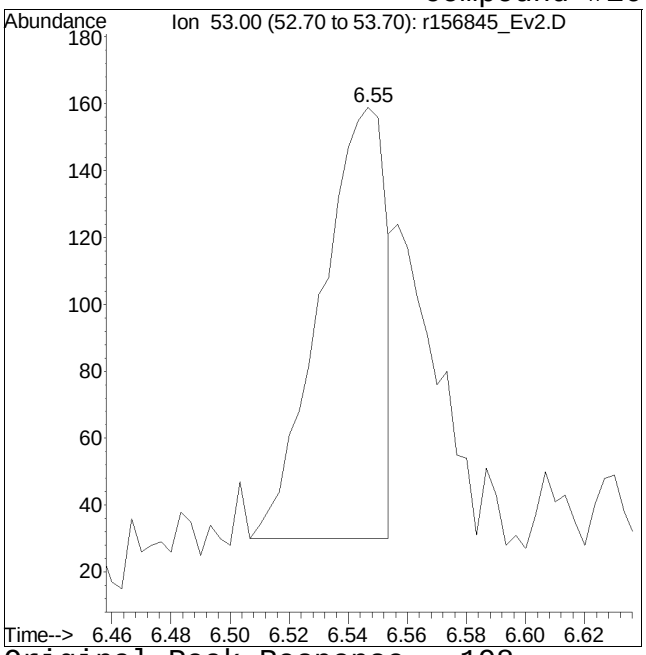

Manual Peak Response = 238 M4

M4 = Poor automated baseline construction.

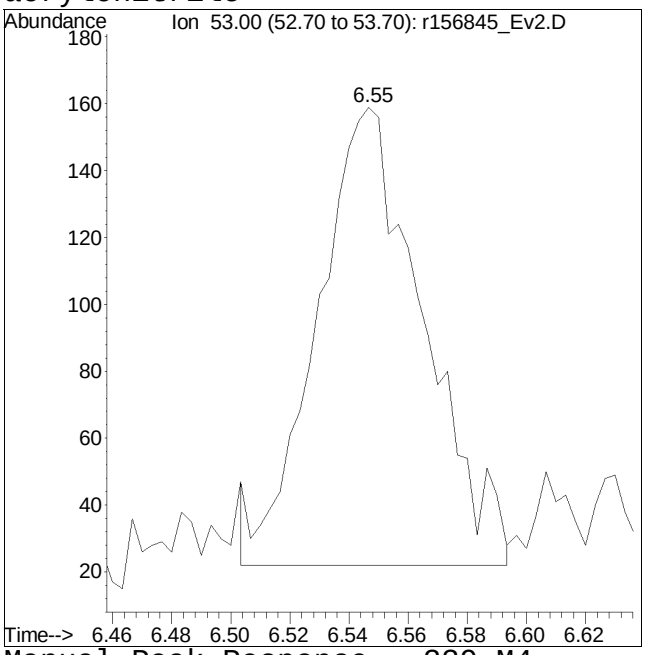
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156845_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:44 PM Instrument :
Sample : ITO15-SIMSTD0.04 Quant Date : 4/5/2018 9:48 am

Compound #16: acrylonitrile




Original Peak Response = 198



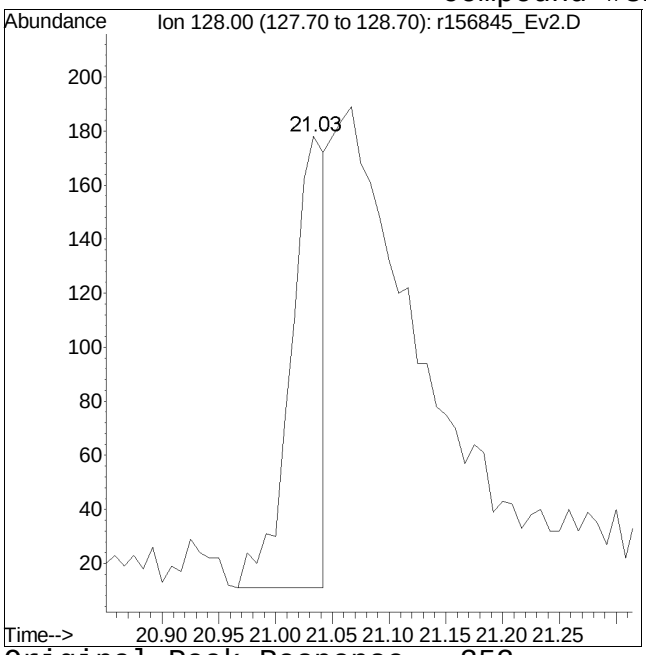

Manual Peak Response = 339 M4

M4 = Poor automated baseline construction.

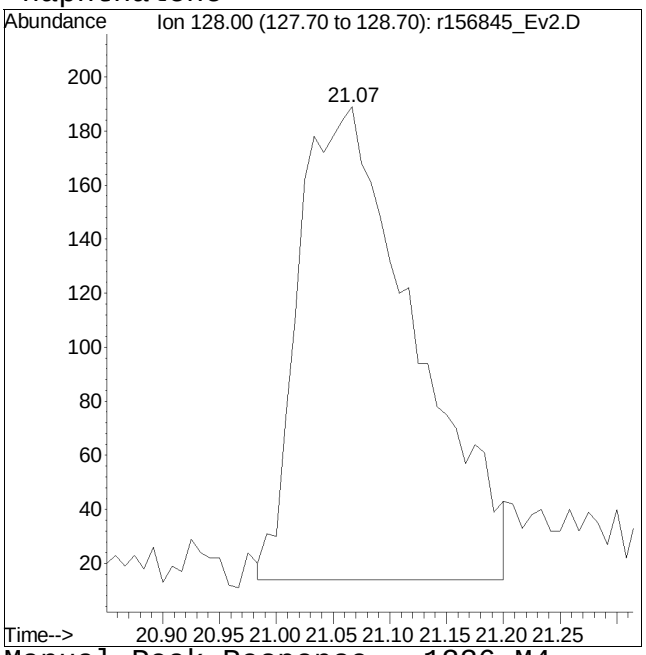
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156845_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 6:44 PM Instrument :
Sample : ITO15-SIMSTD0.04 Quant Date : 4/5/2018 9:48 am

Compound #82: naphthalene




Original Peak Response = 352




Manual Peak Response = 1236 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156846_Ev2.D
Acq On : 4 Apr 2018 7:21 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.1
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:54:32 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.67 | 49 | 130492 | 10.000 | ppbV | # 0.00 |
| Standard Area = 133810 | | | Recovery | = | 97.52% | |
| 33) 1,4-difluorobenzene | 11.94 | 114 | 275136 | 10.000 | ppbV | 0.01 |
| Standard Area = 280369 | | | Recovery | = | 98.13% | |
| 51) chlorobenzene-D5 | 16.59 | 54 | 56828 | 10.000 | ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery | = | 96.22% | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.56 | 65 | 74753 | 10.000 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 100.00% | |
| 53) toluene-D8 | 14.77 | 98 | 255302 | 10.172 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 101.72% | |
| 67) bromofluorobenzene | 17.89 | 95 | 113167 | 8.125 | ppbV | 0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 81.25% | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.90 | 41 | 1055M6 | 0.112 | ppbV | |
| 3) dichlorodifluoromethane | 3.99 | 85 | 1703 | 0.102 | ppbV | 98 |
| 4) chloromethane | 4.18 | 50 | 995 | 0.101 | ppbV # | 88 |
| 5) Freon-114 | 4.31 | 85 | 2033 | 0.102 | ppbV | 100 |
| 6) vinyl chloride | 4.44 | 62 | 995 | 0.101 | ppbV | 94 |
| 7) 1,3-butadiene | 4.62 | 54 | 763 | 0.097 | ppbV | 88 |
| 8) bromomethane | 4.94 | 94 | 832 | 0.103 | ppbV | 97 |
| 9) chloroethane | 5.17 | 64 | 458 | 0.129 | ppbV # | 78 |
| 10) ethanol | 5.37 | 31 | 6054 | 0.756 | ppbV | 96 |
| 11) vinyl bromide | 5.62 | 106 | 808 | 0.102 | ppbV | 92 |
| 12) acrolein | 5.78 | 56 | 397 | 0.096 | ppbV # | 100 |
| 13) acetone | 5.96 | 43 | 9206 | 0.781 | ppbV # | 97 |
| 14) trichlorofluoromethane | 6.15 | 101 | 1633 | 0.101 | ppbV | 95 |
| 15) isopropyl alcohol | 6.29 | 45 | 8245 | 0.553 | ppbV | 99 |
| 16) acrylonitrile | 6.54 | 53 | 681 | 0.088 | ppbV | 96 |
| 17) 1,1-dichloroethene | 6.93 | 61 | 1413 | 0.103 | ppbV | 97 |
| 18) tertiary butyl alcohol | 7.04 | 59 | 1608 | 0.108 | ppbV # | 1 |
| 19) methylene chloride | 7.10 | 49 | 1427 | 0.110 | ppbV | 96 |
| 20) 3-chloropropene | 7.24 | 41 | 1481 | 0.082 | ppbV | 94 |
| 21) carbon disulfide | 7.40 | 76 | 2412 | 0.090 | ppbV # | 1 |
| 22) Freon 113 | 7.44 | 101 | 1706 | 0.104 | ppbV | 98 |
| 23) trans-1,2-dichloroethene | 8.24 | 61 | 1326 | 0.095 | ppbV | 93 |
| 24) 1,1-dichloroethane | 8.47 | 63 | 1811 | 0.105 | ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156846_Ev2.D
Acq On : 4 Apr 2018 7:21 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.1
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:54:32 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 25) MTBE | 8.58 | 73 | 2169 | 0.092 ppbV # | 84 |
| 26) vinyl acetate | 8.71 | 43 | 2394 | 0.101 ppbV # | 93 |
| 27) 2-butanone | 8.99 | 43 | 2463 | 0.106 ppbV # | 97 |
| 28) cis-1,2-dichloroethene | 9.47 | 61 | 1260 | 0.094 ppbV | 95 |
| 29) Ethyl Acetate | 9.80 | 61 | 336 | 0.098 ppbV # | 44 |
| 30) chloroform | 9.83 | 83 | 1567 | 0.097 ppbV | 96 |
| 31) Tetrahydrofuran | 10.33 | 42 | 1449 | 0.092 ppbV | 99 |
| 32) 1,2-dichloroethane | 10.68 | 62 | 1196 | 0.103 ppbV | 98 |
| 34) hexane | 9.75 | 57 | 1637 | 0.096 ppbV # | 74 |
| 36) 1,1,1-trichloroethane | 10.98 | 97 | 1045 | 0.077 ppbV # | 95 |
| 37) benzene | 11.50 | 78 | 3044 | 0.099 ppbV | 96 |
| 38) carbon tetrachloride | 11.67 | 117 | 1167 | 0.093 ppbV | 95 |
| 39) cyclohexane | 11.82 | 56 | 1697 | 0.095 ppbV # | 87 |
| 40) Dibromomethane | 12.42 | 93 | 1060 | 0.110 ppbV # | 100 |
| 41) 1,2-dichloropropane | 12.45 | 63 | 1243 | 0.100 ppbV # | 91 |
| 42) bromodichloromethane | 12.69 | 83 | 1522 | 0.092 ppbV # | 94 |
| 43) 1,4-dioxane | 12.79 | 88 | 548 | 0.086 ppbV # | 48 |
| 44) trichloroethene | 12.73 | 130 | 1178 | 0.102 ppbV | 98 |
| 45) 2,2,4-trimethylpentane | 12.79 | 57 | 5110 | 0.092 ppbV | 97 |
| 46) heptane | 13.10 | 43 | 2391 | 0.088 ppbV | 98 |
| 47) cis-1,3-dichloropropene | 13.75 | 75 | 1206 | 0.079 ppbV | 90 |
| 48) 4-methyl-2-pentanone | 13.81 | 43 | 2484 | 0.082 ppbV # | 98 |
| 49) trans-1,3-dichloropropene | 14.37 | 75 | 1109 | 0.077 ppbV # | 88 |
| 50) 1,1,2-trichloroethane | 14.57 | 97 | 1116 | 0.098 ppbV | 96 |
| 52) toluene | 14.88 | 91 | 3418 | 0.097 ppbV | 97 |
| 54) 2-hexanone | 15.18 | 43 | 2353 | 0.080 ppbV | 97 |
| 55) dibromochloromethane | 15.32 | 129 | 1174 | 0.082 ppbV # | 95 |
| 56) 1,2-dibromoethane | 15.56 | 107 | 1529 | 0.093 ppbV | 100 |
| 57) tetrachloroethene | 16.02 | 166 | 1211 | 0.099 ppbV | 93 |
| 58) 1,1,1,2-tetrachloroethane | 16.62 | 131 | 949 | 0.086 ppbV | 95 |
| 59) chlorobenzene | 16.63 | 112 | 2502 | 0.095 ppbV | 97 |
| 60) ethylbenzene | 16.96 | 91 | 3899 | 0.085 ppbV | 98 |
| 61) m+p-xylene | 17.12 | 91 | 6436 | 0.172 ppbV | 99 |
| 62) bromoform | 17.18 | 173 | 836 | 0.074 ppbV | 98 |
| 63) styrene | 17.43 | 104 | 2330 | 0.080 ppbV | 100 |
| 64) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 2256 | 0.085 ppbV | 99 |
| 65) o-xylene | 17.51 | 91 | 3239 | 0.083 ppbV | 95 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 1922 | 0.092 ppbV # | 65 |
| 68) isopropylbenzene | 18.00 | 105 | 3935 | 0.083 ppbV | 96 |
| 69) Bromobenzene | 18.07 | 77 | 2308 | 0.087 ppbV # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156846_Ev2.D
Acq On : 4 Apr 2018 7:21 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.1
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:54:32 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.52 | 105 | 4061 | 0.076 ppbV # | 97 |
| 71) 1,3,5-trimethylbenzene | 18.59 | 105 | 3515 | 0.076 ppbV | 99 |
| 72) tert-butylbenzene | 18.92 | 119 | 3445 | 0.077 ppbV | 100 |
| 73) 1,2,4-trimethylbenzene | 18.92 | 105 | 3357 | 0.073 ppbV # | 89 |
| 74) Benzyl Chloride | 19.04 | 91 | 1694 | 0.062 ppbV | 98 |
| 75) 1,3-dichlorobenzene | 19.05 | 146 | 2291M3 | 0.081 ppbV | |
| 76) 1,4-dichlorobenzene | 19.11 | 146 | 2213 | 0.079 ppbV | 99 |
| 77) sec-butylbenzene | 19.13 | 105 | 4824 | 0.074 ppbV | 98 |
| 78) p-isopropyltoluene | 19.26 | 119 | 4094 | 0.075 ppbV | 96 |
| 79) 1,2-dichlorobenzene | 19.38 | 146 | 2132 | 0.079 ppbV # | 91 |
| 80) n-butylbenzene | 19.61 | 91 | 3769 | 0.070 ppbV | 96 |
| 81) 1,2,4-trichlorobenzene | 20.90 | 180 | 1101 | 0.048 ppbV # | 89 |
| 82) naphthalene | 21.02 | 128 | 3377 | 0.052 ppbV # | 91 |
| 83) 1,2,3-trichlorobenzene | 21.28 | 180 | 1185 | 0.055 ppbV | 89 |
| 84) hexachlorobutadiene | 21.35 | 225 | 1277 | 0.067 ppbV # | 94 |

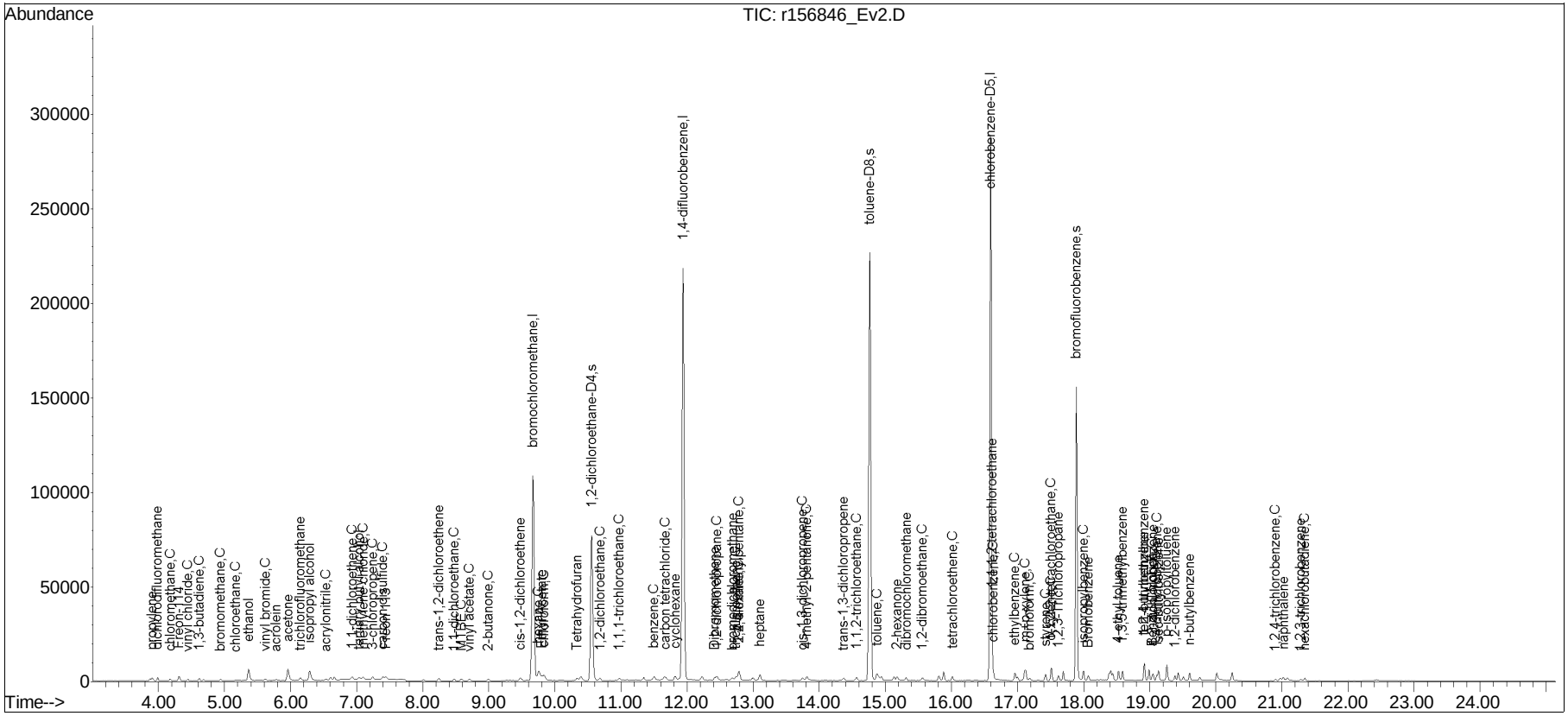
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156846_Ev2.D
Acq On : 4 Apr 2018 7:21 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.1
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:54:32 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

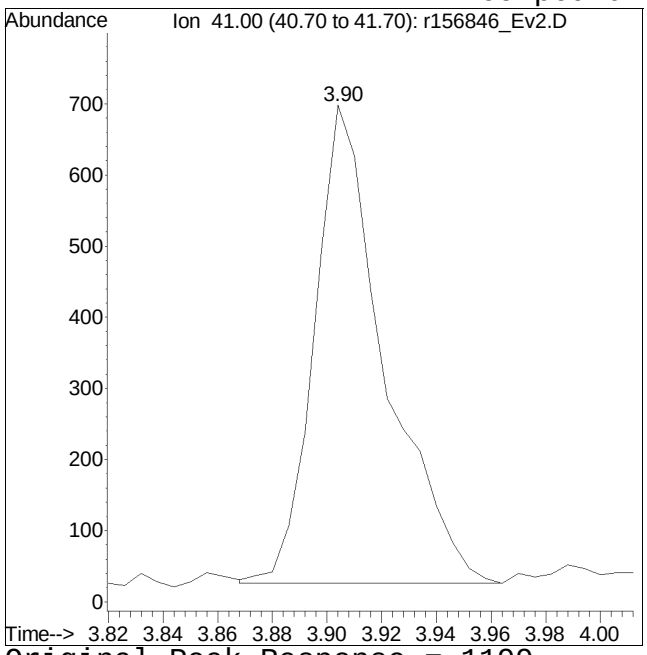
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



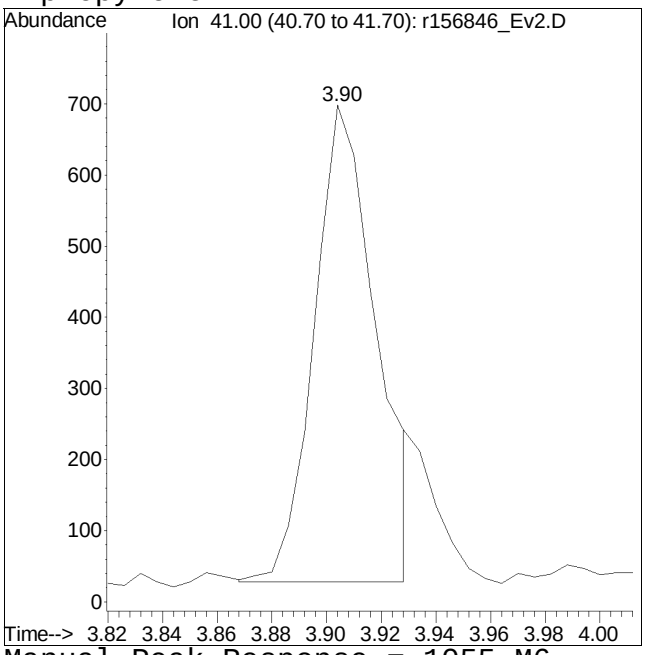
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156846_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 7:21 PM Instrument :
Sample : ITO15-SIMSTD0.1 Quant Date : 4/5/2018 9:48 am

Compound #2: propylene




Original Peak Response = 1199



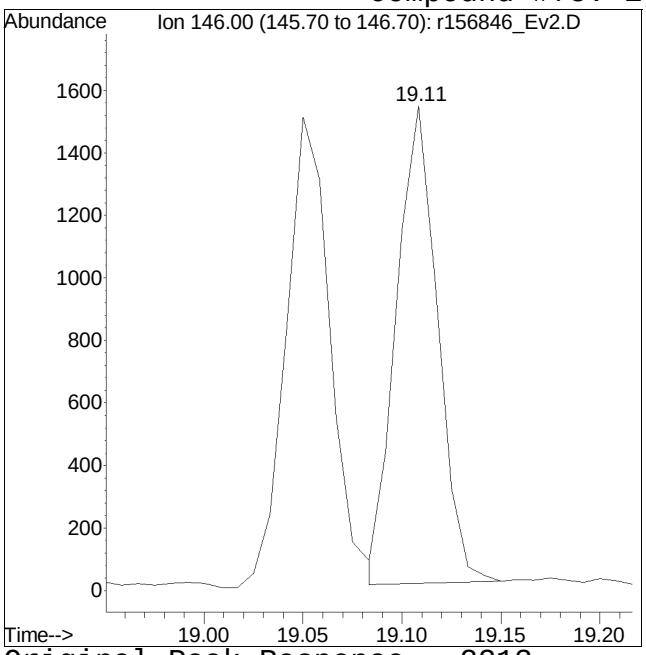

Manual Peak Response = 1055 M6

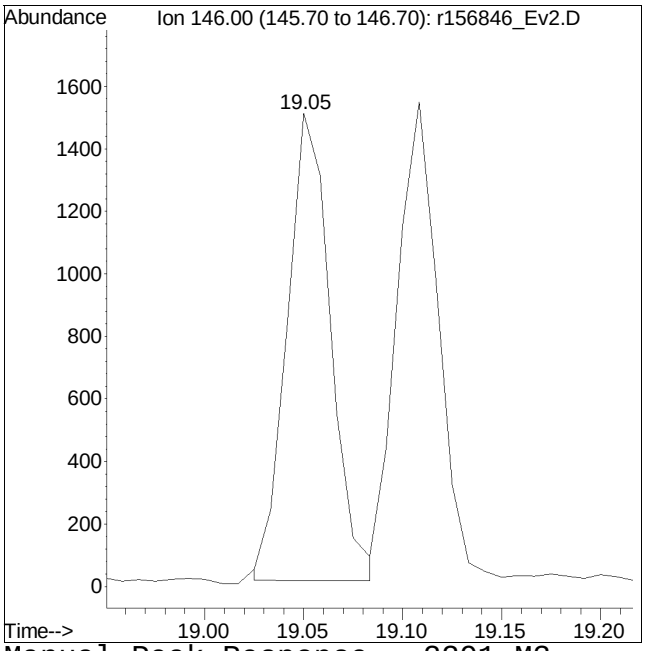
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156846_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 7:21 PM Instrument :
Sample : ITO15-SIMSTD0.1 Quant Date : 4/5/2018 9:48 am

Compound #75: 1,3-dichlorobenzene




Original Peak Response = 2213 Manual Peak Response = 2291 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156847_Ev2.D
Acq On : 4 Apr 2018 7:58 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:55:36 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.66 | 49 | 128596 | 10.000 | ppbV | # 0.00 |
| Standard Area = 133810 | | | Recovery = 96.10% | | | |
| 33) 1,4-difluorobenzene | 11.93 | 114 | 277199 | 10.000 | ppbV | 0.00 |
| Standard Area = 280369 | | | Recovery = 98.87% | | | |
| 51) chlorobenzene-D5 | 16.58 | 54 | 56162 | 10.000 | ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery = 95.09% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.55 | 65 | 76315 | 10.133 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.33% | | | |
| 53) toluene-D8 | 14.76 | 98 | 255859 | 10.315 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 103.15% | | | |
| 67) bromofluorobenzene | 17.88 | 95 | 131589 | 9.560 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 95.60% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.90 | 41 | 2234M6 | 0.240 | ppbV | |
| 3) dichlorodifluoromethane | 3.99 | 85 | 3917 | 0.238 | ppbV | 99 |
| 4) chloromethane | 4.17 | 50 | 2275 | 0.234 | ppbV | 97 |
| 5) Freon-114 | 4.31 | 85 | 4623 | 0.235 | ppbV | 96 |
| 6) vinyl chloride | 4.44 | 62 | 2297 | 0.236 | ppbV | 95 |
| 7) 1,3-butadiene | 4.61 | 54 | 1795 | 0.232 | ppbV | 93 |
| 8) bromomethane | 4.94 | 94 | 1931 | 0.242 | ppbV | 98 |
| 9) chloroethane | 5.16 | 64 | 1190 | 0.340 | ppbV | 93 |
| 10) ethanol | 5.36 | 31 | 11612M4 | 1.472 | ppbV | |
| 11) vinyl bromide | 5.61 | 106 | 1811 | 0.231 | ppbV | 99 |
| 12) acrolein | 5.78 | 56 | 988 | 0.242 | ppbV # | 100 |
| 13) acetone | 5.95 | 43 | 16751 | 1.441 | ppbV # | 98 |
| 14) trichlorofluoromethane | 6.14 | 101 | 3788 | 0.238 | ppbV | 97 |
| 15) isopropyl alcohol | 6.28 | 45 | 13508 | 0.919 | ppbV | 99 |
| 16) acrylonitrile | 6.53 | 53 | 1688 | 0.221 | ppbV | 95 |
| 17) 1,1-dichloroethene | 6.92 | 61 | 3219 | 0.237 | ppbV | 99 |
| 18) tertiary butyl alcohol | 7.02 | 59 | 3457 | 0.236 | ppbV # | 1 |
| 19) methylene chloride | 7.09 | 49 | 3074 | 0.240 | ppbV | 98 |
| 20) 3-chloropropene | 7.24 | 41 | 3336 | 0.188 | ppbV | 97 |
| 21) carbon disulfide | 7.39 | 76 | 5631 | 0.214 | ppbV # | 16 |
| 22) Freon 113 | 7.43 | 101 | 3878 | 0.240 | ppbV | 99 |
| 23) trans-1,2-dichloroethene | 8.23 | 61 | 3208 | 0.233 | ppbV | 93 |
| 24) 1,1-dichloroethane | 8.47 | 63 | 4220 | 0.248 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156847_Ev2.D
Acq On : 4 Apr 2018 7:58 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:55:36 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 25) MTBE | 8.57 | 73 | 4955 | 0.214 ppbV # | 94 |
| 26) vinyl acetate | 8.70 | 43 | 5153 | 0.220 ppbV | 98 |
| 27) 2-butanone | 8.98 | 43 | 5637 | 0.245 ppbV | 97 |
| 28) cis-1,2-dichloroethene | 9.47 | 61 | 2984 | 0.225 ppbV | 97 |
| 29) Ethyl Acetate | 9.79 | 61 | 760 | 0.225 ppbV # | 54 |
| 30) chloroform | 9.82 | 83 | 3598 | 0.225 ppbV | 97 |
| 31) Tetrahydrofuran | 10.32 | 42 | 3295M6 | 0.213 ppbV | |
| 32) 1,2-dichloroethane | 10.68 | 62 | 2735 | 0.238 ppbV | 97 |
| 34) hexane | 9.74 | 57 | 3648 | 0.212 ppbV | 85 |
| 36) 1,1,1-trichloroethane | 10.97 | 97 | 2823 | 0.207 ppbV # | 93 |
| 37) benzene | 11.49 | 78 | 6968 | 0.225 ppbV | 98 |
| 38) carbon tetrachloride | 11.67 | 117 | 2677 | 0.212 ppbV | 95 |
| 39) cyclohexane | 11.81 | 56 | 3678 | 0.204 ppbV | 96 |
| 40) Dibromomethane | 12.41 | 93 | 2262 | 0.233 ppbV # | 100 |
| 41) 1,2-dichloropropane | 12.45 | 63 | 2809 | 0.225 ppbV | 91 |
| 42) bromodichloromethane | 12.67 | 83 | 3326 | 0.200 ppbV # | 96 |
| 43) 1,4-dioxane | 12.77 | 88 | 1492M3 | 0.231 ppbV | |
| 44) trichloroethene | 12.73 | 130 | 2619 | 0.226 ppbV | 99 |
| 45) 2,2,4-trimethylpentane | 12.78 | 57 | 12358 | 0.220 ppbV | 97 |
| 46) heptane | 13.09 | 43 | 5658 | 0.208 ppbV | 95 |
| 47) cis-1,3-dichloropropene | 13.74 | 75 | 2904 | 0.189 ppbV | 94 |
| 48) 4-methyl-2-pentanone | 13.80 | 43 | 6027 | 0.197 ppbV | 98 |
| 49) trans-1,3-dichloropropene | 14.36 | 75 | 2699 | 0.186 ppbV # | 87 |
| 50) 1,1,2-trichloroethane | 14.56 | 97 | 2501 | 0.218 ppbV | 98 |
| 52) toluene | 14.87 | 91 | 7915 | 0.227 ppbV | 99 |
| 54) 2-hexanone | 15.17 | 43 | 5367 | 0.184 ppbV | 97 |
| 55) dibromochloromethane | 15.31 | 129 | 2764 | 0.195 ppbV | 95 |
| 56) 1,2-dibromoethane | 15.55 | 107 | 3500 | 0.214 ppbV | 99 |
| 57) tetrachloroethene | 16.01 | 166 | 2778 | 0.229 ppbV | 95 |
| 58) 1,1,1,2-tetrachloroethane | 16.62 | 131 | 2326 | 0.213 ppbV | 97 |
| 59) chlorobenzene | 16.63 | 112 | 5841 | 0.223 ppbV | 94 |
| 60) ethylbenzene | 16.96 | 91 | 9316 | 0.206 ppbV | 99 |
| 61) m+p-xylene | 17.12 | 91 | 15793 | 0.427 ppbV | 97 |
| 62) bromoform | 17.18 | 173 | 2011 | 0.179 ppbV | 98 |
| 63) styrene | 17.42 | 104 | 5469 | 0.189 ppbV | 97 |
| 64) 1,1,2,2-tetrachloroethane | 17.51 | 83 | 5404 | 0.205 ppbV | 99 |
| 65) o-xylene | 17.51 | 91 | 7852 | 0.204 ppbV | 97 |
| 66) 1,2,3-Trichloropropane | 17.62 | 75 | 4546 | 0.221 ppbV # | 67 |
| 68) isopropylbenzene | 17.99 | 105 | 9548 | 0.203 ppbV | 99 |
| 69) Bromobenzene | 18.07 | 77 | 5426 | 0.206 ppbV # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156847_Ev2.D
Acq On : 4 Apr 2018 7:58 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:55:36 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.52 | 105 | 10102 | 0.192 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.58 | 105 | 8905 | 0.195 | ppbV | 98 |
| 72) tert-butylbenzene | 18.92 | 119 | 8512 | 0.193 | ppbV | 100 |
| 73) 1,2,4-trimethylbenzene | 18.92 | 105 | 8506 | 0.188 | ppbV | 96 |
| 74) Benzyl Chloride | 19.03 | 91 | 4016 | 0.148 | ppbV | 98 |
| 75) 1,3-dichlorobenzene | 19.05 | 146 | 5451 | 0.194 | ppbV | 95 |
| 76) 1,4-dichlorobenzene | 19.10 | 146 | 5310 | 0.192 | ppbV | 96 |
| 77) sec-butylbenzene | 19.13 | 105 | 11996 | 0.186 | ppbV | 100 |
| 78) p-isopropyltoluene | 19.25 | 119 | 10083 | 0.186 | ppbV | 93 |
| 79) 1,2-dichlorobenzene | 19.38 | 146 | 4990 | 0.186 | ppbV | 98 |
| 80) n-butylbenzene | 19.60 | 91 | 9426 | 0.176 | ppbV | 96 |
| 81) 1,2,4-trichlorobenzene | 20.90 | 180 | 3053 | 0.135 | ppbV | 95 |
| 82) naphthalene | 21.02 | 128 | 10434 | 0.163 | ppbV | 98 |
| 83) 1,2,3-trichlorobenzene | 21.27 | 180 | 3031 | 0.142 | ppbV | 97 |
| 84) hexachlorobutadiene | 21.34 | 225 | 3066 | 0.163 | ppbV # | 92 |

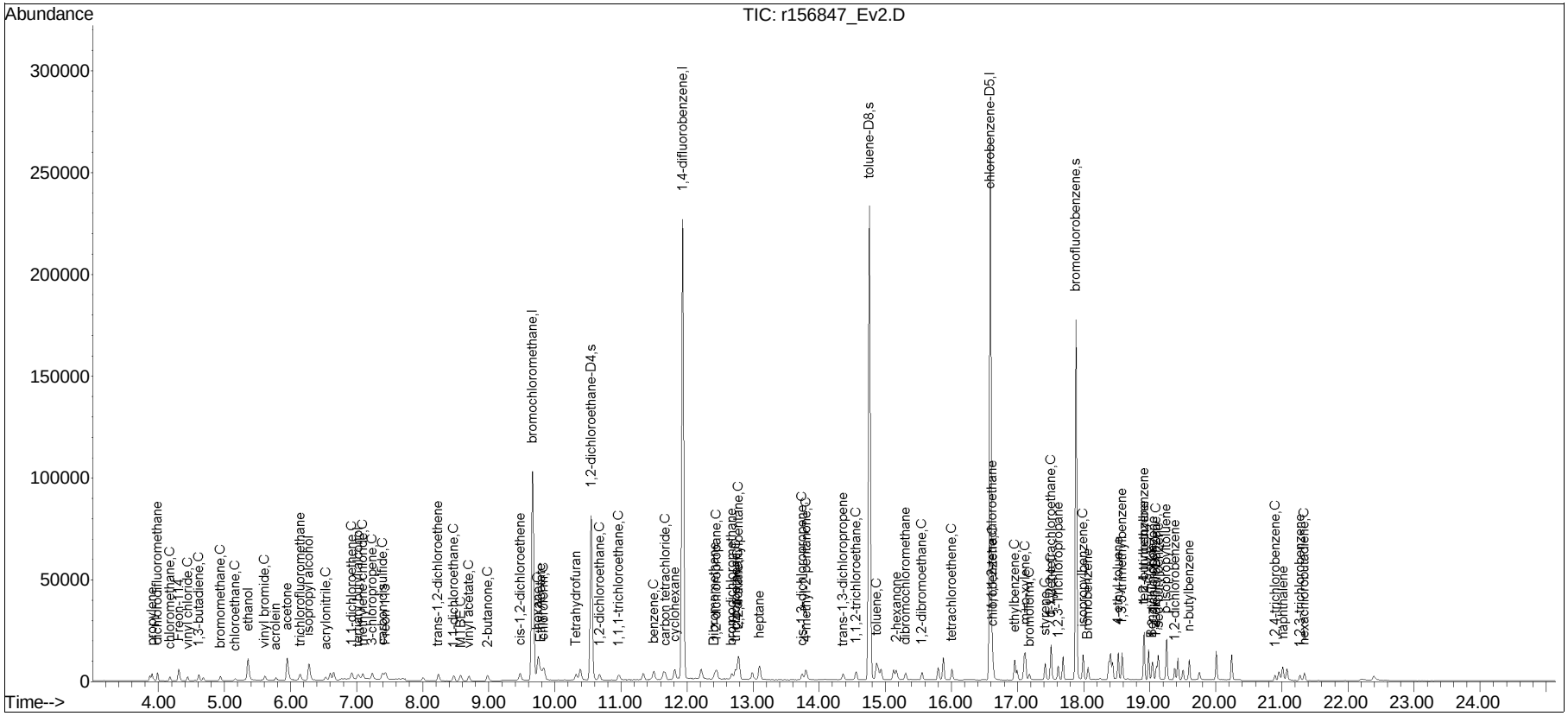
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156847_Ev2.D
Acq On : 4 Apr 2018 7:58 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.2
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:55:36 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

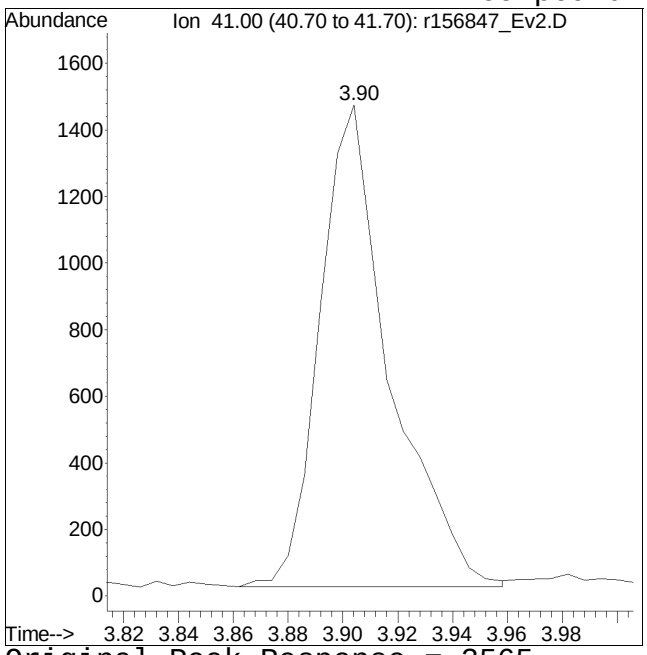
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



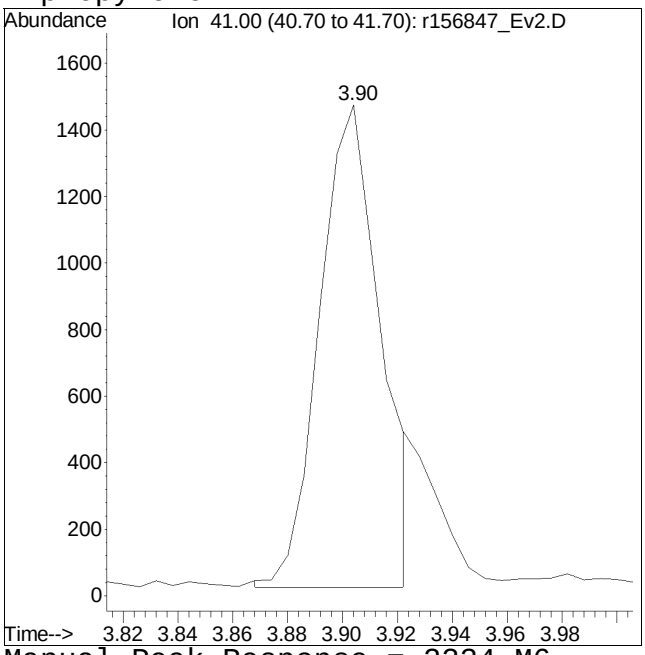
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156847_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 7:58 PM Instrument :
Sample : ITO15-SIMSTD0.2 Quant Date : 4/5/2018 9:48 am

Compound #2: propylene




Original Peak Response = 2565



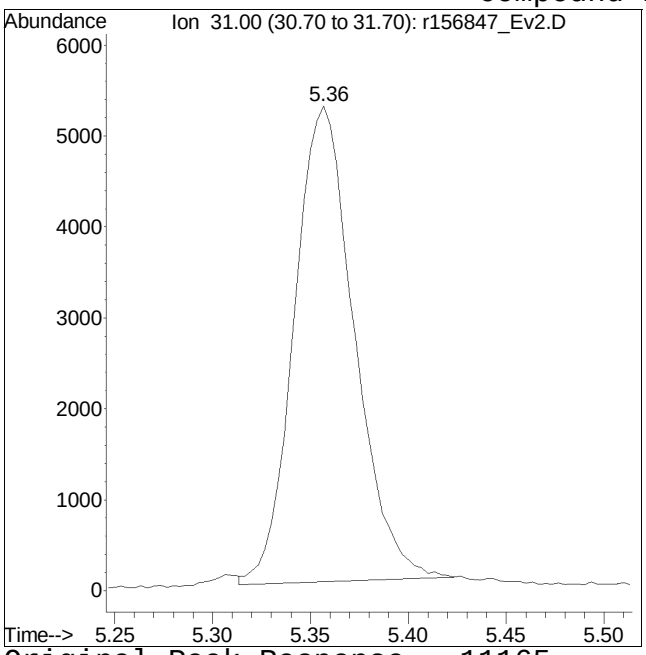

Manual Peak Response = 2234 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

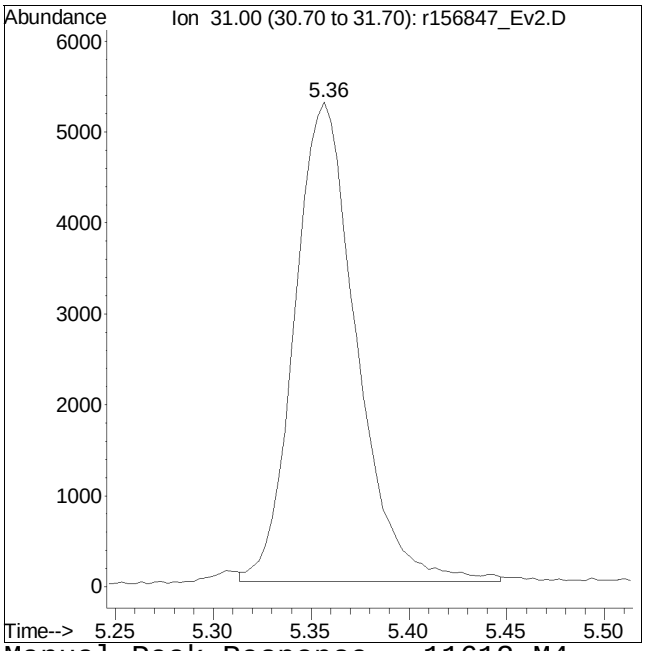
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156847_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 7:58 PM Instrument :
Sample : ITO15-SIMSTD0.2 Quant Date : 4/5/2018 9:48 am

Compound #10: ethanol




Original Peak Response = 11165



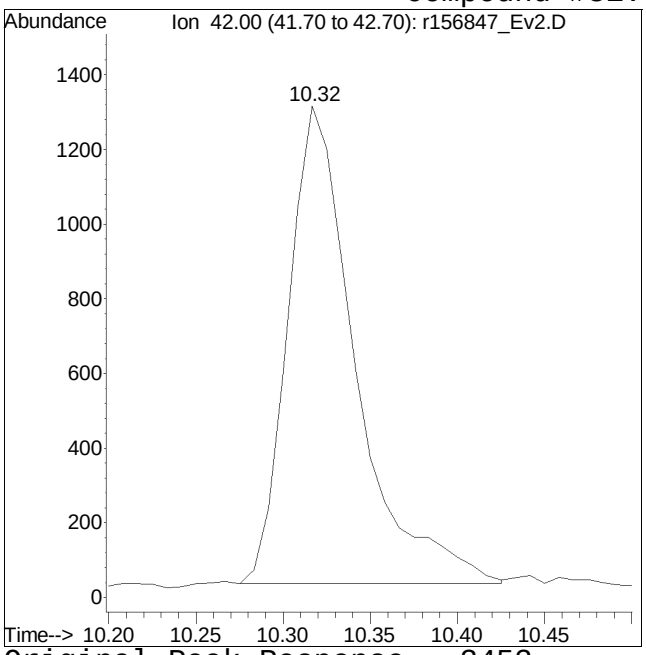

Manual Peak Response = 11612 M4

M4 = Poor automated baseline construction.

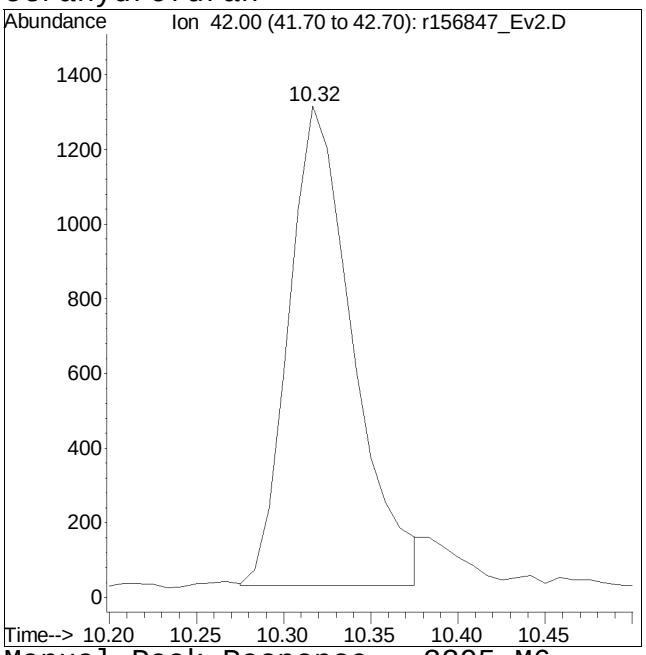
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\ QMethod : TSIM180404.M
Data File : r156847_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 7:58 PM Instrument :
Sample : ITO15-SIMSTD0.2 Quant Date : 4/5/2018 9:48 am

Compound #31: Tetrahydrofuran




Original Peak Response = 3453



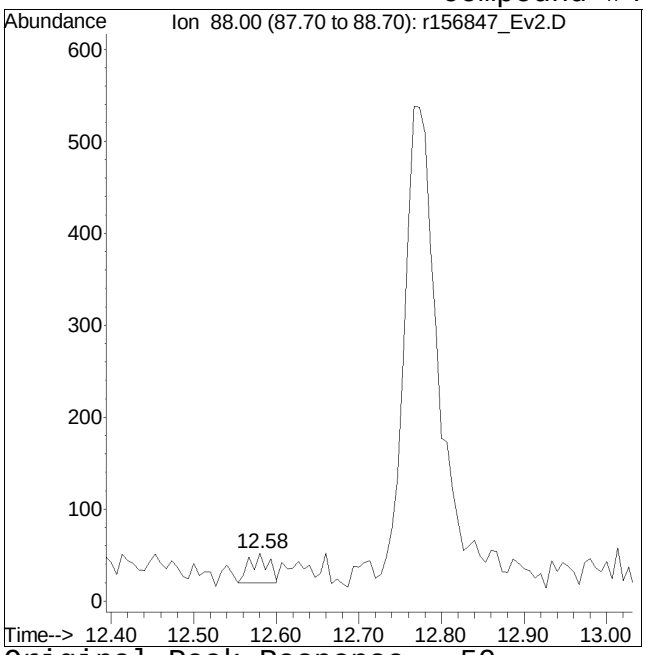

Manual Peak Response = 3295 M6

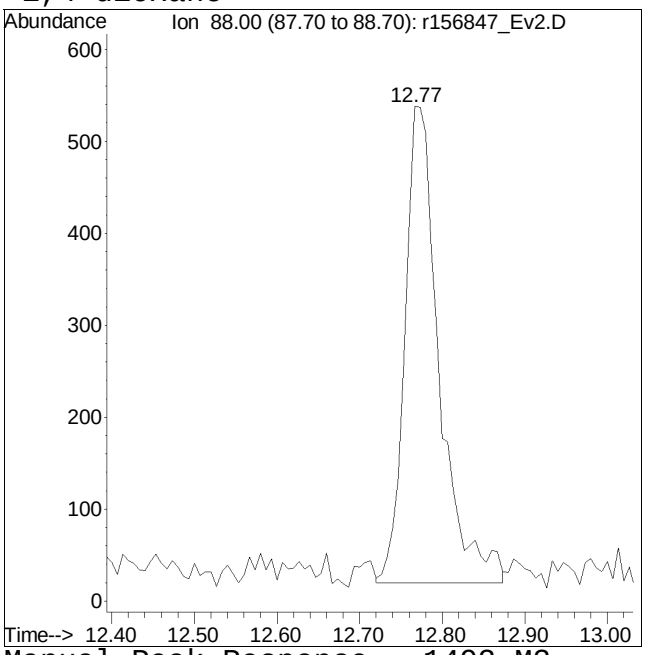
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156847_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 7:58 PM Instrument :
Sample : ITO15-SIMSTD0.2 Quant Date : 4/5/2018 9:48 am

Compound #43: 1,4-dioxane




Original Peak Response = 50 Manual Peak Response = 1492 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156848_Ev2.D
Acq On : 4 Apr 2018 8:33 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:57:16 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.66 | 49 | 130018 | 10.000 | ppbV | # 0.00 |
| Standard Area = 133810 | | | Recovery = 97.17% | | | |
| 33) 1,4-difluorobenzene | 11.93 | 114 | 277973 | 10.000 | ppbV | 0.00 |
| Standard Area = 280369 | | | Recovery = 99.15% | | | |
| 51) chlorobenzene-D5 | 16.58 | 54 | 56744 | 10.000 | ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery = 96.08% | | | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.55 | 65 | 75606 | 10.011 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.11% | | | |
| 53) toluene-D8 | 14.76 | 98 | 257596 | 10.279 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.79% | | | |
| 67) bromofluorobenzene | 17.88 | 95 | 139423 | 10.025 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 100.25% | | | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.90 | 41 | 5239M6 | 0.556 | ppbV | |
| 3) dichlorodifluoromethane | 3.99 | 85 | 9191 | 0.553 | ppbV | 100 |
| 4) chloromethane | 4.17 | 50 | 5346 | 0.545 | ppbV | 98 |
| 5) Freon-114 | 4.31 | 85 | 11047 | 0.555 | ppbV | 98 |
| 6) vinyl chloride | 4.44 | 62 | 5407 | 0.549 | ppbV | 98 |
| 7) 1,3-butadiene | 4.61 | 54 | 4193 | 0.536 | ppbV | 96 |
| 8) bromomethane | 4.94 | 94 | 4486 | 0.555 | ppbV | 99 |
| 9) chloroethane | 5.16 | 64 | 2756 | 0.779 | ppbV | 97 |
| 10) ethanol | 5.35 | 31 | 22938 | 2.876 | ppbV | 100 |
| 11) vinyl bromide | 5.61 | 106 | 4338 | 0.548 | ppbV | 99 |
| 12) acrolein | 5.77 | 56 | 2270 | 0.551 | ppbV # | 100 |
| 13) acetone | 5.94 | 43 | 37984 | 3.232 | ppbV # | 99 |
| 14) trichlorofluoromethane | 6.14 | 101 | 9106 | 0.566 | ppbV | 99 |
| 15) isopropyl alcohol | 6.27 | 45 | 24573 | 1.653 | ppbV | 99 |
| 16) acrylonitrile | 6.52 | 53 | 4005 | 0.518 | ppbV | 98 |
| 17) 1,1-dichloroethene | 6.92 | 61 | 7590 | 0.553 | ppbV | 98 |
| 18) tertiary butyl alcohol | 7.01 | 59 | 7822 | 0.528 | ppbV # | 1 |
| 19) methylene chloride | 7.09 | 49 | 7203 | 0.555 | ppbV | 98 |
| 20) 3-chloropropene | 7.24 | 41 | 8045 | 0.449 | ppbV | 99 |
| 21) carbon disulfide | 7.39 | 76 | 13730 | 0.516 | ppbV # | 68 |
| 22) Freon 113 | 7.43 | 101 | 9013 | 0.551 | ppbV | 98 |
| 23) trans-1,2-dichloroethene | 8.23 | 61 | 7606 | 0.548 | ppbV | 99 |
| 24) 1,1-dichloroethane | 8.47 | 63 | 9471 | 0.550 | ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156848_Ev2.D
Acq On : 4 Apr 2018 8:33 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:57:16 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 8.57 | 73 | 13038 | 0.556 | ppbV | | 97 |
| 26) | vinyl acetate | 8.69 | 43 | 13322 | 0.562 | ppbV | | 100 |
| 27) | 2-butanone | 8.97 | 43 | 13489 | 0.581 | ppbV | | 96 |
| 28) | cis-1,2-dichloroethene | 9.47 | 61 | 7063 | 0.527 | ppbV | | 100 |
| 29) | Ethyl Acetate | 9.78 | 61 | 1825 | 0.535 | ppbV | | 59 |
| 30) | chloroform | 9.82 | 83 | 8667 | 0.537 | ppbV | | 99 |
| 31) | Tetrahydrofuran | 10.30 | 42 | 8046M6 | 0.515 | ppbV | | |
| 32) | 1,2-dichloroethane | 10.68 | 62 | 6420 | 0.553 | ppbV | | 99 |
| 34) | hexane | 9.74 | 57 | 8827 | 0.511 | ppbV | | 99 |
| 36) | 1,1,1-trichloroethane | 10.97 | 97 | 7476 | 0.548 | ppbV | | 96 |
| 37) | benzene | 11.49 | 78 | 16292 | 0.524 | ppbV | | 98 |
| 38) | carbon tetrachloride | 11.67 | 117 | 6516 | 0.514 | ppbV | | 99 |
| 39) | cyclohexane | 11.81 | 56 | 9135 | 0.505 | ppbV | | 98 |
| 40) | Dibromomethane | 12.41 | 93 | 5180 | 0.531 | ppbV | # | 100 |
| 41) | 1,2-dichloropropane | 12.45 | 63 | 6846 | 0.547 | ppbV | | 96 |
| 42) | bromodichloromethane | 12.67 | 83 | 8191 | 0.492 | ppbV | | 99 |
| 43) | 1,4-dioxane | 12.75 | 88 | 3198 | 0.495 | ppbV | # | 80 |
| 44) | trichloroethene | 12.73 | 130 | 6188 | 0.531 | ppbV | | 97 |
| 45) | 2,2,4-trimethylpentane | 12.77 | 57 | 29626 | 0.527 | ppbV | | 98 |
| 46) | heptane | 13.09 | 43 | 14081 | 0.515 | ppbV | | 98 |
| 47) | cis-1,3-dichloropropene | 13.74 | 75 | 7120 | 0.461 | ppbV | | 98 |
| 48) | 4-methyl-2-pentanone | 13.79 | 43 | 14972 | 0.489 | ppbV | | 99 |
| 49) | trans-1,3-dichloropropene | 14.36 | 75 | 6430 | 0.442 | ppbV | | 93 |
| 50) | 1,1,2-trichloroethane | 14.56 | 97 | 5858 | 0.509 | ppbV | | 98 |
| 52) | toluene | 14.87 | 91 | 18962 | 0.537 | ppbV | | 100 |
| 54) | 2-hexanone | 15.16 | 43 | 14014 | 0.476 | ppbV | | 99 |
| 55) | dibromochloromethane | 15.31 | 129 | 6801 | 0.475 | ppbV | | 96 |
| 56) | 1,2-dibromoethane | 15.55 | 107 | 8519 | 0.517 | ppbV | | 100 |
| 57) | tetrachloroethene | 16.01 | 166 | 6420 | 0.524 | ppbV | | 100 |
| 58) | 1,1,1,2-tetrachloroethane | 16.61 | 131 | 5474 | 0.496 | ppbV | | 97 |
| 59) | chlorobenzene | 16.63 | 112 | 13887 | 0.526 | ppbV | | 97 |
| 60) | ethylbenzene | 16.96 | 91 | 22729 | 0.498 | ppbV | | 99 |
| 61) | m+p-xylene | 17.11 | 91 | 38586 | 1.032 | ppbV | | 99 |
| 62) | bromoform | 17.18 | 173 | 4985 | 0.439 | ppbV | | 99 |
| 63) | styrene | 17.42 | 104 | 13874 | 0.476 | ppbV | | 98 |
| 64) | 1,1,2,2-tetrachloroethane | 17.50 | 83 | 13328 | 0.501 | ppbV | | 99 |
| 65) | o-xylene | 17.51 | 91 | 19287 | 0.495 | ppbV | | 100 |
| 66) | 1,2,3-Trichloropropane | 17.61 | 75 | 10946 | 0.526 | ppbV | # | 70 |
| 68) | isopropylbenzene | 17.99 | 105 | 23268 | 0.489 | ppbV | | 98 |
| 69) | Bromobenzene | 18.07 | 77 | 13009 | 0.490 | ppbV | # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156848_Ev2.D
Acq On : 4 Apr 2018 8:33 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:57:16 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.52 | 105 | 25090 | 0.472 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.58 | 105 | 22143 | 0.480 | ppbV | 98 |
| 72) tert-butylbenzene | 18.91 | 119 | 21262 | 0.478 | ppbV | 96 |
| 73) 1,2,4-trimethylbenzene | 18.91 | 105 | 21488 | 0.471 | ppbV | 90 |
| 74) Benzyl Chloride | 19.03 | 91 | 10871 | 0.398 | ppbV | 99 |
| 75) 1,3-dichlorobenzene | 19.04 | 146 | 13655M3 | 0.482 | ppbV | |
| 76) 1,4-dichlorobenzene | 19.10 | 146 | 13080 | 0.469 | ppbV | 98 |
| 77) sec-butylbenzene | 19.13 | 105 | 29612 | 0.453 | ppbV | 95 |
| 78) p-isopropyltoluene | 19.25 | 119 | 25089 | 0.457 | ppbV | 96 |
| 79) 1,2-dichlorobenzene | 19.38 | 146 | 12456 | 0.460 | ppbV # | 91 |
| 80) n-butylbenzene | 19.59 | 91 | 24274 | 0.448 | ppbV | 90 |
| 81) 1,2,4-trichlorobenzene | 20.89 | 180 | 8365 | 0.367 | ppbV | 95 |
| 82) naphthalene | 21.01 | 128 | 28741 | 0.444 | ppbV | 98 |
| 83) 1,2,3-trichlorobenzene | 21.27 | 180 | 8048 | 0.372 | ppbV | 94 |
| 84) hexachlorobutadiene | 21.34 | 225 | 7601 | 0.399 | ppbV | 95 |

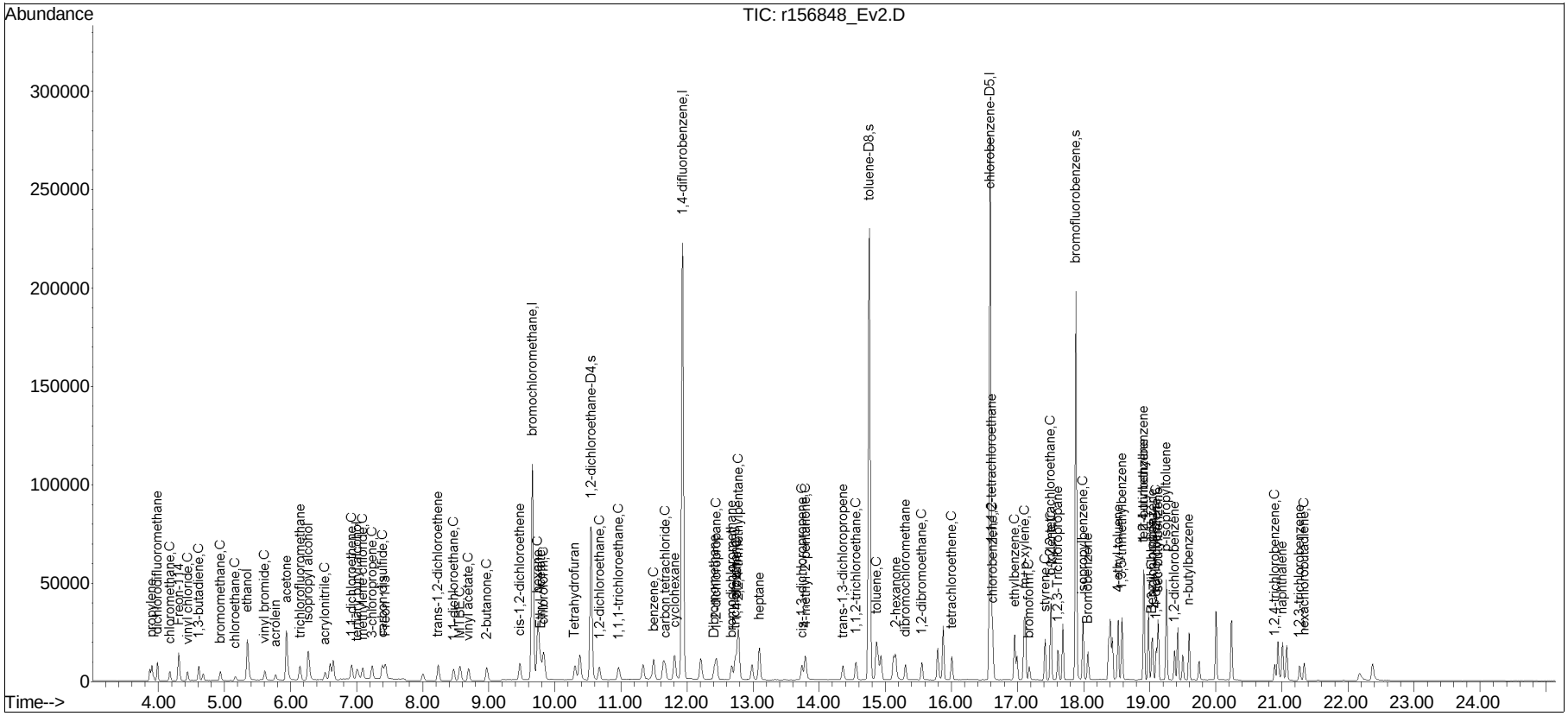
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156848_Ev2.D
Acq On : 4 Apr 2018 8:33 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD0.5
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:57:16 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

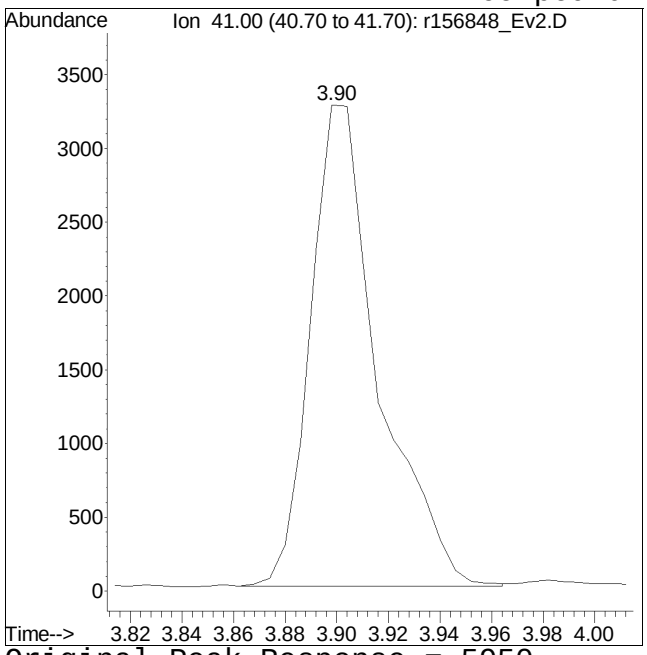
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



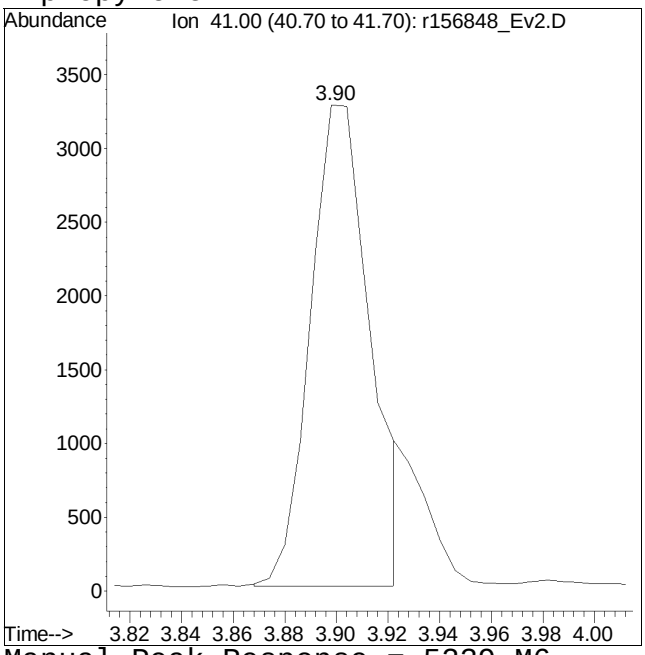
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156848_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 8:33 PM Instrument :
Sample : ITO15-SIMSTD0.5 Quant Date : 4/5/2018 9:49 am

Compound #2: propylene




Original Peak Response = 5950



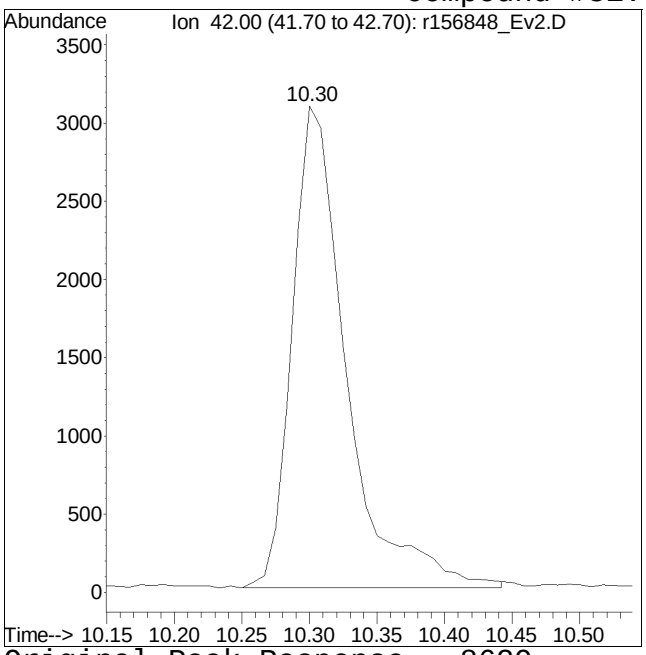

Manual Peak Response = 5239 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

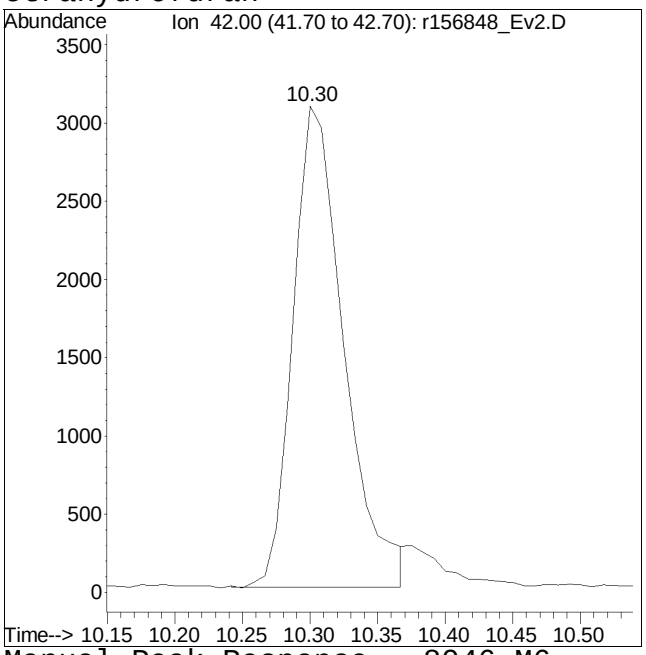
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156848_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 8:33 PM Instrument :
Sample : ITO15-SIMSTD0.5 Quant Date : 4/5/2018 9:49 am

Compound #31: Tetrahydrofuran




Original Peak Response = 8629



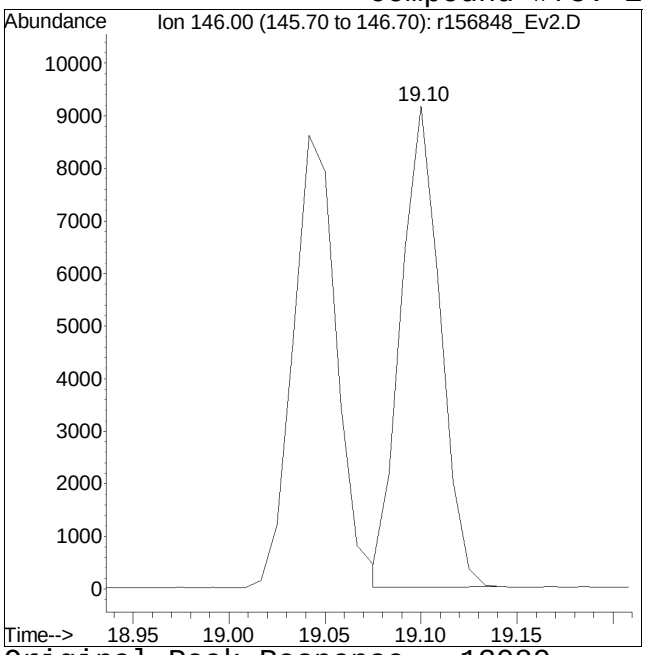

Manual Peak Response = 8046 M6

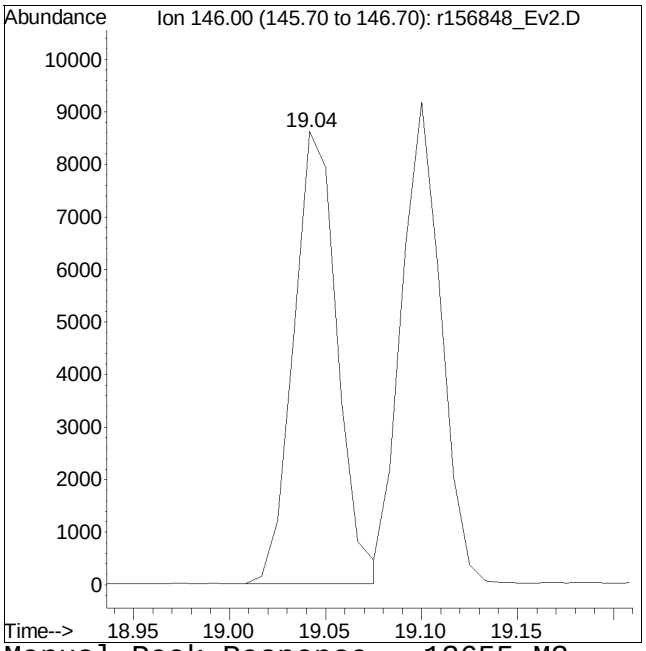
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156848_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 8:33 PM Instrument :
Sample : ITO15-SIMSTD0.5 Quant Date : 4/5/2018 9:49 am

Compound #75: 1,3-dichlorobenzene




Original Peak Response = 13080 Manual Peak Response = 13655 M3

M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156849_Ev2.D
Acq On : 4 Apr 2018 9:11 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:58:07 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.66 | 49 | 130918 | 10.000 | ppbV | # 0.00 |
| Standard Area = 133810 | | | Recovery | = | 97.84% | |
| 33) 1,4-difluorobenzene | 11.93 | 114 | 274872 | 10.000 | ppbV | 0.00 |
| Standard Area = 280369 | | | Recovery | = | 98.04% | |
| 51) chlorobenzene-D5 | 16.58 | 54 | 57158 | 10.000 | ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery | = | 96.78% | |
| System Monitoring Compounds | | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.54 | 65 | 75208 | 10.071 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 100.71% | |
| 53) toluene-D8 | 14.75 | 98 | 251352 | 9.957 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 99.57% | |
| 67) bromofluorobenzene | 17.88 | 95 | 135443 | 9.669 | ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = | 96.69% | |
| Target Compounds | | | | | | Qvalue |
| 2) propylene | 3.90 | 41 | 10376M6 | 1.094 | ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 18170 | 1.085 | ppbV | 99 |
| 4) chloromethane | 4.17 | 50 | 10487 | 1.061 | ppbV | 98 |
| 5) Freon-114 | 4.31 | 85 | 21636 | 1.080 | ppbV | 99 |
| 6) vinyl chloride | 4.44 | 62 | 10701 | 1.080 | ppbV | 100 |
| 7) 1,3-butadiene | 4.61 | 54 | 8324 | 1.058 | ppbV | 95 |
| 8) bromomethane | 4.94 | 94 | 8711 | 1.071 | ppbV | 98 |
| 9) chloroethane | 5.16 | 64 | 5536 | 1.555 | ppbV | 98 |
| 10) ethanol | 5.34 | 31 | 42879 | 5.339 | ppbV | 100 |
| 11) vinyl bromide | 5.61 | 106 | 8411M4 | 1.055 | ppbV | |
| 12) acrolein | 5.77 | 56 | 4206 | 1.014 | ppbV # | 100 |
| 13) acetone | 5.93 | 43 | 70211 | 5.934 | ppbV | 100 |
| 14) trichlorofluoromethane | 6.14 | 101 | 17478 | 1.079 | ppbV | 99 |
| 15) isopropyl alcohol | 6.26 | 45 | 42360 | 2.830 | ppbV | 100 |
| 16) acrylonitrile | 6.52 | 53 | 7919 | 1.017 | ppbV | 98 |
| 17) 1,1-dichloroethene | 6.92 | 61 | 14801 | 1.071 | ppbV | 100 |
| 18) tertiary butyl alcohol | 7.00 | 59 | 14491 | 0.971 | ppbV # | 1 |
| 19) methylene chloride | 7.09 | 49 | 14117 | 1.081 | ppbV | 99 |
| 20) 3-chloropropene | 7.23 | 41 | 16115 | 0.894 | ppbV | 99 |
| 21) carbon disulfide | 7.39 | 76 | 27192 | 1.015 | ppbV # | 85 |
| 22) Freon 113 | 7.43 | 101 | 17895 | 1.086 | ppbV | 100 |
| 23) trans-1,2-dichloroethene | 8.23 | 61 | 14883 | 1.064 | ppbV | 97 |
| 24) 1,1-dichloroethane | 8.47 | 63 | 18730 | 1.080 | ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156849_Ev2.D
Acq On : 4 Apr 2018 9:11 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:58:07 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 25) MTBE | 8.56 | 73 | 25164 | 1.065 | ppbV | | 99 |
| 26) vinyl acetate | 8.69 | 43 | 26669 | 1.116 | ppbV | | 99 |
| 27) 2-butanone | 8.96 | 43 | 26309 | 1.125 | ppbV | | 95 |
| 28) cis-1,2-dichloroethene | 9.47 | 61 | 14406 | 1.067 | ppbV | | 99 |
| 29) Ethyl Acetate | 9.78 | 61 | 3510 | 1.021 | ppbV | | 68 |
| 30) chloroform | 9.82 | 83 | 17342 | 1.067 | ppbV | | 99 |
| 31) Tetrahydrofuran | 10.29 | 42 | 15967 | 1.015 | ppbV | | 100 |
| 32) 1,2-dichloroethane | 10.67 | 62 | 12516 | 1.071 | ppbV | | 99 |
| 34) hexane | 9.73 | 57 | 17835 | 1.044 | ppbV | | 92 |
| 36) 1,1,1-trichloroethane | 10.96 | 97 | 15393 | 1.141 | ppbV | | 95 |
| 37) benzene | 11.49 | 78 | 32619 | 1.061 | ppbV | | 100 |
| 38) carbon tetrachloride | 11.67 | 117 | 12971 | 1.036 | ppbV | | 97 |
| 39) cyclohexane | 11.81 | 56 | 18637 | 1.042 | ppbV | | 98 |
| 40) Dibromomethane | 12.41 | 93 | 10251 | 1.064 | ppbV | # | 100 |
| 41) 1,2-dichloropropane | 12.44 | 63 | 13040 | 1.053 | ppbV | | 96 |
| 42) bromodichloromethane | 12.67 | 83 | 16364 | 0.994 | ppbV | | 98 |
| 43) 1,4-dioxane | 12.75 | 88 | 6411 | 1.003 | ppbV | | 90 |
| 44) trichloroethene | 12.73 | 130 | 11774 | 1.022 | ppbV | | 97 |
| 45) 2,2,4-trimethylpentane | 12.77 | 57 | 58127 | 1.045 | ppbV | | 99 |
| 46) heptane | 13.09 | 43 | 28218 | 1.044 | ppbV | | 99 |
| 47) cis-1,3-dichloropropene | 13.73 | 75 | 14630 | 0.959 | ppbV | | 98 |
| 48) 4-methyl-2-pentanone | 13.78 | 43 | 31314 | 1.035 | ppbV | | 99 |
| 49) trans-1,3-dichloropropene | 14.36 | 75 | 13788 | 0.959 | ppbV | | 97 |
| 50) 1,1,2-trichloroethane | 14.55 | 97 | 11803 | 1.036 | ppbV | | 97 |
| 52) toluene | 14.86 | 91 | 37422 | 1.053 | ppbV | | 100 |
| 54) 2-hexanone | 15.15 | 43 | 28892 | 0.975 | ppbV | | 100 |
| 55) dibromochloromethane | 15.30 | 129 | 13884 | 0.963 | ppbV | | 99 |
| 56) 1,2-dibromoethane | 15.55 | 107 | 17095 | 1.029 | ppbV | | 100 |
| 57) tetrachloroethene | 16.00 | 166 | 12960 | 1.049 | ppbV | | 98 |
| 58) 1,1,1,2-tetrachloroethane | 16.61 | 131 | 11033 | 0.992 | ppbV | | 99 |
| 59) chlorobenzene | 16.63 | 112 | 27945 | 1.050 | ppbV | | 100 |
| 60) ethylbenzene | 16.95 | 91 | 46386 | 1.010 | ppbV | | 100 |
| 61) m+p-xylene | 17.11 | 91 | 77963 | 2.070 | ppbV | | 97 |
| 62) bromoform | 17.18 | 173 | 10304 | 0.902 | ppbV | | 99 |
| 63) styrene | 17.42 | 104 | 28170 | 0.959 | ppbV | | 98 |
| 64) 1,1,2,2-tetrachloroethane | 17.50 | 83 | 26430 | 0.987 | ppbV | | 100 |
| 65) o-xylene | 17.50 | 91 | 39332 | 1.002 | ppbV | | 96 |
| 66) 1,2,3-Trichloropropane | 17.61 | 75 | 21249 | 1.014 | ppbV | # | 70 |
| 68) isopropylbenzene | 17.99 | 105 | 46692 | 0.975 | ppbV | | 97 |
| 69) Bromobenzene | 18.06 | 77 | 25947 | 0.969 | ppbV | # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156849_Ev2.D
Acq On : 4 Apr 2018 9:11 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:58:07 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.52 | 105 | 51032 | 0.952 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.57 | 105 | 45134 | 0.972 | ppbV | 98 |
| 72) tert-butylbenzene | 18.91 | 119 | 43496 | 0.971 | ppbV | 98 |
| 73) 1,2,4-trimethylbenzene | 18.91 | 105 | 44211 | 0.962 | ppbV | 94 |
| 74) Benzyl Chloride | 19.02 | 91 | 23083 | 0.838 | ppbV | 96 |
| 75) 1,3-dichlorobenzene | 19.04 | 146 | 26850 | 0.941 | ppbV | 94 |
| 76) 1,4-dichlorobenzene | 19.10 | 146 | 26520 | 0.944 | ppbV | 94 |
| 77) sec-butylbenzene | 19.13 | 105 | 61363 | 0.933 | ppbV | 97 |
| 78) p-isopropyltoluene | 19.25 | 119 | 52017 | 0.941 | ppbV | 97 |
| 79) 1,2-dichlorobenzene | 19.38 | 146 | 25396 | 0.930 | ppbV | 93 |
| 80) n-butylbenzene | 19.59 | 91 | 50769 | 0.931 | ppbV | 93 |
| 81) 1,2,4-trichlorobenzene | 20.89 | 180 | 18318 | 0.798 | ppbV | 100 |
| 82) naphthalene | 21.01 | 128 | 62930 | 0.964 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.27 | 180 | 17488 | 0.803 | ppbV | 99 |
| 84) hexachlorobutadiene | 21.33 | 225 | 15818 | 0.824 | ppbV # | 92 |

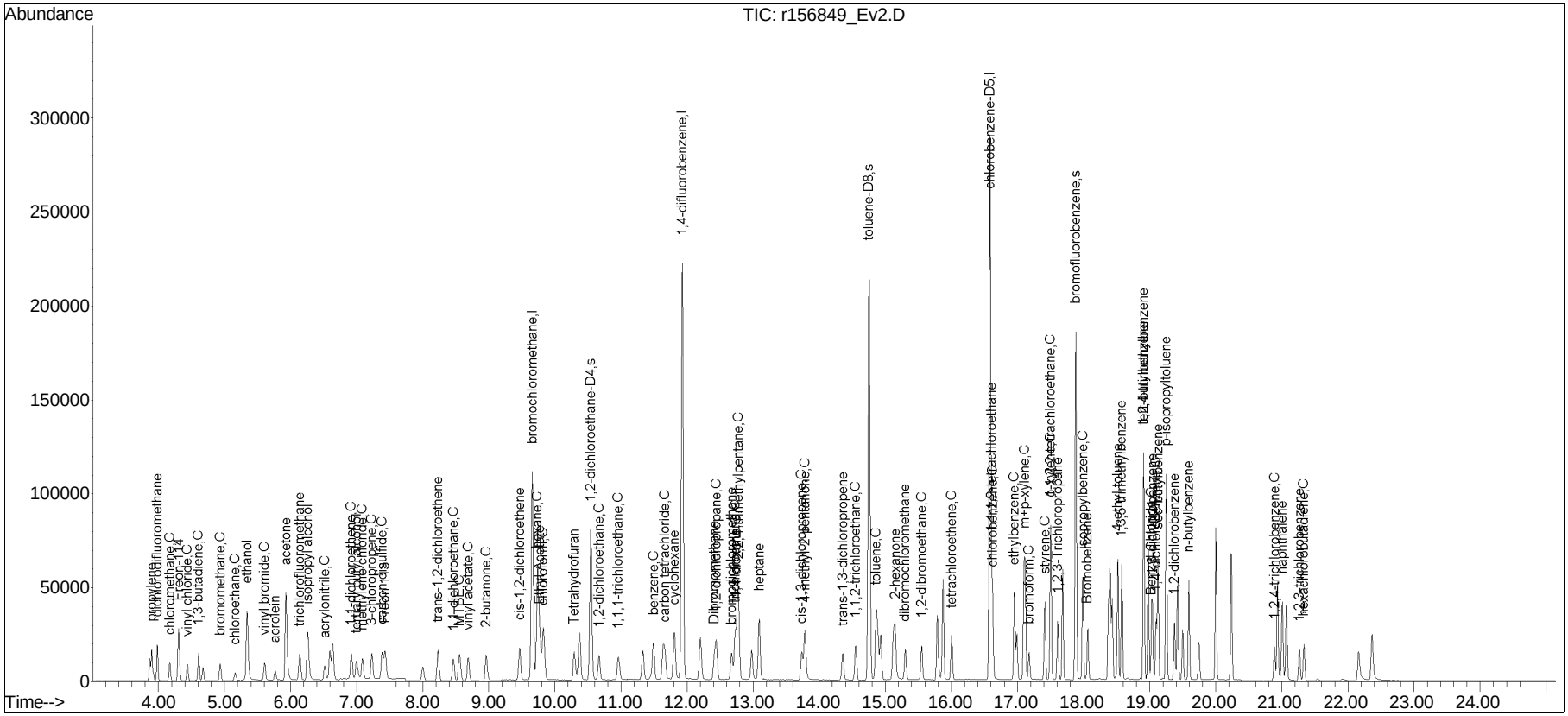
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156849_Ev2.D
Acq On : 4 Apr 2018 9:11 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD1.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:58:07 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

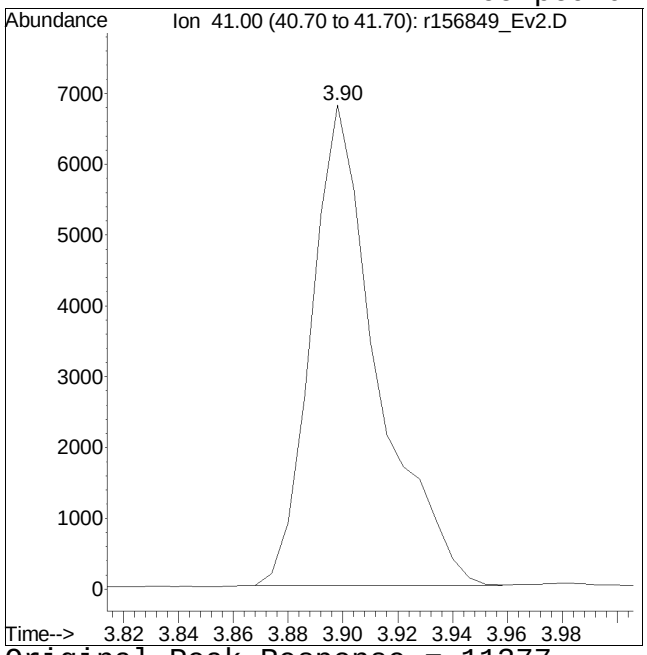
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



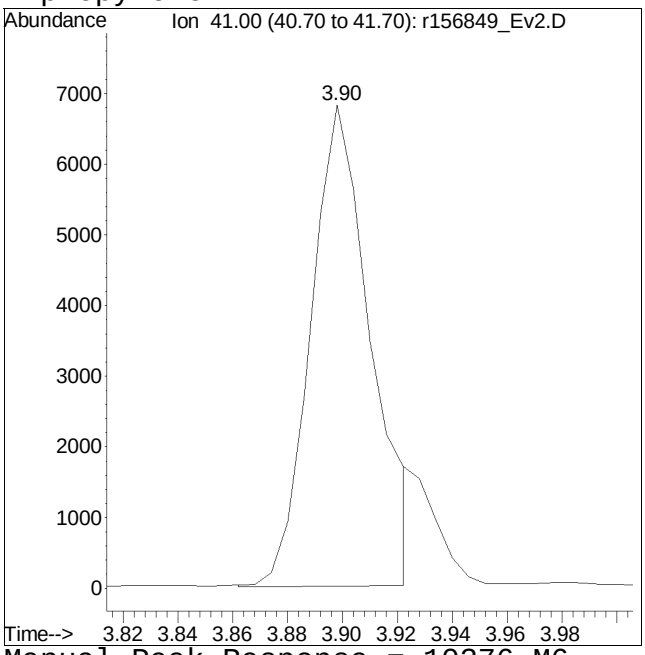
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156849_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:11 PM Instrument :
Sample : ITO15-SIMSTD1.0 Quant Date : 4/5/2018 9:49 am

Compound #2: propylene




Original Peak Response = 11377



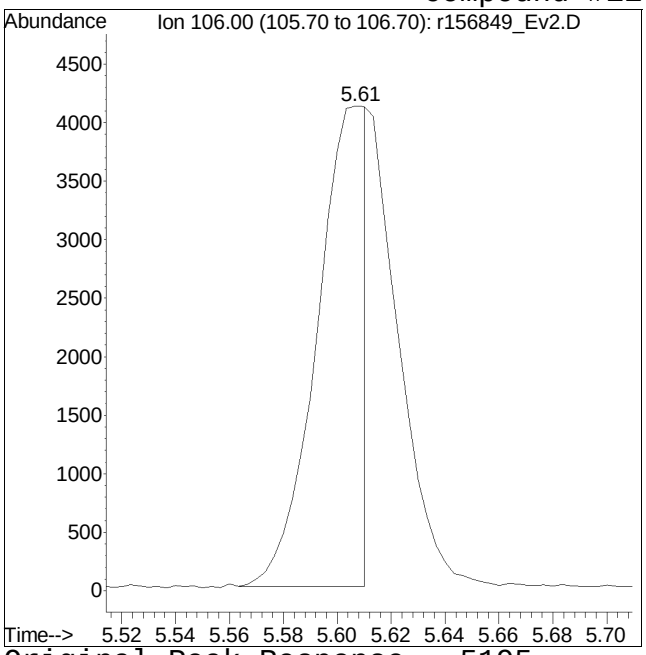

Manual Peak Response = 10376 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

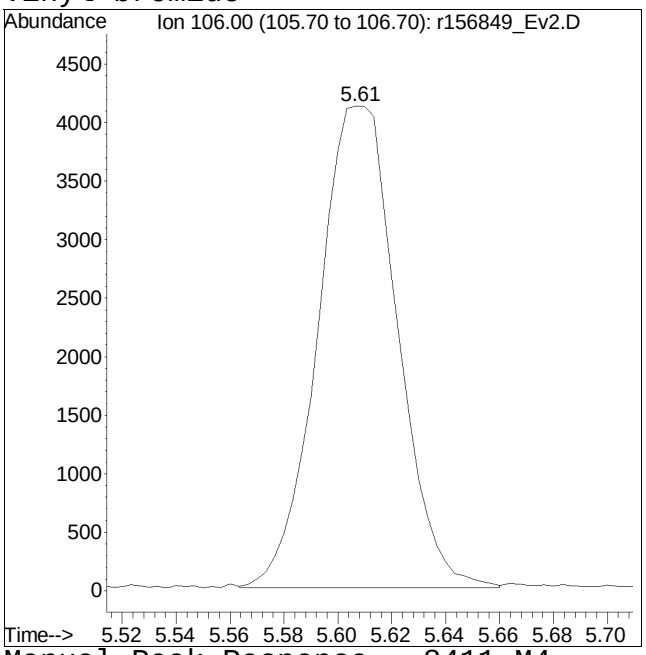
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156849_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:11 PM Instrument :
Sample : ITO15-SIMSTD1.0 Quant Date : 4/5/2018 9:49 am

Compound #11: vinyl bromide




Original Peak Response = 5195




Manual Peak Response = 8411 M4

M4 = Poor automated baseline construction.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156850_Ev2.D
Acq On : 4 Apr 2018 9:48 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:46:33 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 16 18:24:21 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 9.66 | 49 | 133810M2 | 10.000 ppbV | 0.69 |
| Standard Area = 133810 | | | Recovery | = 100.00% | |
| 33) 1,4-difluorobenzene | 11.93 | 114 | 280369M3 | 10.000 ppbV | 0.71 |
| Standard Area = 280369 | | | Recovery | = 100.00% | |
| 51) chlorobenzene-D5 | 16.58 | 54 | 59059M2 | 10.000 ppbV | 0.66 |
| Standard Area = 59059 | | | Recovery | = 100.00% | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.54 | 65 | 76173M3 | 9.631 ppbV | 0.70 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 96.31% | |
| 53) toluene-D8 | 14.75 | 98 | 260833M2 | 12.657 ppbV | 0.68 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 126.57% | |
| 67) bromofluorobenzene | 17.88 | 95 | 144742M3 | 12.721 ppbV | 0.60 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 127.21% | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 48467M6 | 3.946 ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 85573M3 | 4.991 ppbV | |
| 4) chloromethane | 4.17 | 50 | 50508 | 4.177 ppbV | 97 |
| 5) Freon-114 | 4.31 | 85 | 102392M3 | 4.428 ppbV | |
| 6) vinyl chloride | 4.44 | 62 | 50657M3 | 4.091 ppbV | |
| 7) 1,3-butadiene | 4.61 | 54 | 40221M2 | 4.135 ppbV | |
| 8) bromomethane | 4.94 | 94 | 41564M2 | 4.458 ppbV | |
| 9) chloroethane | 5.16 | 64 | 18199M2 | 2.824 ppbV | |
| 10) ethanol | 5.33 | 31 | 205227M2 | 19.762 ppbV | |
| 11) vinyl bromide | 5.61 | 106 | 40727M3 | 4.637 ppbV | |
| 12) acrolein | 5.76 | 56 | 21201M3 | 3.767 ppbV | |
| 13) acetone | 5.92 | 43 | 302359M3 | 19.510 ppbV | |
| 14) trichlorofluoromethane | 6.14 | 101 | 82789M2 | 5.561 ppbV | |
| 15) isopropyl alcohol | 6.25 | 45 | 191260M3 | 9.355 ppbV | |
| 16) acrylonitrile | 6.51 | 53 | 39812M3 | 4.259 ppbV | |
| 17) 1,1-dichloroethene | 6.92 | 61 | 70632M2 | 4.374 ppbV | |
| 18) tertiary butyl alcohol | 6.98 | 59 | 76275M3 | 3.703 ppbV | |
| 19) methylene chloride | 7.09 | 49 | 66750M2 | 4.871 ppbV | |
| 20) 3-chloropropene | 7.23 | 41 | 92133M3 | 4.716 ppbV | |
| 21) carbon disulfide | 7.39 | 76 | 136963M3 | 5.115 ppbV | |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156850_Ev2.D
Acq On : 4 Apr 2018 9:48 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:46:33 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 16 18:24:21 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 22) Freon 113 | 7.43 | 101 | 84172M3 | 5.280 | ppbV | |
| 23) trans-1,2-dichloroethene | 8.23 | 61 | 71484M3 | 4.805 | ppbV | |
| 24) 1,1-dichloroethane | 8.47 | 63 | 88666M2 | 4.774 | ppbV | |
| 25) MTBE | 8.55 | 73 | 120745M3 | 5.586 | ppbV | |
| 26) vinyl acetate | 8.68 | 43 | 122074M3 | 4.662 | ppbV | |
| 27) 2-butanone | 8.95 | 43 | 119475M2 | 4.816 | ppbV | |
| 28) cis-1,2-dichloroethene | 9.47 | 61 | 69003M3 | 4.860 | ppbV | |
| 29) Ethyl Acetate | 9.77 | 61 | 17566M2 | 5.051 | ppbV | |
| 30) chloroform | 9.82 | 83 | 83064M2 | 5.229 | ppbV | |
| 31) Tetrahydrofuran | 10.28 | 42 | 80425M3 | 5.066 | ppbV | |
| 32) 1,2-dichloroethane | 10.67 | 62 | 59713M3 | 4.875 | ppbV | |
| 34) hexane | 9.73 | 57 | 87148M3 | 4.112 | ppbV | |
| 36) 1,1,1-trichloroethane | 10.97 | 97 | 68814M2 | 4.957 | ppbV | |
| 37) benzene | 11.49 | 78 | 156792M2 | 4.401 | ppbV | |
| 38) carbon tetrachloride | 11.67 | 117 | 63870M2 | 5.187 | ppbV | |
| 39) cyclohexane | 11.81 | 56 | 91199M3 | 3.836 | ppbV | |
| 40) Dibromomethane | 12.41 | 93 | 49153M2 | 4.393 | ppbV | |
| 41) 1,2-dichloropropane | 12.44 | 63 | 63142M3 | 4.370 | ppbV | |
| 42) bromodichloromethane | 12.67 | 83 | 83926M3 | 4.522 | ppbV | |
| 43) 1,4-dioxane | 12.73 | 88 | 32595M3 | 4.400 | ppbV | |
| 44) trichloroethene | 12.73 | 130 | 58732M3 | 5.140 | ppbV | |
| 45) 2,2,4-trimethylpentane | 12.77 | 57 | 283600M3 | 4.075 | ppbV | |
| 46) heptane | 13.09 | 43 | 137782M3 | 4.350 | ppbV | |
| 47) cis-1,3-dichloropropene | 13.73 | 75 | 77836M2 | 4.754 | ppbV | |
| 48) 4-methyl-2-pentanone | 13.78 | 43 | 154359M3 | 4.247 | ppbV | |
| 49) trans-1,3-dichloropropene | 14.36 | 75 | 73295M3 | 4.670 | ppbV | |
| 50) 1,1,2-trichloroethane | 14.55 | 97 | 58079M2 | 5.032 | ppbV | |
| 52) toluene | 14.86 | 91 | 183627M2 | 5.876 | ppbV | |
| 54) 2-hexanone | 15.14 | 43 | 153084M3 | 5.874 | ppbV | |
| 55) dibromochloromethane | 15.30 | 129 | 74469M2 | 6.844 | ppbV | |
| 56) 1,2-dibromoethane | 15.55 | 107 | 85826M2 | 6.228 | ppbV | |
| 57) tetrachloroethene | 16.00 | 166 | 63801M2 | 6.454 | ppbV | |
| 58) 1,1,1,2-tetrachloroethane | 16.61 | 131 | 57459M2 | 6.723 | ppbV | |
| 59) chlorobenzene | 16.63 | 112 | 137447M2 | 6.060 | ppbV | |
| 60) ethylbenzene | 16.95 | 91 | 237382M2 | 6.412 | ppbV | |
| 61) m+p-xylene | 17.11 | 91 | 389114M3 | 12.946 | ppbV | |
| 62) bromoform | 17.18 | 173 | 59026M2 | 7.340 | ppbV | |
| 63) styrene | 17.41 | 104 | 151817M2 | 6.891 | ppbV | |
| 64) 1,1,2,2-tetrachloroethane | 17.50 | 83 | 138332M3 | 5.752 | ppbV | |
| 65) o-xylene | 17.50 | 91 | 202744M3 | 6.723 | ppbV | |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156850_Ev2.D
Acq On : 4 Apr 2018 9:48 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:46:33 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 16 18:24:21 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 66) 1,2,3-Trichloropropane | 17.61 | 75 | 108271M3 | 5.814 ppbV | |
| 68) isopropylbenzene | 17.98 | 105 | 247428M3 | 6.866 ppbV | |
| 69) Bromobenzene | 18.06 | 77 | 138280M3 | 5.927 ppbV | |
| 70) 4-ethyl toluene | 18.52 | 105 | 276882M3 | 7.565 ppbV | |
| 71) 1,3,5-trimethylbenzene | 18.57 | 105 | 239914M3 | 7.445 ppbV | |
| 72) tert-butylbenzene | 18.91 | 119 | 231523M2 | 7.313 ppbV | |
| 73) 1,2,4-trimethylbenzene | 18.91 | 105 | 237383M3 | 7.350 ppbV | |
| 74) Benzyl Chloride | 19.02 | 91 | 142316M3 | 6.722 ppbV | |
| 75) 1,3-dichlorobenzene | 19.04 | 146 | 147418M2 | 7.666 ppbV | |
| 76) 1,4-dichlorobenzene | 19.09 | 146 | 145114M2 | 7.496 ppbV | |
| 77) sec-butylbenzene | 19.13 | 105 | 339940M2 | 7.555 ppbV | |
| 78) p-isopropyltoluene | 19.25 | 119 | 285463M3 | 7.724 ppbV | |
| 79) 1,2-dichlorobenzene | 19.38 | 146 | 141060M3 | 7.855 ppbV | |
| 80) n-butylbenzene | 19.59 | 91 | 281688M3 | 7.888 ppbV | |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 118608M2 | 11.626 ppbV | |
| 82) naphthalene | 21.00 | 128 | 337209M2 | 11.598 ppbV | |
| 83) 1,2,3-trichlorobenzene | 21.26 | 180 | 112491M3 | 11.871 ppbV | |
| 84) hexachlorobutadiene | 21.33 | 225 | 99202M2 | 9.974 ppbV | |

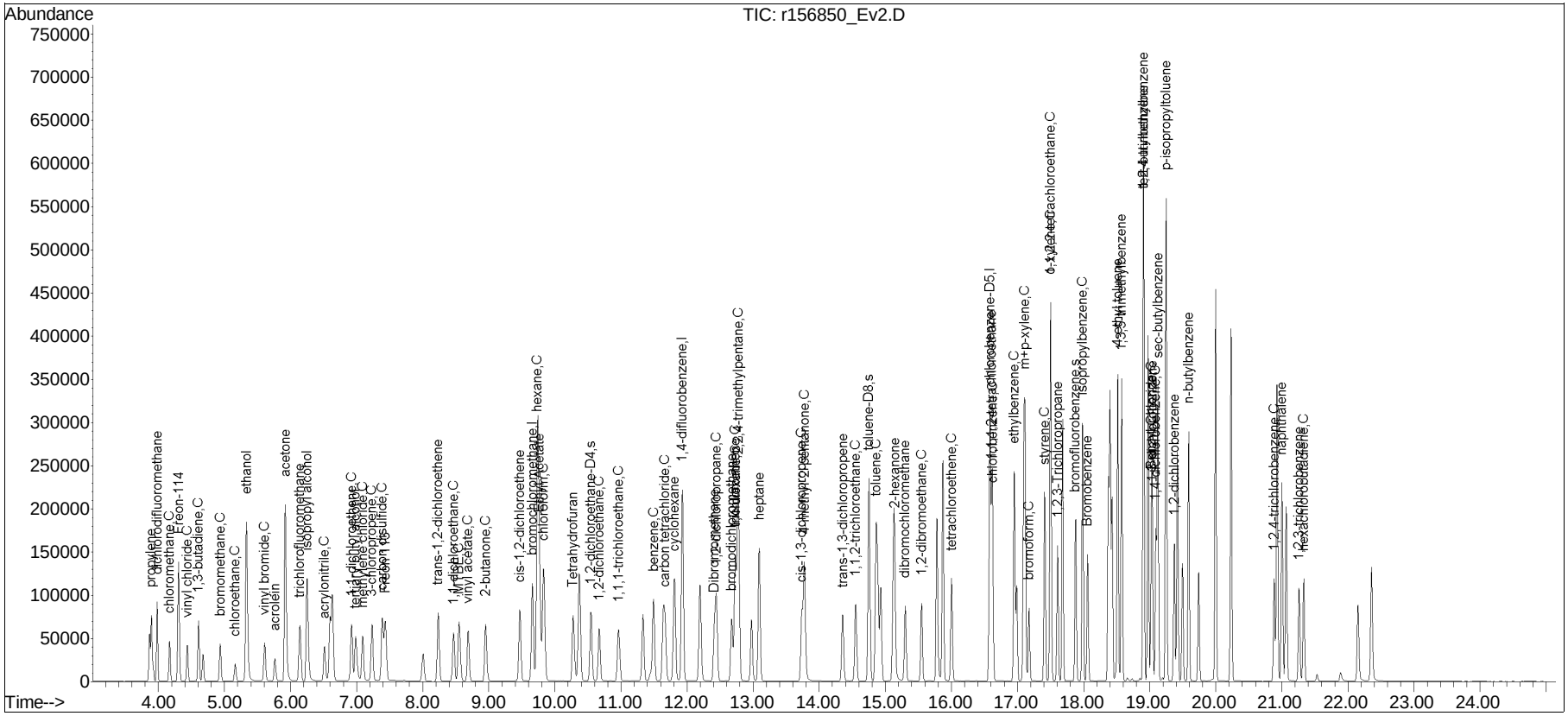
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156850_Ev2.D
Acq On : 4 Apr 2018 9:48 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:46:33 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Fri Feb 16 18:24:21 2018
Response via : Initial Calibration

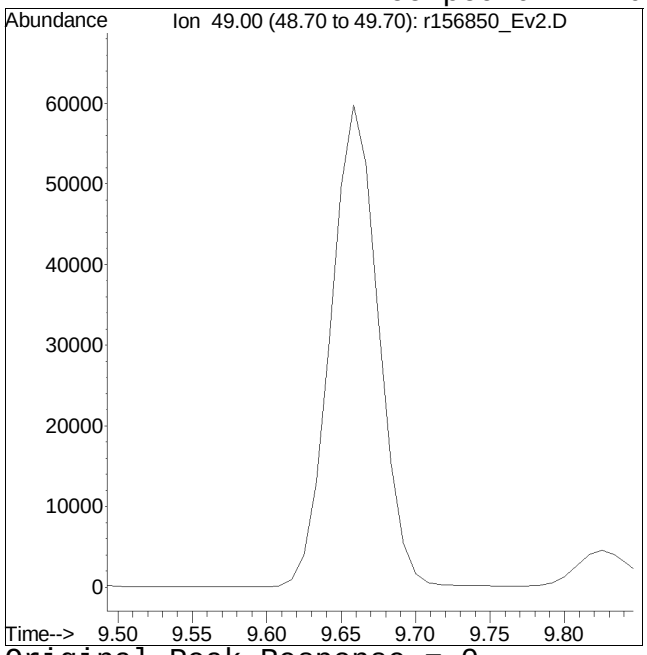
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D

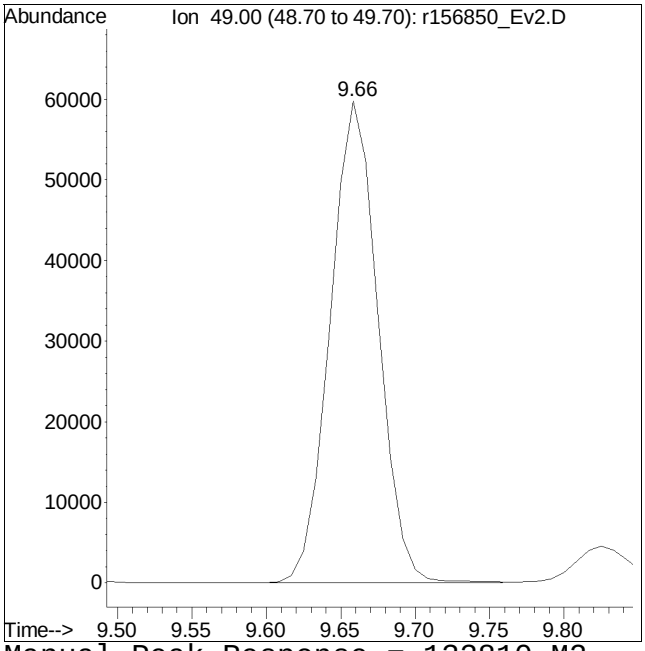


Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #1: bromochloromethane



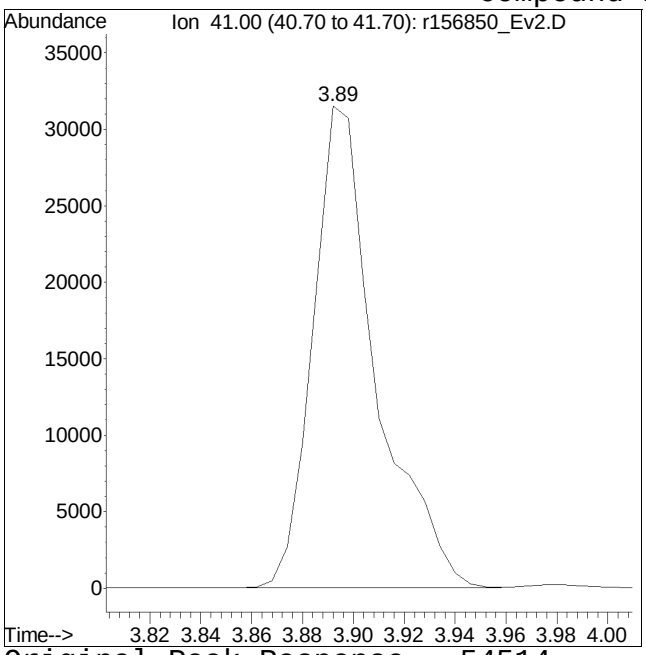




Original Peak Response = 0 Manual Peak Response = 133810 M2
M2 = Peak not found by automatic integration algorithm.

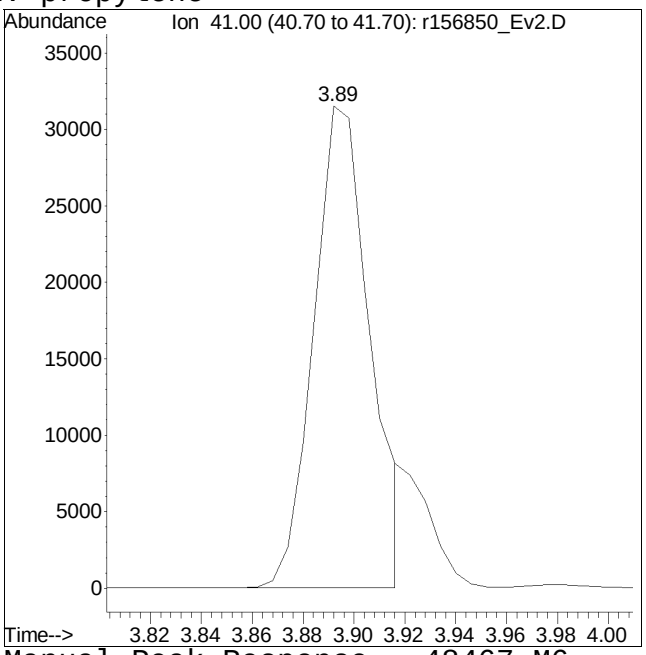
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #2: propylene




Original Peak Response = 54514



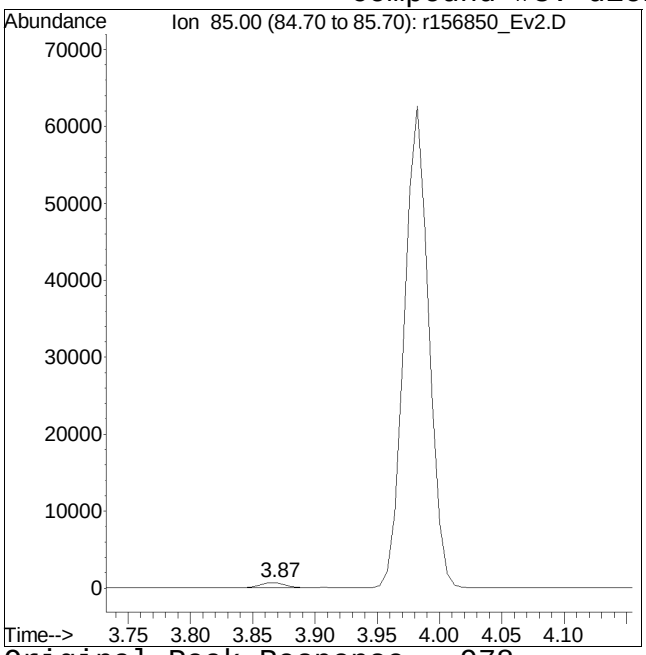

Manual Peak Response = 48467 M6

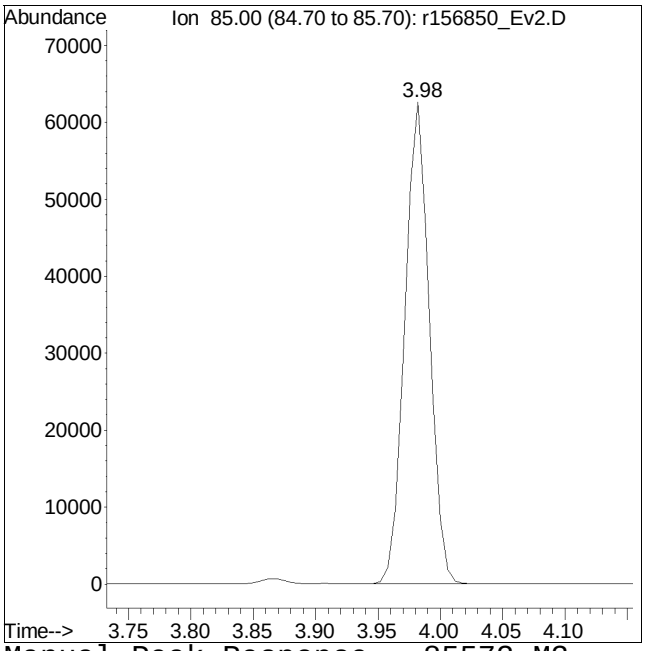
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #3: dichlorodifluoromethane



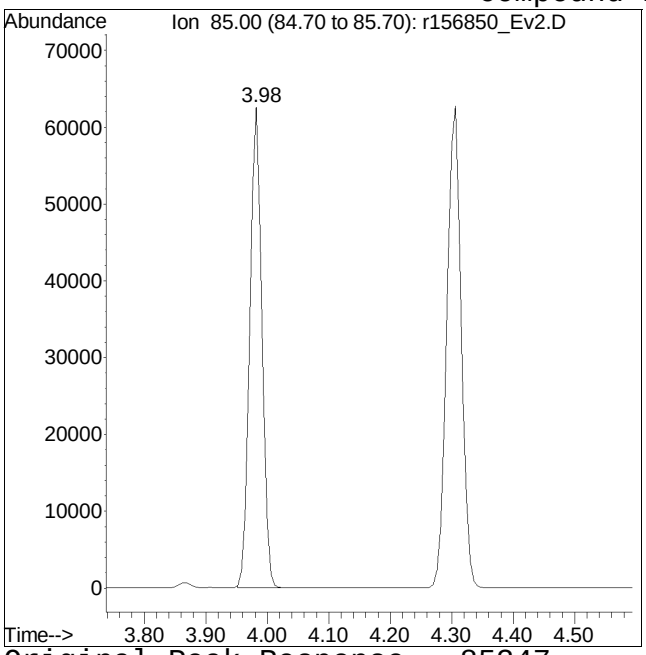



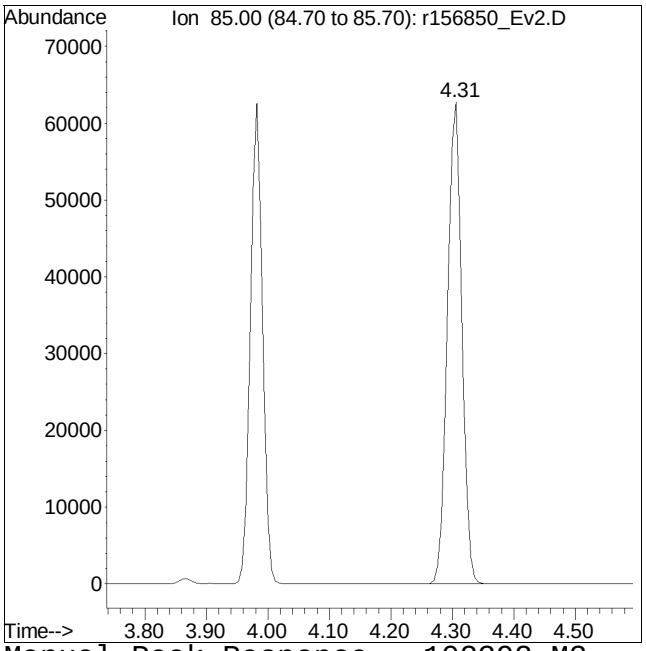

Original Peak Response = 978 Manual Peak Response = 85573 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #5: Freon-114



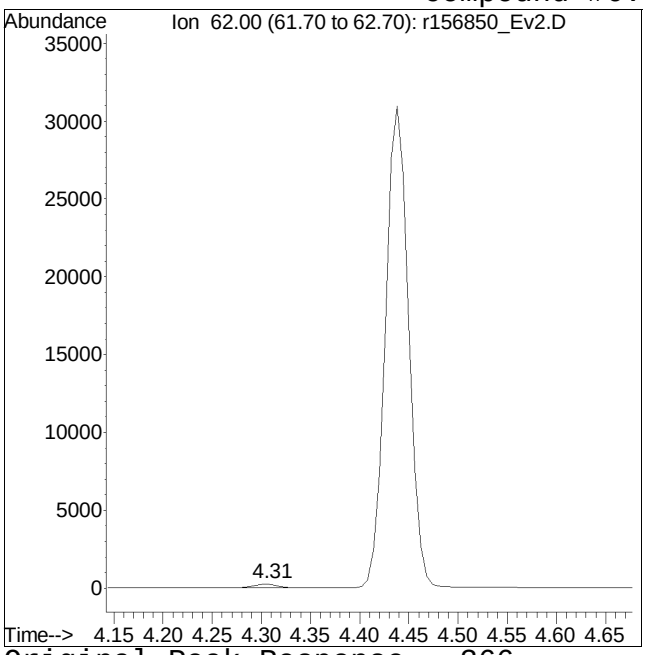



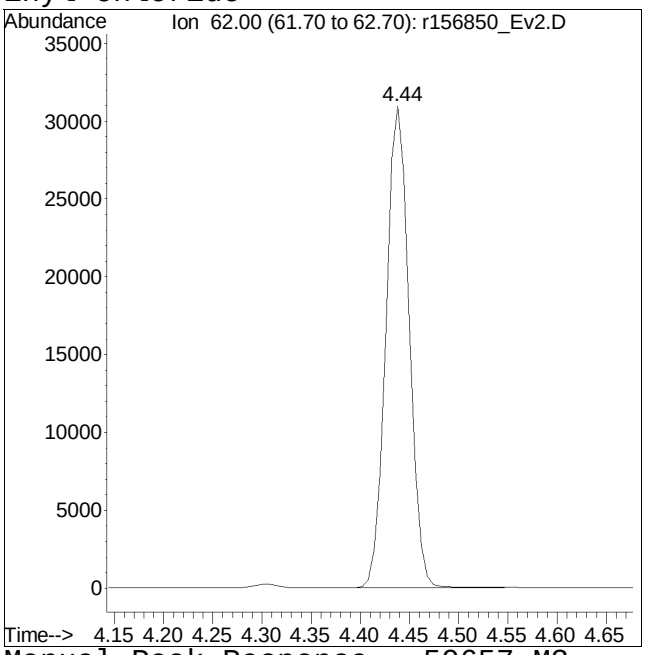

Original Peak Response = 85347 Manual Peak Response = 102392 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #6: vinyl chloride



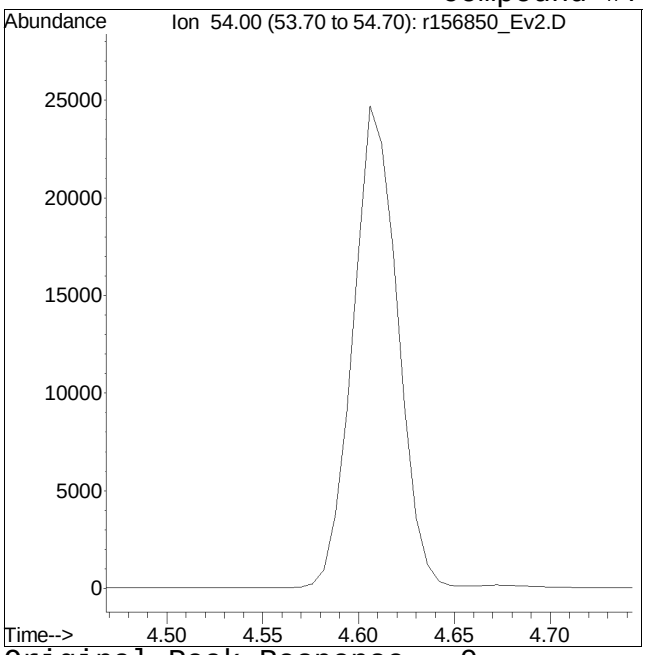

Original Peak Response = 366 Manual Peak Response = 50657 M3

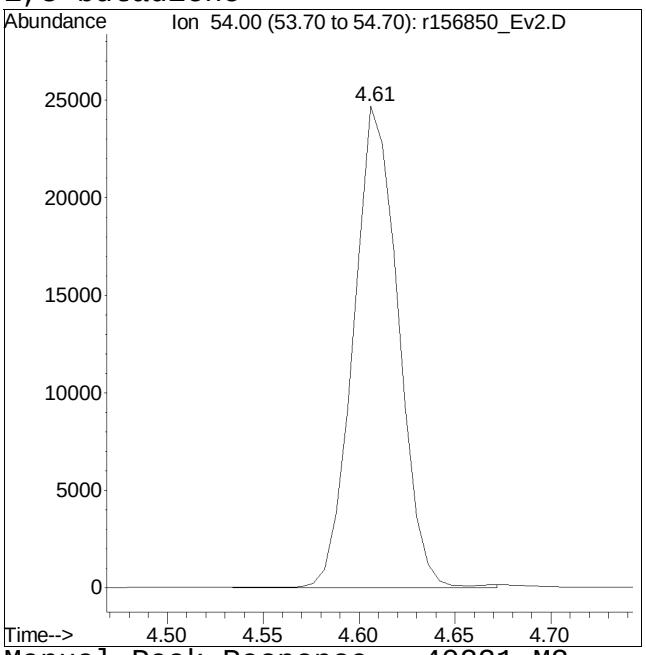
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #7: 1,3-butadiene



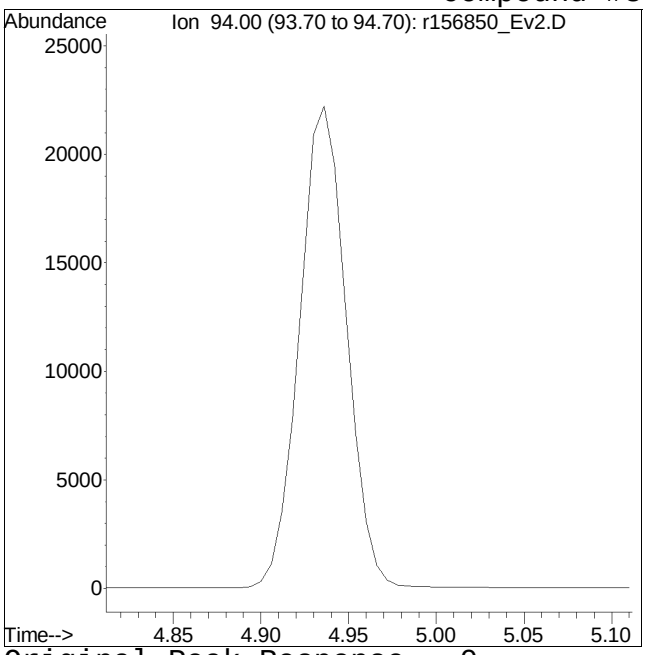



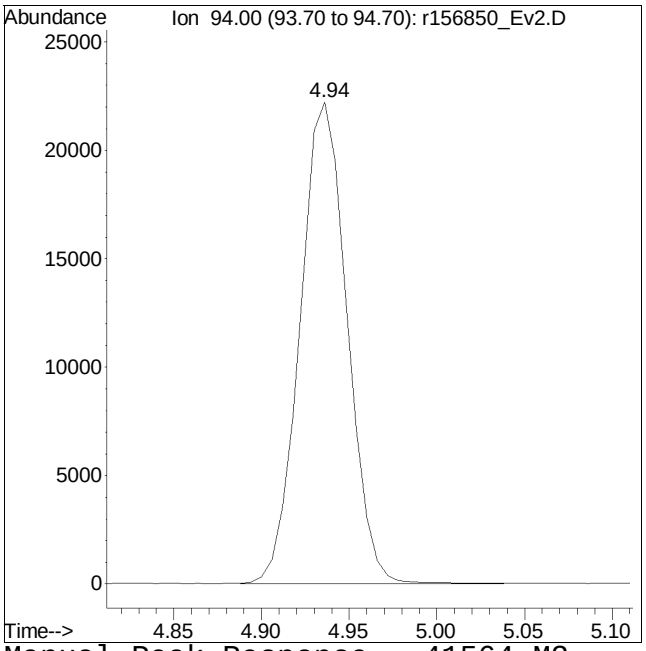

Original Peak Response = 0 Manual Peak Response = 40221 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #8: bromomethane



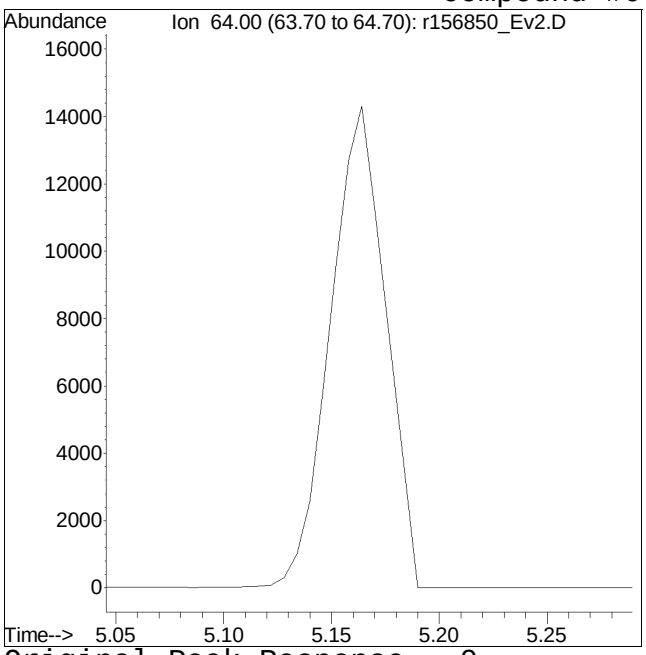



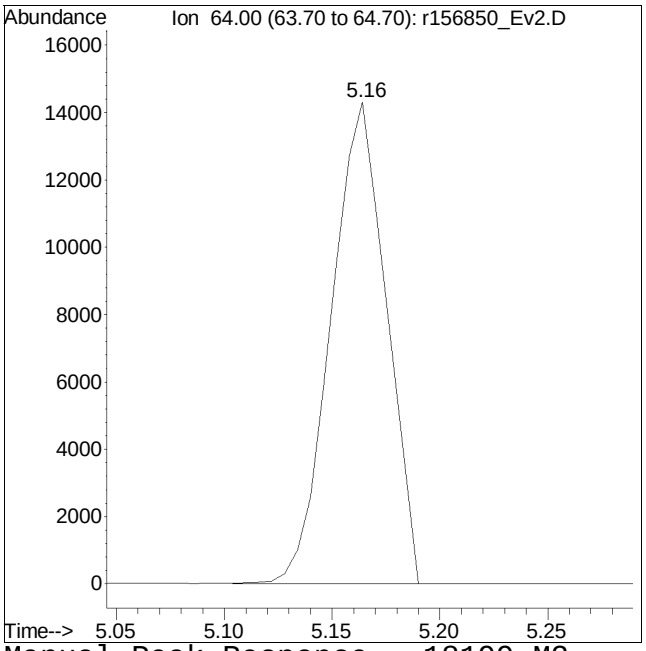

Original Peak Response = 0 Manual Peak Response = 41564 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #9: chloroethane



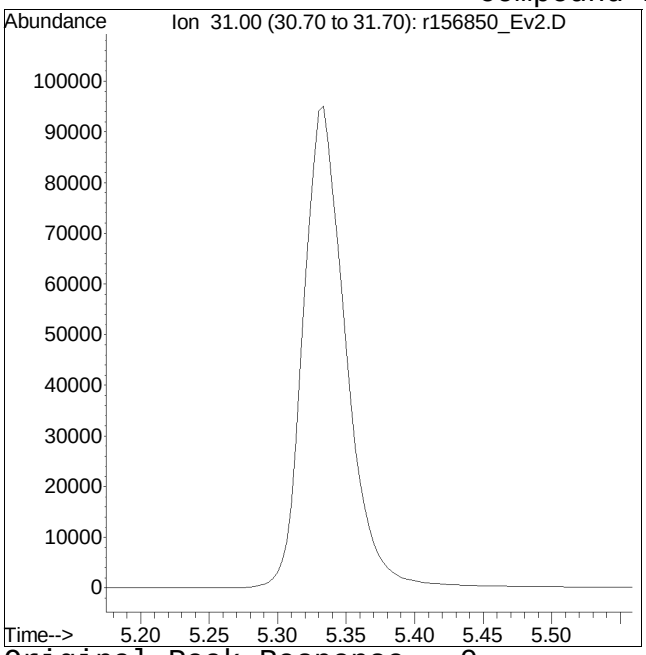



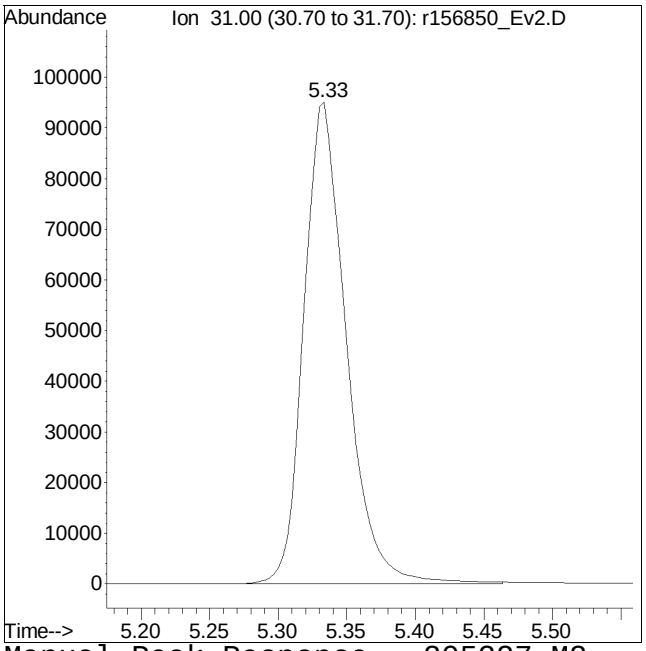

Original Peak Response = 0 Manual Peak Response = 18199 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #10: ethanol



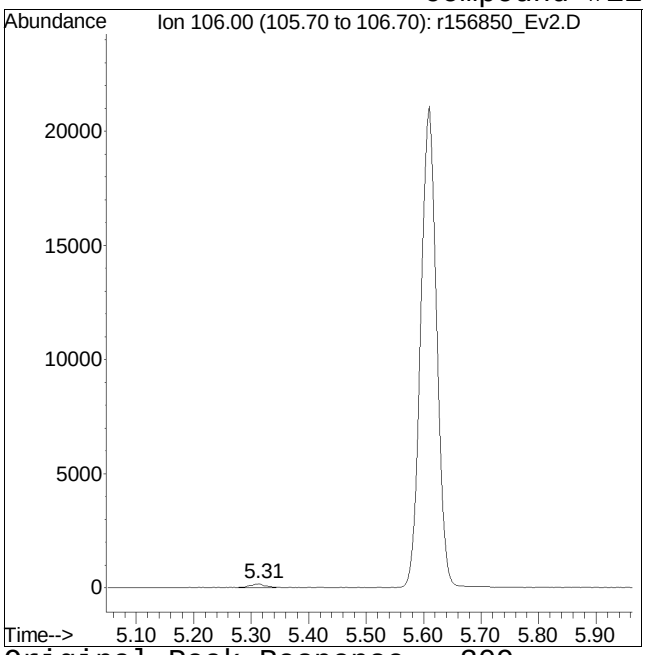



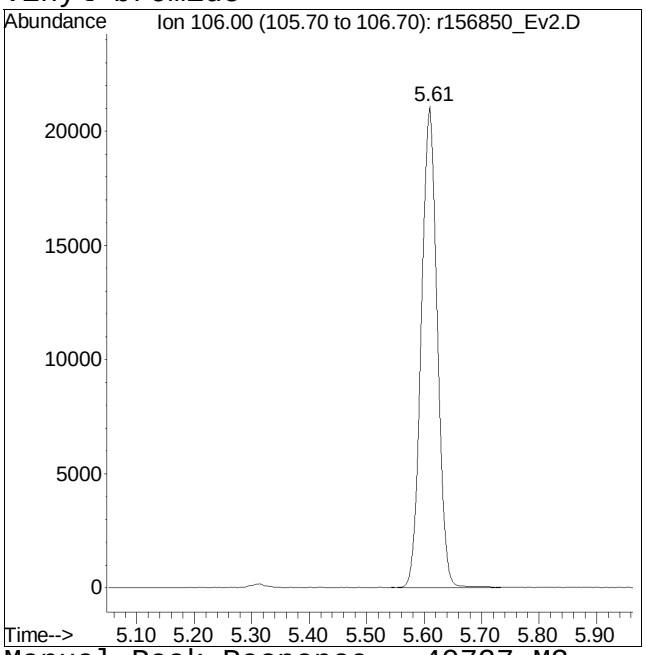

Original Peak Response = 0 Manual Peak Response = 205227 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #11: vinyl bromide



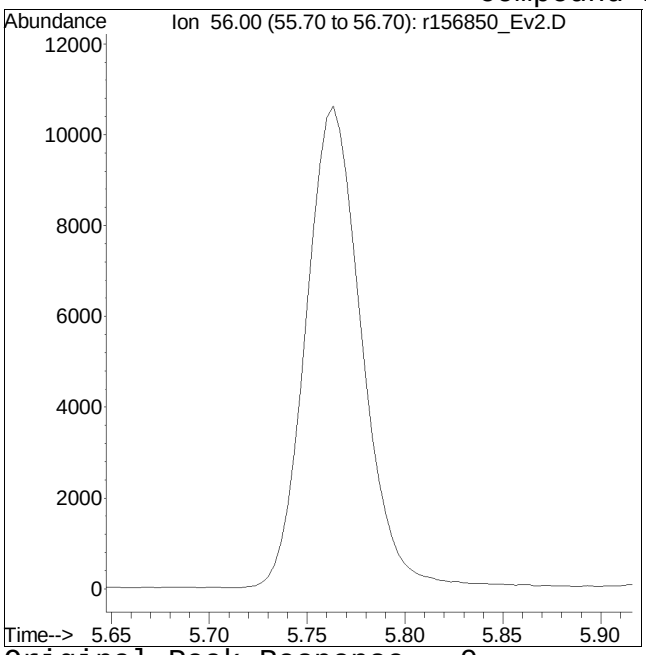

Original Peak Response = 309 Manual Peak Response = 40727 M3

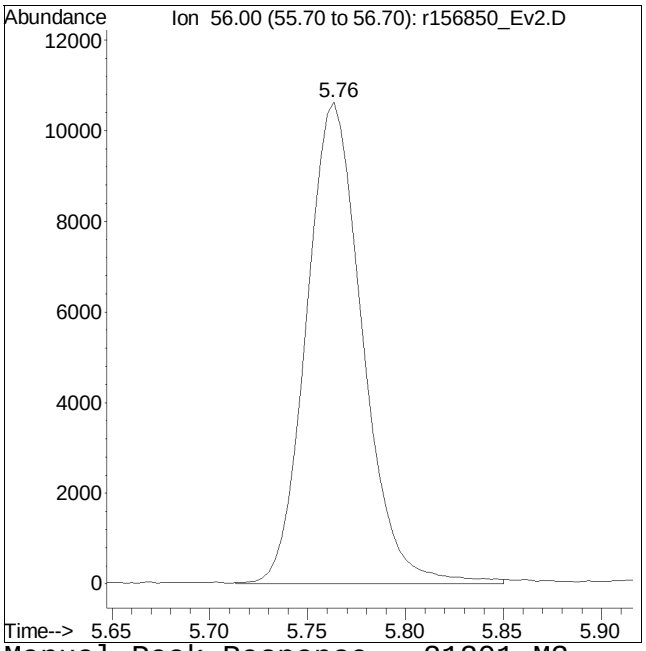
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #12: acrolein



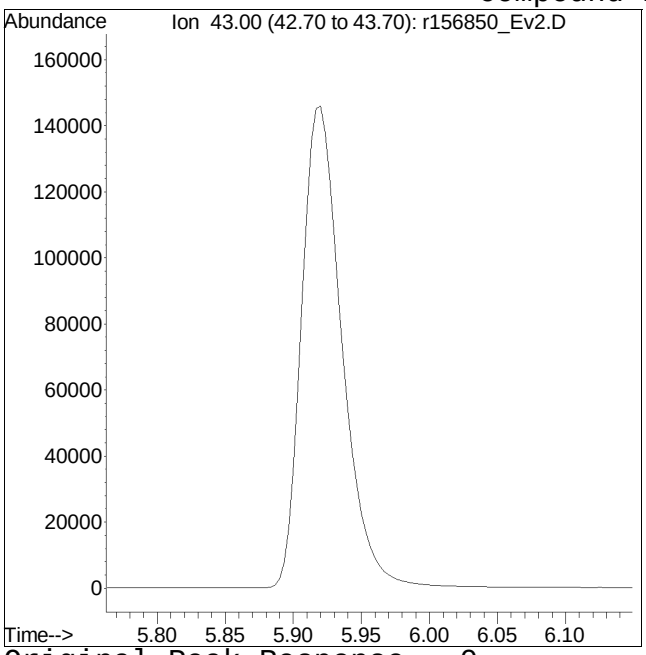



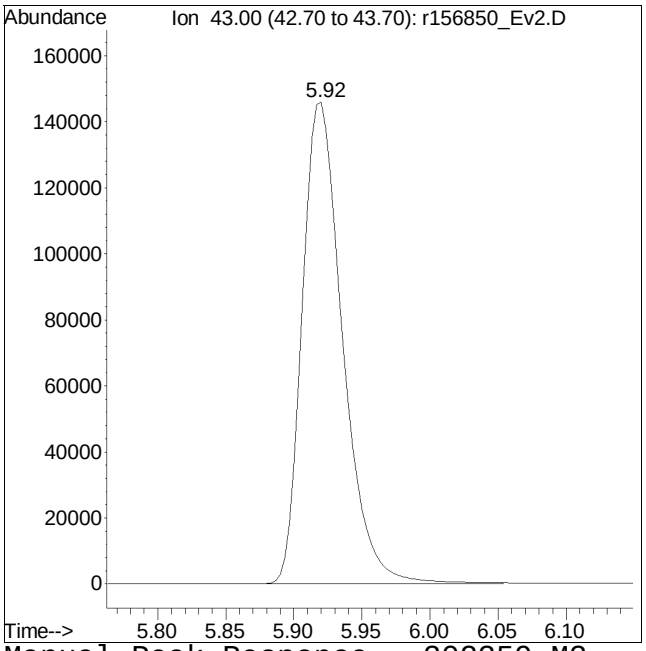

Original Peak Response = 0 Manual Peak Response = 21201 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #13: acetone



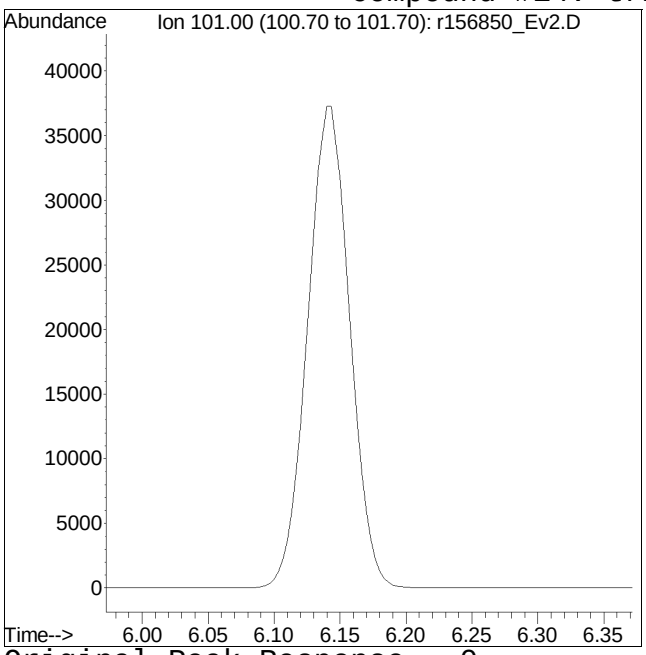



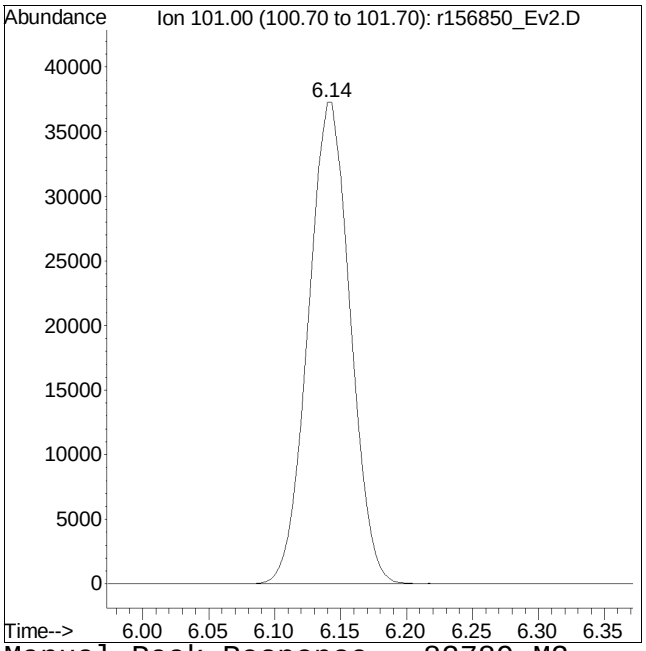

Original Peak Response = 0 Manual Peak Response = 302359 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #14: trichlorofluoromethane



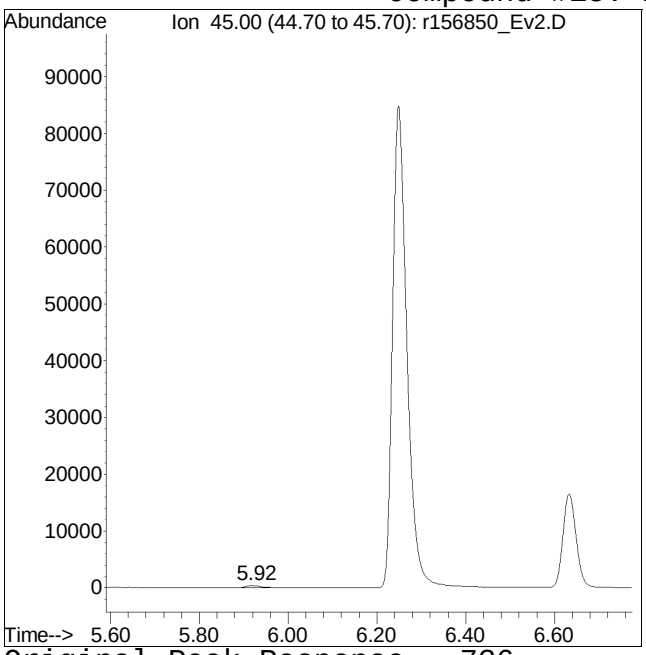



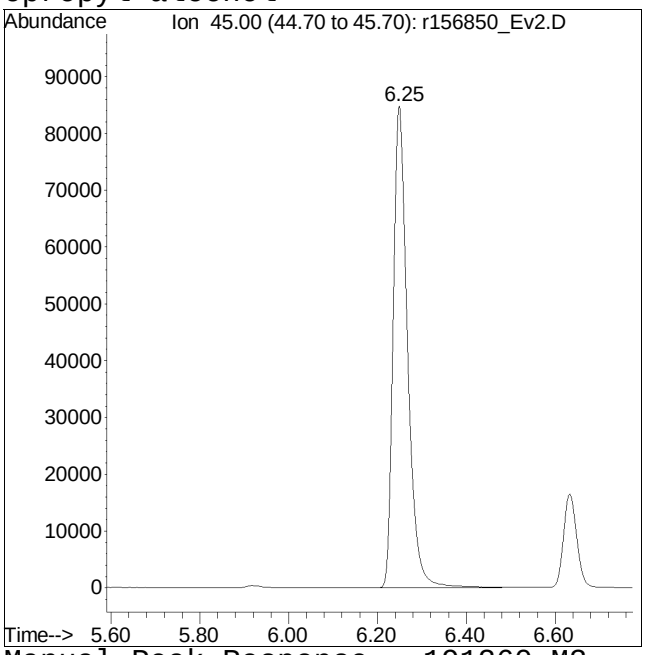

Original Peak Response = 0 Manual Peak Response = 82789 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #15: isopropyl alcohol



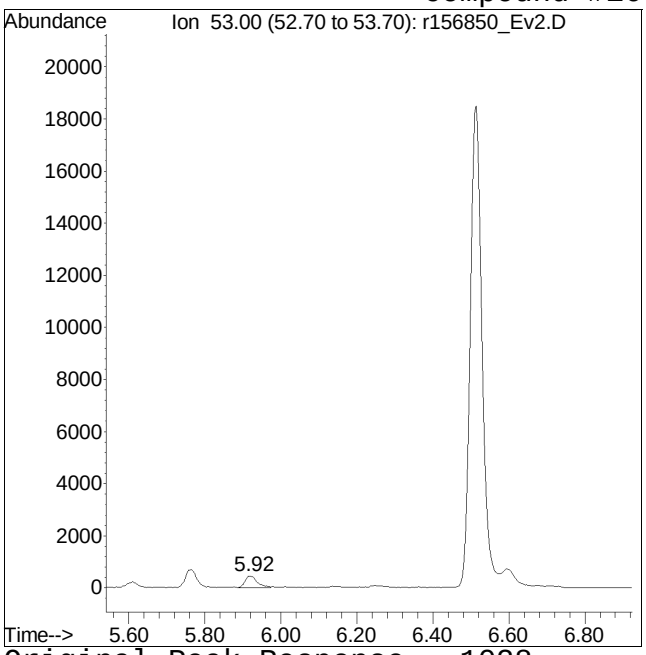

Original Peak Response = 736 Manual Peak Response = 191260 M3

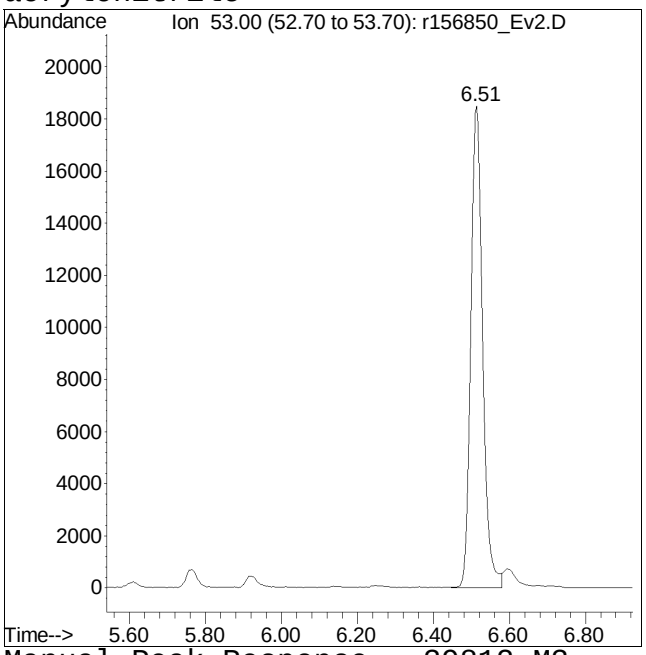
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #16: acrylonitrile



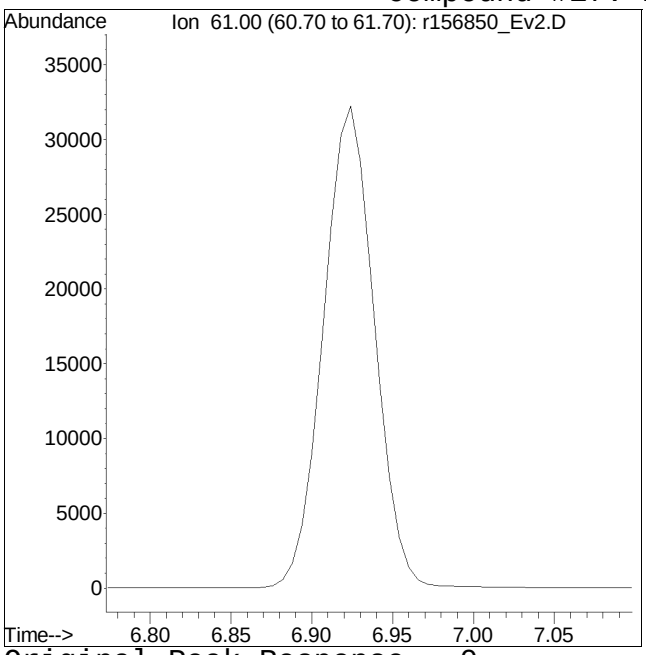



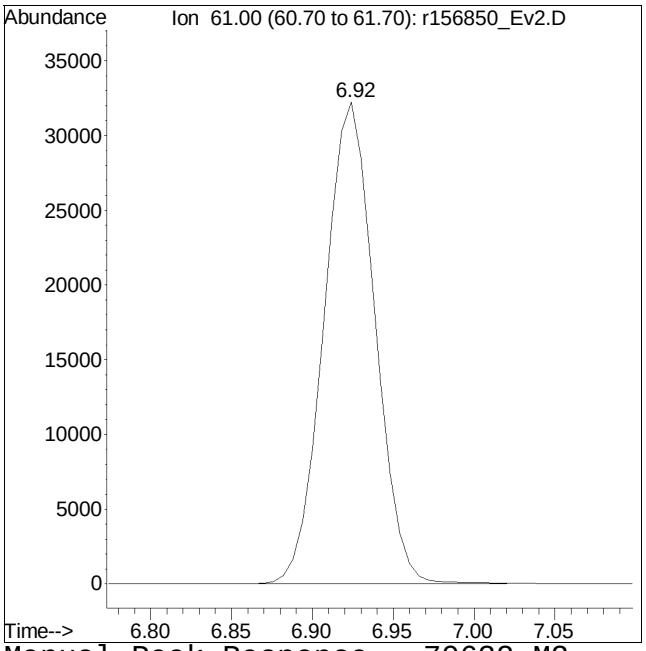

Original Peak Response = 1028 Manual Peak Response = 39812 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #17: 1,1-dichloroethene



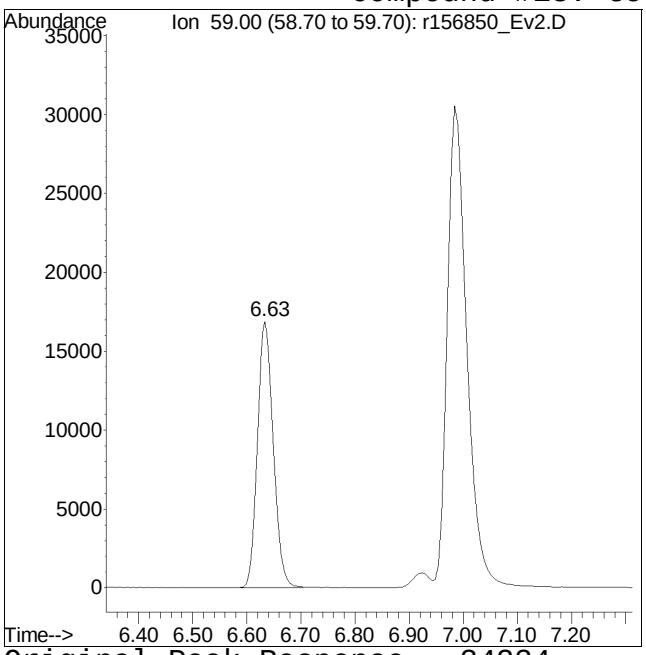



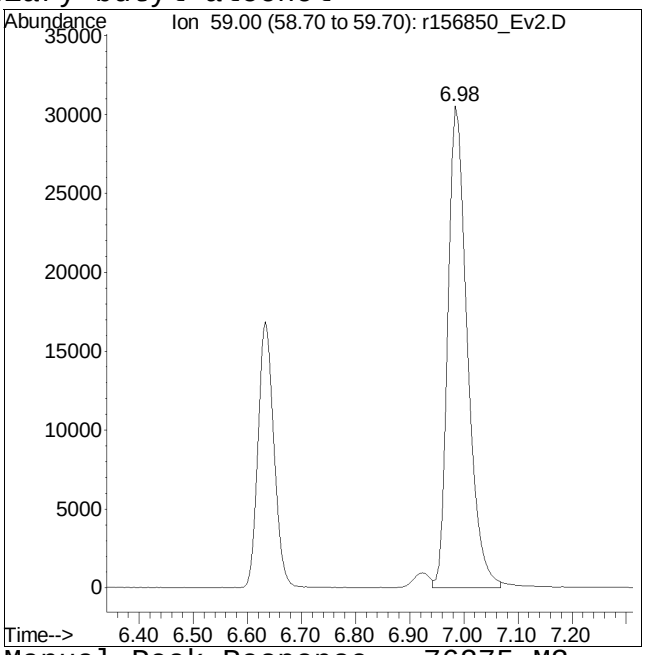

Original Peak Response = 0 Manual Peak Response = 70632 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #18: tertiary butyl alcohol



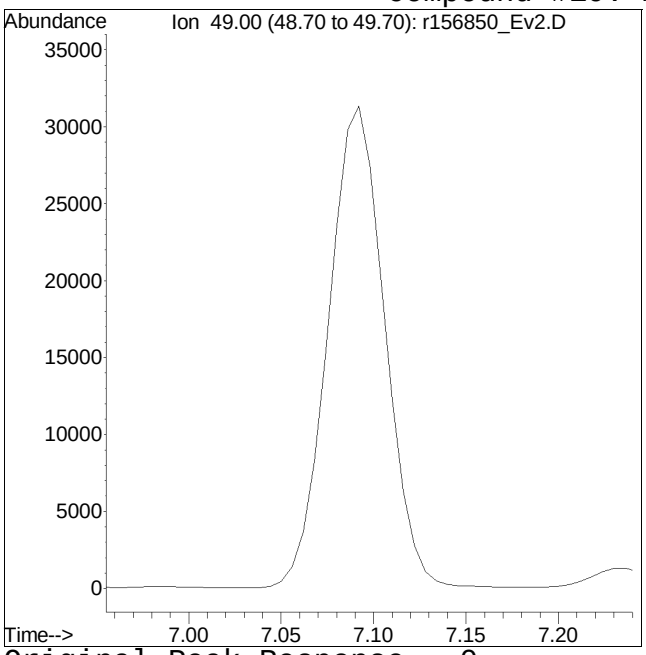



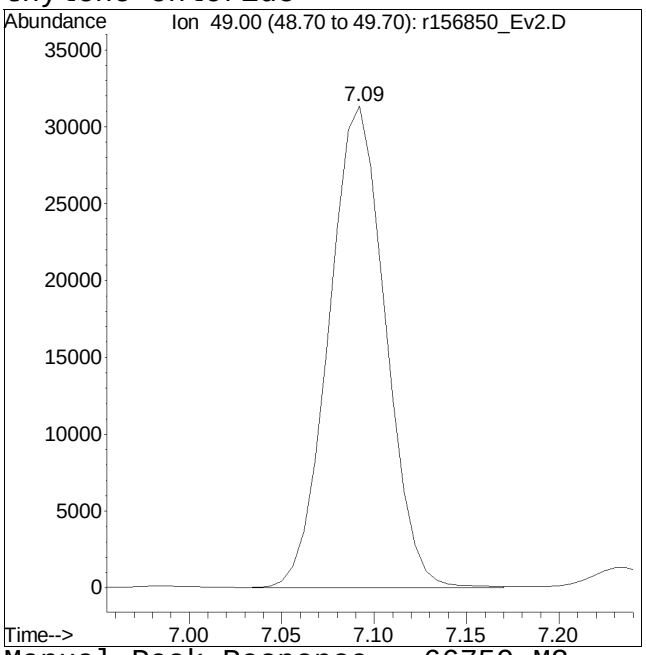

Original Peak Response = 34234 Manual Peak Response = 76275 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #19: methylene chloride



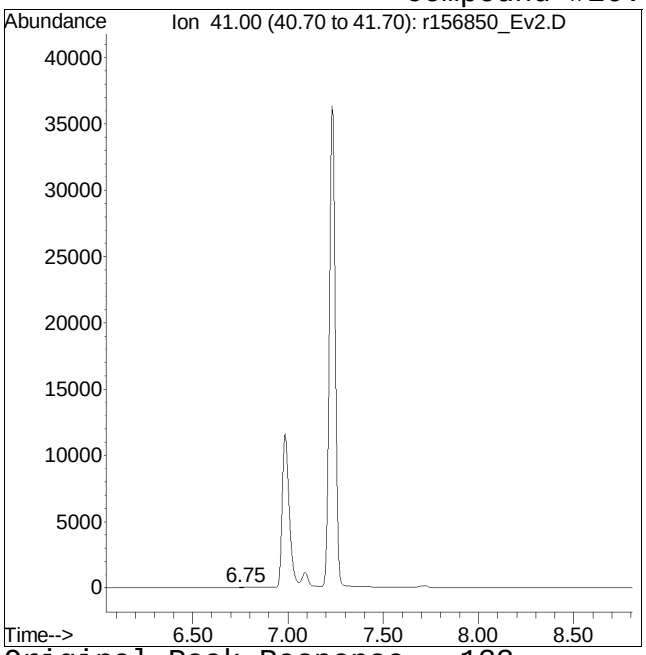



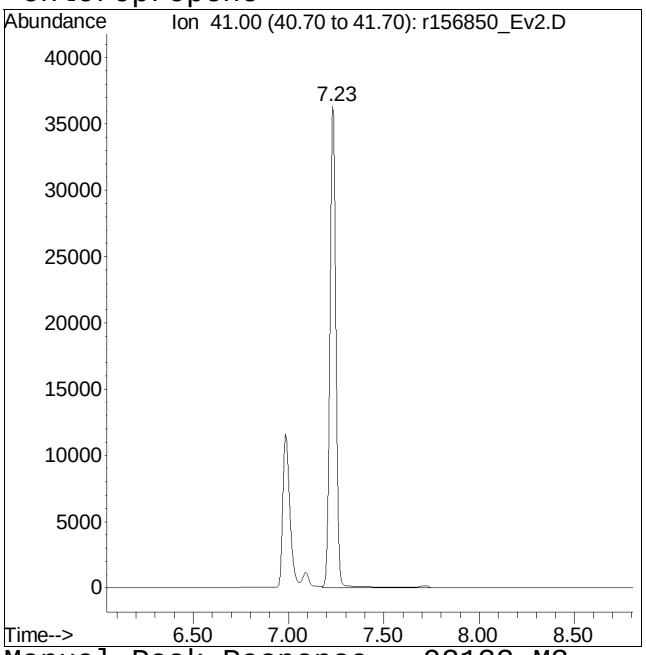

Original Peak Response = 0 Manual Peak Response = 66750 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #20: 3-chloropropene



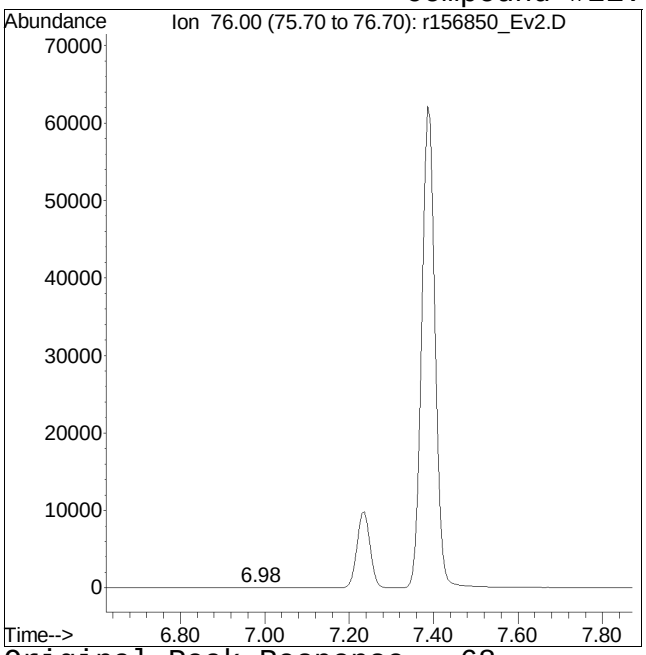

Original Peak Response = 133 Manual Peak Response = 92133 M3

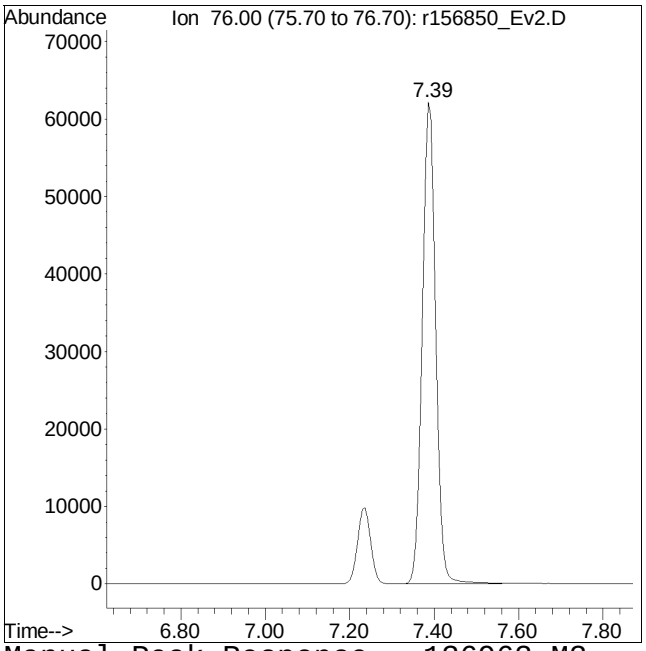
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #21: carbon disulfide



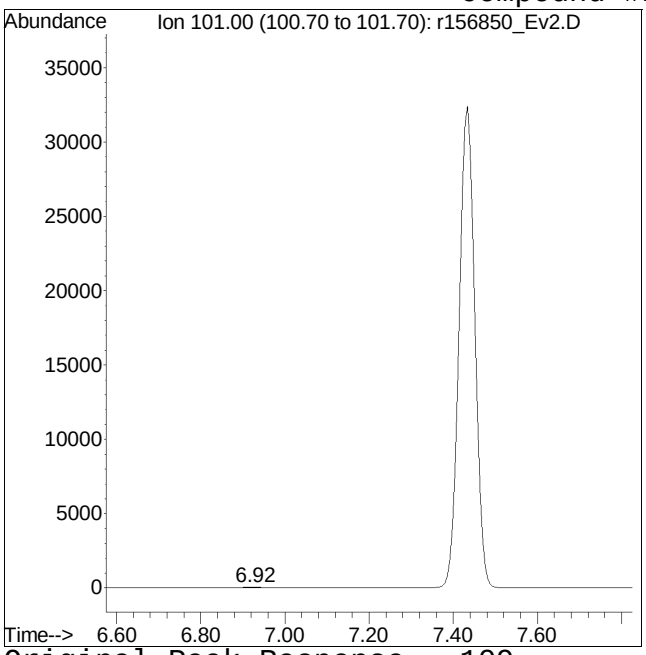



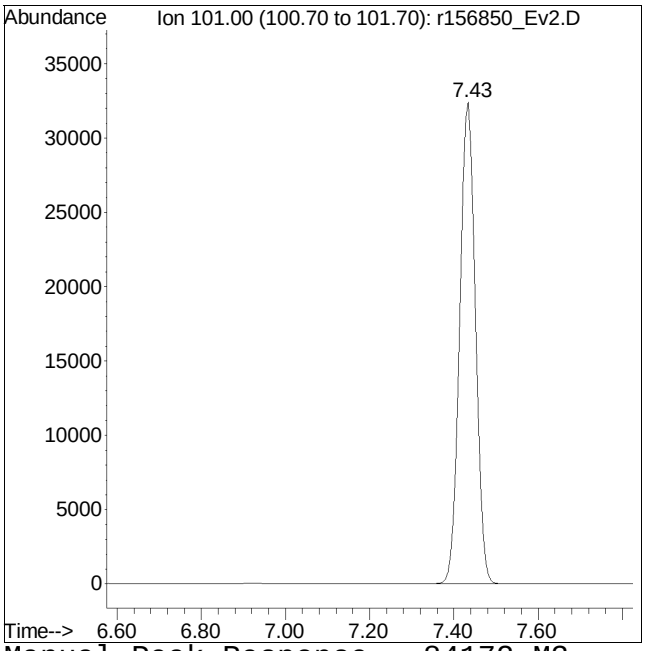

Original Peak Response = 68 Manual Peak Response = 136963 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #22: Freon 113



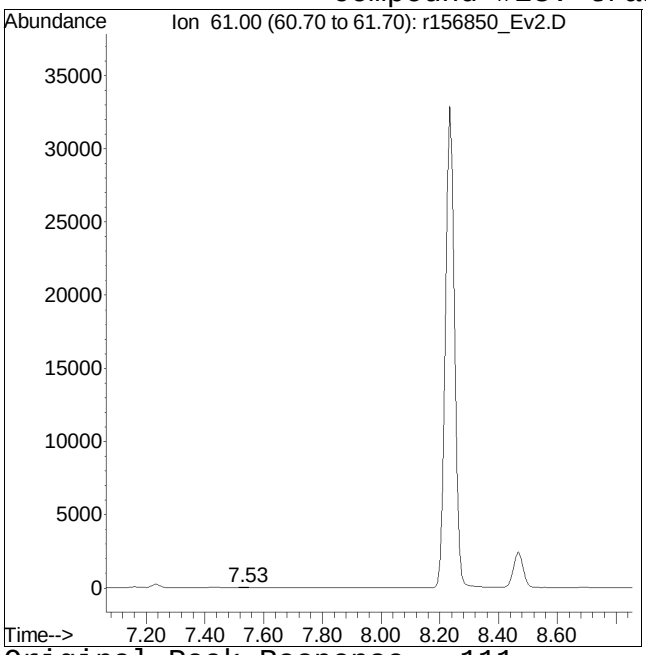

Original Peak Response = 109 Manual Peak Response = 84172 M3

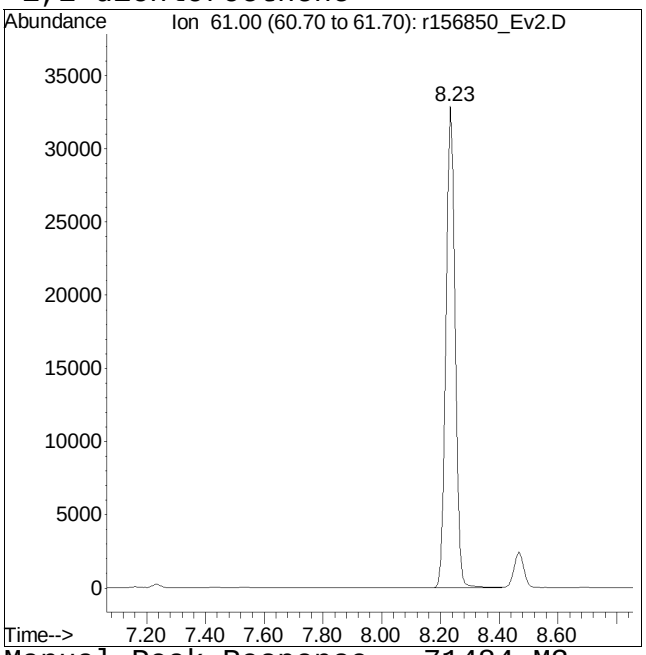
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #23: trans-1,2-dichloroethene



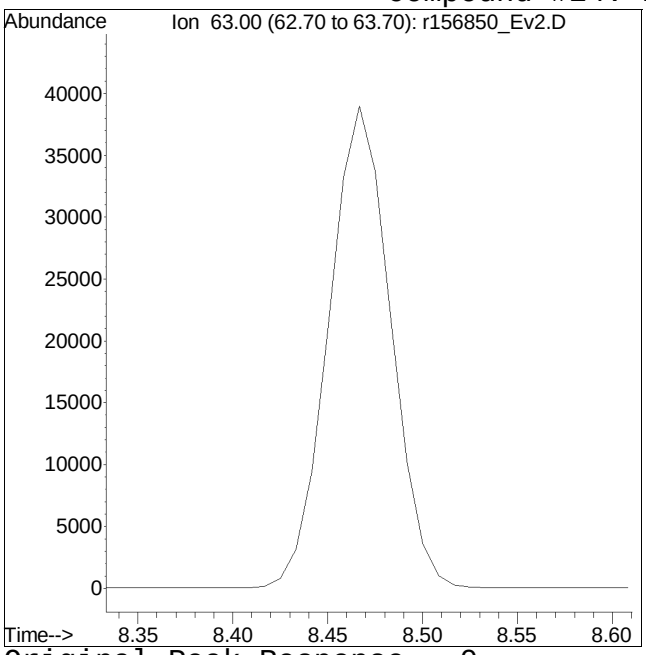

Original Peak Response = 111 Manual Peak Response = 71484 M3

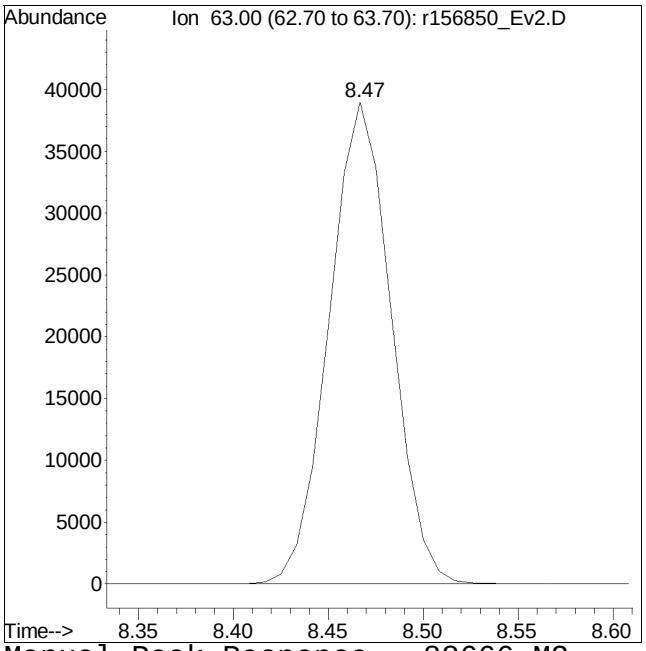
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #24: 1,1-dichloroethane



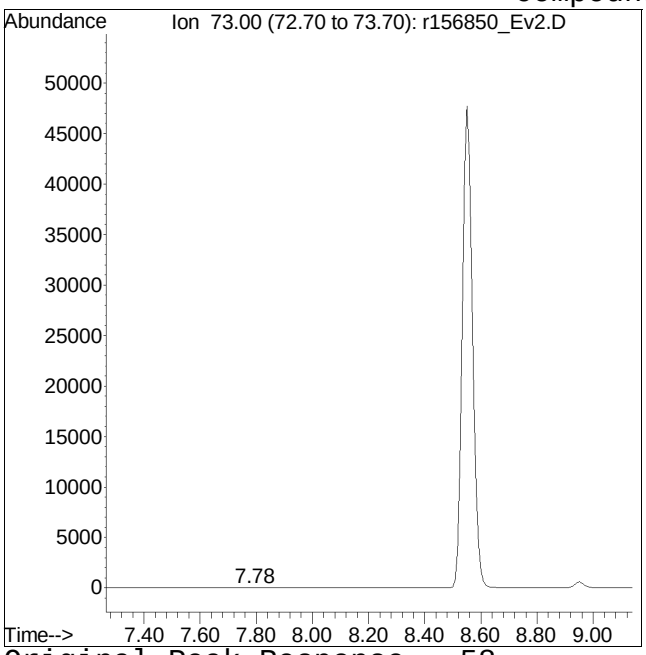



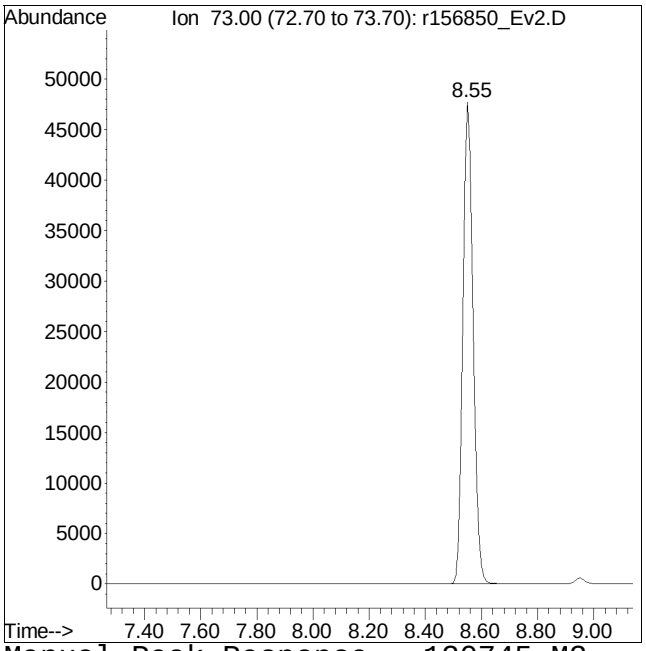

Original Peak Response = 0 Manual Peak Response = 88666 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #25: MTBE



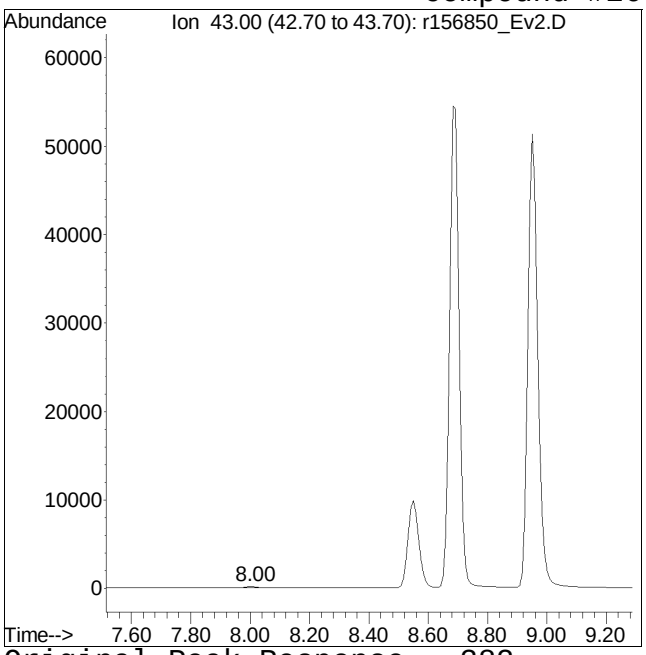

Original Peak Response = 58 Manual Peak Response = 120745 M3

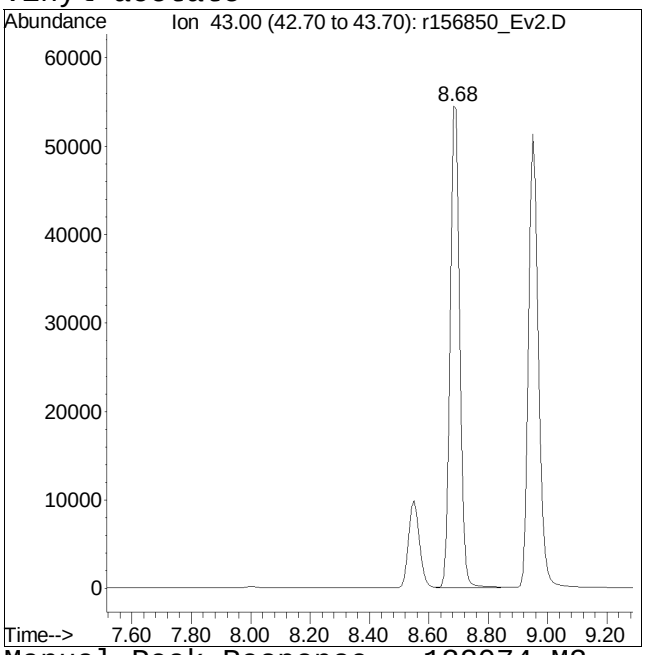
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #26: vinyl acetate



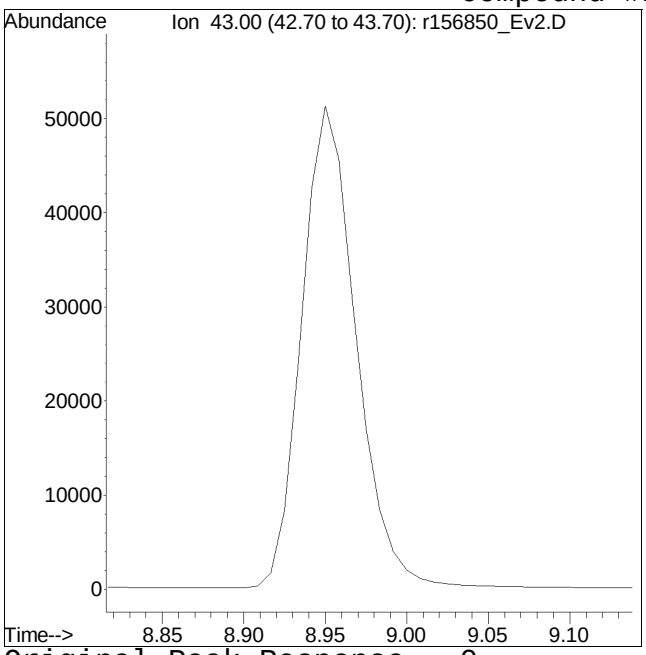

Original Peak Response = 382 Manual Peak Response = 122074 M3

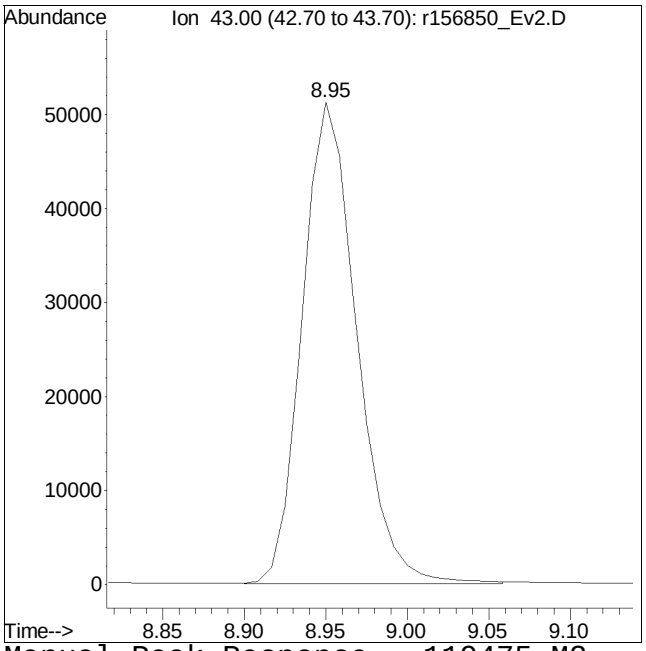
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #27: 2-butanone



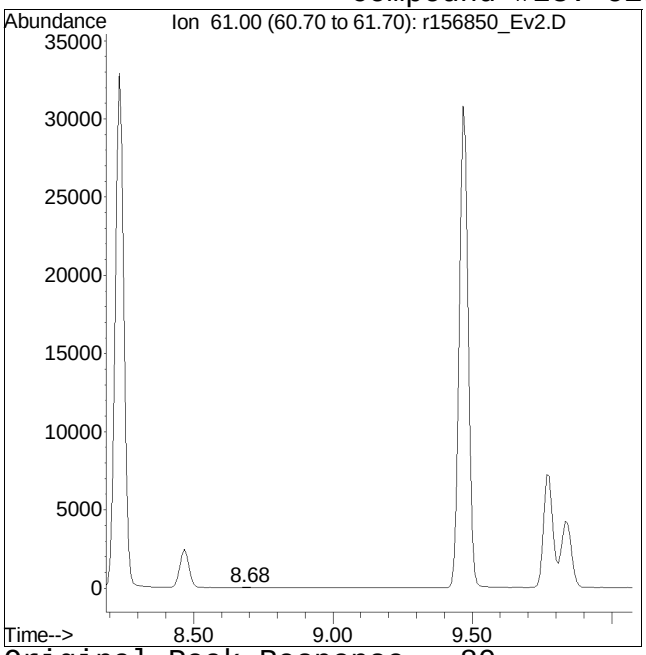



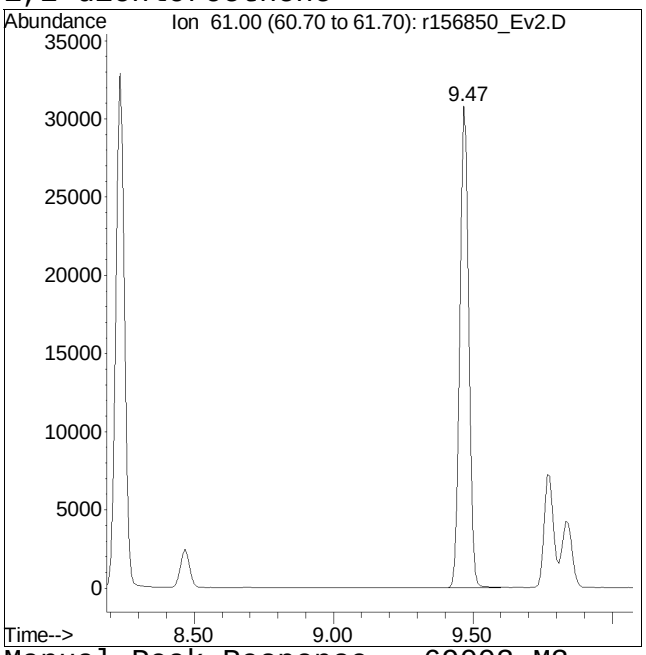

Original Peak Response = 0 Manual Peak Response = 119475 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #28: cis-1,2-dichloroethene



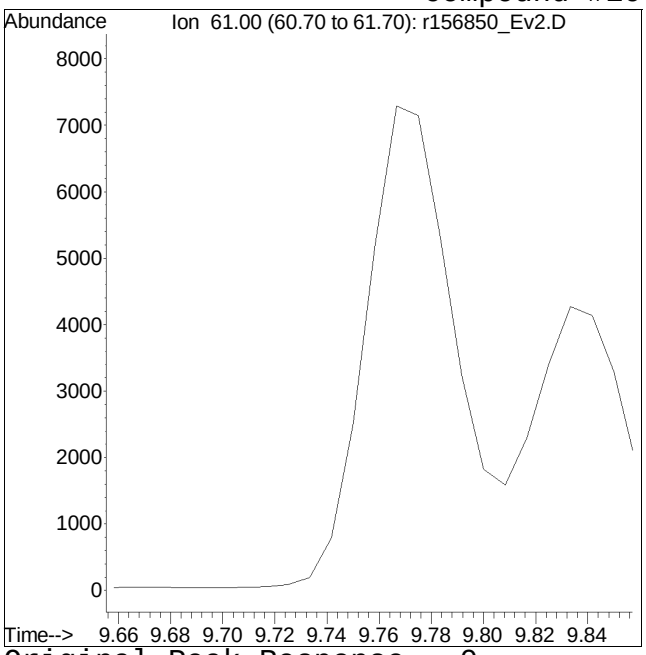

Original Peak Response = 80 Manual Peak Response = 69003 M3

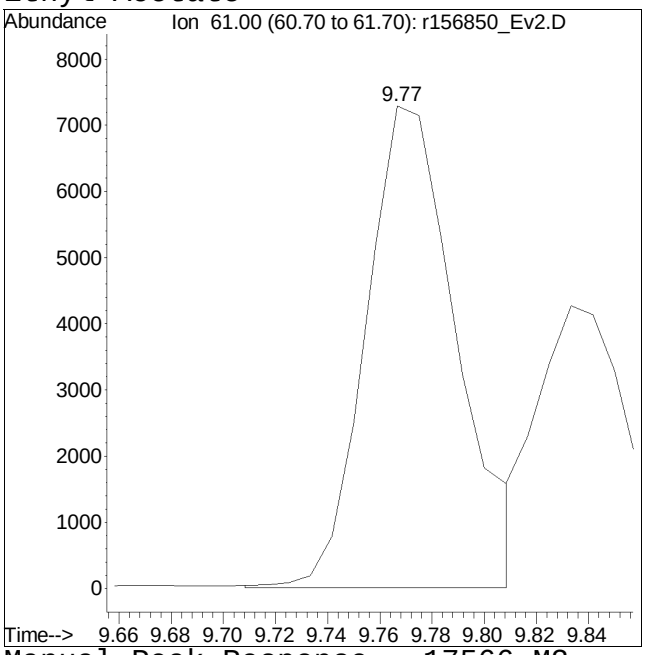
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #29: Ethyl Acetate



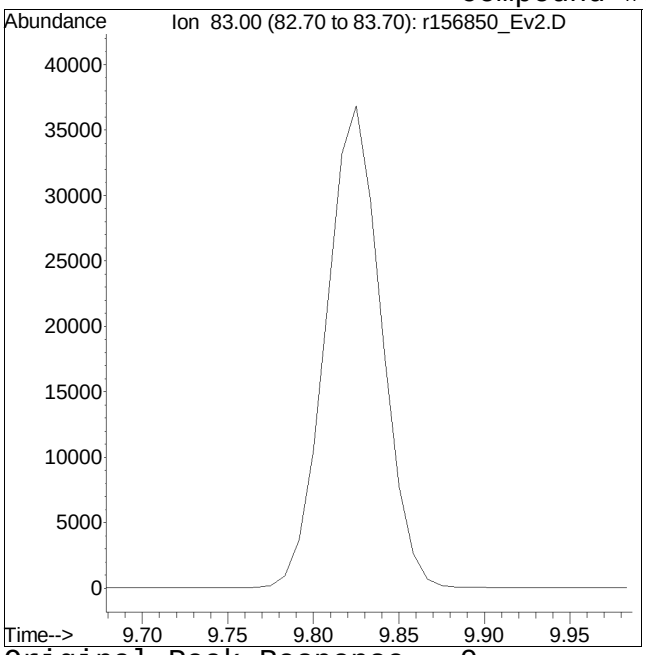



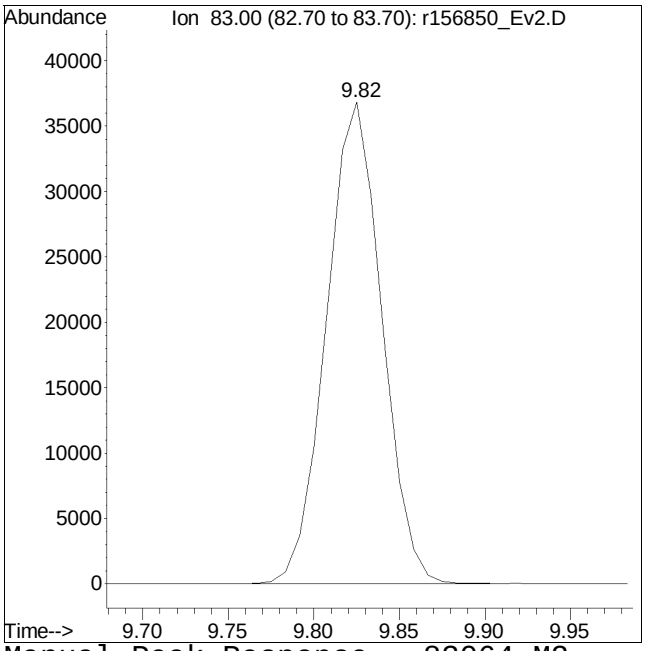

Original Peak Response = 0 Manual Peak Response = 17566 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #30: chloroform



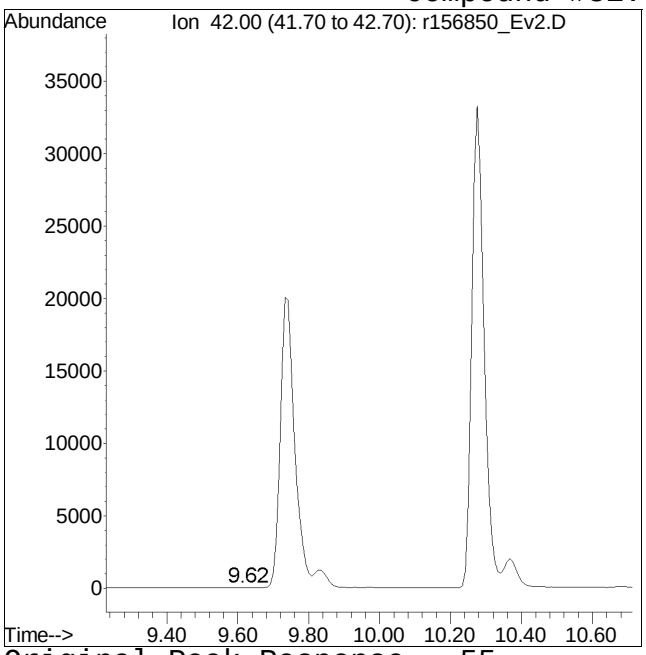



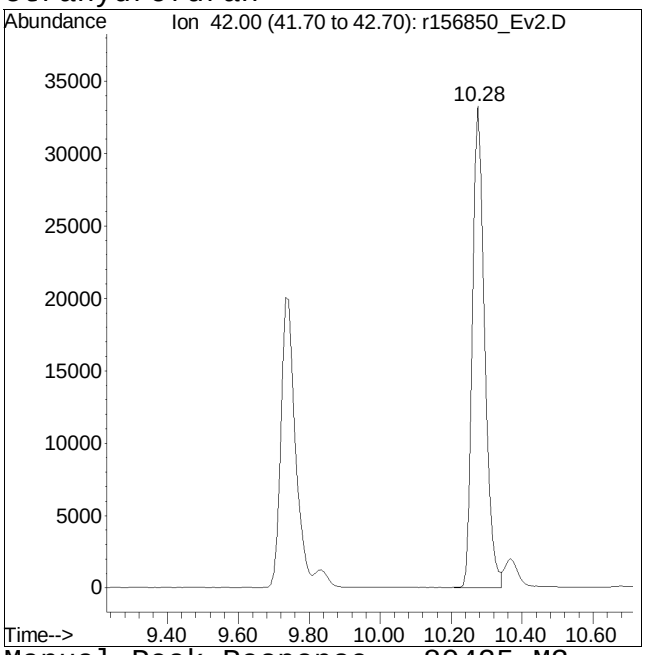

Original Peak Response = 0 Manual Peak Response = 83064 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #31: Tetrahydrofuran



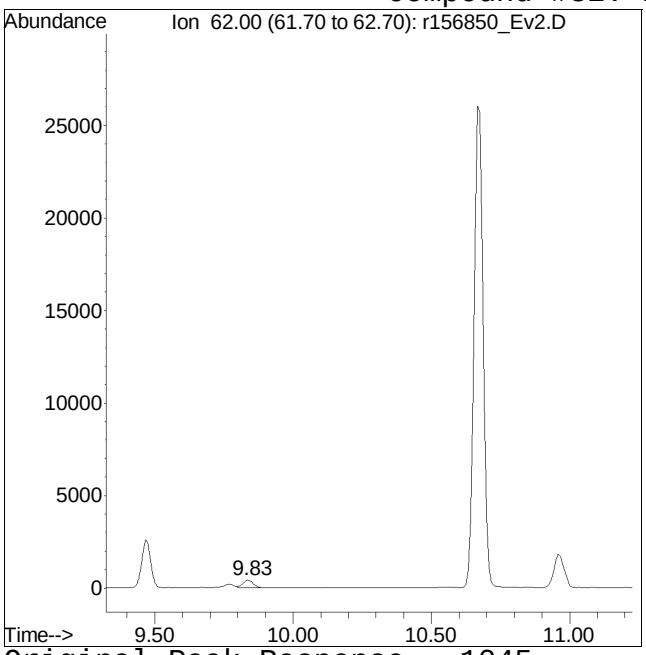

Original Peak Response = 55 Manual Peak Response = 80425 M3

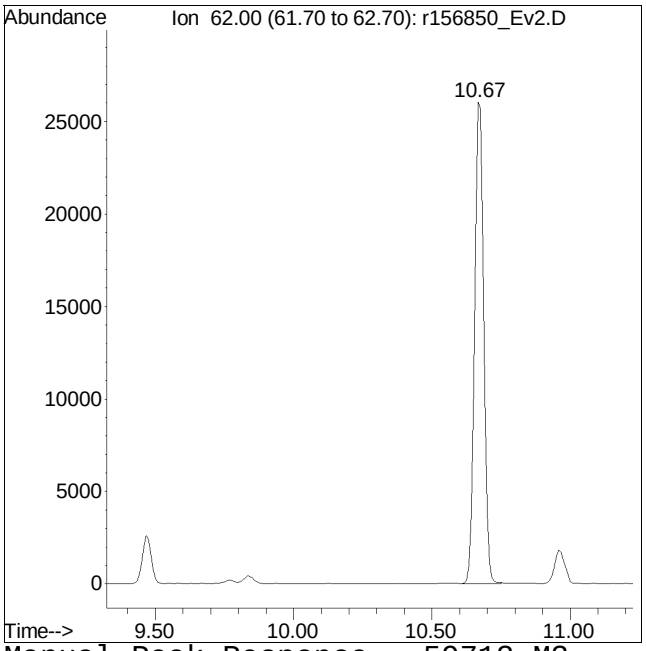
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #32: 1,2-dichloroethane



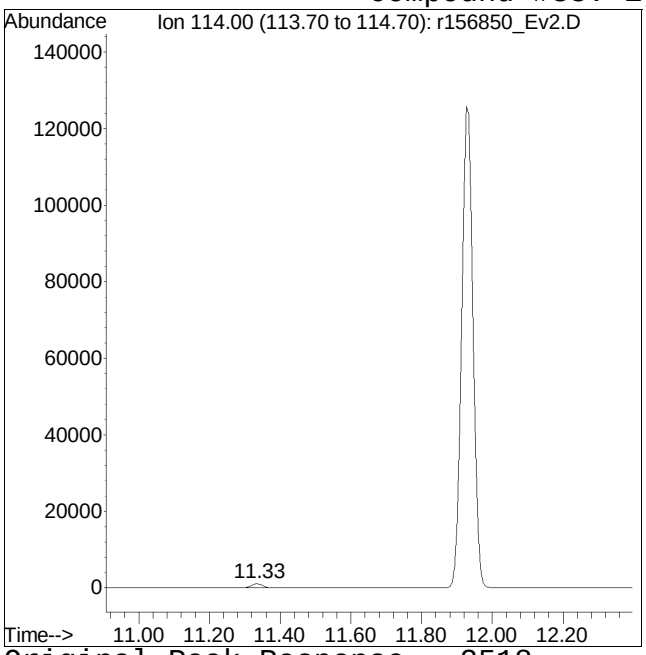

Original Peak Response = 1045 Manual Peak Response = 59713 M3

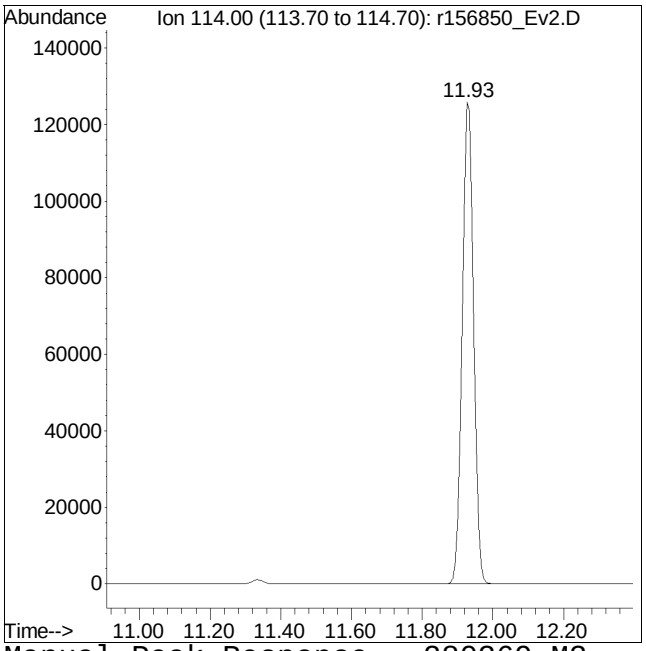
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #33: 1,4-difluorobenzene



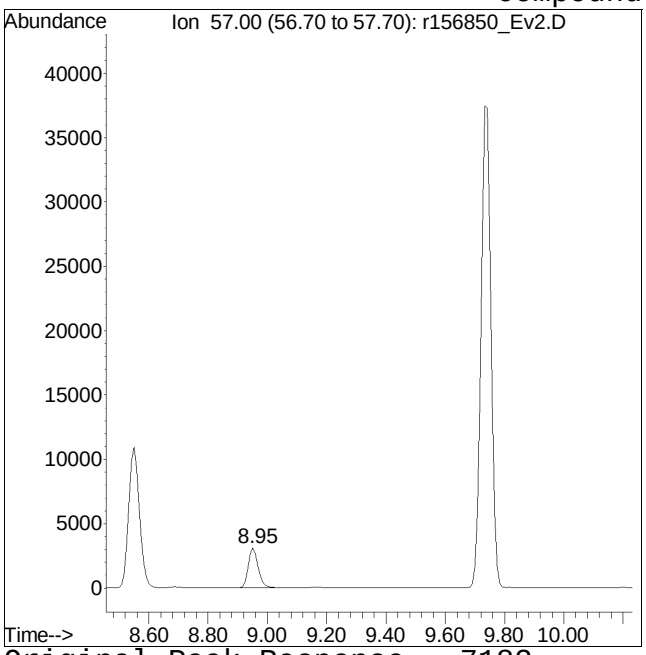



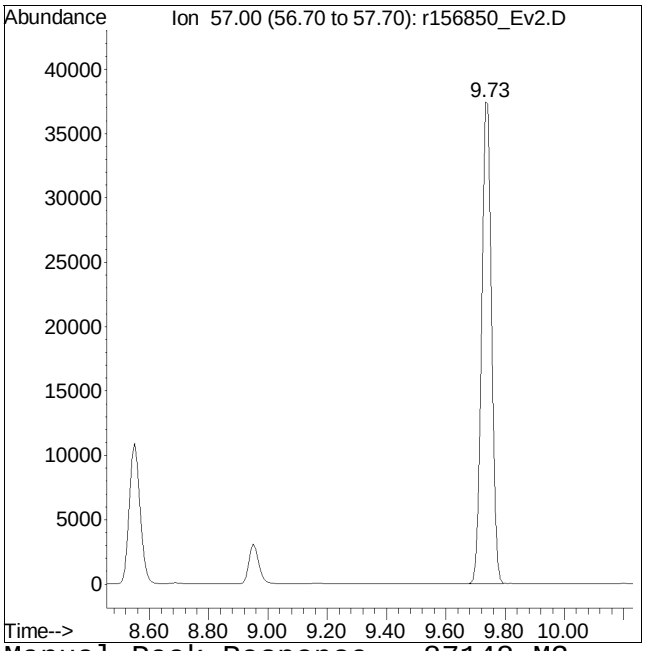

Original Peak Response = 2518 Manual Peak Response = 280369 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #34: hexane



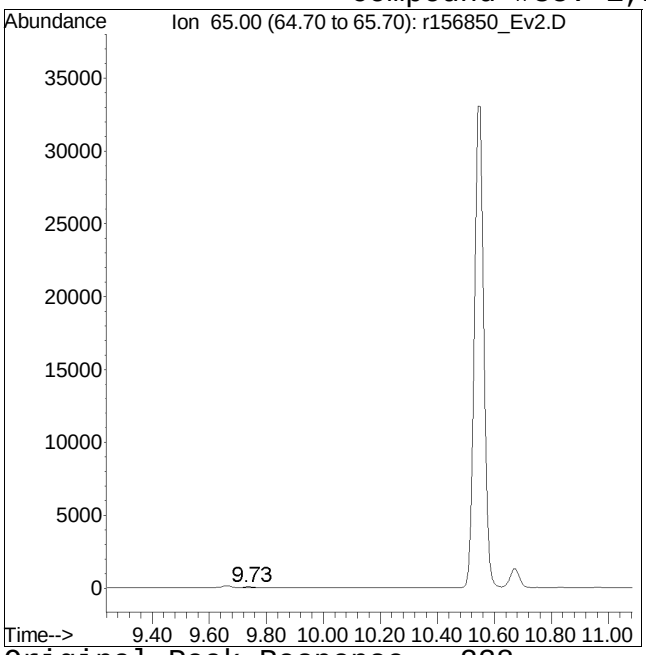

Original Peak Response = 7182 Manual Peak Response = 87148 M3

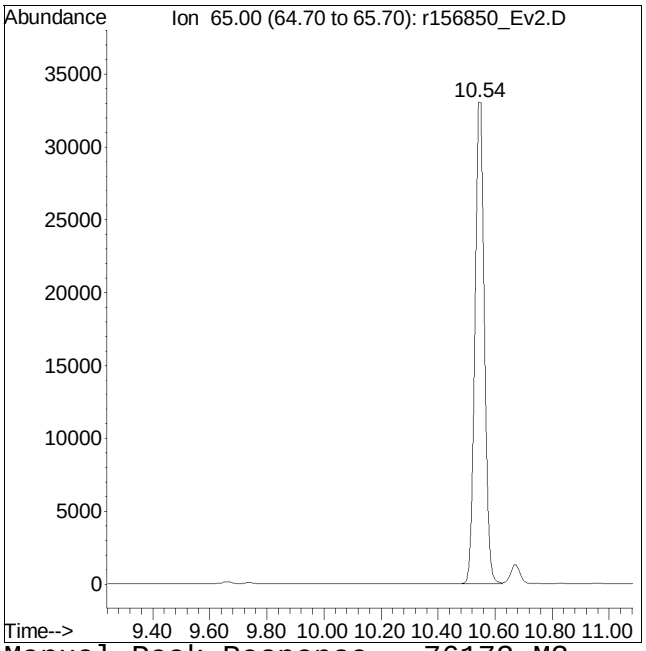
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #35: 1,2-dichloroethane-D4



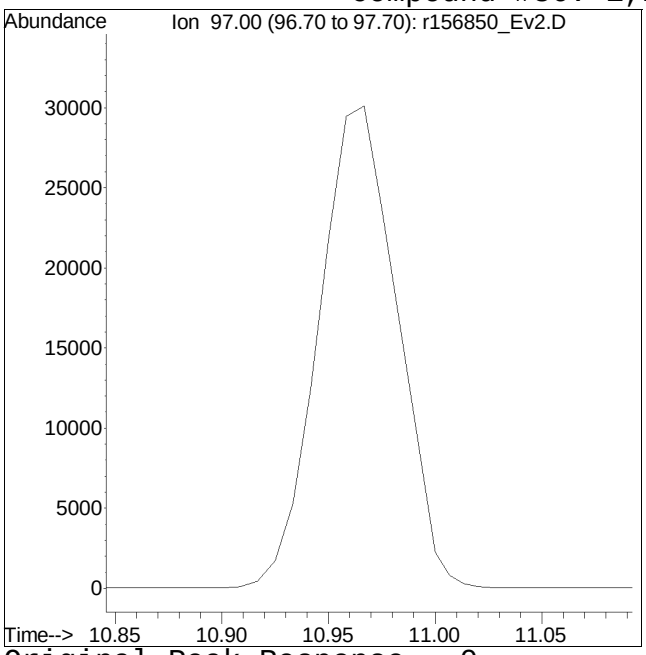

Original Peak Response = 238 Manual Peak Response = 76173 M3

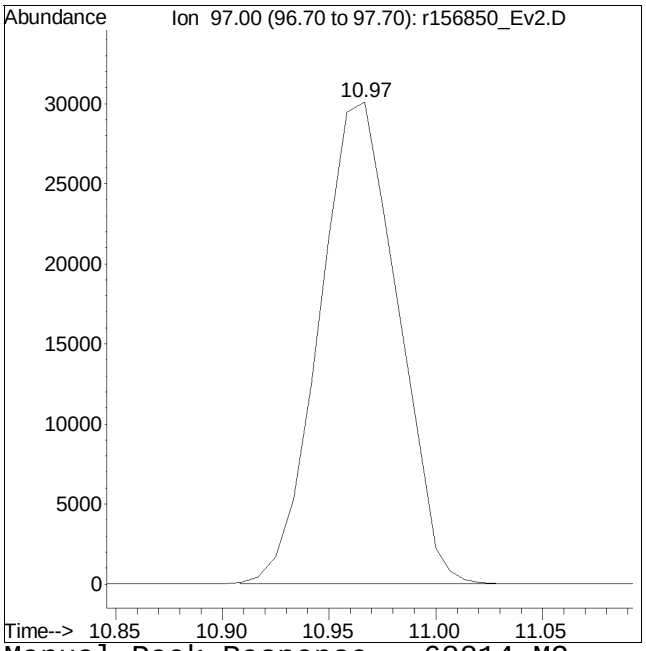
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #36: 1,1,1-trichloroethane



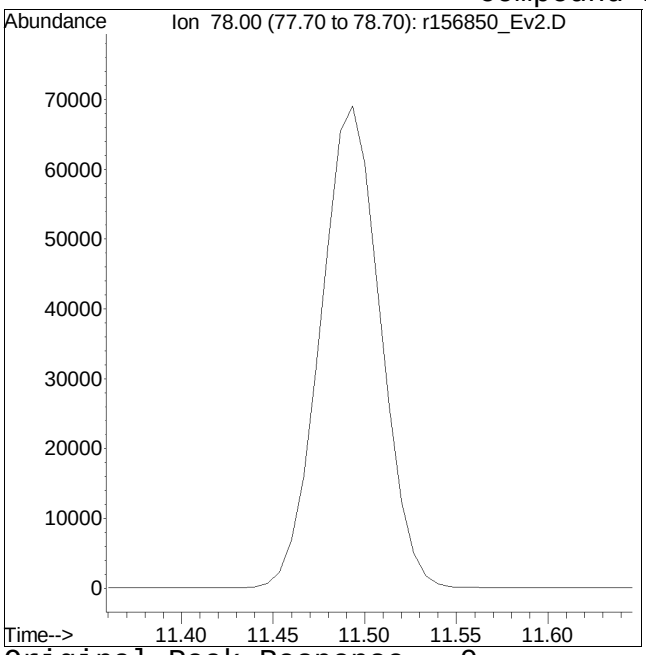



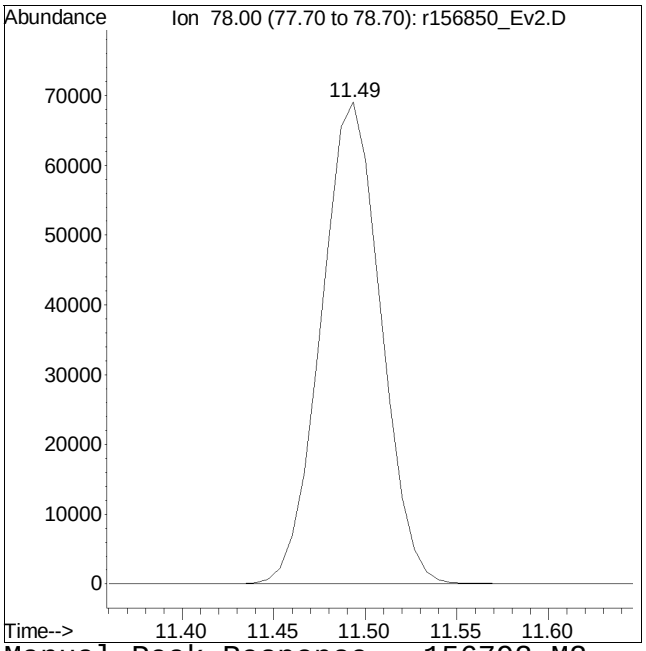

Original Peak Response = 0 Manual Peak Response = 68814 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #37: benzene



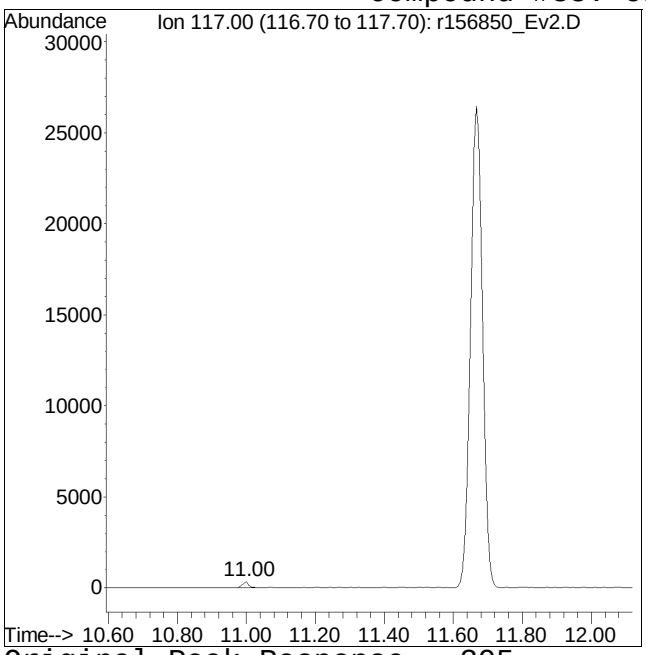



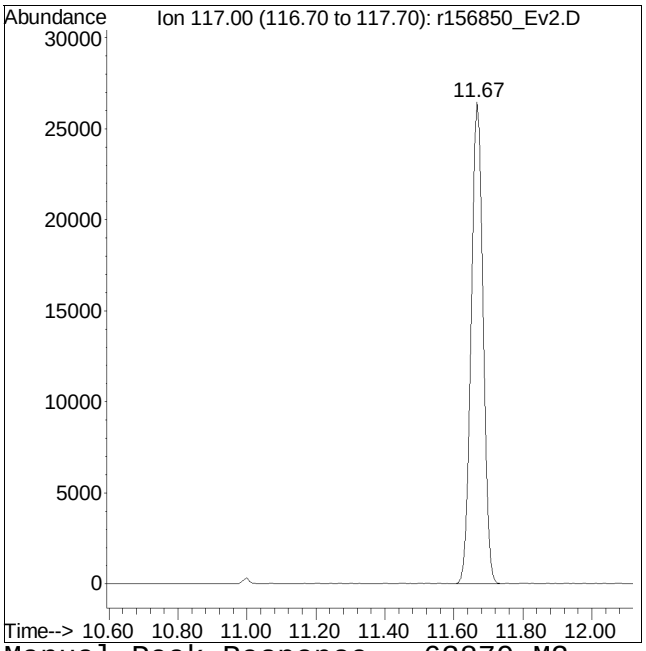

Original Peak Response = 0 Manual Peak Response = 156792 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #38: carbon tetrachloride



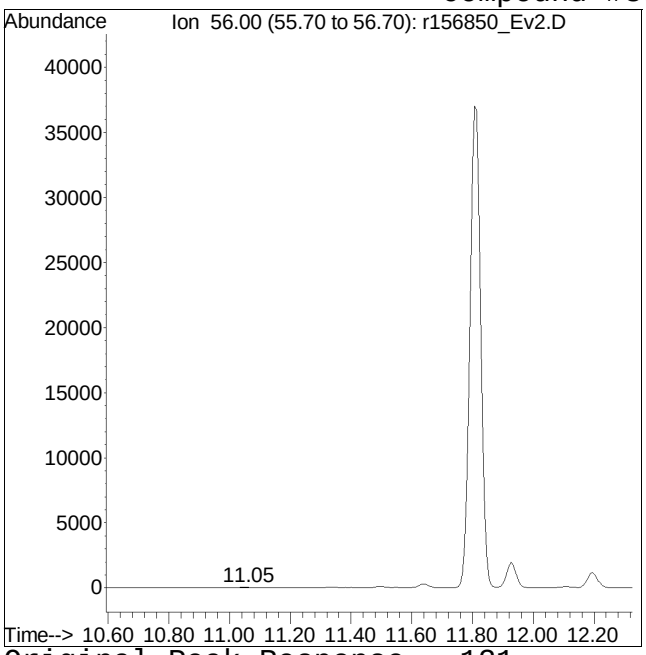



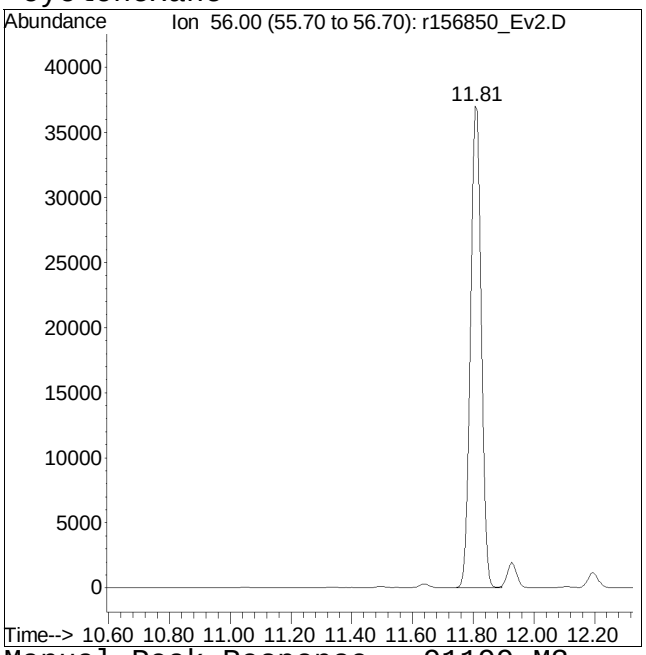

Original Peak Response = 395 Manual Peak Response = 63870 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #39: cyclohexane



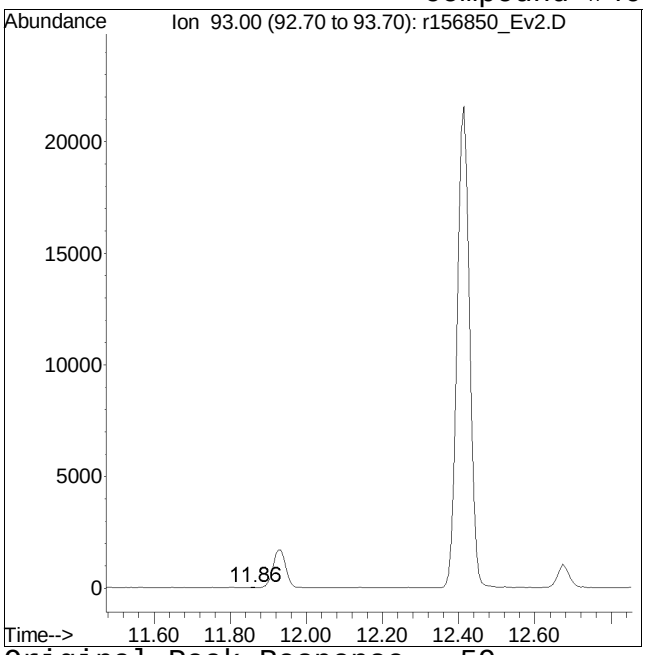

Original Peak Response = 121 Manual Peak Response = 91199 M3

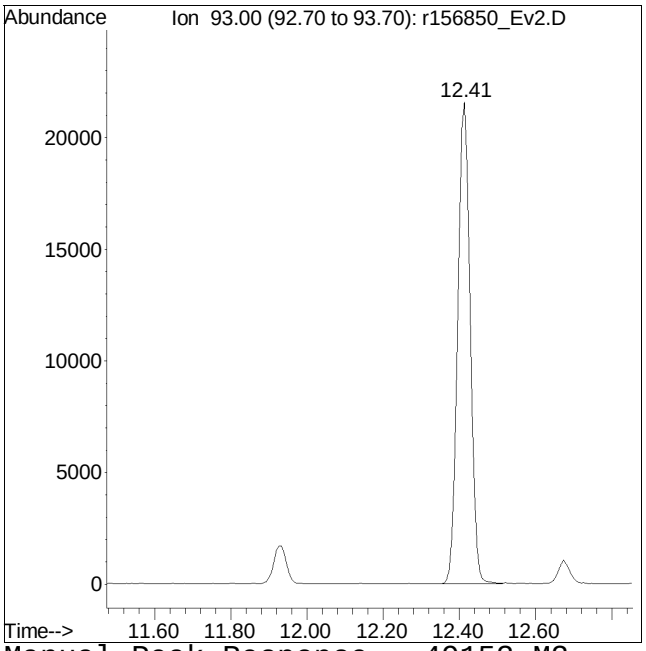
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #40: Dibromomethane



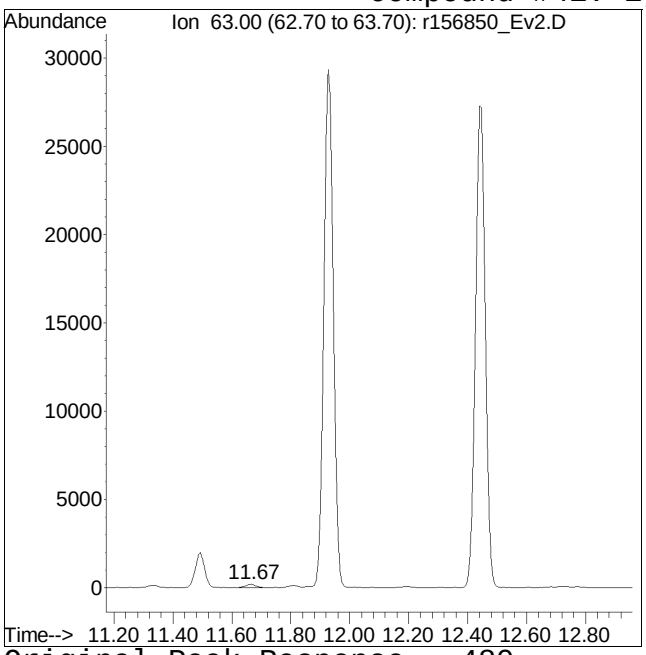



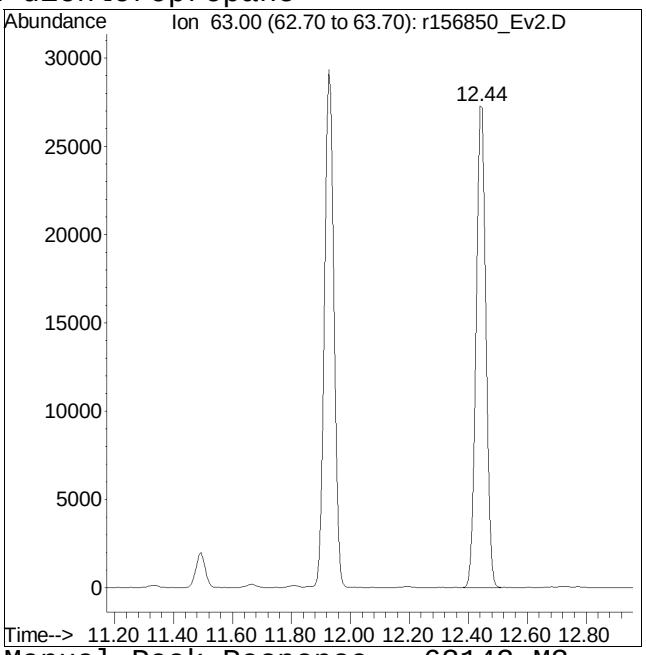

Original Peak Response = 59 Manual Peak Response = 49153 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #41: 1,2-dichloropropane



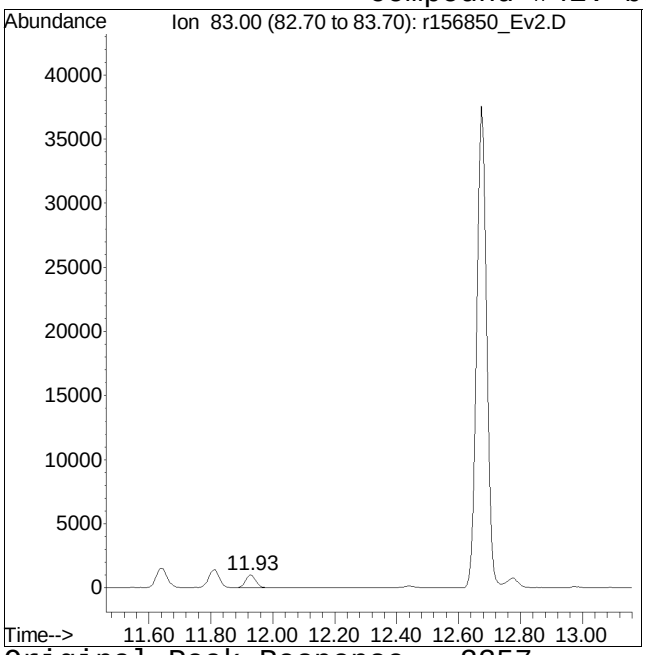

Original Peak Response = 480 Manual Peak Response = 63142 M3

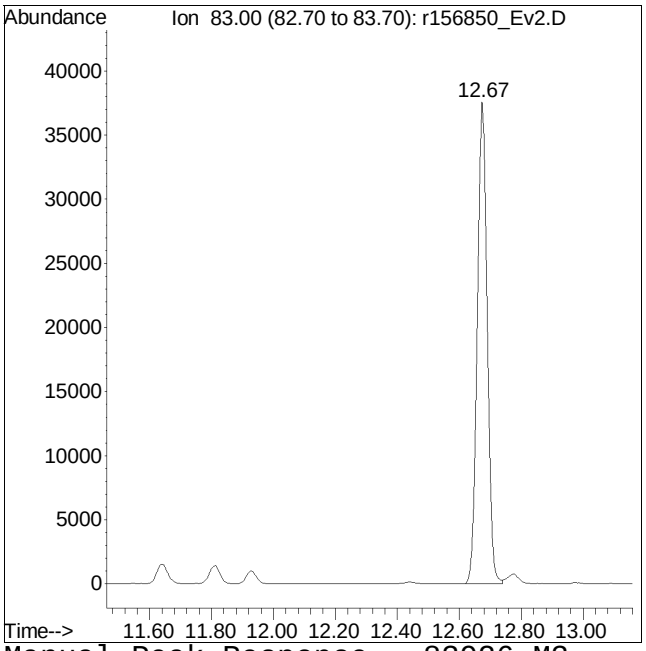
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #42: bromodichloromethane



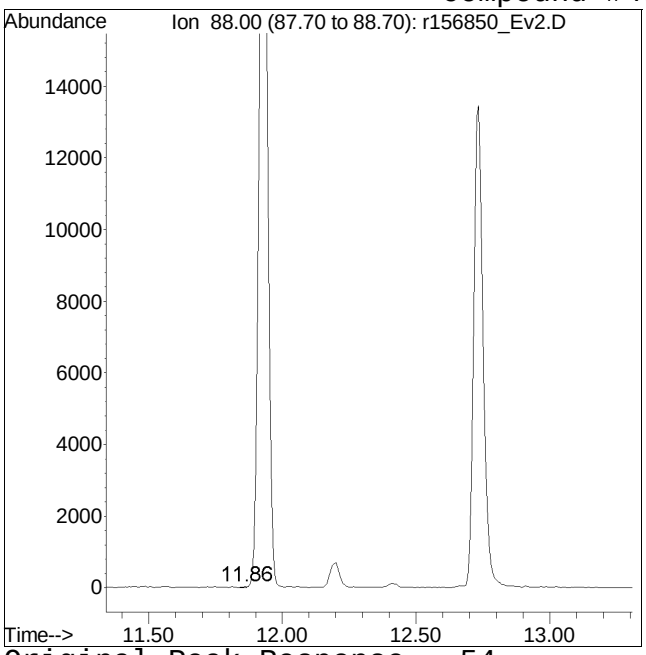

Original Peak Response = 2357 Manual Peak Response = 83926 M3

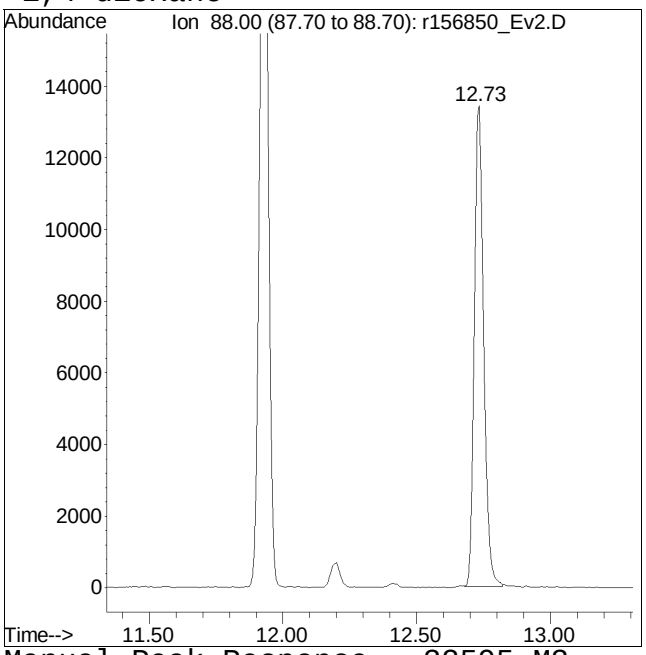
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #43: 1,4-dioxane



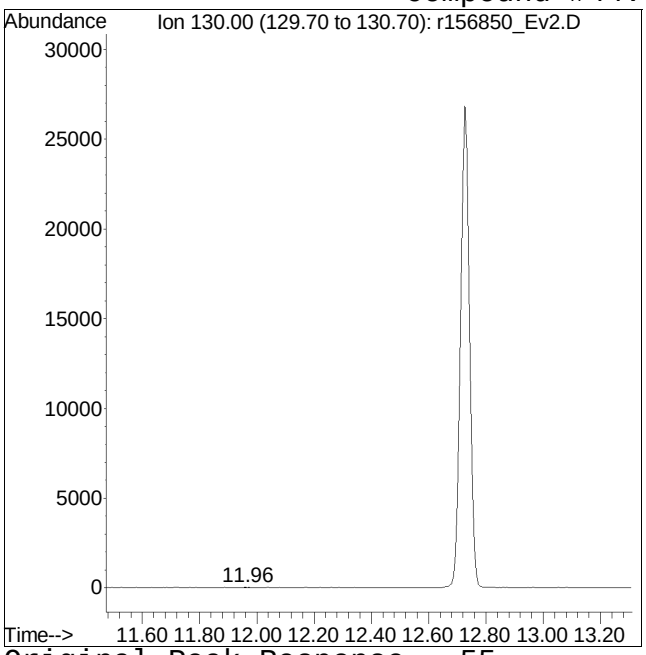

Original Peak Response = 54 Manual Peak Response = 32595 M3

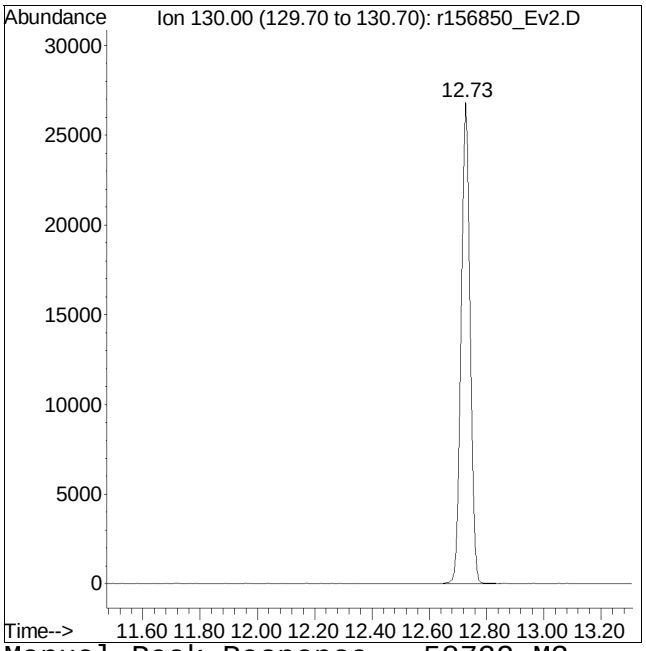
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #44: trichloroethene



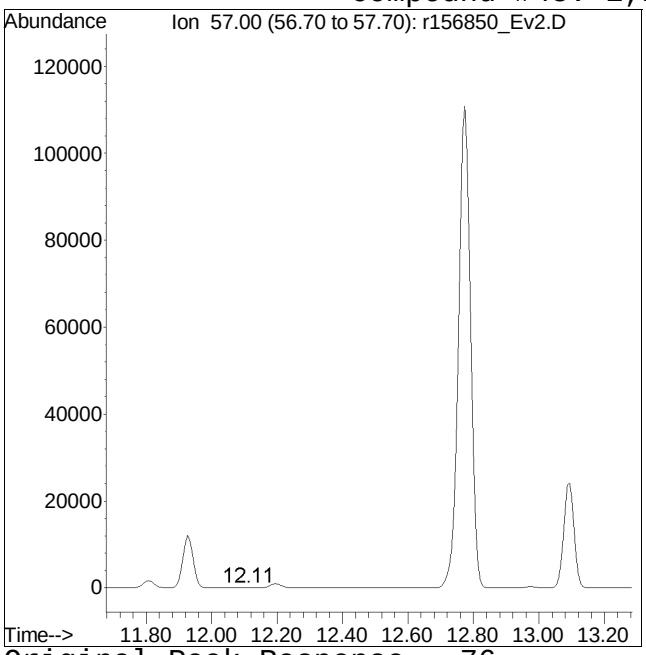

Original Peak Response = 55 Manual Peak Response = 58732 M3

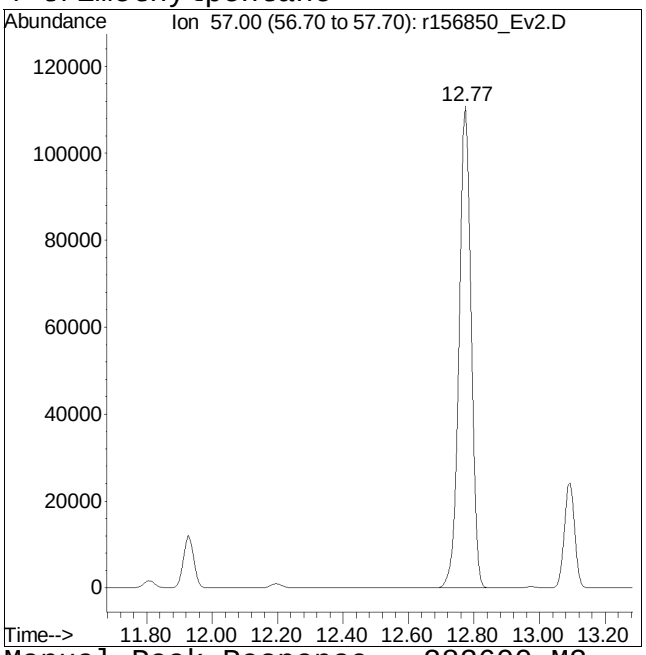
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #45: 2,2,4-trimethylpentane



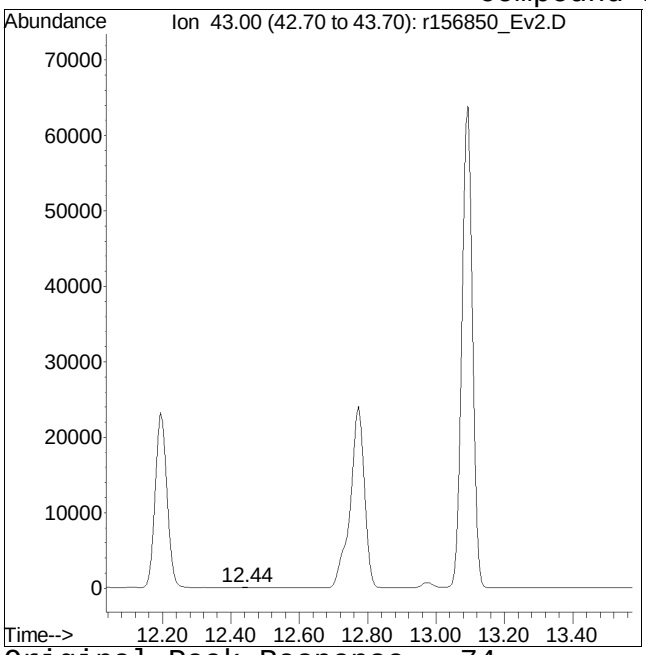



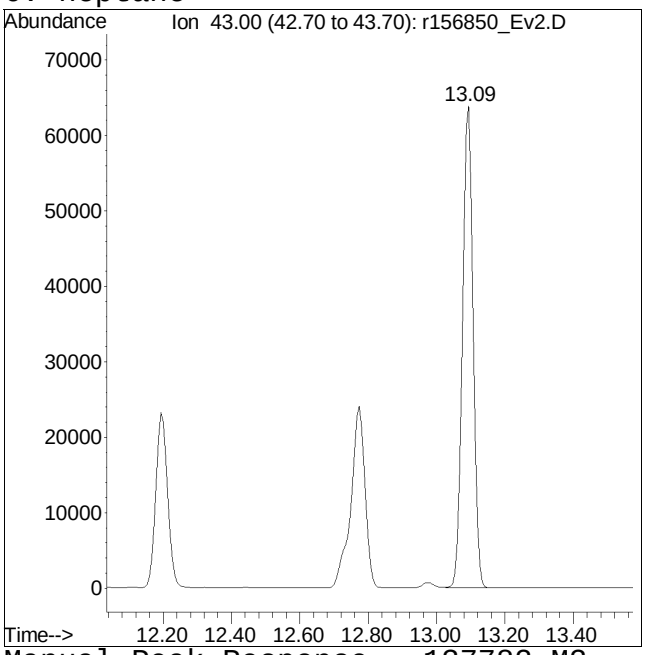

Original Peak Response = 76 Manual Peak Response = 283600 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #46: heptane



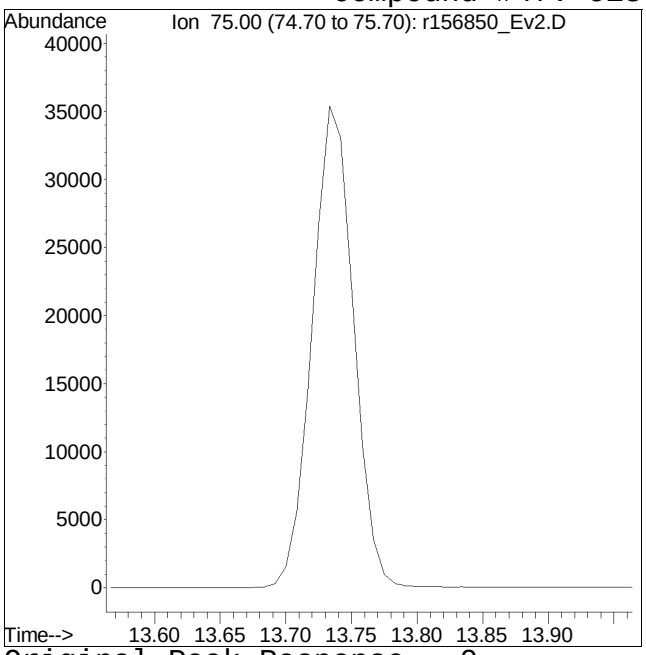

Original Peak Response = 74 Manual Peak Response = 137782 M3

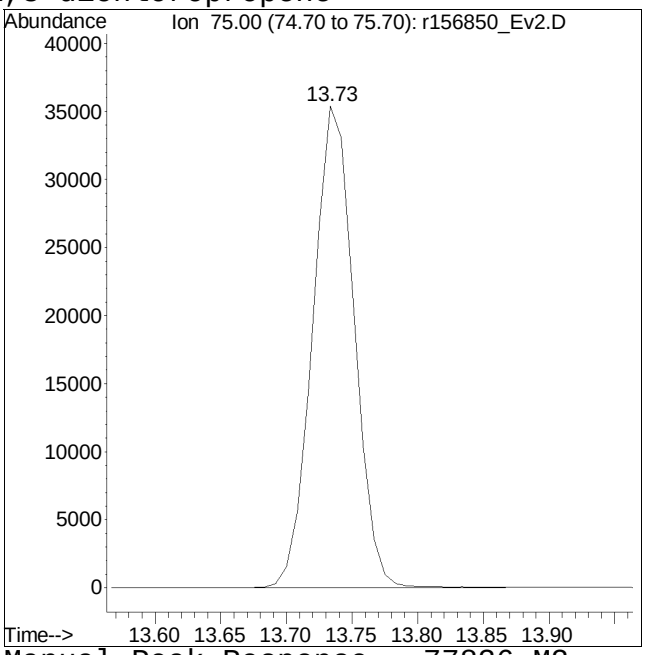
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #47: cis-1,3-dichloropropene



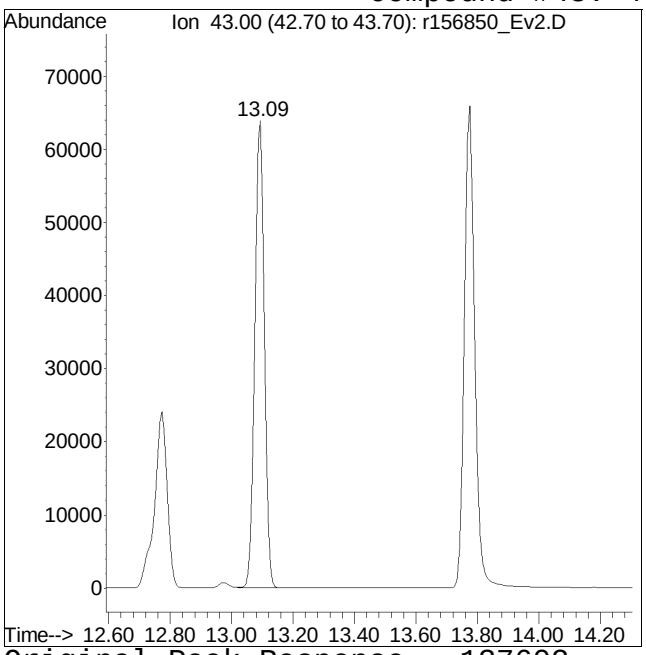



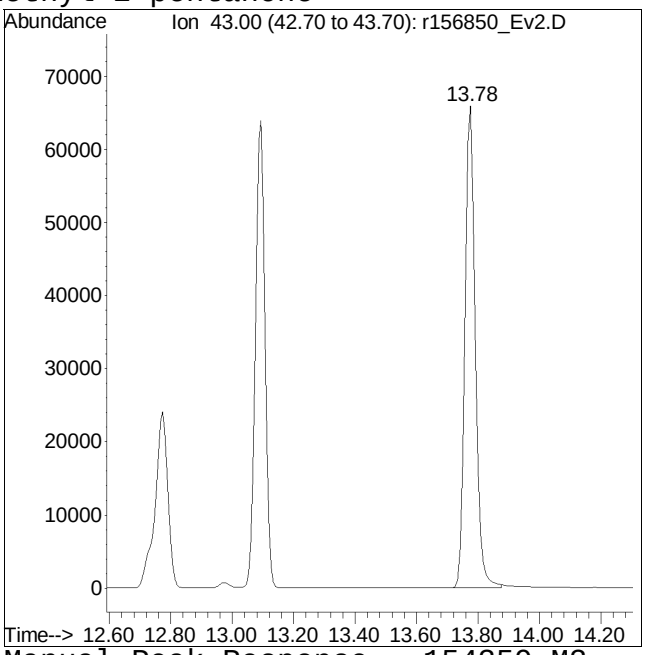

Original Peak Response = 0 Manual Peak Response = 77836 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #48: 4-methyl-2-pentanone



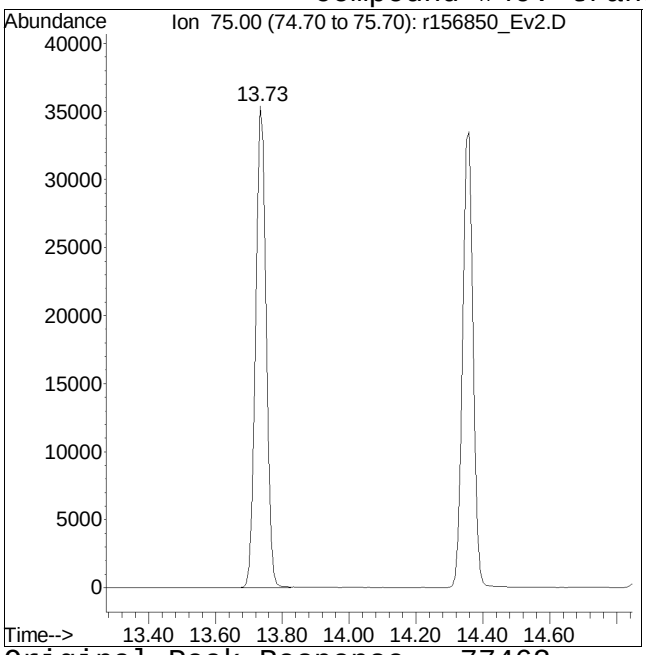



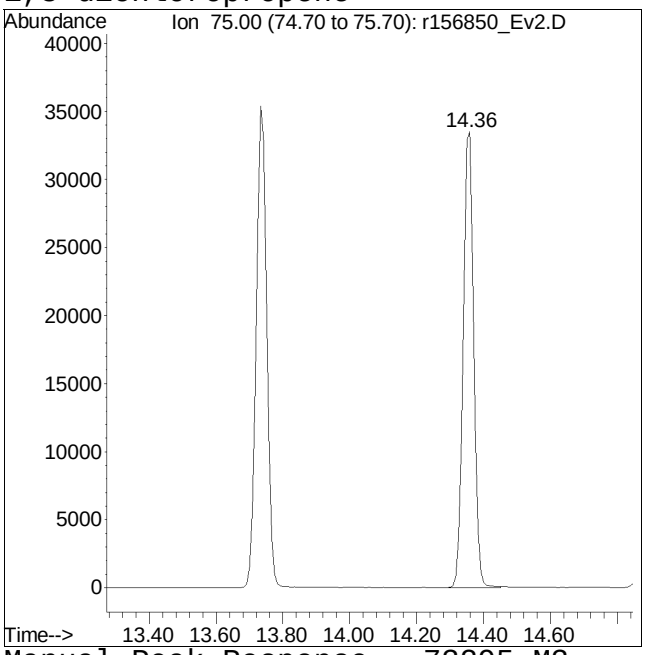

Original Peak Response = 137602 Manual Peak Response = 154359 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #49: trans-1,3-dichloropropene



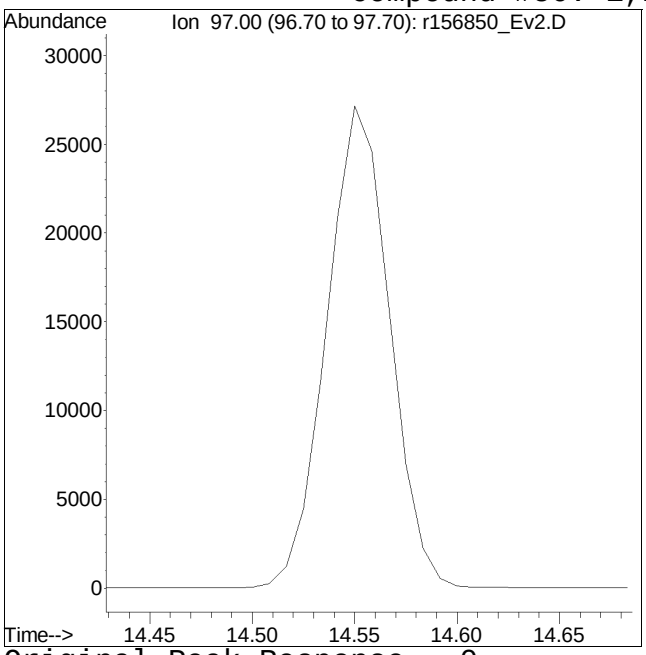

Original Peak Response = 77462 Manual Peak Response = 73295 M3

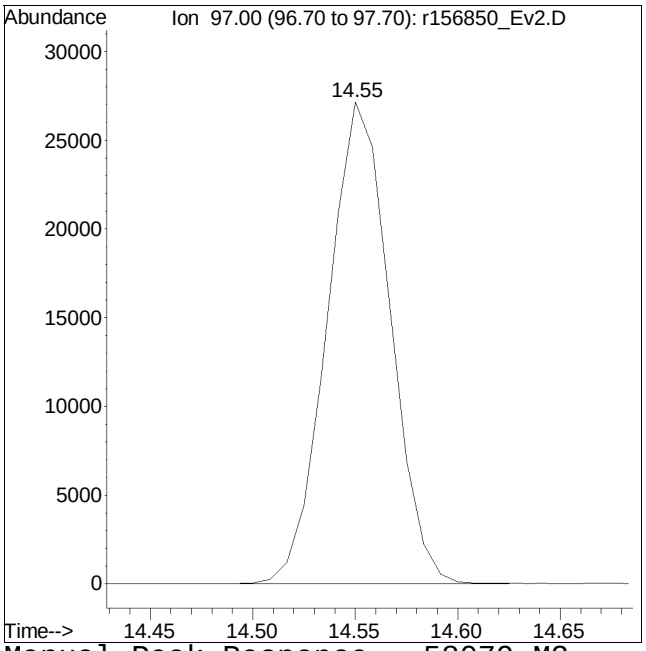
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #50: 1,1,2-trichloroethane



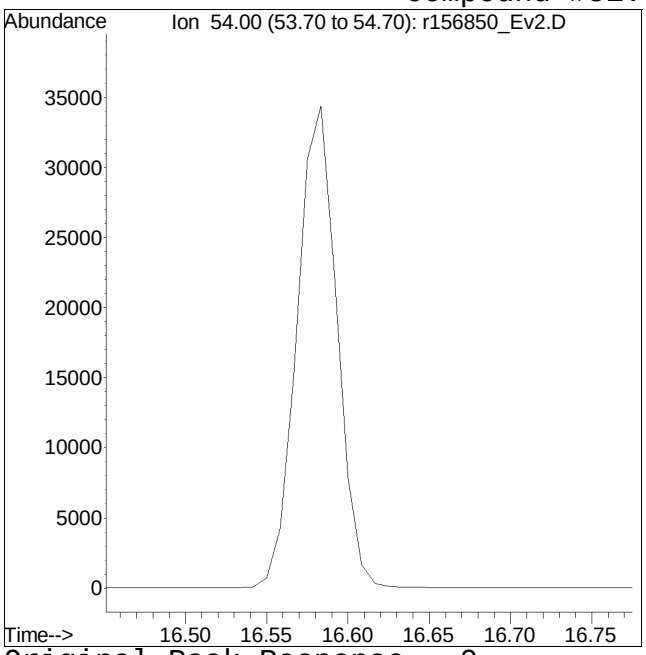



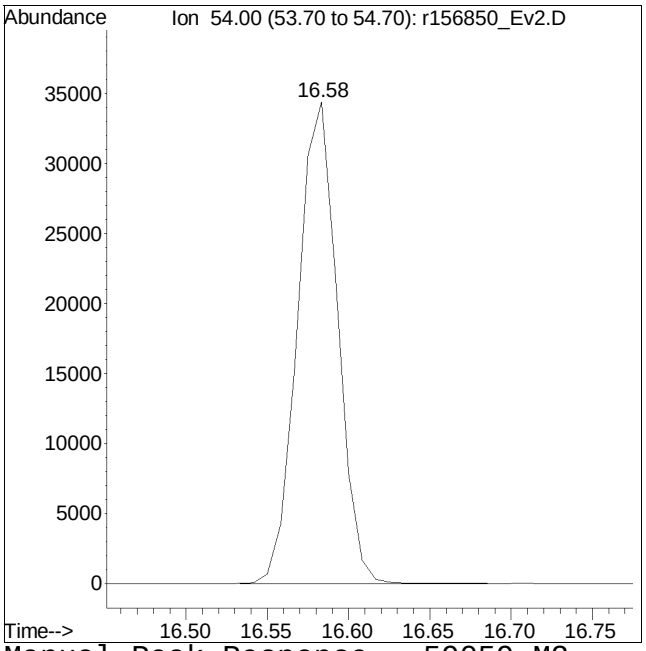

Original Peak Response = 0 Manual Peak Response = 58079 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #51: chlorobenzene-D5



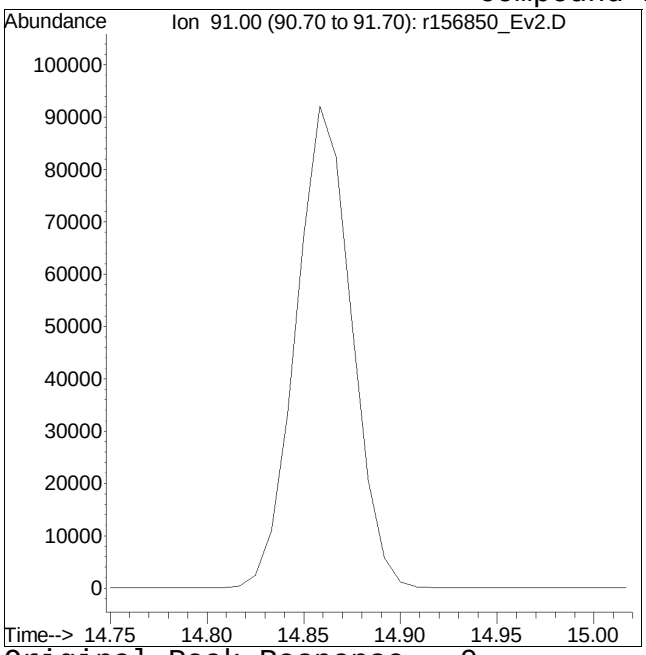



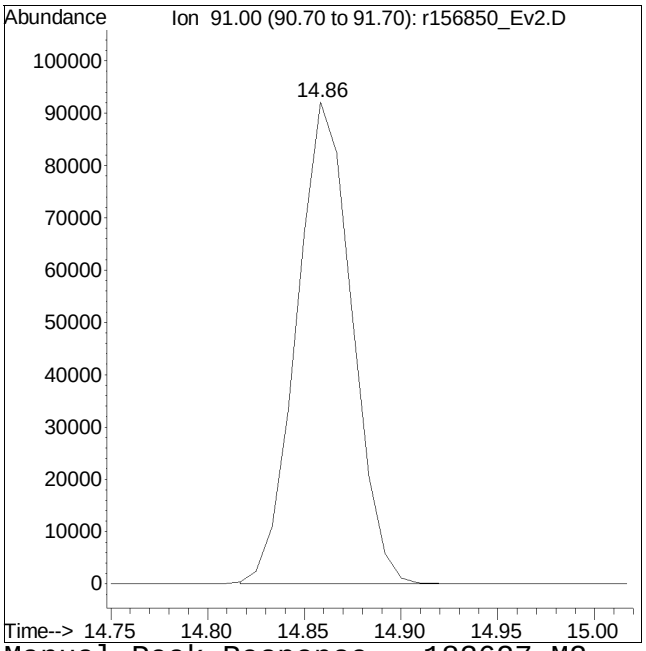

Original Peak Response = 0 Manual Peak Response = 59059 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #52: toluene



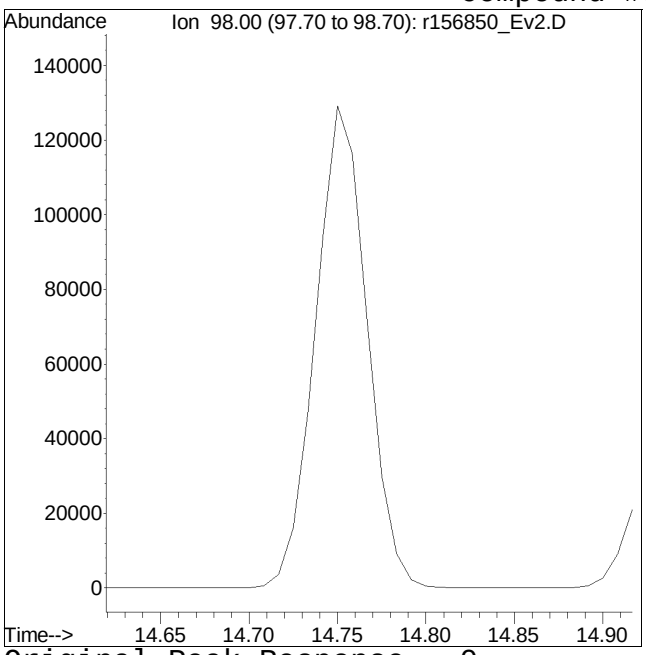



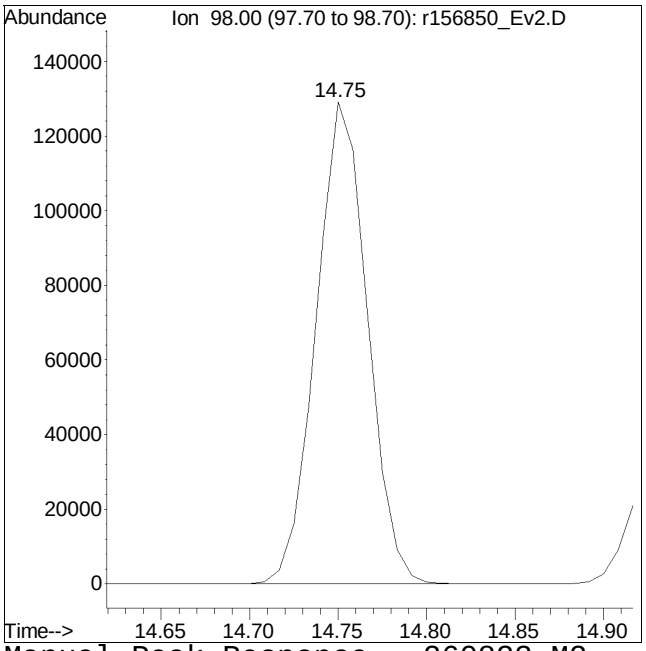

Original Peak Response = 0 Manual Peak Response = 183627 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #53: toluene-D8



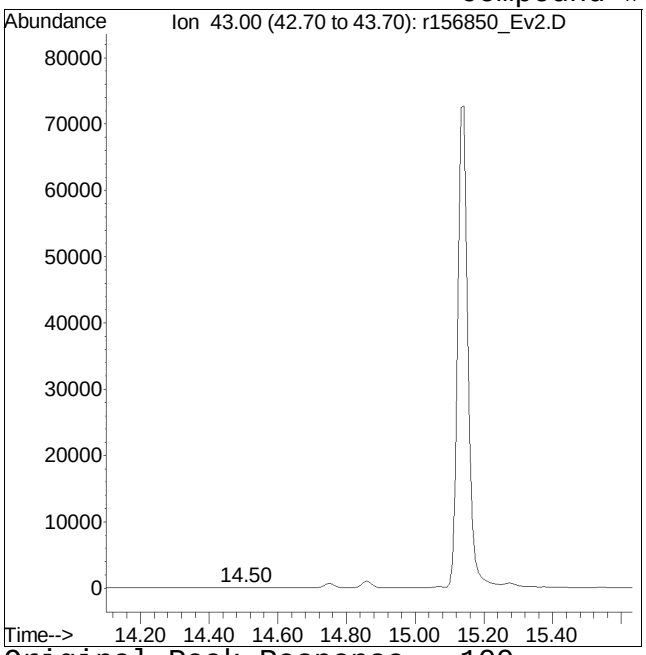



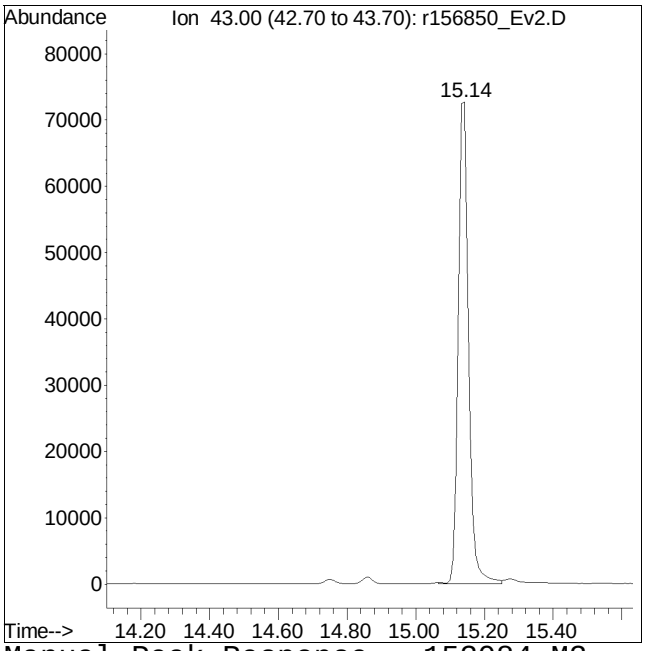

Original Peak Response = 0 Manual Peak Response = 260833 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #54: 2-hexanone



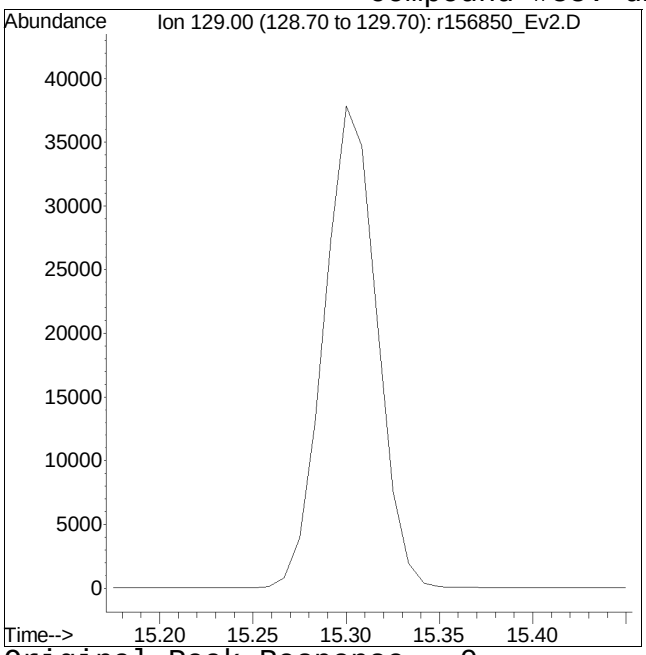

Original Peak Response = 100 Manual Peak Response = 153084 M3

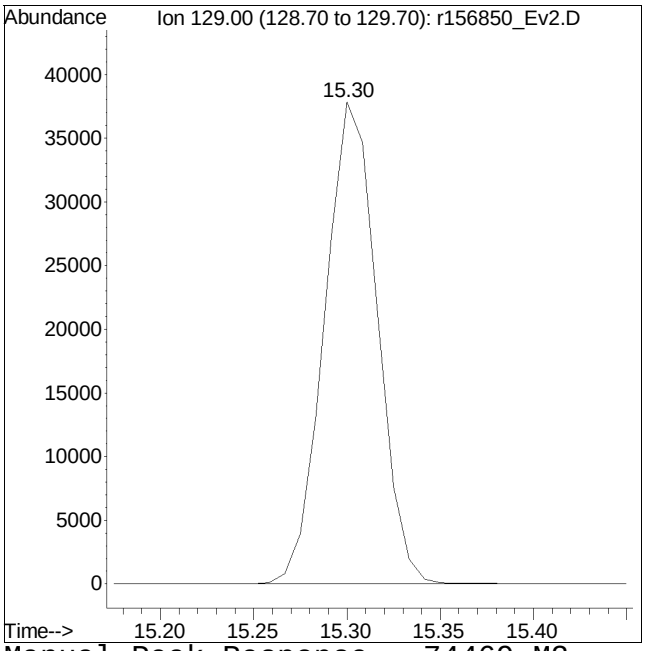
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #55: dibromochloromethane



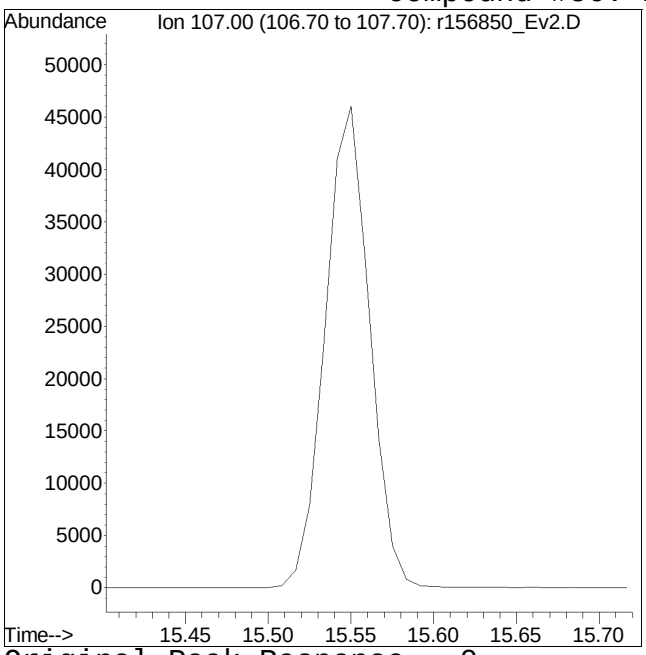



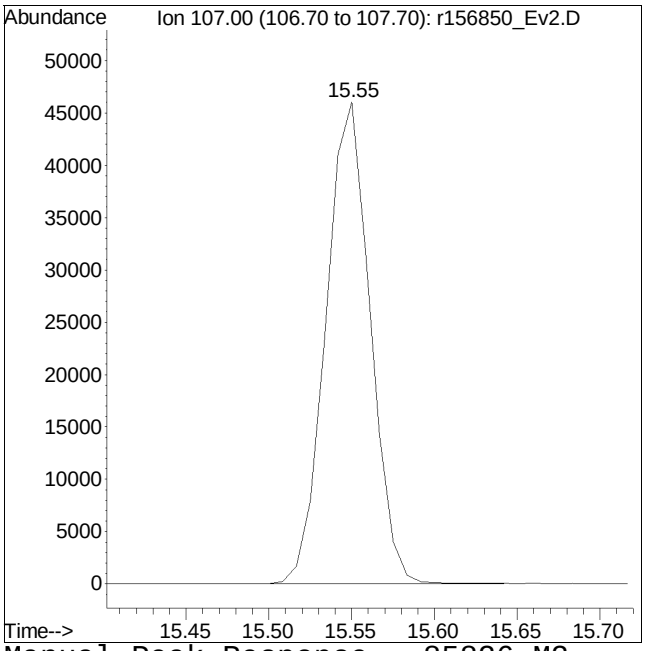

Original Peak Response = 0 Manual Peak Response = 74469 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #56: 1,2-dibromoethane



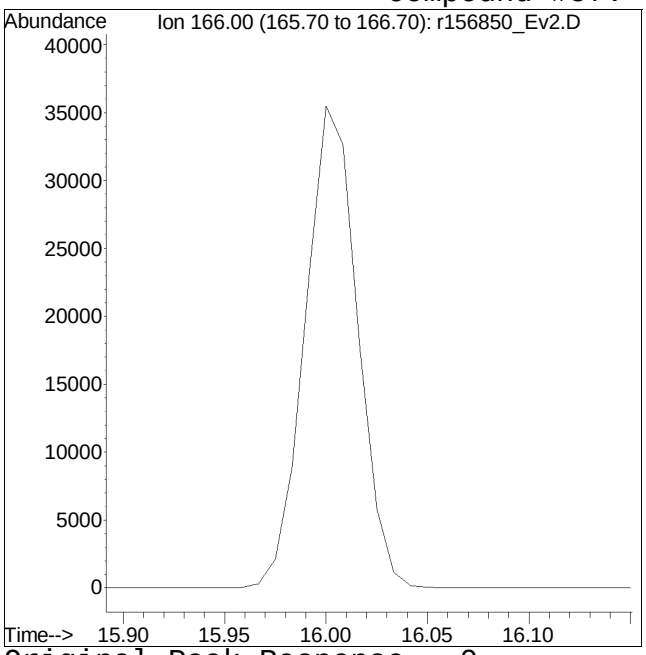



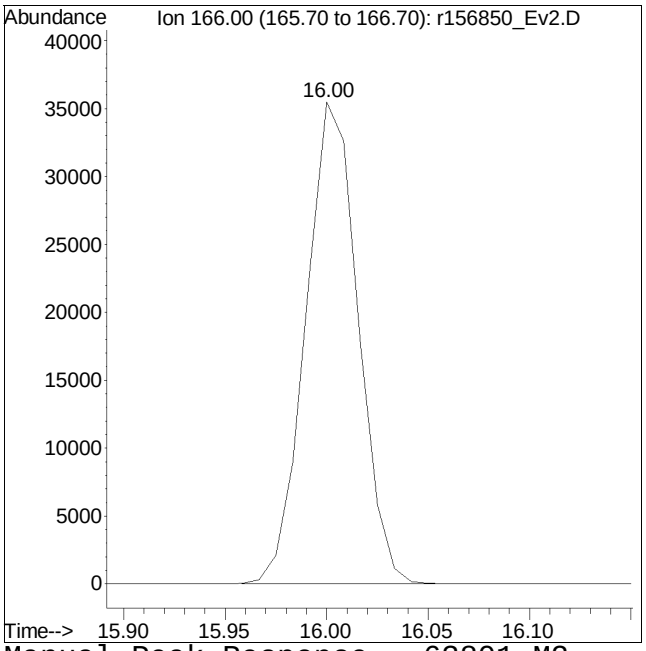

Original Peak Response = 0 Manual Peak Response = 85826 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #57: tetrachloroethene



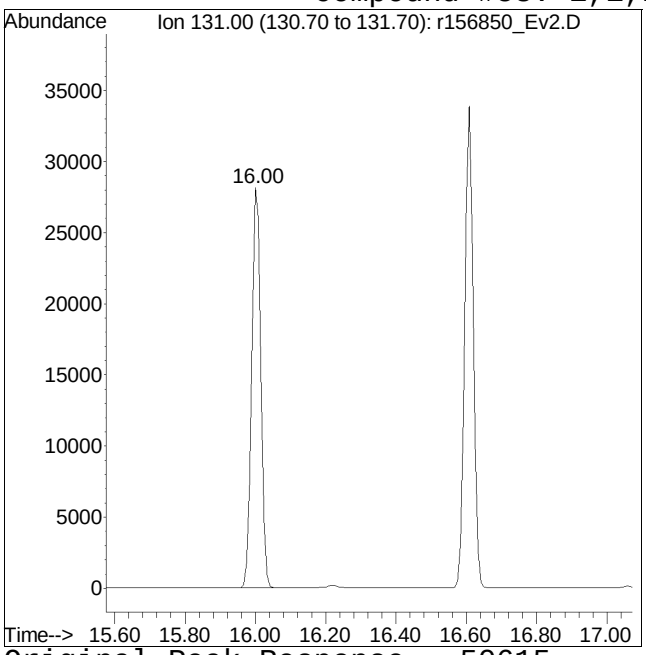



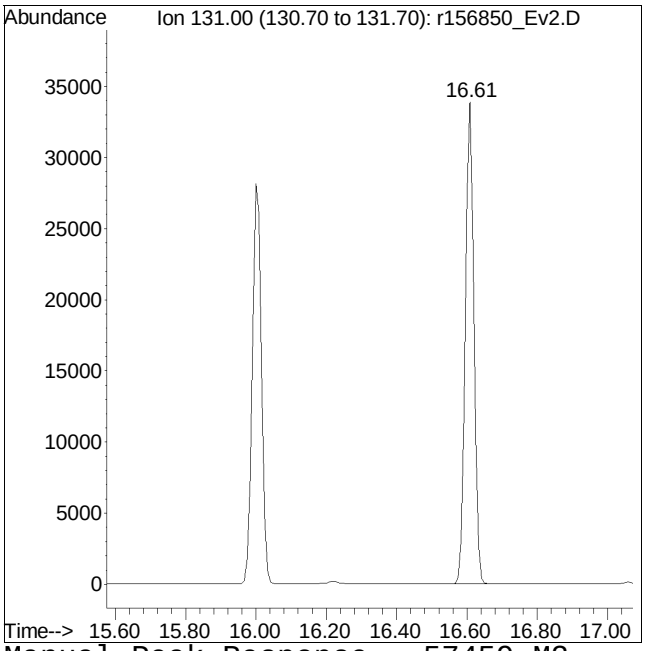

Original Peak Response = 0 Manual Peak Response = 63801 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #58: 1,1,1,2-tetrachloroethane



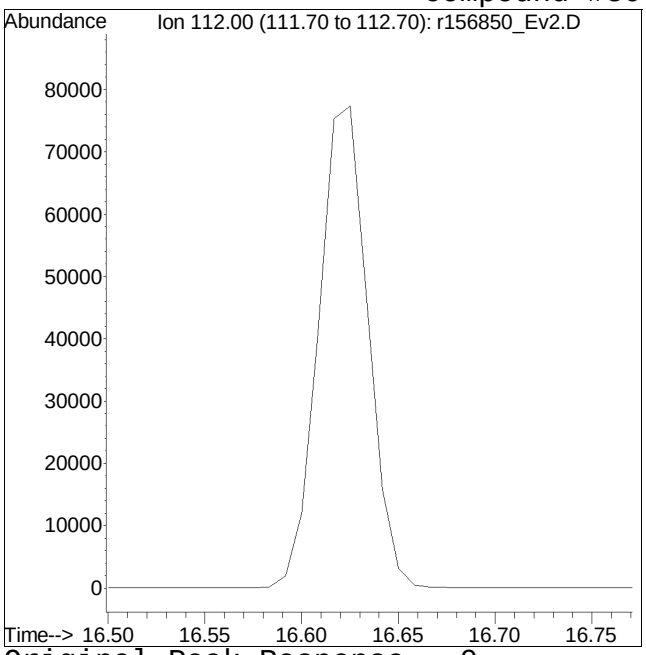



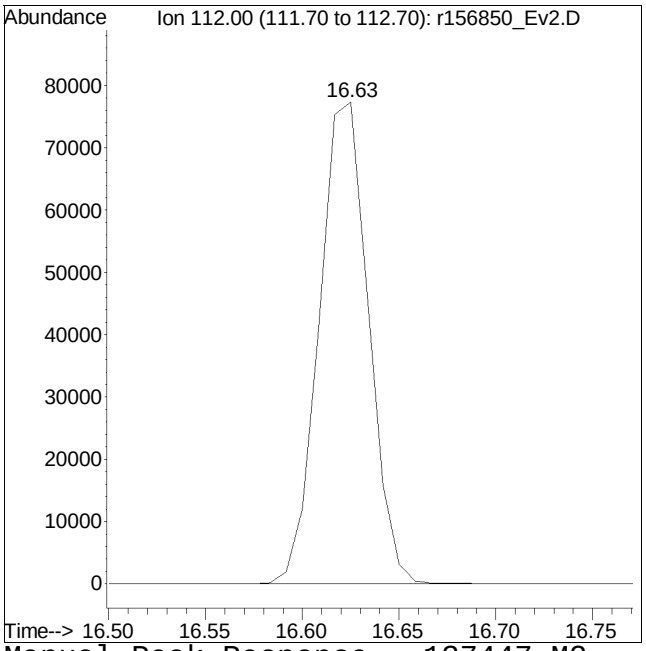

Original Peak Response = 50615 Manual Peak Response = 57459 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #59: chlorobenzene



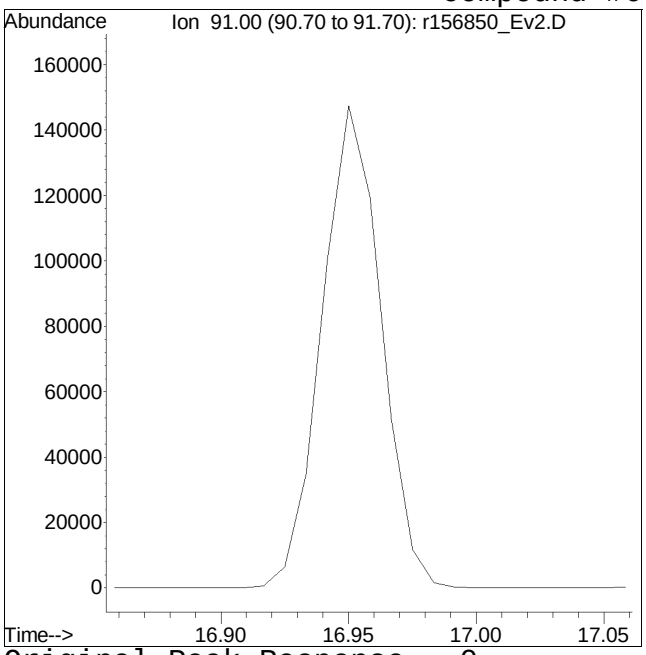



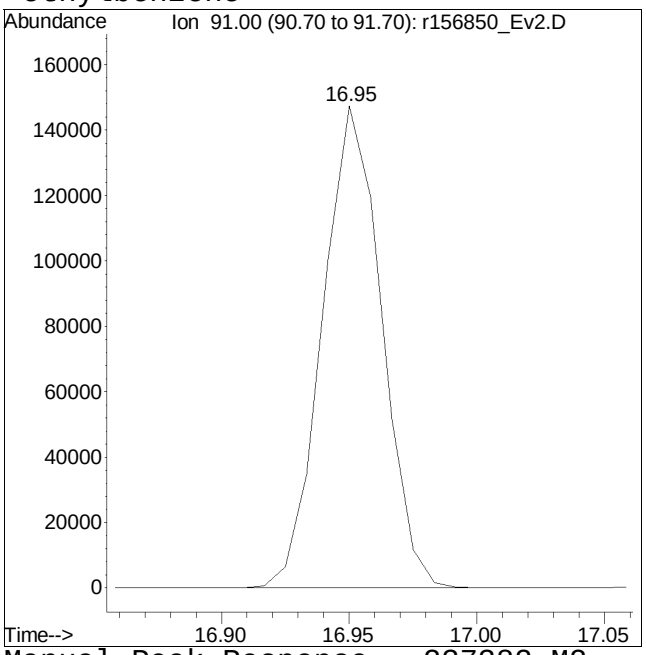

Original Peak Response = 0 Manual Peak Response = 137447 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #60: ethylbenzene



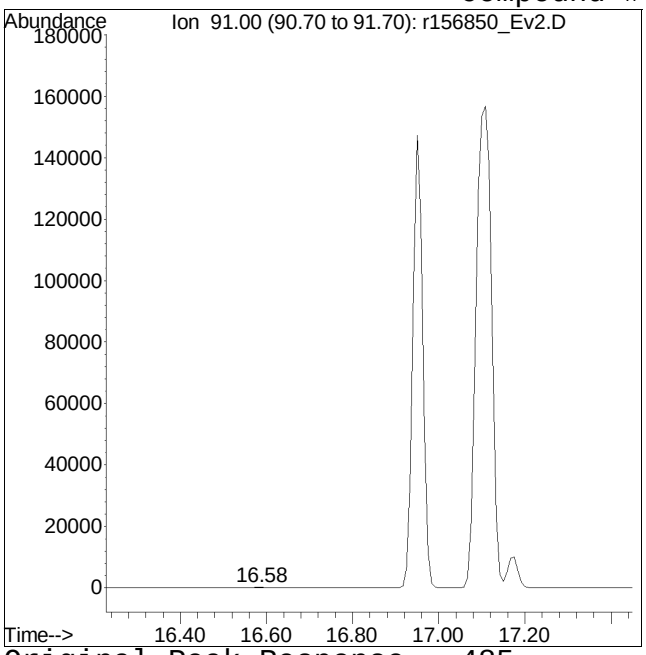



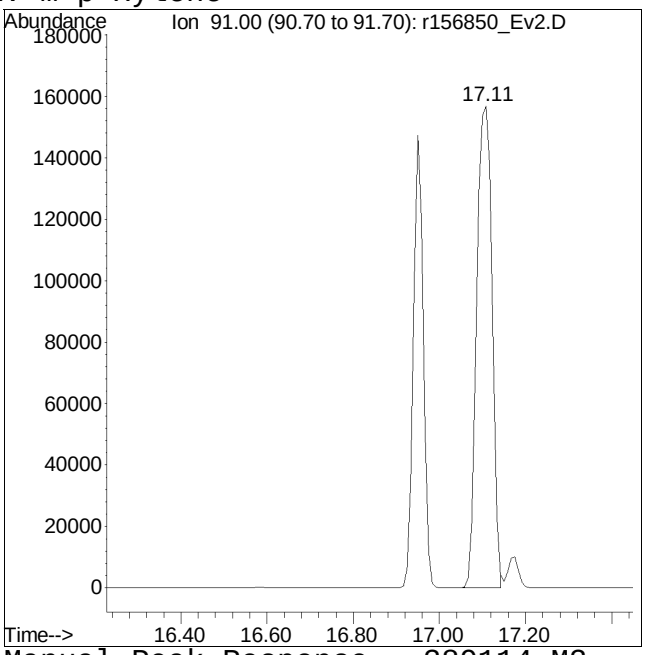

Original Peak Response = 0 Manual Peak Response = 237382 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #61: m+p-xylene



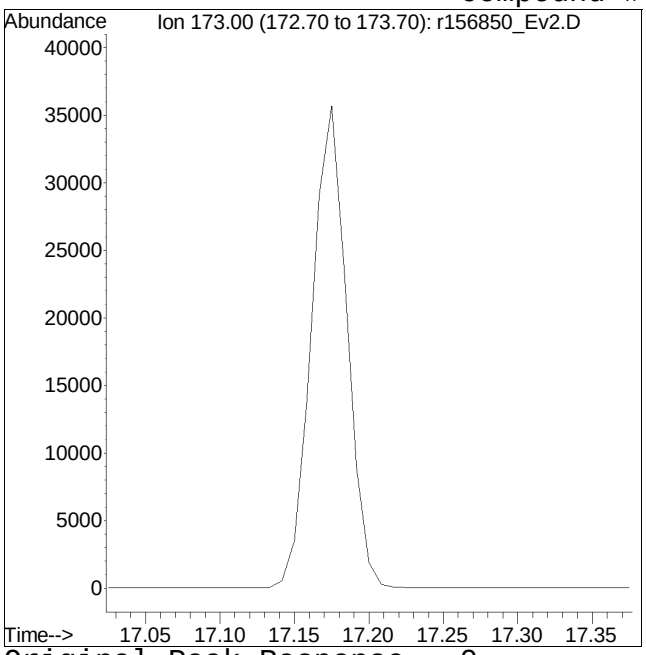

Original Peak Response = 485 Manual Peak Response = 389114 M3

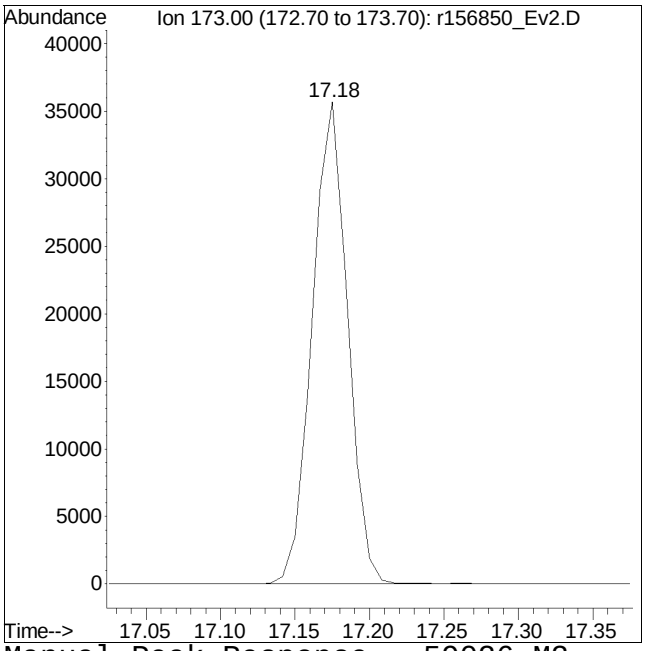
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #62: bromoform



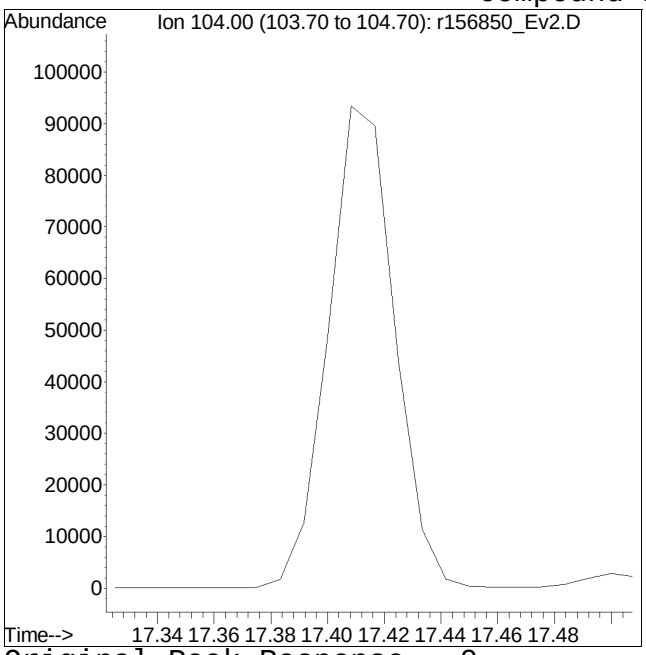



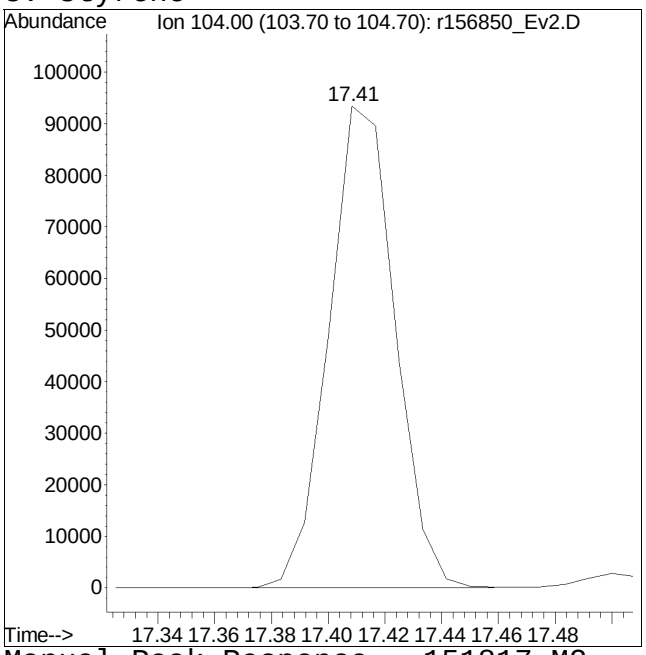

Original Peak Response = 0 Manual Peak Response = 59026 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #63: styrene



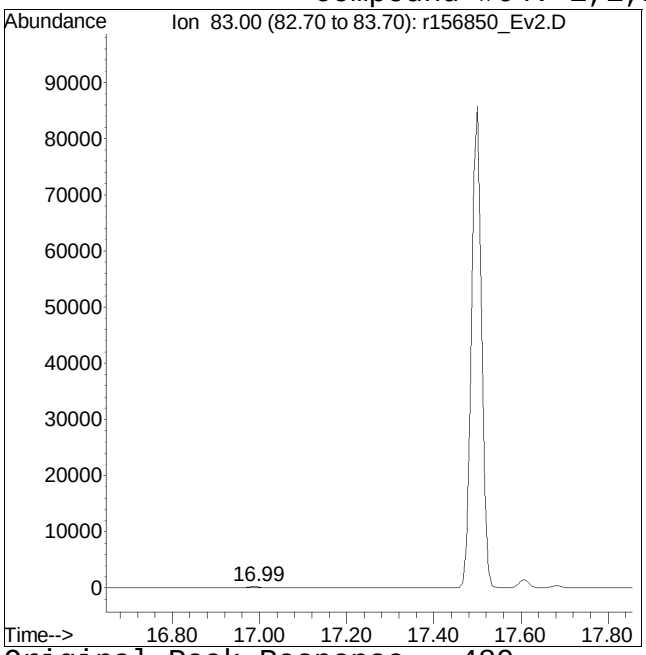



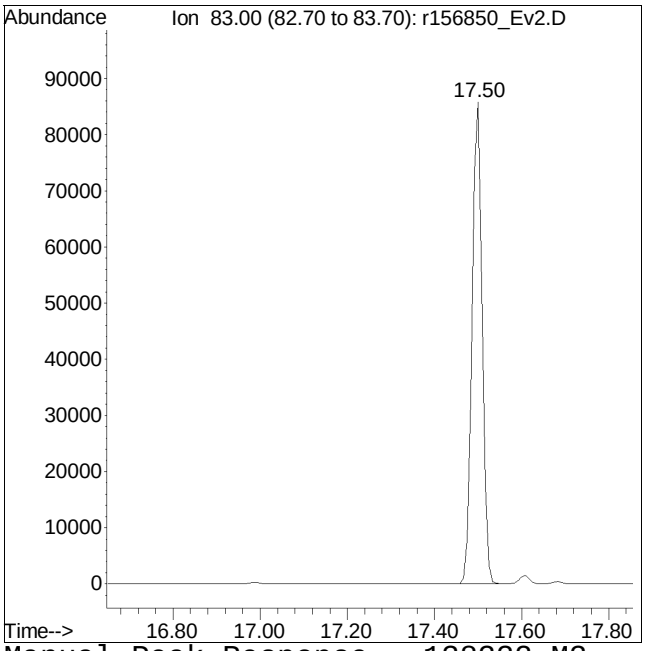

Original Peak Response = 0 Manual Peak Response = 151817 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #64: 1,1,2,2-tetrachloroethane



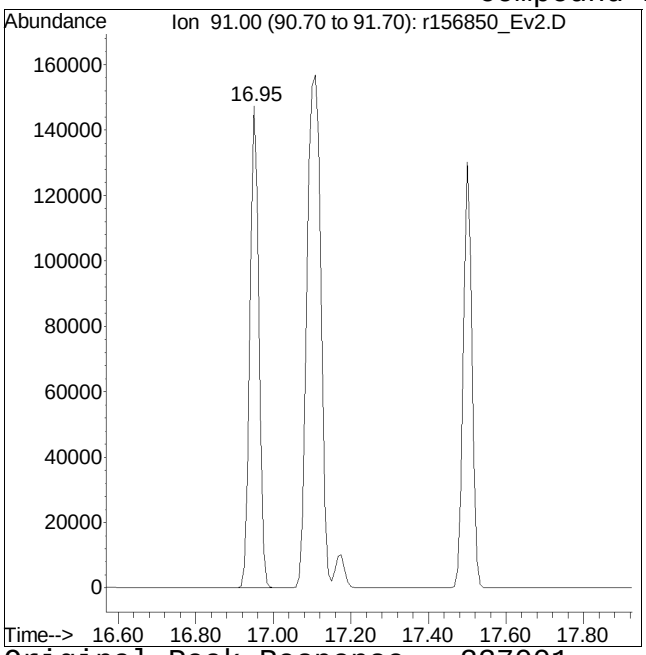



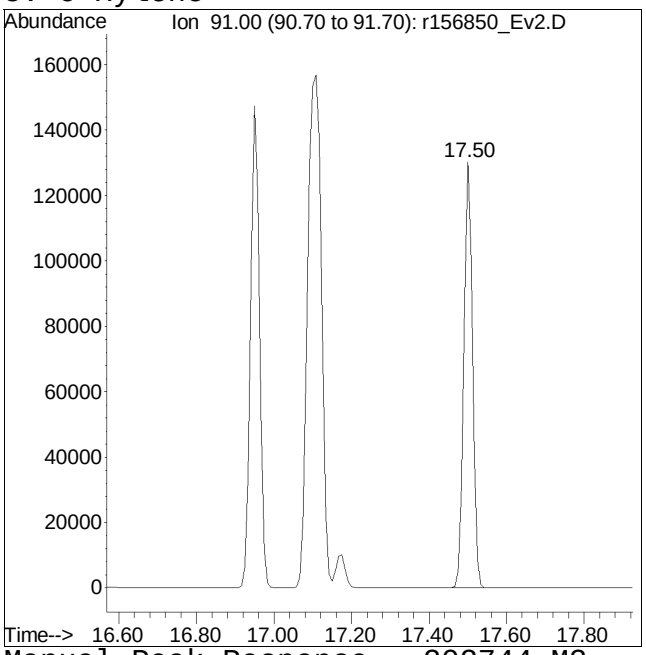

Original Peak Response = 480 Manual Peak Response = 138332 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #65: o-xylene



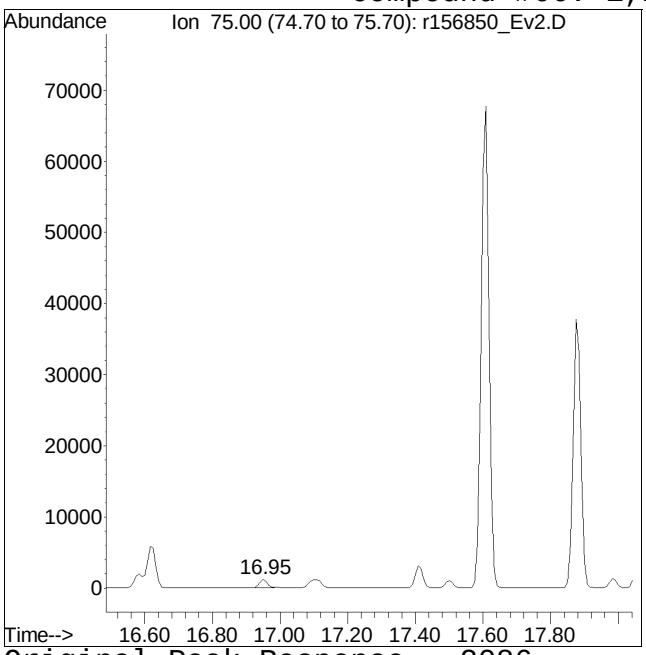



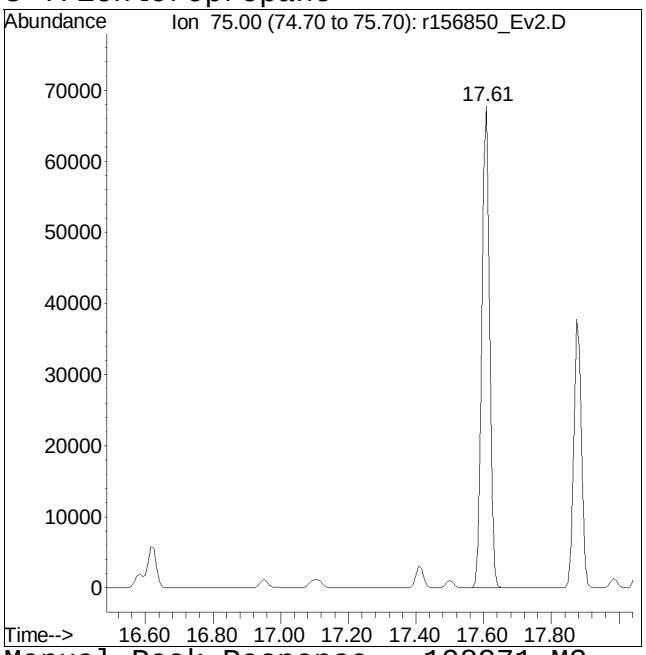

Original Peak Response = 237001 Manual Peak Response = 202744 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #66: 1,2,3-Trichloropropane



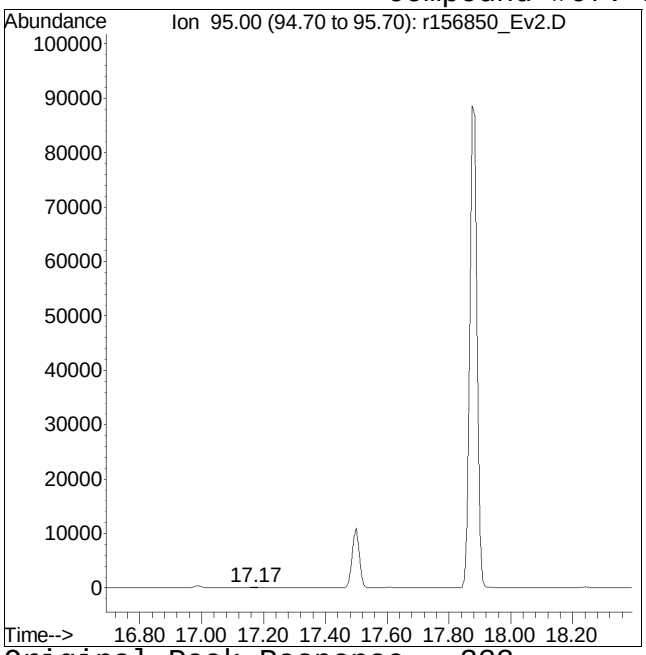



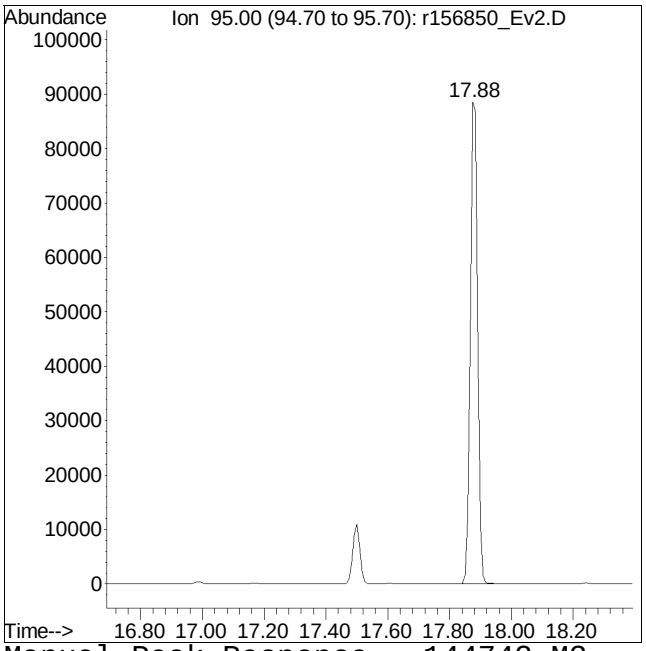

Original Peak Response = 2086 Manual Peak Response = 108271 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #67: bromofluorobenzene



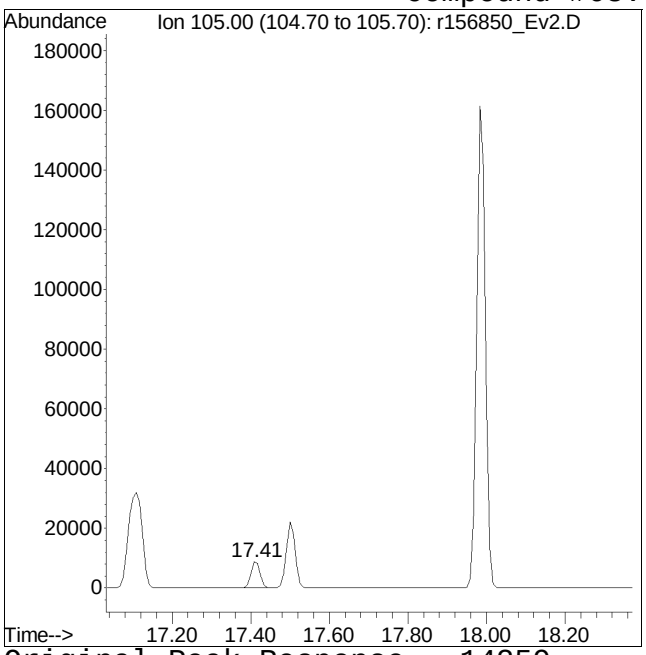

Original Peak Response = 333 Manual Peak Response = 144742 M3

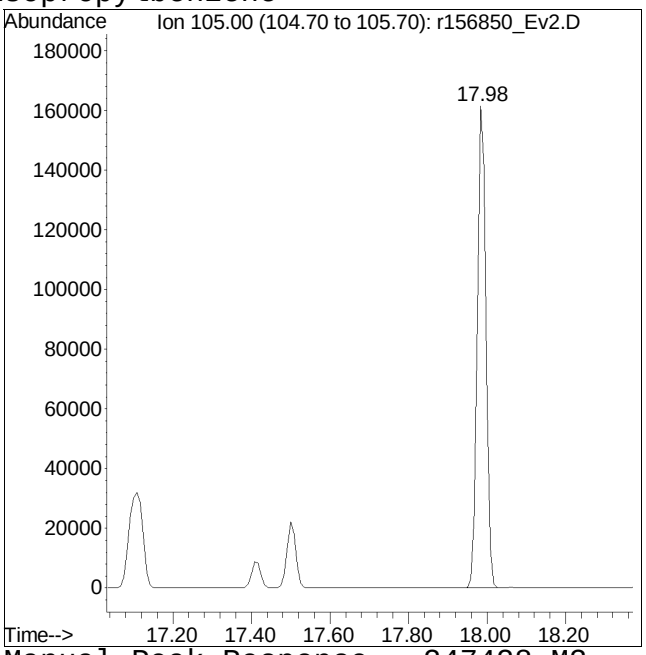
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #68: isopropylbenzene



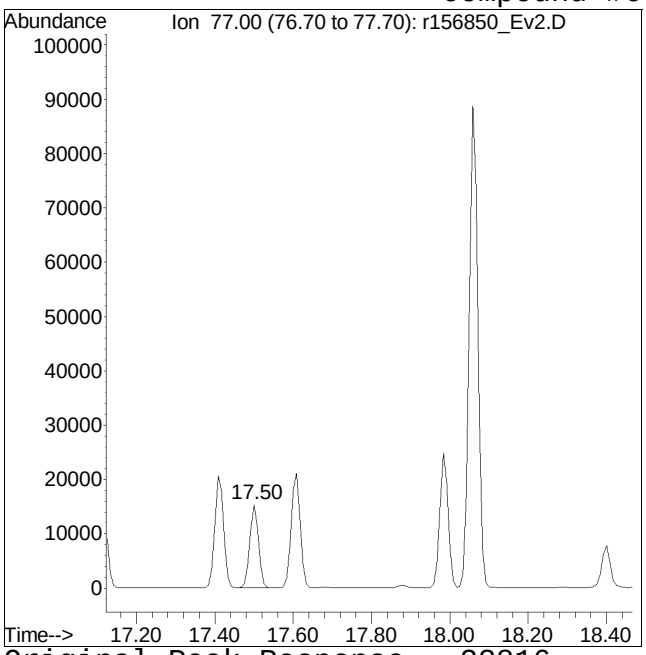



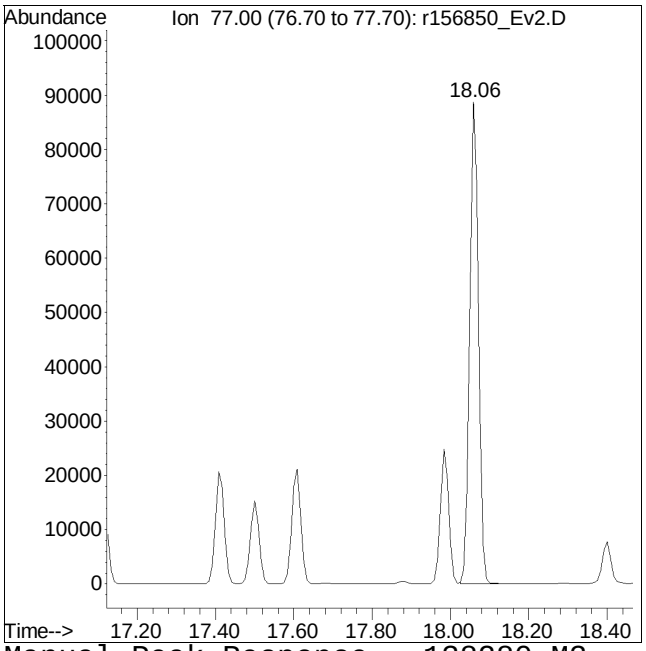

Original Peak Response = 14259 Manual Peak Response = 247428 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\ QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #69: Bromobenzene



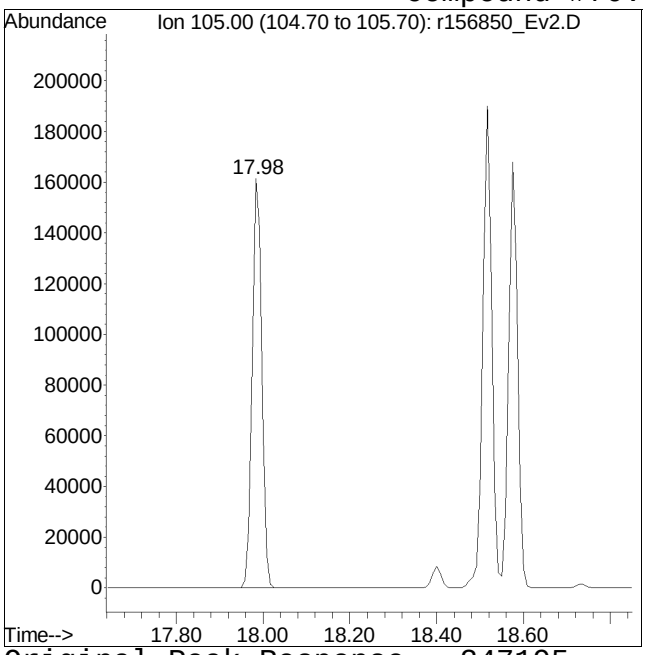

Original Peak Response = 23816 Manual Peak Response = 138280 M3

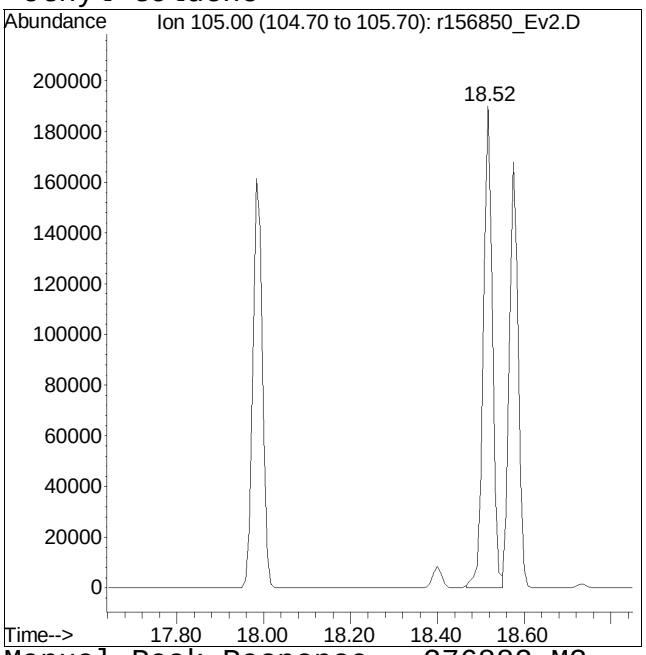
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #70: 4-ethyl toluene



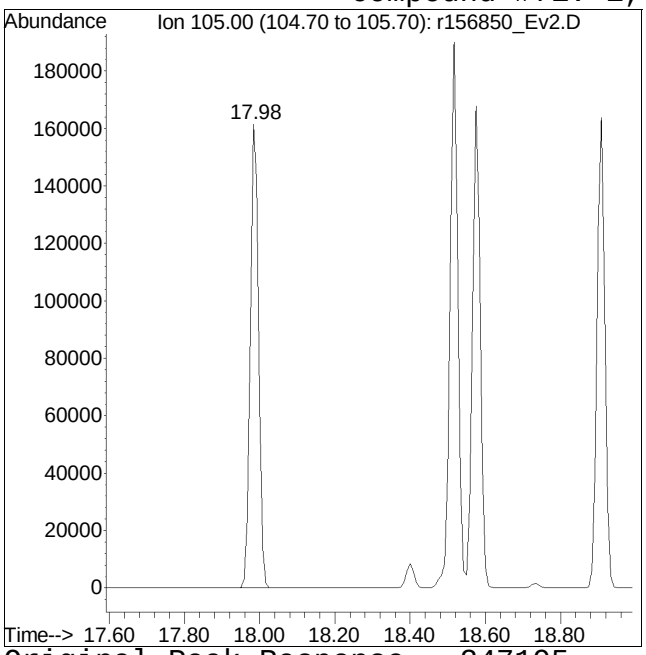



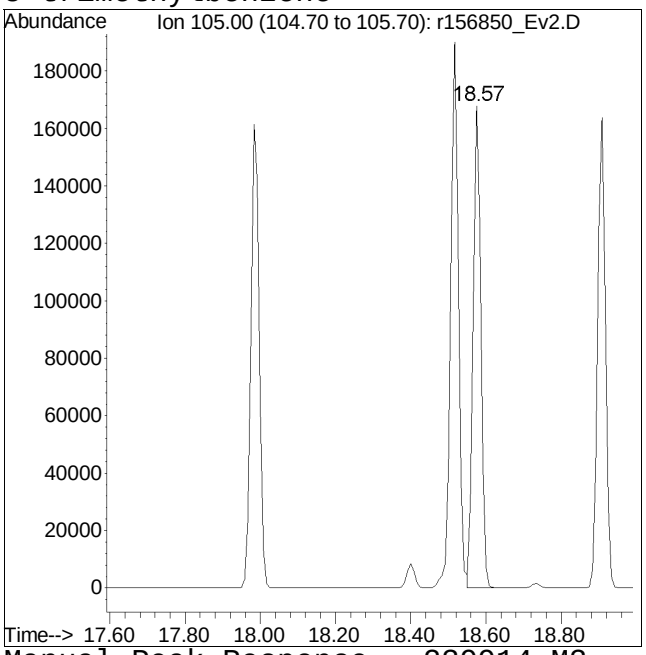

Original Peak Response = 247195 Manual Peak Response = 276882 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #71: 1,3,5-trimethylbenzene



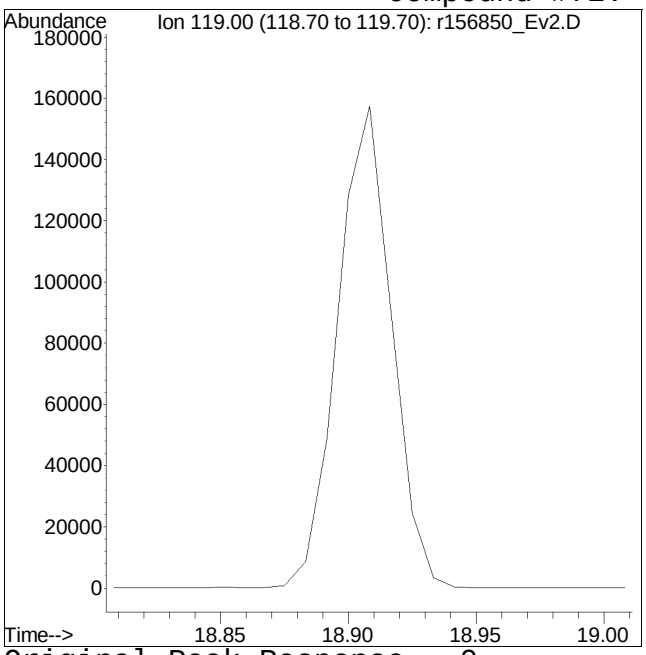



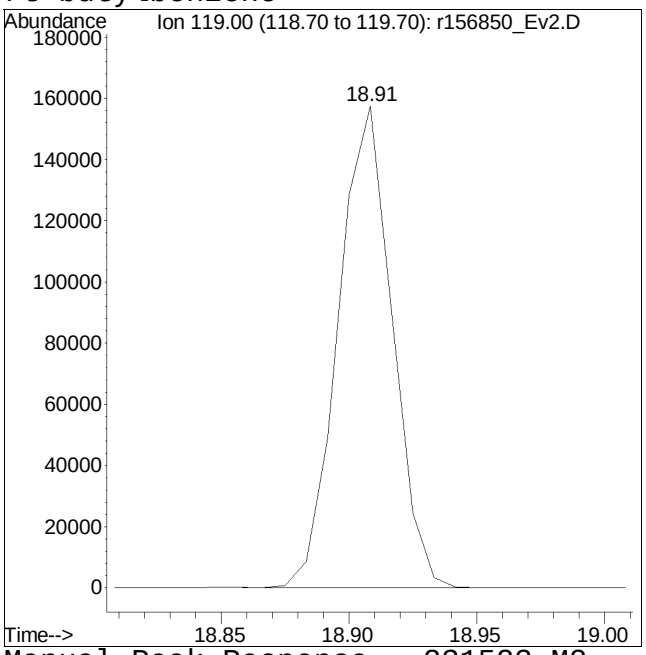

Original Peak Response = 247195 Manual Peak Response = 239914 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #72: tert-butylbenzene



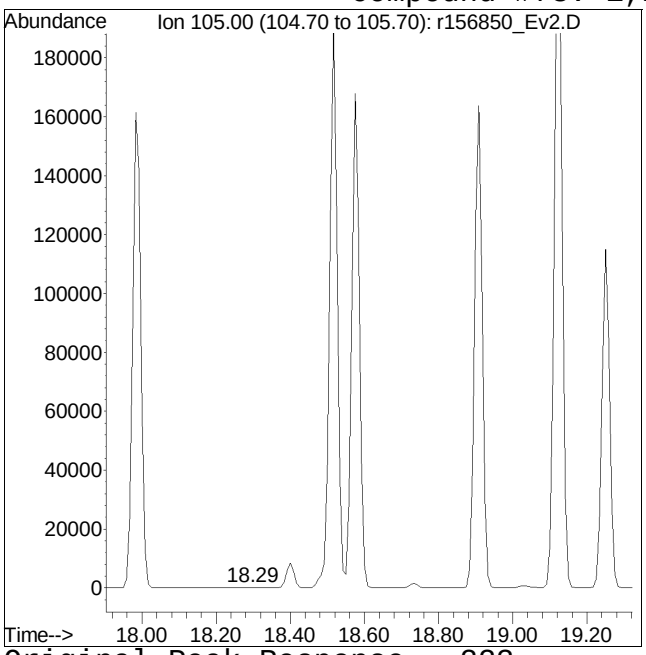



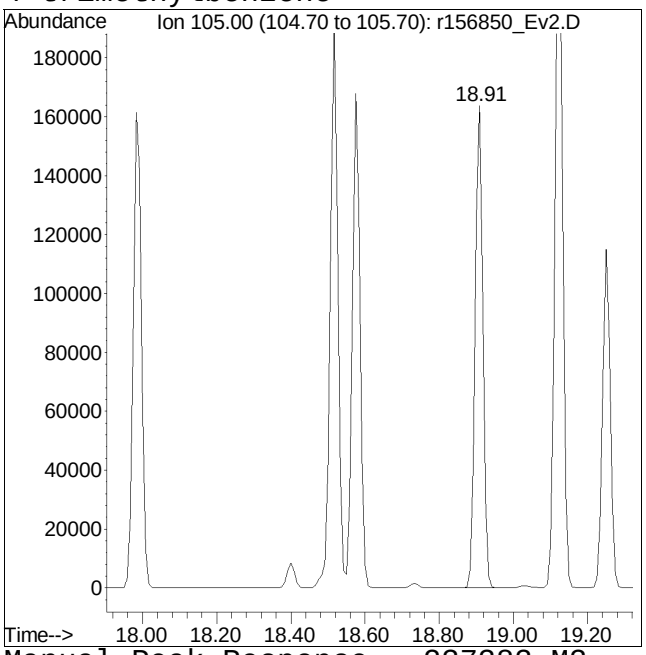

Original Peak Response = 0 Manual Peak Response = 231523 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #73: 1,2,4-trimethylbenzene



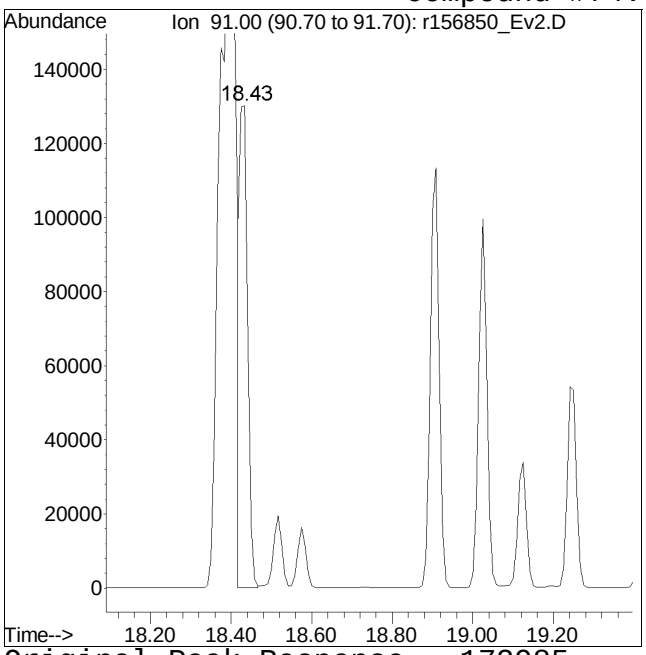



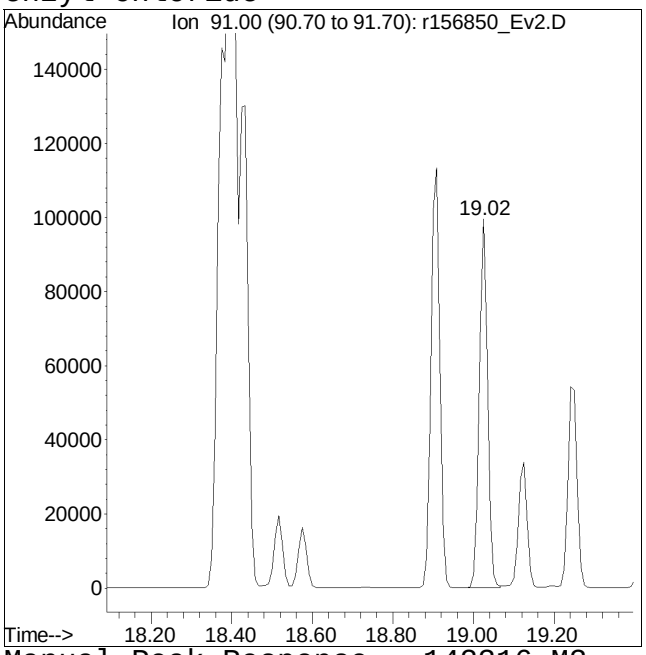

Original Peak Response = 223 Manual Peak Response = 237383 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #74: Benzyl Chloride



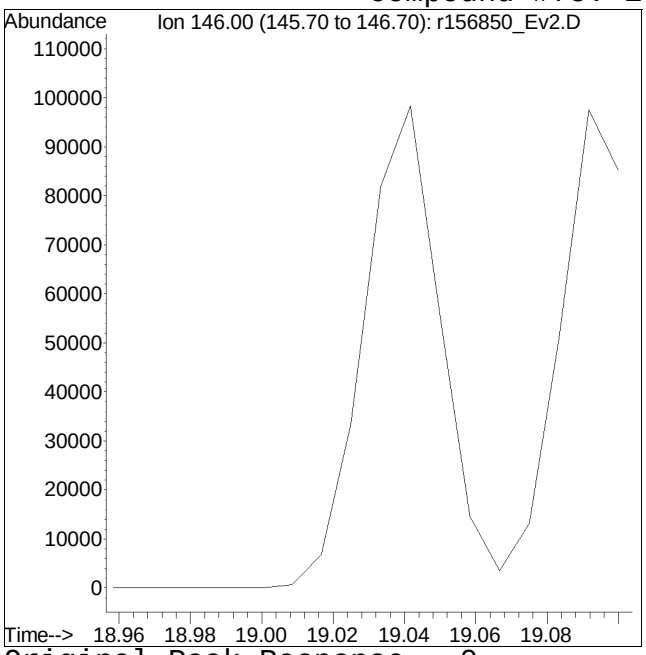



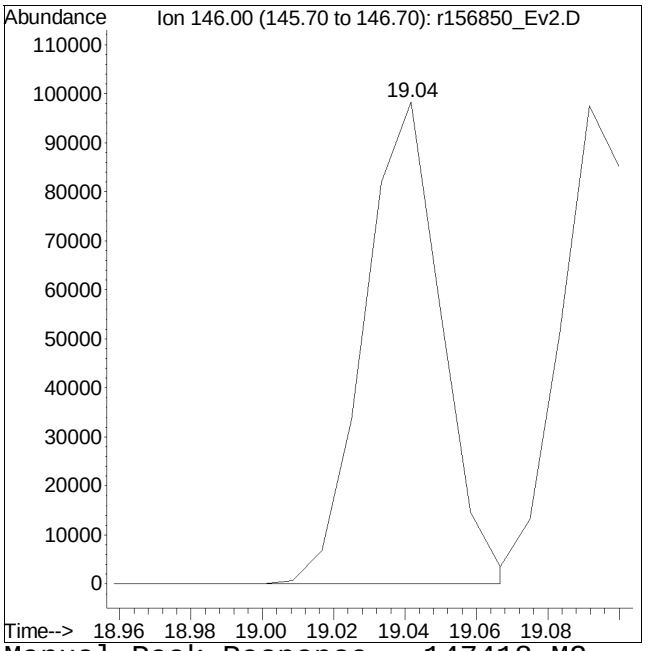

Original Peak Response = 172985 Manual Peak Response = 142316 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #75: 1,3-dichlorobenzene



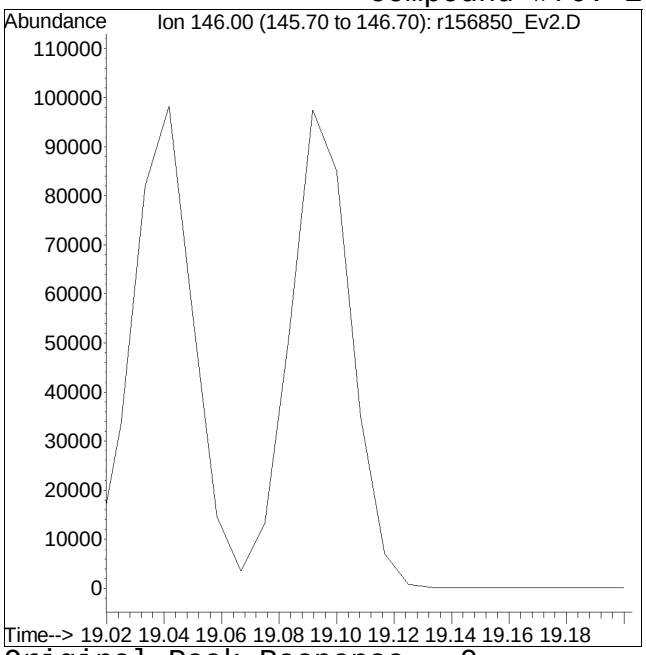



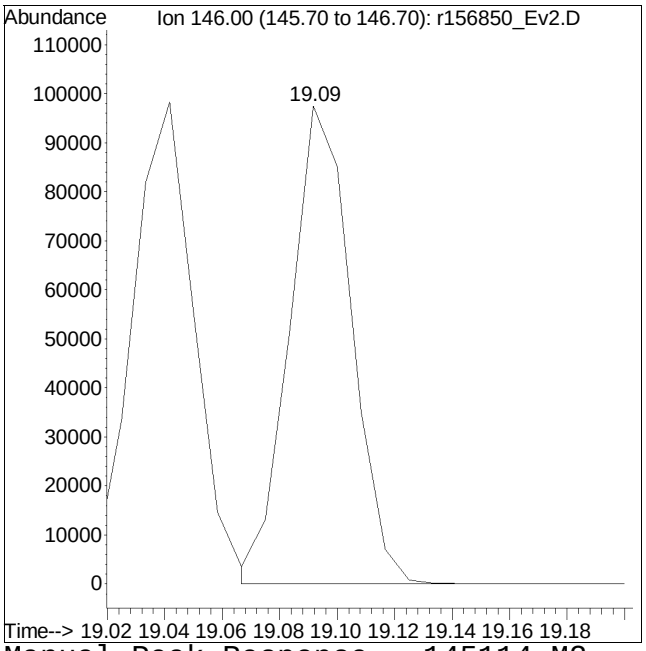

Original Peak Response = 0 Manual Peak Response = 147418 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #76: 1,4-dichlorobenzene



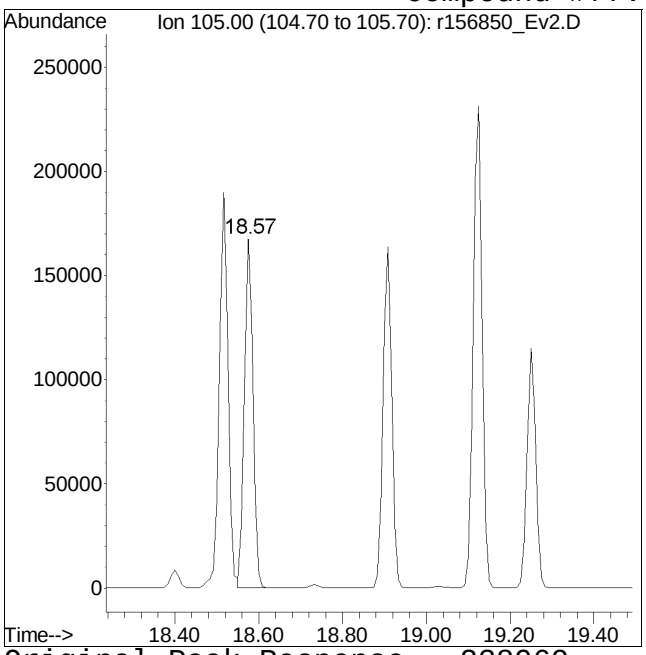



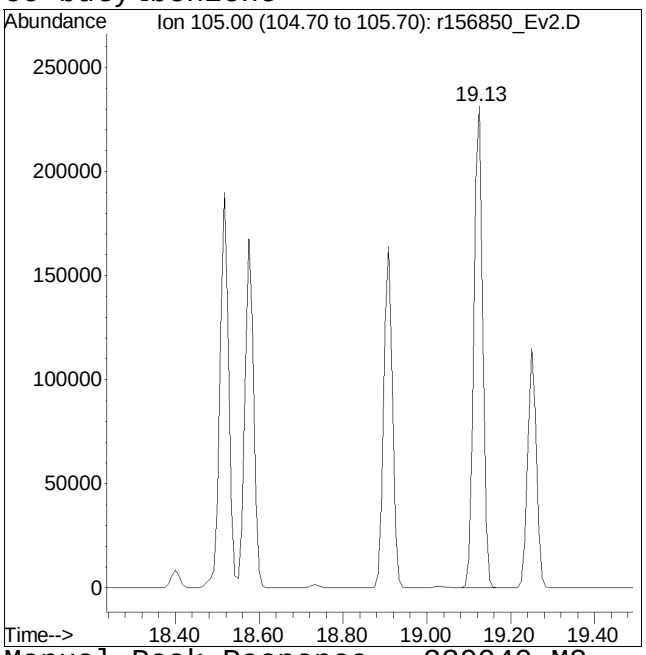

Original Peak Response = 0 Manual Peak Response = 145114 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #77: sec-butylbenzene



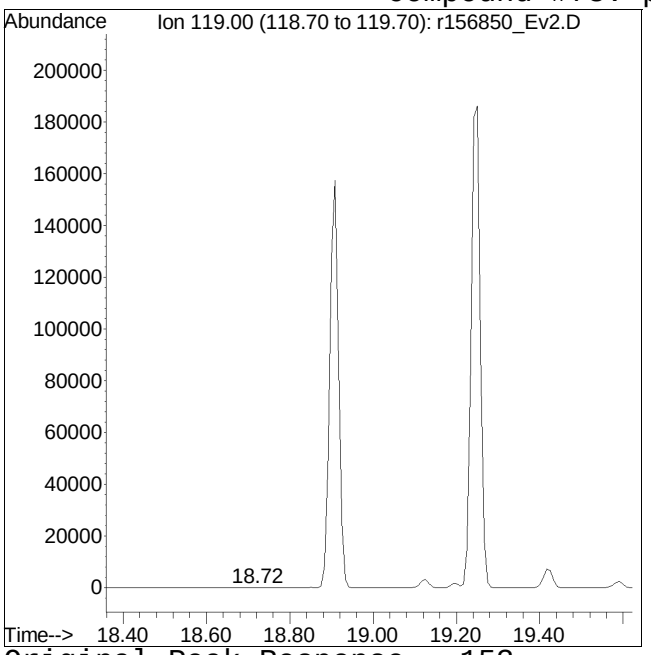



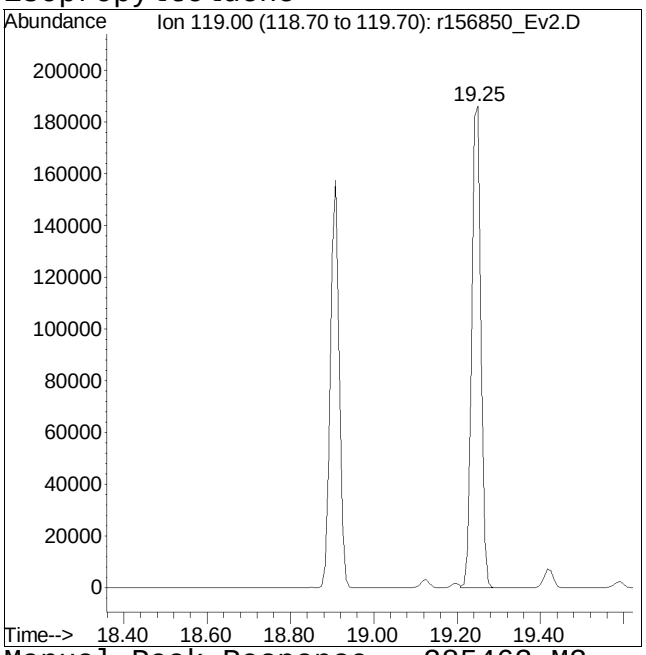

Original Peak Response = 238969 Manual Peak Response = 339940 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #78: p-isopropyltoluene



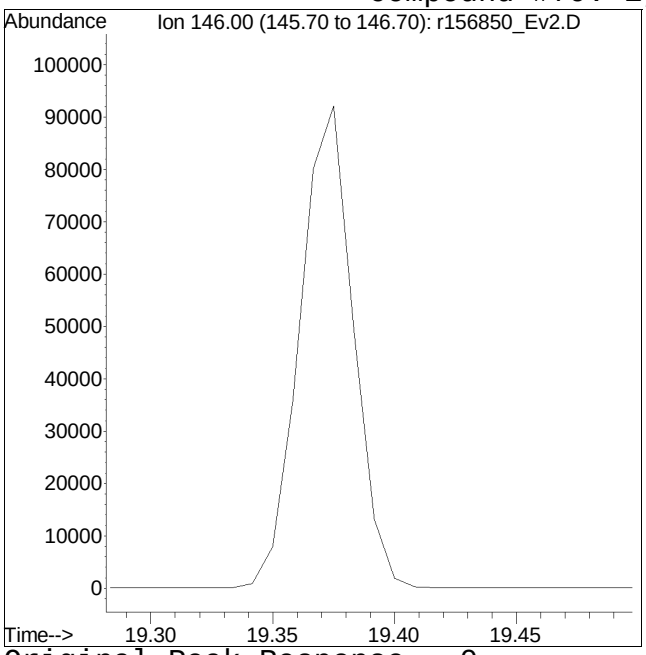

Original Peak Response = 153 Manual Peak Response = 285463 M3

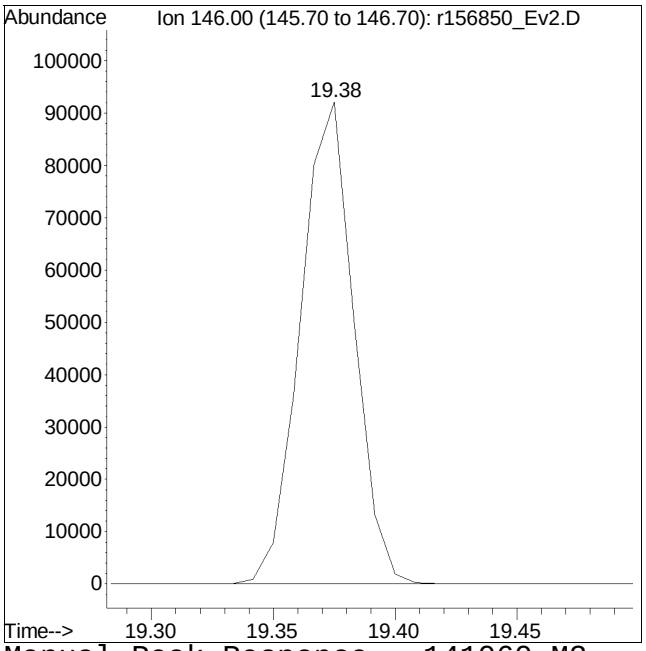
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #79: 1,2-dichlorobenzene



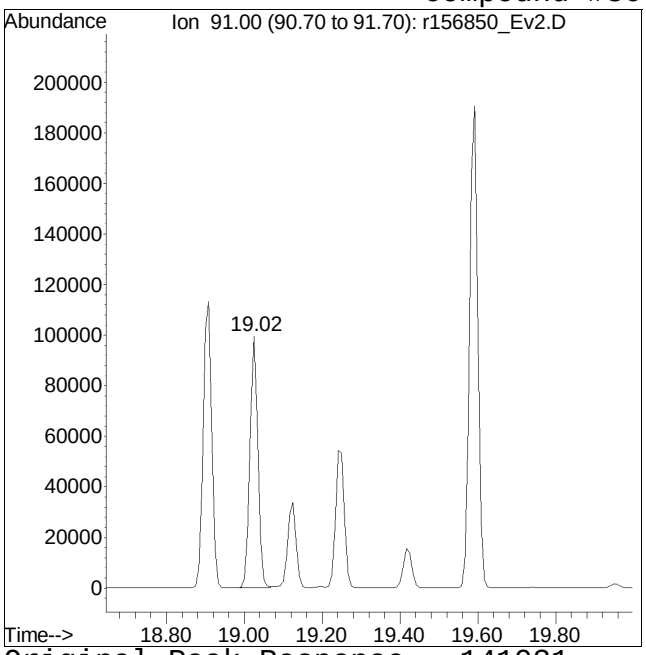



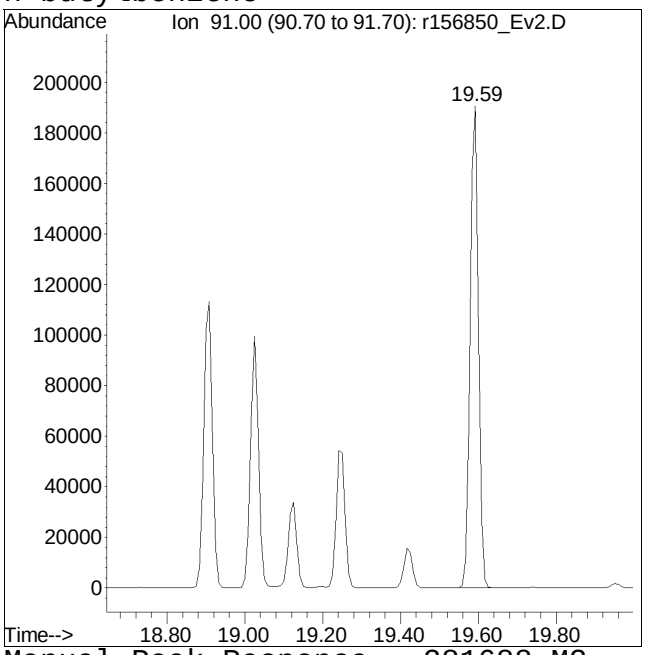

Original Peak Response = 0 Manual Peak Response = 141060 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #80: n-butylbenzene



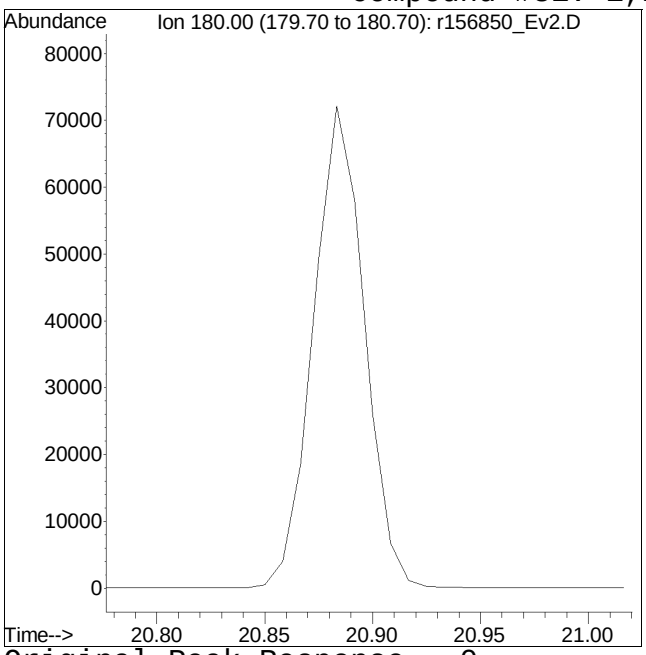

Original Peak Response = 141931 Manual Peak Response = 281688 M3

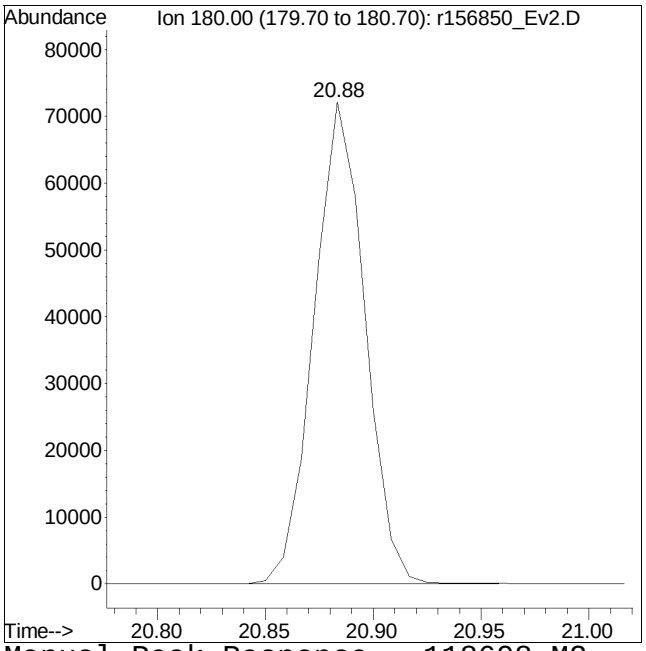
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #81: 1,2,4-trichlorobenzene



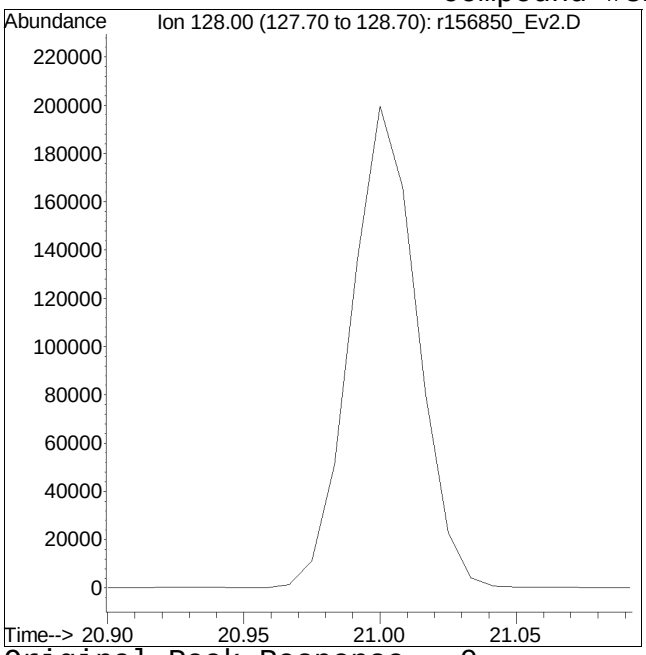



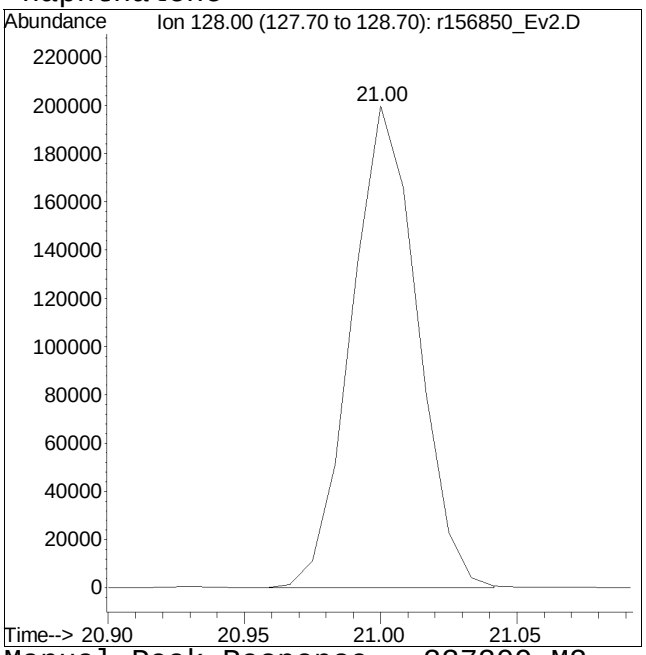

Original Peak Response = 0 Manual Peak Response = 118608 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #82: naphthalene



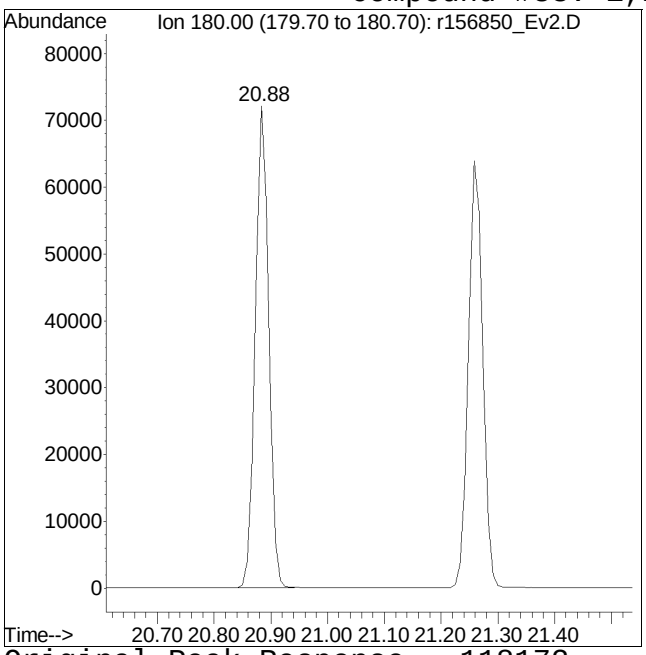



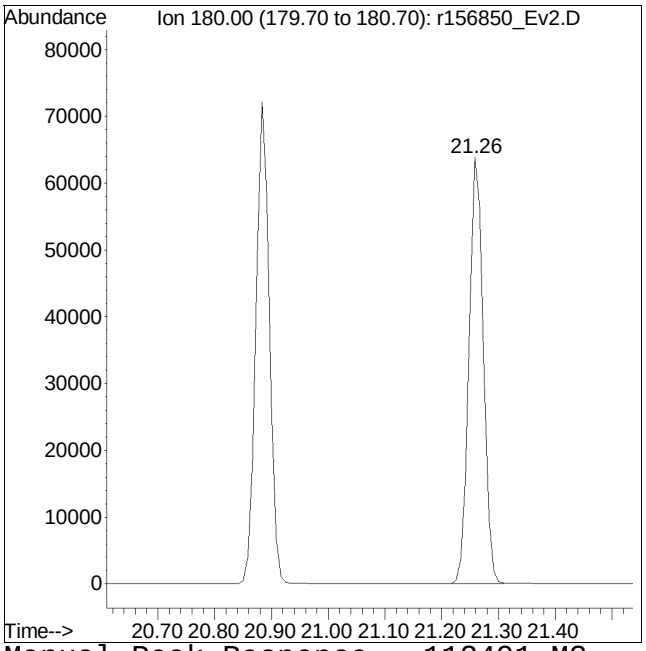

Original Peak Response = 0 Manual Peak Response = 337209 M2
M2 = Peak not found by automatic integration algorithm.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #83: 1,2,3-trichlorobenzene



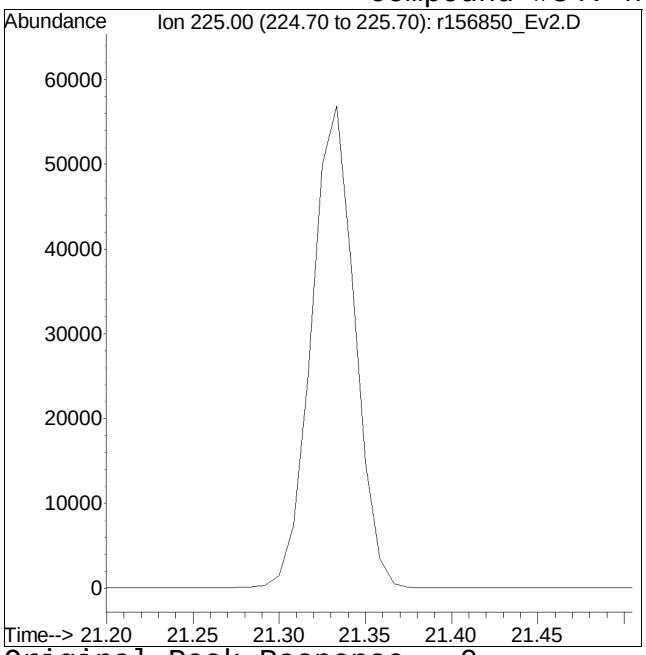



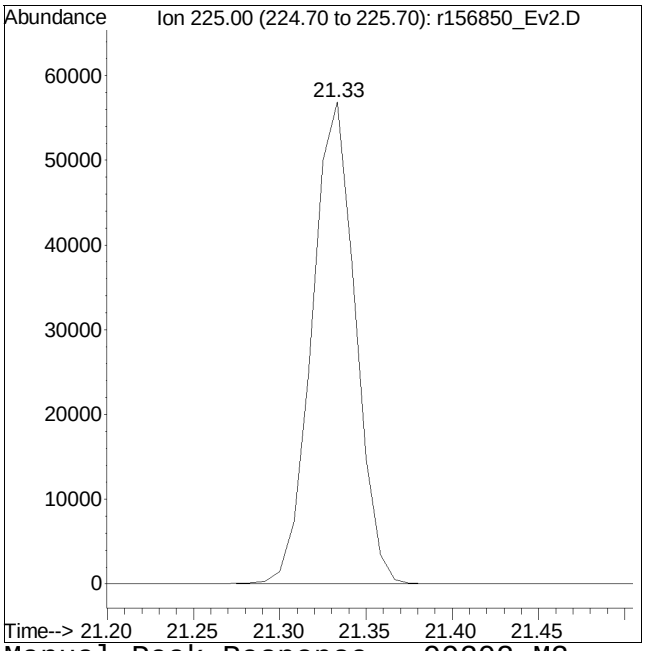

Original Peak Response = 118172 Manual Peak Response = 112491 M3
M3 = Misidentification of the peak (i.e. 1,4-dichlorobenzene identified as 1,3-dichlorobenzene), or misidentification from 2 partially resolved peaks not being split.

Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156850_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 9:48 PM Instrument :
Sample : ITO15-SIMSTD5.0 Quant Date : 4/5/2018 9:28 am

Compound #84: hexachlorobutadiene




Original Peak Response = 0 Manual Peak Response = 99202 M2
M2 = Peak not found by automatic integration algorithm.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156851_Ev2.D
Acq On : 4 Apr 2018 10:25 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD010
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:58:58 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 9.65 | 49 | 137597 | 10.000 ppbV | # 0.00 |
| Standard Area = 133810 | | | Recovery | = 102.83% | |
| 33) 1,4-difluorobenzene | 11.93 | 114 | 287999 | 10.000 ppbV | 0.00 |
| Standard Area = 280369 | | | Recovery | = 102.72% | |
| 51) chlorobenzene-D5 | 16.57 | 54 | 60409 | 10.000 ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery | = 102.29% | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.54 | 65 | 76834 | 9.820 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 98.20% | |
| 53) toluene-D8 | 14.75 | 98 | 264802 | 9.925 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 99.25% | |
| 67) bromofluorobenzene | 17.88 | 95 | 165672 | 11.190 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery | = 111.90% | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 98430M6 | 9.875 ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 178981 | 10.170 ppbV | 99 |
| 4) chloromethane | 4.17 | 50 | 117921 | 11.352 ppbV | 100 |
| 5) Freon-114 | 4.30 | 85 | 229384 | 10.893 ppbV | 96 |
| 6) vinyl chloride | 4.43 | 62 | 107862 | 10.353 ppbV | 96 |
| 7) 1,3-butadiene | 4.61 | 54 | 91057 | 11.008 ppbV | 84 |
| 8) bromomethane | 4.93 | 94 | 85413 | 9.992 ppbV | 99 |
| 9) chloroethane | 5.16 | 64 | 55098 | 14.721 ppbV | 97 |
| 10) ethanol | 5.33 | 31 | 415575 | 49.231 ppbV | 97 |
| 11) vinyl bromide | 5.60 | 106 | 84299 | 10.064 ppbV | 99 |
| 12) acrolein | 5.76 | 56 | 44119 | 10.119 ppbV # | 100 |
| 13) acetone | 5.91 | 43 | 588359 | 47.308 ppbV | 98 |
| 14) trichlorofluoromethane | 6.14 | 101 | 161816 | 9.504 ppbV | 98 |
| 15) isopropyl alcohol | 6.24 | 45 | 365286 | 23.217 ppbV | 100 |
| 16) acrylonitrile | 6.51 | 53 | 82297 | 10.051 ppbV | 100 |
| 17) 1,1-dichloroethene | 6.92 | 61 | 139449 | 9.600 ppbV | 99 |
| 18) tertiary butyl alcohol | 6.98 | 59 | 144966 | 9.241 ppbV # | 1 |
| 19) methylene chloride | 7.09 | 49 | 134404 | 9.791 ppbV | 100 |
| 20) 3-chloropropene | 7.23 | 41 | 155544 | 8.209 ppbV | 98 |
| 21) carbon disulfide | 7.38 | 76 | 283716 | 10.072 ppbV | 98 |
| 22) Freon 113 | 7.43 | 101 | 168212 | 9.717 ppbV | 99 |
| 23) trans-1,2-dichloroethene | 8.22 | 61 | 141336 | 9.614 ppbV | 98 |
| 24) 1,1-dichloroethane | 8.46 | 63 | 177343 | 9.725 ppbV | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156851_Ev2.D
Acq On : 4 Apr 2018 10:25 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD010
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:58:58 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 8.54 | 73 | 242810 | 9.778 | ppbV | | 95 |
| 26) | vinyl acetate | 8.68 | 43 | 289733 | 11.540 | ppbV | | 99 |
| 27) | 2-butanone | 8.94 | 43 | 261942 | 10.661 | ppbV | | 96 |
| 28) | cis-1,2-dichloroethene | 9.47 | 61 | 139141 | 9.805 | ppbV | | 96 |
| 29) | Ethyl Acetate | 9.76 | 61 | 35190 | 9.741 | ppbV | | 90 |
| 30) | chloroform | 9.82 | 83 | 165367 | 9.680 | ppbV | | 98 |
| 31) | Tetrahydrofuran | 10.27 | 42 | 163995 | 9.915 | ppbV | | 97 |
| 32) | 1,2-dichloroethane | 10.67 | 62 | 117381 | 9.558 | ppbV | | 99 |
| 34) | hexane | 9.73 | 57 | 175189 | 9.785 | ppbV | | 84 |
| 36) | 1,1,1-trichloroethane | 10.96 | 97 | 157669 | 11.153 | ppbV | | 98 |
| 37) | benzene | 11.49 | 78 | 319530 | 9.920 | ppbV | | 99 |
| 38) | carbon tetrachloride | 11.67 | 117 | 131580 | 10.028 | ppbV | | 97 |
| 39) | cyclohexane | 11.81 | 56 | 183879 | 9.814 | ppbV | | 99 |
| 40) | Dibromomethane | 12.41 | 93 | 98754 | 9.779 | ppbV | # | 100 |
| 41) | 1,2-dichloropropane | 12.44 | 63 | 126406 | 9.744 | ppbV | | 99 |
| 42) | bromodichloromethane | 12.67 | 83 | 173772 | 10.078 | ppbV | | 99 |
| 43) | 1,4-dioxane | 12.72 | 88 | 64870 | 9.687 | ppbV | | 99 |
| 44) | trichloroethene | 12.72 | 130 | 121816 | 10.096 | ppbV | | 97 |
| 45) | 2,2,4-trimethylpentane | 12.77 | 57 | 573308 | 9.840 | ppbV | | 99 |
| 46) | heptane | 13.09 | 43 | 280088 | 9.895 | ppbV | | 100 |
| 47) | cis-1,3-dichloropropene | 13.73 | 75 | 165169 | 10.329 | ppbV | | 97 |
| 48) | 4-methyl-2-pentanone | 13.77 | 43 | 322254 | 10.162 | ppbV | | 100 |
| 49) | trans-1,3-dichloropropene | 14.35 | 75 | 156593 | 10.399 | ppbV | | 100 |
| 50) | 1,1,2-trichloroethane | 14.55 | 97 | 118489 | 9.930 | ppbV | | 96 |
| 52) | toluene | 14.86 | 91 | 372779 | 9.924 | ppbV | | 99 |
| 54) | 2-hexanone | 15.13 | 43 | 302554 | 9.661 | ppbV | | 99 |
| 55) | dibromochloromethane | 15.30 | 129 | 157191 | 10.318 | ppbV | | 99 |
| 56) | 1,2-dibromoethane | 15.54 | 107 | 180070 | 10.256 | ppbV | | 98 |
| 57) | tetrachloroethene | 16.00 | 166 | 129084 | 9.890 | ppbV | | 98 |
| 58) | 1,1,1,2-tetrachloroethane | 16.61 | 131 | 120261 | 10.231 | ppbV | | 97 |
| 59) | chlorobenzene | 16.62 | 112 | 284480 | 10.117 | ppbV | | 97 |
| 60) | ethylbenzene | 16.95 | 91 | 485238 | 9.992 | ppbV | | 96 |
| 61) | m+p-xylene | 17.10 | 91 | 806796 | 20.271 | ppbV | | 99 |
| 62) | bromoform | 17.18 | 173 | 128300 | 10.625 | ppbV | | 98 |
| 63) | styrene | 17.41 | 104 | 322865 | 10.396 | ppbV | | 98 |
| 64) | 1,1,2,2-tetrachloroethane | 17.49 | 83 | 285758 | 10.098 | ppbV | | 100 |
| 65) | o-xylene | 17.50 | 91 | 410206 | 9.890 | ppbV | | 96 |
| 66) | 1,2,3-Trichloropropane | 17.60 | 75 | 228397 | 10.312 | ppbV | # | 79 |
| 68) | isopropylbenzene | 17.98 | 105 | 510863 | 10.093 | ppbV | | 98 |
| 69) | Bromobenzene | 18.06 | 77 | 289342 | 10.228 | ppbV | # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156851_Ev2.D
Acq On : 4 Apr 2018 10:25 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD010
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:58:58 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.52 | 105 | 578098 | 10.206 | ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.57 | 105 | 494682 | 10.079 | ppbV | 97 |
| 72) tert-butylbenzene | 18.91 | 119 | 485425 | 10.249 | ppbV | 97 |
| 73) 1,2,4-trimethylbenzene | 18.91 | 105 | 496721 | 10.229 | ppbV | 97 |
| 74) Benzyl Chloride | 19.02 | 91 | 315259 | 10.828 | ppbV | 97 |
| 75) 1,3-dichlorobenzene | 19.04 | 146 | 315755 | 10.470 | ppbV | 97 |
| 76) 1,4-dichlorobenzene | 19.09 | 146 | 313561 | 10.563 | ppbV | 97 |
| 77) sec-butylbenzene | 19.13 | 105 | 695327 | 9.999 | ppbV | 98 |
| 78) p-isopropyltoluene | 19.24 | 119 | 592491 | 10.146 | ppbV | 98 |
| 79) 1,2-dichlorobenzene | 19.37 | 146 | 300052 | 10.398 | ppbV | 92 |
| 80) n-butylbenzene | 19.58 | 91 | 571847 | 9.924 | ppbV | 95 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 256850 | 10.586 | ppbV | 98 |
| 82) naphthalene | 21.00 | 128 | 713523 | 10.343 | ppbV | 100 |
| 83) 1,2,3-trichlorobenzene | 21.26 | 180 | 240017 | 10.430 | ppbV | 98 |
| 84) hexachlorobutadiene | 21.33 | 225 | 205404 | 10.121 | ppbV | 98 |

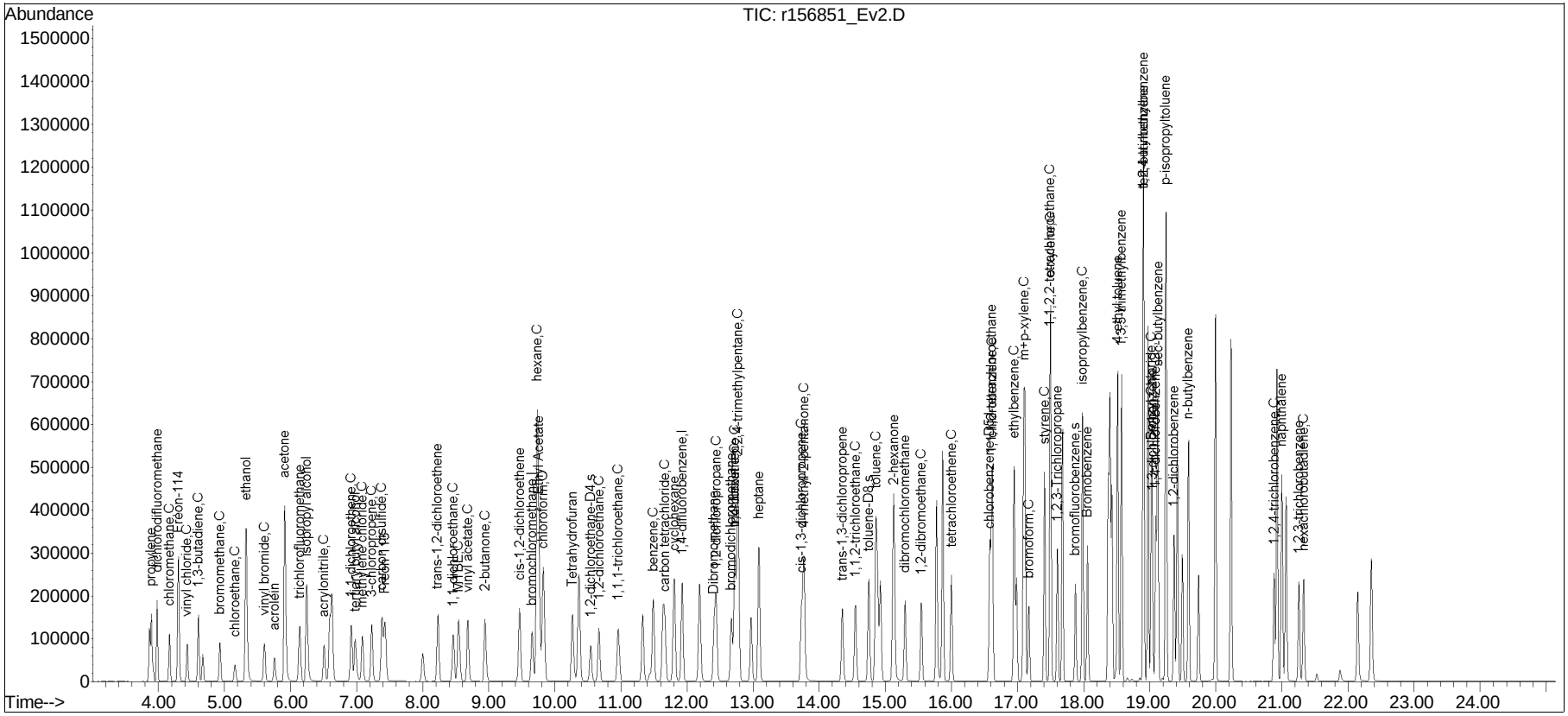
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156851_Ev2.D
Acq On : 4 Apr 2018 10:25 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD010
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 09:58:58 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

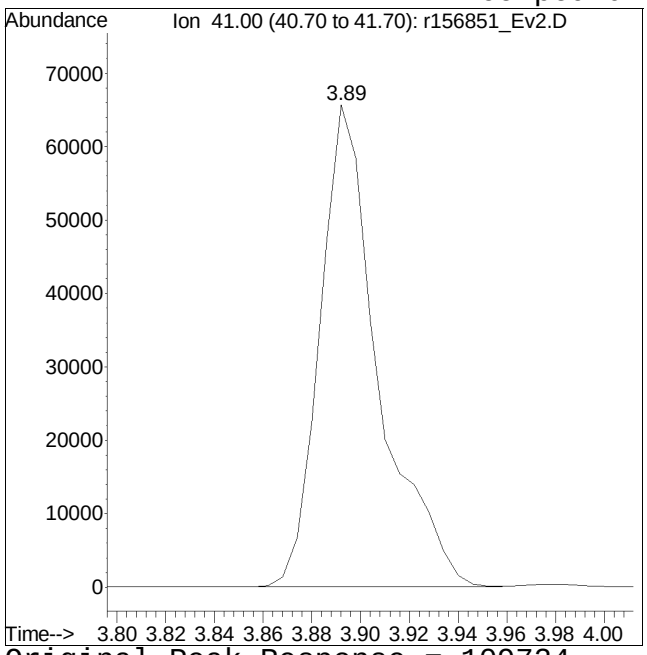
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



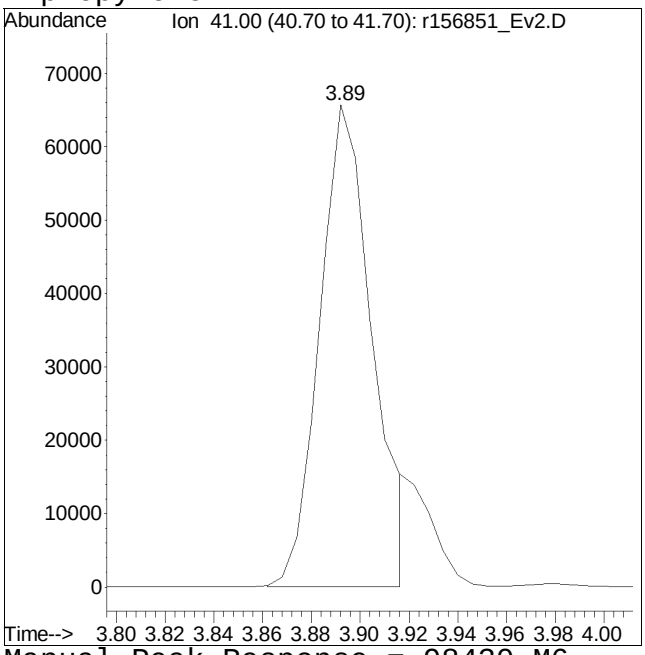
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156851_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 10:25 PM Instrument :
Sample : ITO15-SIMSTD010 Quant Date : 4/5/2018 9:49 am

Compound #2: propylene




Original Peak Response = 109724




Manual Peak Response = 98430 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156852_Ev2.D
Acq On : 4 Apr 2018 11:01 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD020
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:00:00 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 9.65 | 49 | 147866 | 10.000 ppbV | # 0.00 |
| Standard Area = 133810 | | | Recovery = 110.50% | | |
| 33) 1,4-difluorobenzene | 11.93 | 114 | 305447 | 10.000 ppbV | 0.00 |
| Standard Area = 280369 | | | Recovery = 108.94% | | |
| 51) chlorobenzene-D5 | 16.57 | 54 | 64359 | 10.000 ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery = 108.97% | | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.54 | 65 | 76022 | 9.161 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 91.61% | | |
| 53) toluene-D8 | 14.75 | 98 | 288050 | 10.134 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.34% | | |
| 67) bromofluorobenzene | 17.88 | 95 | 157242 | 9.969 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 99.69% | | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 206716M6 | 19.298 ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 380898 | 20.140 ppbV | 99 |
| 4) chloromethane | 4.17 | 50 | 253274 | 22.689 ppbV | 99 |
| 5) Freon-114 | 4.30 | 85 | 510854 | 22.575 ppbV | 98 |
| 6) vinyl chloride | 4.43 | 62 | 234821 | 20.974 ppbV | 97 |
| 7) 1,3-butadiene | 4.61 | 54 | 206609 | 23.243 ppbV # | 78 |
| 8) bromomethane | 4.93 | 94 | 191521 | 20.849 ppbV | 97 |
| 9) chloroethane | 5.15 | 64 | 123869 | 30.797 ppbV | 97 |
| 10) ethanol | 5.32 | 31 | 951954 | 104.940 ppbV | 92 |
| 11) vinyl bromide | 5.60 | 106 | 188226 | 20.912 ppbV | 99 |
| 12) acrolein | 5.75 | 56 | 104242 | 22.247 ppbV # | 100 |
| 13) acetone | 5.91 | 43 | 1245273 | 93.176 ppbV # | 87 |
| 14) trichlorofluoromethane | 6.13 | 101 | 324903 | 17.757 ppbV | 99 |
| 15) isopropyl alcohol | 6.24 | 45 | 850392 | 50.295 ppbV | 99 |
| 16) acrylonitrile | 6.50 | 53 | 194027 | 22.052 ppbV | 99 |
| 17) 1,1-dichloroethene | 6.92 | 61 | 297386 | 19.051 ppbV | 97 |
| 18) tertiary butyl alcohol | 6.97 | 59 | 344300 | 20.424 ppbV # | 1 |
| 19) methylene chloride | 7.09 | 49 | 300097 | 20.342 ppbV | 97 |
| 20) 3-chloropropene | 7.22 | 41 | 325809 | 16.001 ppbV | 96 |
| 21) carbon disulfide | 7.38 | 76 | 649077 | 21.443 ppbV | 93 |
| 22) Freon 113 | 7.43 | 101 | 362533 | 19.488 ppbV | 97 |
| 23) trans-1,2-dichloroethene | 8.22 | 61 | 301810 | 19.104 ppbV | 99 |
| 24) 1,1-dichloroethane | 8.46 | 63 | 371430 | 18.954 ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156852_Ev2.D
Acq On : 4 Apr 2018 11:01 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD020
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:00:00 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| | Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|---|
| 25) | MTBE | 8.54 | 73 | 526592 | 19.733 | ppbV | | 98 |
| 26) | vinyl acetate | 8.68 | 43 | 526351 | 19.509 | ppbV | | 98 |
| 27) | 2-butanone | 8.93 | 43 | 578822 | 21.921 | ppbV | | 96 |
| 28) | cis-1,2-dichloroethene | 9.47 | 61 | 300504 | 19.705 | ppbV | | 92 |
| 29) | Ethyl Acetate | 9.76 | 61 | 78832 | 20.306 | ppbV | | 91 |
| 30) | chloroform | 9.82 | 83 | 359984 | 19.609 | ppbV | | 99 |
| 31) | Tetrahydrofuran | 10.26 | 42 | 361928 | 20.362 | ppbV | | 95 |
| 32) | 1,2-dichloroethane | 10.67 | 62 | 245763 | 18.622 | ppbV | | 97 |
| 34) | hexane | 9.73 | 57 | 380000 | 20.012 | ppbV | | 80 |
| 36) | 1,1,1-trichloroethane | 10.96 | 97 | 338582 | 22.581 | ppbV | | 99 |
| 37) | benzene | 11.49 | 78 | 717812 | 21.011 | ppbV | | 99 |
| 38) | carbon tetrachloride | 11.66 | 117 | 287375 | 20.650 | ppbV | | 97 |
| 39) | cyclohexane | 11.80 | 56 | 410528 | 20.659 | ppbV | | 97 |
| 40) | Dibromomethane | 12.41 | 93 | 215923 | 20.161 | ppbV | # | 100 |
| 41) | 1,2-dichloropropane | 12.43 | 63 | 276649 | 20.108 | ppbV | | 99 |
| 42) | bromodichloromethane | 12.67 | 83 | 386074 | 21.112 | ppbV | | 100 |
| 43) | 1,4-dioxane | 12.71 | 88 | 154582 | 21.766 | ppbV | | 97 |
| 44) | trichloroethene | 12.72 | 130 | 271614 | 21.225 | ppbV | | 99 |
| 45) | 2,2,4-trimethylpentane | 12.77 | 57 | 1265487 | 20.479 | ppbV | | 97 |
| 46) | heptane | 13.09 | 43 | 610904 | 20.349 | ppbV | | 97 |
| 47) | cis-1,3-dichloropropene | 13.73 | 75 | 382190 | 22.535 | ppbV | | 95 |
| 48) | 4-methyl-2-pentanone | 13.76 | 43 | 714254 | 21.237 | ppbV | | 99 |
| 49) | trans-1,3-dichloropropene | 14.35 | 75 | 361303 | 22.624 | ppbV | | 96 |
| 50) | 1,1,2-trichloroethane | 14.55 | 97 | 266588 | 21.066 | ppbV | | 95 |
| 52) | toluene | 14.86 | 91 | 815825 | 20.385 | ppbV | | 100 |
| 54) | 2-hexanone | 15.13 | 43 | 652719 | 19.563 | ppbV | | 98 |
| 55) | dibromochloromethane | 15.30 | 129 | 355470 | 21.902 | ppbV | | 99 |
| 56) | 1,2-dibromoethane | 15.54 | 107 | 409550 | 21.894 | ppbV | | 100 |
| 57) | tetrachloroethene | 16.00 | 166 | 293129 | 21.080 | ppbV | | 97 |
| 58) | 1,1,1,2-tetrachloroethane | 16.61 | 131 | 270335 | 21.587 | ppbV | | 97 |
| 59) | chlorobenzene | 16.62 | 112 | 650301 | 21.708 | ppbV | | 98 |
| 60) | ethylbenzene | 16.95 | 91 | 1068422 | 20.651 | ppbV | | 93 |
| 61) | m+p-xylene | 17.11 | 91 | 1738046 | 40.988 | ppbV | | 95 |
| 62) | bromoform | 17.17 | 173 | 295322 | 22.956 | ppbV | | 99 |
| 63) | styrene | 17.41 | 104 | 734910 | 22.211 | ppbV | | 98 |
| 64) | 1,1,2,2-tetrachloroethane | 17.49 | 83 | 645800 | 21.420 | ppbV | | 98 |
| 65) | o-xylene | 17.50 | 91 | 893863 | 20.229 | ppbV | | 93 |
| 66) | 1,2,3-Trichloropropane | 17.60 | 75 | 510021 | 21.613 | ppbV | # | 83 |
| 68) | isopropylbenzene | 17.98 | 105 | 1127060 | 20.900 | ppbV | | 96 |
| 69) | Bromobenzene | 18.06 | 77 | 652046 | 21.635 | ppbV | # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156852_Ev2.D
Acq On : 4 Apr 2018 11:01 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD020
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:00:00 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.52 | 105 | 1261385 | 20.903 | ppbV | 96 |
| 71) 1,3,5-trimethylbenzene | 18.57 | 105 | 1079754 | 20.650 | ppbV | 95 |
| 72) tert-butylbenzene | 18.91 | 119 | 1050425 | 20.817 | ppbV | 97 |
| 73) 1,2,4-trimethylbenzene | 18.91 | 105 | 1077120 | 20.819 | ppbV | 96 |
| 74) Benzyl Chloride | 19.02 | 91 | 769354 | 24.804 | ppbV | 94 |
| 75) 1,3-dichlorobenzene | 19.03 | 146 | 710399 | 22.111 | ppbV | 94 |
| 76) 1,4-dichlorobenzene | 19.09 | 146 | 693978 | 21.942 | ppbV | 96 |
| 77) sec-butylbenzene | 19.12 | 105 | 1492789 | 20.149 | ppbV | 98 |
| 78) p-isopropyltoluene | 19.24 | 119 | 1260951 | 20.267 | ppbV | 99 |
| 79) 1,2-dichlorobenzene | 19.37 | 146 | 665249 | 21.639 | ppbV | 93 |
| 80) n-butylbenzene | 19.58 | 91 | 1195936 | 19.480 | ppbV | 97 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 524014 | 20.271 | ppbV | 98 |
| 82) naphthalene | 21.00 | 128 | 1412494 | 19.219 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.26 | 180 | 468125 | 19.094 | ppbV | 97 |
| 84) hexachlorobutadiene | 21.32 | 225 | 387366 | 17.916 | ppbV | 99 |

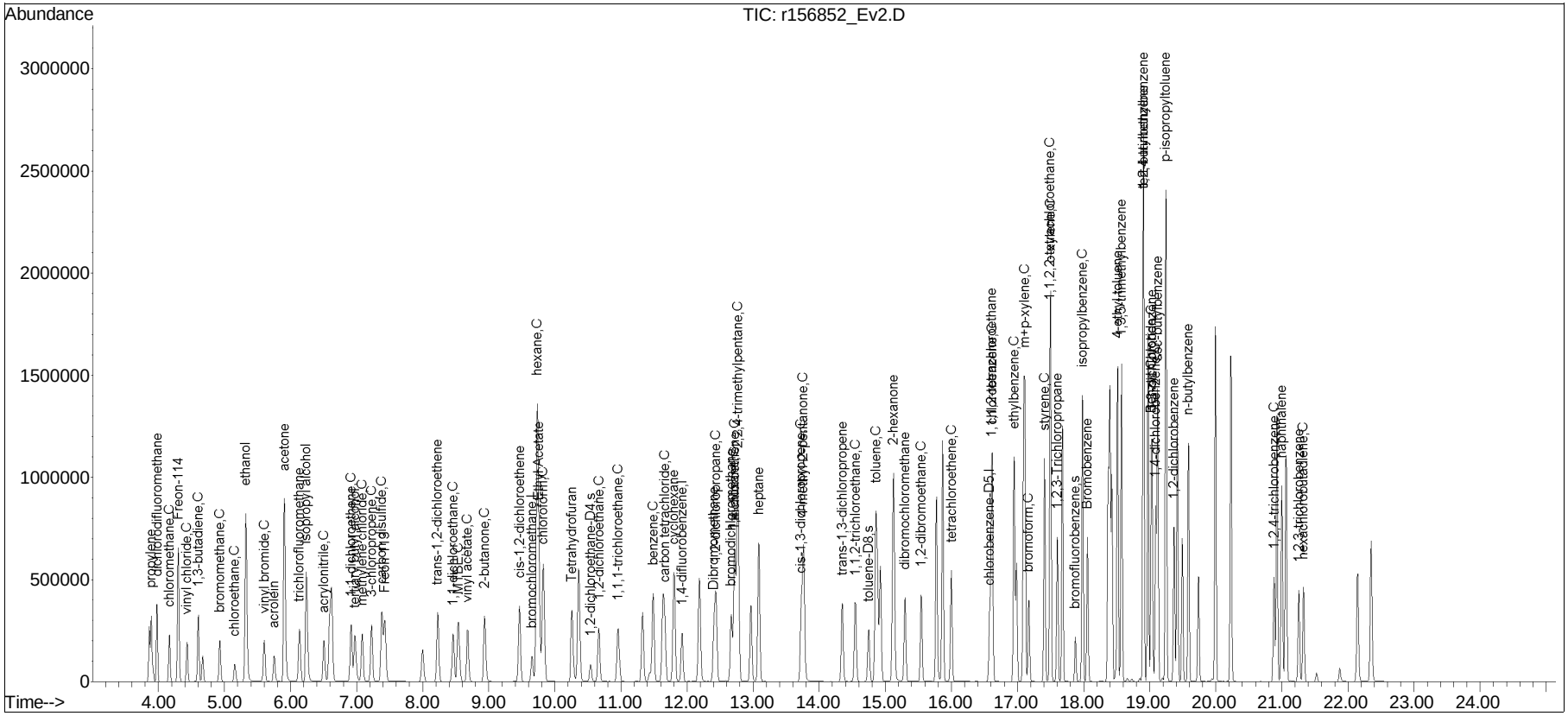
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156852_Ev2.D
Acq On : 4 Apr 2018 11:01 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD020
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:00:00 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

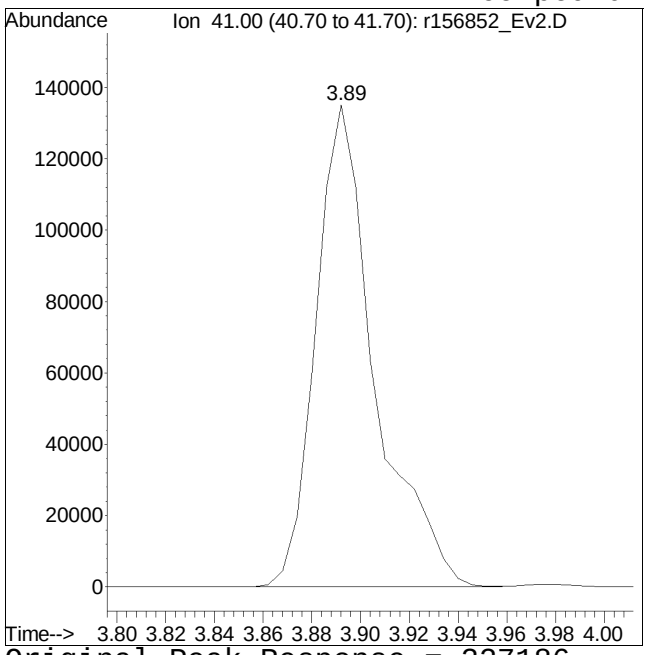
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



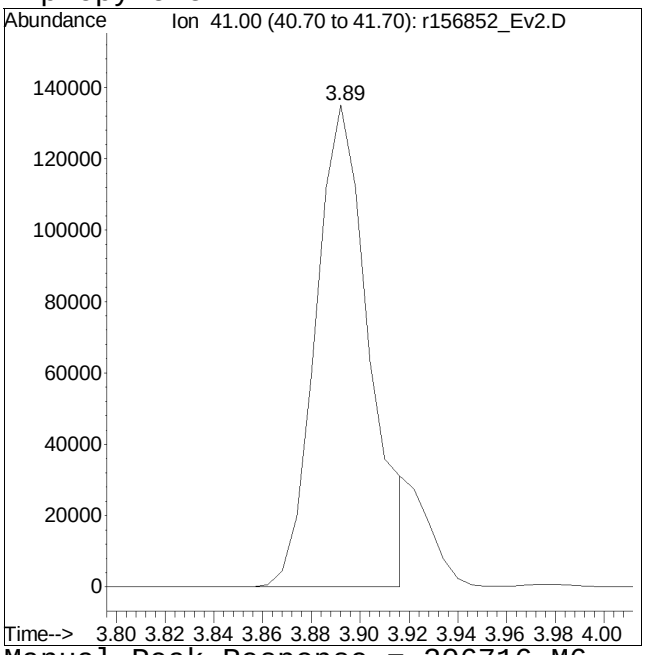
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156852_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 11:01 PM Instrument :
Sample : ITO15-SIMSTD020 Quant Date : 4/5/2018 9:49 am

Compound #2: propylene




Original Peak Response = 227186




Manual Peak Response = 206716 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156853_Ev2.D
Acq On : 4 Apr 2018 11:39 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD050
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:01:02 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 9.66 | 49 | 168135 | 10.000 ppbV | # 0.00 |
| Standard Area = 133810 | | | Recovery = 125.65% | | |
| 33) 1,4-difluorobenzene | 11.92 | 114 | 352614 | 10.000 ppbV | 0.00 |
| Standard Area = 280369 | | | Recovery = 125.77% | | |
| 51) chlorobenzene-D5 | 16.57 | 54 | 68260 | 10.000 ppbV | 0.00 |
| Standard Area = 59059 | | | Recovery = 115.58% | | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.54 | 65 | 71823 | 7.497 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 74.97% | | |
| 53) toluene-D8 | 14.75 | 98 | 309981 | 10.282 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 102.82% | | |
| 67) bromofluorobenzene | 17.88 | 95 | 172825 | 10.331 ppbV | 0.00 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 103.31% | | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 3.89 | 41 | 445306M6 | 36.561 ppbV | |
| 3) dichlorodifluoromethane | 3.98 | 85 | 834830 | 38.821 ppbV | 99 |
| 4) chloromethane | 4.16 | 50 | 568345 | 44.777 ppbV | 97 |
| 5) Freon-114 | 4.29 | 85 | 1159209 | 45.050 ppbV | 97 |
| 6) vinyl chloride | 4.43 | 62 | 555237 | 43.615 ppbV | 97 |
| 7) 1,3-butadiene | 4.60 | 54 | 480945 | 47.582 ppbV | 80 |
| 8) bromomethane | 4.93 | 94 | 457064 | 43.758 ppbV | 95 |
| 9) chloroethane | 5.16 | 64 | 291481 | 63.733 ppbV | 98 |
| 10) ethanol | 5.33 | 31 | 2159659 | 209.373 ppbV | 88 |
| 11) vinyl bromide | 5.60 | 106 | 433060 | 42.312 ppbV | 98 |
| 12) acrolein | 5.75 | 56 | 256641 | 48.169 ppbV # | 100 |
| 13) acetone | 5.91 | 43 | 2517432 | 165.655 ppbV # | 75 |
| 14) trichlorofluoromethane | 6.13 | 101 | 714205 | 34.328 ppbV | 98 |
| 15) isopropyl alcohol | 6.24 | 45 | 1816978 | 94.507 ppbV # | 97 |
| 16) acrylonitrile | 6.51 | 53 | 475320 | 47.509 ppbV | 98 |
| 17) 1,1-dichloroethene | 6.92 | 61 | 697737 | 39.309 ppbV | 94 |
| 18) tertiary butyl alcohol | 6.98 | 59 | 836407 | 43.635 ppbV # | 1 |
| 19) methylene chloride | 7.09 | 49 | 694830 | 41.422 ppbV | 89 |
| 20) 3-chloropropene | 7.22 | 41 | 730357 | 31.544 ppbV # | 93 |
| 21) carbon disulfide | 7.38 | 76 | 1551556 | 45.078 ppbV # | 90 |
| 22) Freon 113 | 7.43 | 101 | 858593 | 40.590 ppbV | 92 |
| 23) trans-1,2-dichloroethene | 8.22 | 61 | 712190 | 39.645 ppbV | 97 |
| 24) 1,1-dichloroethane | 8.46 | 63 | 853478 | 38.303 ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156853_Ev2.D
Acq On : 4 Apr 2018 11:39 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD050
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:01:02 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 25) MTBE | 8.53 | 73 | 1177704 | 38.812 ppbV | 95 |
| 26) vinyl acetate | 8.68 | 43 | 1167096 | 38.044 ppbV # | 92 |
| 27) 2-butanone | 8.93 | 43 | 1045008 | 34.805 ppbV # | 95 |
| 28) cis-1,2-dichloroethene | 9.47 | 61 | 709804 | 40.933 ppbV | 88 |
| 29) Ethyl Acetate | 9.76 | 61 | 200743 | 45.475 ppbV | 75 |
| 30) chloroform | 9.82 | 83 | 867298 | 41.549 ppbV | 99 |
| 31) Tetrahydrofuran | 10.25 | 42 | 872139 | 43.151 ppbV | 92 |
| 32) 1,2-dichloroethane | 10.67 | 62 | 545863 | 36.376 ppbV # | 93 |
| 34) hexane | 9.73 | 57 | 941264 | 42.939 ppbV | 98 |
| 36) 1,1,1-trichloroethane | 10.96 | 97 | 763031 | 44.082 ppbV | 97 |
| 37) benzene | 11.49 | 78 | 1856395 | 47.070 ppbV | 99 |
| 38) carbon tetrachloride | 11.66 | 117 | 682439 | 42.478 ppbV | 98 |
| 39) cyclohexane | 11.80 | 56 | 1046405 | 45.615 ppbV | 93 |
| 40) Dibromomethane | 12.41 | 93 | 529768 | 42.849 ppbV # | 100 |
| 41) 1,2-dichloropropane | 12.44 | 63 | 675613 | 42.538 ppbV | 96 |
| 42) bromodichloromethane | 12.67 | 83 | 948254 | 44.919 ppbV | 99 |
| 43) 1,4-dioxane | 12.71 | 88 | 409515 | 49.948 ppbV | 94 |
| 44) trichloroethene | 12.72 | 130 | 706802 | 47.844 ppbV | 98 |
| 45) 2,2,4-trimethylpentane | 12.77 | 57 | 3176108 | 44.524 ppbV | 93 |
| 46) heptane | 13.09 | 43 | 1424396 | 41.100 ppbV | 91 |
| 47) cis-1,3-dichloropropene | 13.73 | 75 | 968281 | 49.456 ppbV # | 89 |
| 48) 4-methyl-2-pentanone | 13.76 | 43 | 1636417 | 42.147 ppbV | 94 |
| 49) trans-1,3-dichloropropene | 14.35 | 75 | 909797 | 49.348 ppbV | 92 |
| 50) 1,1,2-trichloroethane | 14.55 | 97 | 674071 | 46.141 ppbV | 92 |
| 52) toluene | 14.86 | 91 | 2026619 | 47.745 ppbV | 99 |
| 54) 2-hexanone | 15.13 | 43 | 1493782 | 42.213 ppbV # | 88 |
| 55) dibromochloromethane | 15.30 | 129 | 872279 | 50.672 ppbV | 99 |
| 56) 1,2-dibromoethane | 15.54 | 107 | 1023684 | 51.598 ppbV | 100 |
| 57) tetrachloroethene | 16.00 | 166 | 757398 | 51.355 ppbV # | 93 |
| 58) 1,1,1,2-tetrachloroethane | 16.61 | 131 | 669366 | 50.396 ppbV | 96 |
| 59) chlorobenzene | 16.62 | 112 | 1633982 | 51.428 ppbV | 98 |
| 60) ethylbenzene | 16.95 | 91 | 2563197 | 46.712 ppbV | 90 |
| 61) m+p-xylene | 17.10 | 91 | 4076963 | 90.652 ppbV | 95 |
| 62) bromoform | 17.18 | 173 | 748547 | 54.861 ppbV | 98 |
| 63) styrene | 17.41 | 104 | 1788039 | 50.950 ppbV | 97 |
| 64) 1,1,2,2-tetrachloroethane | 17.49 | 83 | 1532696 | 47.932 ppbV | 98 |
| 65) o-xylene | 17.50 | 91 | 2046378 | 43.664 ppbV | 91 |
| 66) 1,2,3-Trichloropropane | 17.60 | 75 | 1225787 | 48.977 ppbV # | 88 |
| 68) isopropylbenzene | 17.98 | 105 | 2636965 | 46.105 ppbV | 92 |
| 69) Bromobenzene | 18.06 | 77 | 1549326 | 48.470 ppbV # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156853_Ev2.D
Acq On : 4 Apr 2018 11:39 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD050
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:01:02 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.52 | 105 | 2932320 | 45.815 | ppbV | 95 |
| 71) 1,3,5-trimethylbenzene | 18.57 | 105 | 2500541 | 45.089 | ppbV | 93 |
| 72) tert-butylbenzene | 18.91 | 119 | 2303694 | 43.045 | ppbV | 93 |
| 73) 1,2,4-trimethylbenzene | 18.91 | 105 | 2335520 | 42.562 | ppbV | 97 |
| 74) Benzyl Chloride | 19.02 | 91 | 1923840 | 58.480 | ppbV | 91 |
| 75) 1,3-dichlorobenzene | 19.04 | 146 | 1669921 | 49.004 | ppbV | 97 |
| 76) 1,4-dichlorobenzene | 19.09 | 146 | 1654752 | 49.330 | ppbV | 97 |
| 77) sec-butylbenzene | 19.12 | 105 | 3386283 | 43.093 | ppbV | 99 |
| 78) p-isopropyltoluene | 19.24 | 119 | 2767227 | 41.936 | ppbV | 97 |
| 79) 1,2-dichlorobenzene | 19.37 | 146 | 1578194 | 48.400 | ppbV | 93 |
| 80) n-butylbenzene | 19.58 | 91 | 2732069 | 41.958 | ppbV | 100 |
| 81) 1,2,4-trichlorobenzene | 20.88 | 180 | 1254234 | 45.746 | ppbV | 97 |
| 82) naphthalene | 21.00 | 128 | 3290075 | 42.208 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.26 | 180 | 1130279 | 43.467 | ppbV | 97 |
| 84) hexachlorobutadiene | 21.32 | 225 | 920630 | 40.147 | ppbV | 97 |

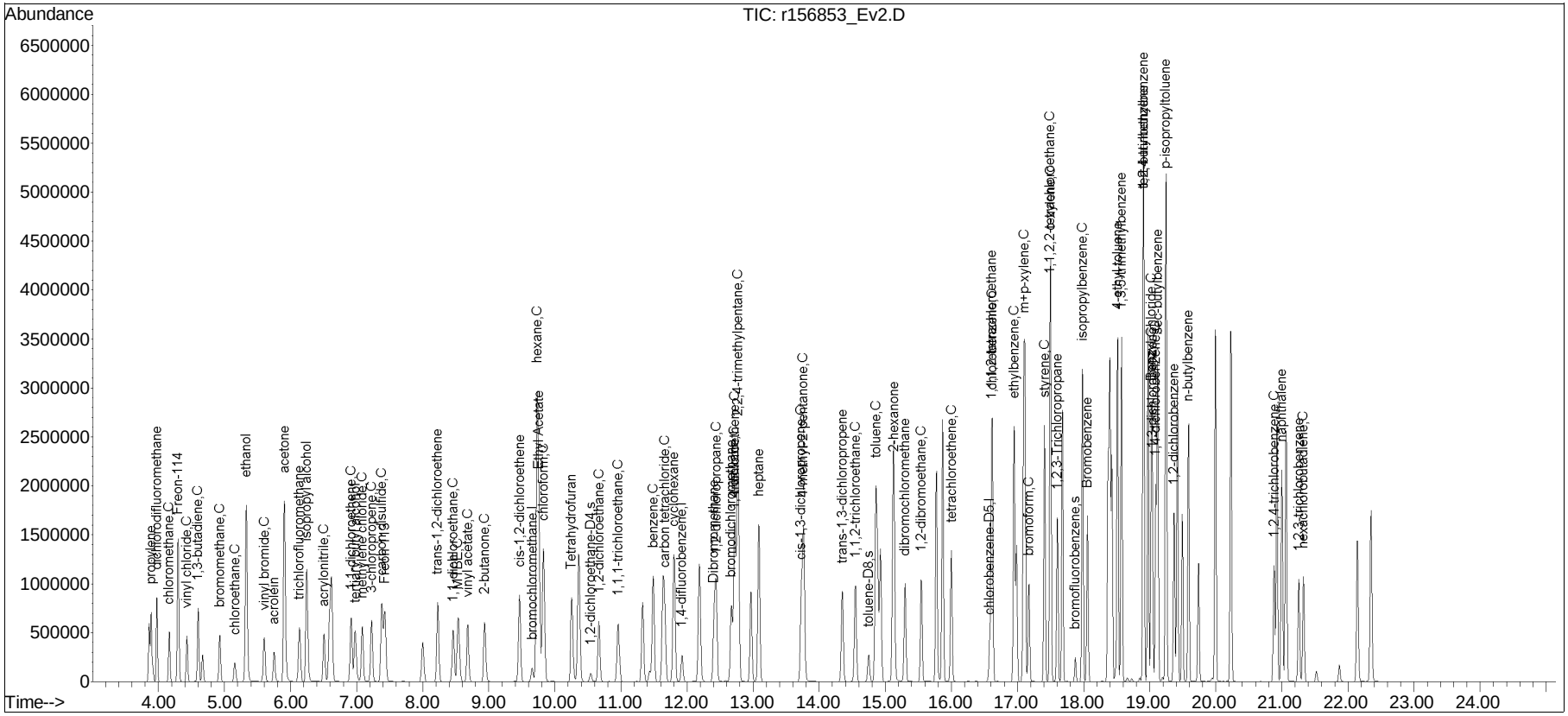
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156853_Ev2.D
Acq On : 4 Apr 2018 11:39 PM
Operator : AIRLAB15:RY
Sample : ITO15-SIMSTD050
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 10:01:02 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 09:48:29 2018
Response via : Initial Calibration

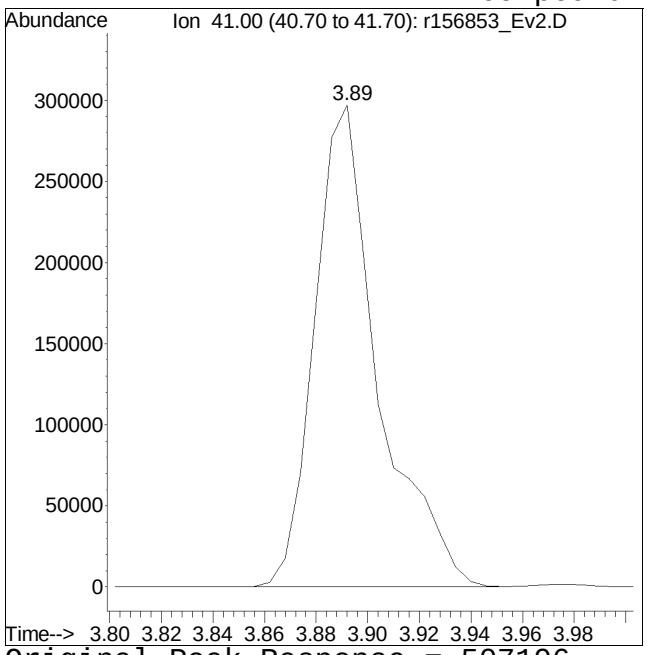
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



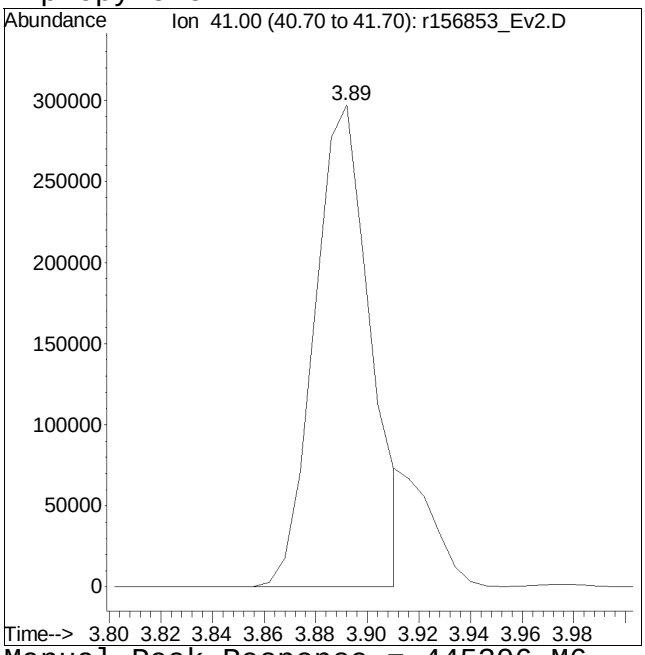
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156853_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/4/2018 11:39 PM Instrument :
Sample : ITO15-SIMSTD050 Quant Date : 4/5/2018 9:49 am

Compound #2: propylene




Original Peak Response = 507196




Manual Peak Response = 445306 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156858_Ev2.D
Acq On : 5 Apr 2018 10:22 AM
Operator : AIRLAB15:RY
Sample : CTO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 11:05:29 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 117 | -0.03 |
| 2 | | propylene | 0.743 | 0.640 | 13.9 | 103 | -0.02 |
| 3 | | dichlorodifluoromethane | 1.343 | 1.083 | 19.4 | 99 | -0.02 |
| 4 | C | chloromethane | 0.807 | 0.703 | 12.9 | 109 | -0.02 |
| 5 | | Freon-114 | 1.627 | 1.503 | 7.6 | 115 | -0.03 |
| 6 | C | vinyl chloride | 0.803 | 0.686 | 14.6 | 106 | -0.03 |
| 7 | C | 1,3-butadiene | 0.649 | 0.661 | -1.8 | 128 | -0.02 |
| 8 | C | bromomethane | 0.654 | 0.564 | 13.8 | 106 | -0.03 |
| 9 | C | chloroethane | 0.410 | 0.388 | 5.4 | 166# | -0.04 |
| 10 | | ethanol | 0.623 | 0.553 | 11.2 | 105 | -0.04 |
| 11 | C | vinyl bromide | 0.654 | 0.567 | 13.3 | 109 | -0.04 |
| 12 | | acrolein | 0.377 | 0.288 | 23.6 | 106 | -0.04 |
| 13 | | acetone | 0.963 | 0.785 | 18.5 | 101 | -0.04 |
| 14 | | trichlorofluoromethane | 1.254 | 0.905 | 27.8 | 85 | -0.03 |
| 15 | | isopropyl alcohol | 1.304 | 1.061 | 18.6 | 108 | -0.04 |
| 16 | C | acrylonitrile | 0.614 | 0.561 | 8.6 | 110 | -0.04 |
| 17 | C | 1,1-dichloroethene | 1.078 | 0.881 | 18.3 | 97 | -0.04 |
| 18 | | tertiary butyl alcohol | 1.215 | 1.011 | 16.8 | 104 | -0.04 |
| 19 | C | methylene chloride | 1.000 | 0.867 | 13.3 | 102 | -0.04 |
| 20 | C | 3-chloropropene | 1.178 | 1.033 | 12.3 | 88 | -0.04 |
| 21 | C | carbon disulfide | 2.075 | 1.900 | 8.4 | 108 | -0.04 |
| 22 | | Freon 113 | 1.320 | 1.091 | 17.3 | 101 | -0.04 |
| 23 | | trans-1,2-dichloroethene | 1.077 | 0.920 | 14.6 | 101 | -0.03 |
| 24 | C | 1,1-dichloroethane | 1.372 | 1.077 | 21.5 | 95 | -0.03 |
| 25 | C | MTBE | 1.806 | 1.567 | 13.2 | 101 | -0.03 |
| 26 | C | vinyl acetate | 1.878 | 2.025 | -7.8 | 130 | -0.03 |
| 27 | C | 2-butanone | 1.881 | 1.761 | 6.4 | 115 | -0.03 |
| 28 | | cis-1,2-dichloroethene | 1.041 | 0.893 | 14.2 | 101 | -0.03 |
| 29 | | Ethyl Acetate | 0.267 | 0.270 | -1.1 | 120 | -0.03 |
| 30 | C | chloroform | 1.265 | 1.115 | 11.9 | 105 | -0.03 |
| 31 | | Tetrahydrofuran | 1.188 | 1.075 | 9.5 | 104 | -0.03 |
| 32 | C | 1,2-dichloroethane | 0.916 | 0.650 | 29.0 | 85 | -0.03 |
| 33 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 124 | -0.03 |
| 34 | C | hexane | 0.615 | 0.593 | 3.6 | 118 | -0.03 |
| 35 | s | 1,2-dichloroethane-D4 | 0.263 | 0.192 | 27.0 | 87 | -0.03 |
| 36 | C | 1,1,1-trichloroethane | 0.494 | 0.440 | 10.9 | 111 | -0.04 |
| 37 | C | benzene | 1.149 | 1.048 | 8.8 | 116 | -0.04 |
| 38 | C | carbon tetrachloride | 0.460 | 0.366 | 20.4 | 99 | -0.04 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156858_Ev2.D
Acq On : 5 Apr 2018 10:22 AM
Operator : AIRLAB15:RY
Sample : CTO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 11:05:29 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 39 | | cyclohexane | 0.642 | 0.648 | -0.9 | 123 | -0.03 |
| 40 | | Dibromomethane | 0.394 | 0.288 | 26.9 | 101 | -0.04 |
| 41 | C | 1,2-dichloropropane | 0.461 | 0.381 | 17.4 | 105 | -0.03 |
| 42 | | bromodichloromethane | 0.572 | 0.560 | 2.1 | 116 | -0.03 |
| 43 | C | 1,4-dioxane | 0.236 | 0.246 | -4.2 | 131 | -0.04 |
| 44 | C | trichloroethene | 0.443 | 0.393 | 11.3 | 116 | -0.03 |
| 45 | C | 2,2,4-trimethylpentane | 2.021 | 2.004 | 0.8 | 122 | -0.03 |
| 46 | | heptane | 0.972 | 0.855 | 12.0 | 107 | -0.04 |
| 47 | C | cis-1,3-dichloropropene | 0.531 | 0.540 | -1.7 | 120 | -0.03 |
| 48 | C | 4-methyl-2-pentanone | 1.041 | 0.971 | 6.7 | 109 | -0.04 |
| 49 | | trans-1,3-dichloropropene | 0.489 | 0.415 | 15.1 | 98 | -0.04 |
| 50 | C | 1,1,2-trichloroethane | 0.429 | 0.385 | 10.3 | 115 | -0.03 |
| 51 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 108 | -0.02 |
| 52 | C | toluene | 6.484 | 6.265 | 3.4 | 109 | -0.02 |
| 53 | s | toluene-D8 | 4.477 | 4.536 | -1.3 | 111 | -0.03 |
| 54 | | 2-hexanone | 4.640 | 4.873 | -5.0 | 102 | -0.03 |
| 55 | | dibromochloromethane | 2.405 | 2.797 | -16.3 | 120 | -0.03 |
| 56 | C | 1,2-dibromoethane | 3.042 | 3.091 | -1.6 | 115 | -0.03 |
| 57 | C | tetrachloroethene | 2.234 | 2.295 | -2.7 | 115 | -0.03 |
| 58 | | 1,1,1,2-tetrachloroethane | 1.935 | 1.869 | 3.4 | 104 | -0.03 |
| 59 | C | chlorobenzene | 4.868 | 5.044 | -3.6 | 117 | -0.02 |
| 60 | C | ethylbenzene | 7.788 | 8.077 | -3.7 | 109 | -0.02 |
| 61 | C | m+p-xylene | 6.430 | 6.435 | -0.1 | 106 | -0.03 |
| 62 | C | bromoform | 1.912 | 2.291 | -19.8 | 124 | -0.03 |
| 63 | C | styrene | 4.895 | 5.343 | -9.2 | 113 | -0.02 |
| 64 | C | 1,1,2,2-tetrachloroethane | 4.554 | 4.949 | -8.7 | 115 | -0.02 |
| 65 | C | o-xylene | 6.514 | 6.671 | -2.4 | 105 | -0.02 |
| 66 | | 1,2,3-Trichloropropane | 3.737 | 3.474 | 7.0 | 103 | -0.03 |
| 67 | s | bromofluorobenzene | 2.279 | 1.608 | 29.4 | 71 | -0.02 |
| 68 | C | isopropylbenzene | 8.022 | 8.337 | -3.9 | 108 | -0.02 |
| 69 | | Bromobenzene | 4.666 | 4.501 | 3.5 | 104 | -0.02 |
| 70 | | 4-ethyl toluene | 8.577 | 9.584 | -11.7 | 111 | -0.02 |
| 71 | | 1,3,5-trimethylbenzene | 7.438 | 7.860 | -5.7 | 105 | -0.02 |
| 72 | | tert-butylbenzene | 7.638 | 7.252 | 5.1 | 100 | -0.03 |
| 73 | | 1,2,4-trimethylbenzene | 7.209 | 7.934 | -10.1 | 107 | -0.03 |
| 74 | C | Benzyl Chloride | 4.211 | 5.162 | -22.6 | 116 | -0.02 |
| 75 | | 1,3-dichlorobenzene | 4.702 | 5.070 | -7.8 | 110 | -0.03 |
| 76 | C | 1,4-dichlorobenzene | 4.649 | 4.878 | -4.9 | 108 | -0.02 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156858_Ev2.D
Acq On : 5 Apr 2018 10:22 AM
Operator : AIRLAB15:RY
Sample : CTO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 11:05:29 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 77 | sec-butylbenzene | 10.225 | 10.432 | -2.0 | 98 | -0.02 |
| 78 | p-isopropyltoluene | 8.557 | 8.273 | 3.3 | 93 | -0.02 |
| 79 | 1,2-dichlorobenzene | 4.428 | 4.761 | -7.5 | 108 | -0.02 |
| 80 | n-butylbenzene | 8.085 | 8.485 | -4.9 | 96 | -0.02 |
| 81 C | 1,2,4-trichlorobenzene | 3.160 | 3.581 | -13.3 | 97 | -0.02 |
| 82 | naphthalene | 9.523 | 9.713 | -2.0 | 92 | -0.02 |
| 83 | 1,2,3-trichlorobenzene | 3.063 | 3.224 | -5.3 | 92 | -0.02 |
| 84 C | hexachlorobutadiene | 2.734 | 2.941 | -7.6 | 95 | -0.02 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156858_Ev2.D
Acq On : 5 Apr 2018 10:22 AM
Operator : AIRLAB15:RY
Sample : CTO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 11:05:29 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 9.63 | 49 | 156310 | 10.000 ppbV | #-0.03 |
| Standard Area = 133810 | | | Recovery = 116.81% | | |
| 33) 1,4-difluorobenzene | 11.89 | 114 | 346313 | 10.000 ppbV | -0.03 |
| Standard Area = 280369 | | | Recovery = 123.52% | | |
| 51) chlorobenzene-D5 | 16.56 | 54 | 64033 | 10.000 ppbV | -0.02 |
| Standard Area = 59059 | | | Recovery = 108.42% | | |
| System Monitoring Compounds | | | | | |
| 35) 1,2-dichloroethane-D4 | 10.51 | 65 | 66480 | 7.287 ppbV | -0.03 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 72.87% | | |
| 53) toluene-D8 | 14.72 | 98 | 290473 | 10.132 ppbV | -0.03 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 101.32% | | |
| 67) bromofluorobenzene | 17.86 | 95 | 102958 | 7.055 ppbV | -0.02 |
| Spiked Amount 10.000 | Range 70 - 130 | | Recovery = 70.55% | | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 3.87 | 41 | 50043M6 | 4.309 ppbV | |
| 3) dichlorodifluoromethane | 3.96 | 85 | 84658 | 4.032 ppbV | 99 |
| 4) chloromethane | 4.14 | 50 | 54939 | 4.355 ppbV | 96 |
| 5) Freon-114 | 4.28 | 85 | 117500 | 4.619 ppbV | 96 |
| 6) vinyl chloride | 4.41 | 62 | 53617 | 4.270 ppbV | 97 |
| 7) 1,3-butadiene | 4.58 | 54 | 51623 | 5.087 ppbV # | 75 |
| 8) bromomethane | 4.91 | 94 | 44063 | 4.313 ppbV | 97 |
| 9) chloroethane | 5.13 | 64 | 30286 | 4.731 ppbV | 99 |
| 10) ethanol | 5.30 | 31 | 216004 | 22.194 ppbV | 87 |
| 11) vinyl bromide | 5.57 | 106 | 44343 | 4.336 ppbV | 97 |
| 12) acrolein | 5.73 | 56 | 22484 | 3.817 ppbV # | 100 |
| 13) acetone | 5.88 | 43 | 306584 | 20.359 ppbV # | 82 |
| 14) trichlorofluoromethane | 6.11 | 101 | 70708 | 3.608 ppbV | 97 |
| 15) isopropyl alcohol | 6.21 | 45 | 207398 | 10.176 ppbV # | 98 |
| 16) acrylonitrile | 6.48 | 53 | 43853 | 4.569 ppbV | 97 |
| 17) 1,1-dichloroethene | 6.89 | 61 | 68840 | 4.084 ppbV | 95 |
| 18) tertiary butyl alcohol | 6.95 | 59 | 79049 | 4.164 ppbV # | 1 |
| 19) methylene chloride | 7.06 | 49 | 67769 | 4.334 ppbV | 90 |
| 20) 3-chloropropene | 7.19 | 41 | 80727 | 4.385 ppbV # | 94 |
| 21) carbon disulfide | 7.35 | 76 | 148524 | 4.578 ppbV # | 92 |
| 22) Freon 113 | 7.40 | 101 | 85274 | 4.133 ppbV | 94 |
| 23) trans-1,2-dichloroethene | 8.20 | 61 | 71912 | 4.271 ppbV | 94 |
| 24) 1,1-dichloroethane | 8.43 | 63 | 84166 | 3.923 ppbV | 98 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156858_Ev2.D
Acq On : 5 Apr 2018 10:22 AM
Operator : AIRLAB15:RY
Sample : CTO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 11:05:29 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 25) MTBE | 8.52 | 73 | 122439 | 4.338 | ppbV | 95 |
| 26) vinyl acetate | 8.65 | 43 | 158260 | 5.392 | ppbV | 98 |
| 27) 2-butanone | 8.92 | 43 | 137624 | 4.681 | ppbV | 98 |
| 28) cis-1,2-dichloroethene | 9.43 | 61 | 69754 | 4.288 | ppbV | 91 |
| 29) Ethyl Acetate | 9.73 | 61 | 21138 | 5.068 | ppbV | 61 |
| 30) chloroform | 9.79 | 83 | 87117 | 4.407 | ppbV | 98 |
| 31) Tetrahydrofuran | 10.24 | 42 | 83997 | 4.523 | ppbV # | 89 |
| 32) 1,2-dichloroethane | 10.63 | 62 | 50821 | 3.550 | ppbV # | 93 |
| 34) hexane | 9.70 | 57 | 102704 | 4.819 | ppbV | 81 |
| 36) 1,1,1-trichloroethane | 10.93 | 97 | 76194 | 4.456 | ppbV # | 97 |
| 37) benzene | 11.45 | 78 | 181538 | 4.562 | ppbV | 98 |
| 38) carbon tetrachloride | 11.63 | 117 | 63458 | 3.985 | ppbV | 96 |
| 39) cyclohexane | 11.77 | 56 | 112160 | 5.044 | ppbV | 91 |
| 40) Dibromomethane | 12.37 | 93 | 49815 | 3.655 | ppbV # | 100 |
| 41) 1,2-dichloropropane | 12.41 | 63 | 66001 | 4.134 | ppbV | 95 |
| 42) bromodichloromethane | 12.64 | 83 | 97015 | 4.902 | ppbV | 100 |
| 43) 1,4-dioxane | 12.69 | 88 | 42583 | 5.217 | ppbV | 96 |
| 44) trichloroethene | 12.69 | 130 | 68047 | 4.438 | ppbV | 97 |
| 45) 2,2,4-trimethylpentane | 12.74 | 57 | 346922 | 4.956 | ppbV # | 90 |
| 46) heptane | 13.05 | 43 | 148080 | 4.400 | ppbV | 91 |
| 47) cis-1,3-dichloropropene | 13.70 | 75 | 93444 | 5.077 | ppbV # | 87 |
| 48) 4-methyl-2-pentanone | 13.73 | 43 | 168214 | 4.665 | ppbV | 94 |
| 49) trans-1,3-dichloropropene | 14.32 | 75 | 71915 | 4.244 | ppbV | 94 |
| 50) 1,1,2-trichloroethane | 14.52 | 97 | 66583 | 4.482 | ppbV | 93 |
| 52) toluene | 14.83 | 91 | 200572 | 4.831 | ppbV | 99 |
| 54) 2-hexanone | 15.11 | 43 | 156024 | 5.251 | ppbV | 92 |
| 55) dibromochloromethane | 15.28 | 129 | 89561 | 5.815 | ppbV | 99 |
| 56) 1,2-dibromoethane | 15.52 | 107 | 98969 | 5.081 | ppbV | 99 |
| 57) tetrachloroethene | 15.98 | 166 | 73472 | 5.136 | ppbV | 93 |
| 58) 1,1,1,2-tetrachloroethane | 16.58 | 131 | 59853 | 4.830 | ppbV | 97 |
| 59) chlorobenzene | 16.60 | 112 | 161488 | 5.180 | ppbV | 97 |
| 60) ethylbenzene | 16.93 | 91 | 258596 | 5.186 | ppbV | 96 |
| 61) m+p-xylene | 17.08 | 91 | 412051 | 10.008 | ppbV | 95 |
| 62) bromoform | 17.15 | 173 | 73360 | 5.993 | ppbV | 100 |
| 63) styrene | 17.39 | 104 | 171053 | 5.457 | ppbV | 96 |
| 64) 1,1,2,2-tetrachloroethane | 17.48 | 83 | 158450 | 5.434 | ppbV | 99 |
| 65) o-xylene | 17.48 | 91 | 213576 | 5.121 | ppbV | 97 |
| 66) 1,2,3-Trichloropropane | 17.58 | 75 | 111234 | 4.648 | ppbV # | 88 |
| 68) isopropylbenzene | 17.97 | 105 | 266932 | 5.197 | ppbV | 97 |
| 69) Bromobenzene | 18.04 | 77 | 144095 | 4.823 | ppbV # | 100 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156858_Ev2.D
Acq On : 5 Apr 2018 10:22 AM
Operator : AIRLAB15:RY
Sample : CTO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 11:05:29 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\r156850_Ev2.D
Sub List : Default - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 70) 4-ethyl toluene | 18.49 | 105 | 306860 | 5.587 ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.56 | 105 | 251646 | 5.284 ppbV | 96 |
| 72) tert-butylbenzene | 18.88 | 119 | 232179 | 4.747 ppbV | 98 |
| 73) 1,2,4-trimethylbenzene | 18.88 | 105 | 254023 | 5.503 ppbV | 96 |
| 74) Benzyl Chloride | 19.01 | 91 | 165272 | 6.130 ppbV | 96 |
| 75) 1,3-dichlorobenzene | 19.02 | 146 | 162334 | 5.392 ppbV | 98 |
| 76) 1,4-dichlorobenzene | 19.07 | 146 | 156181 | 5.247 ppbV | 92 |
| 77) sec-butylbenzene | 19.10 | 105 | 333995 | 5.101 ppbV | 96 |
| 78) p-isopropyltoluene | 19.23 | 119 | 264864 | 4.834 ppbV | 100 |
| 79) 1,2-dichlorobenzene | 19.35 | 146 | 152433 | 5.376 ppbV | 98 |
| 80) n-butylbenzene | 19.57 | 91 | 271657 | 5.247 ppbV | 96 |
| 81) 1,2,4-trichlorobenzene | 20.87 | 180 | 114657 | 5.666 ppbV | 96 |
| 82) naphthalene | 20.98 | 128 | 310971 | 5.100 ppbV | 98 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 103209 | 5.262 ppbV | 96 |
| 84) hexachlorobutadiene | 21.31 | 225 | 94148 | 5.378 ppbV | 99 |

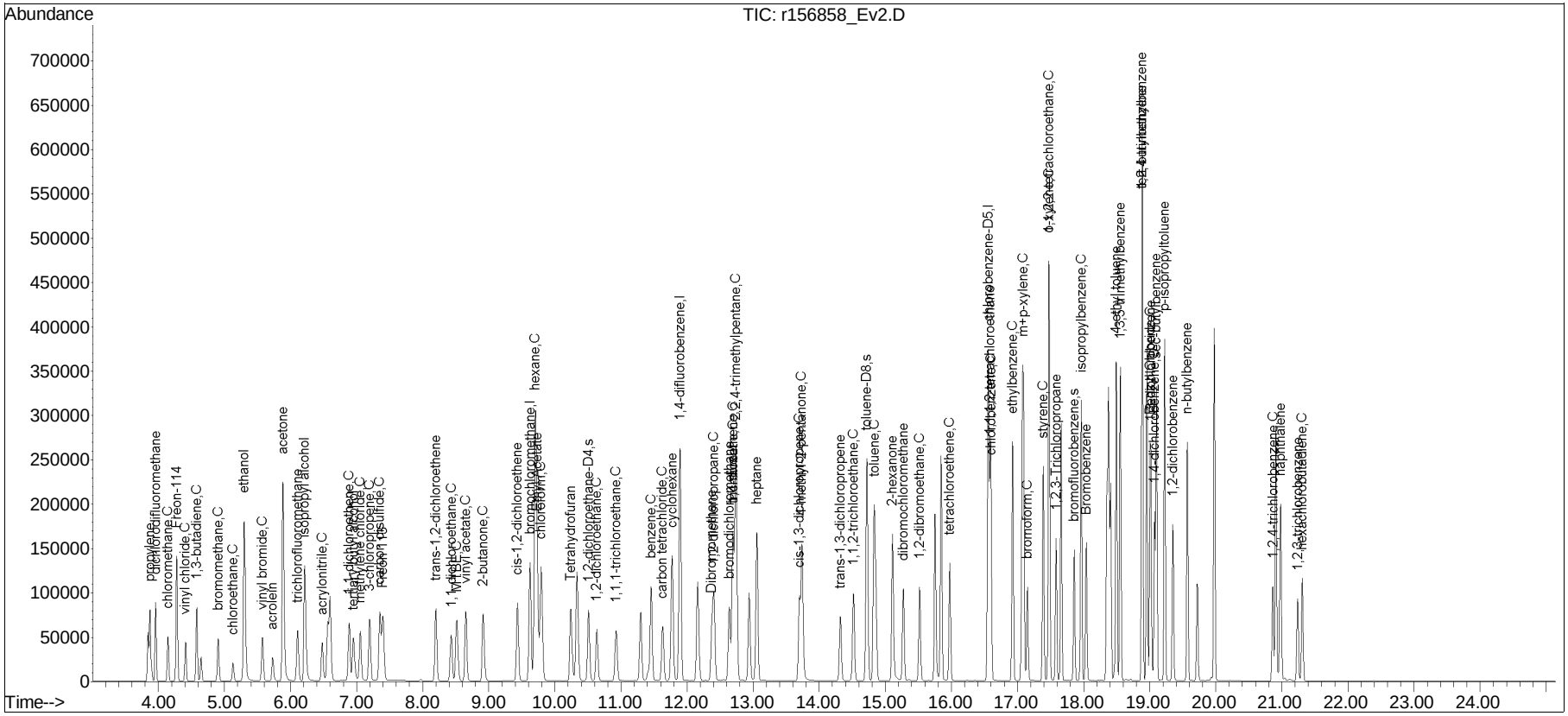
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\
Data File : r156858_Ev2.D
Acq On : 5 Apr 2018 10:22 AM
Operator : AIRLAB15:RY
Sample : CTO15-SIMSTD5.0
Misc : WG1103790
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 05 11:05:29 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180404SIM_ICAL\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

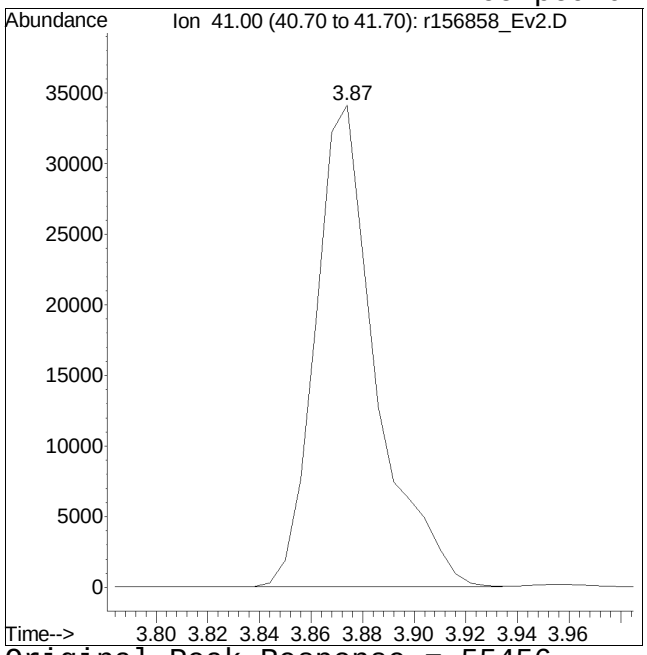
Sub List : Default - All compounds listed8\180404SIM_ICAL\r156850_Ev2.D



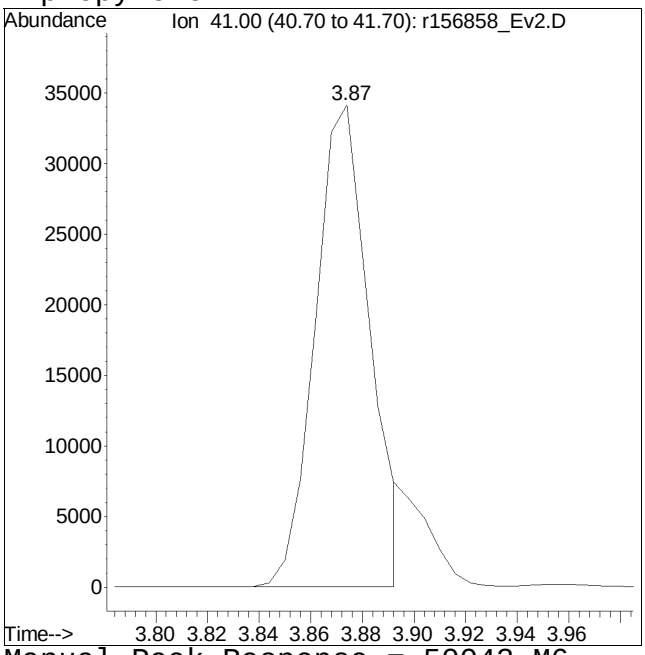
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r156858_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/5/2018 10:22 AM Instrument :
Sample : CTO15-SIMSTD5.0 Quant Date : 4/5/2018 10:59 am

Compound #2: propylene




Original Peak Response = 55456




Manual Peak Response = 50043 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Work Group

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Apr 23 2018, 06:00 pm

Work Group: WG1108448 for Department: 3 GC/MS

Created: 20-APR-18 Due: Operator: ry

| Sample | Client ID | C | Product | Matrix | Stat | UA | HOLD | DUE | PR | Location |
|---|---|---|---|---|---|---|---|---|---|---|
| L1812962-01 | S01-HGR-OA02-041218 | S | TO15-SIM | AIR | DONE | U | 0512 | 0423 | S0 | Can-6 |
| L1812962-02 | S01-B505-IA06-041218 | S | TO15-SIM | AIR | DONE | U | 0512 | 0423 | S0 | Can-6 |
| L1812962-03 | S01-B505-IA10-041218 | S | TO15-SIM | AIR | DONE | U | 0512 | 0423 | S0 | Can-6 |
| L1812962-04 | S01-B505-IA11-041218 | S | TO15-SIM | AIR | DONE | U | 0512 | 0423 | S0 | Can-6 |
| L1812962-08 | S01-B505-IA09-041218 | S | TO15-SIM | AIR | DONE | U | 0512 | 0423 | S0 | Can-6 |
| WG1108448-1 | MS BFB Tune Standard | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108448-2 | Continuing Calibrati | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108448-3 | Laboratory Control S | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108448-4 | Laboratory Method Bl | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108448-5 | Duplicate Sample | S | TO15-SIM | AIR | DONE | U | | | | |

Comments:

WG1108448-5 L1812962-04

ALPHA ANALYTICAL LABORATORIES, INC.

Alpha WORK GROUP REPORT (wk02)

Apr 23 2018, 06:00 pm

Work Group: WG1108672 for Department: 3 GC/MS

Created: 21-APR-18 Due: Operator: ry

| Sample | Client ID | C | Product | Matrix | Stat | UA | HOLD | DUE | PR | Location |
|---|---|---|---|---|---|---|---|---|---|---|
| L1812962-05 | S01-B505-IA12-041218 | S | TO15-SIM | AIR | DONE | U | 0512 | 0423 | S0 | Can-6 |
| L1812962-06 | S01-B505-IA12-041218-FD01 | S | TO15-SIM | AIR | DONE | U | 0512 | 0423 | S0 | Can-6 |
| L1812962-07 | S01-B505-IA07-041218 | S | TO15-SIM | AIR | DONE | U | 0512 | 0423 | S0 | Can-6 |
| L1813132-01 | IA-37WE-2 | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| L1813132-02 | IA-37WE-1 | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| L1813132-03 | SS-37WE | S | TO15-SIM | SOIL_VAPOR | DONE | U | 0512 | 0423 | S0 | Can-2.7 |
| L1813132-04 | SP-E APT 1 | S | TO15-SIM | SOIL_VAPOR | DONE | U | 0512 | 0423 | S0 | Can-2.7 |
| L1813132-05 | IA-16C-1 | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| L1813132-06 | IA-16C-1A | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| L1813132-07 | IA-16C-2 | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| L1813132-08 | IA-14C-2 | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| L1813132-09 | IA-14C-1 | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| L1813132-10 | UNIT 4 | S | TO15-SIM | SOIL_VAPOR | DONE | U | 0513 | 0423 | S0 | Can-2.7 |
| L1813132-11 | UNIT 8 | S | TO15-SIM | SOIL_VAPOR | DONE | U | 0513 | 0423 | S0 | Can-2.7 |
| L1813132-12 | SS-14C | S | TO15-SIM | SOIL_VAPOR | DONE | U | 0513 | 0423 | S0 | Can-2.7 |
| L1813132-13 | IA-11B-1 | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| L1813132-14 | IA-11B-2 | S | TO15-SIM | AIR | DONE | U | 0513 | 0423 | S0 | Can-6 |
| WG1108672-1 | MS BFB Tune Standard | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108672-1 | MS BFB Tune Standard | S | TO15-SIM | SOIL_VAPOR | DONE | U | | | | |
| WG1108672-2 | Continuing Calibrati | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108672-2 | Continuing Calibrati | S | TO15-SIM | SOIL_VAPOR | DONE | U | | | | |
| WG1108672-3 | Laboratory Control S | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108672-3 | Laboratory Control S | S | TO15-SIM | SOIL_VAPOR | DONE | U | | | | |
| WG1108672-4 | Laboratory Method Bl | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108672-4 | Laboratory Method Bl | S | TO15-SIM | SOIL_VAPOR | DONE | U | | | | |
| WG1108672-5 | Duplicate Sample | S | TO15-SIM | AIR | DONE | U | | | | |
| WG1108672-5 | Duplicate Sample | S | TO15-SIM | SOIL_VAPOR | DONE | U | | | | |

Comments:

WG1108672-5 L1813132-04

# Sequence Logs

# Alpha Analytical Air Lab
# Instrument Run Log

ID: Airpiano 2

Internal Standard/Surrogate IDs: SS17-030/ SS17-031

Date: 03/25/18

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: AR

Sequence File Name: 180325.S

SIM ICAL# Full Scan ICAL# TO-12 ICAL# APH ICAL#

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ Sublist | Leak Check Pass ? Y/N |
|---|---|---|---|---|---|---|---|
| 1 | TA2032501 | TO15_SFS | R253193 | 250ml | TUNE | | NA |
| 5 | ITO15-SIMSTD0.02 | TO15_SFS | R253194 | SS18-008D 125ML | SIM ONLY | | NA |
| 5 | ITO15-SIMSTD0.04 | TO15_SFS | R253195 | SS18-008D 250ML | SIM ONLY | | NA |
| 5 | ITO15-SIMSTD0.1 | TO15_SFS | R253196 | SS18-008C 25ML | SIM ONLY | | NA |
| 6 | ITO15-SIMSTD0.2 | TO15_SFS | R253197 | SS18-008C 50ML | | | NA |
| 6 | ITO15-SIMSTD0.5 | TO15_SFS | R253198 | SS18-008C 125ML | | | NA |
| 6 | ITO15-SIMSTD1.0 | TO15_SFS | R253199 | SS18-008C 250ML | | | NA |
| 7 | ITO15-SIMSTD5.0 | TO15_SFS | R253200 | SS18-008B1 125ML | | | NA |
| 7 | ITO15-SIMSTD10.0 | TO15_SFS | R253201 | SS18-008B1 250ML | | | NA |
| 8 | ITO15-SIMSTD20.0 | TO15_SFS | R253202 | SS18-008A 50ML | | | NA |
| 8 | ITO15-SIMSTD50.0 | TO15_SFS | R253203 | SS18-008A 125ML | | | NA |
| 8 | ITO15-SIMSTD100.0 | TO15_SFS | R253204 | SS18-008A 250ML | FULL SCAN ONLY | | NA |
| 1 | BA2032501 | TO15_SFS | R253205 | 250ml | | | NA |
| | | Pause | | | | | |
| 1 | BA2032501 | TO15_SFS | R253206 | 250ml | | | NA |
| 2 | CTO15-LLSTD10.0 | TO15_SFS | R253207 | SS18-007A 250ML | FULL SCAN ICV | | NA |
| 2 | CTO15-SIMSTD5.0 | TO15_SFS | R253208 | SS18-007A 125ML | SIM ICV | | NA |
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# Alpha Analytical Air Lab
# Instrument Run Log

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**Column ID:** Rtx-1 0.25 mm ID

**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation report.

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume analyzed (mL) }

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

# Alpha Analytical Air Lab
# Instrument Run Log

Instrument ID: Airlab15

Internal Standard/Surrogate IDs: SS17-030 / SS17-031

Date: 04/04/18

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: RY

Sequence File Name: 180404.S

SIM ICAL# Full Scan ICAL# NJ ICAL# APH ICAL#

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ sublist | Leak Check Pass ? Y/N |
|---|---|---|---|---|---|---|---|
| 1 | TA15040301 | TO15_SFS.qgm | R156843.qgd | WG1102798 | TUNE | | NA |
| 5 | ITO15-SIMSTD0.02 | TO15_SFS.qgm | R156844.qgd | WG1102798 | SIM ONLY | SS18-008A | NA |
| 5 | ITO15-SIMSTD0.04 | TO15_SFS.qgm | R156845.qgd | WG1102798 | SIM ONLY | SS18-008A | NA |
| 5 | ITO15-SIMSTD0.1 | TO15_SFS.qgm | R156846.qgd | WG1102798 | SIM ONLY | SS18-008A | NA |
| 6 | ITO15-SIMSTD0.2 | TO15_SFS.qgm | R156847.qgd | WG1102798 | | SS18-008C | NA |
| 6 | ITO15-SIMSTD0.5 | TO15_SFS.qgm | R156848.qgd | WG1102798 | | SS18-008C | NA |
| 6 | ITO15-SIMSTD1.0 | TO15_SFS.qgm | R156849.qgd | WG1102798 | | SS18-008C | Y |
| 7 | ITO15-SIMSTD5.0 | TO15_SFS.qgm | R156850.qgd | WG1102798 | | SS18-008B | Y |
| 7 | ITO15-SIMSTD010 | TO15_SFS.qgm | R156851.qgd | WG1102798 | | SS18-008B | Y |
| 8 | ITO15-SIMSTD020 | TO15_SFS.qgm | R156852.qgd | WG1102798 | | SS18-008A | Y |
| 8 | ITO15-SIMSTD050 | TO15_SFS.qgm | R156853.qgd | WG1102798 | | SS18-008A | Y |
| 8 | ITO15-LLSTD100 | TO15_SFS.qgm | R156854.qgd | WG1102798 | NOT USED FOR SIM | SS18-008A | Y |
| 1 | BLANK | TO15_SFS.qgm | R156855.qgd | WG1102798 | | | Y |
| 1 | BLANK | TO15_SFS.qgm | R156856.qgd | WG1102798 | | | Y |
| 2 | CTO15-LLSTD010 | TO15_SFS.qgm | R156857.qgd | WG1102798 | FULL SCAN ICV | | Y |
| 2 | CTO15-SIMSTD5.0 | TO15_SFS.qgm | R156858.qgd | WG1102798 | SIM ICV | | Y |
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# Alpha Analytical Air Lab
# Instrument Run Log

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**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation re

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume analyzed (mL) }

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

# Alpha Analytical Air Lab
# Instrument Run Log

ID: Airpiano 2

Internal Standard/Surrogate IDs: SS17-030/ SS17-031

Date: 04/21/18

Internal Standard/Surrogate Volume: 100 ml

Analyst Initials: RY / MB

Sequence File Name: 180421.S

SIM ICAL# 14572 Full Scan ICAL# 14571 TO-12 ICAL# APH ICAL#

| AS Position # | Sample ID | Acquisition Method | Data File ID | Standard ID or Batch ID #, ICAL Ref # | Comment (s) | Product/ Sublist | Leak Check Pass ? Y/N |
|---|---|---|---|---|---|---|---|
| 1 | TA2042101 | TO15_SFS | R253809 | 250ml | TUNE | | NA |
| 2 | CA2042101 | TO15_SFS | R253810 | SS18-008B2 250 ml 10.0 | LL CC | | NA |
| 3 | CTO15-LLSTD10.0 | TO15_SFS | R253811 | SS18-0087B 250 ml 10.0 | LL LCS | | NA |
| 3 | CTO15-SIMSTD5.0 | TO15_SFS | R253812 | SS18-0087B 125 ml 5.0 | SIM LCS | | NA |
| 1 | BA2042101 | TO15_SFS | R253813 | 250ml | LL BLANK | | NA |
| 1 | BA2042102 | TO15_SFS | R253814 | 250ml | SIM BLANK | | NA |
| 2 | L1812962-05,3,250,250 | TO15_SFS | R253815 | WG1108672,ICAL14572 | | 9 CL BY SIM | Y |
| 3 | L1812962-06,3,250,250 | TO15_SFS | R253816 | WG1108672,ICAL14572 | | 9 CL BY SIM | Y |
| 4 | L1812962-07,3,250,250 | TO15_SFS | R253817 | WG1108672,ICAL14572 | | 9 CL BY SIM | Y |
| 5 | L1813132-01,3,250,250 | TO15_SFS | R253818 | WG1108672,ICAL14572 | ETOH OVERCAL | STD + NAPH BY SIM | Y |
| 6 | L1813132-02,3,250,250 | TO15_SFS | R253819 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 7 | L1813132-05,3,250,250 | TO15_SFS | R253820 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 8 | L1813132-06,3,250,250 | TO15_SFS | R253821 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 9 | L1813132-07,3,250,250 | TO15_SFS | R253822 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 10 | L1813132-08,3,250,250 | TO15_SFS | R253823 | WG1108672,ICAL14572 | ETOH OVERCAL | STD + NAPH BY SIM | Y |
| 11 | L1813132-09,3,250,250 | TO15_SFS | R253824 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 12 | L1813132-13,3,250,250 | TO15_SFS | R253825 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 13 | L1813132-14,3,250,250 | TO15_SFS | R253826 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 14 | L1813132-03,3,250,250 | TO15_SFS | R253827 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 15 | L1813132-04D,3,25,250 | TO15_SFS | R253828 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 15 | L1813132-04DDUP,3,25,250 | TO15_SFS | R253829 | WG1108672,ICAL14572 | TO15-SIM DUP | STD + NAPH BY SIM | Y |
| 16 | L1813132-10,3,250,250 | TO15_SFS | R253830 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |
| 1 | L1813132-11,3,250,250 | TO15_SFS | R253831 | WG1108672,ICAL14572 | | STD + NAPH BY SIM | Y |

# Alpha Analytical Air Lab
# Instrument Run Log

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|---|---|---|---|---|---|---|---|
| 2 | L1813132-12,3,250,250 | TO15_SFS | R253832 | WG1108672,ICAL14572 | PCE OVERCAL | STD + NAPH BY SIM | Y |
| 2 | L1813132-12D,3,100,250 | TO15_SFS | R253833 | WG1108672,ICAL14572 | PCE ONLY | STD + NAPH BY SIM | Y |
| 5 | L1813132-01D,3,100,250 | TO15_SFS | R253834 | WG1108672,ICAL14572 | ETOH ONLY | STD + NAPH BY SIM | Y |
| 10 | L1813132-08D,3,50,250 | TO15_SFS | R253835 | WG1108672,ICAL14572 | ETOH ONLY | STD + NAPH BY SIM | Y |
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**Column ID:** Rtx-1 0.25 mm ID

**Date(s) of Initial Calibration:** Refer to Initial Calibration Summary Form 6

**Date Acquired:** see Instrument Performance Check Summary and/or quantitation report.

**Sample ID information:** L1301234-01,3,250,250 { Lab sample ID, dept #, actual volume analyzed (mL), nominal volume analyzed (mL) }

**Dilution Factor:** See Form 1 report, or divide nominal volume by actual volume analyzed

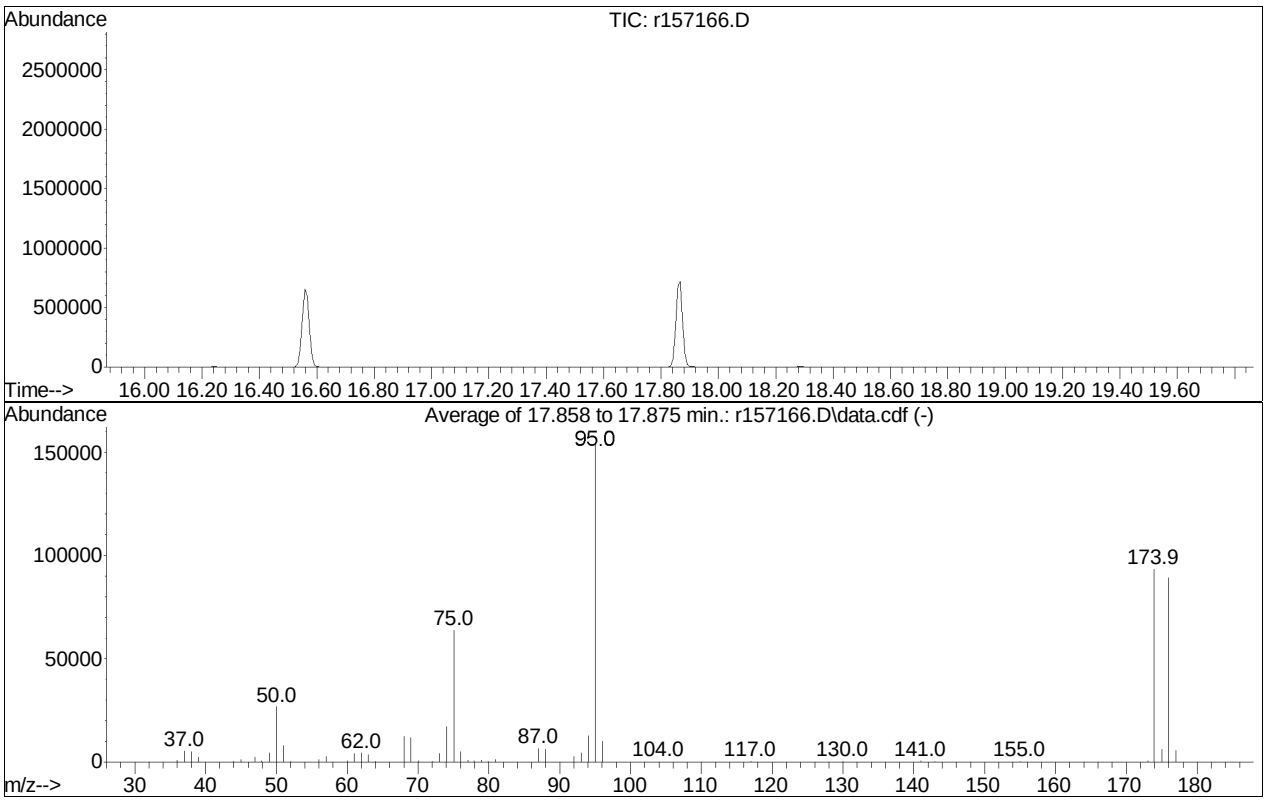
# Analytical Event

# Continuing Calibration
# BFB Tune

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157166.D
Acq On : 20 Apr 2018 2:23 PM
Operator : AIRLAB15:RY
Sample : WG1108448-1,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Thu Apr 05 10:02:48 2018




AutoFind: Scans 2263, 2264, 2265; Background Corrected with Scan 2258

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 17.3 | 26810 | PASS |
| 75 | 95 | 30 | 66 | 41.4 | 63954 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 154538 | PASS |
| 96 | 95 | 5 | 9 | 6.6 | 10207 | PASS |
| 173 | 174 | 0.00 | 2 | 0.5 | 479 | PASS |
| 174 | 95 | 50 | 120 | 60.4 | 93415 | PASS |
| 175 | 174 | 4 | 9 | 6.7 | 6236 | PASS |
| 176 | 174 | 93 | 101 | 95.3 | 89019 | PASS |
| 177 | 176 | 5 | 9 | 6.3 | 5614 | PASS |

# Continuing Calibration

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-2,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 99 | -0.04 |
| 2 | | propylene | 0.743 | 0.709 | 4.6 | 97 | -0.03 |
| 3 | | dichlorodifluoromethane | 1.343 | 1.139 | 15.2 | 88 | -0.04 |
| 4 | C | chloromethane | 0.807 | 0.722 | 10.5 | 95 | -0.04 |
| 5 | | Freon-114 | 1.627 | 1.498 | 7.9 | 97 | -0.04 |
| 6 | C | vinyl chloride | 0.803 | 0.675 | 15.9 | 88 | -0.04 |
| 7 | C | 1,3-butadiene | 0.649 | 0.639 | 1.5 | 106 | -0.04 |
| 8 | C | bromomethane | 0.654 | 0.549 | 16.1 | 88 | -0.04 |
| 9 | C | chloroethane | 0.410 | 0.365 | 11.0 | 133 | -0.04 |
| 10 | | ethanol | 0.623 | 0.490 | 21.3 | 79 | -0.04 |
| 11 | C | vinyl bromide | 0.654 | 0.554 | 15.3 | 90 | -0.05 |
| 12 | | acrolein | 0.377 | 0.251 | 33.4# | 79 | -0.04 |
| 13 | | acetone | 0.963 | 0.838 | 13.0 | 92 | -0.05 |
| 14 | | trichlorofluoromethane | 1.254 | 0.995 | 20.7 | 80 | -0.05 |
| 15 | | isopropyl alcohol | 1.304 | 1.033 | 20.8 | 90 | -0.04 |
| 16 | C | acrylonitrile | 0.614 | 0.490 | 20.2 | 82 | -0.04 |
| 17 | C | 1,1-dichloroethene | 1.078 | 0.864 | 19.9 | 81 | -0.05 |
| 18 | | tertiary butyl alcohol | 1.215 | 0.870 | 28.4 | 76 | -0.04 |
| 19 | C | methylene chloride | 1.000 | 0.838 | 16.2 | 83 | -0.05 |
| 20 | C | 3-chloropropene | 1.178 | 1.038 | 11.9 | 75 | -0.04 |
| 21 | C | carbon disulfide | 2.075 | 1.763 | 15.0 | 86 | -0.05 |
| 22 | | Freon 113 | 1.320 | 1.113 | 15.7 | 88 | -0.05 |
| 23 | | trans-1,2-dichloroethene | 1.077 | 0.995 | 7.6 | 92 | -0.04 |
| 24 | C | 1,1-dichloroethane | 1.372 | 1.234 | 10.1 | 92 | -0.05 |
| 25 | C | MTBE | 1.806 | 1.596 | 11.6 | 88 | -0.04 |
| 26 | C | vinyl acetate | 1.878 | 2.073 | -10.4 | 113 | -0.04 |
| 27 | C | 2-butanone | 1.881 | 1.736 | 7.7 | 97 | -0.04 |
| 28 | | cis-1,2-dichloroethene | 1.041 | 0.916 | 12.0 | 88 | -0.04 |
| 29 | | Ethyl Acetate | 0.267 | 0.252 | 5.6 | 95 | -0.04 |
| 30 | C | chloroform | 1.265 | 1.148 | 9.2 | 92 | -0.04 |
| 31 | | Tetrahydrofuran | 1.188 | 1.070 | 9.9 | 88 | -0.04 |
| 32 | C | 1,2-dichloroethane | 0.916 | 0.741 | 19.1 | 82 | -0.04 |
| 33 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 103 | -0.04 |
| 34 | C | hexane | 0.615 | 0.573 | 6.8 | 95 | -0.04 |
| 36 | C | 1,1,1-trichloroethane | 0.494 | 0.502 | -1.6 | 105 | -0.05 |
| 37 | C | benzene | 1.149 | 1.015 | 11.7 | 93 | -0.04 |
| 38 | C | carbon tetrachloride | 0.460 | 0.410 | 10.9 | 92 | -0.04 |
| 39 | | cyclohexane | 0.642 | 0.621 | 3.3 | 98 | -0.04 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-2,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 40 | | Dibromomethane | 0.394 | 0.296 | 24.9 | 87 | -0.05 |
| 41 | C | 1,2-dichloropropane | 0.461 | 0.389 | 15.6 | 88 | -0.04 |
| 42 | | bromodichloromethane | 0.572 | 0.580 | -1.4 | 99 | -0.04 |
| 43 | C | 1,4-dioxane | 0.236 | 0.229 | 3.0 | 101 | -0.05 |
| 44 | C | trichloroethene | 0.443 | 0.391 | 11.7 | 96 | -0.05 |
| 45 | C | 2,2,4-trimethylpentane | 2.021 | 1.959 | 3.1 | 99 | -0.04 |
| 46 | | heptane | 0.972 | 0.926 | 4.7 | 97 | -0.05 |
| 47 | C | cis-1,3-dichloropropene | 0.531 | 0.513 | 3.4 | 95 | -0.04 |
| 48 | C | 4-methyl-2-pentanone | 1.041 | 1.053 | -1.2 | 98 | -0.04 |
| 49 | | trans-1,3-dichloropropene | 0.489 | 0.404 | 17.4 | 79 | -0.04 |
| 50 | C | 1,1,2-trichloroethane | 0.429 | 0.388 | 9.6 | 96 | -0.04 |
| 51 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 95 | -0.03 |
| 52 | C | toluene | 6.484 | 5.988 | 7.6 | 92 | -0.03 |
| 54 | | 2-hexanone | 4.640 | 4.925 | -6.1 | 90 | -0.04 |
| 55 | | dibromochloromethane | 2.405 | 2.778 | -15.5 | 105 | -0.03 |
| 56 | C | 1,2-dibromoethane | 3.042 | 2.904 | 4.5 | 95 | -0.03 |
| 57 | C | tetrachloroethene | 2.234 | 2.142 | 4.1 | 94 | -0.03 |
| 58 | | 1,1,1,2-tetrachloroethane | 1.935 | 1.837 | 5.1 | 90 | -0.03 |
| 59 | C | chlorobenzene | 4.868 | 4.646 | 4.6 | 95 | -0.03 |
| 60 | C | ethylbenzene | 7.788 | 7.743 | 0.6 | 92 | -0.02 |
| 61 | C | m+p-xylene | 6.430 | 6.378 | 0.8 | 92 | -0.03 |
| 62 | C | bromoform | 1.912 | 2.215 | -15.8 | 105 | -0.03 |
| 63 | C | styrene | 4.895 | 4.993 | -2.0 | 92 | -0.03 |
| 64 | C | 1,1,2,2-tetrachloroethane | 4.554 | 4.627 | -1.6 | 94 | -0.02 |
| 65 | C | o-xylene | 6.514 | 6.533 | -0.3 | 90 | -0.02 |
| 66 | | 1,2,3-Trichloropropane | 3.737 | 3.377 | 9.6 | 88 | -0.03 |
| 68 | C | isopropylbenzene | 8.022 | 7.967 | 0.7 | 90 | -0.02 |
| 69 | | Bromobenzene | 4.666 | 4.285 | 8.2 | 87 | -0.02 |
| 70 | | 4-ethyl toluene | 8.577 | 9.302 | -8.5 | 94 | -0.02 |
| 71 | | 1,3,5-trimethylbenzene | 7.438 | 7.685 | -3.3 | 90 | -0.02 |
| 72 | | tert-butylbenzene | 7.638 | 7.087 | 7.2 | 86 | -0.03 |
| 73 | | 1,2,4-trimethylbenzene | 7.209 | 7.714 | -7.0 | 91 | -0.03 |
| 74 | C | Benzyl Chloride | 4.211 | 4.891 | -16.1 | 96 | -0.02 |
| 75 | | 1,3-dichlorobenzene | 4.702 | 4.806 | -2.2 | 91 | -0.03 |
| 76 | C | 1,4-dichlorobenzene | 4.649 | 4.565 | 1.8 | 88 | -0.02 |
| 77 | | sec-butylbenzene | 10.225 | 10.173 | 0.5 | 84 | -0.02 |
| 78 | | p-isopropyltoluene | 8.557 | 8.077 | 5.6 | 79 | -0.02 |
| 79 | | 1,2-dichlorobenzene | 4.428 | 4.535 | -2.4 | 90 | -0.02 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-2,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 80 | n-butylbenzene | 8.085 | 8.334 | -3.1 | 83 | -0.02 |
| 81 C | 1,2,4-trichlorobenzene | 3.160 | 3.085 | 2.4 | 73 | -0.02 |
| 82 | naphthalene | 9.523 | 8.979 | 5.7 | 75 | -0.02 |
| 83 | 1,2,3-trichlorobenzene | 3.063 | 2.983 | 2.6 | 74 | -0.02 |
| 84 C | hexachlorobutadiene | 2.734 | 2.964 | -8.4 | 84 | -0.02 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-2,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 9.62 | 49 | 132894 | 10.000 ppbV | #-0.04 |
| Standard Area = 132894 | | | Recovery | = 100.00% | |
| 33) 1,4-difluorobenzene | 11.89 | 114 | 287503 | 10.000 ppbV | -0.04 |
| Standard Area = 287503 | | | Recovery | = 100.00% | |
| 51) chlorobenzene-D5 | 16.55 | 54 | 56135 | 10.000 ppbV | -0.03 |
| Standard Area = 56135 | | | Recovery | = 100.00% | |
| System Monitoring Compounds | | | | | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 3.86 | 41 | 47089M6 | 4.769 ppbV | |
| 3) dichlorodifluoromethane | 3.95 | 85 | 75713 | 4.241 ppbV | 100 |
| 4) chloromethane | 4.13 | 50 | 47980 | 4.473 ppbV | 98 |
| 5) Freon-114 | 4.27 | 85 | 99510 | 4.601 ppbV | 99 |
| 6) vinyl chloride | 4.40 | 62 | 44819 | 4.198 ppbV | 98 |
| 7) 1,3-butadiene | 4.57 | 54 | 42459 | 4.921 ppbV # | 78 |
| 8) bromomethane | 4.89 | 94 | 36476 | 4.199 ppbV | 100 |
| 9) chloroethane | 5.12 | 64 | 24228 | 4.451 ppbV | 97 |
| 10) ethanol | 5.29 | 31 | 162958 | 19.694 ppbV | 97 |
| 11) vinyl bromide | 5.56 | 106 | 36821 | 4.235 ppbV | 100 |
| 12) acrolein | 5.72 | 56 | 16680 | 3.331 ppbV # | 100 |
| 13) acetone | 5.87 | 43 | 278330 | 21.739 ppbV # | 93 |
| 14) trichlorofluoromethane | 6.09 | 101 | 66084 | 3.967 ppbV | 98 |
| 15) isopropyl alcohol | 6.21 | 45 | 171524 | 9.899 ppbV | 99 |
| 16) acrylonitrile | 6.47 | 53 | 32575 | 3.992 ppbV | 99 |
| 17) 1,1-dichloroethene | 6.88 | 61 | 57388 | 4.005 ppbV | 97 |
| 18) tertiary butyl alcohol | 6.94 | 59 | 57824 | 3.583 ppbV # | 1 |
| 19) methylene chloride | 7.04 | 49 | 55697 | 4.190 ppbV | 96 |
| 20) 3-chloropropene | 7.19 | 41 | 68939 | 4.405 ppbV | 95 |
| 21) carbon disulfide | 7.34 | 76 | 117134 | 4.247 ppbV | 96 |
| 22) Freon 113 | 7.39 | 101 | 73965 | 4.217 ppbV | 98 |
| 23) trans-1,2-dichloroethene | 8.19 | 61 | 66095 | 4.617 ppbV | 98 |
| 24) 1,1-dichloroethane | 8.42 | 63 | 81973 | 4.494 ppbV | 98 |
| 25) MTBE | 8.51 | 73 | 106057 | 4.420 ppbV | 98 |
| 26) vinyl acetate | 8.64 | 43 | 137717 | 5.518 ppbV | 99 |
| 27) 2-butanone | 8.91 | 43 | 115342 | 4.615 ppbV | 98 |
| 28) cis-1,2-dichloroethene | 9.43 | 61 | 60834 | 4.398 ppbV | 95 |
| 29) Ethyl Acetate | 9.72 | 61 | 16713 | 4.713 ppbV | 81 |
| 30) chloroform | 9.78 | 83 | 76292 | 4.540 ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-2,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 10.23 | 42 | 71118 | 4.505 ppbV | 94 |
| 32) 1,2-dichloroethane | 10.63 | 62 | 49254 | 4.046 ppbV | 98 |
| 34) hexane | 9.69 | 57 | 82372 | 4.656 ppbV | 92 |
| 36) 1,1,1-trichloroethane | 10.92 | 97 | 72145 | 5.082 ppbV | 95 |
| 37) benzene | 11.45 | 78 | 145964 | 4.419 ppbV | 98 |
| 38) carbon tetrachloride | 11.63 | 117 | 58945 | 4.459 ppbV | 98 |
| 39) cyclohexane | 11.77 | 56 | 89310 | 4.838 ppbV | 97 |
| 40) Dibromomethane | 12.37 | 93 | 42559 | 3.762 ppbV # | 100 |
| 41) 1,2-dichloropropane | 12.40 | 63 | 55873 | 4.215 ppbV | 98 |
| 42) bromodichloromethane | 12.63 | 83 | 83440 | 5.078 ppbV | 99 |
| 43) 1,4-dioxane | 12.69 | 88 | 32892 | 4.854 ppbV | 96 |
| 44) trichloroethene | 12.68 | 130 | 56245 | 4.419 ppbV | 96 |
| 45) 2,2,4-trimethylpentane | 12.73 | 57 | 281574 | 4.846 ppbV | 96 |
| 46) heptane | 13.05 | 43 | 133095 | 4.764 ppbV | 98 |
| 47) cis-1,3-dichloropropene | 13.69 | 75 | 73757 | 4.827 ppbV | 94 |
| 48) 4-methyl-2-pentanone | 13.73 | 43 | 151430 | 5.059 ppbV | 98 |
| 49) trans-1,3-dichloropropene | 14.32 | 75 | 58024 | 4.125 ppbV | 96 |
| 50) 1,1,2-trichloroethane | 14.51 | 97 | 55843 | 4.528 ppbV | 98 |
| 52) toluene | 14.82 | 91 | 168071 | 4.618 ppbV | 100 |
| 54) 2-hexanone | 15.10 | 43 | 138233 | 5.307 ppbV | 99 |
| 55) dibromochloromethane | 15.27 | 129 | 77976 | 5.775 ppbV | 99 |
| 56) 1,2-dibromoethane | 15.52 | 107 | 81506 | 4.774 ppbV | 100 |
| 57) tetrachloroethene | 15.98 | 166 | 60120 | 4.794 ppbV | 96 |
| 58) 1,1,1,2-tetrachloroethane | 16.58 | 131 | 51573 | 4.747 ppbV | 98 |
| 59) chlorobenzene | 16.59 | 112 | 130410 | 4.772 ppbV | 97 |
| 60) ethylbenzene | 16.93 | 91 | 217318 | 4.971 ppbV | 97 |
| 61) m+p-xylene | 17.08 | 91 | 358040 | 9.919 ppbV | 99 |
| 62) bromoform | 17.15 | 173 | 62165 | 5.793 ppbV | 100 |
| 63) styrene | 17.38 | 104 | 140149 | 5.100 ppbV | 99 |
| 64) 1,1,2,2-tetrachloroethane | 17.48 | 83 | 129858 | 5.080 ppbV | 99 |
| 65) o-xylene | 17.48 | 91 | 183373 | 5.015 ppbV | 97 |
| 66) 1,2,3-Trichloropropane | 17.58 | 75 | 94797 | 4.519 ppbV # | 82 |
| 68) isopropylbenzene | 17.97 | 105 | 223615 | 4.966 ppbV | 97 |
| 69) Bromobenzene | 18.03 | 77 | 120282 | 4.592 ppbV # | 100 |
| 70) 4-ethyl toluene | 18.49 | 105 | 261084 | 5.422 ppbV | 99 |
| 71) 1,3,5-trimethylbenzene | 18.56 | 105 | 215685 | 5.166 ppbV | 97 |
| 72) tert-butylbenzene | 18.88 | 119 | 198902 | 4.639 ppbV | 98 |
| 73) 1,2,4-trimethylbenzene | 18.88 | 105 | 216500 | 5.350 ppbV | 97 |
| 74) Benzyl Chloride | 19.00 | 91 | 137271 | 5.808 ppbV | 97 |
| 75) 1,3-dichlorobenzene | 19.02 | 146 | 134885 | 5.111 ppbV | 96 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-2,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 76) 1,4-dichlorobenzene | 19.07 | 146 | 128120 | 4.910 | ppbV | 93 |
| 77) sec-butylbenzene | 19.10 | 105 | 285531 | 4.975 | ppbV | 97 |
| 78) p-isopropyltoluene | 19.23 | 119 | 226696 | 4.720 | ppbV | 100 |
| 79) 1,2-dichlorobenzene | 19.35 | 146 | 127299 | 5.121 | ppbV | 94 |
| 80) n-butylbenzene | 19.57 | 91 | 233910 | 5.154 | ppbV | 94 |
| 81) 1,2,4-trichlorobenzene | 20.87 | 180 | 86599 | 4.882 | ppbV | 98 |
| 82) naphthalene | 20.98 | 128 | 252016 | 4.714 | ppbV | 99 |
| 83) 1,2,3-trichlorobenzene | 21.24 | 180 | 83737 | 4.870 | ppbV | 99 |
| 84) hexachlorobutadiene | 21.31 | 225 | 83192 | 5.421 | ppbV | 98 |

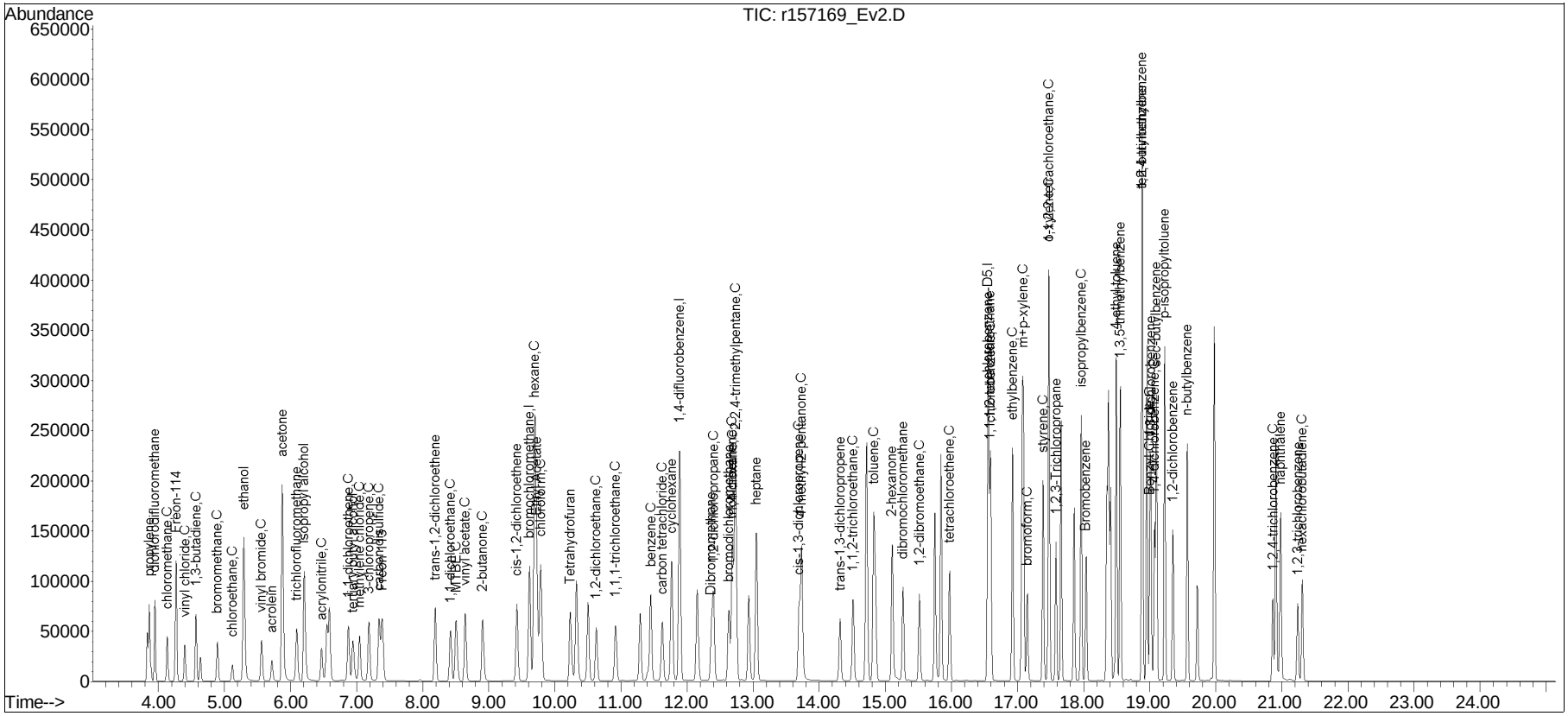
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-2,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

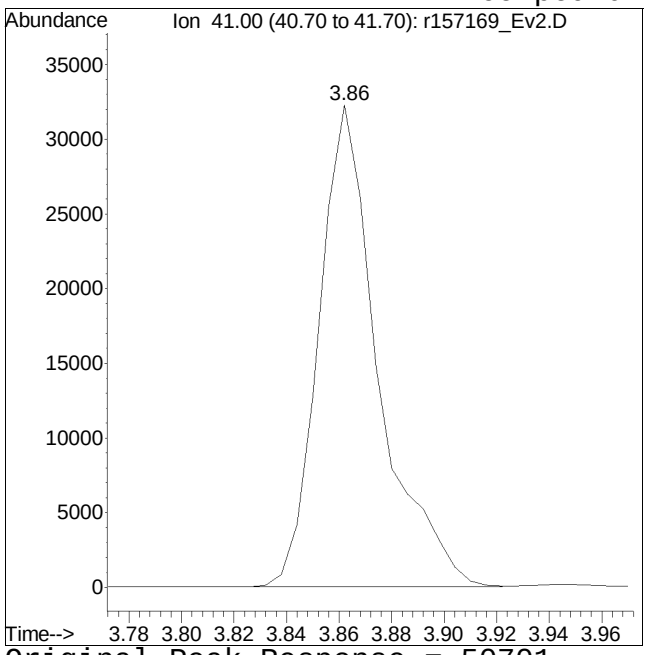
Sub List : Default-LCS-AP2 - All compounds listedSIM\r157169_Ev2.D



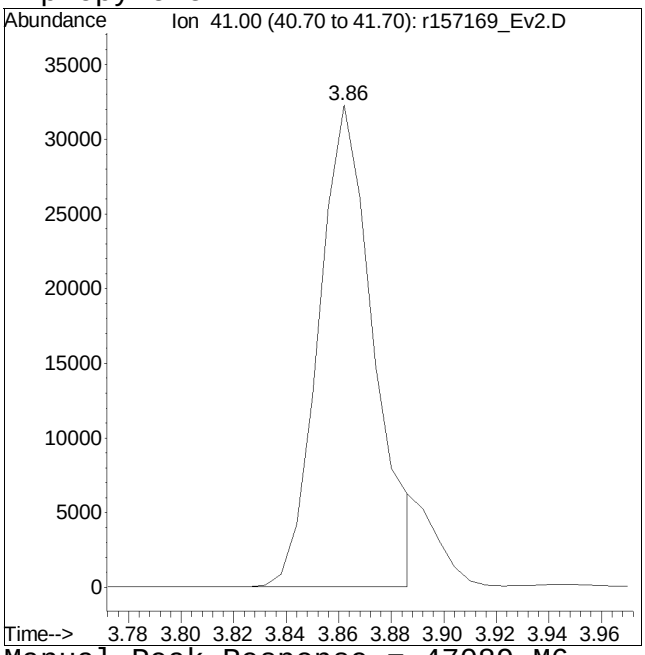
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\Airlab15\QMethod : TSIM180404.M
Data File : r157169_Ev2.D Operator : AIRLAB15:RY
Date Inj'd : 4/20/2018 4:16 PM Instrument :
Sample : WG1108448-2,3,250,250 Quant Date : 4/20/2018 4:55 pm

Compound #2: propylene




Original Peak Response = 50701




Manual Peak Response = 47089 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157172_Ev2.D
Acq On : 20 Apr 2018 7:19 PM
Operator : AIRLAB15:RY
Sample : L1812962-01,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 08:32:07 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : 9_Chlorinateds - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.58 | 49 | 82600 | 10.000 | ppbV | #-0.07 |
| Standard Area = 132894 | | | Recovery = | | 62.15% | |
| 33) 1,4-difluorobenzene | 11.87 | 114 | 203992 | 10.000 | ppbV | -0.06 |
| Standard Area = 287503 | | | Recovery = | | 70.95% | |
| 51) chlorobenzene-D5 | 16.54 | 54 | 46534 | 10.000 | ppbV | -0.04 |
| Standard Area = 56135 | | | Recovery = | | 82.90% | |

System Monitoring Compounds

| Target Compounds | | | Qvalue |
|---|---|---|---|
| 6) vinyl chloride | 0.00 | 0 | N.D. |
| 17) 1,1-dichloroethene | 0.00 | 0 | N.D. |
| 23) trans-1,2-dichloroethene | 0.00 | 0 | N.D. |
| 28) cis-1,2-dichloroethene | 0.00 | 0 | N.D. |
| 44) trichloroethene | 0.00 | 0 | N.D. |
| 57) tetrachloroethene | 15.97 | 0 | N.D. |

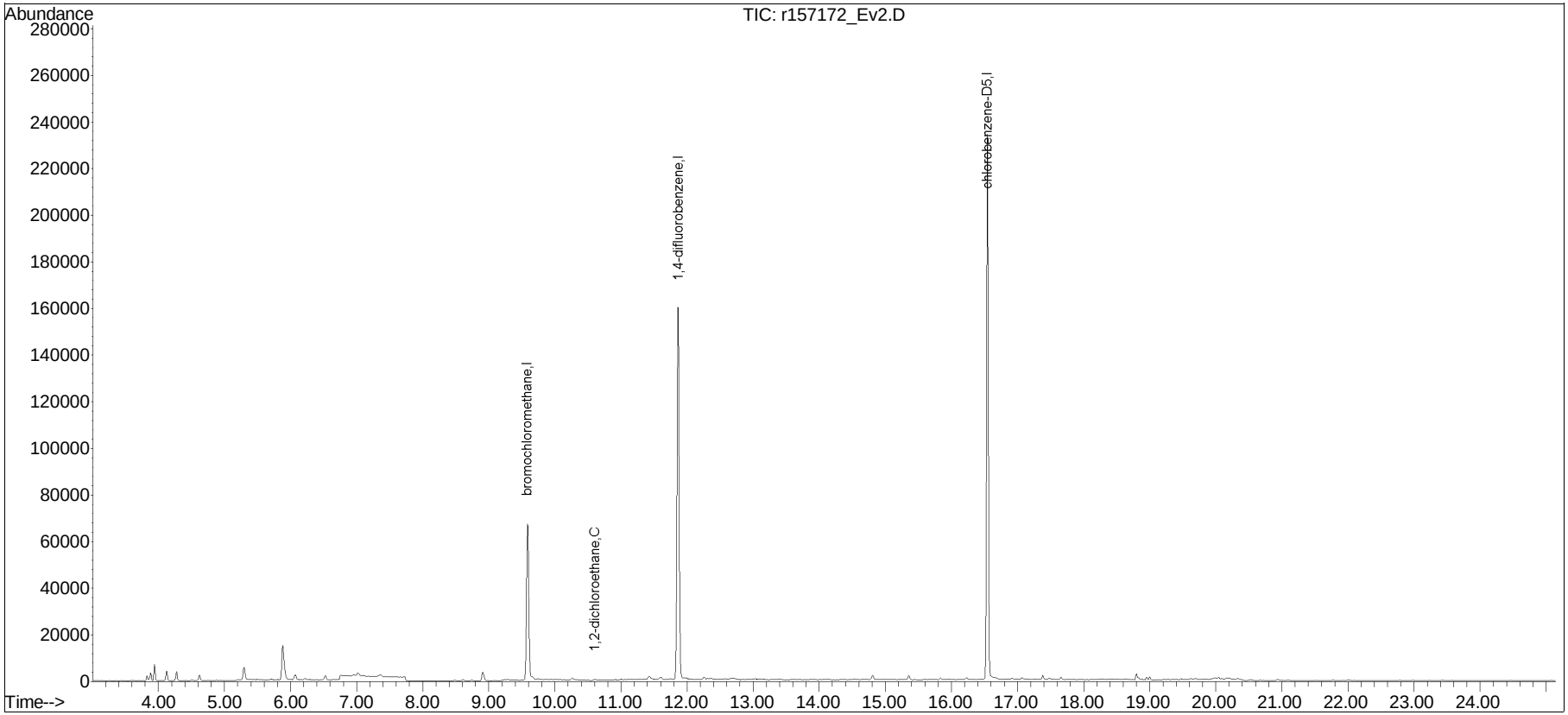
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157172_Ev2.D
Acq On : 20 Apr 2018 7:19 PM
Operator : AIRLAB15:RY
Sample : L1812962-01,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 08:32:07 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Sub List : 9_Chlorinateds - .Airlab15\2018\180420SIM\r157169_Ev2.D




TSIM180404.M Sat Apr 21 17:22:55 2018

Manual Integration/Negative Proof Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airlab15\ | QMethod | : TSIM180404.M |
| Data File | : r157172_Ev2.D | Operator | : AIRLAB15:RY |
| Date Inj'd | : 4/20/2018 7:19 PM | Instrument | : |
| Sample | : L1812962-01,3,250,250 | Quant Date | : 4/21/2018 8:32 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157173_Ev2.D
Acq On : 20 Apr 2018 7:55 PM
Operator : AIRLAB15:RY
Sample : L1812962-02,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:23:14 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : 9_Chlorinateds - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.60 | 49 | 120004 | 10.000 | ppbV | #-0.06 |
| Standard Area = 132894 | | | Recovery = | | 90.30% | |
| 33) 1,4-difluorobenzene | 11.87 | 114 | 247938 | 10.000 | ppbV | -0.05 |
| Standard Area = 287503 | | | Recovery = | | 86.24% | |
| 51) chlorobenzene-D5 | 16.54 | 54 | 48428 | 10.000 | ppbV | -0.04 |
| Standard Area = 56135 | | | Recovery = | | 86.27% | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.00 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 0.00 | | 0 | N.D. | | |
| 23) trans-1,2-dichloroethene | 8.17 | | 0 | N.D. | | |
| 28) cis-1,2-dichloroethene | 9.42 | 61 | 535 | 0.043 | ppbV | 92 |
| 44) trichloroethene | 12.67 | 130 | 1145 | 0.104 | ppbV | 96 |
| 57) tetrachloroethene | 15.96 | 166 | 48288 | 4.463 | ppbV | 98 |

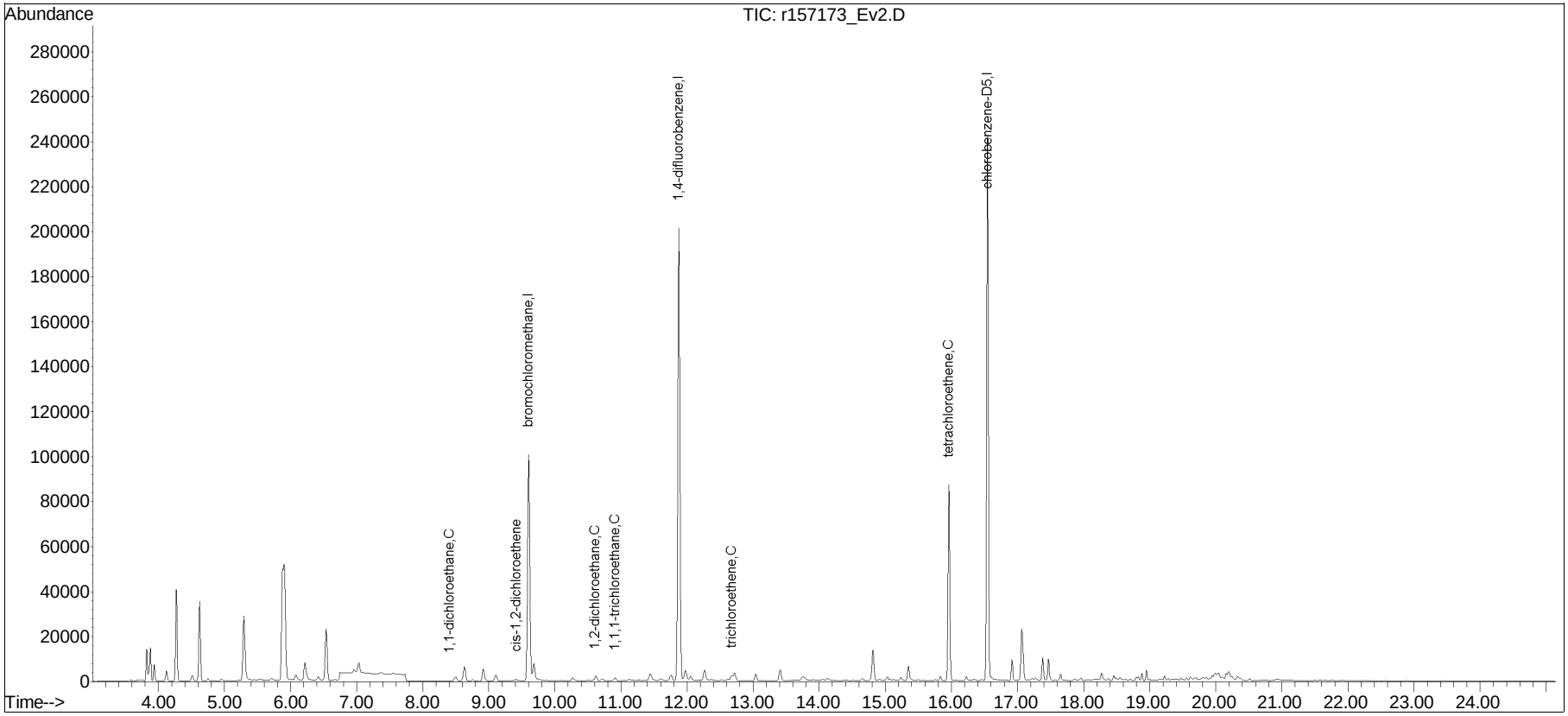
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

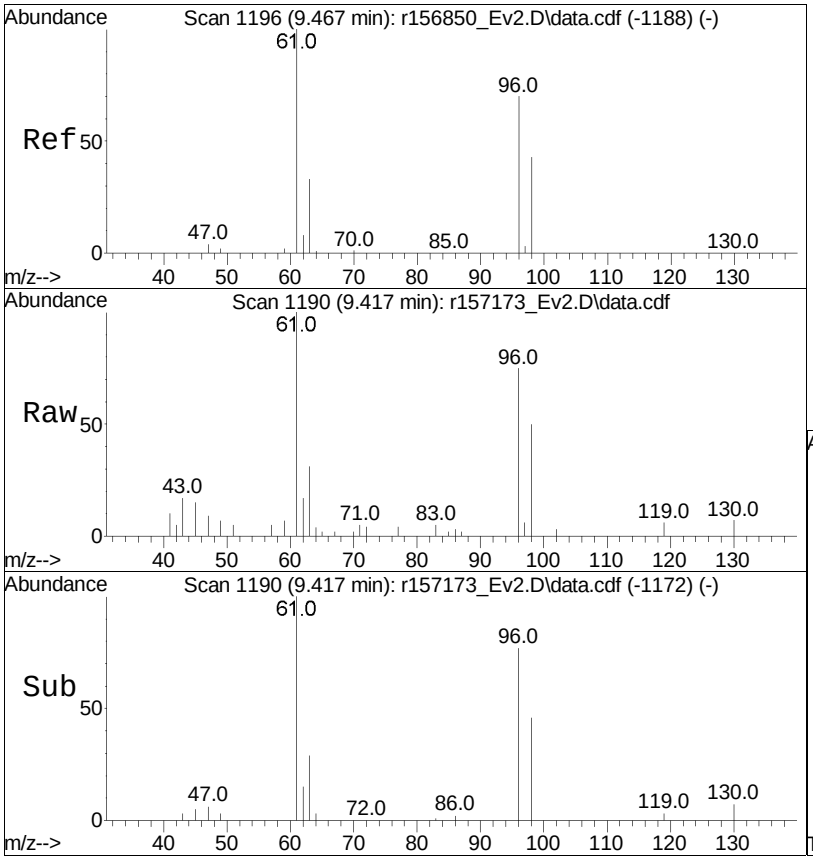
Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157173_Ev2.D
Acq On : 20 Apr 2018 7:55 PM
Operator : AIRLAB15:RY
Sample : L1812962-02,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:23:14 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Sub List : 9_Chlorinateds - .Airlab15\2018\180420SIM\r157169_Ev2.D



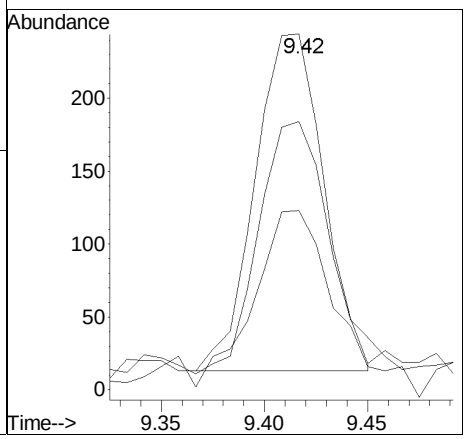

TSIM180404.M Sat Apr 21 17:23:29 2018

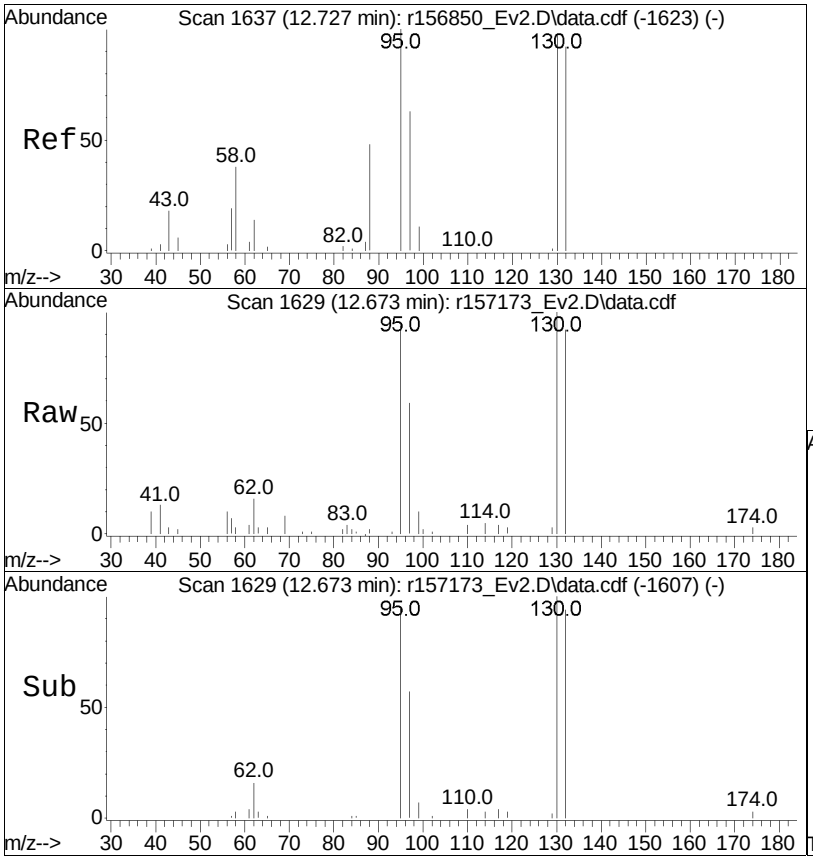



#28
cis-1,2-dichloroethene
Concen: 0.04 ppbV
RT: 9.42 min Scan# 1190
Delta R.T. -0.050 min
Lab File: r157173_Ev2.D
Acq: 20 Apr 2018 7:55 PM

Tgt Ion: 61 Resp: 535

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 75.4 | 56.1 | 84.1 |
| 98 | 50.4 | 34.6 | 52.0 |

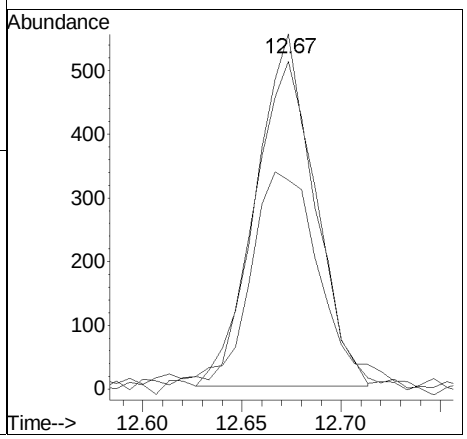


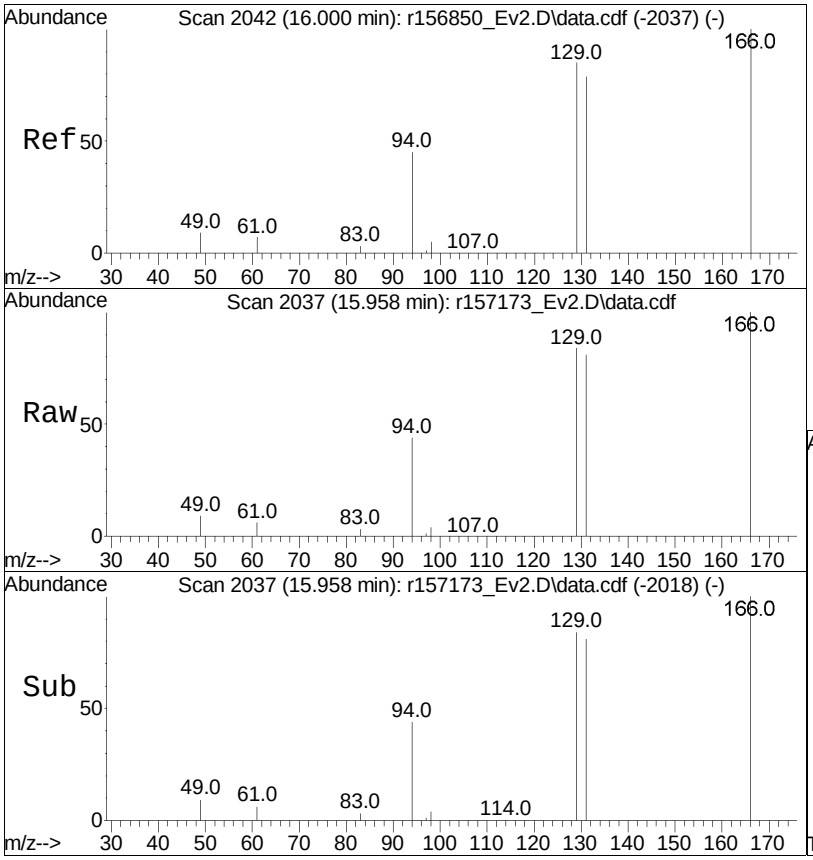



#44
trichloroethene
Concen: 0.10 ppbV
RT: 12.67 min Scan# 1629
Delta R.T. -0.053 min
Lab File: r157173_Ev2.D
Acq: 20 Apr 2018 7:55 PM

Tgt Ion:130 Resp: 1145

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 92.3 | 75.5 | 113.3 |
| 97 | 58.9 | 51.9 | 77.9 |

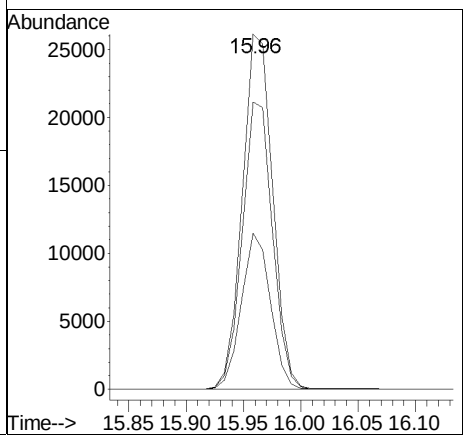





#57
tetrachloroethene
Concen: 4.46 ppbV
RT: 15.96 min Scan# 2037
Delta R.T. -0.042 min
Lab File: r157173_Ev2.D
Acq: 20 Apr 2018 7:55 PM

Tgt Ion:166 Resp: 48288

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 80.9 | 63.5 | 95.3 |
| 94 | 44.0 | 36.1 | 54.1 |



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157174_Ev2.D
Acq On : 20 Apr 2018 8:31 PM
Operator : AIRLAB15:RY
Sample : L1812962-03,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:23:54 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : 9_Chlorinateds - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.60 | 49 | 90747 | 10.000 | ppbV | #-0.06 |
| Standard Area = 132894 | | | Recovery = | | 68.29% | |
| 33) 1,4-difluorobenzene | 11.87 | 114 | 216902 | 10.000 | ppbV | -0.05 |
| Standard Area = 287503 | | | Recovery = | | 75.44% | |
| 51) chlorobenzene-D5 | 16.54 | 54 | 47073 | 10.000 | ppbV | -0.04 |
| Standard Area = 56135 | | | Recovery = | | 83.86% | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.00 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 0.00 | | 0 | N.D. | | |
| 23) trans-1,2-dichloroethene | 8.18 | 61 | 124 | 0.013 | ppbV # | 74 |
| 28) cis-1,2-dichloroethene | 9.42 | 61 | 709 | 0.075 | ppbV | 92 |
| 44) trichloroethene | 12.67 | 130 | 1312 | 0.137 | ppbV | 93 |
| 57) tetrachloroethene | 15.96 | 166 | 70558 | 6.709 | ppbV | 98 |

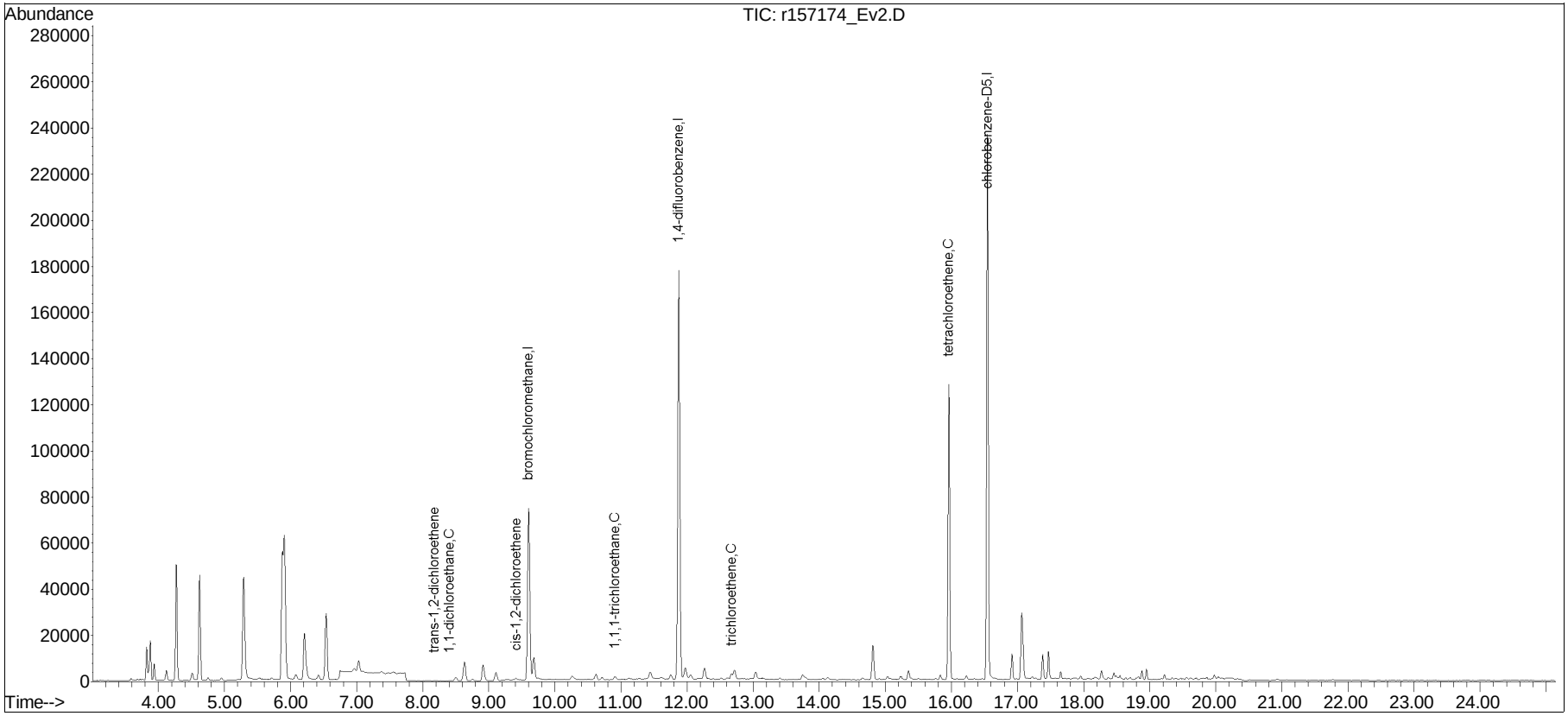
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

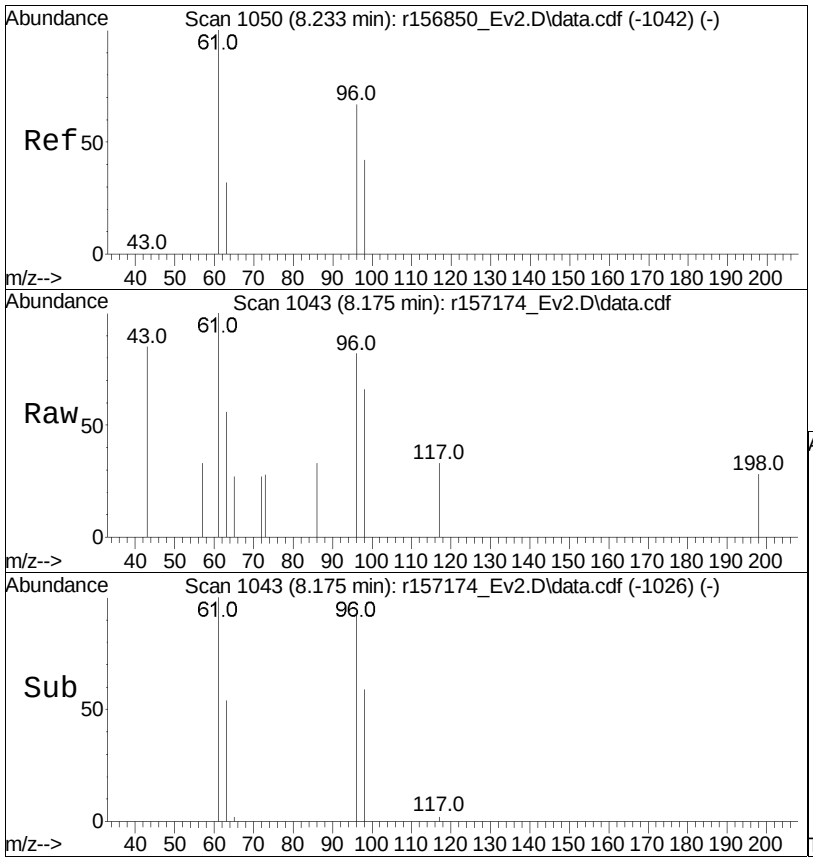
Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157174_Ev2.D
Acq On : 20 Apr 2018 8:31 PM
Operator : AIRLAB15:RY
Sample : L1812962-03,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:23:54 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Sub List : 9_Chlorinateds - .Airlab15\2018\180420SIM\r157169_Ev2.D



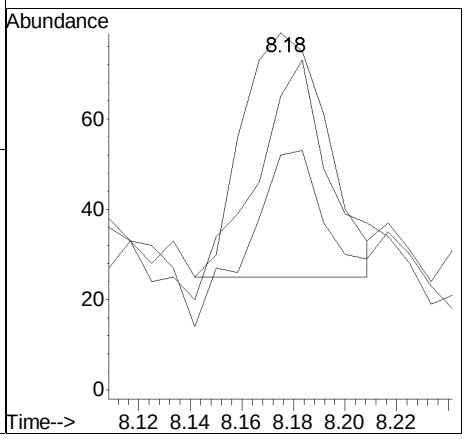

TSIM180404.M Sat Apr 21 17:24:05 2018

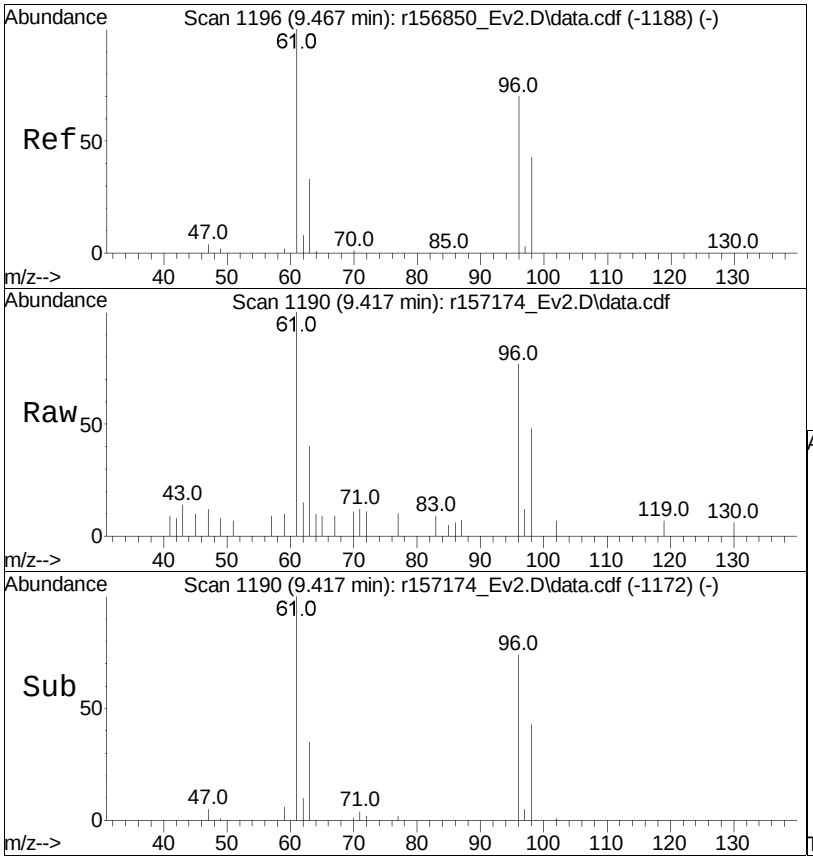



#23
trans-1,2-dichloroethene
Concen: 0.01 ppbV
RT: 8.18 min Scan# 1043
Delta R.T. -0.058 min
Lab File: r157174_Ev2.D
Acq: 20 Apr 2018 8:31 PM

Tgt Ion: 61 Resp: 124

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 82.3 | 54.0 | 81.0# |
| 98 | 65.8 | 33.8 | 50.8# |

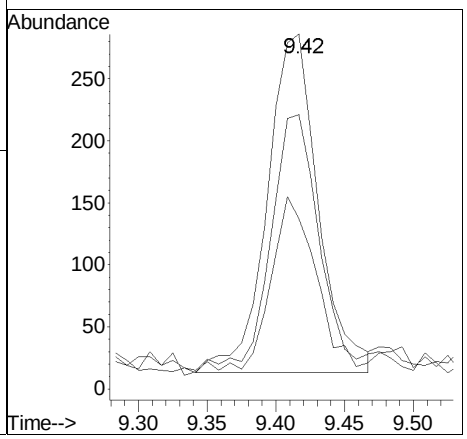


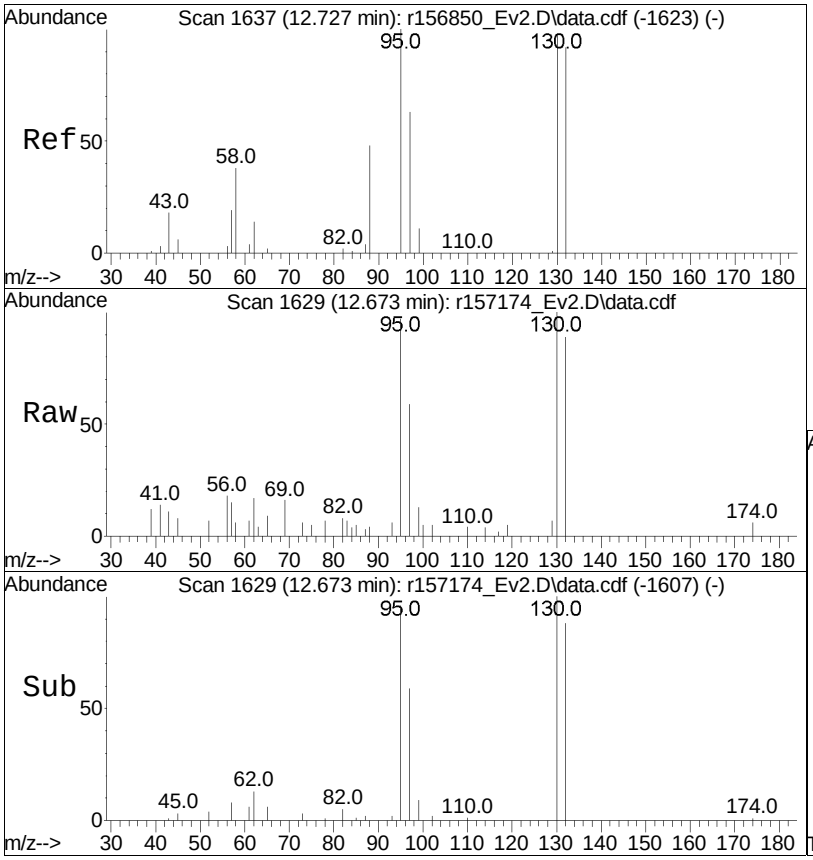



#28
cis-1,2-dichloroethene
Concen: 0.08 ppbV
RT: 9.42 min Scan# 1190
Delta R.T. -0.050 min
Lab File: r157174_Ev2.D
Acq: 20 Apr 2018 8:31 PM

Tgt Ion: 61 Resp: 709

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 77.3 | 56.1 | 84.1 |
| 98 | 47.9 | 34.6 | 52.0 |

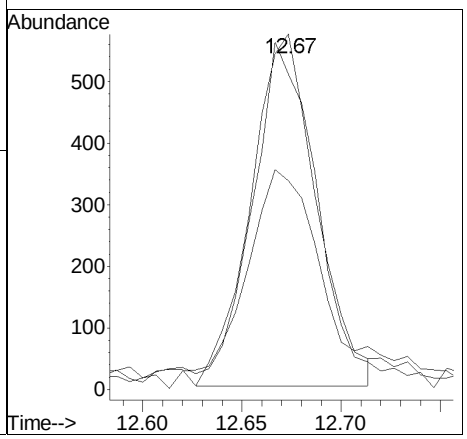


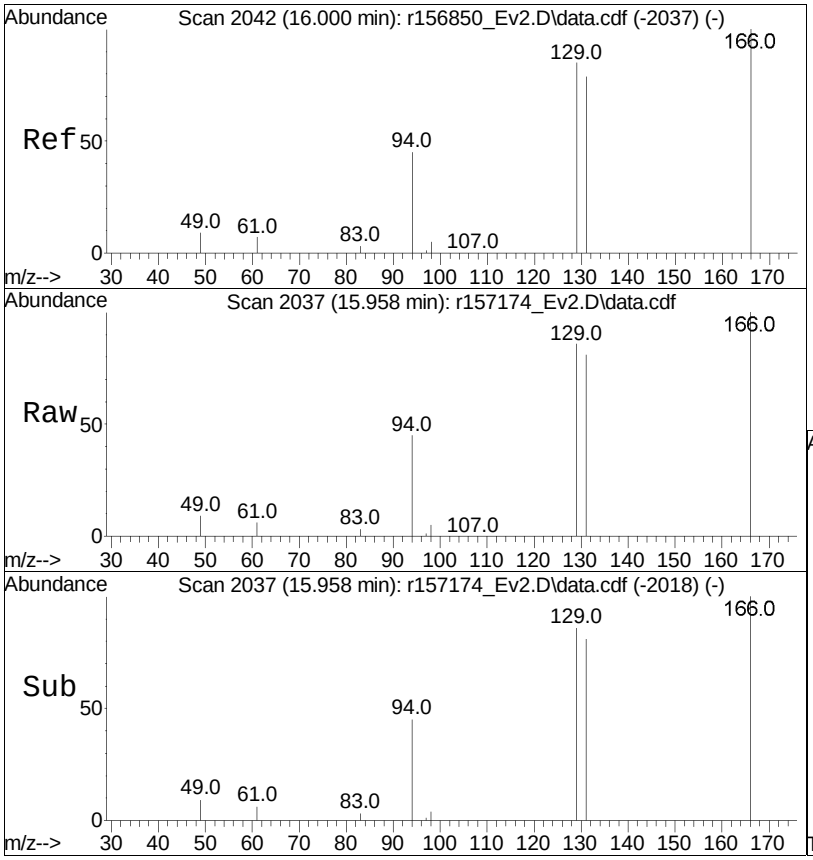



#44
trichloroethene
Concen: 0.14 ppbV
RT: 12.67 min Scan# 1629
Delta R.T. -0.053 min
Lab File: r157174_Ev2.D
Acq: 20 Apr 2018 8:31 PM

Tgt Ion:130 Resp: 1312

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 88.7 | 75.5 | 113.3 |
| 97 | 58.8 | 51.9 | 77.9 |

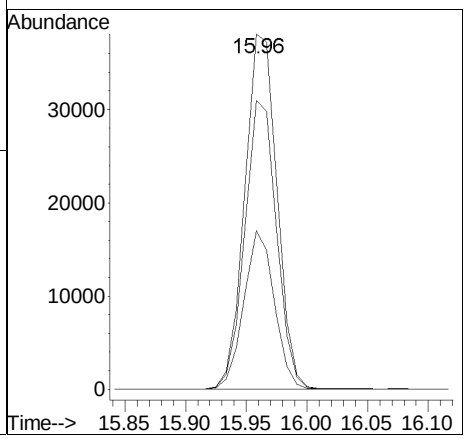





#57
tetrachloroethene
Concen: 6.71 ppbV
RT: 15.96 min Scan# 2037
Delta R.T. -0.042 min
Lab File: r157174_Ev2.D
Acq: 20 Apr 2018 8:31 PM

Tgt Ion:166 Resp: 70558

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 81.3 | 63.5 | 95.3 |
| 94 | 44.7 | 36.1 | 54.1 |



Manual Integration/Negative Proof Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airlab15\ | QMethod | : TSIM180404.M |
| Data File | : r157174_Ev2.D | Operator | : AIRLAB15:RY |
| Date Inj'd | : 4/20/2018 8:31 PM | Instrument | : |
| Sample | : L1812962-03,3,250,250 | Quant Date | : 4/21/2018 8:32 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157175_Ev2.D
Acq On : 20 Apr 2018 9:07 PM
Operator : AIRLAB15:RY
Sample : L1812962-04,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:24:24 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : 9_Chlorinateds - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.60 | 49 | 95489 | 10.000 | ppbV | #-0.06 |
| Standard Area = 132894 | | | Recovery = | | 71.85% | |
| 33) 1,4-difluorobenzene | 11.87 | 114 | 236917 | 10.000 | ppbV | -0.05 |
| Standard Area = 287503 | | | Recovery = | | 82.41% | |
| 51) chlorobenzene-D5 | 16.54 | 54 | 52636 | 10.000 | ppbV | -0.04 |
| Standard Area = 56135 | | | Recovery = | | 93.77% | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.00 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 0.00 | | 0 | N.D. | | |
| 23) trans-1,2-dichloroethene | 8.18 | 61 | 160 | 0.016 | ppbV | 96 |
| 28) cis-1,2-dichloroethene | 9.41 | 61 | 747 | 0.075 | ppbV | 92 |
| 44) trichloroethene | 12.67 | 130 | 733 | 0.070 | ppbV | 96 |
| 57) tetrachloroethene | 15.96 | 166 | 53011 | 4.508 | ppbV | 97 |

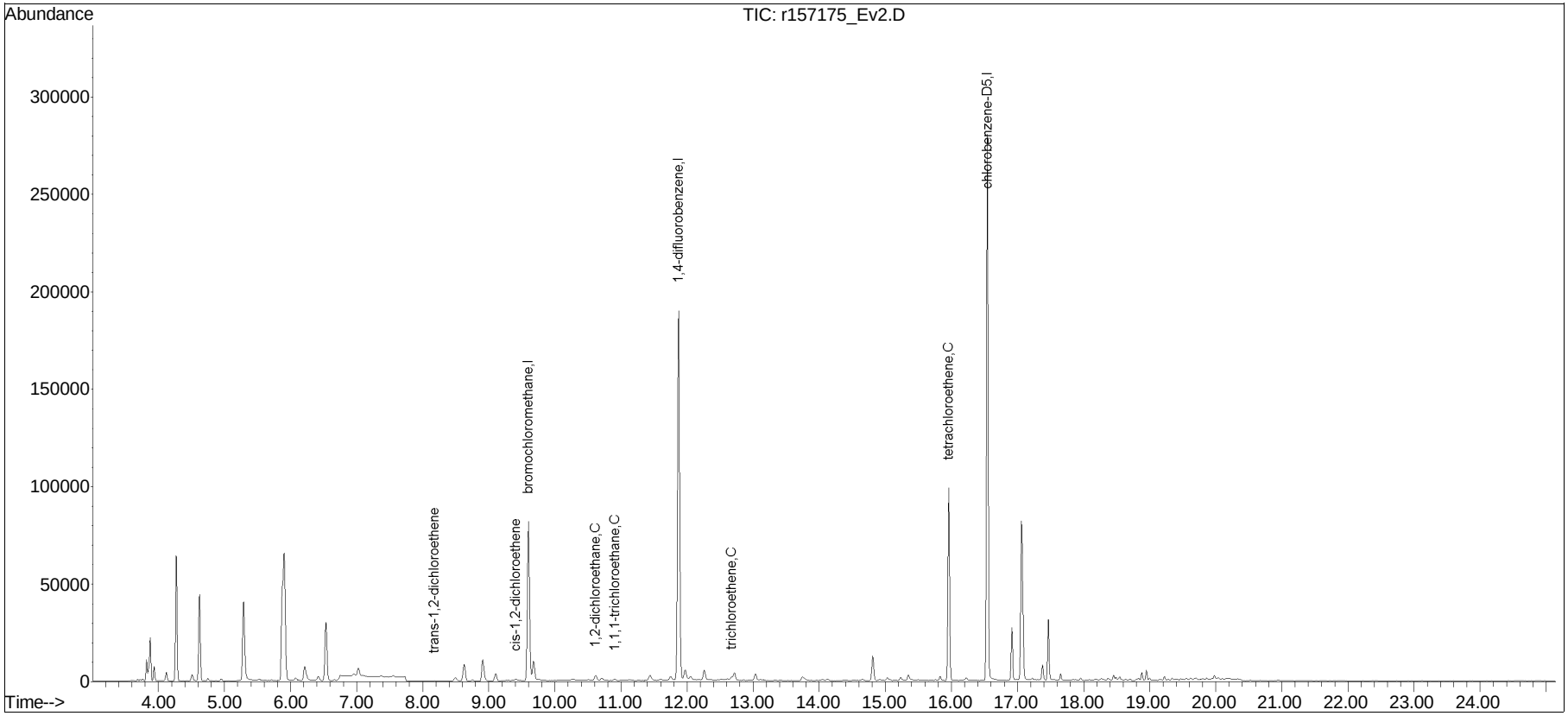
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

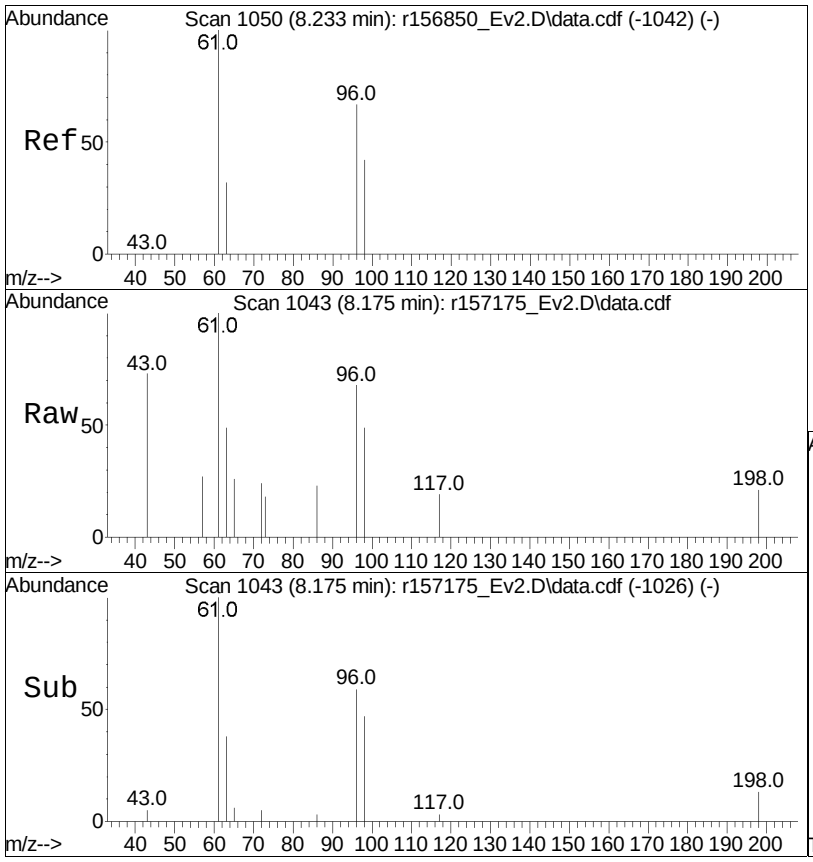
Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157175_Ev2.D
Acq On : 20 Apr 2018 9:07 PM
Operator : AIRLAB15:RY
Sample : L1812962-04,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:24:24 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Sub List : 9_Chlorinateds - .Airlab15\2018\180420SIM\r157169_Ev2.D



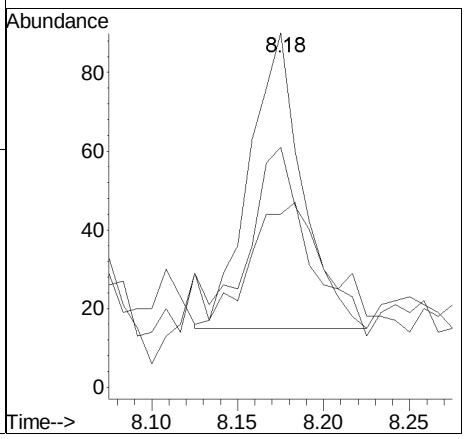

TSIM180404.M Sat Apr 21 17:24:39 2018

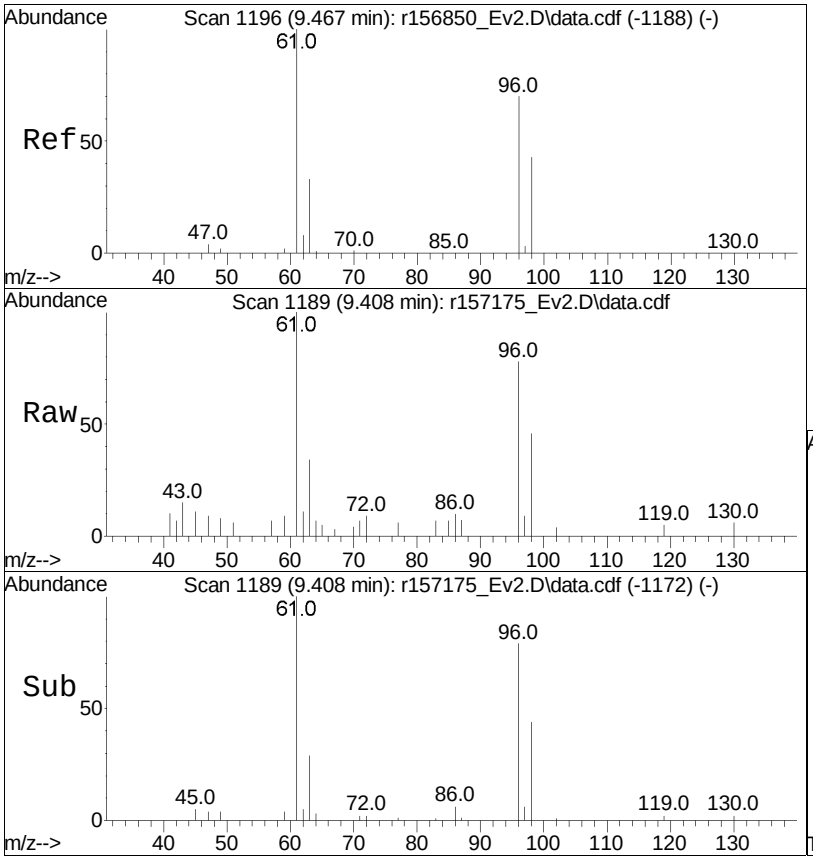



#23
trans-1,2-dichloroethene
Concen: 0.02 ppbV
RT: 8.18 min Scan# 1043
Delta R.T. -0.058 min
Lab File: r157175_Ev2.D
Acq: 20 Apr 2018 9:07 PM

Tgt Ion: 61 Resp: 160

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 67.8 | 54.0 | 81.0 |
| 98 | 48.9 | 33.8 | 50.8 |

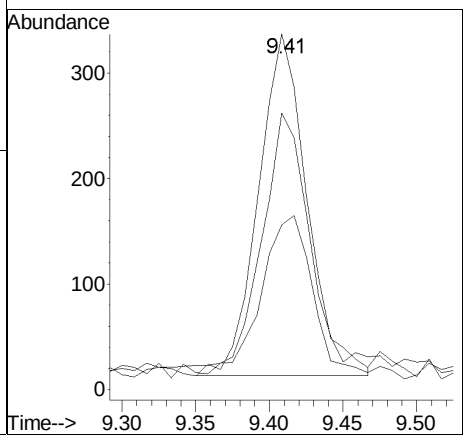


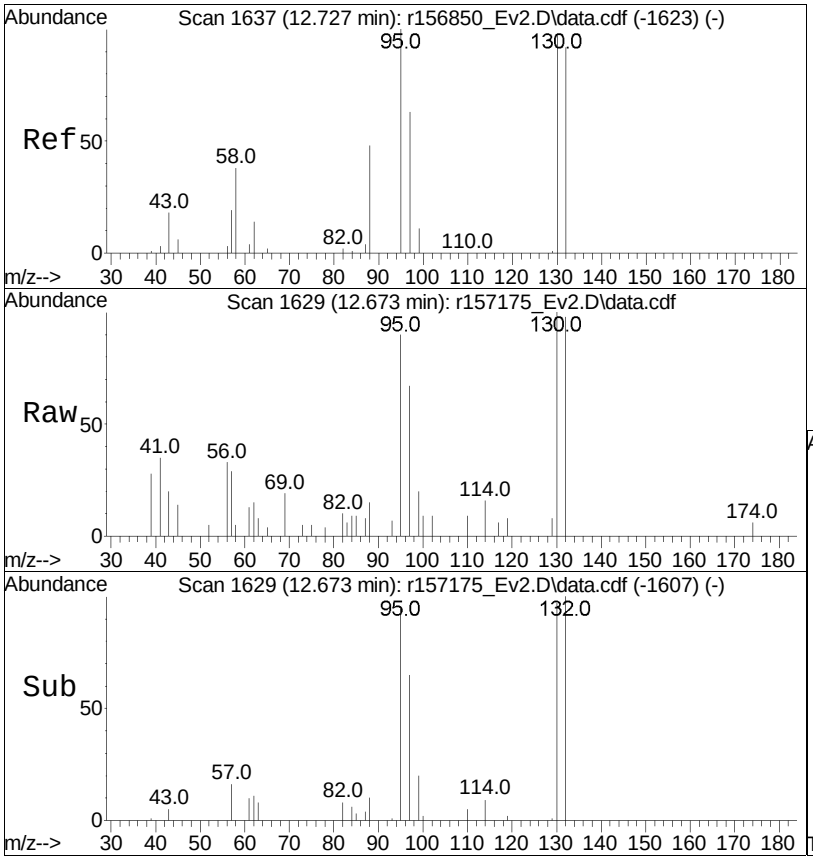



#28
cis-1,2-dichloroethene
Concen: 0.08 ppbV
RT: 9.41 min Scan# 1189
Delta R.T. -0.058 min
Lab File: r157175_Ev2.D
Acq: 20 Apr 2018 9:07 PM

Tgt Ion: 61 Resp: 747

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 77.7 | 56.1 | 84.1 |
| 98 | 46.3 | 34.6 | 52.0 |

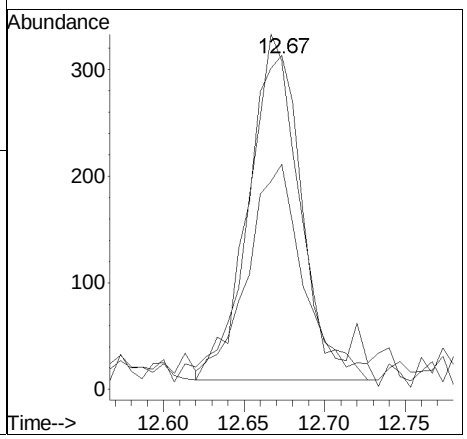


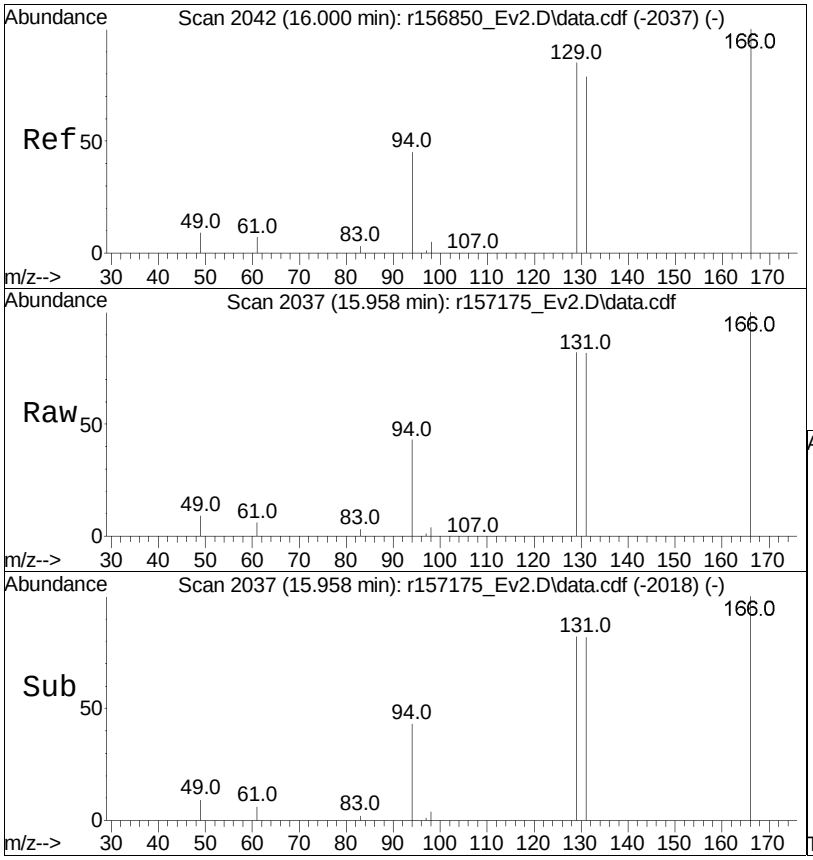



#44
trichloroethene
Concen: 0.07 ppbV
RT: 12.67 min Scan# 1629
Delta R.T. -0.053 min
Lab File: r157175_Ev2.D
Acq: 20 Apr 2018 9:07 PM

Tgt Ion:130 Resp: 733

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 98.4 | 75.5 | 113.3 |
| 97 | 67.4 | 51.9 | 77.9 |

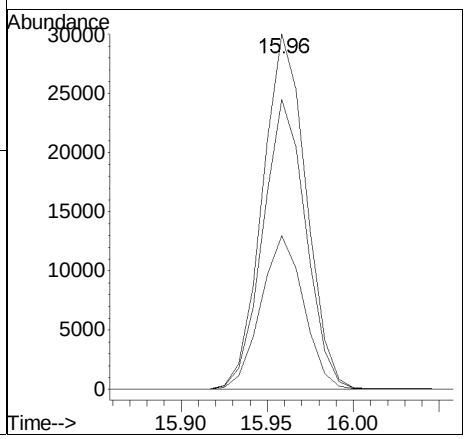





#57
tetrachloroethene
Concen: 4.51 ppbV
RT: 15.96 min Scan# 2037
Delta R.T. -0.042 min
Lab File: r157175_Ev2.D
Acq: 20 Apr 2018 9:07 PM

Tgt Ion:166 Resp: 53011

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 81.6 | 63.5 | 95.3 |
| 94 | 43.2 | 36.1 | 54.1 |



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157180_Ev2.D
Acq On : 21 Apr 2018 12:27 AM
Operator : AIRLAB15:RY
Sample : L1812962-08,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:25:25 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : 9_Chlorinateds - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.59 | 49 | 119538 | 10.000 | ppbV | #-0.07 |
| Standard Area = 132894 | | | Recovery = | | 89.95% | |
| 33) 1,4-difluorobenzene | 11.87 | 114 | 248372 | 10.000 | ppbV | -0.06 |
| Standard Area = 287503 | | | Recovery = | | 86.39% | |
| 51) chlorobenzene-D5 | 16.54 | 54 | 47762 | 10.000 | ppbV | -0.04 |
| Standard Area = 56135 | | | Recovery = | | 85.08% | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.00 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 0.00 | | 0 | N.D. | | |
| 23) trans-1,2-dichloroethene | 0.00 | | 0 | N.D. | d | |
| 28) cis-1,2-dichloroethene | 9.40 | 61 | 495 | 0.040 | ppbV | 92 |
| 44) trichloroethene | 12.67 | 130 | 1092 | 0.099 | ppbV | 97 |
| 57) tetrachloroethene | 15.96 | 166 | 27333 | 2.562 | ppbV | 97 |

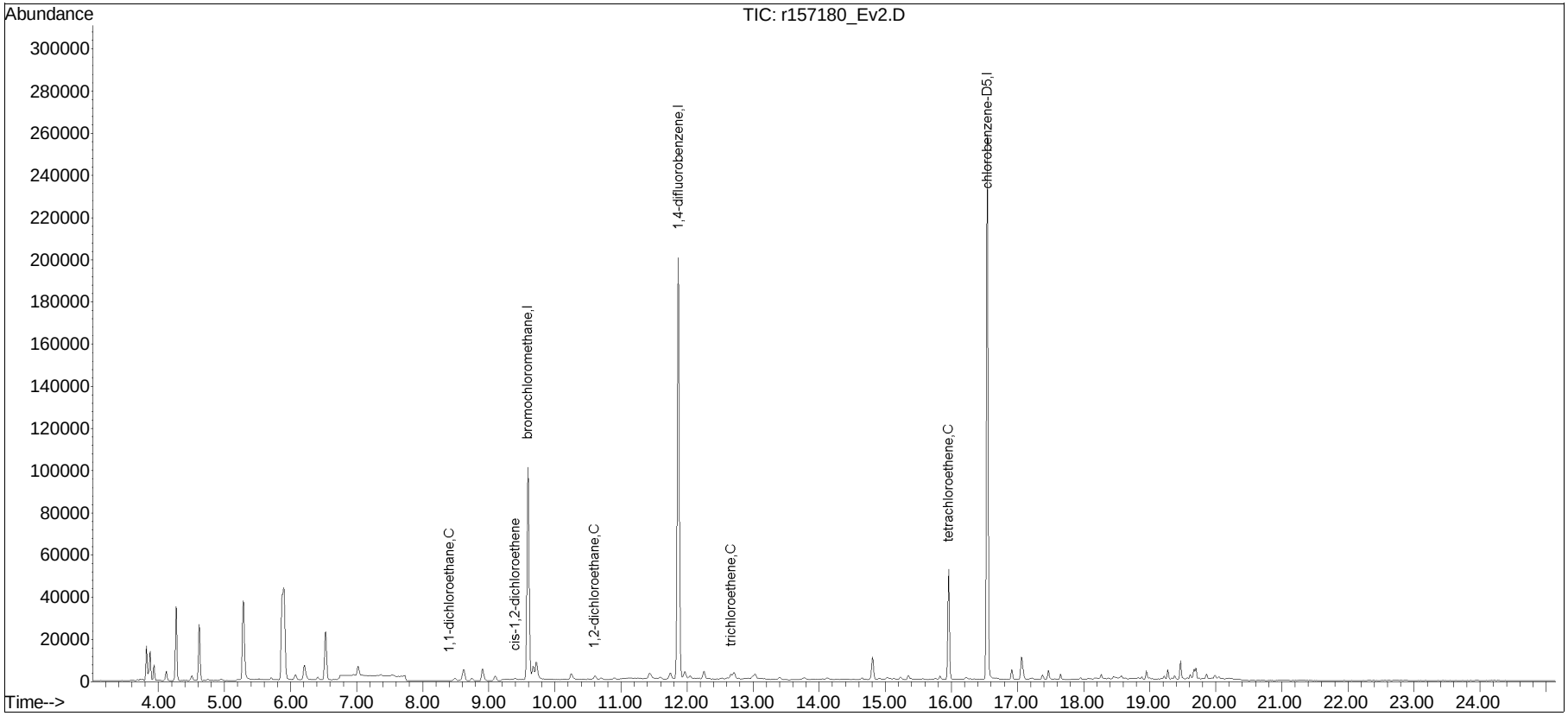
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

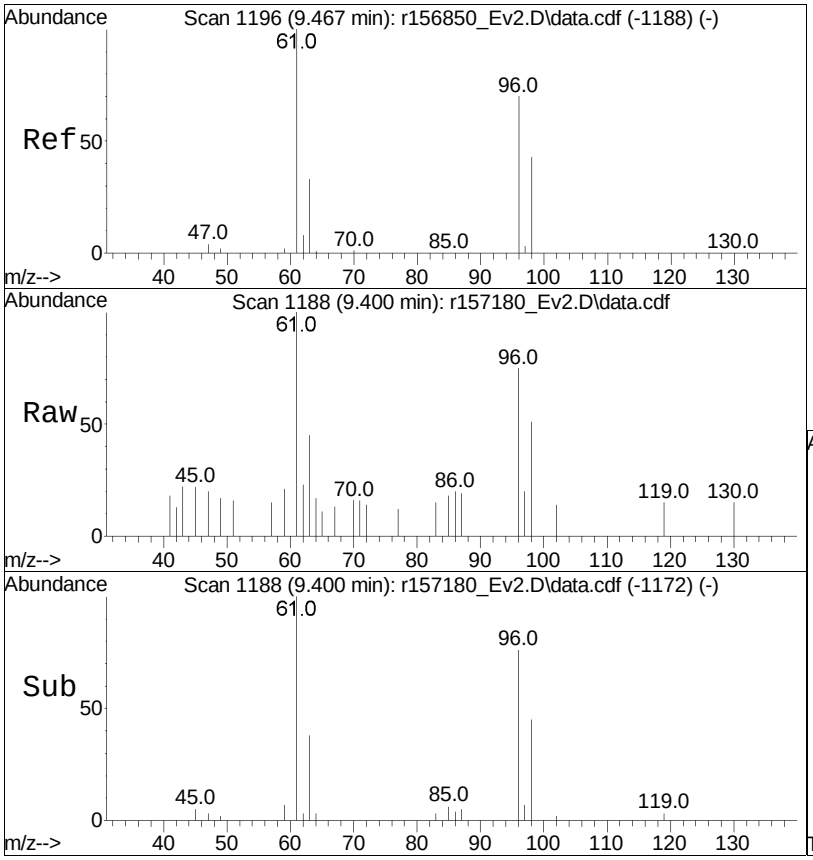
Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157180_Ev2.D
Acq On : 21 Apr 2018 12:27 AM
Operator : AIRLAB15:RY
Sample : L1812962-08,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:25:25 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Sub List : 9_Chlorinateds - .Airlab15\2018\180420SIM\r157169_Ev2.D



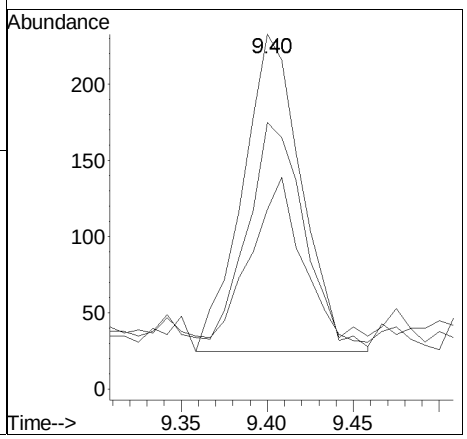

TSIM180404.M Sat Apr 21 17:25:40 2018

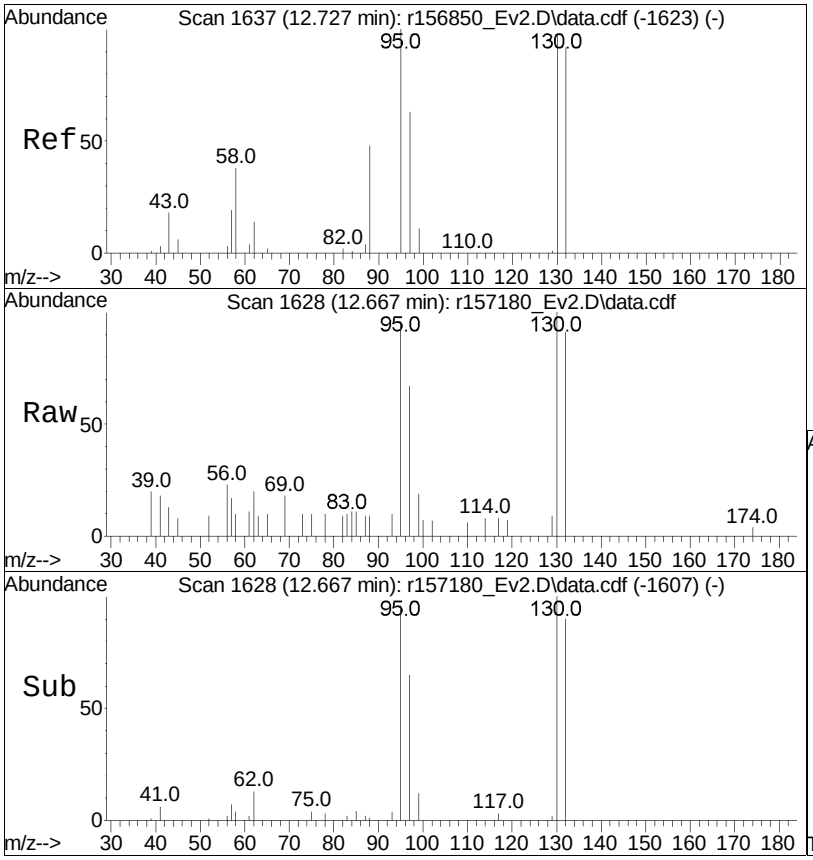



#28
cis-1,2-dichloroethene
Concen: 0.04 ppbV
RT: 9.40 min Scan# 1188
Delta R.T. -0.067 min
Lab File: r157180_Ev2.D
Acq: 21 Apr 2018 12:27 AM

Tgt Ion: 61 Resp: 495

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 75.1 | 56.1 | 84.1 |
| 98 | 50.6 | 34.6 | 52.0 |

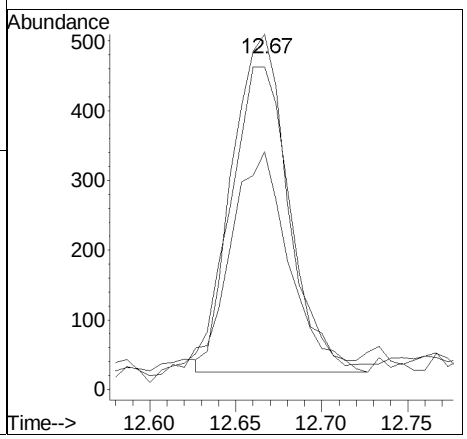


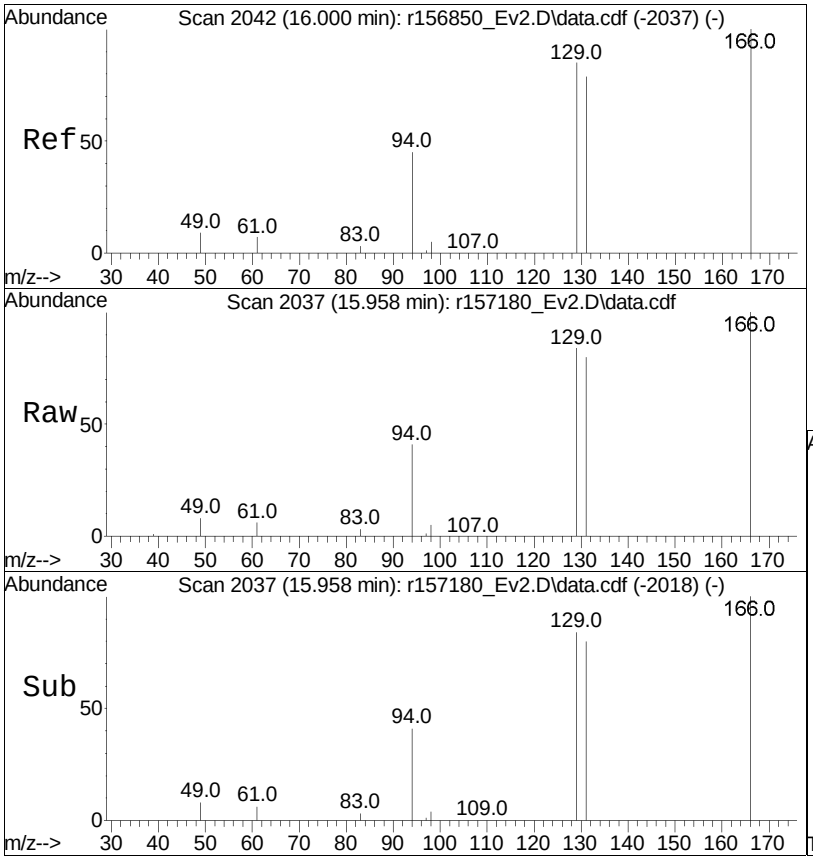



#44
trichloroethene
Concen: 0.10 ppbV
RT: 12.67 min Scan# 1628
Delta R.T. -0.060 min
Lab File: r157180_Ev2.D
Acq: 21 Apr 2018 12:27 AM

Tgt Ion:130 Resp: 1092

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 90.8 | 75.5 | 113.3 |
| 97 | 66.9 | 51.9 | 77.9 |

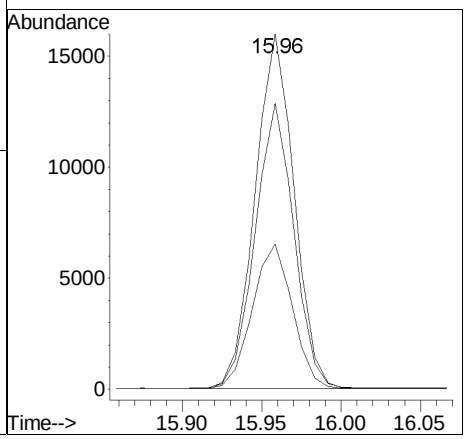





#57
tetrachloroethene
Concen: 2.56 ppbV
RT: 15.96 min Scan# 2037
Delta R.T. -0.042 min
Lab File: r157180_Ev2.D
Acq: 21 Apr 2018 12:27 AM

Tgt Ion:166 Resp: 27333

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 80.5 | 63.5 | 95.3 |
| 94 | 40.9 | 36.1 | 54.1 |



Manual Integration/Negative Proof Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airlab15\ | QMethod | : TSIM180404.M |
| Data File | : r157180_Ev2.D | Operator | : AIRLAB15:RY |
| Date Inj'd | : 4/21/2018 12:27 AM | Instrument | : |
| Sample | : L1812962-08,3,250,250 | Quant Date | : 4/21/2018 8:33 am |

There are no manual integrations or false positives in this file.

# Method Blank
# Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157171_Ev2.D
Acq On : 20 Apr 2018 5:58 PM
Operator : AIRLAB15:RY
Sample : WG1108448-4,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 18:36:44 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.61 | 49 | 123603 | 10.000 | ppbV | #-0.05 |
| Standard Area = 132894 | | | Recovery = | | 93.01% | |
| 33) 1,4-difluorobenzene | 11.88 | 114 | 265728 | 10.000 | ppbV | -0.05 |
| Standard Area = 287503 | | | Recovery = | | 92.43% | |
| 51) chlorobenzene-D5 | 16.55 | 54 | 52009 | 10.000 | ppbV | -0.03 |
| Standard Area = 56135 | | | Recovery = | | 92.65% | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.00 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 0.00 | | 0 | N.D. | | |
| 23) trans-1,2-dichloroethene | 0.00 | | 0 | N.D. | | |
| 28) cis-1,2-dichloroethene | 9.33 | | 0 | N.D. | | |
| 44) trichloroethene | 0.00 | | 0 | N.D. | | |
| 57) tetrachloroethene | 15.89 | | 0 | N.D. | | |

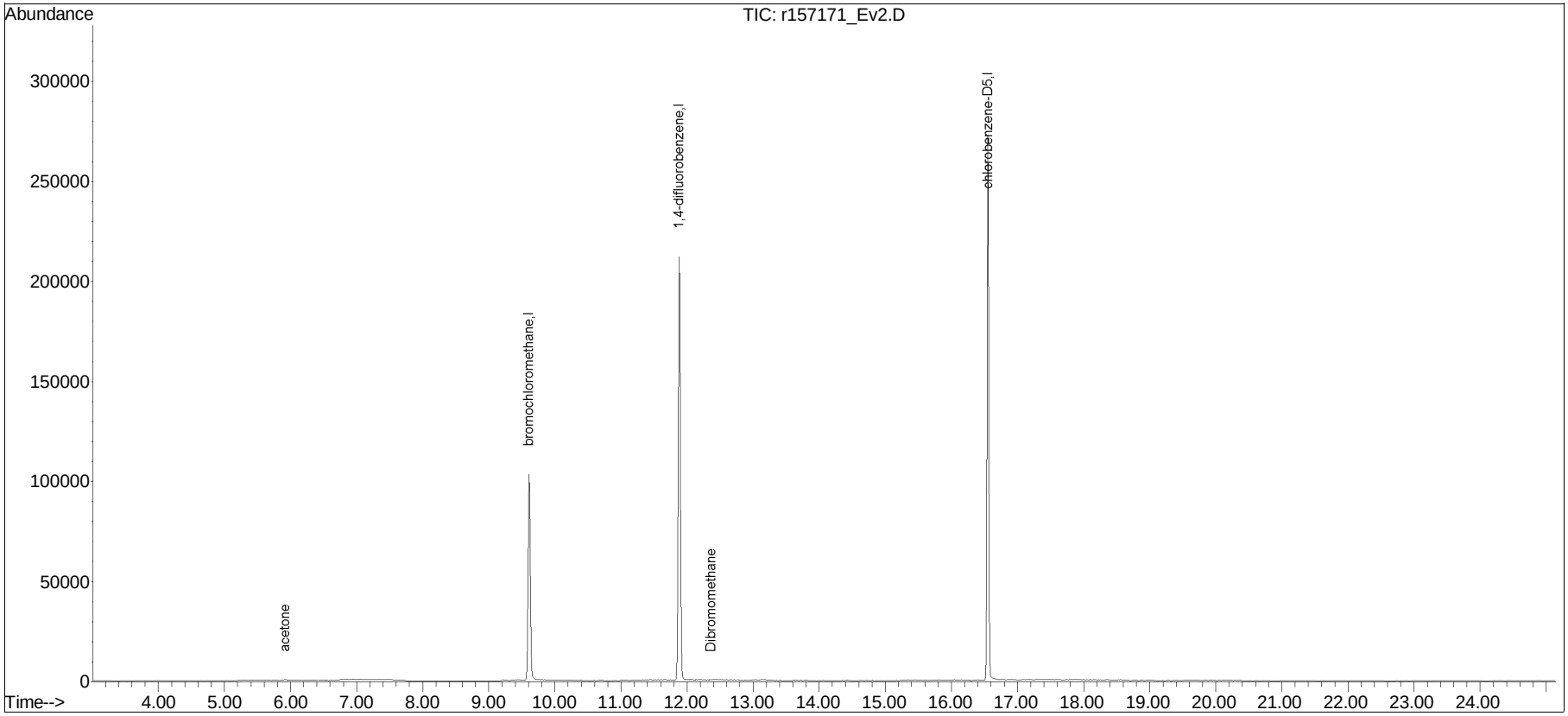
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157171_Ev2.D
Acq On : 20 Apr 2018 5:58 PM
Operator : AIRLAB15:RY
Sample : WG1108448-4,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 18:36:44 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Sub List : Default-LCS-AP2 - All compounds listedSIM\r157169_Ev2.D




TSIM180404.M Sat Apr 21 17:22:25 2018

Manual Integration/Negative Proof Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airlab15\ | QMethod | : TSIM180404.M |
| Data File | : r157171_Ev2.D | Operator | : AIRLAB15:RY |
| Date Inj'd | : 4/20/2018 5:58 PM | Instrument | : |
| Sample | : WG1108448-4,3,250,250 | Quant Date | : 4/20/2018 6:36 pm |

There are no manual integrations or false positives in this file.

# Analytical Event

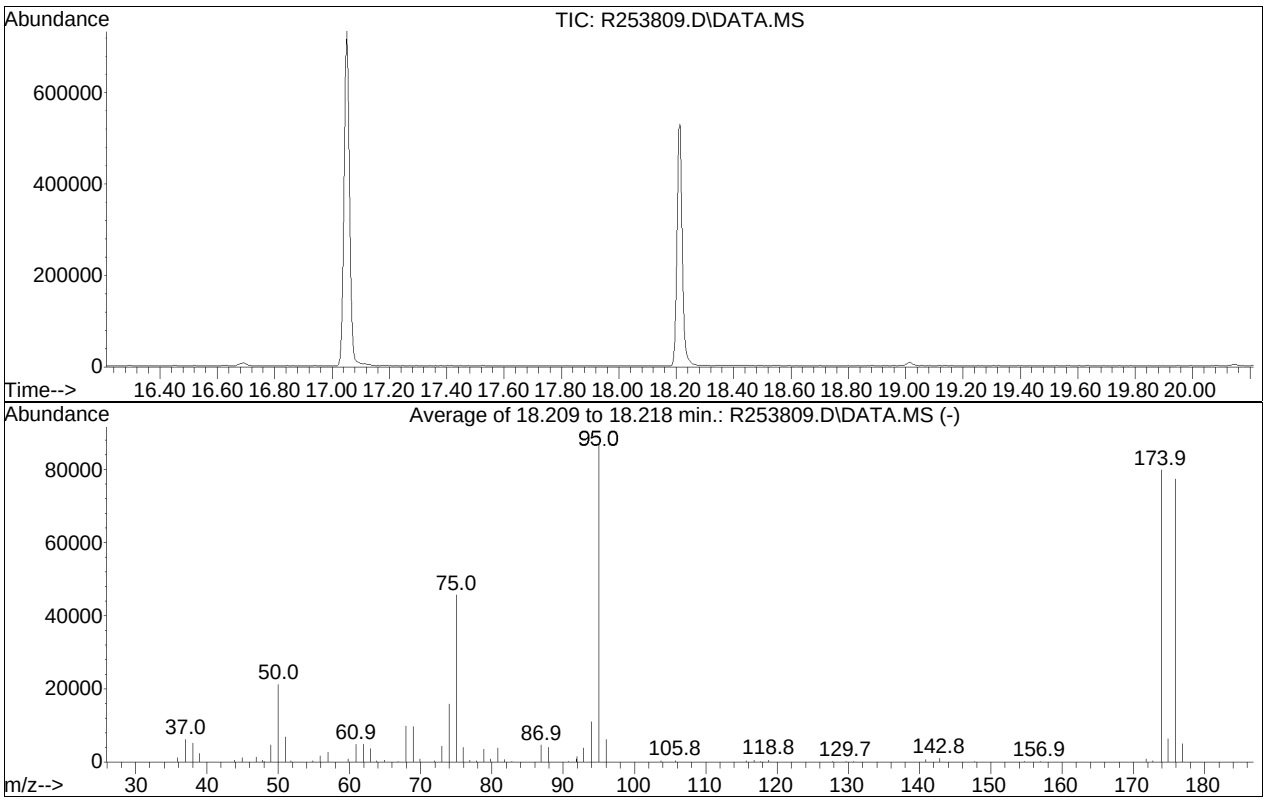
# Continuing Calibration
# BFB Tune

BFB

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253809.D
Acq On : 21 Apr 2018 11:32 am
Operator : AIRPIANO2:RY
Sample : WG1108672-1,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Title : TO-14A/TO-15 SIM/Full Scan Analysis
Last Update : Mon Mar 26 12:18:08 2018




AutoFind: Scans 1813, 1814, 1815; Background Corrected with Scan 1805

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|---|---|---|---|---|---|---|
| 50 | 95 | 8 | 40 | 24.3 | 21238 | PASS |
| 75 | 95 | 30 | 66 | 52.4 | 45736 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 87341 | PASS |
| 96 | 95 | 5 | 9 | 7.2 | 6265 | PASS |
| 173 | 174 | 0.00 | 2 | 0.5 | 409 | PASS |
| 174 | 95 | 50 | 120 | 91.5 | 79907 | PASS |
| 175 | 174 | 4 | 9 | 7.9 | 6301 | PASS |
| 176 | 174 | 93 | 101 | 96.9 | 77469 | PASS |
| 177 | 176 | 5 | 9 | 6.4 | 4967 | PASS |

# Continuing Calibration

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-2,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 1.000 | 1.000 | 0.0 | 70 | 0.00 |
| 2 | | propylene | 0.578 | 0.725 | -25.4 | 93 | 0.00 |
| 3 | | dichlorodifluoromethane | 1.995 | 1.872 | 6.2 | 68 | 0.00 |
| 4 | C | chloromethane | 0.926 | 0.898 | 3.0 | 70 | 0.00 |
| 5 | | Freon-114 | 2.693 | 2.297 | 14.7 | 61 | 0.00 |
| 6 | C | vinyl chloride | 1.051 | 0.944 | 10.2 | 65 | 0.00 |
| 7 | C | 1,3-butadiene | 0.698 | 0.749 | -7.3 | 78 | 0.00 |
| 8 | C | bromomethane | 0.905 | 0.775 | 14.4 | 62 | 0.00 |
| 9 | C | chloroethane | 0.517 | 0.449 | 13.2 | 64 | 0.00 |
| 10 | | ethanol | 0.641 | 0.624 | 2.7 | 70 | 0.00 |
| 11 | C | vinyl bromide | 0.842 | 0.711 | 15.6 | 60 | 0.00 |
| 12 | C | acrolein | 0.424 | 0.240 | 43.4# | 43# | 0.00 |
| 13 | | acetone | 1.145 | 1.033 | 9.8 | 63 | 0.00 |
| 14 | | trichlorofluoromethane | 2.061 | 1.497 | 27.4 | 45# | 0.00 |
| 15 | | isopropyl alcohol | 1.271 | 1.032 | 18.8 | 75 | 0.00 |
| 16 | C | acrylonitrile | 0.545 | 0.435 | 20.2 | 59# | 0.00 |
| 17 | C | 1,1-dichloroethene | 1.362 | 1.072 | 21.3 | 57# | 0.00 |
| 18 | | tertiary butyl alcohol | 1.320 | 0.991 | 24.9 | 55# | 0.00 |
| 19 | C | methylene chloride | 1.004 | 0.887 | 11.7 | 63 | 0.00 |
| 20 | C | 3-chloropropene | 0.910 | 0.986 | -8.4 | 79 | 0.00 |
| 21 | C | carbon disulfide | 2.364 | 1.885 | 20.3 | 59# | 0.00 |
| 22 | | Freon 113 | 1.582 | 1.238 | 21.7 | 57# | 0.00 |
| 23 | | trans-1,2-dichloroethene | 1.225 | 0.939 | 23.3 | 55# | 0.00 |
| 24 | C | 1,1-dichloroethane | 1.550 | 1.254 | 19.1 | 58# | 0.00 |
| 25 | C | MTBE | 1.863 | 1.551 | 16.7 | 59# | 0.00 |
| 26 | C | vinyl acetate | 1.537 | 1.518 | 1.2 | 74 | 0.00 |
| 27 | C | 2-butanone | 1.627 | 1.571 | 3.4 | 70 | 0.00 |
| 28 | | cis-1,2-dichloroethene | 1.172 | 0.902 | 23.0 | 55# | 0.00 |
| 29 | | Ethyl Acetate | 0.250 | 0.225 | 10.0 | 63 | 0.00 |
| 30 | C | chloroform | 1.738 | 1.345 | 22.6 | 56# | 0.00 |
| 31 | | Tetrahydrofuran | 0.900 | 0.794 | 11.8 | 68 | 0.00 |
| 32 | C | 1,2-dichloroethane | 1.205 | 0.946 | 21.5 | 57# | 0.00 |
| 33 | I | 1,4-difluorobenzene | 1.000 | 1.000 | 0.0 | 62 | 0.00 |
| 34 | C | hexane | 0.524 | 0.522 | 0.4 | 64 | 0.00 |
| 36 | C | 1,1,1-trichloroethane | 0.709 | 0.626 | 11.7 | 57# | 0.00 |
| 37 | C | benzene | 1.081 | 0.910 | 15.8 | 54# | 0.00 |
| 38 | C | carbon tetrachloride | 0.704 | 0.630 | 10.5 | 57# | 0.00 |
| 39 | | cyclohexane | 0.527 | 0.521 | 1.1 | 63 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-2,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 40 | | dibromomethane | 0.477 | 0.343 | 28.1 | 50# | 0.00 |
| 41 | C | 1,2-dichloropropane | 0.441 | 0.390 | 11.6 | 57# | 0.00 |
| 42 | | bromodichloromethane | 0.824 | 0.792 | 3.9 | 61 | 0.00 |
| 43 | C | 1,4-dioxane | 0.224 | 0.206 | 8.0 | 58# | 0.00 |
| 44 | C | trichloroethene | 0.441 | 0.383 | 13.2 | 56# | 0.00 |
| 45 | C | 2,2,4-trimethylpentane | 1.718 | 1.830 | -6.5 | 68 | 0.00 |
| 46 | | heptane | 0.618 | 0.690 | -11.7 | 71 | 0.00 |
| 47 | C | cis-1,3-dichloropropene | 0.585 | 0.505 | 13.7 | 54# | 0.00 |
| 48 | C | 4-methyl-2-pentanone | 0.867 | 0.934 | -7.7 | 68 | 0.00 |
| 49 | | trans-1,3-dichloropropene | 0.572 | 0.424 | 25.9 | 46# | 0.00 |
| 50 | C | 1,1,2-trichloroethane | 0.439 | 0.388 | 11.6 | 56# | 0.00 |
| 51 | I | chlorobenzene-D5 | 1.000 | 1.000 | 0.0 | 68 | 0.00 |
| 52 | C | toluene | 5.482 | 4.356 | 20.5 | 55# | 0.00 |
| 54 | | 2-hexanone | 3.536 | 3.363 | 4.9 | 65 | 0.00 |
| 55 | | dibromochloromethane | 3.146 | 2.892 | 8.1 | 63 | 0.00 |
| 56 | C | 1,2-dibromoethane | 3.018 | 2.346 | 22.3 | 53# | 0.00 |
| 57 | C | tetrachloroethene | 2.309 | 1.937 | 16.1 | 59# | 0.00 |
| 58 | | 1,1,1,2-tetrachloroethane | 2.188 | 1.648 | 24.7 | 51# | 0.00 |
| 59 | C | chlorobenzene | 4.323 | 3.412 | 21.1 | 54# | 0.00 |
| 60 | C | ethylbenzene | 6.802 | 5.413 | 20.4 | 54# | 0.00 |
| 61 | C | m+p-xylene | 5.321 | 4.362 | 18.0 | 54# | 0.00 |
| 62 | C | bromoform | 2.850 | 2.864 | -0.5 | 67 | 0.00 |
| 63 | C | styrene | 3.859 | 3.092 | 19.9 | 52# | 0.00 |
| 64 | C | 1,1,2,2-tetrachloroethane | 4.582 | 3.877 | 15.4 | 56# | 0.00 |
| 65 | C | o-xylene | 5.518 | 4.685 | 15.1 | 56# | 0.00 |
| 66 | | 1,2,3-trichloropropane | 3.324 | 2.686 | 19.2 | 55# | 0.00 |
| 68 | C | isopropylbenzene | 6.935 | 5.614 | 19.0 | 55# | 0.00 |
| 69 | | bromobenzene | 3.874 | 3.096 | 20.1 | 54# | 0.00 |
| 70 | | 4-ethyl toluene | 6.760 | 6.570 | 2.8 | 58# | 0.00 |
| 71 | | 1,3,5-trimethylbenzene | 5.659 | 4.963 | 12.3 | 54# | 0.00 |
| 72 | | tert-butylbenzene | 6.285 | 5.224 | 16.9 | 55# | 0.00 |
| 73 | | 1,2,4-trimethylbenzene | 5.662 | 5.432 | 4.1 | 57# | 0.00 |
| 74 | C | Benzyl Chloride | 5.107 | 4.833 | 5.4 | 61 | 0.00 |
| 75 | | 1,3-dichlorobenzene | 4.024 | 3.781 | 6.0 | 56# | 0.00 |
| 76 | C | 1,4-dichlorobenzene | 4.135 | 3.769 | 8.9 | 55# | 0.00 |
| 77 | | sec-butylbenzene | 8.859 | 7.448 | 15.9 | 55# | 0.00 |
| 78 | | p-isopropyltoluene | 7.366 | 5.778 | 21.6 | 51# | 0.00 |
| 79 | | 1,2-dichlorobenzene | 3.810 | 3.562 | 6.5 | 57# | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-2,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 80 | n-butylbenzene | 7.231 | 6.351 | 12.2 | 55# | 0.00 |
| 81 C | 1,2,4-trichlorobenzene | 3.251 | 3.049 | 6.2 | 52# | 0.00 |
| 82 | naphthalene | 6.703 | 5.850 | 12.7 | 47# | 0.00 |
| 83 | 1,2,3-trichlorobenzene | 2.707 | 2.405 | 11.2 | 46# | 0.00 |
| 84 C | hexachlorobutadiene | 2.738 | 2.747 | -0.3 | 60 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-2,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 10.539 | 49 | 191605 | 10.000 ppbV | 0.00 |
| Standard Area = 191605 | | | Recovery = 100.00% | | |
| 33) 1,4-difluorobenzene | 12.736 | 114 | 388232 | 10.000 ppbV | # 0.00 |
| Standard Area = 388232 | | | Recovery = 100.00% | | |
| 51) chlorobenzene-D5 | 17.051 | 54 | 97750 | 10.000 ppbV | 0.00 |
| Standard Area = 97750 | | | Recovery = 100.00% | | |
| System Monitoring Compounds | | | | | |
| Target Compounds | | | | | Qvalue |
| 2) propylene | 4.281 | 41 | 69415M6 | 6.264 ppbV | |
| 3) dichlorodifluoromethane | 4.389 | 85 | 179359 | 4.692 ppbV | 98 |
| 4) chloromethane | 4.626 | 50 | 86010 | 4.845 ppbV | 96 |
| 5) Freon-114 | 4.783 | 85 | 220058 | 4.265 ppbV | 99 |
| 6) vinyl chloride | 4.961 | 62 | 90423 | 4.492 ppbV | 96 |
| 7) 1,3-butadiene | 5.168 | 54 | 71756 | 5.366 ppbV | 99 |
| 8) bromomethane | 5.558 | 94 | 74277 | 4.283 ppbV | 98 |
| 9) chloroethane | 5.822 | 64 | 42993 | 4.339 ppbV | 95 |
| 10) ethanol | 6.046 | 31 | 298670 | 24.327 ppbV | 97 |
| 11) vinyl bromide | 6.325 | 106 | 68115 | 4.222 ppbV | 98 |
| 12) acrolein | 6.517 | 56 | 23033 | 2.837 ppbV # | 92 |
| 13) acetone | 6.701 | 43 | 495042 | 22.570 ppbV | 100 |
| 14) trichlorofluoromethane | 6.909 | 101 | 143380 | 3.632 ppbV | 99 |
| 15) isopropyl alcohol | 7.069 | 45 | 247085 | 10.143 ppbV | 99 |
| 16) acrylonitrile | 7.333 | 53 | 41656 | 3.993 ppbV | 99 |
| 17) 1,1-dichloroethene | 7.764 | 61 | 102667 | 3.934 ppbV | 98 |
| 18) tertiary butyl alcohol | 7.860 | 59 | 94986 | 3.754 ppbV # | 91 |
| 19) methylene chloride | 7.932 | 49 | 84963 | 4.417 ppbV | 92 |
| 20) 3-chloropropene | 8.084 | 41 | 94495 | 5.422 ppbV # | 92 |
| 21) carbon disulfide | 8.276 | 76 | 180600 | 3.987 ppbV | 98 |
| 22) Freon 113 | 8.276 | 101 | 118559 | 3.912 ppbV | 100 |
| 23) trans-1,2-dichloroethene | 9.112 | 61 | 89917 | 3.830 ppbV | 98 |
| 24) 1,1-dichloroethane | 9.351 | 63 | 120114 | 4.045 ppbV | 99 |
| 25) MTBE | 9.446 | 73 | 148637 | 4.163 ppbV | 97 |
| 26) vinyl acetate | 9.555 | 43 | 145391 | 4.936 ppbV | 97 |
| 27) 2-butanone | 9.842 | 43 | 150513 | 4.829 ppbV | 94 |
| 28) cis-1,2-dichloroethene | 10.352 | 61 | 86460 | 3.849 ppbV | 97 |
| 29) Ethyl Acetate | 10.624 | 61 | 21547 | 4.496 ppbV # | 57 |
| 30) chloroform | 10.699 | 83 | 128865 | 3.871 ppbV | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-2,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | | Dev(Min) |
|---|---|---|---|---|---|---|---|
| 31) Tetrahydrofuran | 11.178 | 42 | 76049M6 | 4.412 | ppbV | | |
| 32) 1,2-dichloroethane | 11.535 | 62 | 90582 | 3.924 | ppbV | # | 95 |
| 34) hexane | 10.596 | 57 | 101347 | 4.984 | ppbV | | 94 |
| 36) 1,1,1-trichloroethane | 11.822 | 97 | 121473 | 4.414 | ppbV | | 92 |
| 37) benzene | 12.344 | 78 | 176565 | 4.209 | ppbV | | 99 |
| 38) carbon tetrachloride | 12.519 | 117 | 122330 | 4.476 | ppbV | | 94 |
| 39) cyclohexane | 12.660 | 56 | 101121 | 4.938 | ppbV | | 94 |
| 40) dibromomethane | 13.237 | 93 | 66597 | 3.598 | ppbV | | 93 |
| 41) 1,2-dichloropropane | 13.270 | 63 | 75784 | 4.427 | ppbV | | 97 |
| 42) bromodichloromethane | 13.487 | 83 | 153750 | 4.806 | ppbV | # | 98 |
| 43) 1,4-dioxane | 13.542 | 88 | 39930 | 4.601 | ppbV | | 92 |
| 44) trichloroethene | 13.531 | 130 | 74290 | 4.339 | ppbV | | 97 |
| 45) 2,2,4-trimethylpentane | 13.564 | 57 | 355154 | 5.325 | ppbV | | 97 |
| 46) heptane | 13.847 | 43 | 133993 | 5.582 | ppbV | | 96 |
| 47) cis-1,3-dichloropropene | 14.495 | 75 | 98088 | 4.322 | ppbV | | 91 |
| 48) 4-methyl-2-pentanone | 14.532 | 43 | 181295 | 5.383 | ppbV | | 96 |
| 49) trans-1,3-dichloropropene | 15.047 | 75 | 82339 | 3.705 | ppbV | # | 86 |
| 50) 1,1,2-trichloroethane | 15.237 | 97 | 75397 | 4.428 | ppbV | | 95 |
| 52) toluene | 15.508 | 91 | 212917 | 3.973 | ppbV | | 98 |
| 54) 2-hexanone | 15.734 | 43 | 164375 | 4.756 | ppbV | | 91 |
| 55) dibromochloromethane | 15.905 | 129 | 141357 | 4.597 | ppbV | | 96 |
| 56) 1,2-dibromoethane | 16.131 | 107 | 114656 | 3.886 | ppbV | | 99 |
| 57) tetrachloroethene | 16.529 | 166 | 94687 | 4.196 | ppbV | | 91 |
| 58) 1,1,1,2-tetrachloroethane | 17.070 | 131 | 80529 | 3.764 | ppbV | | 99 |
| 59) chlorobenzene | 17.085 | 112 | 166762 | 3.946 | ppbV | | 93 |
| 60) ethylbenzene | 17.370 | 91 | 264547 | 3.979 | ppbV | | 100 |
| 61) m+p-xylene | 17.509 | 91 | 426398 | 8.198 | ppbV | | 100 |
| 62) bromoform | 17.594 | 173 | 139969 | 5.025 | ppbV | | 98 |
| 63) styrene | 17.785 | 104 | 151099 | 4.006 | ppbV | | 98 |
| 64) 1,1,2,2-tetrachloroethane | 17.866 | 83 | 189474 | 4.230 | ppbV | | 99 |
| 65) o-xylene | 17.866 | 91 | 228963 | 4.245 | ppbV | | 97 |
| 66) 1,2,3-trichloropropane | 17.966 | 75 | 131292 | 4.040 | ppbV | | 96 |
| 68) isopropylbenzene | 18.294 | 105 | 274398 | 4.048 | ppbV | | 100 |
| 69) bromobenzene | 18.385 | 77 | 151338 | 3.996 | ppbV | | 99 |
| 70) 4-ethyl toluene | 18.770 | 105 | 321125 | 4.860 | ppbV | | 100 |
| 71) 1,3,5-trimethylbenzene | 18.823 | 105 | 242563 | 4.385 | ppbV | # | 10 |
| 72) tert-butylbenzene | 19.128 | 119 | 255327 | 4.156 | ppbV | | 98 |
| 73) 1,2,4-trimethylbenzene | 19.128 | 105 | 265489 | 4.797 | ppbV | # | 21 |
| 74) Benzyl Chloride | 19.247 | 91 | 236237 | 4.733 | ppbV | # | 32 |
| 75) 1,3-dichlorobenzene | 19.266 | 146 | 184788 | 4.698 | ppbV | | 99 |

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-2,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : Default-LCS-AP2 - All compounds listed

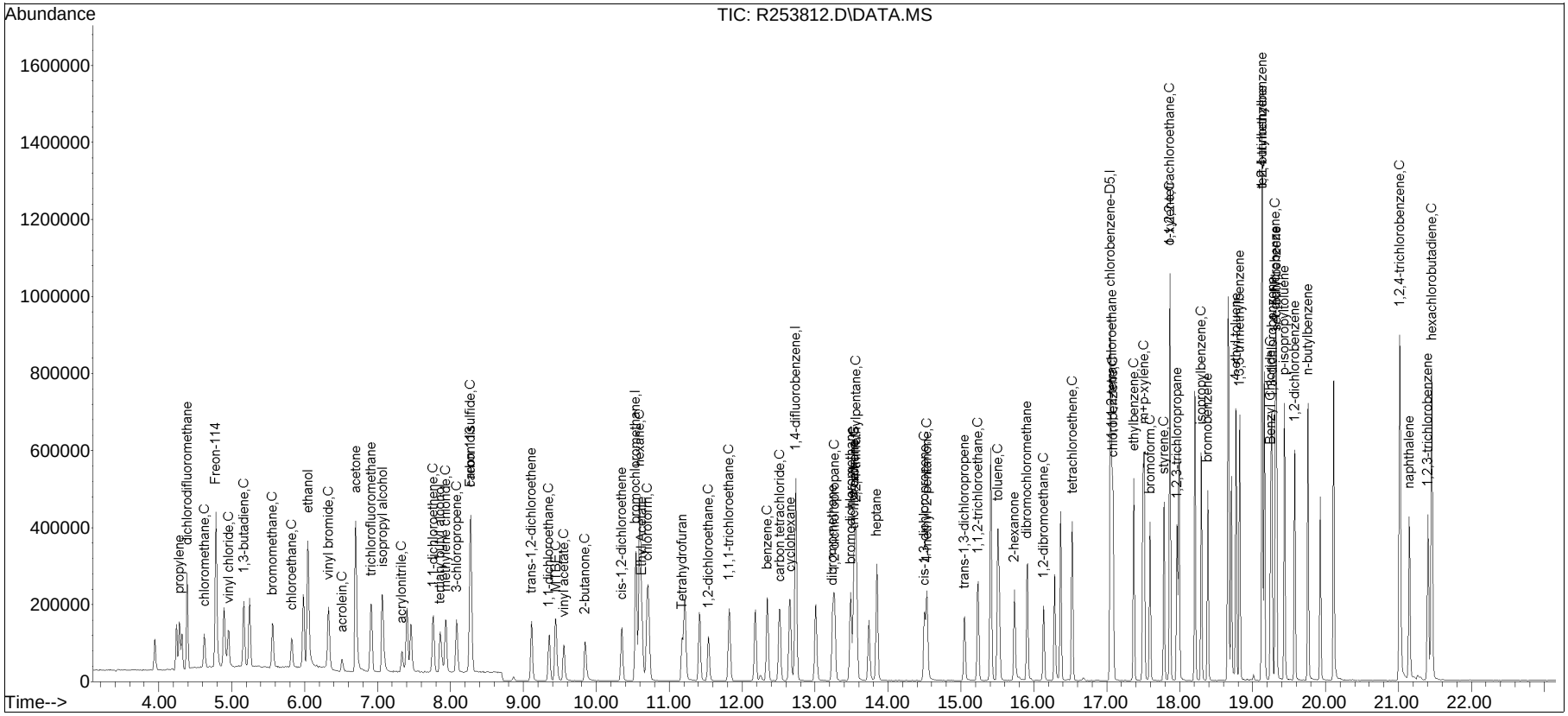
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| 76) 1,4-dichlorobenzene | 19.314 | 146 | 184221 | 4.558 | ppbV | 96 |
| 77) sec-butylbenzene | 19.328 | 105 | 364005 | 4.203 | ppbV | 98 |
| 78) p-isopropyltoluene | 19.438 | 119 | 282386 | 3.922 | ppbV | 96 |
| 79) 1,2-dichlorobenzene | 19.576 | 146 | 174106 | 4.675 | ppbV | 98 |
| 80) n-butylbenzene | 19.761 | 91 | 310427 | 4.392 | ppbV | 99 |
| 81) 1,2,4-trichlorobenzene | 21.018 | 180 | 149001 | 4.689 | ppbV # | 89 |
| 82) naphthalene | 21.147 | 128 | 285922 | 4.364 | ppbV | 98 |
| 83) 1,2,3-trichlorobenzene | 21.404 | 180 | 117528 | 4.442 | ppbV | 96 |
| 84) hexachlorobutadiene | 21.457 | 225 | 134255 | 5.016 | ppbV | 98 |

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

Sub List : Default-LCS-AP2 - All compounds listedR253812.D

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-2,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

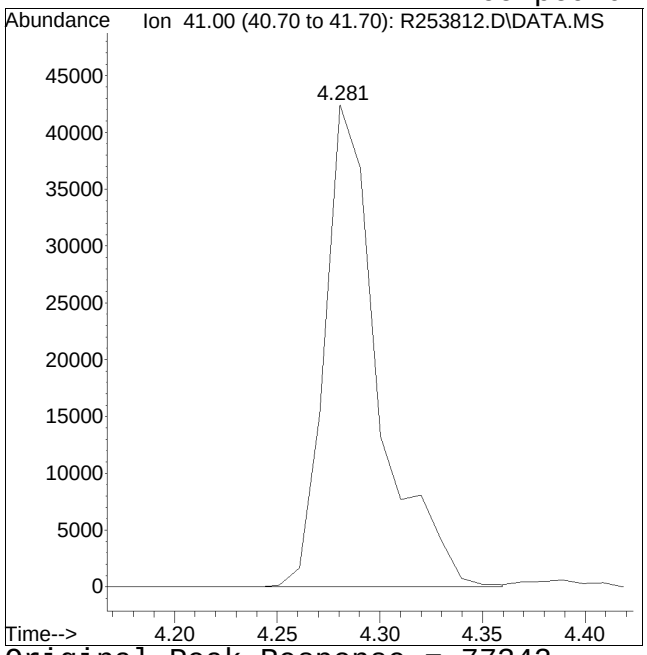


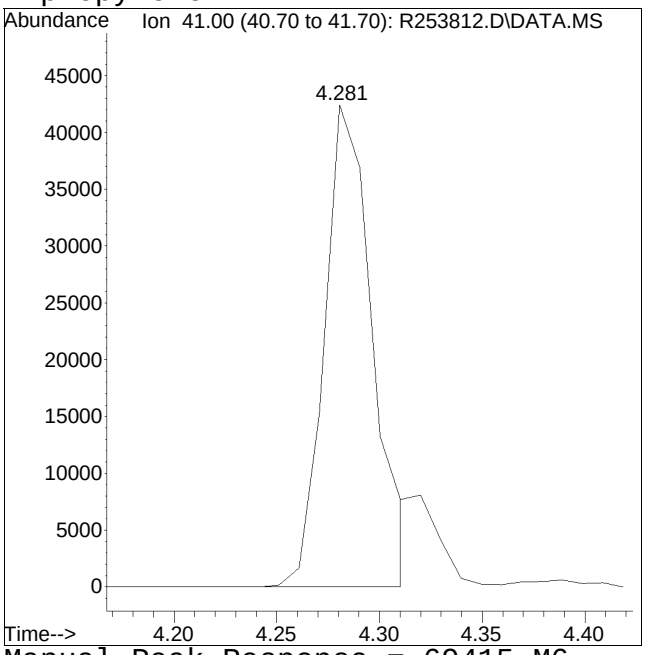
Manual Integration/Negative Proof Report

Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253812.D
Date Inj'd : 4/21/2018 1:20 pm
Sample : WG1108672-2,3,250,250

Method : TSIM180325.M
Operator : AIRPIANO2:RY
Instrument : Airpiano 2
Quant Date : 4/21/2018 2:08 pm

Compound #2: propylene




Original Peak Response = 77342

Manual Peak Response = 69415 M6

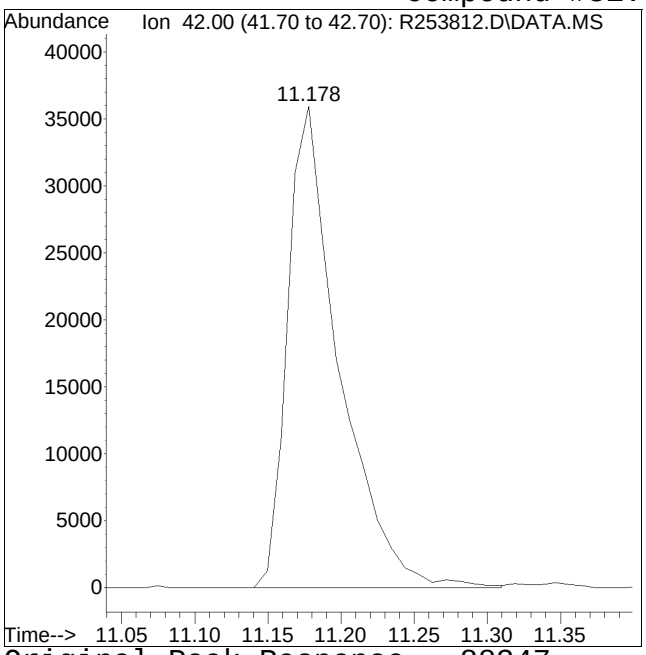
M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

Manual Integration/Negative Proof Report

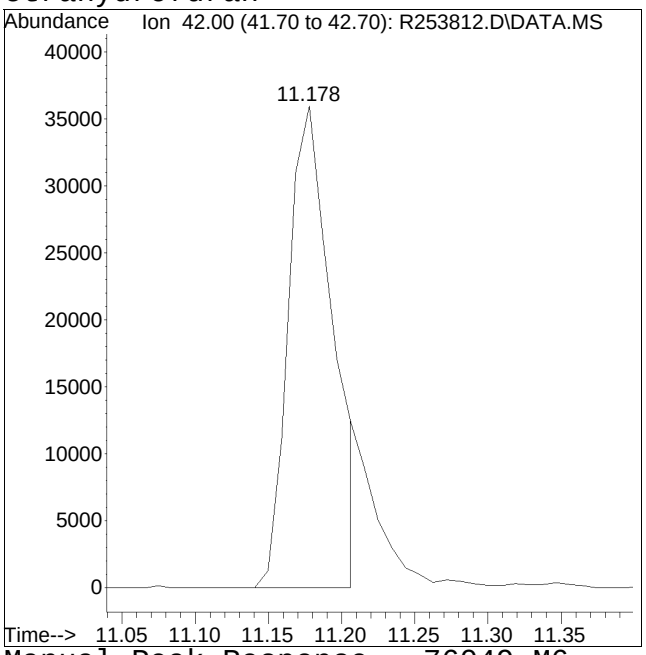
Data Path : O:\Forensics\Data\AIR2\2018Q
Data File : R253812.D
Date Inj'd : 4/21/2018 1:20 pm
Sample : WG1108672-2,3,250,250

Method : TSIM180325.M
Operator : AIRPIANO2:RY
Instrument : Airpiano 2
Quant Date : 4/21/2018 2:08 pm

Compound #31: Tetrahydrofuran




Original Peak Response = 88347




Manual Peak Response = 76049 M6

M6 = Misassignment of peak valley by automated integration (poor split of 2 peaks).

# Sample Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253815.D
Acq On : 21 Apr 2018 3:35 pm
Operator : AIRPIANO2:MB
Sample : L1812962-05,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 21 16:04:22 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : 9_Chlorinateds - .

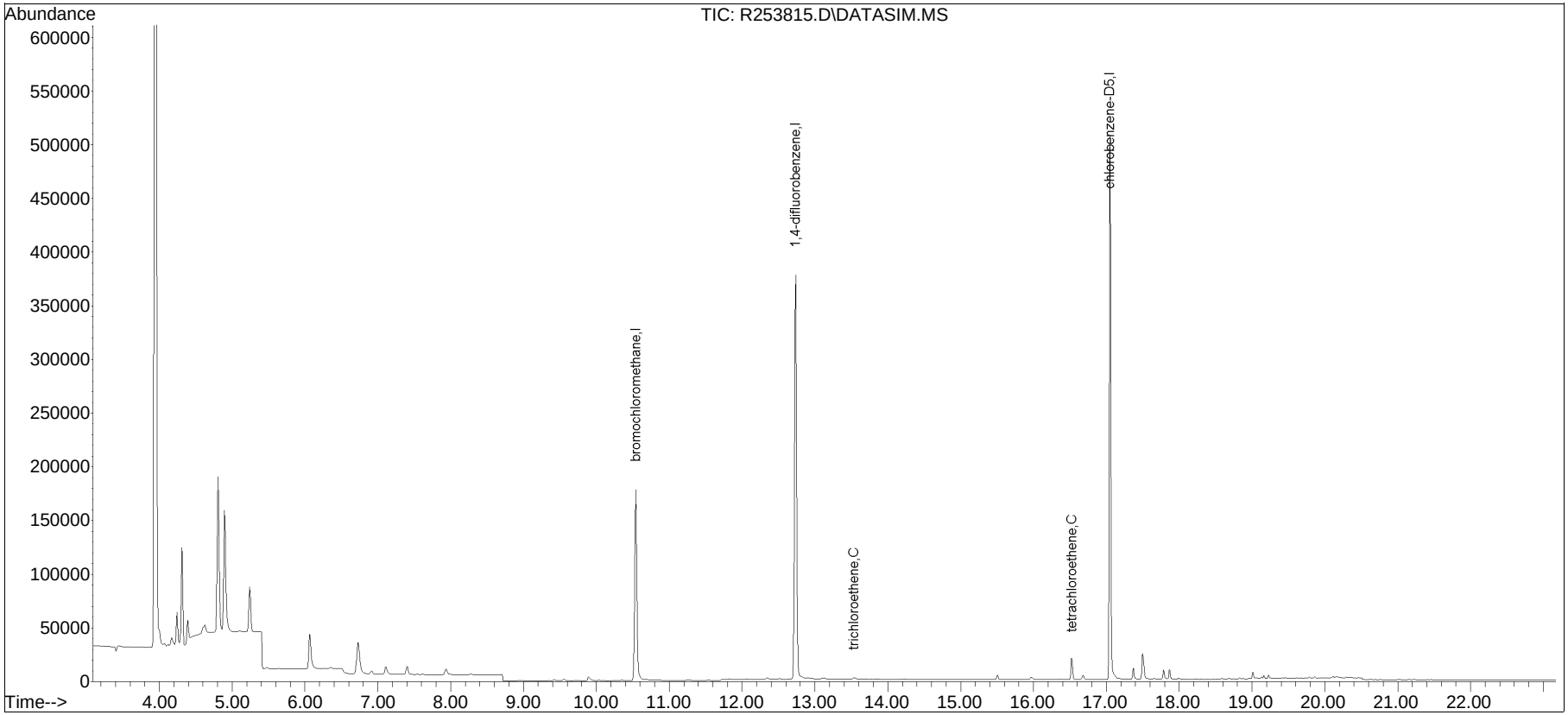
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 215253 | 10.000 | ppbV | 0.00 |
| Standard Area = 191605 | | | Recovery = 112.34% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 413838 | 10.000 | ppbV | 0.00 |
| Standard Area = 388232 | | | Recovery = 106.60% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 87770 | 10.000 | ppbV | 0.00 |
| Standard Area = 97750 | | | Recovery = 89.79% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 4.952 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 7.766 | | 0 | N.D. | | |
| 23) trans-1,2-dichloroethene | 9.106 | | 0 | N.D. | | |
| 28) cis-1,2-dichloroethene | 10.344 | | 0 | N.D. | | |
| 44) trichloroethene | 13.532 | 130 | 544 | 0.030 | ppbV | 100 |
| 57) tetrachloroethene | 16.530 | 166 | 9762 | 0.482 | ppbV # | 87 |

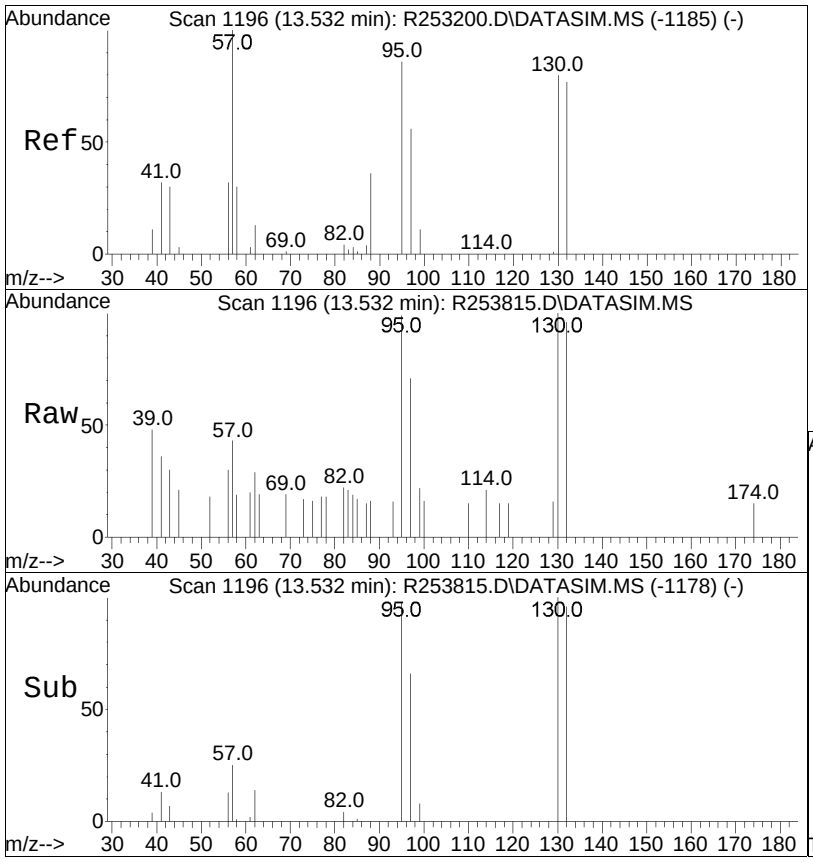
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : 9_Chlorinateds - .AIR2\2018\180421SIM\R253812.D

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253815.D
Acq On : 21 Apr 2018 3:35 pm
Operator : AIRPIANO2:MB
Sample : L1812962-05,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Apr 21 16:04:22 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

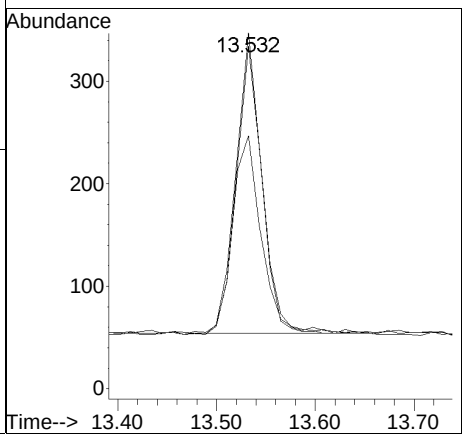


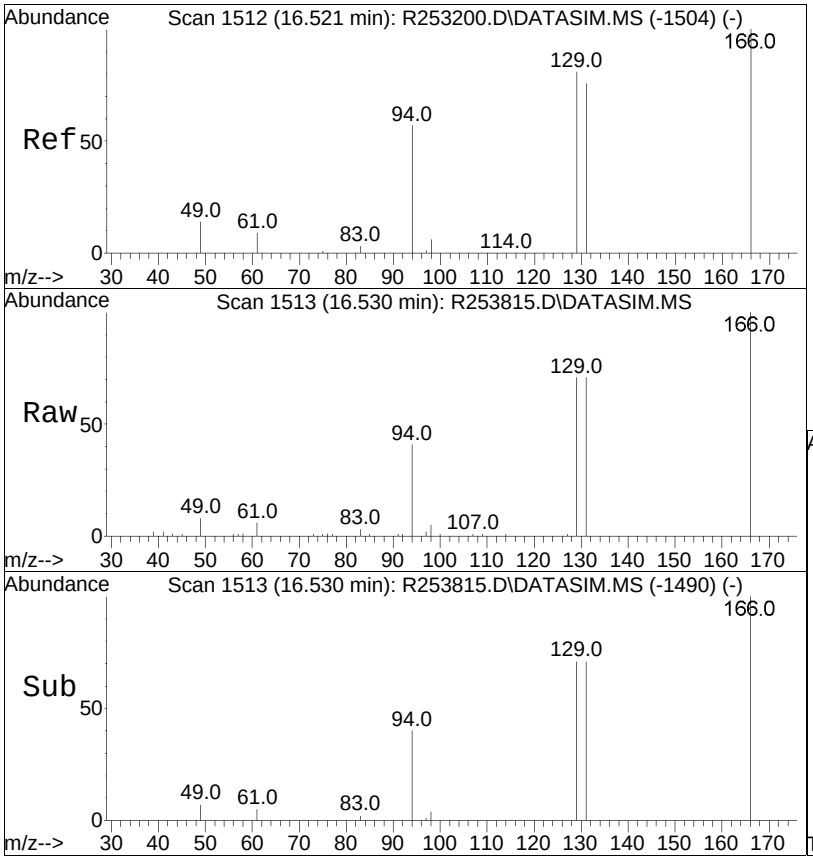



#44
trichloroethene
Concen: 0.03 ppbV
RT: 13.532 min Scan# 1196
Delta R.T. -0.000 min
Lab File: R253815.D
Acq: 21 Apr 2018 3:35 pm

Tgt Ion:130 Resp: 544

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 96.3 | 77.2 | 115.8 |
| 97 | 71.2 | 56.5 | 84.7 |

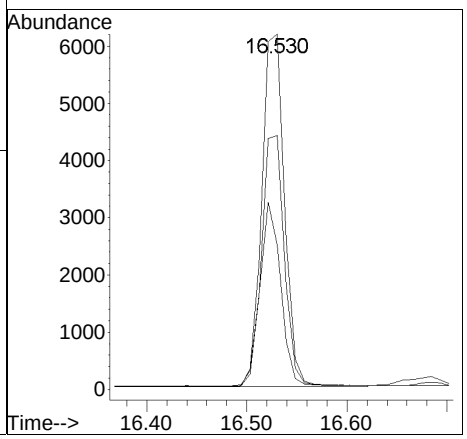





#57
tetrachloroethene
Concen: 0.48 ppbV
RT: 16.530 min Scan# 1513
Delta R.T. 0.009 min
Lab File: R253815.D
Acq: 21 Apr 2018 3:35 pm

Tgt Ion:166 Resp: 9762

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 71.5 | 61.0 | 91.6 |
| 94 | 40.7 | 46.0 | 69.0# |



Manual Integration/Negative Proof Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\AIR2\2018Q | Method | : TSIM180325.M |
| Data File | : R253815.D | Operator | : AIRPIANO2:MB |
| Date Inj'd | : 4/21/2018 3:35 pm | Instrument | : Airpiano 2 |
| Sample | : L1812962-05,3,250,250 | Quant Date | : 4/21/2018 4:04 pm |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253816.D
Acq On : 21 Apr 2018 4:45 pm
Operator : AIRPIANO2:MB
Sample : L1812962-06,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 22 08:45:42 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : 9_Chlorinateds - .

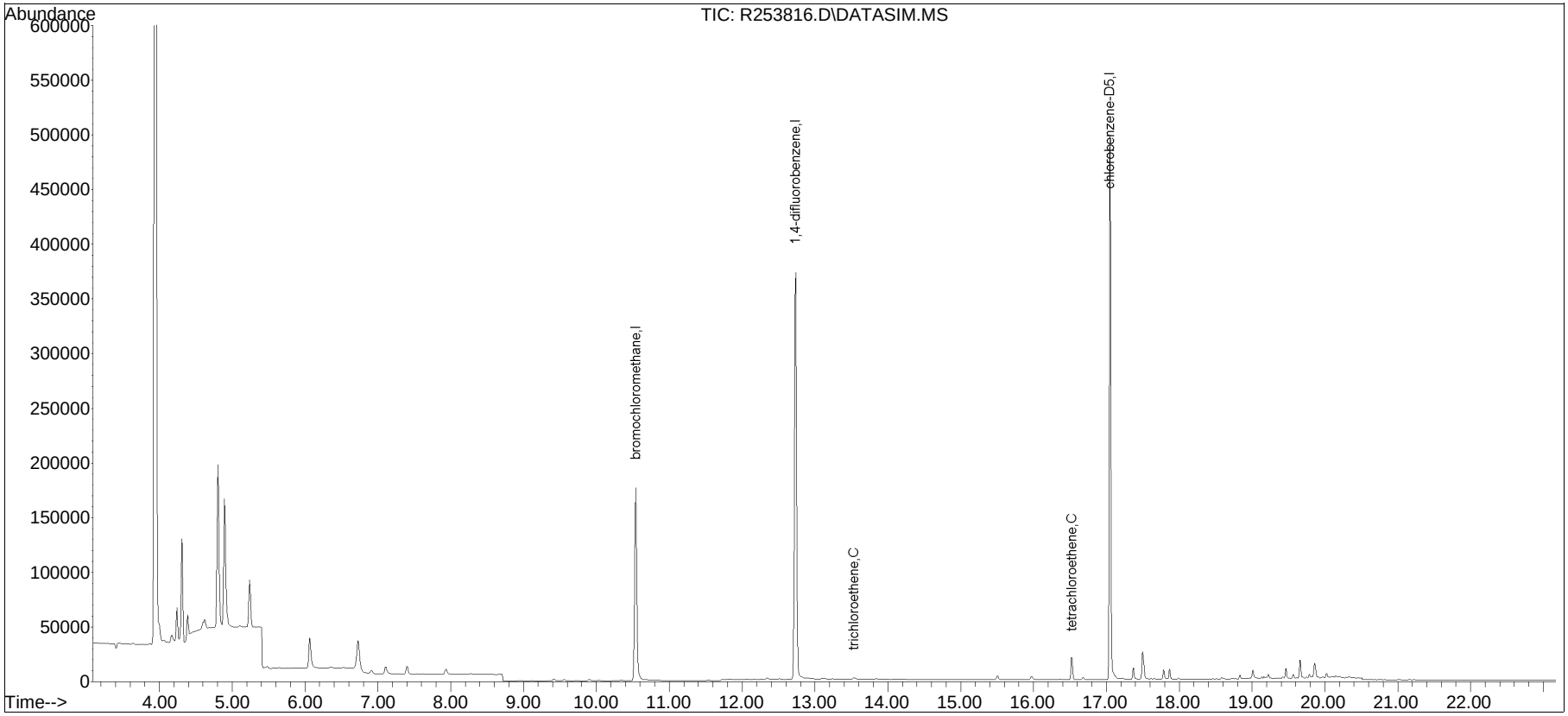
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 216213 | 10.000 | ppbV | 0.00 |
| Standard Area = 191605 | | | Recovery = 112.84% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 414230 | 10.000 | ppbV | 0.00 |
| Standard Area = 388232 | | | Recovery = 106.70% | | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 86988 | 10.000 | ppbV | 0.00 |
| Standard Area = 97750 | | | Recovery = 88.99% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 4.962 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 7.750 | | 0 | N.D. | | |
| 23) trans-1,2-dichloroethene | 9.113 | | 0 | N.D. | | |
| 28) cis-1,2-dichloroethene | 10.343 | | 0 | N.D. | | |
| 44) trichloroethene | 13.532 | 130 | 575 | 0.031 | ppbV | 97 |
| 57) tetrachloroethene | 16.530 | 166 | 9971 | 0.496 | ppbV # | 86 |

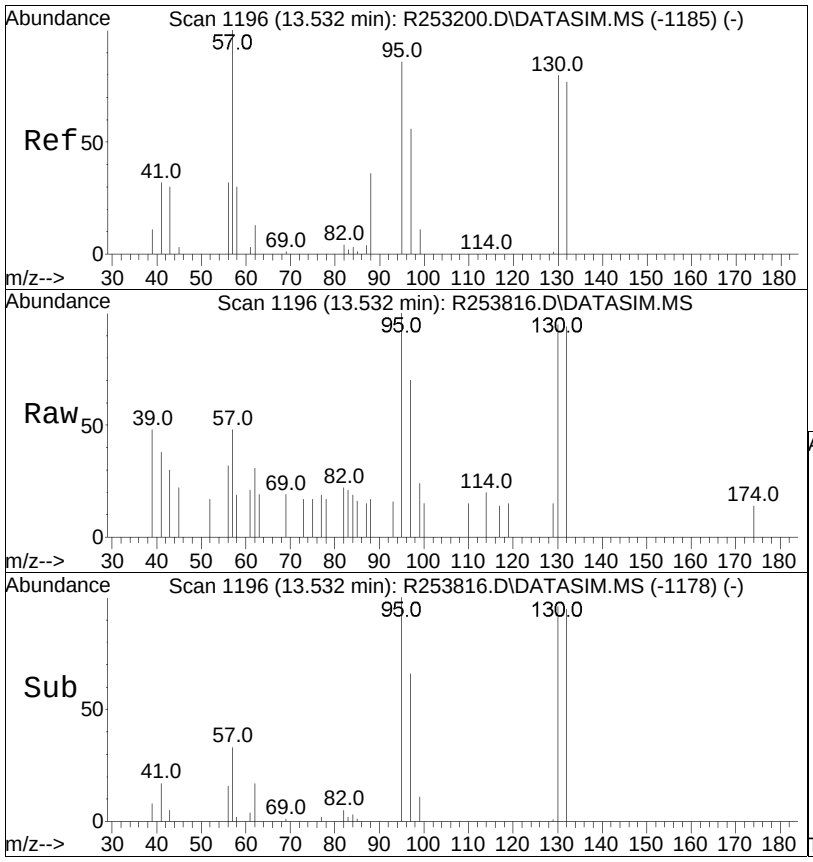
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : 9_Chlorinateds - .AIR2\2018\180421SIM\R253812.D

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253816.D
Acq On : 21 Apr 2018 4:45 pm
Operator : AIRPIANO2:MB
Sample : L1812962-06,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 22 08:45:42 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

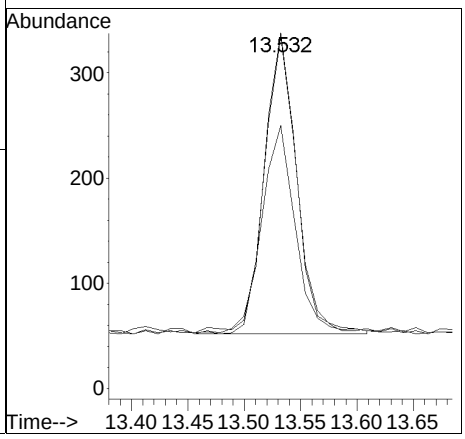


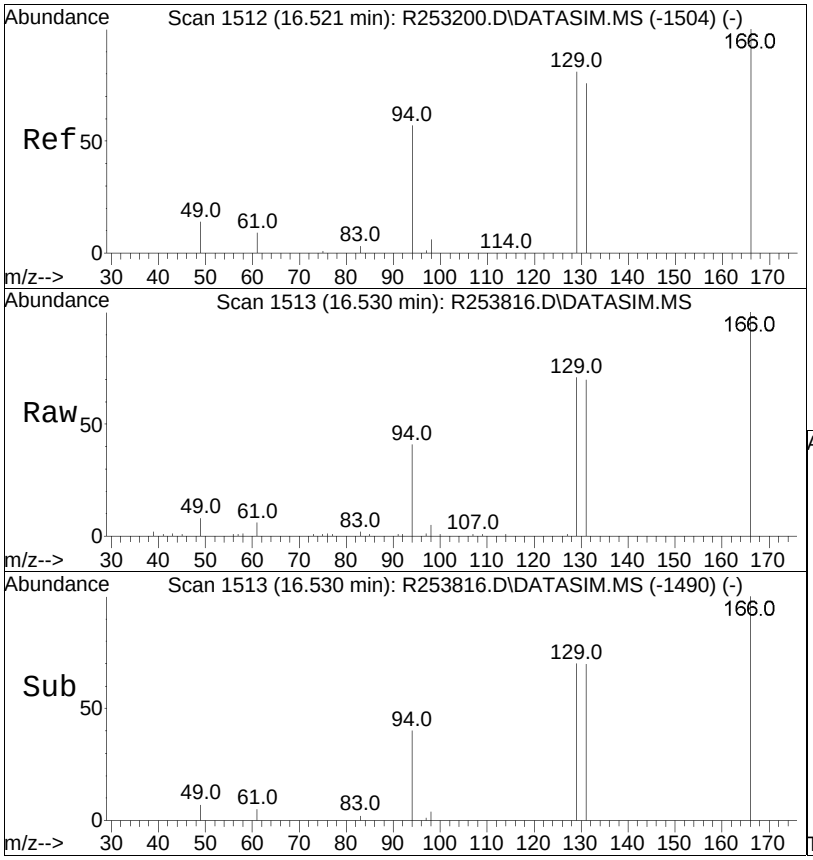



#44
trichloroethene
Concen: 0.03 ppbV
RT: 13.532 min Scan# 1196
Delta R.T. -0.000 min
Lab File: R253816.D
Acq: 21 Apr 2018 4:45 pm

Tgt Ion:130 Resp: 575

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 99.1 | 77.2 | 115.8 |
| 97 | 74.0 | 56.5 | 84.7 |

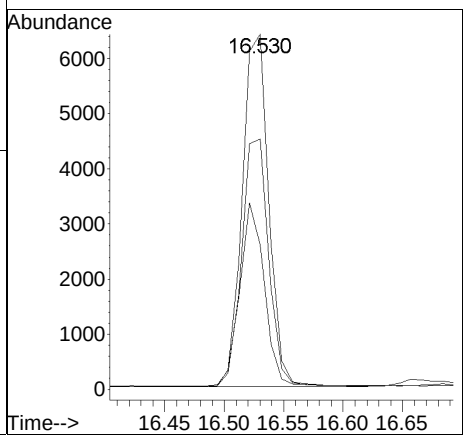





#57
tetrachloroethene
Concen: 0.50 ppbV
RT: 16.530 min Scan# 1513
Delta R.T. 0.009 min
Lab File: R253816.D
Acq: 21 Apr 2018 4:45 pm

Tgt Ion:166 Resp: 9971

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 70.4 | 61.0 | 91.6 |
| 94 | 40.5 | 46.0 | 69.0# |



Manual Integration/Negative Proof Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\AIR2\2018Q | Method | : TSIM180325.M |
| Data File | : R253816.D | Operator | : AIRPIANO2:MB |
| Date Inj'd | : 4/21/2018 4:45 pm | Instrument | : Airpiano 2 |
| Sample | : L1812962-06,3,250,250 | Quant Date | : 4/22/2018 8:45 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253817.D
Acq On : 21 Apr 2018 5:21 pm
Operator : AIRPIANO2:MB
Sample : L1812962-07,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 23 09:37:04 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : 9_Chlorinateds - .

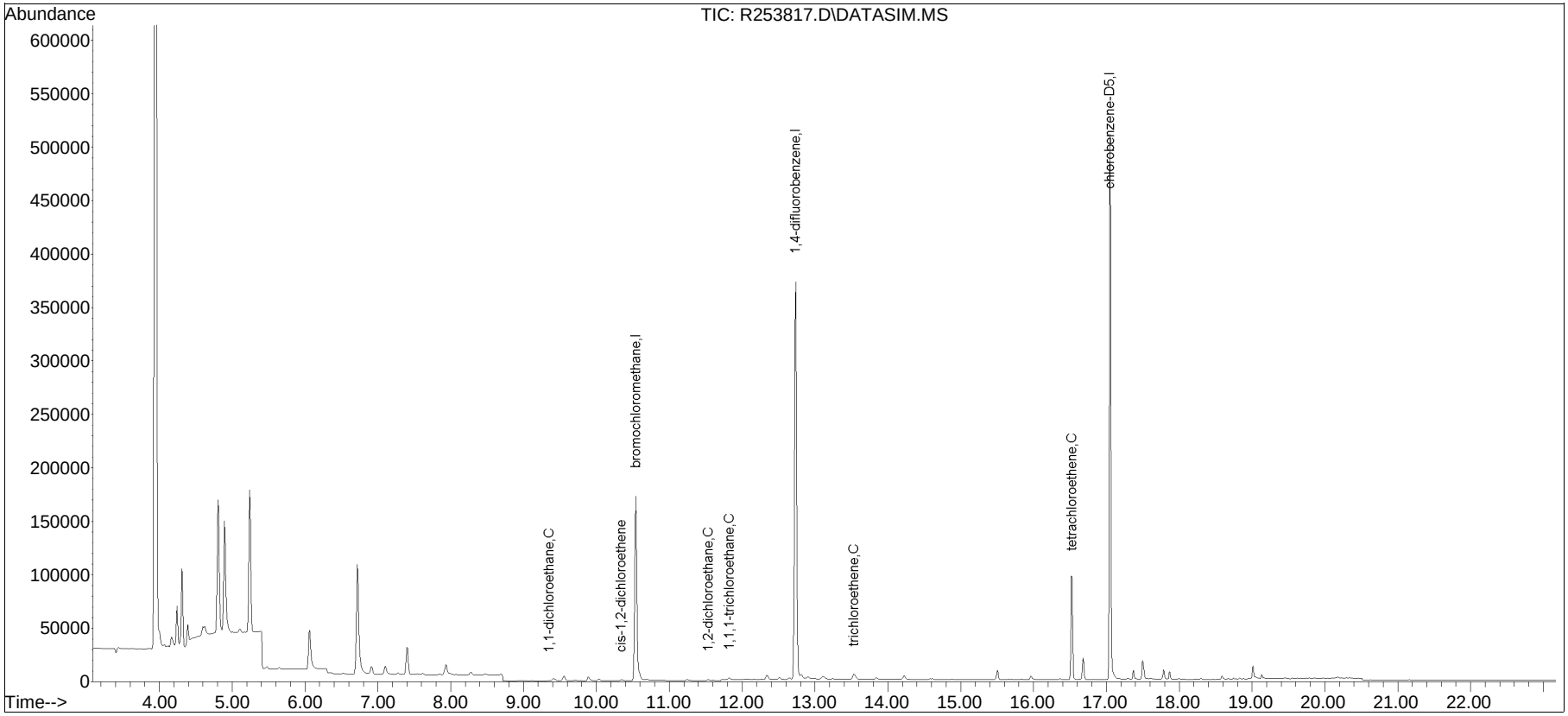
| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 210360 | 10.000 ppbV | 0.00 |
| Standard Area = 191605 | | | Recovery | = 109.79% | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 404919 | 10.000 ppbV | 0.00 |
| Standard Area = 388232 | | | Recovery | = 104.30% | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 88374 | 10.000 ppbV | 0.00 |
| Standard Area = 97750 | | | Recovery | = 90.41% | |
| System Monitoring Compounds | | | | | |
| Target Compounds | | | | | Qvalue |
| 6) vinyl chloride | 4.952 | | 0 | N.D. | |
| 17) 1,1-dichloroethene | 7.758 | | 0 | N.D. | |
| 23) trans-1,2-dichloroethene | 9.113 | | 0 | N.D. | |
| 28) cis-1,2-dichloroethene | 10.343 | 61 | 681 | 0.028 ppbV # | 91 |
| 44) trichloroethene | 13.532 | 130 | 1978 | 0.111 ppbV | 99 |
| 57) tetrachloroethene | 16.530 | 166 | 47877 | 2.347 ppbV # | 85 |

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

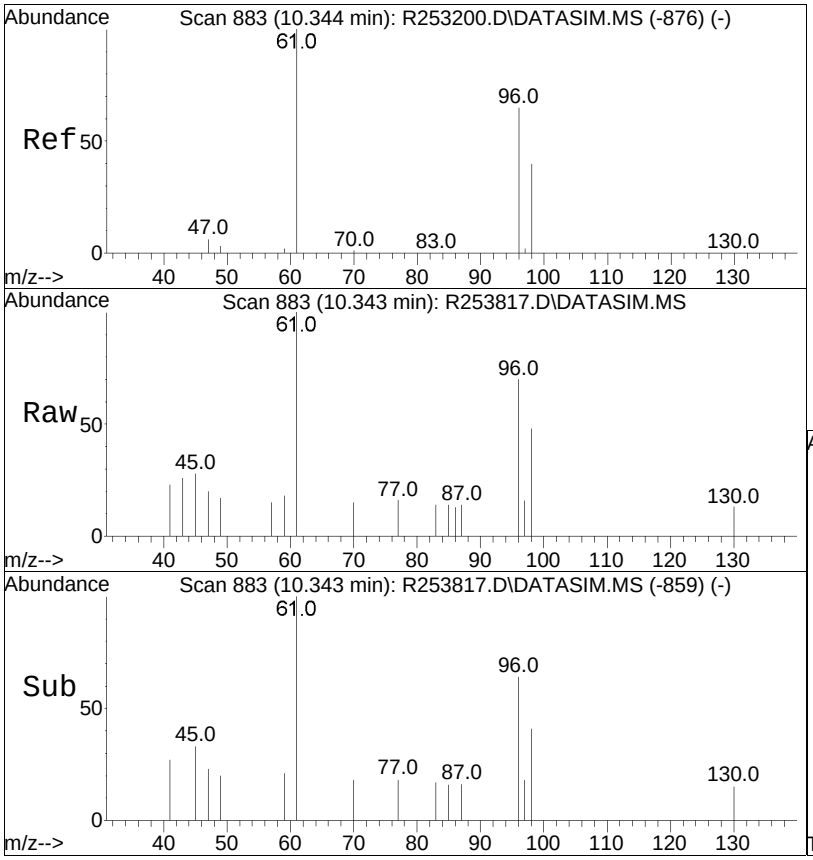
Sub List : 9_Chlorinateds - .AIR2\2018\180421SIM\R253812.D

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253817.D
Acq On : 21 Apr 2018 5:21 pm
Operator : AIRPIANO2:MB
Sample : L1812962-07,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Apr 23 09:37:04 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration



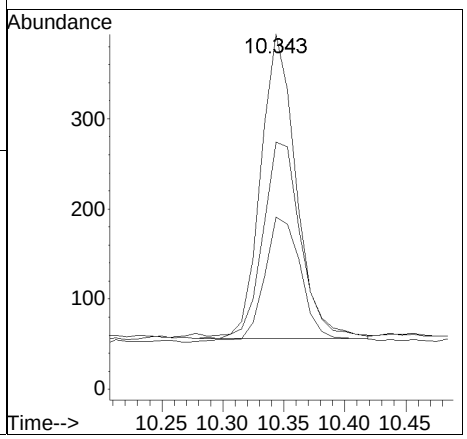

TSIM180325.M Mon Apr 23 09:40:41 2018

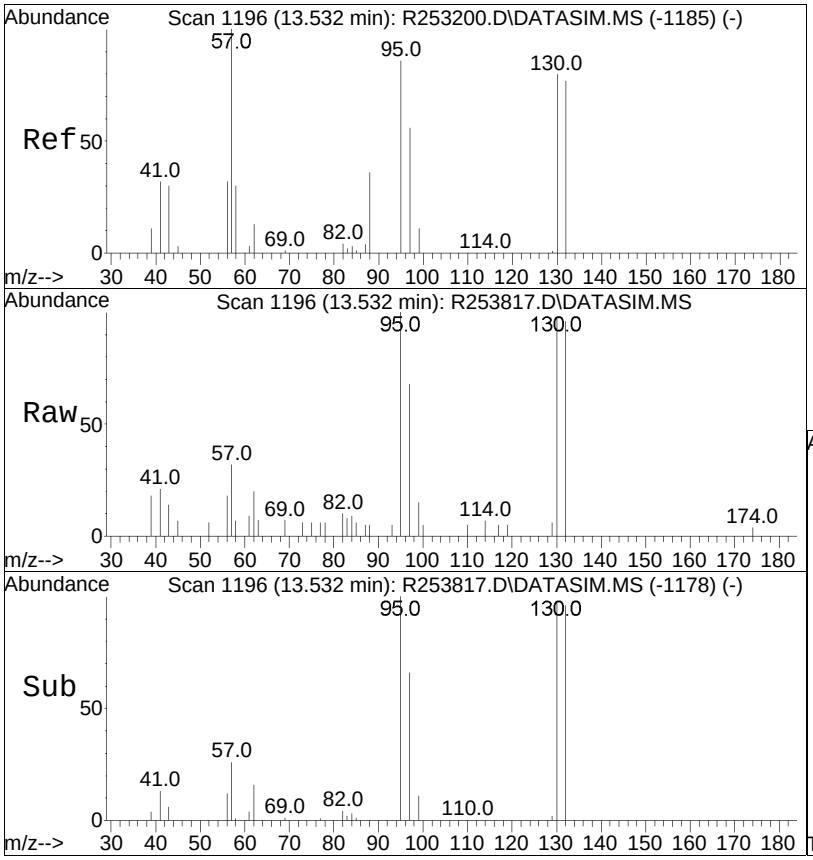



#28
cis-1,2-dichloroethene
Concen: 0.03 ppbV
RT: 10.343 min Scan# 883
Delta R.T. -0.000 min
Lab File: R253817.D
Acq: 21 Apr 2018 5:21 pm

Tgt Ion: 61 Resp: 681

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 69.5 | 51.7 | 77.5 |
| 98 | 48.5 | 31.7 | 47.5# |

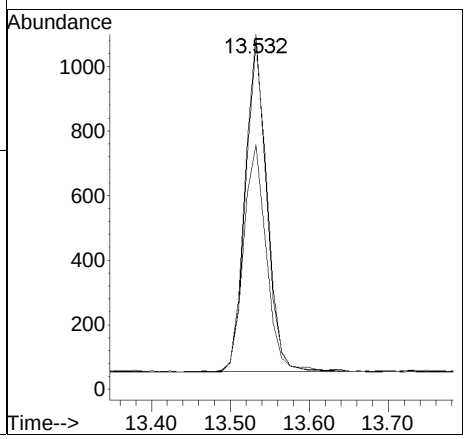


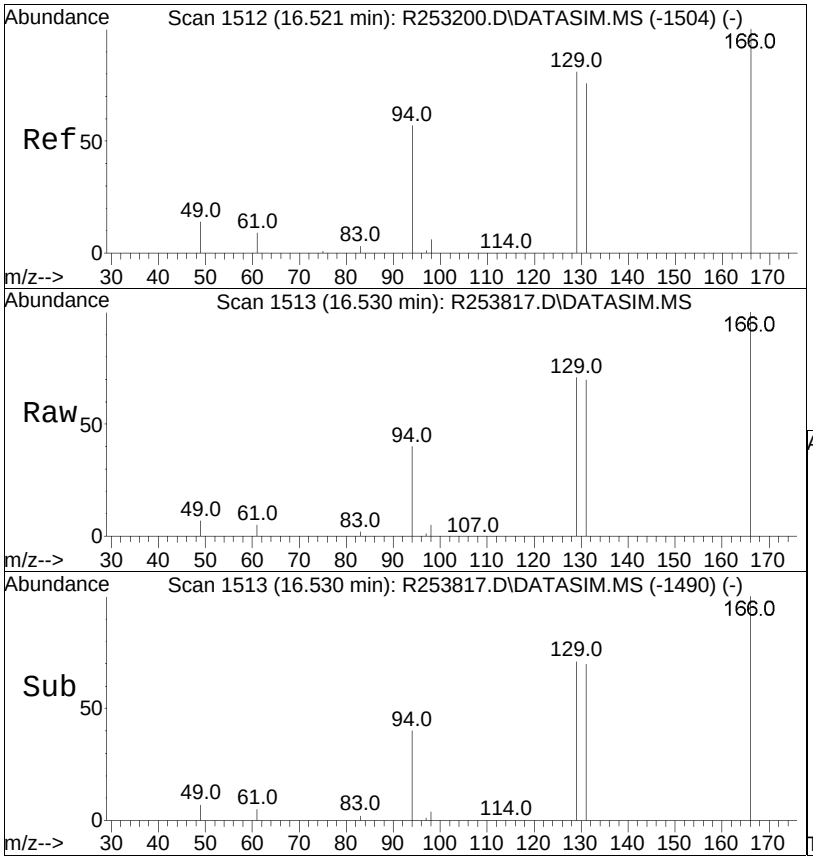



#44
trichloroethene
Concen: 0.11 ppbV
RT: 13.532 min Scan# 1196
Delta R.T. -0.000 min
Lab File: R253817.D
Acq: 21 Apr 2018 5:21 pm

Tgt Ion:130 Resp: 1978

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 97.5 | 77.2 | 115.8 |
| 97 | 68.9 | 56.5 | 84.7 |

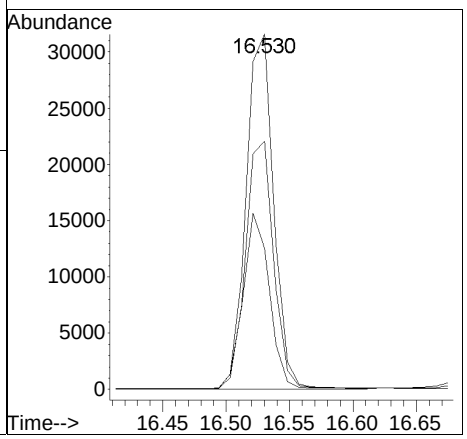





#57
tetrachloroethene
Concen: 2.35 ppbV
RT: 16.530 min Scan# 1513
Delta R.T. 0.009 min
Lab File: R253817.D
Acq: 21 Apr 2018 5:21 pm

Tgt Ion:166 Resp: 47877

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 69.9 | 61.0 | 91.6 |
| 94 | 39.7 | 46.0 | 69.0# |



# Method Blank
# Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253814.D
Acq On : 21 Apr 2018 2:48 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-4,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 21 15:16:10 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 211811 | 10.000 | ppbV | 0.00 |
| Standard Area = 191605 | | | Recovery = 110.55% | | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 423616 | 10.000 | ppbV | 0.00 |
| Standard Area = 388232 | | | Recovery = 109.11% | | | |
| 51) chlorobenzene-D5 | 17.053 | 54 | 91106 | 10.000 | ppbV | 0.00 |
| Standard Area = 97750 | | | Recovery = 93.20% | | | |

System Monitoring Compounds

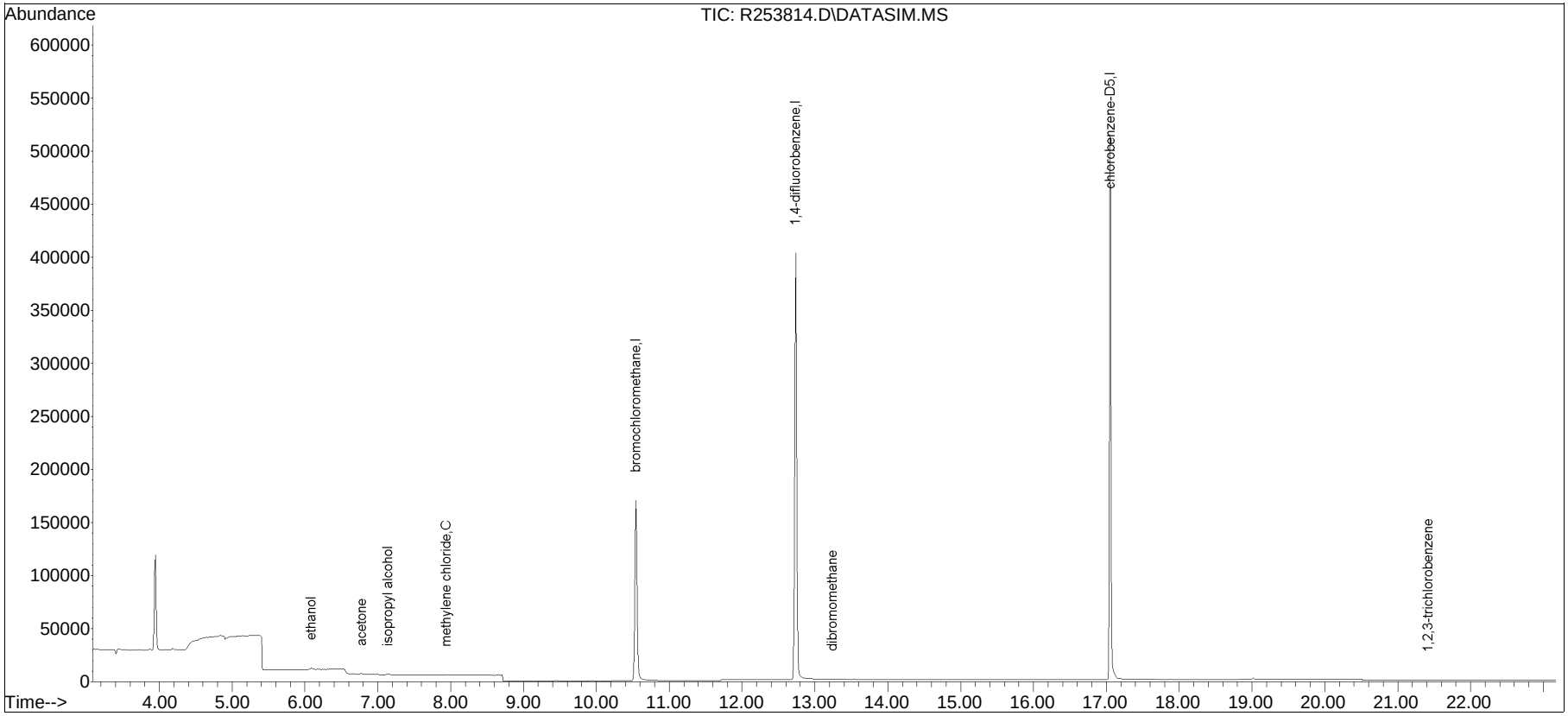
| Target Compounds | | | | Qvalue |
|---|---|---|---|---|
| 6) vinyl chloride | 4.942 | 0 | N.D. | |
| 17) 1,1-dichloroethene | 7.766 | 0 | N.D. | |
| 23) trans-1,2-dichloroethene | 9.106 | 0 | N.D. | |
| 28) cis-1,2-dichloroethene | 10.344 | 0 | N.D. | |
| 44) trichloroethene | 13.543 | 0 | N.D. | |
| 57) tetrachloroethene | 16.521 | 0 | N.D. | |

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

Sub List : Default-LCS-AP2 - All compounds listedR253812.D

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253814.D
Acq On : 21 Apr 2018 2:48 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-4,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 21 15:16:10 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration




TSIM180325.M Mon Apr 23 09:36:21 2018

# Batch Quality Control

# LCS Raw Data

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-3,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 10.000 | 10.000 | 0.0 | 99 | -0.04 |
| 2 | | propylene | 5.000 | 4.769 | 4.6 | 97 | -0.03 |
| 3 | | dichlorodifluoromethane | 5.000 | 4.241 | 15.2 | 88 | -0.04 |
| 4 | C | chloromethane | 5.000 | 4.473 | 10.5 | 95 | -0.04 |
| 5 | | Freon-114 | 5.000 | 4.601 | 8.0 | 97 | -0.04 |
| 6 | C | vinyl chloride | 5.000 | 4.198 | 16.0 | 88 | -0.04 |
| 7 | C | 1,3-butadiene | 5.000 | 4.921 | 1.6 | 106 | -0.04 |
| 8 | C | bromomethane | 5.000 | 4.199 | 16.0 | 88 | -0.04 |
| 9 | C | chloroethane | 5.000 | 4.451 | 11.0 | 133 | -0.04 |
| 10 | | ethanol | 25.000 | 19.694 | 21.2 | 79 | -0.04 |
| 11 | C | vinyl bromide | 5.000 | 4.235 | 15.3 | 90 | -0.05 |
| 12 | | acrolein | 5.000 | 3.331 | 33.4# | 79 | -0.04 |
| 13 | | acetone | 25.000 | 21.739 | 13.0 | 92 | -0.05 |
| 14 | | trichlorofluoromethane | 5.000 | 3.967 | 20.7 | 80 | -0.05 |
| 15 | | isopropyl alcohol | 12.500 | 9.899 | 20.8 | 90 | -0.04 |
| 16 | C | acrylonitrile | 5.000 | 3.992 | 20.2 | 82 | -0.04 |
| 17 | C | 1,1-dichloroethene | 5.000 | 4.005 | 19.9 | 81 | -0.05 |
| 18 | | tertiary butyl alcohol | 5.000 | 3.583 | 28.3 | 76 | -0.04 |
| 19 | C | methylene chloride | 5.000 | 4.190 | 16.2 | 83 | -0.05 |
| 20 | C | 3-chloropropene | 5.000 | 4.405 | 11.9 | 75 | -0.04 |
| 21 | C | carbon disulfide | 5.000 | 4.247 | 15.1 | 86 | -0.05 |
| 22 | | Freon 113 | 5.000 | 4.217 | 15.7 | 88 | -0.05 |
| 23 | | trans-1,2-dichloroethene | 5.000 | 4.617 | 7.7 | 92 | -0.04 |
| 24 | C | 1,1-dichloroethane | 5.000 | 4.494 | 10.1 | 92 | -0.05 |
| 25 | C | MTBE | 5.000 | 4.420 | 11.6 | 88 | -0.04 |
| 26 | C | vinyl acetate | 5.000 | 5.518 | -10.4 | 113 | -0.04 |
| 27 | C | 2-butanone | 5.000 | 4.615 | 7.7 | 97 | -0.04 |
| 28 | | cis-1,2-dichloroethene | 5.000 | 4.398 | 12.0 | 88 | -0.04 |
| 29 | | Ethyl Acetate | 5.000 | 4.713 | 5.7 | 95 | -0.04 |
| 30 | C | chloroform | 5.000 | 4.540 | 9.2 | 92 | -0.04 |
| 31 | | Tetrahydrofuran | 5.000 | 4.505 | 9.9 | 88 | -0.04 |
| 32 | C | 1,2-dichloroethane | 5.000 | 4.046 | 19.1 | 82 | -0.04 |
| 33 | I | 1,4-difluorobenzene | 10.000 | 10.000 | 0.0 | 103 | -0.04 |
| 34 | C | hexane | 5.000 | 4.656 | 6.9 | 95 | -0.04 |
| 36 | C | 1,1,1-trichloroethane | 5.000 | 5.082 | -1.6 | 105 | -0.05 |
| 37 | C | benzene | 5.000 | 4.419 | 11.6 | 93 | -0.04 |
| 38 | C | carbon tetrachloride | 5.000 | 4.459 | 10.8 | 92 | -0.04 |
| 39 | | cyclohexane | 5.000 | 4.838 | 3.2 | 98 | -0.04 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-3,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 40 | | Dibromomethane | 5.000 | 3.762 | 24.8 | 87 | -0.05 |
| 41 | C | 1,2-dichloropropane | 5.000 | 4.215 | 15.7 | 88 | -0.04 |
| 42 | | bromodichloromethane | 5.000 | 5.078 | -1.6 | 99 | -0.04 |
| 43 | C | 1,4-dioxane | 5.000 | 4.854 | 2.9 | 101 | -0.05 |
| 44 | C | trichloroethene | 5.000 | 4.419 | 11.6 | 96 | -0.05 |
| 45 | C | 2,2,4-trimethylpentane | 5.000 | 4.846 | 3.1 | 99 | -0.04 |
| 46 | | heptane | 5.000 | 4.764 | 4.7 | 97 | -0.05 |
| 47 | C | cis-1,3-dichloropropene | 5.000 | 4.827 | 3.5 | 95 | -0.04 |
| 48 | C | 4-methyl-2-pentanone | 5.000 | 5.059 | -1.2 | 98 | -0.04 |
| 49 | | trans-1,3-dichloropropene | 5.000 | 4.125 | 17.5 | 79 | -0.04 |
| 50 | C | 1,1,2-trichloroethane | 5.000 | 4.528 | 9.4 | 96 | -0.04 |
| 51 | I | chlorobenzene-D5 | 10.000 | 10.000 | 0.0 | 95 | -0.03 |
| 52 | C | toluene | 5.000 | 4.618 | 7.6 | 92 | -0.03 |
| 54 | | 2-hexanone | 5.000 | 5.307 | -6.1 | 90 | -0.04 |
| 55 | | dibromochloromethane | 5.000 | 5.775 | -15.5 | 105 | -0.03 |
| 56 | C | 1,2-dibromoethane | 5.000 | 4.774 | 4.5 | 95 | -0.03 |
| 57 | C | tetrachloroethene | 5.000 | 4.794 | 4.1 | 94 | -0.03 |
| 58 | | 1,1,1,2-tetrachloroethane | 5.000 | 4.747 | 5.1 | 90 | -0.03 |
| 59 | C | chlorobenzene | 5.000 | 4.772 | 4.6 | 95 | -0.03 |
| 60 | C | ethylbenzene | 5.000 | 4.971 | 0.6 | 92 | -0.02 |
| 61 | C | m+p-xylene | 10.000 | 9.919 | 0.8 | 92 | -0.03 |
| 62 | C | bromoform | 5.000 | 5.793 | -15.9 | 105 | -0.03 |
| 63 | C | styrene | 5.000 | 5.100 | -2.0 | 92 | -0.03 |
| 64 | C | 1,1,2,2-tetrachloroethane | 5.000 | 5.080 | -1.6 | 94 | -0.02 |
| 65 | C | o-xylene | 5.000 | 5.015 | -0.3 | 90 | -0.02 |
| 66 | | 1,2,3-Trichloropropane | 5.000 | 4.519 | 9.6 | 88 | -0.03 |
| 68 | C | isopropylbenzene | 5.000 | 4.966 | 0.7 | 90 | -0.02 |
| 69 | | Bromobenzene | 5.000 | 4.592 | 8.2 | 87 | -0.02 |
| 70 | | 4-ethyl toluene | 5.000 | 5.422 | -8.4 | 94 | -0.02 |
| 71 | | 1,3,5-trimethylbenzene | 5.000 | 5.166 | -3.3 | 90 | -0.02 |
| 72 | | tert-butylbenzene | 5.000 | 4.639 | 7.2 | 86 | -0.03 |
| 73 | | 1,2,4-trimethylbenzene | 5.000 | 5.350 | -7.0 | 91 | -0.03 |
| 74 | C | Benzyl Chloride | 5.000 | 5.808 | -16.2 | 96 | -0.02 |
| 75 | | 1,3-dichlorobenzene | 5.000 | 5.111 | -2.2 | 91 | -0.03 |
| 76 | C | 1,4-dichlorobenzene | 5.000 | 4.910 | 1.8 | 88 | -0.02 |
| 77 | | sec-butylbenzene | 5.000 | 4.975 | 0.5 | 84 | -0.02 |
| 78 | | p-isopropyltoluene | 5.000 | 4.720 | 5.6 | 79 | -0.02 |
| 79 | | 1,2-dichlorobenzene | 5.000 | 5.121 | -2.4 | 90 | -0.02 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-3,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 80 | n-butylbenzene | 5.000 | 5.154 | -3.1 | 83 | -0.02 |
| 81 C | 1,2,4-trichlorobenzene | 5.000 | 4.882 | 2.4 | 73 | -0.02 |
| 82 | naphthalene | 5.000 | 4.714 | 5.7 | 75 | -0.02 |
| 83 | 1,2,3-trichlorobenzene | 5.000 | 4.870 | 2.6 | 74 | -0.02 |
| 84 C | hexachlorobutadiene | 5.000 | 5.421 | -8.4 | 84 | -0.02 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 0

# Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-3,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 1 | I | bromochloromethane | 10.000 | 10.000 | 0.0 | 70 | 0.00 |
| 2 | | propylene | 5.000 | 6.264 | -25.3 | 93 | 0.00 |
| 3 | | dichlorodifluoromethane | 5.000 | 4.692 | 6.2 | 68 | 0.00 |
| 4 | C | chloromethane | 5.000 | 4.845 | 3.1 | 70 | 0.00 |
| 5 | | Freon-114 | 5.000 | 4.265 | 14.7 | 61 | 0.00 |
| 6 | C | vinyl chloride | 5.000 | 4.492 | 10.2 | 65 | 0.00 |
| 7 | C | 1,3-butadiene | 5.000 | 5.366 | -7.3 | 78 | 0.00 |
| 8 | C | bromomethane | 5.000 | 4.283 | 14.3 | 62 | 0.00 |
| 9 | C | chloroethane | 5.000 | 4.339 | 13.2 | 64 | 0.00 |
| 10 | | ethanol | 25.000 | 24.327 | 2.7 | 70 | 0.00 |
| 11 | C | vinyl bromide | 5.000 | 4.222 | 15.6 | 60 | 0.00 |
| 12 | C | acrolein | 5.000 | 2.837 | 43.3# | 43 | 0.00 |
| 13 | | acetone | 25.000 | 22.570 | 9.7 | 63 | 0.00 |
| 14 | | trichlorofluoromethane | 5.000 | 3.632 | 27.4 | 45 | 0.00 |
| 15 | | isopropyl alcohol | 12.500 | 10.143 | 18.9 | 75 | 0.00 |
| 16 | C | acrylonitrile | 5.000 | 3.993 | 20.1 | 59 | 0.00 |
| 17 | C | 1,1-dichloroethene | 5.000 | 3.934 | 21.3 | 57 | 0.00 |
| 18 | | tertiary butyl alcohol | 5.000 | 3.754 | 24.9 | 55 | 0.00 |
| 19 | C | methylene chloride | 5.000 | 4.417 | 11.7 | 63 | 0.00 |
| 20 | C | 3-chloropropene | 5.000 | 5.422 | -8.4 | 79 | 0.00 |
| 21 | C | carbon disulfide | 5.000 | 3.987 | 20.3 | 59 | 0.00 |
| 22 | | Freon 113 | 5.000 | 3.912 | 21.8 | 57 | 0.00 |
| 23 | | trans-1,2-dichloroethene | 5.000 | 3.830 | 23.4 | 55 | 0.00 |
| 24 | C | 1,1-dichloroethane | 5.000 | 4.045 | 19.1 | 58 | 0.00 |
| 25 | C | MTBE | 5.000 | 4.163 | 16.7 | 59 | 0.00 |
| 26 | C | vinyl acetate | 5.000 | 4.936 | 1.3 | 74 | 0.00 |
| 27 | C | 2-butanone | 5.000 | 4.829 | 3.4 | 70 | 0.00 |
| 28 | | cis-1,2-dichloroethene | 5.000 | 3.849 | 23.0 | 55 | 0.00 |
| 29 | | Ethyl Acetate | 5.000 | 4.496 | 10.1 | 63 | 0.00 |
| 30 | C | chloroform | 5.000 | 3.871 | 22.6 | 56 | 0.00 |
| 31 | | Tetrahydrofuran | 5.000 | 4.412 | 11.8 | 68 | 0.00 |
| 32 | C | 1,2-dichloroethane | 5.000 | 3.924 | 21.5 | 57 | 0.00 |
| 33 | I | 1,4-difluorobenzene | 10.000 | 10.000 | 0.0 | 62 | 0.00 |
| 34 | C | hexane | 5.000 | 4.984 | 0.3 | 64 | 0.00 |
| 36 | C | 1,1,1-trichloroethane | 5.000 | 4.414 | 11.7 | 57 | 0.00 |
| 37 | C | benzene | 5.000 | 4.209 | 15.8 | 54 | 0.00 |
| 38 | C | carbon tetrachloride | 5.000 | 4.476 | 10.5 | 57 | 0.00 |
| 39 | | cyclohexane | 5.000 | 4.938 | 1.2 | 63 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-3,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| 40 | | dibromomethane | 5.000 | 3.598 | 28.0 | 50 | 0.00 |
| 41 | C | 1,2-dichloropropane | 5.000 | 4.427 | 11.5 | 57 | 0.00 |
| 42 | | bromodichloromethane | 5.000 | 4.806 | 3.9 | 61 | 0.00 |
| 43 | C | 1,4-dioxane | 5.000 | 4.601 | 8.0 | 58 | 0.00 |
| 44 | C | trichloroethene | 5.000 | 4.339 | 13.2 | 56 | 0.00 |
| 45 | C | 2,2,4-trimethylpentane | 5.000 | 5.325 | -6.5 | 68 | 0.00 |
| 46 | | heptane | 5.000 | 5.582 | -11.6 | 71 | 0.00 |
| 47 | C | cis-1,3-dichloropropene | 5.000 | 4.322 | 13.6 | 54 | 0.00 |
| 48 | C | 4-methyl-2-pentanone | 5.000 | 5.383 | -7.7 | 68 | 0.00 |
| 49 | | trans-1,3-dichloropropene | 5.000 | 3.705 | 25.9 | 46 | 0.00 |
| 50 | C | 1,1,2-trichloroethane | 5.000 | 4.428 | 11.4 | 56 | 0.00 |
| 51 | I | chlorobenzene-D5 | 10.000 | 10.000 | 0.0 | 68 | 0.00 |
| 52 | C | toluene | 5.000 | 3.973 | 20.5 | 55 | 0.00 |
| 54 | | 2-hexanone | 5.000 | 4.756 | 4.9 | 65 | 0.00 |
| 55 | | dibromochloromethane | 5.000 | 4.597 | 8.1 | 63 | 0.00 |
| 56 | C | 1,2-dibromoethane | 5.000 | 3.886 | 22.3 | 53 | 0.00 |
| 57 | C | tetrachloroethene | 5.000 | 4.196 | 16.1 | 59 | 0.00 |
| 58 | | 1,1,1,2-tetrachloroethane | 5.000 | 3.764 | 24.7 | 51 | 0.00 |
| 59 | C | chlorobenzene | 5.000 | 3.946 | 21.1 | 54 | 0.00 |
| 60 | C | ethylbenzene | 5.000 | 3.979 | 20.4 | 54 | 0.00 |
| 61 | C | m+p-xylene | 10.000 | 8.198 | 18.0 | 54 | 0.00 |
| 62 | C | bromoform | 5.000 | 5.025 | -0.5 | 67 | 0.00 |
| 63 | C | styrene | 5.000 | 4.006 | 19.9 | 52 | 0.00 |
| 64 | C | 1,1,2,2-tetrachloroethane | 5.000 | 4.230 | 15.4 | 56 | 0.00 |
| 65 | C | o-xylene | 5.000 | 4.245 | 15.1 | 56 | 0.00 |
| 66 | | 1,2,3-trichloropropane | 5.000 | 4.040 | 19.2 | 55 | 0.00 |
| 68 | C | isopropylbenzene | 5.000 | 4.048 | 19.0 | 55 | 0.00 |
| 69 | | bromobenzene | 5.000 | 3.996 | 20.1 | 54 | 0.00 |
| 70 | | 4-ethyl toluene | 5.000 | 4.860 | 2.8 | 58 | 0.00 |
| 71 | | 1,3,5-trimethylbenzene | 5.000 | 4.385 | 12.3 | 54 | 0.00 |
| 72 | | tert-butylbenzene | 5.000 | 4.156 | 16.9 | 55 | 0.00 |
| 73 | | 1,2,4-trimethylbenzene | 5.000 | 4.797 | 4.1 | 57 | 0.00 |
| 74 | C | Benzyl Chloride | 5.000 | 4.733 | 5.3 | 61 | 0.00 |
| 75 | | 1,3-dichlorobenzene | 5.000 | 4.698 | 6.0 | 56 | 0.00 |
| 76 | C | 1,4-dichlorobenzene | 5.000 | 4.558 | 8.8 | 55 | 0.00 |
| 77 | | sec-butylbenzene | 5.000 | 4.203 | 15.9 | 55 | 0.00 |
| 78 | | p-isopropyltoluene | 5.000 | 3.922 | 21.6 | 51 | 0.00 |
| 79 | | 1,2-dichlorobenzene | 5.000 | 4.675 | 6.5 | 57 | 0.00 |

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-3,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

| | Compound | Amount | Calc. | %Dev | Area% | Dev(min) |
|---|---|---|---|---|---|---|
| 80 | n-butylbenzene | 5.000 | 4.392 | 12.2 | 55 | 0.00 |
| 81 C | 1,2,4-trichlorobenzene | 5.000 | 4.689 | 6.2 | 52 | 0.00 |
| 82 | naphthalene | 5.000 | 4.364 | 12.7 | 47 | 0.00 |
| 83 | 1,2,3-trichlorobenzene | 5.000 | 4.442 | 11.2 | 46 | 0.00 |
| 84 C | hexachlorobutadiene | 5.000 | 5.016 | -0.3 | 60 | 0.00 |

* Evaluation of CC level amount vs concentration.
(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-3,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : Default-LCS-AP2 - All compounds listed

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.62 | 49 | 132894 | 10.000 | ppbV | #-0.04 |
| Standard Area = 132894 | | | Recovery = 100.00% | | | |
| 33) 1,4-difluorobenzene | 11.89 | 114 | 287503 | 10.000 | ppbV | -0.04 |
| Standard Area = 287503 | | | Recovery = 100.00% | | | |
| 51) chlorobenzene-D5 | 16.55 | 54 | 56135 | 10.000 | ppbV | -0.03 |
| Standard Area = 56135 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 4.40 | 62 | 44819 | 4.198 | ppbV | 98 |
| 17) 1,1-dichloroethene | 6.88 | 61 | 57388 | 4.005 | ppbV | 97 |
| 23) trans-1,2-dichloroethene | 8.19 | 61 | 66095 | 4.617 | ppbV | 98 |
| 28) cis-1,2-dichloroethene | 9.43 | 61 | 60834 | 4.398 | ppbV | 95 |
| 44) trichloroethene | 12.68 | 130 | 56245 | 4.419 | ppbV | 96 |
| 57) tetrachloroethene | 15.98 | 166 | 60120 | 4.794 | ppbV | 96 |

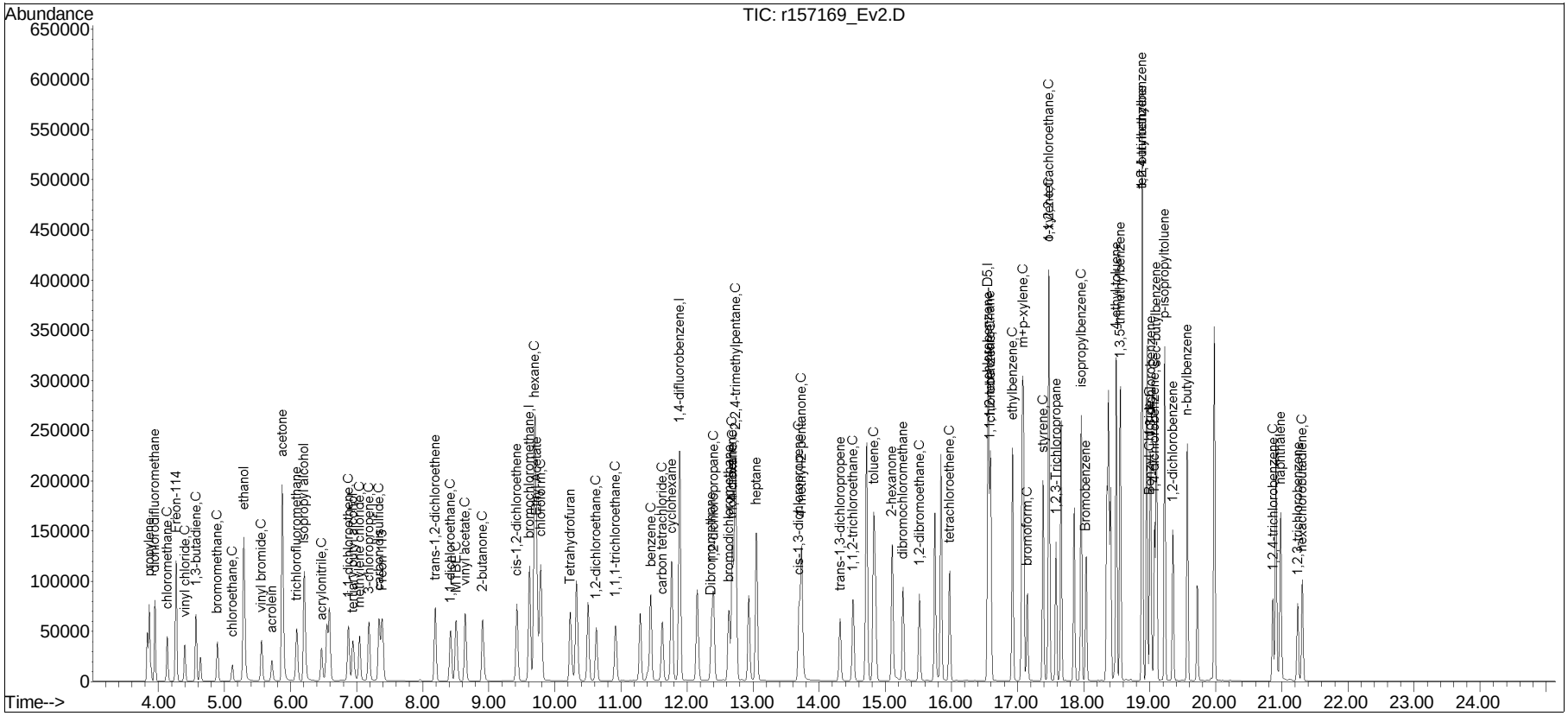
(#) = qualifier out of range (m) = manual integration (+) = signals summed

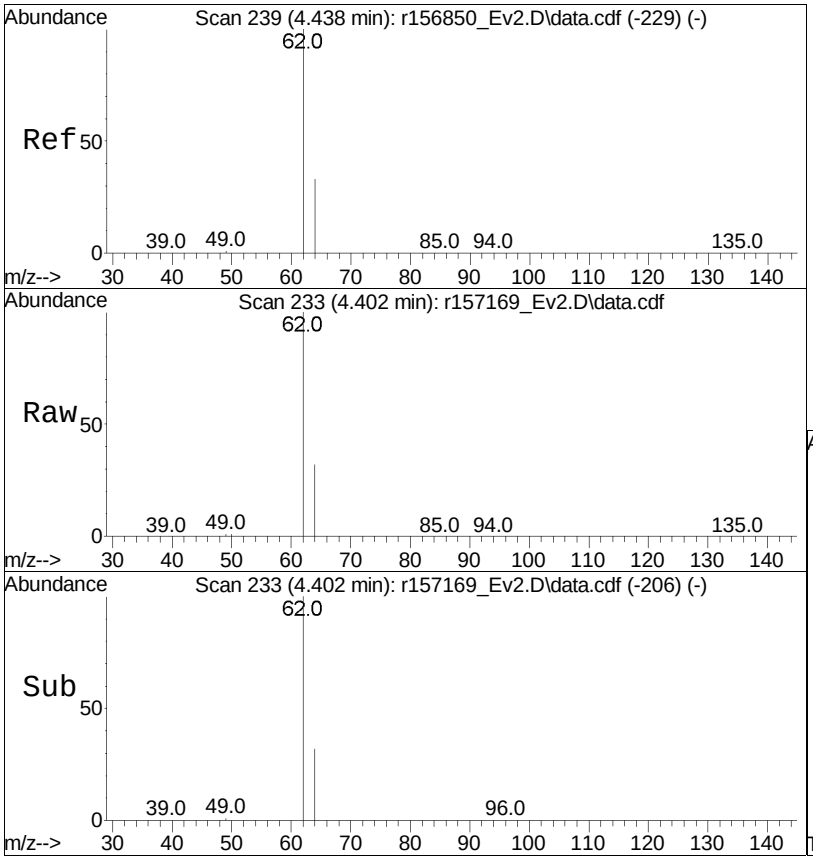
Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157169_Ev2.D
Acq On : 20 Apr 2018 4:16 PM
Operator : AIRLAB15:RY
Sample : WG1108448-3,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 20 16:56:10 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Sub List : Default-LCS-AP2 - All compounds listedSIM\r157169_Ev2.D

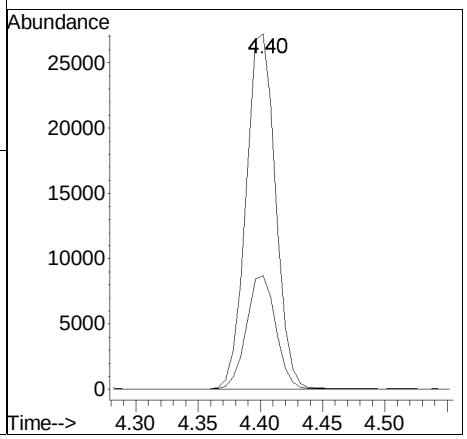


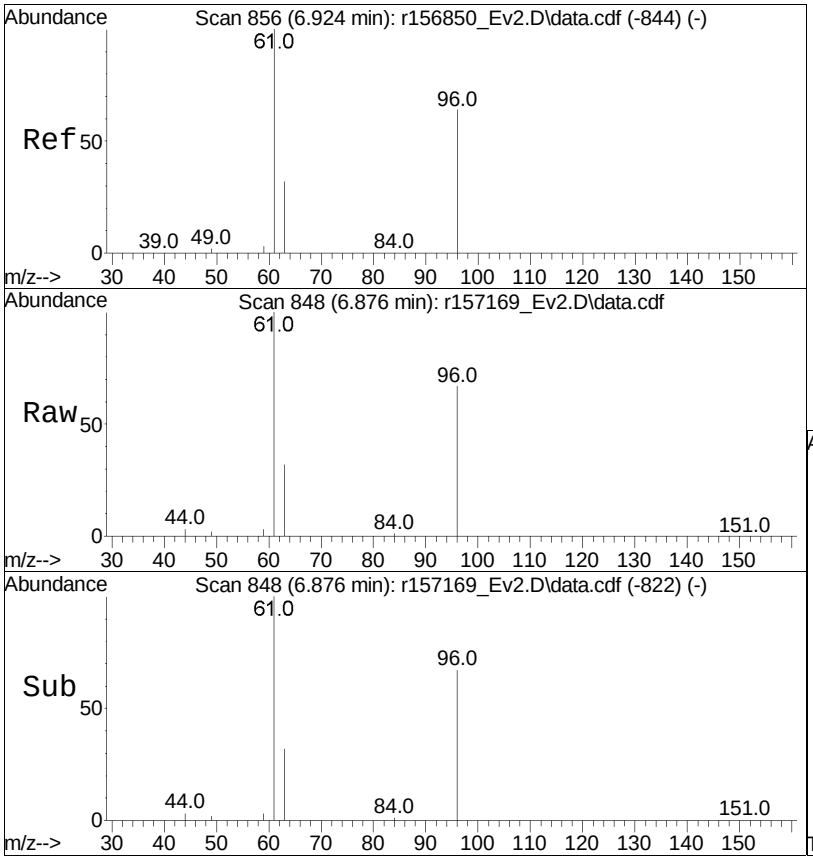



#6
vinyl chloride
Concen: 4.20 ppbV
RT: 4.40 min Scan# 233
Delta R.T. -0.036 min
Lab File: r157169_Ev2.D
Acq: 20 Apr 2018 4:16 PM

Tgt Ion: 62 Resp: 44819

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 32.0 | 26.3 | 39.5 |

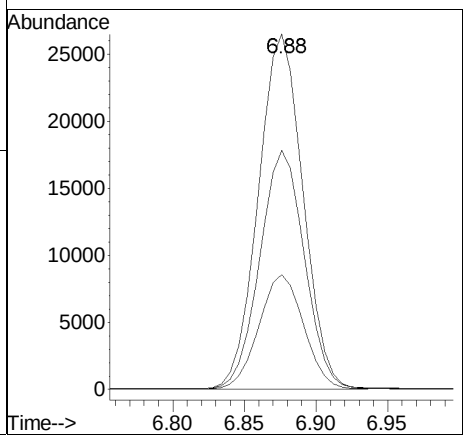


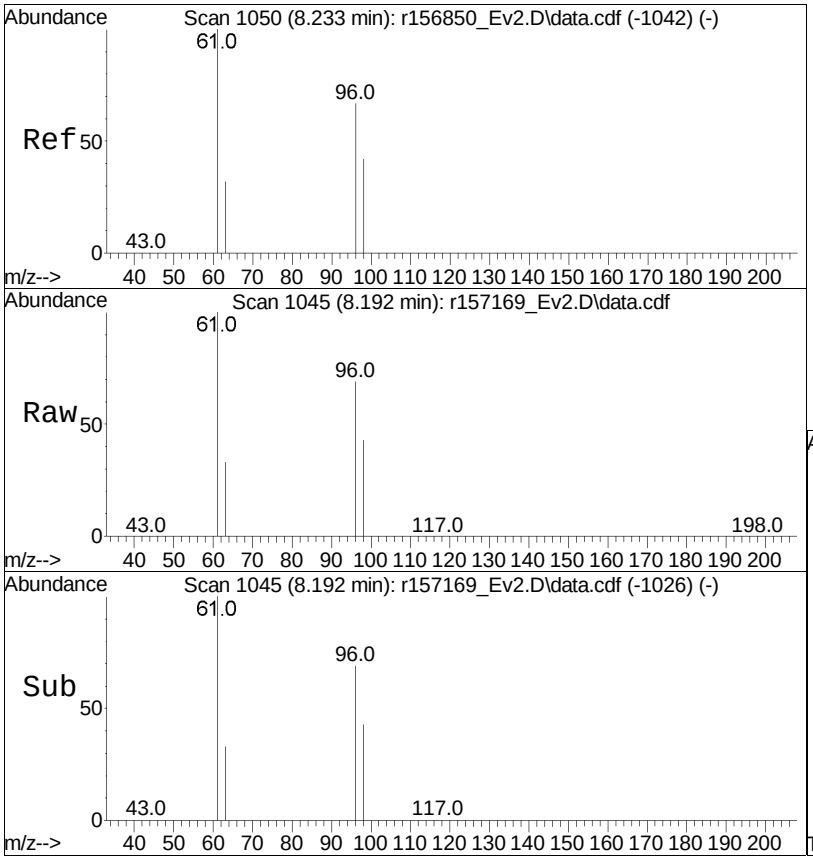



#17
1,1-dichloroethene
Concen: 4.00 ppbV
RT: 6.88 min Scan# 848
Delta R.T. -0.048 min
Lab File: r157169_Ev2.D
Acq: 20 Apr 2018 4:16 PM

Tgt Ion: 61 Resp: 57388

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 67.2 | 51.1 | 76.7 |
| 63 | 32.3 | 25.9 | 38.9 |

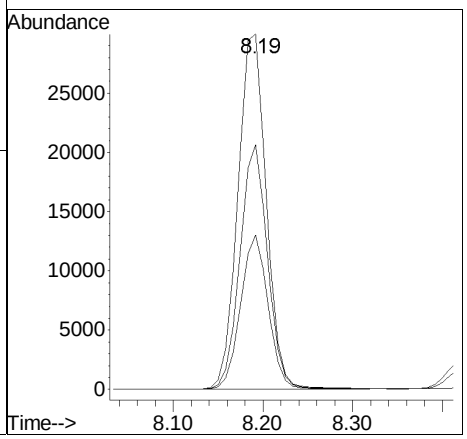


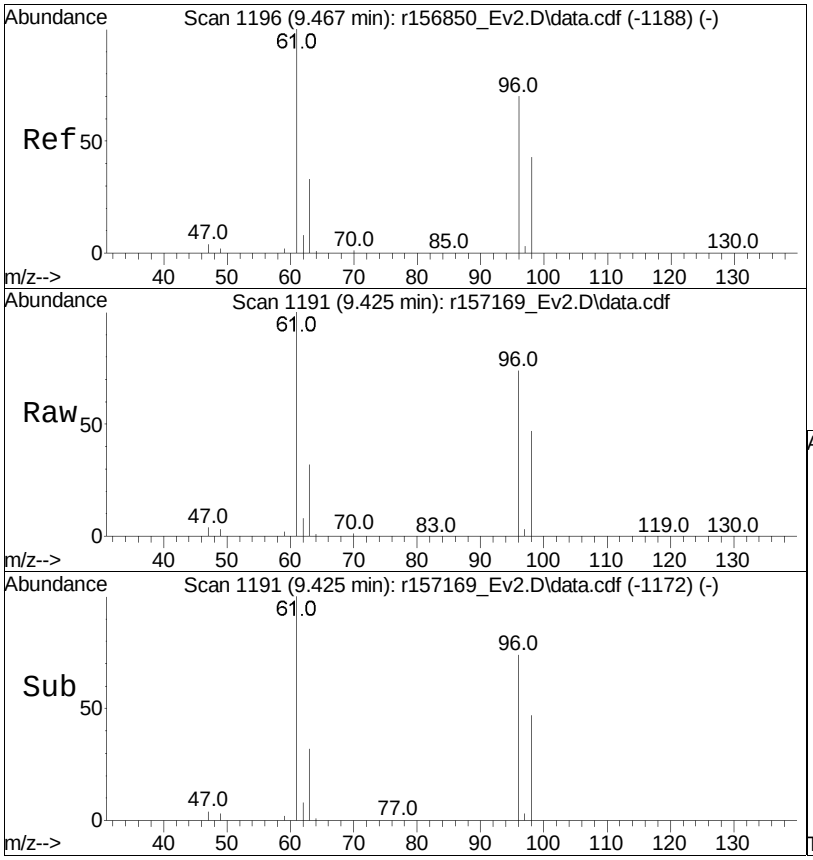



#23
trans-1,2-dichloroethene
Concen: 4.62 ppbV
RT: 8.19 min Scan# 1045
Delta R.T. -0.042 min
Lab File: r157169_Ev2.D
Acq: 20 Apr 2018 4:16 PM

Tgt Ion: 61 Resp: 66095

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 68.8 | 54.0 | 81.0 |
| 98 | 43.5 | 33.8 | 50.8 |

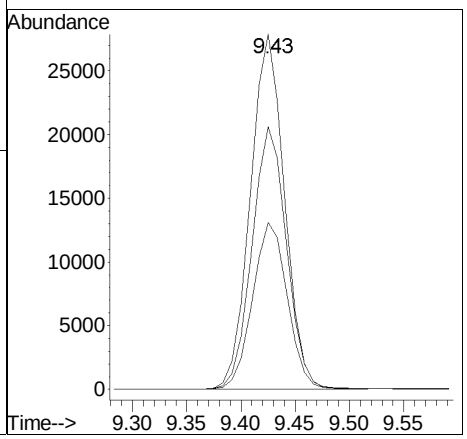


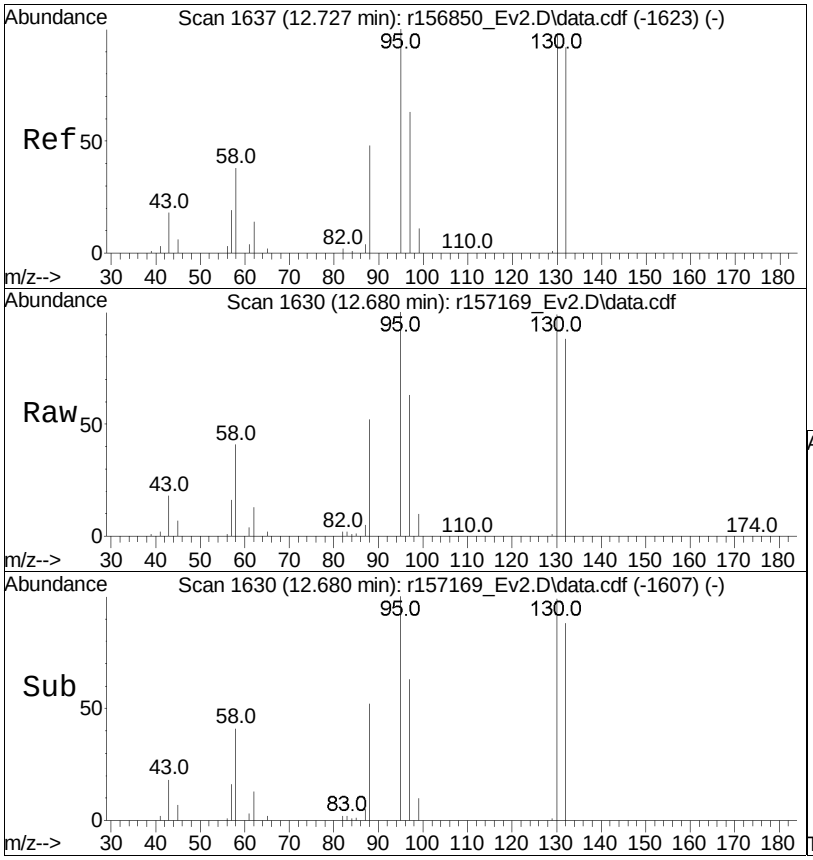



#28
cis-1,2-dichloroethene
Concen: 4.40 ppbV
RT: 9.43 min Scan# 1191
Delta R.T. -0.042 min
Lab File: r157169_Ev2.D
Acq: 20 Apr 2018 4:16 PM

Tgt Ion: 61 Resp: 60834

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 73.9 | 56.1 | 84.1 |
| 98 | 47.0 | 34.6 | 52.0 |

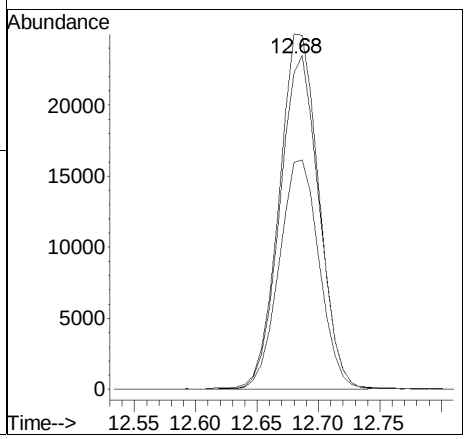


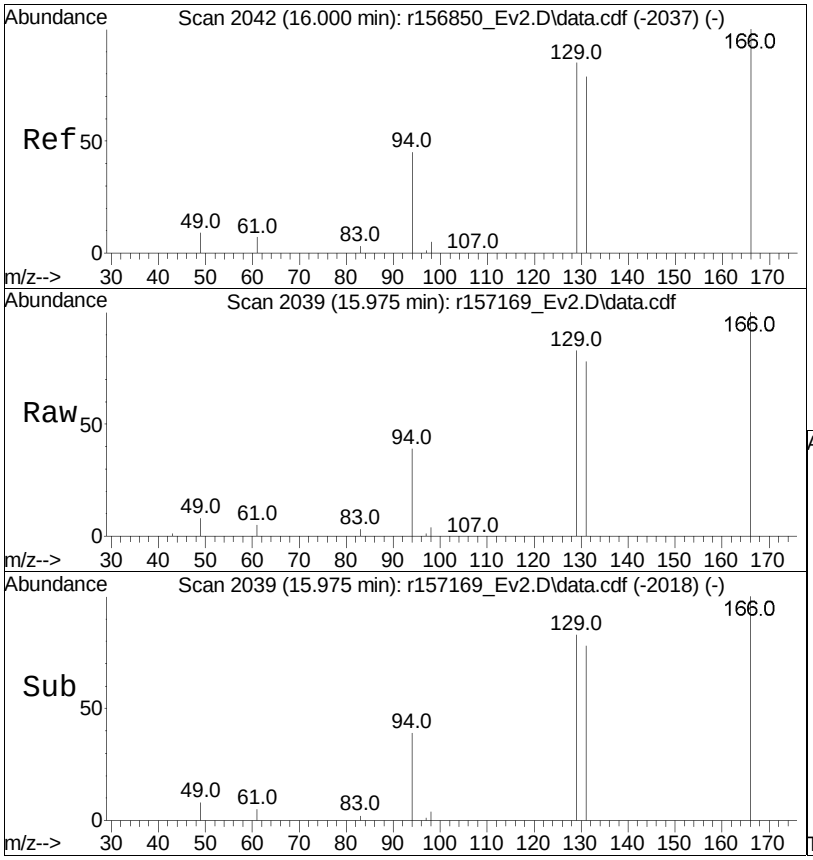



#44
trichloroethene
Concen: 4.42 ppbV
RT: 12.68 min Scan# 1630
Delta R.T. -0.047 min
Lab File: r157169_Ev2.D
Acq: 20 Apr 2018 4:16 PM

Tgt Ion:130 Resp: 56245

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 89.1 | 75.5 | 113.3 |
| 97 | 63.9 | 51.9 | 77.9 |

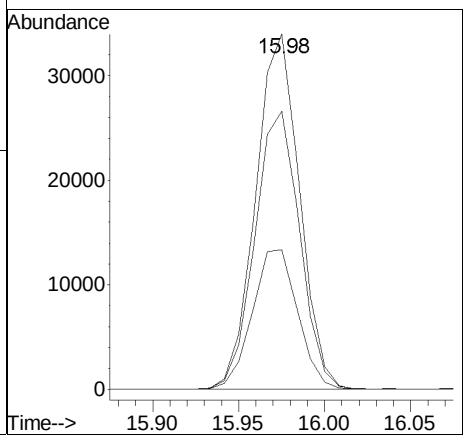





#57
tetrachloroethene
Concen: 4.79 ppbV
RT: 15.98 min Scan# 2039
Delta R.T. -0.025 min
Lab File: r157169_Ev2.D
Acq: 20 Apr 2018 4:16 PM

Tgt Ion:166 Resp: 60120

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 78.3 | 63.5 | 95.3 |
| 94 | 39.3 | 36.1 | 54.1 |



Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-3,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : Default-LCS-AP2 - All compounds listed

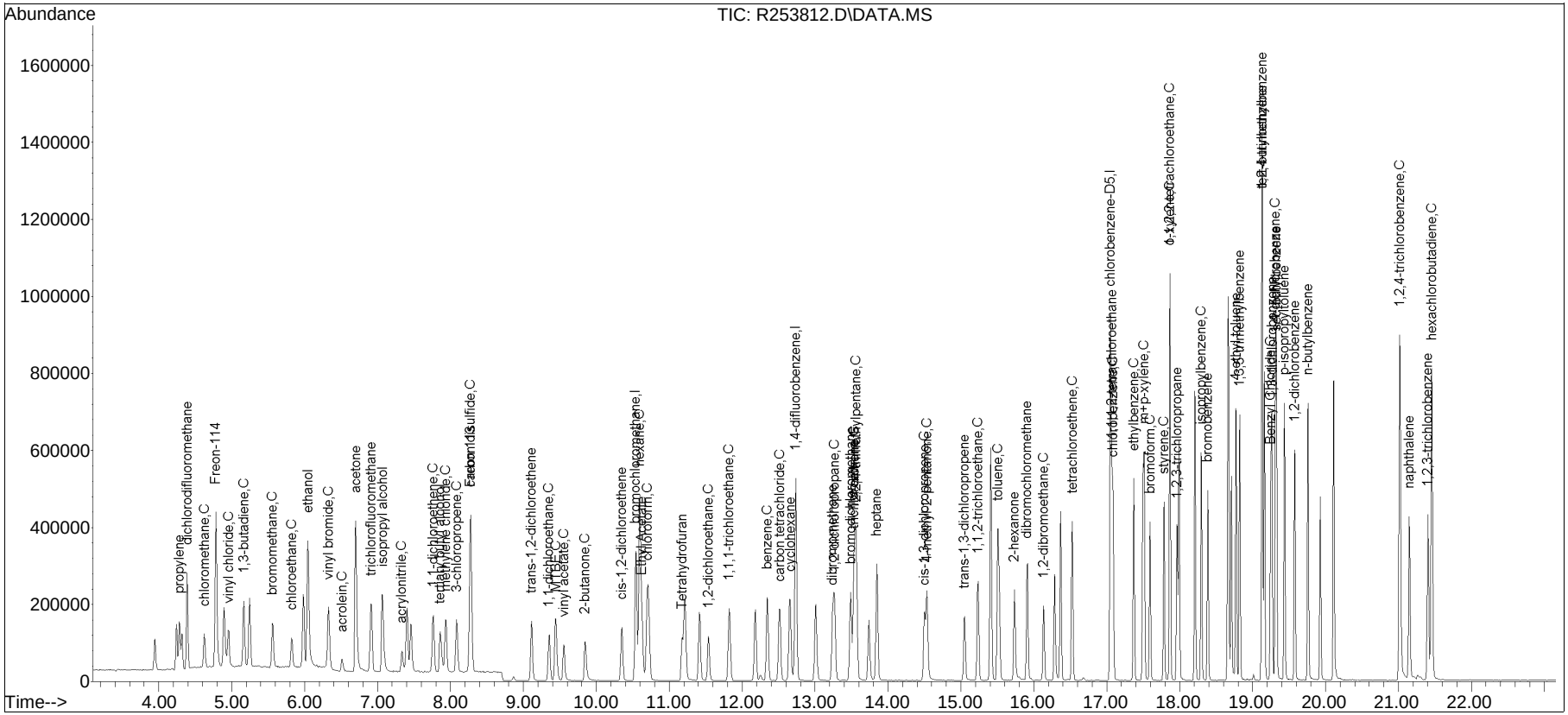
| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 10.539 | 49 | 191605 | 10.000 | ppbV | 0.00 |
| Standard Area = 191605 | | | Recovery = 100.00% | | | |
| 33) 1,4-difluorobenzene | 12.736 | 114 | 388232 | 10.000 | ppbV | # 0.00 |
| Standard Area = 388232 | | | Recovery = 100.00% | | | |
| 51) chlorobenzene-D5 | 17.051 | 54 | 97750 | 10.000 | ppbV | 0.00 |
| Standard Area = 97750 | | | Recovery = 100.00% | | | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 4.961 | 62 | 90423 | 4.492 | ppbV | 96 |
| 17) 1,1-dichloroethene | 7.764 | 61 | 102667 | 3.934 | ppbV | 98 |
| 23) trans-1,2-dichloroethene | 9.112 | 61 | 89917 | 3.830 | ppbV | 98 |
| 28) cis-1,2-dichloroethene | 10.352 | 61 | 86460 | 3.849 | ppbV | 97 |
| 44) trichloroethene | 13.531 | 130 | 74290 | 4.339 | ppbV | 97 |
| 57) tetrachloroethene | 16.529 | 166 | 94687 | 4.196 | ppbV | 91 |

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

Sub List : Default-LCS-AP2 - All compounds listedR253812.D

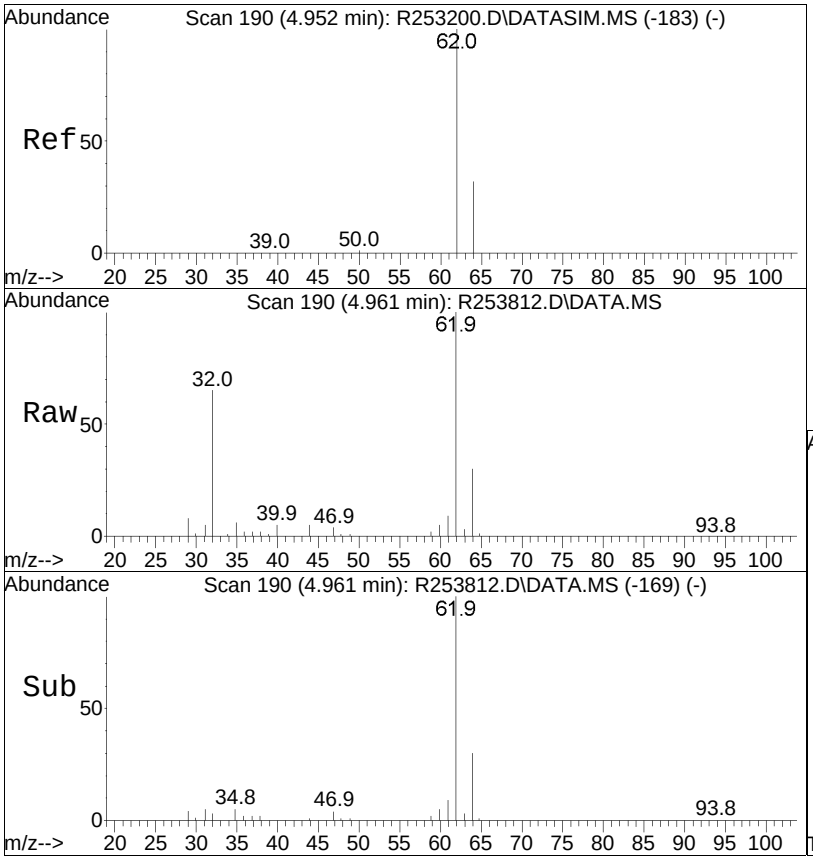
Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253812.D
Acq On : 21 Apr 2018 1:20 pm
Operator : AIRPIANO2:RY
Sample : WG1108672-3,3,250,250
Misc : WG1108672,ICAL14572
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Apr 21 14:08:38 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration




TSIM180325.M Mon Apr 23 09:35:27 2018

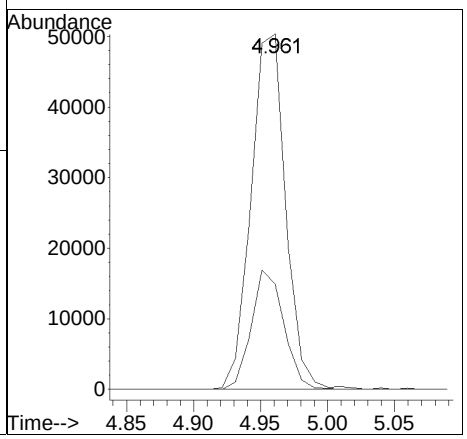
Page 2

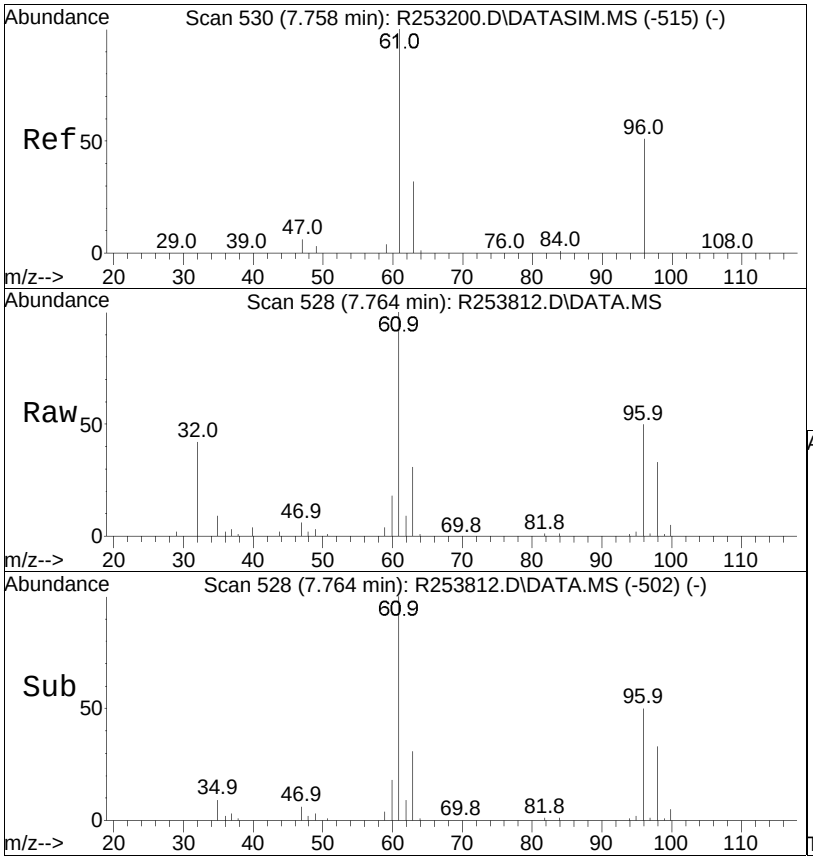



#6
vinyl chloride
Concen: 4.49 ppbV
RT: 4.961 min Scan# 190
Delta R.T. 0.008 min
Lab File: R253812.D
Acq: 21 Apr 2018 1:20 pm

Tgt Ion: 62 Resp: 90423

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 62 | 100 | | |
| 64 | 29.7 | 25.4 | 38.0 |

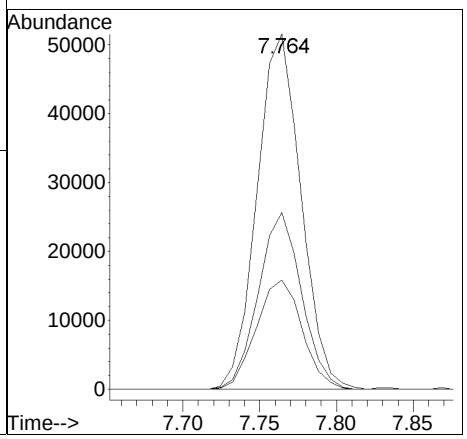


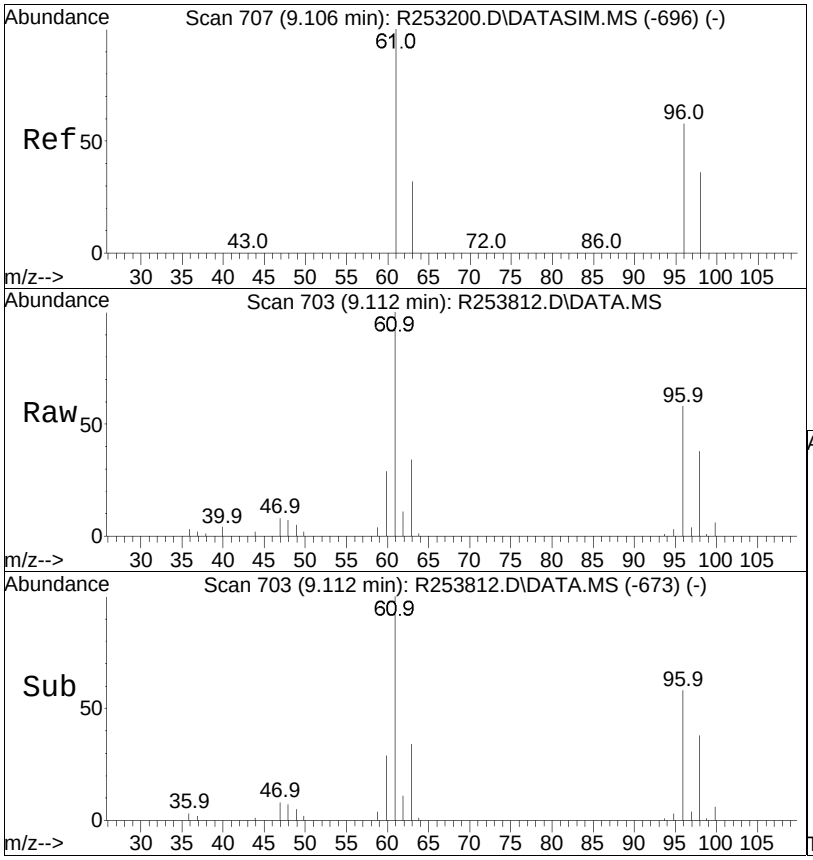



#17
1,1-dichloroethene
Concen: 3.93 ppbV
RT: 7.764 min Scan# 528
Delta R.T. 0.007 min
Lab File: R253812.D
Acq: 21 Apr 2018 1:20 pm

Tgt Ion: 61 Resp: 102667

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 49.8 | 41.0 | 61.6 |
| 63 | 30.8 | 25.6 | 38.4 |

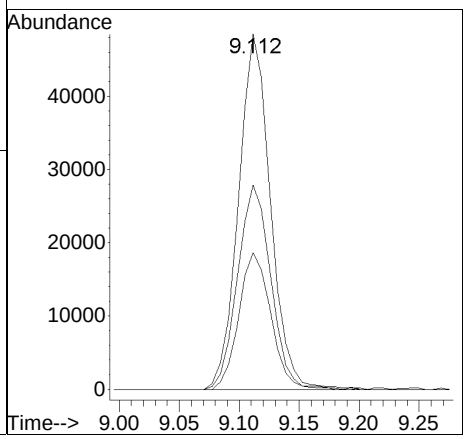


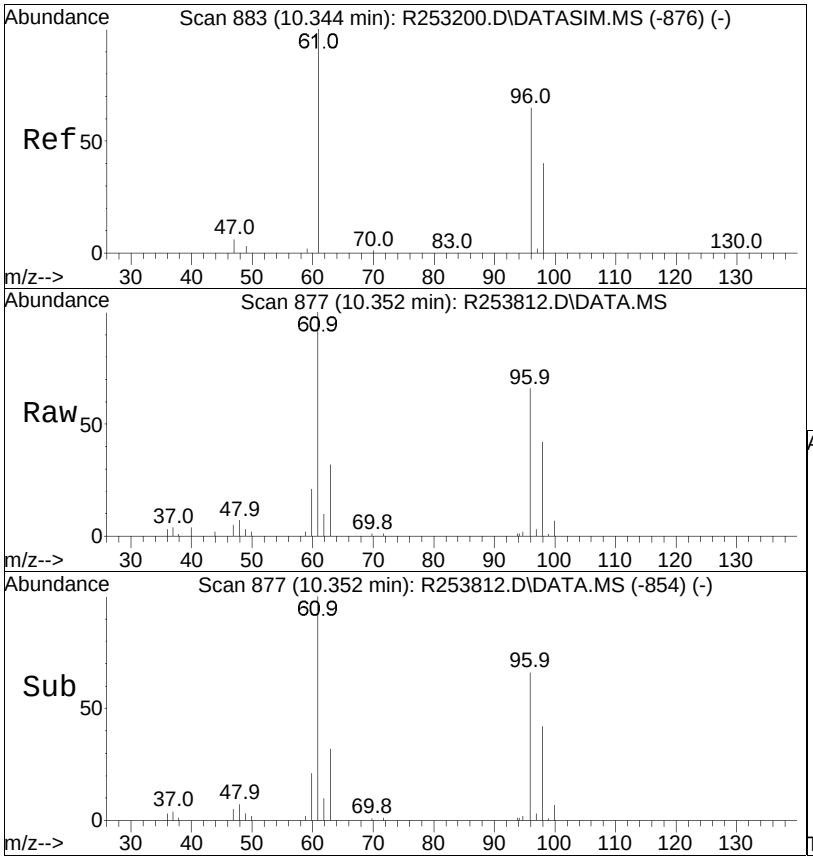



#23
trans-1,2-dichloroethene
Concen: 3.83 ppbV
RT: 9.112 min Scan# 703
Delta R.T. 0.005 min
Lab File: R253812.D
Acq: 21 Apr 2018 1:20 pm

Tgt Ion: 61 Resp: 89917

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 57.6 | 46.3 | 69.5 |
| 98 | 38.5 | 28.6 | 42.8 |

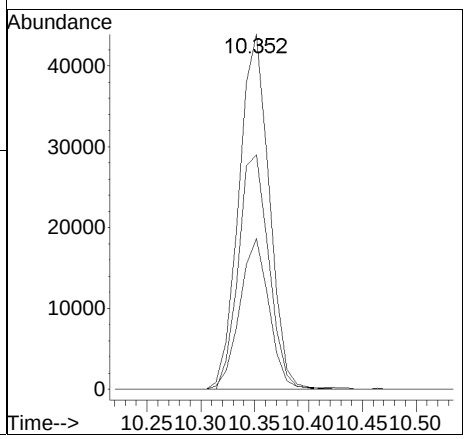


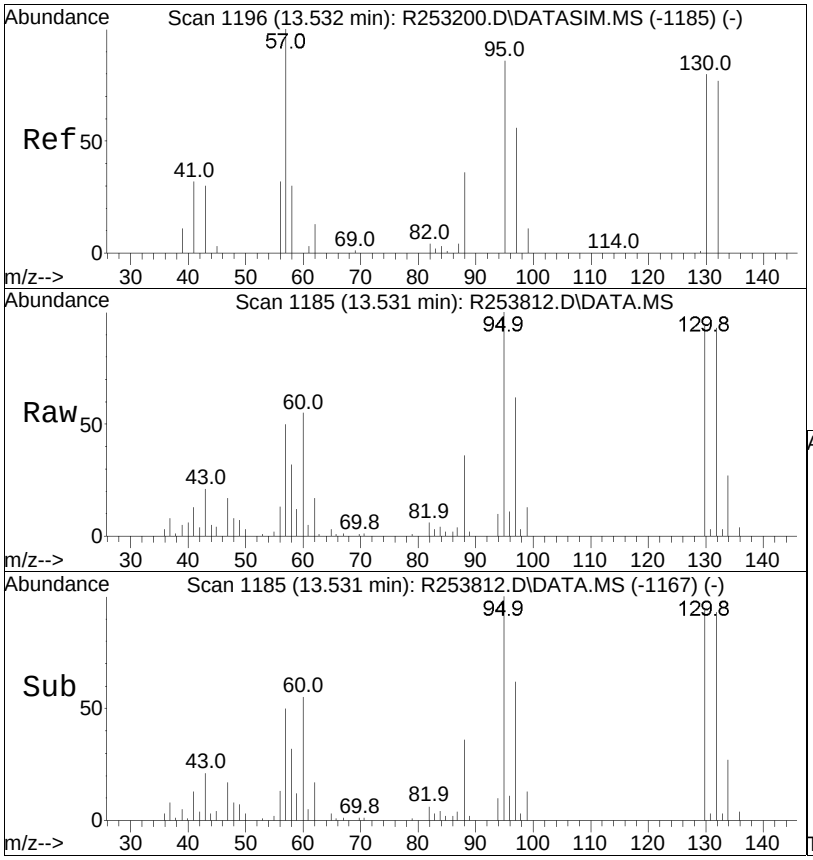



#28
cis-1,2-dichloroethene
Concen: 3.85 ppbV
RT: 10.352 min Scan# 877
Delta R.T. 0.008 min
Lab File: R253812.D
Acq: 21 Apr 2018 1:20 pm

Tgt Ion: 61 Resp: 86460

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 66.0 | 51.7 | 77.5 |
| 98 | 42.4 | 31.7 | 47.5 |

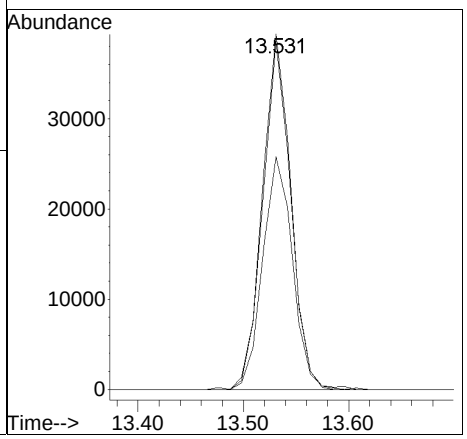


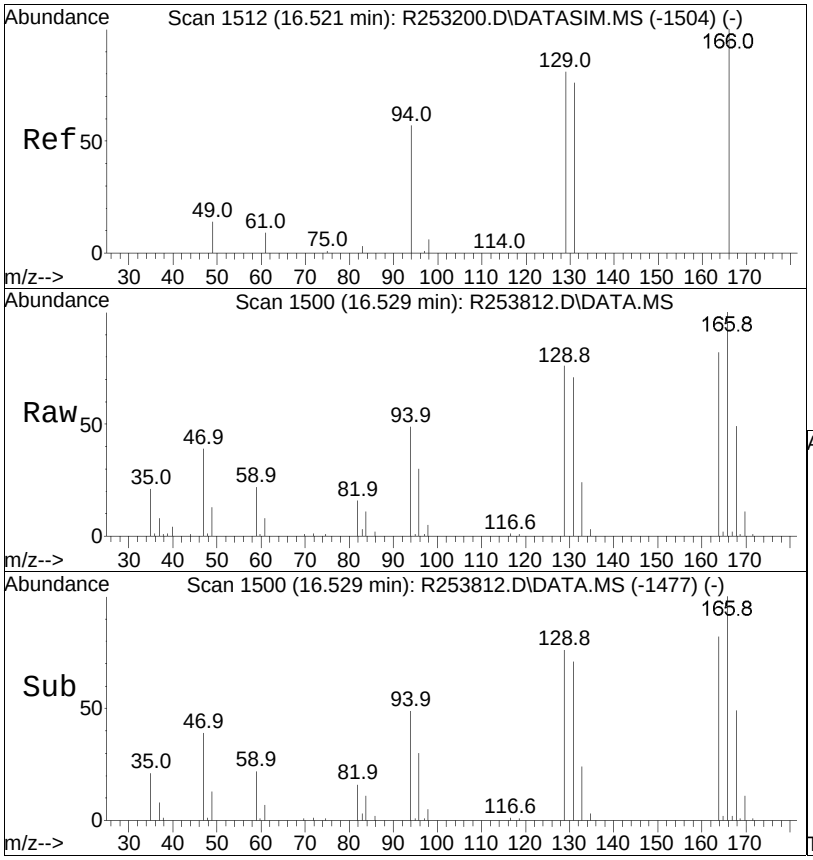



#44
trichloroethene
Concen: 4.34 ppbV
RT: 13.531 min Scan# 1185
Delta R.T. -0.001 min
Lab File: R253812.D
Acq: 21 Apr 2018 1:20 pm

Tgt Ion:130 Resp: 74290

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 97.9 | 77.2 | 115.8 |
| 97 | 65.5 | 56.5 | 84.7 |

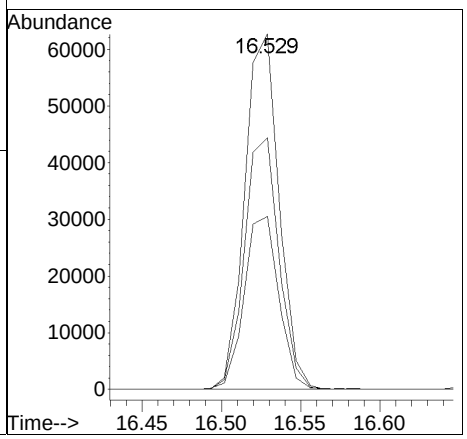





#57
tetrachloroethene
Concen: 4.20 ppbV
RT: 16.529 min Scan# 1500
Delta R.T. 0.008 min
Lab File: R253812.D
Acq: 21 Apr 2018 1:20 pm

Tgt Ion:166 Resp: 94687

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 70.9 | 61.0 | 91.6 |
| 94 | 48.7 | 46.0 | 69.0 |



# Duplicate Raw Data

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157176_Ev2.D
Acq On : 20 Apr 2018 9:43 PM
Operator : AIRLAB15:RY
Sample : WG1108448-5,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:24:54 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\Airlab15\2018\180420SIM\r157169_Ev2.D
Sub List : 9_Chlorinateds - .

| Compound | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|---|---|---|---|---|---|---|
| Internal Standards | | | | | | |
| 1) bromochloromethane | 9.60 | 49 | 91330 | 10.000 | ppbV | #-0.06 |
| Standard Area = 132894 | | | Recovery = | | 68.72% | |
| 33) 1,4-difluorobenzene | 11.87 | 114 | 226826 | 10.000 | ppbV | -0.05 |
| Standard Area = 287503 | | | Recovery = | | 78.90% | |
| 51) chlorobenzene-D5 | 16.54 | 54 | 52155 | 10.000 | ppbV | -0.04 |
| Standard Area = 56135 | | | Recovery = | | 92.91% | |
| System Monitoring Compounds | | | | | | |
| Target Compounds | | | | | | Qvalue |
| 6) vinyl chloride | 0.00 | | 0 | N.D. | | |
| 17) 1,1-dichloroethene | 6.75 | | 0 | N.D. | | |
| 23) trans-1,2-dichloroethene | 8.18 | 61 | 186 | 0.019 | ppbV # | 82 |
| 28) cis-1,2-dichloroethene | 9.41 | 61 | 743 | 0.078 | ppbV | 98 |
| 44) trichloroethene | 12.67 | 130 | 625 | 0.062 | ppbV | 91 |
| 57) tetrachloroethene | 15.96 | 166 | 52920 | 4.542 | ppbV | 98 |

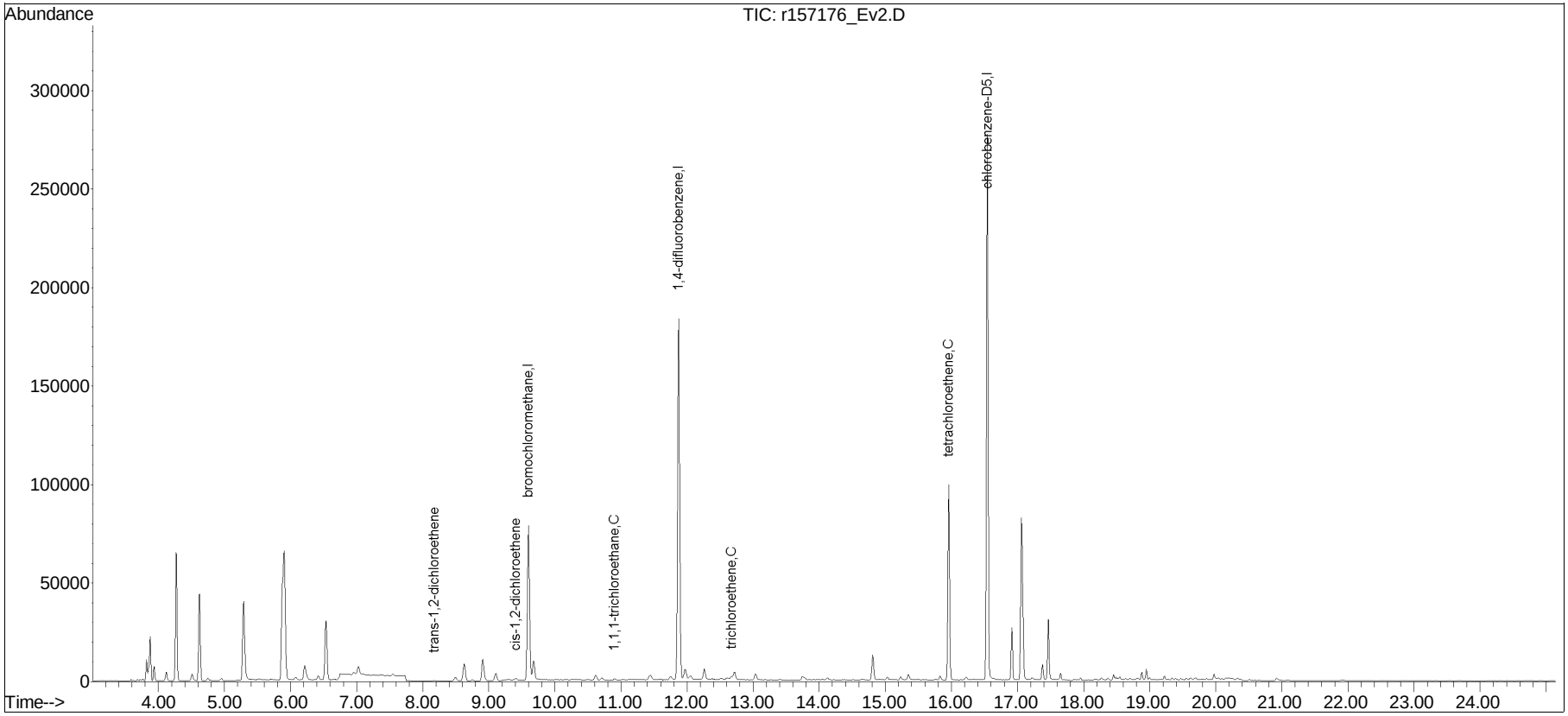
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

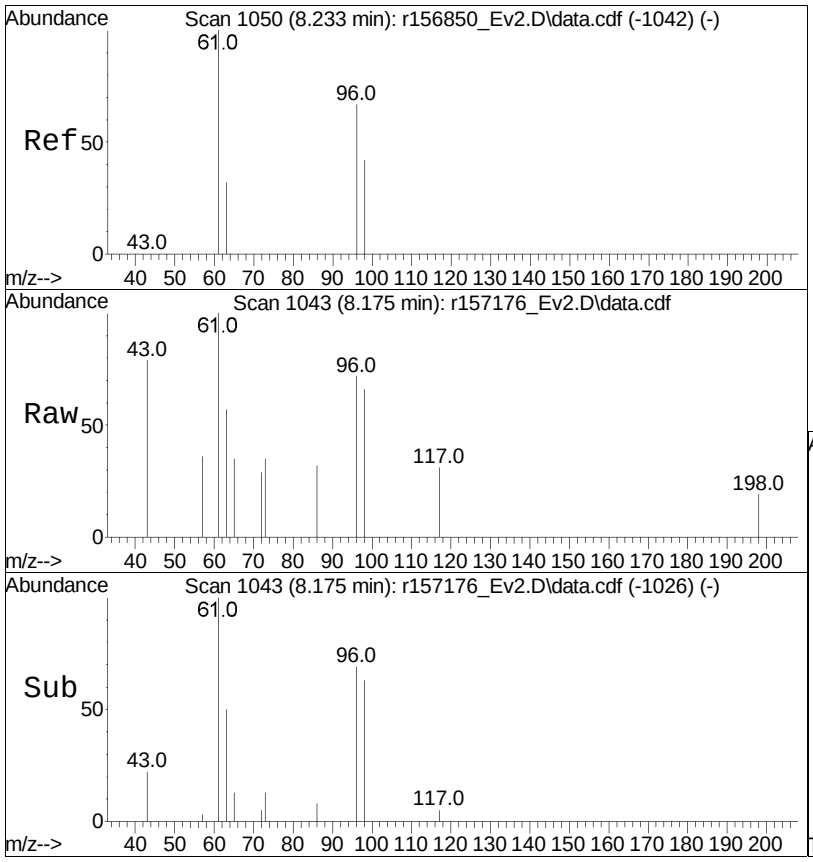
Data Path : O:\Forensics\Data\Airlab15\2018\180420SIM\
Data File : r157176_Ev2.D
Acq On : 20 Apr 2018 9:43 PM
Operator : AIRLAB15:RY
Sample : WG1108448-5,3,250,250
Misc : WG1108448,ICAL14605
ALS Vial : 0 Sample Multiplier: 1

Quant Time: Apr 21 17:24:54 2018
Quant Method : O:\Forensics\Data\Airlab15\2018\180420SIM\TSIM180404.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Thu Apr 05 10:02:48 2018
Response via : Initial Calibration

Sub List : 9_Chlorinateds - .Airlab15\2018\180420SIM\r157169_Ev2.D



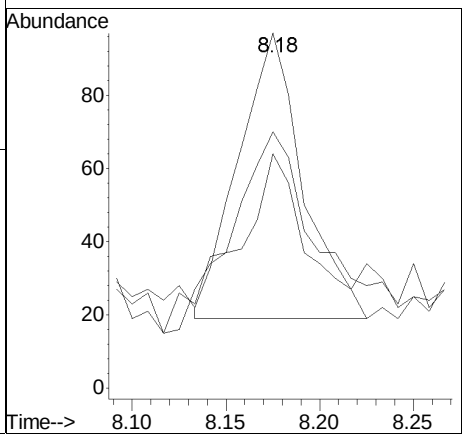

TSIM180404.M Sat Apr 21 17:25:05 2018

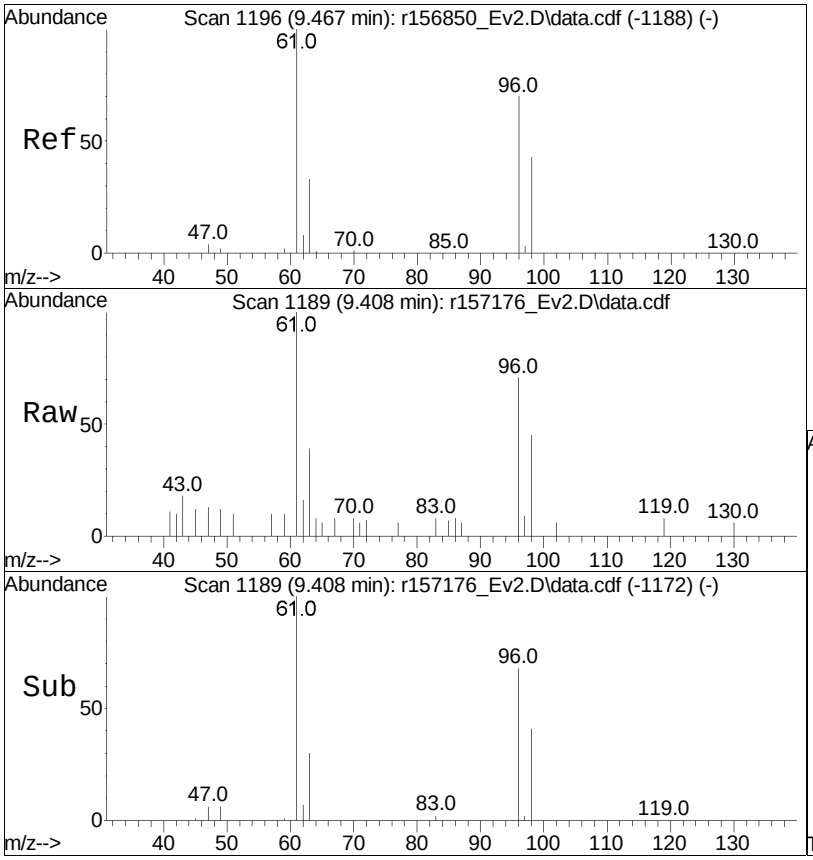



#23
trans-1,2-dichloroethene
Concen: 0.02 ppbV
RT: 8.18 min Scan# 1043
Delta R.T. -0.058 min
Lab File: r157176_Ev2.D
Acq: 20 Apr 2018 9:43 PM

Tgt Ion: 61 Resp: 186

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 72.2 | 54.0 | 81.0 |
| 98 | 66.0 | 33.8 | 50.8# |

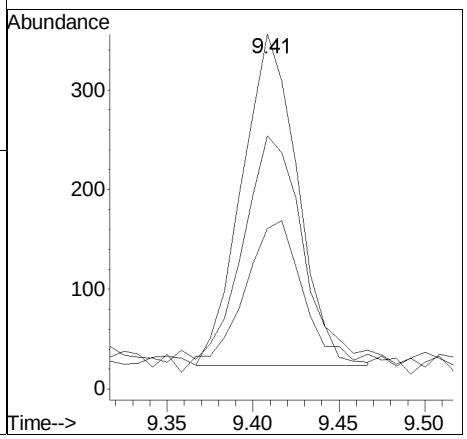


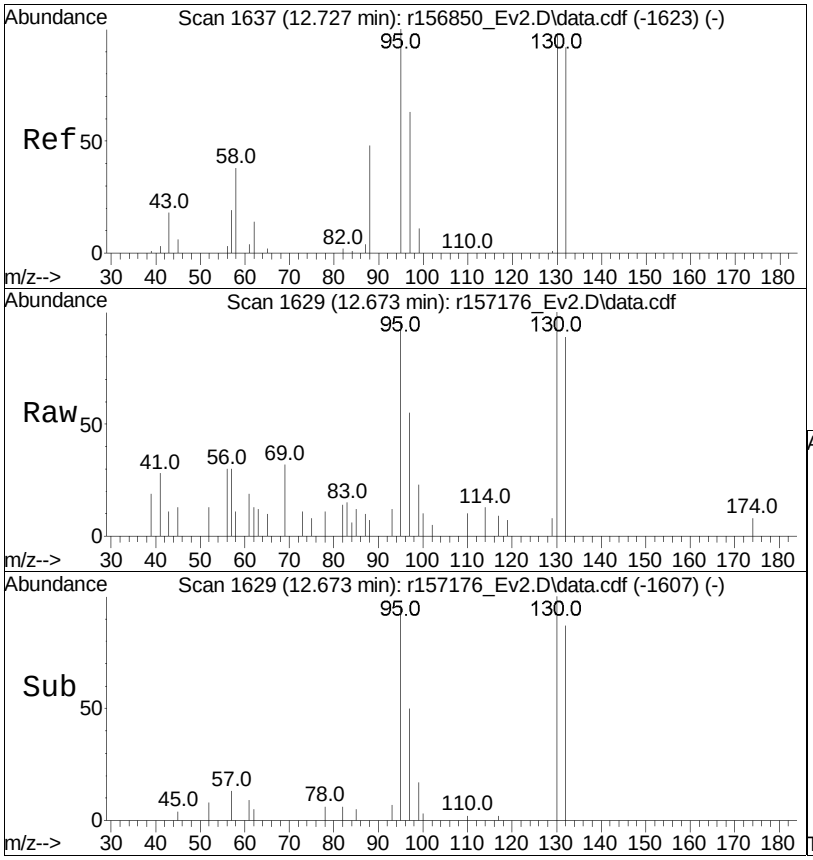



#28
cis-1,2-dichloroethene
Concen: 0.08 ppbV
RT: 9.41 min Scan# 1189
Delta R.T. -0.058 min
Lab File: r157176_Ev2.D
Acq: 20 Apr 2018 9:43 PM

Tgt Ion: 61 Resp: 743

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 71.3 | 56.1 | 84.1 |
| 98 | 45.2 | 34.6 | 52.0 |

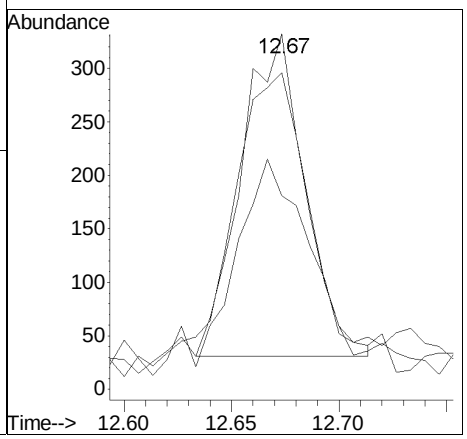


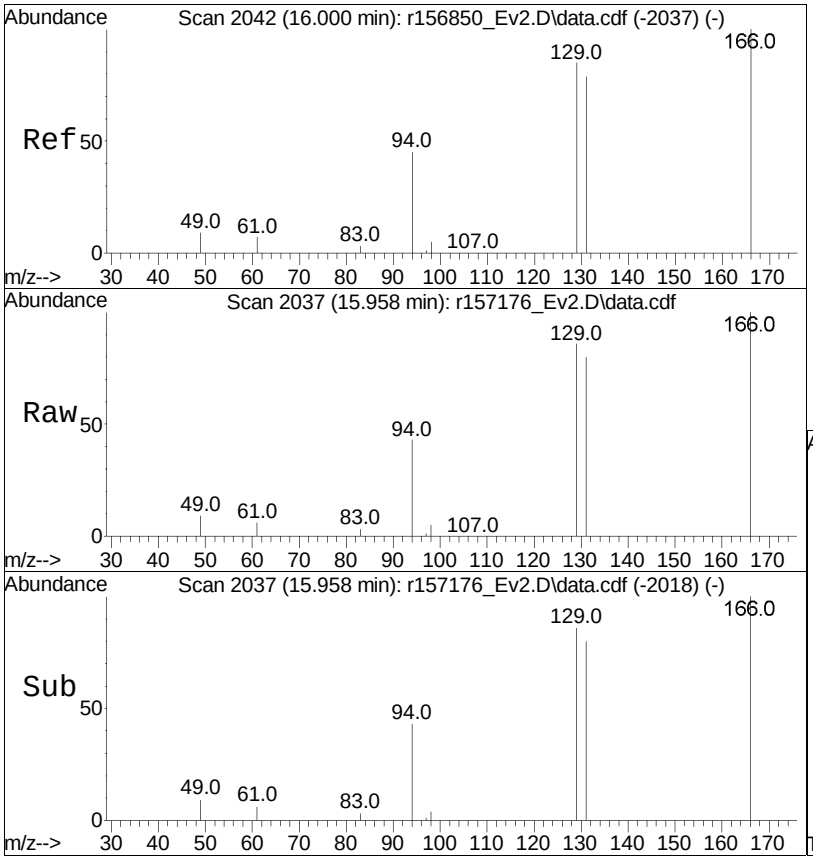



#44
trichloroethene
Concen: 0.06 ppbV
RT: 12.67 min Scan# 1629
Delta R.T. -0.053 min
Lab File: r157176_Ev2.D
Acq: 20 Apr 2018 9:43 PM

Tgt Ion:130 Resp: 625

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 89.2 | 75.5 | 113.3 |
| 97 | 54.5 | 51.9 | 77.9 |

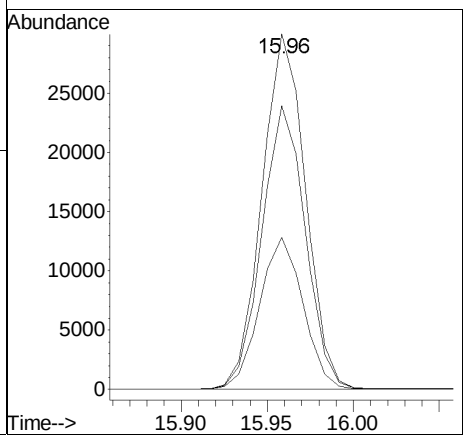





#57
tetrachloroethene
Concen: 4.54 ppbV
RT: 15.96 min Scan# 2037
Delta R.T. -0.042 min
Lab File: r157176_Ev2.D
Acq: 20 Apr 2018 9:43 PM

Tgt Ion:166 Resp: 52920

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 79.8 | 63.5 | 95.3 |
| 94 | 42.8 | 36.1 | 54.1 |



Manual Integration/Negative Proof Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\Airlab15\ | QMethod | : TSIM180404.M |
| Data File | : r157176_Ev2.D | Operator | : AIRLAB15:RY |
| Date Inj'd | : 4/20/2018 9:43 PM | Instrument | : |
| Sample | : WG1108448-5,3,250,250 | Quant Date | : 4/21/2018 8:32 am |

There are no manual integrations or false positives in this file.

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253829.D
Acq On : 22 Apr 2018 12:14 am
Operator : AIRPIANO2:MB
Sample : WG1108672-5,3,25,250
Misc : WG1108672,ICAL14572
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 22 08:49:43 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

CCAL FILE : O:\Forensics\Data\AIR2\2018\180421SIM\R253812.D
Sub List : 5_Chlorinateds - .

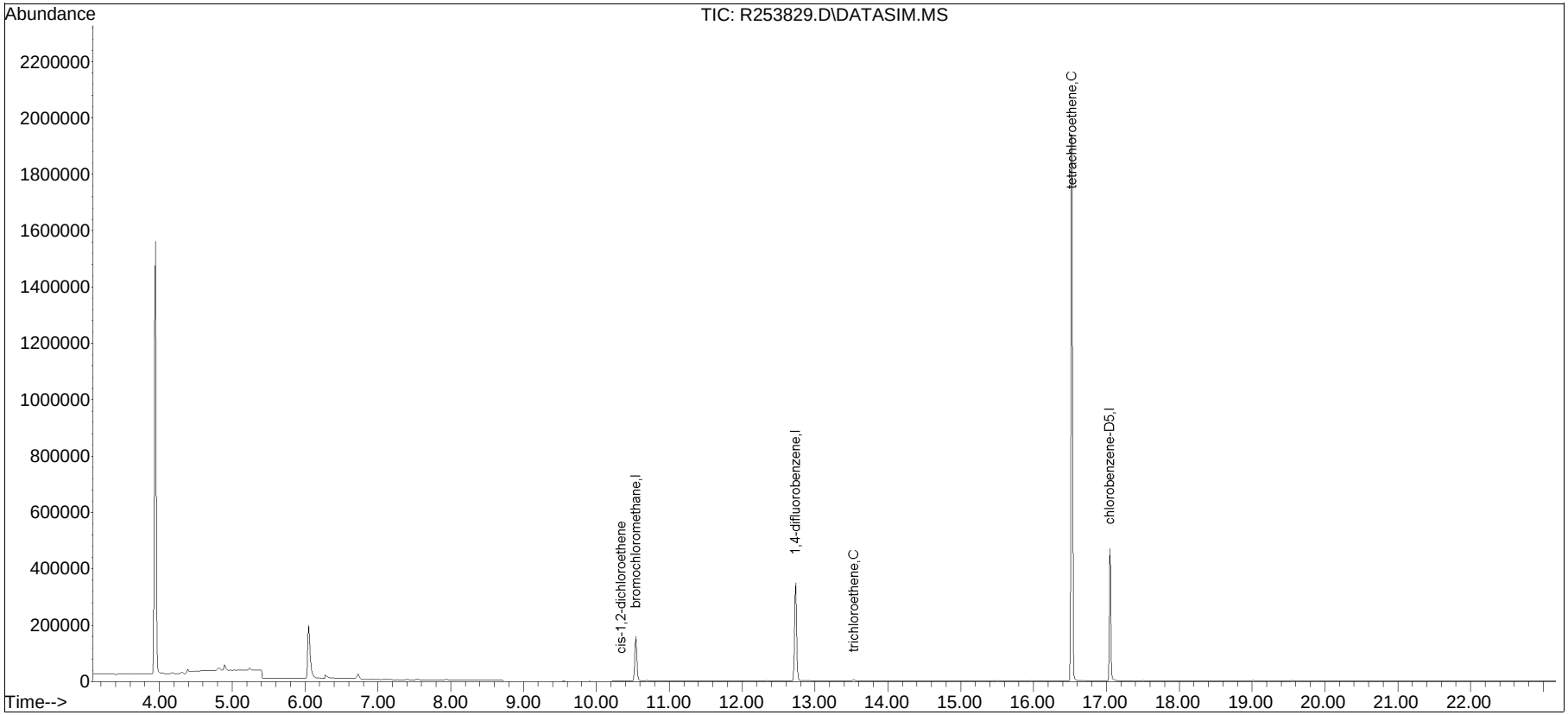
| Compound | R.T. | QIon | Response | Conc Units | Dev(Min) |
|---|---|---|---|---|---|
| Internal Standards | | | | | |
| 1) bromochloromethane | 10.541 | 49 | 192630 | 10.000 ppbV | 0.00 |
| Standard Area = 191605 | | | Recovery = 100.53% | | |
| 33) 1,4-difluorobenzene | 12.738 | 114 | 374076 | 10.000 ppbV | 0.00 |
| Standard Area = 388232 | | | Recovery = 96.35% | | |
| 51) chlorobenzene-D5 | 17.048 | 54 | 81395 | 10.000 ppbV | 0.00 |
| Standard Area = 97750 | | | Recovery = 83.27% | | |
| System Monitoring Compounds | | | | | |
| Target Compounds | | | | | Qvalue |
| 6) vinyl chloride | 4.962 | | 0 | N.D. | |
| 23) trans-1,2-dichloroethene | 9.113 | | 0 | N.D. | |
| 28) cis-1,2-dichloroethene | 10.343 | 61 | 286 | 0.013 ppbV # | 81 |
| 44) trichloroethene | 13.532 | 130 | 2110 | 0.128 ppbV | 98 |
| 57) tetrachloroethene | 16.530 | 166 | 909874 | 48.420 ppbV # | 87 |

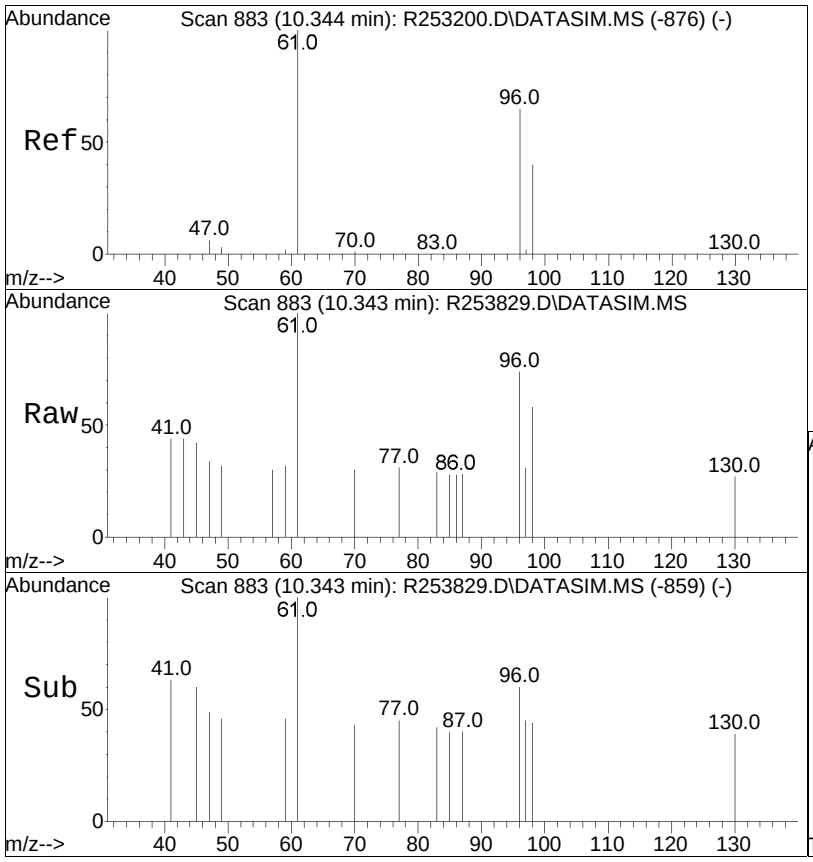
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Sub List : 5_Chlorinateds - .AIR2\2018\180421SIM\R253812.D

Data Path : O:\Forensics\Data\AIR2\2018\180421SIM\
Data File : R253829.D
Acq On : 22 Apr 2018 12:14 am
Operator : AIRPIANO2:MB
Sample : WG1108672-5,3,25,250
Misc : WG1108672,ICAL14572
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Apr 22 08:49:43 2018
Quant Method : O:\Forensics\Data\AIR2\2018\180421SIM\TSIM180325.M
Quant Title : TO-14A/TO-15 SIM/Full Scan Analysis
QLast Update : Mon Mar 26 12:17:28 2018
Response via : Initial Calibration

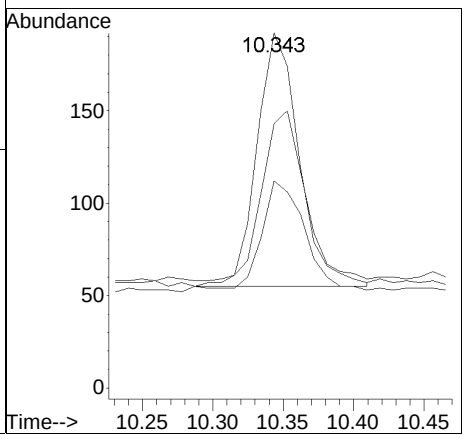


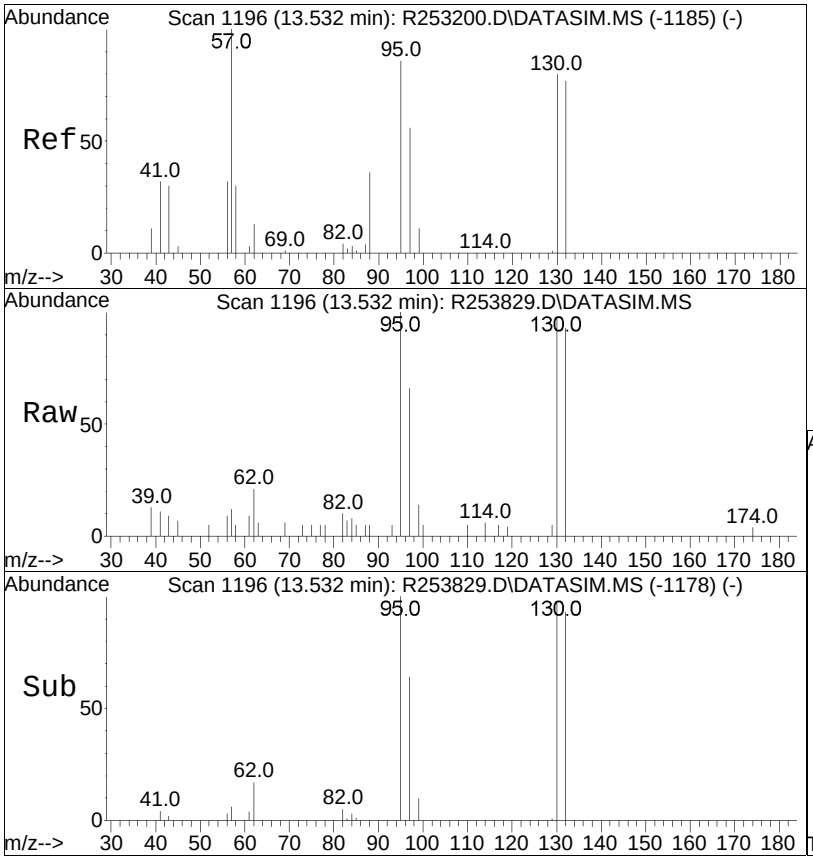



#28
cis-1,2-dichloroethene
Concen: 0.01 ppbV
RT: 10.343 min Scan# 883
Delta R.T. -0.000 min
Lab File: R253829.D
Acq: 22 Apr 2018 12:14 am

Tgt Ion: 61 Resp: 286

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 61 | 100 | | |
| 96 | 74.5 | 51.7 | 77.5 |
| 98 | 58.3 | 31.7 | 47.5# |

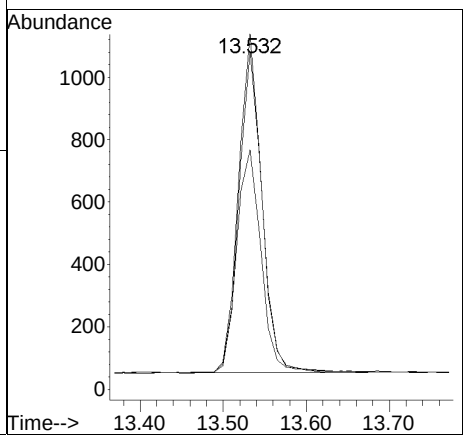


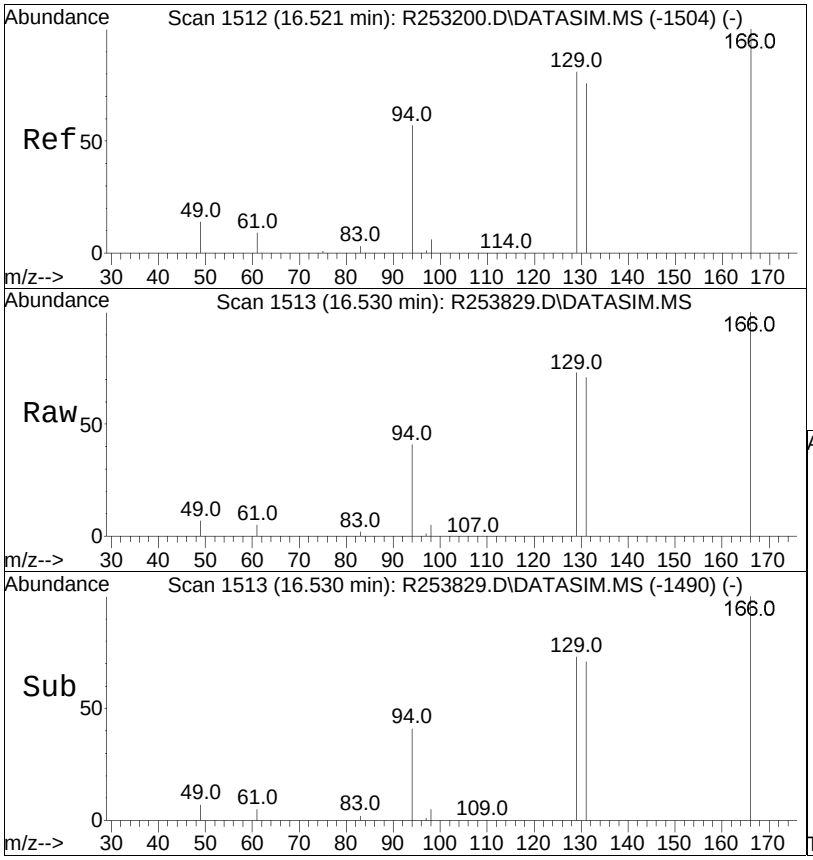



#44
trichloroethene
Concen: 0.13 ppbV
RT: 13.532 min Scan# 1196
Delta R.T. -0.000 min
Lab File: R253829.D
Acq: 22 Apr 2018 12:14 am

Tgt Ion:130 Resp: 2110

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 130 | 100 | | |
| 132 | 95.3 | 77.2 | 115.8 |
| 97 | 67.4 | 56.5 | 84.7 |

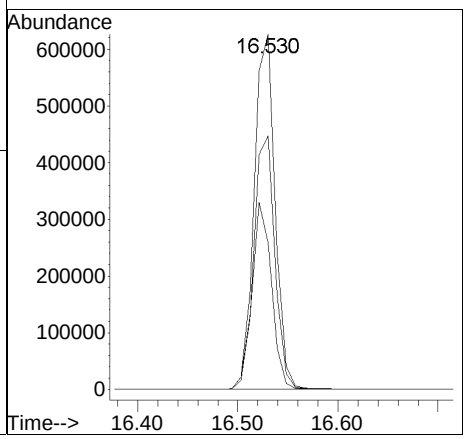





#57
tetrachloroethene
Concen: 48.42 ppbV
RT: 16.530 min Scan# 1513
Delta R.T. 0.009 min
Lab File: R253829.D
Acq: 22 Apr 2018 12:14 am

Tgt Ion:166 Resp: 909874

| Ion | Ratio | Lower | Upper |
|---|---|---|---|
| 166 | 100 | | |
| 131 | 71.4 | 61.0 | 91.6 |
| 94 | 41.2 | 46.0 | 69.0# |



Manual Integration/Negative Proof Report

| | | | |
|---|---|---|---|
| Data Path | : O:\Forensics\Data\AIR2\2018Q | Method | : TSIM180325.M |
| Data File | : R253829.D | Operator | : AIRPIANO2:MB |
| Date Inj'd | : 4/22/2018 12:14 am | Instrument | : Airpiano 2 |
| Sample | : WG1108672-5,3,25,250 | Quant Date | : 4/22/2018 8:49 am |

There are no manual integrations or false positives in this file.

# Alpha Report

# ANALYTICAL REPORT

| | |
|---|---|
| Lab Number: | L1812962 |
| Client: | CH2MHILL<br>1880 Way Cross Road<br>Cincinatti, OH 45420 |
| ATTN: | Marie Chiller |
| Phone: | (513) 673-2201 |
| Project Name: | DOW HANGING ROCK |
| Project Number: | 693874.01.RR |
| Report Date: | 04/23/18 |

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Certifications & Approvals: MA (M-MA030), NH NELAP (2062), NJ NELAP (MA015), CT (PH-0141), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-13-00067), USFWS (Permit #LE2069641).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

| Alpha Sample ID | Client ID | Matrix | Sample Location | Collection Date/Time | Receive Date |
|---|---|---|---|---|---|
| L1812962-01 | S01-HGR-OA02-041218 | AIR | IRONTON, OH | 04/12/18 16:12 | 04/13/18 |
| L1812962-02 | S01-B505-IA06-041218 | AIR | IRONTON, OH | 04/12/18 16:15 | 04/13/18 |
| L1812962-03 | S01-B505-IA10-041218 | AIR | IRONTON, OH | 04/12/18 16:17 | 04/13/18 |
| L1812962-04 | S01-B505-IA11-041218 | AIR | IRONTON, OH | 04/12/18 16:18 | 04/13/18 |
| L1812962-05 | S01-B505-IA12-041218 | AIR | IRONTON, OH | 04/12/18 16:22 | 04/13/18 |
| L1812962-06 | S01-B505-IA12-041218-FD01 | AIR | IRONTON, OH | 04/12/18 16:22 | 04/13/18 |
| L1812962-07 | S01-B505-IA07-041218 | AIR | IRONTON, OH | 04/12/18 16:21 | 04/13/18 |
| L1812962-08 | S01-B505-IA09-041218 | AIR | IRONTON, OH | 04/12/18 16:19 | 04/13/18 |

**Project Name:** DOW HANGING ROCK **Lab Number:** L1812962
**Project Number:** 693874.01.RR **Report Date:** 04/23/18

## Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY
For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Client Services at 800-624-9220 with any questions.

| | | | |
|---|---|---|---|
| **Project Name:** | DOW HANGING ROCK | **Lab Number:** | L1812962 |
| **Project Number:** | 693874.01.RR | **Report Date:** | 04/23/18 |

**Case Narrative (continued)**

Volatile Organics in Air

Canisters were released from the laboratory on April 11, 2018. The canister certification results are provided as an addendum.

Sample Receipt

The canister ID number for the sample designated S01-B505-IA12-041218 (L1812962-05) is listed on the CoC as 946 but should be 949.

The canister ID number for the sample designated S01-B505-IA07-041218 (L1812962-07) is listed on the CoC as 986 but should be 968.

The sample end times were provided by the client in an email after receipt of the samples. A revised CoC was not provided.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Christopher J. Anderson

Title: Technical Director/Representative Date: 04/23/18

# AIR

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## SAMPLE RESULTS

Lab ID: L1812962-01
Client ID: S01-HGR-OA02-041218
Sample Location: IRONTON, OH

Date Collected: 04/12/18 16:12
Date Received: 04/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/20/18 19:19
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 71 | | 60-140 |
| bromochloromethane | 62 | | 60-140 |
| chlorobenzene-d5 | 83 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## SAMPLE RESULTS

Lab ID: L1812962-02
Client ID: S01-B505-IA06-041218
Sample Location: IRONTON, OH

Date Collected: 04/12/18 16:15
Date Received: 04/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/20/18 19:55
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | 0.043 | 0.020 | -- | 0.170 | 0.079 | -- | | 1 |
| Trichloroethene | 0.104 | 0.020 | -- | 0.559 | 0.107 | -- | | 1 |
| Tetrachloroethene | 4.46 | 0.020 | -- | 30.2 | 0.136 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 86 | | 60-140 |
| bromochloromethane | 90 | | 60-140 |
| chlorobenzene-d5 | 86 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## SAMPLE RESULTS

Lab ID: L1812962-03
Client ID: S01-B505-IA10-041218
Sample Location: IRONTON, OH

Date Collected: 04/12/18 16:17
Date Received: 04/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/20/18 20:31
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | 0.075 | 0.020 | -- | 0.297 | 0.079 | -- | | 1 |
| Trichloroethene | 0.137 | 0.020 | -- | 0.736 | 0.107 | -- | | 1 |
| Tetrachloroethene | 6.71 | 0.020 | -- | 45.5 | 0.136 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 75 | | 60-140 |
| bromochloromethane | 68 | | 60-140 |
| chlorobenzene-d5 | 84 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## SAMPLE RESULTS

Lab ID: L1812962-04
Client ID: S01-B505-IA11-041218
Sample Location: IRONTON, OH

Date Collected: 04/12/18 16:18
Date Received: 04/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/20/18 21:07
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | 0.075 | 0.020 | -- | 0.297 | 0.079 | -- | | 1 |
| Trichloroethene | 0.070 | 0.020 | -- | 0.376 | 0.107 | -- | | 1 |
| Tetrachloroethene | 4.51 | 0.020 | -- | 30.6 | 0.136 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 82 | | 60-140 |
| bromochloromethane | 72 | | 60-140 |
| chlorobenzene-d5 | 94 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## SAMPLE RESULTS

Lab ID: L1812962-05
Client ID: S01-B505-IA12-041218
Sample Location: IRONTON, OH

Date Collected: 04/12/18 16:22
Date Received: 04/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/21/18 15:35
Analyst: MB

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Trichloroethene | 0.030 | 0.020 | -- | 0.161 | 0.107 | -- | | 1 |
| Tetrachloroethene | 0.482 | 0.020 | -- | 3.27 | 0.136 | -- | | 1 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-difluorobenzene | 107 | | 60-140 |
| bromochloromethane | 112 | | 60-140 |
| chlorobenzene-d5 | 90 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## SAMPLE RESULTS

Lab ID: L1812962-06
Client ID: S01-B505-IA12-041218-FD01
Sample Location: IRONTON, OH

Date Collected: 04/12/18 16:22
Date Received: 04/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/21/18 16:45
Analyst: MB

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Trichloroethene | 0.031 | 0.020 | -- | 0.167 | 0.107 | -- | | 1 |
| Tetrachloroethene | 0.496 | 0.020 | -- | 3.36 | 0.136 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 107 | | 60-140 |
| bromochloromethane | 113 | | 60-140 |
| chlorobenzene-d5 | 89 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## SAMPLE RESULTS

Lab ID: L1812962-07
Client ID: S01-B505-IA07-041218
Sample Location: IRONTON, OH

Date Collected: 04/12/18 16:21
Date Received: 04/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/21/18 17:21
Analyst: MB

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | 0.028 | 0.020 | -- | 0.111 | 0.079 | -- | | 1 |
| Trichloroethene | 0.111 | 0.020 | -- | 0.597 | 0.107 | -- | | 1 |
| Tetrachloroethene | 2.35 | 0.020 | -- | 15.9 | 0.136 | -- | | 1 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-difluorobenzene | 104 | | 60-140 |
| bromochloromethane | 110 | | 60-140 |
| chlorobenzene-d5 | 90 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## SAMPLE RESULTS

Lab ID: L1812962-08
Client ID: S01-B505-IA09-041218
Sample Location: IRONTON, OH

Date Collected: 04/12/18 16:19
Date Received: 04/13/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/21/18 00:27
Analyst: RY

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | 0.040 | 0.020 | -- | 0.159 | 0.079 | -- | | 1 |
| Trichloroethene | 0.099 | 0.020 | -- | 0.532 | 0.107 | -- | | 1 |
| Tetrachloroethene | 2.56 | 0.020 | -- | 17.4 | 0.136 | -- | | 1 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-difluorobenzene | 86 | | 60-140 |
| bromochloromethane | 90 | | 60-140 |
| chlorobenzene-d5 | 85 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 04/20/18 17:58

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 01-04,08 Batch: WG1108448-4 | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR
**Lab Number:** L1812962
**Report Date:** 04/23/18

# Method Blank Analysis
## Batch Quality Control

Analytical Method: 48,TO-15-SIM
Analytical Date: 04/21/18 14:48

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab for sample(s): 05-07 Batch: WG1108672-4 | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-04,08 Batch: WG1108448-3 | | | | | | | | |
| Propylene | 95 | | - | | 70-130 | - | | 25 |
| Dichlorodifluoromethane | 85 | | - | | 70-130 | - | | 25 |
| Chloromethane | 89 | | - | | 70-130 | - | | 25 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | 92 | | - | | 70-130 | - | | 25 |
| Vinyl chloride | 84 | | - | | 70-130 | - | | 25 |
| 1,3-Butadiene | 98 | | - | | 70-130 | - | | 25 |
| Bromomethane | 84 | | - | | 70-130 | - | | 25 |
| Chloroethane | 89 | | - | | 70-130 | - | | 25 |
| Ethyl Alcohol | 79 | | - | | 70-130 | - | | 25 |
| Vinyl bromide | 85 | | - | | 70-130 | - | | 25 |
| Acetone | 87 | | - | | 70-130 | - | | 25 |
| Trichlorofluoromethane | 79 | | - | | 70-130 | - | | 25 |
| iso-Propyl Alcohol | 79 | | - | | 70-130 | - | | 25 |
| Acrylonitrile | 80 | | - | | 70-130 | - | | 25 |
| 1,1-Dichloroethene | 80 | | - | | 70-130 | - | | 25 |
| tert-Butyl Alcohol[1] | 72 | | - | | 70-130 | - | | 25 |
| Methylene chloride | 84 | | - | | 70-130 | - | | 25 |
| 3-Chloropropene | 88 | | - | | 70-130 | - | | 25 |
| Carbon disulfide | 85 | | - | | 70-130 | - | | 25 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 84 | | - | | 70-130 | - | | 25 |
| trans-1,2-Dichloroethene | 92 | | - | | 70-130 | - | | 25 |
| 1,1-Dichloroethane | 90 | | - | | 70-130 | - | | 25 |
| Methyl tert butyl ether | 88 | | - | | 70-130 | - | | 25 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR
**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-04,08 Batch: WG1108448-3 | | | | | | | | |
| Vinyl acetate | 110 | | - | | 70-130 | - | | 25 |
| 2-Butanone | 92 | | - | | 70-130 | - | | 25 |
| cis-1,2-Dichloroethene | 88 | | - | | 70-130 | - | | 25 |
| Ethyl Acetate | 94 | | - | | 70-130 | - | | 25 |
| Chloroform | 91 | | - | | 70-130 | - | | 25 |
| Tetrahydrofuran | 90 | | - | | 70-130 | - | | 25 |
| 1,2-Dichloroethane | 81 | | - | | 70-130 | - | | 25 |
| n-Hexane | 93 | | - | | 70-130 | - | | 25 |
| 1,1,1-Trichloroethane | 102 | | - | | 70-130 | - | | 25 |
| Benzene | 88 | | - | | 70-130 | - | | 25 |
| Carbon tetrachloride | 89 | | - | | 70-130 | - | | 25 |
| Cyclohexane | 97 | | - | | 70-130 | - | | 25 |
| Dibromomethane[1] | 75 | | - | | 70-130 | - | | 25 |
| 1,2-Dichloropropane | 84 | | - | | 70-130 | - | | 25 |
| Bromodichloromethane | 102 | | - | | 70-130 | - | | 25 |
| 1,4-Dioxane | 97 | | - | | 70-130 | - | | 25 |
| Trichloroethene | 88 | | - | | 70-130 | - | | 25 |
| 2,2,4-Trimethylpentane | 97 | | - | | 70-130 | - | | 25 |
| cis-1,3-Dichloropropene | 97 | | - | | 70-130 | - | | 25 |
| 4-Methyl-2-pentanone | 101 | | - | | 70-130 | - | | 25 |
| trans-1,3-Dichloropropene | 82 | | - | | 70-130 | - | | 25 |
| 1,1,2-Trichloroethane | 91 | | - | | 70-130 | - | | 25 |
| Toluene | 92 | | - | | 70-130 | - | | 25 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR
**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-04,08 Batch: WG1108448-3 | | | | | | | | |
| 2-Hexanone | 106 | | - | | 70-130 | - | | 25 |
| Dibromochloromethane | 116 | | - | | 70-130 | - | | 25 |
| 1,2-Dibromoethane | 95 | | - | | 70-130 | - | | 25 |
| Tetrachloroethene | 96 | | - | | 70-130 | - | | 25 |
| 1,1,1,2-Tetrachloroethane | 95 | | - | | 70-130 | - | | 25 |
| Chlorobenzene | 95 | | - | | 70-130 | - | | 25 |
| Ethylbenzene | 99 | | - | | 70-130 | - | | 25 |
| p/m-Xylene | 99 | | - | | 70-130 | - | | 25 |
| Bromoform | 116 | | - | | 70-130 | - | | 25 |
| Styrene | 102 | | - | | 70-130 | - | | 25 |
| 1,1,2,2-Tetrachloroethane | 102 | | - | | 70-130 | - | | 25 |
| o-Xylene | 100 | | - | | 70-130 | - | | 25 |
| 1,2,3-Trichloropropane[1] | 90 | | - | | 70-130 | - | | 25 |
| Isopropylbenzene | 99 | | - | | 70-130 | - | | 25 |
| Bromobenzene[1] | 92 | | - | | 70-130 | - | | 25 |
| 4-Ethyltoluene | 108 | | - | | 70-130 | - | | 25 |
| 1,3,5-Trimethylbenzene | 103 | | - | | 70-130 | - | | 25 |
| 1,2,4-Trimethylbenzene | 107 | | - | | 70-130 | - | | 25 |
| Benzyl chloride | 116 | | - | | 70-130 | - | | 25 |
| 1,3-Dichlorobenzene | 102 | | - | | 70-130 | - | | 25 |
| 1,4-Dichlorobenzene | 98 | | - | | 70-130 | - | | 25 |
| sec-Butylbenzene | 100 | | - | | 70-130 | - | | 25 |
| p-Isopropyltoluene | 94 | | - | | 70-130 | - | | 25 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-04,08 Batch: WG1108448-3 | | | | | | | | |
| 1,2-Dichlorobenzene | 102 | | - | | 70-130 | - | | 25 |
| n-Butylbenzene | 103 | | - | | 70-130 | - | | 25 |
| 1,2,4-Trichlorobenzene | 98 | | - | | 70-130 | - | | 25 |
| Naphthalene | 94 | | - | | 70-130 | - | | 25 |
| 1,2,3-Trichlorobenzene | 97 | | - | | 70-130 | - | | 25 |
| Hexachlorobutadiene | 108 | | - | | 70-130 | - | | 25 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR
**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 05-07 Batch: WG1108672-3 | | | | | | | | |
| Propylene | 125 | | - | | 70-130 | - | | 25 |
| Dichlorodifluoromethane | 94 | | - | | 70-130 | - | | 25 |
| Chloromethane | 97 | | - | | 70-130 | - | | 25 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | 85 | | - | | 70-130 | - | | 25 |
| Vinyl chloride | 90 | | - | | 70-130 | - | | 25 |
| 1,3-Butadiene | 107 | | - | | 70-130 | - | | 25 |
| Bromomethane | 86 | | - | | 70-130 | - | | 25 |
| Chloroethane | 87 | | - | | 70-130 | - | | 25 |
| Ethyl Alcohol | 97 | | - | | 70-130 | - | | 25 |
| Vinyl bromide | 84 | | - | | 70-130 | - | | 25 |
| Acetone | 90 | | - | | 70-130 | - | | 25 |
| Trichlorofluoromethane | 73 | | - | | 70-130 | - | | 25 |
| iso-Propyl Alcohol | 81 | | - | | 70-130 | - | | 25 |
| Acrylonitrile | 80 | | - | | 70-130 | - | | 25 |
| 1,1-Dichloroethene | 79 | | - | | 70-130 | - | | 25 |
| tert-Butyl Alcohol[1] | 75 | | - | | 70-130 | - | | 25 |
| Methylene chloride | 88 | | - | | 70-130 | - | | 25 |
| 3-Chloropropene | 108 | | - | | 70-130 | - | | 25 |
| Carbon disulfide | 80 | | - | | 70-130 | - | | 25 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 78 | | - | | 70-130 | - | | 25 |
| trans-1,2-Dichloroethene | 77 | | - | | 70-130 | - | | 25 |
| 1,1-Dichloroethane | 81 | | - | | 70-130 | - | | 25 |
| Methyl tert butyl ether | 83 | | - | | 70-130 | - | | 25 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR
**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 05-07 Batch: WG1108672-3 | | | | | | | | |
| Vinyl acetate | 99 | | - | | 70-130 | - | | 25 |
| 2-Butanone | 97 | | - | | 70-130 | - | | 25 |
| cis-1,2-Dichloroethene | 77 | | - | | 70-130 | - | | 25 |
| Ethyl Acetate | 90 | | - | | 70-130 | - | | 25 |
| Chloroform | 77 | | - | | 70-130 | - | | 25 |
| Tetrahydrofuran | 88 | | - | | 70-130 | - | | 25 |
| 1,2-Dichloroethane | 78 | | - | | 70-130 | - | | 25 |
| n-Hexane | 100 | | - | | 70-130 | - | | 25 |
| 1,1,1-Trichloroethane | 88 | | - | | 70-130 | - | | 25 |
| Benzene | 84 | | - | | 70-130 | - | | 25 |
| Carbon tetrachloride | 90 | | - | | 70-130 | - | | 25 |
| Cyclohexane | 99 | | - | | 70-130 | - | | 25 |
| Dibromomethane[1] | 72 | | - | | 70-130 | - | | 25 |
| 1,2-Dichloropropane | 89 | | - | | 70-130 | - | | 25 |
| Bromodichloromethane | 96 | | - | | 70-130 | - | | 25 |
| 1,4-Dioxane | 92 | | - | | 70-130 | - | | 25 |
| Trichloroethene | 87 | | - | | 70-130 | - | | 25 |
| 2,2,4-Trimethylpentane | 106 | | - | | 70-130 | - | | 25 |
| cis-1,3-Dichloropropene | 86 | | - | | 70-130 | - | | 25 |
| 4-Methyl-2-pentanone | 108 | | - | | 70-130 | - | | 25 |
| trans-1,3-Dichloropropene | 74 | | - | | 70-130 | - | | 25 |
| 1,1,2-Trichloroethane | 89 | | - | | 70-130 | - | | 25 |
| Toluene | 79 | | - | | 70-130 | - | | 25 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR
**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 05-07 Batch: WG1108672-3 | | | | | | | | |
| 2-Hexanone | 95 | | - | | 70-130 | - | | 25 |
| Dibromochloromethane | 92 | | - | | 70-130 | - | | 25 |
| 1,2-Dibromoethane | 78 | | - | | 70-130 | - | | 25 |
| Tetrachloroethene | 84 | | - | | 70-130 | - | | 25 |
| 1,1,1,2-Tetrachloroethane | 75 | | - | | 70-130 | - | | 25 |
| Chlorobenzene | 79 | | - | | 70-130 | - | | 25 |
| Ethylbenzene | 80 | | - | | 70-130 | - | | 25 |
| p/m-Xylene | 82 | | - | | 70-130 | - | | 25 |
| Bromoform | 100 | | - | | 70-130 | - | | 25 |
| Styrene | 80 | | - | | 70-130 | - | | 25 |
| 1,1,2,2-Tetrachloroethane | 85 | | - | | 70-130 | - | | 25 |
| o-Xylene | 85 | | - | | 70-130 | - | | 25 |
| 1,2,3-Trichloropropane[1] | 81 | | - | | 70-130 | - | | 25 |
| Isopropylbenzene | 81 | | - | | 70-130 | - | | 25 |
| Bromobenzene[1] | 80 | | - | | 70-130 | - | | 25 |
| 4-Ethyltoluene | 97 | | - | | 70-130 | - | | 25 |
| 1,3,5-Trimethylbenzene | 88 | | - | | 70-130 | - | | 25 |
| 1,2,4-Trimethylbenzene | 96 | | - | | 70-130 | - | | 25 |
| Benzyl chloride | 95 | | - | | 70-130 | - | | 25 |
| 1,3-Dichlorobenzene | 94 | | - | | 70-130 | - | | 25 |
| 1,4-Dichlorobenzene | 91 | | - | | 70-130 | - | | 25 |
| sec-Butylbenzene | 84 | | - | | 70-130 | - | | 25 |
| p-Isopropyltoluene | 78 | | - | | 70-130 | - | | 25 |

# Lab Control Sample Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | LCS %Recovery | Qual | LCSD %Recovery | Qual | %Recovery Limits | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 05-07 Batch: WG1108672-3 | | | | | | | | |
| 1,2-Dichlorobenzene | 94 | | - | | 70-130 | - | | 25 |
| n-Butylbenzene | 88 | | - | | 70-130 | - | | 25 |
| 1,2,4-Trichlorobenzene | 94 | | - | | 70-130 | - | | 25 |
| Naphthalene | 87 | | - | | 70-130 | - | | 25 |
| 1,2,3-Trichlorobenzene | 89 | | - | | 70-130 | - | | 25 |
| Hexachlorobutadiene | 100 | | - | | 70-130 | - | | 25 |

# Lab Duplicate Analysis
## Batch Quality Control

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

| Parameter | Native Sample | Duplicate Sample | Units | RPD | Qual | RPD Limits |
|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 01-04,08 QC Batch ID: WG1108448-5 QC Sample: L1812962-04 Client ID: S01-B505-IA11-041218 | | | | | | |
| Vinyl chloride | ND | ND | ppbV | NC | | 25 |
| 1,1-Dichloroethene | ND | ND | ppbV | NC | | 25 |
| trans-1,2-Dichloroethene | ND | ND | ppbV | NC | | 25 |
| cis-1,2-Dichloroethene | 0.075 | 0.078 | ppbV | 4 | | 25 |
| Trichloroethene | 0.070 | 0.062 | ppbV | 12 | | 25 |
| Tetrachloroethene | 4.51 | 4.54 | ppbV | 1 | | 25 |
| Volatile Organics in Air by SIM - Mansfield Lab Associated sample(s): 05-07 QC Batch ID: WG1108672-5 QC Sample: L1813132-04 Client ID: DUP Sample | | | | | | |
| Vinyl chloride | ND | ND | ppbV | NC | | 25 |
| trans-1,2-Dichloroethene | ND | ND | ppbV | NC | | 25 |
| cis-1,2-Dichloroethene | ND | ND | ppbV | NC | | 25 |
| Trichloroethene | 1.28 | 1.28 | ppbV | 0 | | 25 |
| Tetrachloroethene | 467 | 484 | ppbV | 4 | | 25 |

**Project Name:** DOW HANGING ROCK

**Lab Number:** L1812962

**Project Number:** 693874.01.RR

**Report Date:** 04/23/18

## Canister and Flow Controller Information

| Samplenum | Client ID | Media ID | Media Type | Date Prepared | Bottle Order | Cleaning Batch ID | Can Leak Check | Initial Pressure (in. Hg) | Pressure on Receipt (in. Hg) | Flow Controler Leak Chk | Flow Out mL/min | Flow In mL/min | % RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L1812962-01 | S01-HGR-OA02-041218 | 0948 | Flow 5 | 04/11/18 | 262888 | | - | - | - | Pass | 10.0 | 9.5 | 5 |
| L1812962-01 | S01-HGR-OA02-041218 | 602 | 6.0L Can | 04/11/18 | 262888 | L1811914-10 | Pass | -30.0 | -7.5 | - | - | - | - |
| L1812962-02 | S01-B505-IA06-041218 | 0062 | Flow 5 | 04/11/18 | 262888 | | - | - | - | Pass | 10.0 | 9.7 | 3 |
| L1812962-02 | S01-B505-IA06-041218 | 1533 | 6.0L Can | 04/11/18 | 262888 | L1811914-08 | Pass | -30.0 | -7.0 | - | - | - | - |
| L1812962-03 | S01-B505-IA10-041218 | 0080 | Flow 4 | 04/11/18 | 262888 | | - | - | - | Pass | 9.9 | 9.8 | 1 |
| L1812962-03 | S01-B505-IA10-041218 | 753 | 6.0L Can | 04/11/18 | 262888 | L1811914-03 | Pass | -30.0 | -6.8 | - | - | - | - |
| L1812962-04 | S01-B505-IA11-041218 | 0258 | Flow 4 | 04/11/18 | 262888 | | - | - | - | Pass | 10.0 | 9.9 | 1 |
| L1812962-04 | S01-B505-IA11-041218 | 1551 | 6.0L Can | 04/11/18 | 262888 | L1811914-05 | Pass | -30.0 | -6.6 | - | - | - | - |
| L1812962-05 | S01-B505-IA12-041218 | 0945 | Flow 5 | 04/11/18 | 262888 | | - | - | - | Pass | 9.9 | 7.6 | 26 |
| L1812962-05 | S01-B505-IA12-041218 | 949 | 6.0L Can | 04/11/18 | 262888 | L1811914-04 | Pass | -30.0 | -7.4 | - | - | - | - |
| L1812962-06 | S01-B505-IA12-041218-FD01 | 0618 | Flow 5 | 04/11/18 | 262888 | | - | - | - | Pass | 10.0 | 9.7 | 3 |
| L1812962-06 | S01-B505-IA12-041218-FD01 | 594 | 6.0L Can | 04/11/18 | 262888 | L1811914-02 | Pass | -30.0 | -7.8 | - | - | - | - |
| L1812962-07 | S01-B505-IA07-041218 | 0968 | Flow 5 | 04/11/18 | 262888 | | - | - | - | Pass | 9.2 | 10.0 | 8 |
| L1812962-07 | S01-B505-IA07-041218 | 968 | 6.0L Can | 04/11/18 | 262888 | L1811914-09 | Pass | -30.0 | -5.7 | - | - | - | - |
| L1812962-08 | S01-B505-IA09-041218 | 0341 | Flow 5 | 04/11/18 | 262888 | | - | - | - | Pass | 10.0 | 9.5 | 5 |

**Project Name:** DOW HANGING ROCK

**Lab Number:** L1812962

**Project Number:** 693874.01.RR

**Report Date:** 04/23/18

## Canister and Flow Controller Information

| Samplenum | Client ID | Media ID | Media Type | Date Prepared | Bottle Order | Cleaning Batch ID | Can Leak Check | Initial Pressure (in. Hg) | Pressure on Receipt (in. Hg) | Flow Controler Leak Chk | Flow Out mL/min | Flow In mL/min | % RPD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L1812962-08 | S01-B505-IA09-041218 | 1634 | 6.0L Can | 04/11/18 | 262888 | L1811914-06 | Pass | -30.0 | -7.1 | - | - | - | - |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-02
Client ID: CAN 594 FC 0258
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/07/18 00:35
Analyst: GJ

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.500 | -- | ND | 0.500 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acetone | ND | 2.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-02
Client ID: CAN 594 FC 0258
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.500 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-02
Client ID: CAN 594 FC 0258
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| n-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 92 | | 60-140 |
| bromochloromethane | 94 | | 60-140 |
| chlorobenzene-d5 | 93 | | 60-140 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-03
Client ID: CAN 753 FC 0968
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/07/18 01:13
Analyst: GJ

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.500 | -- | ND | 0.500 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acetone | ND | 2.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-03
Client ID: CAN 753 FC 0968
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.500 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-03
Client ID: CAN 753 FC 0968
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| n-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 92 | | 60-140 |
| bromochloromethane | 95 | | 60-140 |
| chlorobenzene-d5 | 94 | | 60-140 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-04
Client ID: CAN 949 FC 0945
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/07/18 01:51
Analyst: GJ

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.500 | -- | ND | 0.500 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acetone | ND | 2.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-04
Client ID: CAN 949 FC 0945
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.500 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-04
Client ID: CAN 949 FC 0945
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| n-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 93 | | 60-140 |
| bromochloromethane | 94 | | 60-140 |
| chlorobenzene-d5 | 94 | | 60-140 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-05
Client ID: CAN 1551 FC 0948
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/07/18 02:29
Analyst: GJ

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.500 | -- | ND | 0.500 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acetone | ND | 2.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-05
Client ID: CAN 1551 FC 0948
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.500 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-05
Client ID: CAN 1551 FC 0948
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| n-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 92 | | 60-140 |
| bromochloromethane | 95 | | 60-140 |
| chlorobenzene-d5 | 93 | | 60-140 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-06
Client ID: CAN 1634 FC 0080
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/07/18 03:07
Analyst: GJ

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Dichlorodifluoromethane | ND | 0.200 | -- | ND | 0.989 | -- | | 1 |
| Chloromethane | ND | 0.500 | -- | ND | 0.500 | -- | | 1 |
| Freon-114 | ND | 0.050 | -- | ND | 0.349 | -- | | 1 |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,3-Butadiene | ND | 0.020 | -- | ND | 0.044 | -- | | 1 |
| Bromomethane | ND | 0.020 | -- | ND | 0.078 | -- | | 1 |
| Chloroethane | ND | 0.100 | -- | ND | 0.264 | -- | | 1 |
| Acetone | ND | 2.00 | -- | ND | 2.38 | -- | | 1 |
| Trichlorofluoromethane | ND | 0.050 | -- | ND | 0.281 | -- | | 1 |
| Acrylonitrile | ND | 0.500 | -- | ND | 1.09 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Methylene chloride | ND | 0.500 | -- | ND | 1.74 | -- | | 1 |
| Freon-113 | ND | 0.050 | -- | ND | 0.383 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| Methyl tert butyl ether | ND | 0.200 | -- | ND | 0.721 | -- | | 1 |
| 2-Butanone | ND | 0.500 | -- | ND | 1.47 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| Chloroform | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Benzene | ND | 0.100 | -- | ND | 0.319 | -- | | 1 |
| Carbon tetrachloride | ND | 0.020 | -- | ND | 0.126 | -- | | 1 |
| 1,2-Dichloropropane | ND | 0.020 | -- | ND | 0.092 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-06
Client ID: CAN 1634 FC 0080
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Bromodichloromethane | ND | 0.020 | -- | ND | 0.134 | -- | | 1 |
| 1,4-Dioxane | ND | 0.100 | -- | ND | 0.360 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| cis-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 4-Methyl-2-pentanone | ND | 0.500 | -- | ND | 2.05 | -- | | 1 |
| trans-1,3-Dichloropropene | ND | 0.020 | -- | ND | 0.091 | -- | | 1 |
| 1,1,2-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Toluene | ND | 0.050 | -- | ND | 0.188 | -- | | 1 |
| Dibromochloromethane | ND | 0.020 | -- | ND | 0.170 | -- | | 1 |
| 1,2-Dibromoethane | ND | 0.020 | -- | ND | 0.154 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |
| 1,1,1,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| Chlorobenzene | ND | 0.100 | -- | ND | 0.461 | -- | | 1 |
| Ethylbenzene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| p/m-Xylene | ND | 0.040 | -- | ND | 0.174 | -- | | 1 |
| Bromoform | ND | 0.020 | -- | ND | 0.207 | -- | | 1 |
| Styrene | ND | 0.020 | -- | ND | 0.085 | -- | | 1 |
| 1,1,2,2-Tetrachloroethane | ND | 0.020 | -- | ND | 0.137 | -- | | 1 |
| o-Xylene | ND | 0.020 | -- | ND | 0.087 | -- | | 1 |
| Isopropylbenzene | ND | 0.500 | -- | ND | 0.983 | -- | | 1 |
| 1,3,5-Trimethybenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,2,4-Trimethylbenzene | ND | 0.020 | -- | ND | 0.098 | -- | | 1 |
| 1,3-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| 1,4-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |
| sec-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| p-Isopropyltoluene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2-Dichlorobenzene | ND | 0.020 | -- | ND | 0.120 | -- | | 1 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-06
Client ID: CAN 1634 FC 0080
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:

| Parameter | ppbV Results | ppbV RL | ppbV MDL | ug/m3 Results | ug/m3 RL | ug/m3 MDL | Qualifier | Dilution Factor |
|---|---|---|---|---|---|---|---|---|
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| n-Butylbenzene | ND | 0.500 | -- | ND | 1.10 | -- | | 1 |
| 1,2,4-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Naphthalene | ND | 0.050 | -- | ND | 0.262 | -- | | 1 |
| 1,2,3-Trichlorobenzene | ND | 0.050 | -- | ND | 0.371 | -- | | 1 |
| Hexachlorobutadiene | ND | 0.050 | -- | ND | 0.533 | -- | | 1 |

| Internal Standard | % Recovery | Qualifier | Acceptance Criteria |
|---|---|---|---|
| 1,4-difluorobenzene | 92 | | 60-140 |
| bromochloromethane | 94 | | 60-140 |
| chlorobenzene-d5 | 93 | | 60-140 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-08
Client ID: CAN 1533 FC 0341
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/10/18 00:11
Analyst: MB

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-difluorobenzene | 89 | | 60-140 |
| bromochloromethane | 93 | | 60-140 |
| chlorobenzene-d5 | 88 | | 60-140 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-09
Client ID: CAN 968 FC 0062
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/10/18 00:47
Analyst: MB

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-difluorobenzene | 89 | | 60-140 |
| bromochloromethane | 92 | | 60-140 |
| chlorobenzene-d5 | 89 | | 60-140 |

**Project Name:** INDIV. CANISTER CERTIFICATION
**Project Number:** CANISTER QC INDIV

**Lab Number:** L1811914
**Report Date:** 04/23/18

# Air Canister Certification Results

Lab ID: L1811914-10
Client ID: CAN 602 FC 0618
Sample Location:

Date Collected: 04/05/18 16:00
Date Received: 04/06/18
Field Prep: Not Specified

Sample Depth:
Matrix: Air
Anaytical Method: 48,TO-15-SIM
Analytical Date: 04/10/18 01:22
Analyst: MB

| | ppbV | | | ug/m3 | | | | |
|---|---|---|---|---|---|---|---|---|
| **Parameter** | **Results** | **RL** | **MDL** | **Results** | **RL** | **MDL** | **Qualifier** | **Dilution Factor** |
| Volatile Organics in Air by SIM - Mansfield Lab | | | | | | | | |
| Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | | 1 |
| 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,1-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | | 1 |
| 1,2-Dichloroethane | ND | 0.020 | -- | ND | 0.081 | -- | | 1 |
| 1,1,1-Trichloroethane | ND | 0.020 | -- | ND | 0.109 | -- | | 1 |
| Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | | 1 |
| Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | | 1 |

| **Internal Standard** | **% Recovery** | **Qualifier** | **Acceptance Criteria** |
|---|---|---|---|
| 1,4-difluorobenzene | 92 | | 60-140 |
| bromochloromethane | 93 | | 60-140 |
| chlorobenzene-d5 | 90 | | 60-140 |

**Project Name:** DOW HANGING ROCK
**Project Number:** 693874.01.RR

**Lab Number:** L1812962
**Report Date:** 04/23/18

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

### Cooler Information

| Cooler | Custody Seal |
|---|---|
| N/A | Present/Intact |

### Container Information

| Container ID | Container Type | Cooler | Initial pH | Final pH | Temp deg C | Pres | Seal | Frozen Date/Time | Analysis(*) |
|---|---|---|---|---|---|---|---|---|---|
| L1812962-01A | Canister - 6 Liter | N/A | NA | | | Y | Absent | | TO15-SIM(30) |
| L1812962-02A | Canister - 6 Liter | N/A | NA | | | Y | Absent | | TO15-SIM(30) |
| L1812962-03A | Canister - 6 Liter | N/A | NA | | | Y | Absent | | TO15-SIM(30) |
| L1812962-04A | Canister - 6 Liter | N/A | NA | | | Y | Absent | | TO15-SIM(30) |
| L1812962-05A | Canister - 6 Liter | N/A | NA | | | Y | Absent | | TO15-SIM(30) |
| L1812962-06A | Canister - 6 Liter | N/A | NA | | | Y | Absent | | TO15-SIM(30) |
| L1812962-07A | Canister - 6 Liter | N/A | NA | | | Y | Absent | | TO15-SIM(30) |
| L1812962-08A | Canister - 6 Liter | N/A | NA | | | Y | Absent | | TO15-SIM(30) |

*Values in parentheses indicate holding time in days

| | | | |
|---|---|---|---|
| **Project Name:** | DOW HANGING ROCK | **Lab Number:** | L1812962 |
| **Project Number:** | 693874.01.RR | **Report Date:** | 04/23/18 |

# GLOSSARY

### *Acronyms*

| | |
|---|---|
| EDL | - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME). |
| EPA | - Environmental Protection Agency. |
| LCS | - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| LCSD | - Laboratory Control Sample Duplicate: Refer to LCS. |
| LFB | - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes. |
| MDL | - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| MS | - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. |
| MSD | - Matrix Spike Sample Duplicate: Refer to MS. |
| NA | - Not Applicable. |
| NC | - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit. |
| NDPA/DPA | - N-Nitrosodiphenylamine/Diphenylamine. |
| NI | - Not Ignitable. |
| NP | - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil. |
| RL | - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable. |
| RPD | - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report. |
| SRM | - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples. |
| STLP | - Semi-dynamic Tank Leaching Procedure per EPA Method 1315. |
| TIC | - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations. |

### *Footnotes*

| | |
|---|---|
| 1 | - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method. |

### *Terms*

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### *Data Qualifiers*

| | |
|---|---|
| **A** | - Spectra identified as "Aldol Condensation Product". |
| **B** | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related |

*Report Format:* Data Usability Report

| | | | |
|---|---|---|---|
| **Project Name:** | DOW HANGING ROCK | **Lab Number:** | L1812962 |
| **Project Number:** | 693874.01.RR | **Report Date:** | 04/23/18 |

***Data Qualifiers***

projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

**C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

**D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

**E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

**G** - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

**H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

**I** - The lower value for the two columns has been reported due to obvious interference.

**M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

**NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

**P** - The RPD between the results for the two columns exceeds the method-specified criteria.

**Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

**R** - Analytical results are from sample re-analysis.

**RE** - Analytical results are from sample re-extraction.

**S** - Analytical results are from modified screening analysis.

**J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

**ND** - Not detected at the reporting limit (RL) for the sample.

*Report Format:* Data Usability Report

**Project Name:** DOW HANGING ROCK **Lab Number:** L1812962
**Project Number:** 693874.01.RR **Report Date:** 04/23/18

## REFERENCES

48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

# Certification Information

**The following analytes are not included in our Primary NELAP Scope of Accreditation:**

**Westborough Facility**
**EPA 624:** m/p-xylene, o-xylene
**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
**EPA 8270D:** NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
**EPA 300:** DW: Bromide
**EPA 6860:** SCM: Perchlorate
**EPA 9010:** NPW and SCM: Amenable Cyanide Distillation
**SM4500**: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

**Mansfield Facility**
**SM 2540D:** TSS
**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
**Biological Tissue Matrix:** EPA 3050B

**The following analytes are included in our Massachusetts DEP Scope of Accreditation**

**Westborough Facility:**

***Drinking Water***
**EPA 300.0**: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
**EPA 332**: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
**Microbiology**: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

***Non-Potable Water***
**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
**EPA 624**: Volatile Halocarbons & Aromatics,
**EPA 608**: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
**EPA 625**: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
**Microbiology**: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, SM9222D.**

**Mansfield Facility:**

***Drinking Water***
**EPA 200.7:** Al, Ba, Be, Cd, Cr, Cu, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
**EPA 522.**

***Non-Potable Water***
**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn.
**EPA 245.1** Hg.
**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

# AIR ANALYSIS

PAGE 1 OF 1

ALPHA ANALYTICAL

**CHAIN OF CUSTODY**

320 Forbes Blvd, Mansfield, MA 02048
TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 4/13/18

ALPHA Job #: L1812962

**Client Information**

Client: Jacobs ~~CH2M~~ / Dow

Address: 1880 Waycross Rd
Cincinnati, OH 45420

Phone: 513-673-2201

Fax:

Email: Marie.Chiller@ch2m.com

☐ These samples have been previously analyzed by Alpha

**Project Information**

Project Name: Dow Hanging Rock

Project Location: Ironton, OH

Project #: 643874.01.RR

Project Manager: Marie Chiller

ALPHA Quote #:

**Turn-Around Time**

☐ Standard ☒ RUSH (only confirmed if pre-approved)

Date Due: Time:

**Report Information - Data Deliverables**

☐ FAX
☐ ADEx
Criteria Checker:
(Default based on Regulatory Criteria Indicated)
Other Formats:
☒ EMAIL (standard pdf report)
☐ Additional Deliverables:

Report to: (if different than Project Manager)

**Billing Information**

☐ Same as Client info PO #:

**Regulatory Requirements/Report Limits**

| State/Fed | Program | Res / Comm |
|---|---|---|
| | | |
| | | |
| | | |

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List: ☒

**All Columns Below Must Be Filled Out**

| ALPHA Lab ID (Lab Use Only) | Sample ID | COLLECTION End Date | Start Time | End Time | Initial Vacuum | Final Vacuum | Sample Matrix* | Sampler's Initials | Can Size | ID Can | ID - Flow Controller | TO-15 | TO-15 SIM | APH Subtract Non-petroleum HCs ☐ | Fixed Gases | Sulfides & Mercaptans by TO-15 | Sample Comments (i.e. PID) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 812962-01 | S01-HGR-OA02-041218 | 4/12/18 | 0812 | | -29.50" | -6.03" | AA | PK | 6L | 602 | 0948 | | | | | | |
| -02 | S01-B505-IA06-041218 | | 0815 | | -29.16" | -6.07" | | | | 1533 | 0062 | | | | | | |
| -03 | S01-B505-IA10-041218 | | 0818 | | -29.05" | -5.71" | | | | 753 | 80 | | | | | | |
| -04 | S01-B505-IA11-041218 | | 0819 | | -29.32" | -5.81" | | | | 1551 | 0258 | | (PK) | | | | |
| | ~~S01-B505-IA07-041218~~ | | 0821 | | ~~-29.13~~ | ~~-6.57"~~ | | | | ~~986~~ | ~~0968~~ | | | | | | |
| -05 | S01-B505-IA12-041218 | | 0825 | | -29.59 | | | | | 946 | 945 | | | | | | |
| -06 | S01-B505-IA12-041218-FD01 | | 0825 | | -29.70" | | | | | 594 | 618 | | | | | | |
| -07 | S01-B505-IA07-041218 | | 0824 | | -29.40" | -4.82" | | | | 986 | 0968 | | | | | | |
| -08 | S01-B505-IA09-041218 | | 0821 | | -29.13 | -6.57" | | | | 1634 | 341 | | | | | | |

*SAMPLE MATRIX CODES
AA = Ambient Air (Indoor/Outdoor)
SV = Soil Vapor/Landfill Gas/SVE
Other = Please Specify

Container Type

| Relinquished By: | Date/Time | Received By: | Date/Time: |
|---|---|---|---|
| Patrick Kish FedEx | 4/12/18 | FedEx Ken Beals AAC | 4/13/18 10:44 |

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

# Alpha
# Summary Forms

# Organic Summary Forms

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : L1812962-01 | Date Collected | : 04/12/18 16:12 |
| Client ID | : S01-HGR-OA02-041218 | Date Received | : 04/13/18 |
| Sample Location | : IRONTON, OH | Date Analyzed | : 04/20/18 19:19 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : RY |
| Lab File ID | : R157172_EV2 | Instrument ID | : AIRLAB15 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | U |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : L1812962-02 | Date Collected | : 04/12/18 16:15 |
| Client ID | : S01-B505-IA06-041218 | Date Received | : 04/13/18 |
| Sample Location | : IRONTON, OH | Date Analyzed | : 04/20/18 19:55 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : RY |
| Lab File ID | : R157173_EV2 | Instrument ID | : AIRLAB15 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.043 | 0.020 | -- | 0.170 | 0.079 | -- | |
| 79-01-6 | Trichloroethene | 0.104 | 0.020 | -- | 0.559 | 0.107 | -- | |
| 127-18-4 | Tetrachloroethene | 4.46 | 0.020 | -- | 30.2 | 0.136 | -- | |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : L1812962-03 | Date Collected | : 04/12/18 16:17 |
| Client ID | : S01-B505-IA10-041218 | Date Received | : 04/13/18 |
| Sample Location | : IRONTON, OH | Date Analyzed | : 04/20/18 20:31 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : RY |
| Lab File ID | : R157174_EV2 | Instrument ID | : AIRLAB15 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.075 | 0.020 | -- | 0.297 | 0.079 | -- | |
| 79-01-6 | Trichloroethene | 0.137 | 0.020 | -- | 0.736 | 0.107 | -- | |
| 127-18-4 | Tetrachloroethene | 6.71 | 0.020 | -- | 45.5 | 0.136 | -- | |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : L1812962-04 | Date Collected | : 04/12/18 16:18 |
| Client ID | : S01-B505-IA11-041218 | Date Received | : 04/13/18 |
| Sample Location | : IRONTON, OH | Date Analyzed | : 04/20/18 21:07 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : RY |
| Lab File ID | : R157175_EV2 | Instrument ID | : AIRLAB15 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.075 | 0.020 | -- | 0.297 | 0.079 | -- | |
| 79-01-6 | Trichloroethene | 0.070 | 0.020 | -- | 0.376 | 0.107 | -- | |
| 127-18-4 | Tetrachloroethene | 4.51 | 0.020 | -- | 30.6 | 0.136 | -- | |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : L1812962-05 | Date Collected | : 04/12/18 16:22 |
| Client ID | : S01-B505-IA12-041218 | Date Received | : 04/13/18 |
| Sample Location | : IRONTON, OH | Date Analyzed | : 04/21/18 15:35 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : MB |
| Lab File ID | : R253815 | Instrument ID | : AIRPIANO2 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 79-01-6 | Trichloroethene | 0.030 | 0.020 | -- | 0.161 | 0.107 | -- | |
| 127-18-4 | Tetrachloroethene | 0.482 | 0.020 | -- | 3.27 | 0.136 | -- | |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : L1812962-06 | Date Collected | : 04/12/18 16:22 |
| Client ID | : S01-B505-IA12-041218-FD01 | Date Received | : 04/13/18 |
| Sample Location | : IRONTON, OH | Date Analyzed | : 04/21/18 16:45 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : MB |
| Lab File ID | : R253816 | Instrument ID | : AIRPIANO2 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 79-01-6 | Trichloroethene | 0.031 | 0.020 | -- | 0.167 | 0.107 | -- | |
| 127-18-4 | Tetrachloroethene | 0.496 | 0.020 | -- | 3.36 | 0.136 | -- | |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : L1812962-07 | Date Collected | : 04/12/18 16:21 |
| Client ID | : S01-B505-IA07-041218 | Date Received | : 04/13/18 |
| Sample Location | : IRONTON, OH | Date Analyzed | : 04/21/18 17:21 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : MB |
| Lab File ID | : R253817 | Instrument ID | : AIRPIANO2 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.028 | 0.020 | -- | 0.111 | 0.079 | -- | |
| 79-01-6 | Trichloroethene | 0.111 | 0.020 | -- | 0.597 | 0.107 | -- | |
| 127-18-4 | Tetrachloroethene | 2.35 | 0.020 | -- | 15.9 | 0.136 | -- | |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : L1812962-08 | Date Collected | : 04/12/18 16:19 |
| Client ID | : S01-B505-IA09-041218 | Date Received | : 04/13/18 |
| Sample Location | : IRONTON, OH | Date Analyzed | : 04/21/18 00:27 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : RY |
| Lab File ID | : R157180_EV2 | Instrument ID | : AIRLAB15 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.040 | 0.020 | -- | 0.159 | 0.079 | -- | |
| 79-01-6 | Trichloroethene | 0.099 | 0.020 | -- | 0.532 | 0.107 | -- | |
| 127-18-4 | Tetrachloroethene | 2.56 | 0.020 | -- | 17.4 | 0.136 | -- | |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : WG1108448-4 | Date Collected | : NA |
| Client ID | : WG1108448-4BLANK | Date Received | : NA |
| Sample Location | : | Date Analyzed | : 04/20/18 17:58 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : RY |
| Lab File ID | : R157171_EV2 | Instrument ID | : AIRLAB15 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | U |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : WG1108448-5 | Date Collected | : 04/12/18 16:18 |
| Client ID | : S01-B505-IA11-041218DUP | Date Received | : 04/13/18 |
| Sample Location | : | Date Analyzed | : 04/20/18 21:43 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : RY |
| Lab File ID | : R157176_EV2 | Instrument ID | : AIRLAB15 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | 0.078 | 0.020 | -- | 0.309 | 0.079 | -- | |
| 79-01-6 | Trichloroethene | 0.062 | 0.020 | -- | 0.333 | 0.107 | -- | |
| 127-18-4 | Tetrachloroethene | 4.54 | 0.020 | -- | 30.8 | 0.136 | -- | |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : WG1108672-4 | Date Collected | : NA |
| Client ID | : WG1108672-4BLANK | Date Received | : NA |
| Sample Location | : | Date Analyzed | : 04/21/18 14:48 |
| Sample Matrix | : AIR | Dilution Factor | : 1 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : RY |
| Lab File ID | : R253814 | Instrument ID | : AIRPIANO2 |
| Sample Amount | : 250 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.020 | -- | ND | 0.051 | -- | U |
| 75-35-4 | 1,1-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.020 | -- | ND | 0.079 | -- | U |
| 79-01-6 | Trichloroethene | ND | 0.020 | -- | ND | 0.107 | -- | U |
| 127-18-4 | Tetrachloroethene | ND | 0.020 | -- | ND | 0.136 | -- | U |

# Form 1
# Volatile Organics

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Lab ID | : WG1108672-5 | Date Collected | : 04/12/18 08:50 |
| Client ID | : SP-E APT 1DUP | Date Received | : 04/16/18 |
| Sample Location | : | Date Analyzed | : 04/22/18 00:14 |
| Sample Matrix | : AIR | Dilution Factor | : 10 |
| Analytical Method | : 48,TO-15-SIM | Analyst | : MB |
| Lab File ID | : R253829 | Instrument ID | : AIRPIANO2 |
| Sample Amount | : 25.0 ml | GC Column | : RTX-1 |

| | | ppbV | | | ug/m3 | | | |
|---|---|---|---|---|---|---|---|---|
| CAS NO. | Parameter | Results | RL | MDL | Results | RL | MDL | Qualifier |
| 75-01-4 | Vinyl chloride | ND | 0.200 | -- | ND | 0.511 | -- | U |
| 156-60-5 | trans-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 156-59-2 | cis-1,2-Dichloroethene | ND | 0.200 | -- | ND | 0.793 | -- | U |
| 79-01-6 | Trichloroethene | 1.28 | 0.200 | -- | 6.88 | 1.07 | -- | |
| 127-18-4 | Tetrachloroethene | 484. | 0.200 | -- | 3280 | 1.36 | -- | |

# Form 2
# Surrogate Recovery
# AIRVOA

**Client: CH2MHILL**
**Project Name: DOW HANGING ROCK**

**Lab Number: L1812962**
**Project Number: 693874.01.RR**
**Matrix:**

| CLIENT ID (LAB SAMPLE NO.) | SMC1 | SMC2 | SMC3 | SMC4 | TOT OUT |
|---|---|---|---|---|---|

**QC LIMITS**
**(-)** **S1 =**

*** Values outside of QC limits**

**FORM II TO15-SIM**

# Lab Duplicates
# Form 3

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Client Sample ID | : S01-B505-IA11-041218 | Matrix | : AIR |
| Lab Sample ID | : L1812962-04 | Analysis Date | : 04/20/18 21:07 |
| Lab File ID | : R157175_EV2 | DUP File ID | : r157176_Ev2 |
| Dup Sample ID | : WG1108448-5 | DUP Analysis Date | : 04/20/18 21:43 |

| Parameter | Sample Concentration (ppbV) | Duplicate Concentration (ppbV) | RPD | RPD Limit |
|---|---|---|---|---|
| Vinyl chloride | ND | ND | NC | 25 |
| 1,1-Dichloroethene | ND | ND | NC | 25 |
| trans-1,2-Dichloroethene | ND | ND | NC | 25 |
| cis-1,2-Dichloroethene | 0.075 | 0.078 | 4 | 25 |
| Trichloroethene | 0.070 | 0.062 | 12 | 25 |
| Tetrachloroethene | 4.51 | 4.54 | 1 | 25 |

# Lab Duplicates
# Form 3

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Client Sample ID | : NA | Matrix | : AIR |
| Lab Sample ID | : NA | Analysis Date | : 04/21/18 23:42 |
| Lab File ID | : R253828 | DUP File ID | : R253829 |
| Dup Sample ID | : WG1108672-5 | DUP Analysis Date | : 04/22/18 00:14 |

| Parameter | Sample Concentration (ppbV) | Duplicate Concentration (ppbV) | RPD | RPD Limit |
|---|---|---|---|---|
| Vinyl chloride | ND | ND | NC | 25 |
| trans-1,2-Dichloroethene | ND | ND | NC | 25 |
| cis-1,2-Dichloroethene | ND | ND | NC | 25 |
| Trichloroethene | 1.28 | 1.28 | 0 | 25 |
| Tetrachloroethene | 467 | 484 | 4 | 25 |

# Laboratory Control Sample
# Form 3

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Matrix | : AIR | | |
| LCS Sample ID | : WG1108448-3 Analysis Date : 04/20/18 16:16 | File ID | : r157169_Ev2 |
| LCSD Sample ID | : Analysis Date : | File ID | : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| Propylene | 5 | 4.77 | 95 | | | | - | 70-130 | 25 |
| Dichlorodifluoromethane | 5 | 4.24 | 85 | | | | - | 70-130 | 25 |
| Chloromethane | 5 | 4.47 | 89 | | | | - | 70-130 | 25 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | 5 | 4.60 | 92 | | | | - | 70-130 | 25 |
| Vinyl chloride | 5 | 4.20 | 84 | | | | - | 70-130 | 25 |
| 1,3-Butadiene | 5 | 4.92 | 98 | | | | - | 70-130 | 25 |
| Bromomethane | 5 | 4.20 | 84 | | | | - | 70-130 | 25 |
| Chloroethane | 5 | 4.45 | 89 | | | | - | 70-130 | 25 |
| Ethyl Alcohol | 25 | 19.7 | 79 | | | | - | 70-130 | 25 |
| Vinyl bromide | 5 | 4.24 | 85 | | | | - | 70-130 | 25 |
| Acetone | 25 | 21.7 | 87 | | | | - | 70-130 | 25 |
| Trichlorofluoromethane | 5 | 3.97 | 79 | | | | - | 70-130 | 25 |
| iso-Propyl Alcohol | 12.5 | 9.90 | 79 | | | | - | 70-130 | 25 |
| Acrylonitrile | 5 | 3.99 | 80 | | | | - | 70-130 | 25 |
| 1,1-Dichloroethene | 5 | 4.00 | 80 | | | | - | 70-130 | 25 |
| tert-Butyl Alcohol | 5 | 3.58 | 72 | | | | - | 70-130 | 25 |
| Methylene chloride | 5 | 4.19 | 84 | | | | - | 70-130 | 25 |
| 3-Chloropropene | 5 | 4.40 | 88 | | | | - | 70-130 | 25 |
| Carbon disulfide | 5 | 4.25 | 85 | | | | - | 70-130 | 25 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 5 | 4.22 | 84 | | | | - | 70-130 | 25 |
| trans-1,2-Dichloroethene | 5 | 4.62 | 92 | | | | - | 70-130 | 25 |
| 1,1-Dichloroethane | 5 | 4.49 | 90 | | | | - | 70-130 | 25 |
| Methyl tert butyl ether | 5 | 4.42 | 88 | | | | - | 70-130 | 25 |
| Vinyl acetate | 5 | 5.52 | 110 | | | | - | 70-130 | 25 |

# Laboratory Control Sample
# Form 3

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Matrix | : AIR | | |
| LCS Sample ID | : WG1108448-3 Analysis Date : 04/20/18 16:16 | File ID | : r157169_Ev2 |
| LCSD Sample ID | : Analysis Date : | File ID | : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| 2-Butanone | 5 | 4.62 | 92 | | | | - | 70-130 | 25 |
| cis-1,2-Dichloroethene | 5 | 4.40 | 88 | | | | - | 70-130 | 25 |
| Ethyl Acetate | 5 | 4.71 | 94 | | | | - | 70-130 | 25 |
| Chloroform | 5 | 4.54 | 91 | | | | - | 70-130 | 25 |
| Tetrahydrofuran | 5 | 4.50 | 90 | | | | - | 70-130 | 25 |
| 1,2-Dichloroethane | 5 | 4.05 | 81 | | | | - | 70-130 | 25 |
| n-Hexane | 5 | 4.66 | 93 | | | | - | 70-130 | 25 |
| 1,1,1-Trichloroethane | 5 | 5.08 | 102 | | | | - | 70-130 | 25 |
| Benzene | 5 | 4.42 | 88 | | | | - | 70-130 | 25 |
| Carbon tetrachloride | 5 | 4.46 | 89 | | | | - | 70-130 | 25 |
| Cyclohexane | 5 | 4.84 | 97 | | | | - | 70-130 | 25 |
| Dibromomethane | 5 | 3.76 | 75 | | | | - | 70-130 | 25 |
| 1,2-Dichloropropane | 5 | 4.22 | 84 | | | | - | 70-130 | 25 |
| Bromodichloromethane | 5 | 5.08 | 102 | | | | - | 70-130 | 25 |
| 1,4-Dioxane | 5 | 4.85 | 97 | | | | - | 70-130 | 25 |
| Trichloroethene | 5 | 4.42 | 88 | | | | - | 70-130 | 25 |
| 2,2,4-Trimethylpentane | 5 | 4.85 | 97 | | | | - | 70-130 | 25 |
| cis-1,3-Dichloropropene | 5 | 4.83 | 97 | | | | - | 70-130 | 25 |
| 4-Methyl-2-pentanone | 5 | 5.06 | 101 | | | | - | 70-130 | 25 |
| trans-1,3-Dichloropropene | 5 | 4.12 | 82 | | | | - | 70-130 | 25 |
| 1,1,2-Trichloroethane | 5 | 4.53 | 91 | | | | - | 70-130 | 25 |
| Toluene | 5 | 4.62 | 92 | | | | - | 70-130 | 25 |
| 2-Hexanone | 5 | 5.31 | 106 | | | | - | 70-130 | 25 |
| Dibromochloromethane | 5 | 5.78 | 116 | | | | - | 70-130 | 25 |
| 1,2-Dibromoethane | 5 | 4.77 | 95 | | | | - | 70-130 | 25 |
| Tetrachloroethene | 5 | 4.79 | 96 | | | | - | 70-130 | 25 |
| 1,1,1,2-Tetrachloroethane | 5 | 4.75 | 95 | | | | - | 70-130 | 25 |
| Chlorobenzene | 5 | 4.77 | 95 | | | | - | 70-130 | 25 |

# Laboratory Control Sample
# Form 3

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Matrix | : AIR | | |
| LCS Sample ID | : WG1108448-3 Analysis Date : 04/20/18 16:16 | File ID | : r157169_Ev2 |
| LCSD Sample ID | : Analysis Date : | File ID | : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| Ethylbenzene | 5 | 4.97 | 99 | | | | - | 70-130 | 25 |
| p/m-Xylene | 10 | 9.92 | 99 | | | | - | 70-130 | 25 |
| Bromoform | 5 | 5.79 | 116 | | | | - | 70-130 | 25 |
| Styrene | 5 | 5.10 | 102 | | | | - | 70-130 | 25 |
| 1,1,2,2-Tetrachloroethane | 5 | 5.08 | 102 | | | | - | 70-130 | 25 |
| o-Xylene | 5 | 5.02 | 100 | | | | - | 70-130 | 25 |
| 1,2,3-Trichloropropane | 5 | 4.52 | 90 | | | | - | 70-130 | 25 |
| Isopropylbenzene | 5 | 4.97 | 99 | | | | - | 70-130 | 25 |
| Bromobenzene | 5 | 4.59 | 92 | | | | - | 70-130 | 25 |
| 4-Ethyltoluene | 5 | 5.42 | 108 | | | | - | 70-130 | 25 |
| 1,3,5-Trimethylbenzene | 5 | 5.17 | 103 | | | | - | 70-130 | 25 |
| 1,2,4-Trimethylbenzene | 5 | 5.35 | 107 | | | | - | 70-130 | 25 |
| Benzyl chloride | 5 | 5.81 | 116 | | | | - | 70-130 | 25 |
| 1,3-Dichlorobenzene | 5 | 5.11 | 102 | | | | - | 70-130 | 25 |
| 1,4-Dichlorobenzene | 5 | 4.91 | 98 | | | | - | 70-130 | 25 |
| sec-Butylbenzene | 5 | 4.98 | 100 | | | | - | 70-130 | 25 |
| p-Isopropyltoluene | 5 | 4.72 | 94 | | | | - | 70-130 | 25 |
| 1,2-Dichlorobenzene | 5 | 5.12 | 102 | | | | - | 70-130 | 25 |
| n-Butylbenzene | 5 | 5.15 | 103 | | | | - | 70-130 | 25 |
| 1,2,4-Trichlorobenzene | 5 | 4.88 | 98 | | | | - | 70-130 | 25 |
| Naphthalene | 5 | 4.71 | 94 | | | | - | 70-130 | 25 |
| 1,2,3-Trichlorobenzene | 5 | 4.87 | 97 | | | | - | 70-130 | 25 |
| Hexachlorobutadiene | 5 | 5.42 | 108 | | | | - | 70-130 | 25 |

# Laboratory Control Sample
# Form 3

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Matrix | : AIR | | |
| LCS Sample ID | : WG1108672-3 Analysis Date : 04/21/18 13:20 | File ID | : R253812 |
| LCSD Sample ID | : Analysis Date : | File ID | : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| Propylene | 5 | 6.26 | 125 | | | | - | 70-130 | 25 |
| Dichlorodifluoromethane | 5 | 4.69 | 94 | | | | - | 70-130 | 25 |
| Chloromethane | 5 | 4.84 | 97 | | | | - | 70-130 | 25 |
| 1,2-Dichloro-1,1,2,2-tetrafluoroethane | 5 | 4.26 | 85 | | | | - | 70-130 | 25 |
| Vinyl chloride | 5 | 4.49 | 90 | | | | - | 70-130 | 25 |
| 1,3-Butadiene | 5 | 5.37 | 107 | | | | - | 70-130 | 25 |
| Bromomethane | 5 | 4.28 | 86 | | | | - | 70-130 | 25 |
| Chloroethane | 5 | 4.34 | 87 | | | | - | 70-130 | 25 |
| Ethyl Alcohol | 25 | 24.3 | 97 | | | | - | 70-130 | 25 |
| Vinyl bromide | 5 | 4.22 | 84 | | | | - | 70-130 | 25 |
| Acetone | 25 | 22.6 | 90 | | | | - | 70-130 | 25 |
| Trichlorofluoromethane | 5 | 3.63 | 73 | | | | - | 70-130 | 25 |
| iso-Propyl Alcohol | 12.5 | 10.1 | 81 | | | | - | 70-130 | 25 |
| Acrylonitrile | 5 | 3.99 | 80 | | | | - | 70-130 | 25 |
| 1,1-Dichloroethene | 5 | 3.93 | 79 | | | | - | 70-130 | 25 |
| tert-Butyl Alcohol | 5 | 3.75 | 75 | | | | - | 70-130 | 25 |
| Methylene chloride | 5 | 4.42 | 88 | | | | - | 70-130 | 25 |
| 3-Chloropropene | 5 | 5.42 | 108 | | | | - | 70-130 | 25 |
| Carbon disulfide | 5 | 3.99 | 80 | | | | - | 70-130 | 25 |
| 1,1,2-Trichloro-1,2,2-Trifluoroethane | 5 | 3.91 | 78 | | | | - | 70-130 | 25 |
| trans-1,2-Dichloroethene | 5 | 3.83 | 77 | | | | - | 70-130 | 25 |
| 1,1-Dichloroethane | 5 | 4.04 | 81 | | | | - | 70-130 | 25 |
| Methyl tert butyl ether | 5 | 4.16 | 83 | | | | - | 70-130 | 25 |
| Vinyl acetate | 5 | 4.94 | 99 | | | | - | 70-130 | 25 |

# Laboratory Control Sample
# Form 3

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Matrix | : AIR | | |
| LCS Sample ID | : WG1108672-3 | Analysis Date : 04/21/18 13:20 | File ID : R253812 |
| LCSD Sample ID | : | Analysis Date : | File ID : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| 2-Butanone | 5 | 4.83 | 97 | | | | - | 70-130 | 25 |
| cis-1,2-Dichloroethene | 5 | 3.85 | 77 | | | | - | 70-130 | 25 |
| Ethyl Acetate | 5 | 4.50 | 90 | | | | - | 70-130 | 25 |
| Chloroform | 5 | 3.87 | 77 | | | | - | 70-130 | 25 |
| Tetrahydrofuran | 5 | 4.41 | 88 | | | | - | 70-130 | 25 |
| 1,2-Dichloroethane | 5 | 3.92 | 78 | | | | - | 70-130 | 25 |
| n-Hexane | 5 | 4.98 | 100 | | | | - | 70-130 | 25 |
| 1,1,1-Trichloroethane | 5 | 4.41 | 88 | | | | - | 70-130 | 25 |
| Benzene | 5 | 4.21 | 84 | | | | - | 70-130 | 25 |
| Carbon tetrachloride | 5 | 4.48 | 90 | | | | - | 70-130 | 25 |
| Cyclohexane | 5 | 4.94 | 99 | | | | - | 70-130 | 25 |
| Dibromomethane | 5 | 3.60 | 72 | | | | - | 70-130 | 25 |
| 1,2-Dichloropropane | 5 | 4.43 | 89 | | | | - | 70-130 | 25 |
| Bromodichloromethane | 5 | 4.81 | 96 | | | | - | 70-130 | 25 |
| 1,4-Dioxane | 5 | 4.60 | 92 | | | | - | 70-130 | 25 |
| Trichloroethene | 5 | 4.34 | 87 | | | | - | 70-130 | 25 |
| 2,2,4-Trimethylpentane | 5 | 5.32 | 106 | | | | - | 70-130 | 25 |
| cis-1,3-Dichloropropene | 5 | 4.32 | 86 | | | | - | 70-130 | 25 |
| 4-Methyl-2-pentanone | 5 | 5.38 | 108 | | | | - | 70-130 | 25 |
| trans-1,3-Dichloropropene | 5 | 3.70 | 74 | | | | - | 70-130 | 25 |
| 1,1,2-Trichloroethane | 5 | 4.43 | 89 | | | | - | 70-130 | 25 |
| Toluene | 5 | 3.97 | 79 | | | | - | 70-130 | 25 |
| 2-Hexanone | 5 | 4.76 | 95 | | | | - | 70-130 | 25 |
| Dibromochloromethane | 5 | 4.60 | 92 | | | | - | 70-130 | 25 |
| 1,2-Dibromoethane | 5 | 3.89 | 78 | | | | - | 70-130 | 25 |
| Tetrachloroethene | 5 | 4.20 | 84 | | | | - | 70-130 | 25 |
| 1,1,1,2-Tetrachloroethane | 5 | 3.76 | 75 | | | | - | 70-130 | 25 |
| Chlorobenzene | 5 | 3.95 | 79 | | | | - | 70-130 | 25 |

# Laboratory Control Sample
# Form 3

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Matrix | : AIR | | |
| LCS Sample ID | : WG1108672-3 Analysis Date : 04/21/18 13:20 | File ID | : R253812 |
| LCSD Sample ID | : Analysis Date : | File ID | : |

| | Laboratory Control Sample | | | Laboratory Control Duplicate | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Parameter | True (ppbV) | Found (ppbV) | %R | True (ppbV) | Found (ppbV) | %R | RPD | Recovery Limits | RPD Limit |
| Ethylbenzene | 5 | 3.98 | 80 | | | | - | 70-130 | 25 |
| p/m-Xylene | 10 | 8.20 | 82 | | | | - | 70-130 | 25 |
| Bromoform | 5 | 5.02 | 100 | | | | - | 70-130 | 25 |
| Styrene | 5 | 4.01 | 80 | | | | - | 70-130 | 25 |
| 1,1,2,2-Tetrachloroethane | 5 | 4.23 | 85 | | | | - | 70-130 | 25 |
| o-Xylene | 5 | 4.24 | 85 | | | | - | 70-130 | 25 |
| 1,2,3-Trichloropropane | 5 | 4.04 | 81 | | | | - | 70-130 | 25 |
| Isopropylbenzene | 5 | 4.05 | 81 | | | | - | 70-130 | 25 |
| Bromobenzene | 5 | 4.00 | 80 | | | | - | 70-130 | 25 |
| 4-Ethyltoluene | 5 | 4.86 | 97 | | | | - | 70-130 | 25 |
| 1,3,5-Trimethylbenzene | 5 | 4.38 | 88 | | | | - | 70-130 | 25 |
| 1,2,4-Trimethylbenzene | 5 | 4.80 | 96 | | | | - | 70-130 | 25 |
| Benzyl chloride | 5 | 4.73 | 95 | | | | - | 70-130 | 25 |
| 1,3-Dichlorobenzene | 5 | 4.70 | 94 | | | | - | 70-130 | 25 |
| 1,4-Dichlorobenzene | 5 | 4.56 | 91 | | | | - | 70-130 | 25 |
| sec-Butylbenzene | 5 | 4.20 | 84 | | | | - | 70-130 | 25 |
| p-Isopropyltoluene | 5 | 3.92 | 78 | | | | - | 70-130 | 25 |
| 1,2-Dichlorobenzene | 5 | 4.68 | 94 | | | | - | 70-130 | 25 |
| n-Butylbenzene | 5 | 4.39 | 88 | | | | - | 70-130 | 25 |
| 1,2,4-Trichlorobenzene | 5 | 4.69 | 94 | | | | - | 70-130 | 25 |
| Naphthalene | 5 | 4.36 | 87 | | | | - | 70-130 | 25 |
| 1,2,3-Trichlorobenzene | 5 | 4.44 | 89 | | | | - | 70-130 | 25 |
| Hexachlorobutadiene | 5 | 5.02 | 100 | | | | - | 70-130 | 25 |

# Method Blank Summary
# Form 4
# AIRVOA

| | | | |
|---|---|---|---|
| **Client** | : CH2MHILL | **Lab Number** | : L1812962 |
| **Project Name** | : DOW HANGING ROCK | **Project Number** | : 693874.01.RR |
| **Lab Sample ID** | : WG1108448-4 | **Lab File ID** | : r157171_Ev2 |
| **Instrument ID** | : AIRLAB15 | | |
| **Matrix** | : AIR | **Analysis Date** | : 04/20/18 17:58 |

| Client Sample No. | Lab Sample ID | Analysis Date |
|---|---|---|
| WG1108448-3LCS | WG1108448-3 | 04/20/18 16:16 |
| S01-HGR-OA02-041218 | L1812962-01 | 04/20/18 19:19 |
| S01-B505-IA06-041218 | L1812962-02 | 04/20/18 19:55 |
| S01-B505-IA10-041218 | L1812962-03 | 04/20/18 20:31 |
| S01-B505-IA11-041218 | L1812962-04 | 04/20/18 21:07 |
| S01-B505-IA11-041218DUP | WG1108448-5 | 04/20/18 21:43 |
| S01-B505-IA09-041218 | L1812962-08 | 04/21/18 00:27 |

# Method Blank Summary
# Form 4
# AIRVOA

| | | | |
|---|---|---|---|
| **Client** | : CH2MHILL | **Lab Number** | : L1812962 |
| **Project Name** | : DOW HANGING ROCK | **Project Number** | : 693874.01.RR |
| **Lab Sample ID** | : WG1108672-4 | **Lab File ID** | : R253814 |
| **Instrument ID** | : AIRPIANO2 | | |
| **Matrix** | : AIR | **Analysis Date** | : 04/21/18 14:48 |

| Client Sample No. | Lab Sample ID | Analysis Date |
|---|---|---|
| WG1108672-3LCS | WG1108672-3 | 04/21/18 13:20 |
| S01-B505-IA12-041218 | L1812962-05 | 04/21/18 15:35 |
| S01-B505-IA12-041218-FD01 | L1812962-06 | 04/21/18 16:45 |
| S01-B505-IA07-041218 | L1812962-07 | 04/21/18 17:21 |
| SP-E APT 1DUP | WG1108672-5 | 04/22/18 00:14 |

# Instrument Performance Check
# Bromofluorobenzene (BFB)
# Form 5

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRPIANO2 | Analysis Date | : 03/25/18 21:42 |
| Tune Standard | : WG1100531-1 | Tune File ID | : R253193_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 23.7 |
| 75 | 30.0 - 66.0% of mass 95 | 53.5 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.7 |
| 173 | Less than 2.0% of mass 174 | 0 (0 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 72.5 |
| 175 | 4.0 - 9.0% of mass 174 | 5.2 (7.1 )1 |
| 176 | 93.0 - 101% of mass 174 | 68.8 (94.9)1 |
| 177 | 5.0 - 9.0% of mass 176 | 4.7 (6.8 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| STD0.02 | R1057975-1 | R253194 | 03/25/18 22:16 |
| STD0.04 | R1057975-2 | R253195 | 03/25/18 22:50 |
| STD0.1 | R1057975-3 | R253196 | 03/25/18 23:28 |
| STD0.2 | R1057975-4 | R253197 | 03/26/18 00:02 |
| STD0.5 | R1057975-5 | R253198 | 03/26/18 00:37 |
| STD1.0 | R1057975-6 | R253199 | 03/26/18 01:14 |
| STD5.0 | R1057975-7 | R253200 | 03/26/18 01:49 |
| STD10.0 | R1057975-8 | R253201 | 03/26/18 02:26 |
| STD20.0 | R1057975-9 | R253202 | 03/26/18 03:00 |
| STD50.0 | R1057975-10 | R253203 | 03/26/18 03:35 |
| ICV Quant | R1057975-11 | R253208 | 03/26/18 10:23 |

# Instrument Performance Check
# Bromofluorobenzene (BFB)
# Form 5

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRPIANO2 | Analysis Date | : 04/21/18 11:32 |
| Tune Standard | : WG1108672-1 | Tune File ID | : R253809_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 24.3 |
| 75 | 30.0 - 66.0% of mass 95 | 52.4 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 7.2 |
| 173 | Less than 2.0% of mass 174 | 0.5 (.5 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 91.5 |
| 175 | 4.0 - 9.0% of mass 174 | 7.2 (7.9 )1 |
| 176 | 93.0 - 101% of mass 174 | 88.7 (96.9)1 |
| 177 | 5.0 - 9.0% of mass 176 | 5.7 (6.4 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| WG1108672-2CCAL | WG1108672-2 | R253812 | 04/21/18 13:20 |
| WG1108672-3LCS | WG1108672-3 | R253812 | 04/21/18 13:20 |
| WG1108672-4BLANK | WG1108672-4 | R253814 | 04/21/18 14:48 |
| S01-B505-IA12-041218 | L1812962-05 | R253815 | 04/21/18 15:35 |
| S01-B505-IA12-041218-FD01 | L1812962-06 | R253816 | 04/21/18 16:45 |
| S01-B505-IA07-041218 | L1812962-07 | R253817 | 04/21/18 17:21 |
| WG1108672-5DUP | WG1108672-5 | R253829 | 04/22/18 00:14 |

# Instrument Performance Check
# Bromofluorobenzene (BFB)
# Form 5

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRLAB15 | Analysis Date | : 04/04/18 17:34 |
| Tune Standard | : WG1103790-1 | Tune File ID | : R156843_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 18.9 |
| 75 | 30.0 - 66.0% of mass 95 | 43.1 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.4 |
| 173 | Less than 2.0% of mass 174 | 0.3 (.5 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 58.8 |
| 175 | 4.0 - 9.0% of mass 174 | 3.9 (6.7 )1 |
| 176 | 93.0 - 101% of mass 174 | 54.9 (93.4)1 |
| 177 | 5.0 - 9.0% of mass 176 | 3.4 (6.2 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| STD0.02 | R1061018-1 | R156844_EV2 | 04/04/18 18:10 |
| STD0.04 | R1061018-2 | R156845_EV2 | 04/04/18 18:44 |
| STD0.1 | R1061018-3 | R156846_EV2 | 04/04/18 19:21 |
| STD0.2 | R1061018-4 | R156847_EV2 | 04/04/18 19:58 |
| STD0.5 | R1061018-5 | R156848_EV2 | 04/04/18 20:33 |
| STD1.0 | R1061018-6 | R156849_EV2 | 04/04/18 21:11 |
| STD5.0 | R1061018-7 | R156850_EV2 | 04/04/18 21:48 |
| STD010 | R1061018-8 | R156851_EV2 | 04/04/18 22:25 |
| STD020 | R1061018-9 | R156852_EV2 | 04/04/18 23:01 |
| STD050 | R1061018-10 | R156853_EV2 | 04/04/18 23:39 |
| ICV QUANT REPORT | R1061018-11 | R156858_EV2 | 04/05/18 10:22 |

# Instrument Performance Check
# Bromofluorobenzene (BFB)
# Form 5

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRLAB15 | Analysis Date | : 04/20/18 14:23 |
| Tune Standard | : WG1108448-1 | Tune File ID | : r157166_tune |

| m/e | Ion Abundance Criteria | %Relative Abundance |
|---|---|---|
| 50 | 8.0 - 40.0% of mass 95 | 17.3 |
| 75 | 30.0 - 66.0% of mass 95 | 41.4 |
| 95 | Base Peak, 100% relative abundance | 100 |
| 96 | 5.0 - 9.0% of mass 95 | 6.6 |
| 173 | Less than 2.0% of mass 174 | 0.3 (.5 )1 |
| 174 | 50.0 - 120.0% of mass 95 | 60.4 |
| 175 | 4.0 - 9.0% of mass 174 | 4 (6.7 )1 |
| 176 | 93.0 - 101% of mass 174 | 57.6 (95.3)1 |
| 177 | 5.0 - 9.0% of mass 176 | 3.6 (6.3 )2 |

1-Value is % of mass 174 2-Value is % of mass 176

This Check Applies to the following Samples, MS, MSD, Blanks, and Standards:

| Client Sample ID | Lab Sample ID | File ID | Analysis Date/Time |
|---|---|---|---|
| WG1108448-2CCAL | WG1108448-2 | R157169_EV2 | 04/20/18 16:16 |
| WG1108448-3LCS | WG1108448-3 | R157169_EV2 | 04/20/18 16:16 |
| WG1108448-4BLANK | WG1108448-4 | R157171_EV2 | 04/20/18 17:58 |
| S01-HGR-OA02-041218 | L1812962-01 | R157172_EV2 | 04/20/18 19:19 |
| S01-B505-IA06-041218 | L1812962-02 | R157173_EV2 | 04/20/18 19:55 |
| S01-B505-IA10-041218 | L1812962-03 | R157174_EV2 | 04/20/18 20:31 |
| S01-B505-IA11-041218 | L1812962-04 | R157175_EV2 | 04/20/18 21:07 |
| WG1108448-5DUP | WG1108448-5 | R157176_EV2 | 04/20/18 21:43 |
| S01-B505-IA09-041218 | L1812962-08 | R157180_EV2 | 04/21/18 00:27 |

# Initial Calibration Summary
# Form 6

| | | | |
|---|---|---|---|
| **Client** | **: CH2MHILL** | **Lab Number** | **: L1812962** |
| **Project Name** | **: DOW HANGING ROCK** | **Project Number** | **: 693874.01.RR** |
| **Instrument ID** | **: AIRPIANO2** | **Ical Ref** | **: ICAL14572** |
| **Calibration dates** | **: 03/25/18 22:16 03/26/18 03:35** | | |

Calibration Files
0.02=R253194.D 0.04=R253195.D 0.1 =R253196.D 0.2 =R253197.D 0.5 =R253198.D 1.0 =R253199.D
5.0 =R253200.D 10.0=R253201.D 20.0=R253202.D 50.0=R253203.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ----------ISTD---------- | | | | | | | | | | | |
| 2) | | propylene | | | | 0.665 | 0.614 | 0.588 | 0.544 | 0.539 | 0.580 | 0.518 | 0.5783 | 8.66 |
| 3) | | dichlorodifluoromethane | | | 1.960 | 2.299 | 2.137 | 1.968 | 1.925 | 1.803 | 2.048 | 1.820 | 1.9949 | 8.24 |
| 4) | C | chloromethane | | | 0.939 | 1.087 | 0.999 | 0.951 | 0.899 | 0.861 | 0.896 | 0.780 | 0.9265 | 9.92 |
| 5) | | Freon-114 | 2.860 | 2.682 | 2.557 | 3.083 | 2.838 | 2.745 | 2.626 | 2.519 | 2.683 | 2.334 | 2.6927 | 7.69 |
| 6) | C | vinyl chloride | 1.137 | 1.048 | 0.997 | 1.222 | 1.113 | 1.075 | 1.019 | 0.974 | 1.028 | 0.893 | 1.0505 | 8.78 |
| 7) | C | 1,3-butadiene | 0.750 | 0.730 | 0.639 | 0.800 | 0.743 | 0.702 | 0.673 | 0.654 | 0.691 | 0.597 | 0.6979 | 8.59 |
| 8) | C | bromomethane | 0.973 | 0.909 | 0.878 | 1.045 | 0.953 | 0.923 | 0.880 | 0.841 | 0.883 | 0.766 | 0.9051 | 8.40 |
| 9) | C | chloroethane | 0.583 | 0.539 | 0.489 | 0.592 | 0.547 | 0.524 | 0.496 | 0.476 | 0.498 | 0.429 | 0.5172 | 9.64 |
| 10) | | ethanol | | | | | 0.760 | 0.675 | 0.629 | 0.590 | 0.648 | 0.544 | 0.6408 | 11.59 |
| 11) | C | vinyl bromide | 0.882 | 0.831 | 0.794 | 0.978 | 0.884 | 0.864 | 0.827 | 0.790 | 0.839 | 0.731 | 0.8420 | 7.92 |
| 12) | C | acrolein | | 0.585 | 0.463 | 0.497 | 0.433 | 0.309 | 0.395 | 0.379 | 0.402 | 0.349 | 0.4237 | 19.58 |
| 13) | | acetone | | | | 1.245 | 1.441 | 1.002 | 1.160 | 0.872 | 1.246 | 1.048 | 1.1447 | 16.45 |
| 14) | | trichlorofluoromethane | 2.024 | 1.865 | 1.790 | 2.196 | 2.551 | 1.943 | 2.337 | 1.814 | 1.992 | 2.095 | 2.0605 | 11.77 |
| 15) | | isopropyl alcohol | | | | 1.902 | 1.885 | 1.121 | 0.966 | 0.907 | 1.107 | 1.012 | 1.2714 | 33.95# |
| 16) | C | acrylonitrile | | | 0.527 | 0.636 | 0.594 | 0.489 | 0.518 | 0.516 | 0.561 | 0.515 | 0.5445 | 9.00 |
| 17) | C | 1,1-dichloroethene | 1.473 | 1.308 | 1.253 | 1.552 | 1.412 | 1.380 | 1.313 | 1.281 | 1.378 | 1.271 | 1.3622 | 7.08 |
| 18) | | tertiary butyl alcohol | | | | 1.460 | 1.338 | 1.238 | 1.262 | 1.204 | 1.413 | 1.328 | 1.3205 | 7.07 |
| 19) | C | methylene chloride | | | | | 1.086 | 1.049 | 0.981 | 0.953 | 1.019 | 0.937 | 1.0039 | 5.75 |
| 20) | C | 3-chloropropene | 1.024 | 0.845 | 0.827 | 0.995 | 0.921 | 0.902 | 0.879 | 0.872 | 0.950 | 0.880 | 0.9095 | 6.99 |
| 21) | C | carbon disulfide | | | 2.249 | 2.642 | 2.378 | 2.316 | 2.256 | 2.239 | 2.475 | 2.356 | 2.3639 | 5.82 |
| 22) | | Freon 113 | 1.663 | 1.530 | 1.438 | 1.760 | 1.609 | 1.573 | 1.514 | 1.502 | 1.655 | 1.576 | 1.5819 | 5.91 |
| 23) | | trans-1,2-dichloroethene | 1.259 | 1.157 | 1.123 | 1.391 | 1.267 | 1.237 | 1.196 | 1.170 | 1.270 | 1.184 | 1.2253 | 6.28 |
| 24) | C | 1,1-dichloroethane | 1.608 | 1.496 | 1.428 | 1.764 | 1.619 | 1.576 | 1.512 | 1.464 | 1.581 | 1.449 | 1.5497 | 6.54 |
| 25) | C | MTBE | 1.891 | 1.754 | 1.667 | 2.073 | 1.909 | 1.859 | 1.831 | 1.811 | 1.983 | 1.857 | 1.8634 | 6.08 |
| 26) | C | vinyl acetate | | | | | 1.420 | 1.373 | 1.442 | 1.505 | 1.782 | 1.702 | 1.5374 | 10.80 |
| 27) | C | 2-butanone | | | | 1.802 | 1.653 | 1.587 | 1.574 | 1.540 | 1.679 | 1.552 | 1.6267 | 5.71 |
| 28) | | cis-1,2-dichloroethene | 1.220 | 1.125 | 1.078 | 1.325 | 1.217 | 1.180 | 1.145 | 1.115 | 1.204 | 1.114 | 1.1722 | 6.19 |
| 29) | | Ethyl Acetate | | | | 0.236 | 0.237 | 0.228 | 0.249 | 0.250 | 0.282 | 0.268 | 0.2501 | 7.71 |
| 30) | C | chloroform | 1.827 | 1.660 | 1.568 | 1.944 | 1.788 | 1.744 | 1.685 | 1.651 | 1.814 | 1.693 | 1.7375 | 6.25 |
| 31) | | Tetrahydrofuran | | | | 1.033 | 0.975 | 0.943 | 0.817 | 0.796 | 0.898 | 0.835 | 0.8995 | 9.85 |
| 32) | C | 1,2-dichloroethane | 1.290 | 1.196 | 1.130 | 1.351 | 1.243 | 1.202 | 1.169 | 1.127 | 1.212 | 1.128 | 1.2047 | 6.14 |
| 33) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | | | |
| 34) | C | hexane | | | 0.475 | 0.576 | 0.526 | 0.514 | 0.506 | 0.500 | 0.553 | 0.541 | 0.5238 | 6.14 |
| 35) | s | 1,2-dichloroethane-D4 | 0.322 | 0.322 | 0.321 | 0.321 | 0.318 | 0.317 | 0.315 | 0.313 | 0.309 | 0.309 | 0.3168 | 1.61 |
| 36) | C | 1,1,1-trichloroethane | 0.728 | 0.688 | 0.640 | 0.793 | 0.731 | 0.710 | 0.686 | 0.673 | 0.730 | 0.710 | 0.7089 | 5.85 |
| 37) | C | benzene | | 1.124 | 1.008 | 1.224 | 1.119 | 1.082 | 1.040 | 1.017 | 1.088 | 1.022 | 1.0806 | 6.41 |
| 38) | C | carbon tetrachloride | 0.713 | 0.647 | 0.626 | 0.774 | 0.716 | 0.700 | 0.686 | 0.678 | 0.755 | 0.743 | 0.7039 | 6.60 |

# Initial Calibration Summary
# Form 6

| | | | |
|---|---|---|---|
| **Client** | **: CH2MHILL** | **Lab Number** | **: L1812962** |
| **Project Name** | **: DOW HANGING ROCK** | **Project Number** | **: 693874.01.RR** |
| **Instrument ID** | **: AIRPIANO2** | **Ical Ref** | **: ICAL14572** |
| **Calibration dates** | **: 03/25/18 22:16 03/26/18 03:35** | | |

Calibration Files
0.02=R253194.D 0.04=R253195.D 0.1 =R253196.D 0.2 =R253197.D 0.5 =R253198.D 1.0 =R253199.D
5.0 =R253200.D 10.0=R253201.D 20.0=R253202.D 50.0=R253203.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39) | | cyclohexane | | | 0.483 | 0.591 | 0.546 | 0.529 | 0.509 | 0.500 | 0.542 | 0.519 | 0.5275 | 6.29 |
| 40) | | dibromomethane | 0.687 | 0.532 | 0.433 | 0.506 | 0.450 | 0.432 | 0.421 | 0.411 | 0.453 | 0.442 | 0.4767 | 17.39 |
| 41) | C | 1,2-dichloropropane | 0.490 | 0.436 | 0.404 | 0.485 | 0.443 | 0.432 | 0.422 | 0.410 | 0.450 | 0.437 | 0.4409 | 6.43 |
| 42) | | bromodichloromethane | 0.865 | 0.747 | 0.742 | 0.913 | 0.845 | 0.825 | 0.805 | 0.792 | 0.865 | 0.841 | 0.8241 | 6.51 |
| 43) | C | 1,4-dioxane | | | 0.187 | 0.237 | 0.218 | 0.211 | 0.220 | 0.217 | 0.254 | 0.244 | 0.2236 | 9.51 |
| 44) | C | trichloroethene | 0.461 | 0.414 | 0.392 | 0.474 | 0.440 | 0.431 | 0.425 | 0.428 | 0.479 | 0.466 | 0.4410 | 6.47 |
| 45) | C | 2,2,4-trimethylpentane | | | 1.539 | 1.879 | 1.742 | 1.703 | 1.677 | 1.652 | 1.817 | 1.735 | 1.7179 | 6.02 |
| 46) | | heptane | | | 0.558 | 0.678 | 0.634 | 0.608 | 0.601 | 0.589 | 0.650 | 0.629 | 0.6184 | 6.09 |
| 47) | C | cis-1,3-dichloropropene | 0.568 | 0.529 | 0.509 | 0.633 | 0.589 | 0.575 | 0.585 | 0.584 | 0.646 | 0.628 | 0.5846 | 7.50 |
| 48) | C | 4-methyl-2-pentanone | | | | 0.879 | 0.841 | 0.833 | 0.849 | 0.836 | 0.929 | 0.904 | 0.8674 | 4.35 |
| 49) | | trans-1,3-dichloropropene | 0.549 | 0.503 | 0.491 | 0.606 | 0.575 | 0.558 | 0.574 | 0.577 | 0.653 | 0.637 | 0.5724 | 9.03 |
| 50) | C | 1,1,2-trichloroethane | 0.440 | 0.423 | 0.386 | 0.488 | 0.448 | 0.437 | 0.429 | 0.422 | 0.463 | 0.449 | 0.4386 | 6.17 |
| 51) | I | chlorobenzene-D5 | ----------ISTD---------- | | | | | | | | | | | |
| 52) | C | toluene | | 5.376 | 5.011 | 6.127 | 5.601 | 5.510 | 5.404 | 5.314 | 5.721 | 5.277 | 5.4823 | 5.76 |
| 53) | s | toluene-D8 | 3.828 | 3.783 | 3.792 | 3.811 | 3.797 | 3.788 | 3.768 | 3.761 | 3.673 | 3.570 | 3.7570 | 2.07 |
| 54) | | 2-hexanone | | | | 3.310 | 3.255 | 3.315 | 3.529 | 3.546 | 4.006 | 3.791 | 3.5359 | 7.87 |
| 55) | | dibromochloromethane | 3.108 | 2.861 | 2.700 | 3.397 | 3.141 | 3.080 | 3.124 | 3.155 | 3.538 | 3.356 | 3.1460 | 7.84 |
| 56) | C | 1,2-dibromoethane | 2.981 | 2.785 | 2.660 | 3.309 | 3.069 | 2.979 | 3.000 | 2.998 | 3.291 | 3.108 | 3.0180 | 6.59 |
| 57) | C | tetrachloroethene | 2.294 | 2.119 | 1.999 | 2.490 | 2.283 | 2.235 | 2.245 | 2.279 | 2.593 | 2.549 | 2.3087 | 8.10 |
| 58) | | 1,1,1,2-tetrachloroethane | 2.118 | 2.016 | 1.873 | 2.386 | 2.179 | 2.147 | 2.174 | 2.180 | 2.441 | 2.372 | 2.1885 | 7.95 |
| 59) | C | chlorobenzene | 4.486 | 3.956 | 3.727 | 4.764 | 4.377 | 4.282 | 4.295 | 4.268 | 4.664 | 4.411 | 4.3230 | 7.08 |
| 60) | C | ethylbenzene | 6.597 | 6.258 | 5.912 | 7.464 | 6.914 | 6.852 | 6.863 | 6.858 | 7.446 | 6.858 | 6.8022 | 6.94 |
| 61) | C | m+p-xylene | 5.224 | 4.751 | 4.492 | 5.672 | 5.295 | 5.281 | 5.459 | 5.459 | 6.044 | 5.536 | 5.3213 | 8.30 |
| 62) | C | bromoform | 2.604 | 2.424 | 2.260 | 2.901 | 2.725 | 2.699 | 2.883 | 3.043 | 3.537 | 3.421 | 2.8497 | 14.17 |
| 63) | C | styrene | 3.647 | 3.343 | 3.156 | 4.030 | 3.827 | 3.831 | 4.041 | 4.078 | 4.475 | 4.162 | 3.8590 | 10.18 |
| 64) | C | 1,1,2,2-tetrachloroethane | 4.299 | 4.072 | 3.886 | 4.932 | 4.623 | 4.508 | 4.708 | 4.786 | 5.388 | 4.618 | 4.5820 | 9.38 |
| 65) | C | o-xylene | 5.307 | 4.917 | 4.684 | 5.880 | 5.438 | 5.441 | 5.673 | 5.778 | 6.463 | 5.602 | 5.5182 | 9.03 |
| 66) | | 1,2,3-trichloropropane | 3.182 | 3.136 | 2.794 | 3.620 | 3.377 | 3.304 | 3.340 | 3.343 | 3.665 | 3.483 | 3.3244 | 7.56 |
| 67) | s | bromofluorobenzene | 1.890 | 1.905 | 1.928 | 1.945 | 1.968 | 1.992 | 2.033 | 2.039 | 2.038 | 2.004 | 1.9741 | 2.83 |
| 68) | C | isopropylbenzene | | | | 7.127 | 6.686 | 6.675 | 6.893 | 6.881 | 7.504 | 6.781 | 6.9353 | 4.24 |
| 69) | | bromobenzene | 3.848 | 3.384 | 3.327 | 4.145 | 3.869 | 3.797 | 3.924 | 3.932 | 4.361 | 4.153 | 3.8740 | 8.34 |
| 70) | | 4-ethyl toluene | 5.152 | 5.163 | 5.173 | 6.983 | 6.844 | 7.006 | 7.644 | 7.740 | 8.342 | 7.552 | 6.7599 | 17.53 |
| 71) | | 1,3,5-trimethylbenzene | 4.394 | 4.339 | 4.358 | 6.175 | 5.839 | 5.776 | 6.250 | 6.325 | 6.840 | 6.296 | 5.6592 | 16.60 |
| 72) | | tert-butylbenzene | | | | 6.040 | 5.745 | 5.805 | 6.446 | 6.627 | 7.351 | 5.978 | 6.2847 | 9.08 |
| 73) | | 1,2,4-trimethylbenzene | 4.102 | 4.086 | 4.228 | 5.755 | 5.692 | 5.783 | 6.512 | 6.733 | 7.560 | 6.172 | 5.6623 | 21.01 |
| 74) | C | Benzyl Chloride | | | | 3.804 | 3.962 | 4.240 | 5.424 | 5.657 | 6.471 | 6.189 | 5.1066 | 21.44 |
| 75) | | 1,3-dichlorobenzene | 3.002 | 2.922 | 2.999 | 4.023 | 3.958 | 4.026 | 4.565 | 4.707 | 5.206 | 4.828 | 4.0236 | 20.49 |
| 76) | C | 1,4-dichlorobenzene | 3.242 | 2.959 | 3.092 | 4.004 | 4.085 | 4.127 | 4.693 | 4.874 | 5.418 | 4.855 | 4.1350 | 20.25 |

# Initial Calibration Summary
# Form 6

| | | | |
|---|---|---|---|
| **Client** | **: CH2MHILL** | **Lab Number** | **: L1812962** |
| **Project Name** | **: DOW HANGING ROCK** | **Project Number** | **: 693874.01.RR** |
| **Instrument ID** | **: AIRPIANO2** | **Ical Ref** | **: ICAL14572** |
| **Calibration dates** | **: 03/25/18 22:16 03/26/18 03:35** | | |

Calibration Files
0.02=R253194.D 0.04=R253195.D 0.1 =R253196.D 0.2 =R253197.D 0.5 =R253198.D 1.0 =R253199.D
5.0 =R253200.D 10.0=R253201.D 20.0=R253202.D 50.0=R253203.D

| | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 77) | sec-butylbenzene | | | | 0.840 | 0.815 | 0.828 | 0.919 | 0.928 | 1.012 | 0.859 | 0.8859 | 7.99 |
| 78) | p-isopropyltoluene | | | | 6.709 | 6.575 | 6.733 | 7.680 | 7.809 | 8.535 | 7.520 | 7.3658 | 9.83 |
| 79) | 1,2-dichlorobenzene | 2.981 | 2.854 | 2.871 | 3.796 | 3.790 | 3.779 | 4.279 | 4.413 | 4.821 | 4.517 | 3.8102 | 18.74 |
| 80) | n-butylbenzene | | | | 5.787 | 6.221 | 6.916 | 7.839 | 7.933 | 8.440 | 7.484 | 7.2314 | 13.35 |
| 81) C | 1,2,4-trichlorobenzene | | 1.456 | 1.887 | 2.592 | 3.004 | 2.989 | 4.018 | 4.358 | 4.642 | 4.308 | 3.2507 | 35.26# |
| 82) | naphthalene | | 2.509 | 3.480 | 5.642 | 7.127 | 7.058 | 8.519 | 8.899 | 8.748 | 8.346 | 6.7032 | 35.15# |
| 83) | 1,2,3-trichlorobenzene | | 0.799 | 1.444 | 1.847 | 2.593 | 2.506 | 3.546 | 3.795 | 3.863 | 3.969 | 2.7069 | 43.01# |
| 84) C | hexachlorobutadiene | | 1.832 | 1.863 | 2.403 | 2.416 | 2.402 | 3.108 | 3.378 | 3.594 | 3.646 | 2.7380 | 25.89 |

# Initial Calibration Summary
# Form 6

| | | | |
|---|---|---|---|
| **Client** | **: CH2MHILL** | **Lab Number** | **: L1812962** |
| **Project Name** | **: DOW HANGING ROCK** | **Project Number** | **: 693874.01.RR** |
| **Instrument ID** | **: AIRLAB15** | **Ical Ref** | **: ICAL14605** |
| **Calibration dates** | **: 04/04/18 18:10 04/04/18 23:39** | | |

Calibration Files
0.02=r156844_Ev2.D 0.04=r156845_Ev2.D 0.1 =r156846_Ev2.D 0.2 =r156847_Ev2.D 0.5 =r156848_Ev2.D
1.0 =r156849_Ev2.D 5.0 =r156850_Ev2.D 10.0=r156851_Ev2.D 20.0=r156852_Ev2.D 50.0=r156853_Ev2.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1) | I | bromochloromethane | ----------ISTD---------- | | | | | | | | | | | |
| 2) | | propylene | | | 0.808 | 0.869 | 0.806 | 0.793 | 0.724 | 0.715 | 0.699 | 0.530 | 0.7430 | 13.93 |
| 3) | | dichlorodifluoromethane | 1.557 | 1.386 | 1.305 | 1.523 | 1.414 | 1.388 | 1.279 | 1.301 | 1.288 | 0.993 | 1.3434 | 11.64 |
| 4) | C | chloromethane | | 0.849 | 0.762 | 0.885 | 0.822 | 0.801 | 0.755 | 0.857 | 0.856 | 0.676 | 0.8071 | 8.18 |
| 5) | | Freon-114 | 1.648 | 1.616 | 1.558 | 1.797 | 1.699 | 1.653 | 1.530 | 1.667 | 1.727 | 1.379 | 1.6274 | 7.18 |
| 6) | C | vinyl chloride | 0.903 | 0.830 | 0.762 | 0.893 | 0.832 | 0.817 | 0.757 | 0.784 | 0.794 | 0.660 | 0.8033 | 8.74 |
| 7) | C | 1,3-butadiene | 0.685 | 0.711 | 0.585 | 0.698 | 0.645 | 0.636 | 0.601 | 0.662 | 0.699 | 0.572 | 0.6493 | 7.73 |
| 8) | C | bromomethane | 0.576 | 0.784 | 0.638 | 0.751 | 0.690 | 0.665 | 0.621 | 0.621 | 0.648 | 0.544 | 0.6537 | 11.23 |
| 9) | C | chloroethane | 0.579 | 0.418 | 0.351 | 0.463 | 0.424 | 0.423 | 0.272 | 0.400 | 0.419 | 0.347 | 0.4096 | 19.70 |
| 10) | | ethanol | | | | | 0.706 | 0.655 | 0.613 | 0.604 | 0.644 | 0.514 | 0.6226 | 10.33 |
| 11) | C | vinyl bromide | 0.831 | 0.705 | 0.619 | 0.704 | 0.667 | 0.642 | 0.609 | 0.613 | 0.636 | 0.515 | 0.6543 | 12.63 |
| 12) | | acrolein | 0.658 | 0.456 | 0.304 | 0.384 | 0.349 | 0.321 | 0.317 | 0.321 | 0.352 | 0.305 | 0.3769 | 28.96 |
| 13) | | acetone | | | | 1.303 | 1.169 | 1.073 | 0.904 | 0.855 | 0.842 | 0.599 | 0.9634 | 24.41 |
| 14) | | trichlorofluoromethane | 1.369 | 1.345 | 1.251 | 1.473 | 1.401 | 1.335 | 1.237 | 1.176 | 1.099 | 0.850 | 1.2536 | 14.36 |
| 15) | | isopropyl alcohol | | | | 2.101 | 1.512 | 1.294 | 1.143 | 1.062 | 1.150 | 0.865 | 1.3039 | 30.99# |
| 16) | C | acrylonitrile | 0.677 | 0.650 | 0.522 | 0.656 | 0.616 | 0.605 | 0.595 | 0.598 | 0.656 | 0.565 | 0.6141 | 7.75 |
| 17) | C | 1,1-dichloroethene | 1.155 | 1.090 | 1.083 | 1.252 | 1.168 | 1.131 | 1.056 | 1.013 | 1.006 | 0.830 | 1.0783 | 10.64 |
| 18) | | tertiary butyl alcohol | 1.497 | 1.409 | 1.232 | 1.344 | 1.203 | 1.107 | 1.140 | 1.054 | 1.164 | 0.995 | 1.2145 | 13.12 |
| 19) | C | methylene chloride | | | | | 1.108 | 1.078 | 0.998 | 0.977 | 1.015 | 0.827 | 1.0003 | 9.86 |
| 20) | C | 3-chloropropene | | | | 1.297 | 1.238 | 1.231 | 1.377 | 1.130 | 1.102 | 0.869 | 1.1776 | 14.03 |
| 21) | C | carbon disulfide | | | | 2.189 | 2.112 | 2.077 | 2.047 | 2.062 | 2.195 | 1.846 | 2.0754 | 5.65 |
| 22) | | Freon 113 | 1.565 | 1.338 | 1.307 | 1.508 | 1.386 | 1.367 | 1.258 | 1.222 | 1.226 | 1.021 | 1.3199 | 11.68 |
| 23) | | trans-1,2-dichloroethene | 1.159 | 1.079 | 1.016 | 1.247 | 1.170 | 1.137 | 1.068 | 1.027 | 1.021 | 0.847 | 1.0771 | 10.27 |
| 24) | C | 1,1-dichloroethane | 1.591 | 1.332 | 1.388 | 1.641 | 1.457 | 1.431 | 1.325 | 1.289 | 1.256 | 1.015 | 1.3725 | 12.91 |
| 25) | C | MTBE | 1.922 | 1.867 | 1.662 | 1.927 | 2.006 | 1.922 | 1.805 | 1.765 | 1.781 | 1.401 | 1.8056 | 9.63 |
| 26) | C | vinyl acetate | | | 1.835 | 2.004 | 2.049 | 2.037 | 1.825 | 2.106 | 1.780 | 1.388 | 1.8779 | 12.35 |
| 27) | C | 2-butanone | | | | 2.192 | 2.075 | 2.010 | 1.786 | 1.904 | 1.957 | 1.243 | 1.8809 | 16.43 |
| 28) | | cis-1,2-dichloroethene | 1.132 | 1.060 | 0.966 | 1.160 | 1.086 | 1.100 | 1.031 | 1.011 | 1.016 | 0.844 | 1.0408 | 8.74 |
| 29) | | Ethyl Acetate | | | | 0.295 | 0.281 | 0.268 | 0.263 | 0.256 | 0.267 | 0.239 | 0.2669 | 6.75 |
| 30) | C | chloroform | 1.452 | 1.244 | 1.201 | 1.399 | 1.333 | 1.325 | 1.242 | 1.202 | 1.217 | 1.032 | 1.2646 | 9.39 |
| 31) | | Tetrahydrofuran | | | 1.110 | 1.281 | 1.238 | 1.220 | 1.202 | 1.192 | 1.224 | 1.037 | 1.1880 | 6.55 |
| 32) | C | 1,2-dichloroethane | 1.016 | 0.995 | 0.917 | 1.063 | 0.988 | 0.956 | 0.893 | 0.853 | 0.831 | 0.649 | 0.9160 | 12.99 |
| 33) | I | 1,4-difluorobenzene | ----------ISTD---------- | | | | | | | | | | | |
| 34) | C | hexane | | | 0.595 | 0.658 | 0.635 | 0.649 | 0.622 | 0.608 | 0.622 | 0.534 | 0.6154 | 6.30 |
| 35) | s | 1,2-dichloroethane-D4 | 0.273 | 0.278 | 0.272 | 0.275 | 0.272 | 0.274 | 0.272 | 0.267 | 0.249 | 0.204 | 0.2634 | 8.53 |
| 36) | C | 1,1,1-trichloroethane | 0.530 | 0.395 | 0.380 | 0.509 | 0.538 | 0.560 | 0.491 | 0.547 | 0.554 | 0.433 | 0.4937 | 13.66 |
| 37) | C | benzene | | 1.163 | 1.106 | 1.257 | 1.172 | 1.187 | 1.118 | 1.109 | 1.175 | 1.053 | 1.1490 | 5.15 |
| 38) | C | carbon tetrachloride | 0.510 | 0.471 | 0.424 | 0.483 | 0.469 | 0.472 | 0.456 | 0.457 | 0.470 | 0.387 | 0.4598 | 7.29 |

# Initial Calibration Summary
# Form 6

| | | | |
|---|---|---|---|
| **Client** | **: CH2MHILL** | **Lab Number** | **: L1812962** |
| **Project Name** | **: DOW HANGING ROCK** | **Project Number** | **: 693874.01.RR** |
| **Instrument ID** | **: AIRLAB15** | **Ical Ref** | **: ICAL14605** |
| **Calibration dates** | **: 04/04/18 18:10 04/04/18 23:39** | | |

Calibration Files
0.02=r156844_Ev2.D 0.04=r156845_Ev2.D 0.1 =r156846_Ev2.D 0.2 =r156847_Ev2.D 0.5 =r156848_Ev2.D
1.0 =r156849_Ev2.D 5.0 =r156850_Ev2.D 10.0=r156851_Ev2.D 20.0=r156852_Ev2.D 50.0=r156853_Ev2.D

| | | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 39) | | cyclohexane | 0.606 | 0.645 | 0.617 | 0.663 | 0.657 | 0.678 | 0.651 | 0.638 | 0.672 | 0.594 | 0.6421 | 4.44 |
| 40) | | Dibromomethane | 0.556 | 0.493 | 0.385 | 0.408 | 0.373 | 0.373 | 0.351 | 0.343 | 0.353 | 0.300 | 0.3935 | 19.32 |
| 41) | C | 1,2-dichloropropane | 0.448 | 0.512 | 0.452 | 0.507 | 0.493 | 0.474 | 0.450 | 0.439 | 0.453 | 0.383 | 0.4611 | 8.20 |
| 42) | | bromodichloromethane | 0.523 | 0.483 | 0.553 | 0.600 | 0.589 | 0.595 | 0.599 | 0.603 | 0.632 | 0.538 | 0.5715 | 8.01 |
| 43) | C | 1,4-dioxane | | 0.246 | 0.199 | 0.269 | 0.230 | 0.233 | 0.233 | 0.225 | 0.253 | 0.232 | 0.2357 | 8.26 |
| 44) | C | trichloroethene | 0.547 | 0.419 | 0.428 | 0.472 | 0.445 | 0.428 | 0.419 | 0.423 | 0.445 | 0.401 | 0.4427 | 9.35 |
| 45) | C | 2,2,4-trimethylpentane | 2.055 | 1.938 | 1.857 | 2.229 | 2.132 | 2.115 | 2.023 | 1.991 | 2.072 | 1.801 | 2.0212 | 6.41 |
| 46) | | heptane | 1.042 | 0.983 | 0.869 | 1.021 | 1.013 | 1.027 | 0.983 | 0.973 | 1.000 | 0.808 | 0.9718 | 7.71 |
| 47) | C | cis-1,3-dichloropropene | 0.527 | 0.478 | 0.438 | 0.524 | 0.512 | 0.532 | 0.555 | 0.574 | 0.626 | 0.549 | 0.5315 | 9.61 |
| 48) | C | 4-methyl-2-pentanone | 0.976 | 0.912 | 0.903 | 1.087 | 1.077 | 1.139 | 1.101 | 1.119 | 1.169 | 0.928 | 1.0412 | 9.71 |
| 49) | | trans-1,3-dichloropropene | 0.486 | 0.378 | 0.403 | 0.487 | 0.463 | 0.502 | 0.523 | 0.544 | 0.591 | 0.516 | 0.4893 | 12.90 |
| 50) | C | 1,1,2-trichloroethane | 0.506 | 0.431 | 0.406 | 0.451 | 0.421 | 0.429 | 0.414 | 0.411 | 0.436 | 0.382 | 0.4289 | 7.71 |
| 51) | I | chlorobenzene-D5 | ----------ISTD---------- | | | | | | | | | | | |
| 52) | C | toluene | 7.240 | 6.641 | 6.015 | 7.047 | 6.683 | 6.547 | 6.218 | 6.171 | 6.338 | 5.938 | 6.4839 | 6.63 |
| 53) | s | toluene-D8 | 4.517 | 4.452 | 4.493 | 4.556 | 4.540 | 4.397 | 4.416 | 4.383 | 4.476 | 4.541 | 4.4772 | 1.40 |
| 54) | | 2-hexanone | 4.011 | 3.838 | 4.141 | 4.778 | 4.939 | 5.055 | 5.184 | 5.008 | 5.071 | 4.377 | 4.6402 | 10.79 |
| 55) | | dibromochloromethane | 1.872 | 2.386 | 2.066 | 2.461 | 2.397 | 2.429 | 2.522 | 2.602 | 2.762 | 2.556 | 2.4052 | 10.78 |
| 56) | C | 1,2-dibromoethane | 3.514 | 3.034 | 2.691 | 3.116 | 3.003 | 2.991 | 2.906 | 2.981 | 3.182 | 2.999 | 3.0416 | 6.92 |
| 57) | C | tetrachloroethene | 2.041 | 2.372 | 2.131 | 2.473 | 2.263 | 2.267 | 2.161 | 2.137 | 2.277 | 2.219 | 2.2341 | 5.65 |
| 58) | | 1,1,1,2-tetrachloroethane | 2.271 | 1.484 | 1.670 | 2.071 | 1.929 | 1.930 | 1.946 | 1.991 | 2.100 | 1.961 | 1.9354 | 11.38 |
| 59) | C | chlorobenzene | 5.412 | 4.682 | 4.403 | 5.200 | 4.895 | 4.889 | 4.655 | 4.709 | 5.052 | 4.788 | 4.8685 | 6.01 |
| 60) | C | ethylbenzene | 7.471 | 7.246 | 6.861 | 8.294 | 8.011 | 8.115 | 8.039 | 8.033 | 8.300 | 7.510 | 7.7880 | 6.25 |
| 61) | C | m+p-xylene | 6.131 | 5.866 | 5.663 | 7.030 | 6.800 | 6.820 | 6.589 | 6.678 | 6.751 | 5.973 | 6.4300 | 7.41 |
| 62) | C | bromoform | 2.183 | 1.502 | 1.471 | 1.790 | 1.757 | 1.803 | 1.999 | 2.124 | 2.294 | 2.193 | 1.9116 | 15.25 |
| 63) | C | styrene | 4.632 | 4.100 | 4.100 | 4.869 | 4.890 | 4.928 | 5.141 | 5.345 | 5.709 | 5.239 | 4.8954 | 10.50 |
| 64) | C | 1,1,2,2-tetrachloroethane | 4.445 | 4.065 | 3.970 | 4.811 | 4.698 | 4.624 | 4.685 | 4.730 | 5.017 | 4.491 | 4.5535 | 7.14 |
| 65) | C | o-xylene | 6.451 | 5.722 | 5.700 | 6.990 | 6.798 | 6.881 | 6.866 | 6.790 | 6.944 | 5.996 | 6.5138 | 7.91 |
| 66) | | 1,2,3-Trichloropropane | 3.718 | 3.647 | 3.382 | 4.047 | 3.858 | 3.718 | 3.667 | 3.781 | 3.962 | 3.592 | 3.7371 | 5.08 |
| 67) | s | bromofluorobenzene | 1.378 | 2.084 | 1.991 | 2.343 | 2.457 | 2.370 | 2.451 | 2.743 | 2.443 | 2.532 | 2.2791 | 16.75 |
| 68) | C | isopropylbenzene | 7.870 | 7.232 | 6.924 | 8.500 | 8.201 | 8.169 | 8.379 | 8.457 | 8.756 | 7.726 | 8.0215 | 7.29 |
| 69) | | Bromobenzene | 5.120 | 4.447 | 4.061 | 4.831 | 4.585 | 4.540 | 4.683 | 4.790 | 5.066 | 4.539 | 4.6661 | 6.63 |
| 70) | | 4-ethyl toluene | 7.542 | 6.983 | 7.146 | 8.994 | 8.843 | 8.928 | 9.376 | 9.570 | 9.800 | 8.592 | 8.5774 | 11.75 |
| 71) | | 1,3,5-trimethylbenzene | 6.326 | 6.210 | 6.185 | 7.928 | 7.805 | 7.896 | 8.125 | 8.189 | 8.389 | 7.327 | 7.4379 | 11.73 |
| 72) | | tert-butylbenzene | | | | 7.578 | 7.494 | 7.610 | 7.840 | 8.036 | 8.161 | 6.750 | 7.6383 | 6.06 |
| 73) | | 1,2,4-trimethylbenzene | 5.829 | 6.002 | 5.907 | 7.573 | 7.574 | 7.735 | 8.039 | 8.223 | 8.368 | 6.843 | 7.2092 | 13.71 |
| 74) | C | Benzyl Chloride | 3.026 | 3.003 | 2.981 | 3.575 | 3.832 | 4.038 | 4.819 | 5.219 | 5.977 | 5.637 | 4.2107 | 26.84 |
| 75) | | 1,3-dichlorobenzene | 3.993 | 3.998 | 4.031 | 4.853 | 4.813 | 4.698 | 4.992 | 5.227 | 5.519 | 4.893 | 4.7017 | 11.31 |
| 76) | C | 1,4-dichlorobenzene | 4.144 | 4.127 | 3.894 | 4.727 | 4.610 | 4.640 | 4.914 | 5.191 | 5.391 | 4.848 | 4.6487 | 10.29 |

# Initial Calibration Summary
# Form 6

| | | | |
|---|---|---|---|
| **Client** | **: CH2MHILL** | **Lab Number** | **: L1812962** |
| **Project Name** | **: DOW HANGING ROCK** | **Project Number** | **: 693874.01.RR** |
| **Instrument ID** | **: AIRLAB15** | **Ical Ref** | **: ICAL14605** |
| **Calibration dates** | **: 04/04/18 18:10 04/04/18 23:39** | | |

Calibration Files

0.02=r156844_Ev2.D 0.04=r156845_Ev2.D 0.1 =r156846_Ev2.D 0.2 =r156847_Ev2.D 0.5 =r156848_Ev2.D

1.0 =r156849_Ev2.D 5.0 =r156850_Ev2.D 10.0=r156851_Ev2.D 20.0=r156852_Ev2.D 50.0=r156853_Ev2.D

| | Compound | 0.02 | 0.04 | 0.1 | 0.2 | 0.5 | 1.0 | 5.0 | 10.0 | 20.0 | 50.0 | Avg | %RSD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 77) | sec-butylbenzene | 0.907 | 0.830 | 0.849 | 1.068 | 1.044 | 1.074 | 1.151 | 1.151 | 1.160 | 0.992 | 1.0225 | 12.14 |
| 78) | p-isopropyltoluene | 7.160 | 6.903 | 7.204 | 8.977 | 8.843 | 9.101 | 9.667 | 9.808 | 9.796 | 8.108 | 8.5567 | 13.27 |
| 79) | 1,2-dichlorobenzene | 3.798 | 3.923 | 3.752 | 4.443 | 4.390 | 4.443 | 4.777 | 4.967 | 5.168 | 4.624 | 4.4284 | 10.94 |
| 80) | n-butylbenzene | 5.661 | 6.428 | 6.632 | 8.392 | 8.556 | 8.882 | 9.539 | 9.466 | 9.291 | 8.005 | 8.0852 | 17.08 |
| 81) C | 1,2,4-trichlorobenzene | | 1.617 | 1.937 | 2.718 | 2.948 | 3.205 | 4.017 | 4.252 | 4.071 | 3.675 | 3.1600 | 29.89 |
| 82) | naphthalene | | 0.549 | 0.594 | 0.929 | 1.013 | 1.101 | 1.142 | 1.181 | 1.097 | 0.964 | 0.9523 | 24.25 |
| 83) | 1,2,3-trichlorobenzene | | 2.159 | 2.085 | 2.698 | 2.837 | 3.060 | 3.809 | 3.973 | 3.637 | 3.312 | 3.0633 | 22.30 |
| 84) C | hexachlorobutadiene | 2.245 | 2.203 | 2.247 | 2.730 | 2.679 | 2.767 | 3.359 | 3.400 | 3.009 | 2.697 | 2.7338 | 15.78 |

# Continuing Calibration
# Form 7

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRLAB15 | Calibration Date | : 04/20/18 16:16 |
| Lab File ID | : R157169_EV2 | Init. Calib. Date(s) | : 04/04/18 04/04/18 |
| Sample No | : WG1108448-2 | Init. Calib. Times | : 18:10 23:39 |
| Channel | : | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| bromochloromethane | 1 | 1 | - | 0 | 30 | 99 | -.04 |
| propylene | 0.743 | 0.709 | - | 4.6 | 30 | 97 | -.03 |
| dichlorodifluoromethane | 1.343 | 1.139 | - | 15.2 | 30 | 88 | -.04 |
| chloromethane | 0.807 | 0.722 | - | 10.5 | 30 | 95 | -.04 |
| Freon-114 | 1.627 | 1.498 | - | 7.9 | 30 | 97 | -.04 |
| vinyl chloride | 0.803 | 0.675 | - | 15.9 | 30 | 88 | -.04 |
| 1,3-butadiene | 0.649 | 0.639 | - | 1.5 | 30 | 106 | -.04 |
| bromomethane | 0.654 | 0.549 | - | 16.1 | 30 | 88 | -.04 |
| chloroethane | 0.41 | 0.365 | - | 11 | 30 | 133 | -.04 |
| ethanol | 0.623 | 0.49 | - | 21.3 | 30 | 79 | -.04 |
| vinyl bromide | 0.654 | 0.554 | - | 15.3 | 30 | 90 | -.05 |
| acrolein | 0.377 | 0.251 | - | 33.4* | 30 | 79 | -.04 |
| acetone | 0.963 | 0.838 | - | 13 | 30 | 92 | -.05 |
| trichlorofluoromethane | 1.254 | 0.995 | - | 20.7 | 30 | 80 | -.05 |
| isopropyl alcohol | 1.304 | 1.033 | - | 20.8 | 30 | 90 | -.04 |
| acrylonitrile | 0.614 | 0.49 | - | 20.2 | 30 | 82 | -.04 |
| 1,1-dichloroethene | 1.078 | 0.864 | - | 19.9 | 30 | 81 | -.05 |
| tertiary butyl alcohol | 1.215 | 0.87 | - | 28.4 | 30 | 76 | -.04 |
| methylene chloride | 1 | 0.838 | - | 16.2 | 30 | 83 | -.05 |
| 3-chloropropene | 1.178 | 1.038 | - | 11.9 | 30 | 75 | -.04 |
| carbon disulfide | 2.075 | 1.763 | - | 15 | 30 | 86 | -.05 |
| Freon 113 | 1.32 | 1.113 | - | 15.7 | 30 | 88 | -.05 |
| trans-1,2-dichloroethene | 1.077 | 0.995 | - | 7.6 | 30 | 92 | -.04 |
| 1,1-dichloroethane | 1.372 | 1.234 | - | 10.1 | 30 | 92 | -.05 |
| MTBE | 1.806 | 1.596 | - | 11.6 | 30 | 88 | -.04 |
| vinyl acetate | 1.878 | 2.073 | - | -10.4 | 30 | 113 | -.04 |
| 2-butanone | 1.881 | 1.736 | - | 7.7 | 30 | 97 | -.04 |
| cis-1,2-dichloroethene | 1.041 | 0.916 | - | 12 | 30 | 88 | -.04 |
| Ethyl Acetate | 0.267 | 0.252 | - | 5.6 | 30 | 95 | -.04 |
| chloroform | 1.265 | 1.148 | - | 9.2 | 30 | 92 | -.04 |
| Tetrahydrofuran | 1.188 | 1.07 | - | 9.9 | 30 | 88 | -.04 |
| 1,2-dichloroethane | 0.916 | 0.741 | - | 19.1 | 30 | 82 | -.04 |
| 1,4-difluorobenzene | 1 | 1 | - | 0 | 30 | 103 | -.04 |
| hexane | 0.615 | 0.573 | - | 6.8 | 30 | 95 | -.04 |
| 1,1,1-trichloroethane | 0.494 | 0.502 | - | -1.6 | 30 | 105 | -.05 |
| benzene | 1.149 | 1.015 | - | 11.7 | 30 | 93 | -.04 |
| carbon tetrachloride | 0.46 | 0.41 | - | 10.9 | 30 | 92 | -.04 |
| cyclohexane | 0.642 | 0.621 | - | 3.3 | 30 | 98 | -.04 |
| Dibromomethane | 0.394 | 0.296 | - | 24.9 | 30 | 87 | -.05 |
| 1,2-dichloropropane | 0.461 | 0.389 | - | 15.6 | 30 | 88 | -.04 |
| bromodichloromethane | 0.572 | 0.58 | - | -1.4 | 30 | 99 | -.04 |
| 1,4-dioxane | 0.236 | 0.229 | - | 3 | 30 | 101 | -.05 |
| trichloroethene | 0.443 | 0.391 | - | 11.7 | 30 | 96 | -.05 |
| 2,2,4-trimethylpentane | 2.021 | 1.959 | - | 3.1 | 30 | 99 | -.04 |
| heptane | 0.972 | 0.926 | - | 4.7 | 30 | 97 | -.05 |

* Value outside of QC limits.

# Continuing Calibration
# Form 7

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRLAB15 | Calibration Date | : 04/20/18 16:16 |
| Lab File ID | : R157169_EV2 | Init. Calib. Date(s) | : 04/04/18 04/04/18 |
| Sample No | : WG1108448-2 | Init. Calib. Times | : 18:10 23:39 |
| Channel | : | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| cis-1,3-dichloropropene | 0.531 | 0.513 | - | 3.4 | 30 | 95 | -.04 |
| 4-methyl-2-pentanone | 1.041 | 1.053 | - | -1.2 | 30 | 98 | -.04 |
| trans-1,3-dichloropropene | 0.489 | 0.404 | - | 17.4 | 30 | 79 | -.04 |
| 1,1,2-trichloroethane | 0.429 | 0.388 | - | 9.6 | 30 | 96 | -.04 |
| chlorobenzene-D5 | 1 | 1 | - | 0 | 30 | 95 | -.03 |
| toluene | 6.484 | 5.988 | - | 7.6 | 30 | 92 | -.03 |
| 2-hexanone | 4.64 | 4.925 | - | -6.1 | 30 | 90 | -.04 |
| dibromochloromethane | 2.405 | 2.778 | - | -15.5 | 30 | 105 | -.03 |
| 1,2-dibromoethane | 3.042 | 2.904 | - | 4.5 | 30 | 95 | -.03 |
| tetrachloroethene | 2.234 | 2.142 | - | 4.1 | 30 | 94 | -.03 |
| 1,1,1,2-tetrachloroethane | 1.935 | 1.837 | - | 5.1 | 30 | 90 | -.03 |
| chlorobenzene | 4.868 | 4.646 | - | 4.6 | 30 | 95 | -.03 |
| ethylbenzene | 7.788 | 7.743 | - | 0.6 | 30 | 92 | -.02 |
| m+p-xylene | 6.43 | 6.378 | - | 0.8 | 30 | 92 | -.03 |
| bromoform | 1.912 | 2.215 | - | -15.8 | 30 | 105 | -.03 |
| styrene | 4.895 | 4.993 | - | -2 | 30 | 92 | -.03 |
| 1,1,2,2-tetrachloroethane | 4.554 | 4.627 | - | -1.6 | 30 | 94 | -.02 |
| o-xylene | 6.514 | 6.533 | - | -0.3 | 30 | 90 | -.02 |
| 1,2,3-Trichloropropane | 3.737 | 3.377 | - | 9.6 | 30 | 88 | -.03 |
| isopropylbenzene | 8.022 | 7.967 | - | 0.7 | 30 | 90 | -.02 |
| Bromobenzene | 4.666 | 4.285 | - | 8.2 | 30 | 87 | -.02 |
| 4-ethyl toluene | 8.577 | 9.302 | - | -8.5 | 30 | 94 | -.02 |
| 1,3,5-trimethylbenzene | 7.438 | 7.685 | - | -3.3 | 30 | 90 | -.02 |
| tert-butylbenzene | 7.638 | 7.087 | - | 7.2 | 30 | 86 | -.03 |
| 1,2,4-trimethylbenzene | 7.209 | 7.714 | - | -7 | 30 | 91 | -.03 |
| Benzyl Chloride | 4.211 | 4.891 | - | -16.1 | 30 | 96 | -.02 |
| 1,3-dichlorobenzene | 4.702 | 4.806 | - | -2.2 | 30 | 91 | -.03 |
| 1,4-dichlorobenzene | 4.649 | 4.565 | - | 1.8 | 30 | 88 | -.02 |
| sec-butylbenzene | 10.225 | 10.173 | - | 0.5 | 30 | 84 | -.02 |
| p-isopropyltoluene | 8.557 | 8.077 | - | 5.6 | 30 | 79 | -.02 |
| 1,2-dichlorobenzene | 4.428 | 4.535 | - | -2.4 | 30 | 90 | -.02 |
| n-butylbenzene | 8.085 | 8.334 | - | -3.1 | 30 | 83 | -.02 |
| 1,2,4-trichlorobenzene | 3.16 | 3.085 | - | 2.4 | 30 | 73 | -.02 |
| naphthalene | 9.523 | 8.979 | - | 5.7 | 30 | 75 | -.02 |
| 1,2,3-trichlorobenzene | 3.063 | 2.983 | - | 2.6 | 30 | 74 | -.02 |
| hexachlorobutadiene | 2.734 | 2.964 | - | -8.4 | 30 | 84 | -.02 |

* Value outside of QC limits.

# Continuing Calibration
# Form 7

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRPIANO2 | Calibration Date | : 04/21/18 13:20 |
| Lab File ID | : R253812 | Init. Calib. Date(s) | : 03/25/18 03/26/18 |
| Sample No | : WG1108672-2 | Init. Calib. Times | : 22:16 03:35 |
| Channel | : | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| bromochloromethane | 1 | 1 | - | 0 | 30 | 70 | 0 |
| propylene | 0.578 | 0.725 | - | -25.4 | 30 | 93 | 0 |
| dichlorodifluoromethane | 1.995 | 1.872 | - | 6.2 | 30 | 68 | 0 |
| chloromethane | 0.926 | 0.898 | - | 3 | 30 | 70 | 0 |
| Freon-114 | 2.693 | 2.297 | - | 14.7 | 30 | 61 | 0 |
| vinyl chloride | 1.051 | 0.944 | - | 10.2 | 30 | 65 | 0 |
| 1,3-butadiene | 0.698 | 0.749 | - | -7.3 | 30 | 78 | 0 |
| bromomethane | 0.905 | 0.775 | - | 14.4 | 30 | 62 | 0 |
| chloroethane | 0.517 | 0.449 | - | 13.2 | 30 | 64 | 0 |
| ethanol | 0.641 | 0.624 | - | 2.7 | 30 | 70 | 0 |
| vinyl bromide | 0.842 | 0.711 | - | 15.6 | 30 | 60 | 0 |
| acrolein | 0.424 | 0.24 | - | 43.4* | 30 | 43 | 0 |
| acetone | 1.145 | 1.033 | - | 9.8 | 30 | 63 | 0 |
| trichlorofluoromethane | 2.061 | 1.497 | - | 27.4 | 30 | 45 | 0 |
| isopropyl alcohol | 1.271 | 1.032 | - | 18.8 | 30 | 75 | 0 |
| acrylonitrile | 0.545 | 0.435 | - | 20.2 | 30 | 59 | 0 |
| 1,1-dichloroethene | 1.362 | 1.072 | - | 21.3 | 30 | 57 | 0 |
| tertiary butyl alcohol | 1.32 | 0.991 | - | 24.9 | 30 | 55 | 0 |
| methylene chloride | 1.004 | 0.887 | - | 11.7 | 30 | 63 | 0 |
| 3-chloropropene | 0.91 | 0.986 | - | -8.4 | 30 | 79 | 0 |
| carbon disulfide | 2.364 | 1.885 | - | 20.3 | 30 | 59 | 0 |
| Freon 113 | 1.582 | 1.238 | - | 21.7 | 30 | 57 | 0 |
| trans-1,2-dichloroethene | 1.225 | 0.939 | - | 23.3 | 30 | 55 | 0 |
| 1,1-dichloroethane | 1.55 | 1.254 | - | 19.1 | 30 | 58 | 0 |
| MTBE | 1.863 | 1.551 | - | 16.7 | 30 | 59 | 0 |
| vinyl acetate | 1.537 | 1.518 | - | 1.2 | 30 | 74 | 0 |
| 2-butanone | 1.627 | 1.571 | - | 3.4 | 30 | 70 | 0 |
| cis-1,2-dichloroethene | 1.172 | 0.902 | - | 23 | 30 | 55 | 0 |
| Ethyl Acetate | 0.25 | 0.225 | - | 10 | 30 | 63 | 0 |
| chloroform | 1.738 | 1.345 | - | 22.6 | 30 | 56 | 0 |
| Tetrahydrofuran | 0.9 | 0.794 | - | 11.8 | 30 | 68 | 0 |
| 1,2-dichloroethane | 1.205 | 0.946 | - | 21.5 | 30 | 57 | 0 |
| 1,4-difluorobenzene | 1 | 1 | - | 0 | 30 | 62 | 0 |
| hexane | 0.524 | 0.522 | - | 0.4 | 30 | 64 | 0 |
| 1,1,1-trichloroethane | 0.709 | 0.626 | - | 11.7 | 30 | 57 | 0 |
| benzene | 1.081 | 0.91 | - | 15.8 | 30 | 54 | 0 |
| carbon tetrachloride | 0.704 | 0.63 | - | 10.5 | 30 | 57 | 0 |
| cyclohexane | 0.527 | 0.521 | - | 1.1 | 30 | 63 | 0 |
| dibromomethane | 0.477 | 0.343 | - | 28.1 | 30 | 50 | 0 |
| 1,2-dichloropropane | 0.441 | 0.39 | - | 11.6 | 30 | 57 | 0 |
| bromodichloromethane | 0.824 | 0.792 | - | 3.9 | 30 | 61 | 0 |
| 1,4-dioxane | 0.224 | 0.206 | - | 8 | 30 | 58 | 0 |
| trichloroethene | 0.441 | 0.383 | - | 13.2 | 30 | 56 | 0 |
| 2,2,4-trimethylpentane | 1.718 | 1.83 | - | -6.5 | 30 | 68 | 0 |
| heptane | 0.618 | 0.69 | - | -11.7 | 30 | 71 | 0 |

* Value outside of QC limits.

# Continuing Calibration
# Form 7

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRPIANO2 | Calibration Date | : 04/21/18 13:20 |
| Lab File ID | : R253812 | Init. Calib. Date(s) | : 03/25/18 03/26/18 |
| Sample No | : WG1108672-2 | Init. Calib. Times | : 22:16 03:35 |
| Channel | : | | |

| Compound | Ave. RRF | RRF | Min RRF | %D | Max %D | Area% | Dev(min) |
|---|---|---|---|---|---|---|---|
| cis-1,3-dichloropropene | 0.585 | 0.505 | - | 13.7 | 30 | 54 | 0 |
| 4-methyl-2-pentanone | 0.867 | 0.934 | - | -7.7 | 30 | 68 | 0 |
| trans-1,3-dichloropropene | 0.572 | 0.424 | - | 25.9 | 30 | 46 | 0 |
| 1,1,2-trichloroethane | 0.439 | 0.388 | - | 11.6 | 30 | 56 | 0 |
| chlorobenzene-D5 | 1 | 1 | - | 0 | 30 | 68 | 0 |
| toluene | 5.482 | 4.356 | - | 20.5 | 30 | 55 | 0 |
| 2-hexanone | 3.536 | 3.363 | - | 4.9 | 30 | 65 | 0 |
| dibromochloromethane | 3.146 | 2.892 | - | 8.1 | 30 | 63 | 0 |
| 1,2-dibromoethane | 3.018 | 2.346 | - | 22.3 | 30 | 53 | 0 |
| tetrachloroethene | 2.309 | 1.937 | - | 16.1 | 30 | 59 | 0 |
| 1,1,1,2-tetrachloroethane | 2.188 | 1.648 | - | 24.7 | 30 | 51 | 0 |
| chlorobenzene | 4.323 | 3.412 | - | 21.1 | 30 | 54 | 0 |
| ethylbenzene | 6.802 | 5.413 | - | 20.4 | 30 | 54 | 0 |
| m+p-xylene | 5.321 | 4.362 | - | 18 | 30 | 54 | 0 |
| bromoform | 2.85 | 2.864 | - | -0.5 | 30 | 67 | 0 |
| styrene | 3.859 | 3.092 | - | 19.9 | 30 | 52 | 0 |
| 1,1,2,2-tetrachloroethane | 4.582 | 3.877 | - | 15.4 | 30 | 56 | 0 |
| o-xylene | 5.518 | 4.685 | - | 15.1 | 30 | 56 | 0 |
| 1,2,3-trichloropropane | 3.324 | 2.686 | - | 19.2 | 30 | 55 | 0 |
| isopropylbenzene | 6.935 | 5.614 | - | 19 | 30 | 55 | 0 |
| bromobenzene | 3.874 | 3.096 | - | 20.1 | 30 | 54 | 0 |
| 4-ethyl toluene | 6.76 | 6.57 | - | 2.8 | 30 | 58 | 0 |
| 1,3,5-trimethylbenzene | 5.659 | 4.963 | - | 12.3 | 30 | 54 | 0 |
| tert-butylbenzene | 6.285 | 5.224 | - | 16.9 | 30 | 55 | 0 |
| 1,2,4-trimethylbenzene | 5.662 | 5.432 | - | 4.1 | 30 | 57 | 0 |
| Benzyl Chloride | 5.107 | 4.833 | - | 5.4 | 30 | 61 | 0 |
| 1,3-dichlorobenzene | 4.024 | 3.781 | - | 6 | 30 | 56 | 0 |
| 1,4-dichlorobenzene | 4.135 | 3.769 | - | 8.9 | 30 | 55 | 0 |
| sec-butylbenzene | 8.859 | 7.448 | - | 15.9 | 30 | 55 | 0 |
| p-isopropyltoluene | 7.366 | 5.778 | - | 21.6 | 30 | 51 | 0 |
| 1,2-dichlorobenzene | 3.81 | 3.562 | - | 6.5 | 30 | 57 | 0 |
| n-butylbenzene | 7.231 | 6.351 | - | 12.2 | 30 | 55 | 0 |
| 1,2,4-trichlorobenzene | 3.251 | 3.049 | - | 6.2 | 30 | 52 | 0 |
| naphthalene | 6.703 | 5.85 | - | 12.7 | 30 | 47 | 0 |
| 1,2,3-trichlorobenzene | 2.707 | 2.405 | - | 11.2 | 30 | 46 | 0 |
| hexachlorobutadiene | 2.738 | 2.747 | - | -0.3 | 30 | 60 | 0 |

* Value outside of QC limits.

# Internal Standard Area and RT Summary
# Form 8

| | | | |
|---|---|---|---|
| Client | : CH2MHILL | Lab Number | : L1812962 |
| Project Name | : DOW HANGING ROCK | Project Number | : 693874.01.RR |
| Instrument ID | : AIRLAB15 | Analysis Date | : 04/20/18 16:16 |
| Sample No | : WG1108448-2 | Lab File ID | : R157169_EV2 |

| | Bromochloromethane | | 1,4-Difluorobenzene | | Chlorobenzene-d5 | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1108448-2 | 132894 | 9.62 | 287503 | 11.89 | 56135 | 16.55 |
| Upper Limit | 186052 | 9.95 | 402504 | 12.22 | 78589 | 16.88 |
| Lower Limit | 79736 | 9.29 | 172502 | 11.56 | 33681 | 16.22 |
| Sample ID | | | | | | |
| WG1108448-3 LCS | 132894 | 9.62 | 287503 | 11.89 | 56135 | 16.55 |
| WG1108448-4 BLANK | 123603 | 9.61 | 265728 | 11.88 | 52009 | 16.55 |
| S01-HGR-OA02-041218 | 82600 | 9.58 | 203992 | 11.87 | 46534 | 16.54 |
| S01-B505-IA06-041218 | 120004 | 9.60 | 247938 | 11.87 | 48428 | 16.54 |
| S01-B505-IA10-041218 | 90747 | 9.60 | 216902 | 11.87 | 47073 | 16.54 |
| S01-B505-IA11-041218 | 95489 | 9.60 | 236917 | 11.87 | 52636 | 16.54 |
| S01-B505-IA11-041218 DUP | 91330 | 9.60 | 226826 | 11.87 | 52155 | 16.54 |
| S01-B505-IA09-041218 | 119538 | 9.59 | 248372 | 11.87 | 47762 | 16.54 |

Area Upper Limit = +40% of internal standard area
Area Lower Limit = - 40% of internal standard area

RT Upper Limit = +0.33 minutes of internal standard RT
RT Lower Limit = -0.33 minutes of internal standard RT

* Values outside of QC limits

# Internal Standard Area and RT Summary
# Form 8

| | | | |
|---|---|---|---|
| **Client** | : CH2MHILL | **Lab Number** | : L1812962 |
| **Project Name** | : DOW HANGING ROCK | **Project Number** | : 693874.01.RR |
| **Instrument ID** | : AIRPIANO2 | **Analysis Date** | : 04/21/18 13:20 |
| **Sample No** | : WG1108672-2 | **Lab File ID** | : R253812 |

| | Bromochloromethane | | 1,4-Difluorobenzene | | Chlorobenzene-d5 | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| WG1108672-2 | 191605 | 10.54 | 388232 | 12.74 | 97750 | 17.05 |
| Upper Limit | 268247 | 10.87 | 543525 | 13.07 | 136850 | 17.38 |
| Lower Limit | 114963 | 10.21 | 232939 | 12.41 | 58650 | 16.72 |
| Sample ID | | | | | | |
| WG1108672-3 LCS | 191605 | 10.54 | 388232 | 12.74 | 97750 | 17.05 |
| WG1108672-4 BLANK | 211811 | 10.54 | 423616 | 12.74 | 91106 | 17.05 |
| S01-B505-IA12-041218 | 215253 | 10.54 | 413838 | 12.74 | 87770 | 17.05 |
| S01-B505-IA12-041218-FD01 | 216213 | 10.54 | 414230 | 12.74 | 86988 | 17.05 |
| S01-B505-IA07-041218 | 210360 | 10.54 | 404919 | 12.74 | 88374 | 17.05 |
| SP-E APT 1 DUP | 192630 | 10.54 | 374076 | 12.74 | 81395 | 17.05 |

Area Upper Limit = +40% of internal standard area
Area Lower Limit = - 40% of internal standard area

RT Upper Limit = +0.33 minutes of internal standard RT
RT Lower Limit = -0.33 minutes of internal standard RT

* Values outside of QC limits