

## Data Package



**con-test<sup>®</sup>**  
ANALYTICAL LABORATORY

September 24, 2019

Maria Wright  
Dvirka And Bartilucci  
330 Crossways Park Drive  
Woodbury, NY 11797-2015

Project Location: Farrand Controls Site  
Client Job Number:  
Project Number: 3150-16  
Laboratory Work Order Number: 19H0576

Enclosed are results of analyses for samples received by the laboratory on August 10, 2019. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read "Kaitlyn", with a stylized flourish at the end.

Kaitlyn A. Feliciano  
Project Manager

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Dvirka And Bartilucci  
330 Crossways Park Drive  
Woodbury, NY 11797-2015  
ATTN: Maria Wright

REPORT DATE: 9/24/2019

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 3150-16

**ANALYTICAL SUMMARY**

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WORK ORDER NUMBER: 19H0576

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Farrand Contols Site

| FIELD SAMPLE #    | LAB ID:    | MATRIX           | SAMPLE DESCRIPTION | TEST          | SUB LAB |
|-------------------|------------|------------------|--------------------|---------------|---------|
| Trip Blank-8/9/19 | 19H0576-01 | Trip Blank Water |                    | SW-846 8260C  |         |
| OC-19D            | 19H0576-02 | Ground Water     |                    | SW-846 8260C  |         |
| MW-21R            | 19H0576-03 | Ground Water     |                    | SOP 434-PFAAS |         |
|                   |            |                  |                    | SW-846 8260C  |         |
|                   |            |                  |                    | SW-846 8270D  |         |
| OC-19S            | 19H0576-04 | Ground Water     |                    | SW-846 8260C  |         |
| MW-21S            | 19H0576-05 | Ground Water     |                    | SOP 434-PFAAS |         |
|                   |            |                  |                    | SW-846 8260C  |         |
|                   |            |                  |                    | SW-846 8270D  |         |
| Drum Composite    | 19H0576-06 | Ground Water     |                    | SW-846 8260C  |         |



#### **CASE NARRATIVE SUMMARY**

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

REVISED REPORT 09-24-19: The 8260 and 8270 results have been revised to report to the MDL.

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**SOP 434-PFAAS****Qualifications:****S-23**

Surrogate recovery outside of control limits in BS/MS spiked sample, all reported analytes are within control criteria, data not significantly affected.

**Analyte & Samples(s) Qualified:****13C-PFDA**

B238243-BS1

**V-06**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.

**Analyte & Samples(s) Qualified:****6:2 Fluorotelomersulfonate (6:2 FT)**

S039525-CCV1

**N-EtFOSAA**

S039525-CCV1

**V-26**

Opening calibration verification was within control criteria. Closing calibration verification was outside of criteria and biased on the low side. Re-analysis yielded similar non-conformance, matrix interference confirmed.

**Analyte & Samples(s) Qualified:****6:2 Fluorotelomersulfonate (6:2 FT)**

S039480-CCV4

**Perfluorobutanoic acid (PFBA)**

S039480-CCV2, S039480-CCV3

**Perfluorooctanesulfonamide (FOS/**

S039480-CCV3

**V-32**

Opening calibration verification was within control criteria. Closing calibration verification was outside of criteria and biased on the high side. Re-analysis yielded similar non-conformance, matrix interference confirmed.

**Analyte & Samples(s) Qualified:****13C-PFOS**

S039480-CCV2

**6:2 Fluorotelomersulfonate (6:2 FT)**

S039480-CCV2

**SW-846 8260C****Qualifications:****RL-11**

Elevated reporting limit due to high concentration of target compounds.

**Analyte & Samples(s) Qualified:**

19H0576-02[OC-19D], 19H0576-03[MW-21R], 19H0576-06[Drum Composite]

**V-05**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

**Analyte & Samples(s) Qualified:****Chloromethane**

19H0576-01[Trip Blank-8/9/19], 19H0576-02[OC-19D], 19H0576-03[MW-21R], 19H0576-04[OC-19S], 19H0576-05[MW-21S], 19H0576-06[Drum Composite], B237875-BLK1, B237875-BS1, B237875-BSD1, S039168-CCV1

**n-Butylbenzene**

19H0576-01[Trip Blank-8/9/19], 19H0576-02[OC-19D], 19H0576-03[MW-21R], 19H0576-04[OC-19S], 19H0576-05[MW-21S], 19H0576-06[Drum Composite], B237875-BLK1, B237875-BS1, B237875-BSD1, S039168-CCV1

**V-20**

Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

**Analyte & Samples(s) Qualified:****Bromomethane**

B237875-BS1, B237875-BSD1, S039168-CCV1

**V-36**

Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

**Analyte & Samples(s) Qualified:****Carbon Disulfide**

B237875-BS1, B237875-BSD1, S039168-CCV1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.

I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Jakub A. Matusik  
IT Assistant

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: Trip Blank-8/9/19

Sampled: 8/9/2019 00:00

Sample ID: 19H0576-01

Sample Matrix: Trip Blank Water

## Volatile Organic Compounds by GC/MS

| Analyte                            | Results | RL   | DL   | Units | Dilution | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------------------|---------|------|------|-------|----------|-----------|--------------|---------------|--------------------|---------|
| Acetone                            | ND      | 50   | 3.8  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Acrylonitrile                      | ND      | 5.0  | 0.52 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| tert-Amyl Methyl Ether (TAME)      | ND      | 0.50 | 0.14 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Benzene                            | ND      | 1.0  | 0.18 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Bromobenzene                       | ND      | 1.0  | 0.15 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Bromochloromethane                 | ND      | 1.0  | 0.32 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Bromodichloromethane               | ND      | 0.50 | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Bromoform                          | ND      | 1.0  | 0.46 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Bromomethane                       | ND      | 5.0  | 0.78 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 2-Butanone (MEK)                   | ND      | 20   | 1.9  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| tert-Butyl Alcohol (TBA)           | ND      | 20   | 4.2  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| n-Butylbenzene                     | ND      | 1.0  | 0.21 | µg/L  | 1        | V-05      | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| sec-Butylbenzene                   | ND      | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| tert-Butylbenzene                  | ND      | 1.0  | 0.17 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| tert-Butyl Ethyl Ether (TBEE)      | ND      | 0.50 | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Carbon Disulfide                   | ND      | 5.0  | 4.4  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Carbon Tetrachloride               | ND      | 5.0  | 0.11 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Chlorobenzene                      | ND      | 1.0  | 0.15 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Chlorodibromomethane               | ND      | 0.50 | 0.21 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Chloroethane                       | ND      | 2.0  | 0.35 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Chloroform                         | ND      | 2.0  | 0.17 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Chloromethane                      | ND      | 2.0  | 0.45 | µg/L  | 1        | V-05      | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 2-Chlorotoluene                    | ND      | 1.0  | 0.12 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 4-Chlorotoluene                    | ND      | 1.0  | 0.14 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND      | 5.0  | 0.53 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,2-Dibromoethane (EDB)            | ND      | 0.50 | 0.19 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Dibromomethane                     | ND      | 1.0  | 0.37 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,2-Dichlorobenzene                | ND      | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,3-Dichlorobenzene                | ND      | 1.0  | 0.12 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,4-Dichlorobenzene                | ND      | 1.0  | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| trans-1,4-Dichloro-2-butene        | ND      | 2.0  | 0.31 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Dichlorodifluoromethane (Freon 12) | ND      | 2.0  | 0.26 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,1-Dichloroethane                 | ND      | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,2-Dichloroethane                 | ND      | 1.0  | 0.41 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,1-Dichloroethylene               | ND      | 1.0  | 0.32 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| cis-1,2-Dichloroethylene           | ND      | 1.0  | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| trans-1,2-Dichloroethylene         | ND      | 1.0  | 0.31 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,2-Dichloropropane                | ND      | 1.0  | 0.20 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,3-Dichloropropane                | ND      | 0.50 | 0.11 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 2,2-Dichloropropane                | ND      | 1.0  | 0.20 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| 1,1-Dichloropropene                | ND      | 2.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| cis-1,3-Dichloropropene            | ND      | 0.50 | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| trans-1,3-Dichloropropene          | ND      | 0.50 | 0.23 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |
| Diethyl Ether                      | ND      | 2.0  | 0.34 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/13/19 22:33      | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Controls Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

**Field Sample #: Trip Blank-8/9/19**

Sampled: 8/9/2019 00:00

**Sample ID: 19H0576-01**

Sample Matrix: Trip Blank Water

## Volatile Organic Compounds by GC/MS

| Analyte                                           | Results | RL         | DL   | Units           | Dilution | Flag/Qual | Method       | Date            | Date/Time     | Analyst |
|---------------------------------------------------|---------|------------|------|-----------------|----------|-----------|--------------|-----------------|---------------|---------|
|                                                   |         |            |      |                 |          |           |              | Prepared        | Analyzed      |         |
| Diisopropyl Ether (DIPE)                          | ND      | 0.50       | 0.17 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,4-Dioxane                                       | ND      | 50         | 22   | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Ethylbenzene                                      | ND      | 1.0        | 0.13 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Hexachlorobutadiene                               | ND      | 0.60       | 0.47 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 2-Hexanone (MBK)                                  | ND      | 10         | 1.5  | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Isopropylbenzene (Cumene)                         | ND      | 1.0        | 0.17 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| p-Isopropyltoluene (p-Cymene)                     | ND      | 1.0        | 0.20 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Methyl Acetate                                    | ND      | 1.0        | 0.42 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Methyl tert-Butyl Ether (MTBE)                    | ND      | 1.0        | 0.25 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Methyl Cyclohexane                                | ND      | 1.0        | 0.20 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Methylene Chloride                                | ND      | 5.0        | 0.34 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 4-Methyl-2-pentanone (MIBK)                       | ND      | 10         | 1.7  | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Naphthalene                                       | ND      | 2.0        | 0.31 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| n-Propylbenzene                                   | ND      | 1.0        | 0.13 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Styrene                                           | ND      | 1.0        | 0.11 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,1,1,2-Tetrachloroethane                         | ND      | 1.0        | 0.27 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,1,2,2-Tetrachloroethane                         | ND      | 0.50       | 0.22 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Tetrachloroethylene                               | ND      | 1.0        | 0.18 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Tetrahydrofuran                                   | ND      | 10         | 0.51 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Toluene                                           | ND      | 1.0        | 0.14 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,2,3-Trichlorobenzene                            | ND      | 5.0        | 0.57 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,2,4-Trichlorobenzene                            | ND      | 1.0        | 0.40 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,3,5-Trichlorobenzene                            | ND      | 1.0        | 0.30 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,1,1-Trichloroethane                             | ND      | 1.0        | 0.20 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,1,2-Trichloroethane                             | ND      | 1.0        | 0.16 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Trichloroethylene                                 | ND      | 1.0        | 0.24 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Trichlorofluoromethane (Freon 11)                 | ND      | 2.0        | 0.33 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,2,3-Trichloropropane                            | ND      | 2.0        | 0.25 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND      | 1.0        | 0.32 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,2,4-Trimethylbenzene                            | ND      | 1.0        | 0.18 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| 1,3,5-Trimethylbenzene                            | ND      | 1.0        | 0.14 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Vinyl Chloride                                    | ND      | 2.0        | 0.45 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| m+p Xylene                                        | ND      | 2.0        | 0.30 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| o-Xylene                                          | ND      | 1.0        | 0.17 | µg/L            | 1        |           | SW-846 8260C | 8/13/19         | 8/13/19 22:33 | BRF     |
| Surrogates                                        |         | % Recovery |      | Recovery Limits |          | Flag/Qual |              |                 |               |         |
| 1,2-Dichloroethane-d4                             |         | 102        |      | 70-130          |          |           |              | 8/13/19 22:33   |               |         |
| Toluene-d8                                        |         | 112        |      | 70-130          |          |           |              | 8/13/19 22:33</ |               |         |

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: Trip Blank-8/9/19

Sampled: 8/9/2019 00:00

Sample ID: 19H0576-01

Sample Matrix: Trip Blank Water

**Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)**

| Analyte       | Results | Units | Response | RT | DF | CAS # | Q# | Method       | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------------|---------|-------|----------|----|----|-------|----|--------------|------------------|-----------------------|---------|
| No TICs Found | 0.0     | µg/L  |          |    | 1  |       |    | SW-846 8260C | 8/13/19          | 8/13/19 22:33         | BRF     |

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Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: OC-19D

Sampled: 8/9/2019 10:44

Sample ID: 19H0576-02

Sample Matrix: Ground Water

Sample Flags: RL-11

## Volatile Organic Compounds by GC/MS

| Analyte                            | Results | RL  | DL  | Units | Dilution | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------------------|---------|-----|-----|-------|----------|-----------|--------------|---------------|--------------------|---------|
| Acetone                            | ND      | 500 | 38  | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Acrylonitrile                      | ND      | 50  | 5.2 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| tert-Amyl Methyl Ether (TAME)      | ND      | 5.0 | 1.4 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Benzene                            | ND      | 10  | 1.8 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Bromobenzene                       | ND      | 10  | 1.5 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Bromochloromethane                 | ND      | 10  | 3.2 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Bromodichloromethane               | ND      | 5.0 | 1.6 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Bromoform                          | ND      | 10  | 4.6 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Bromomethane                       | ND      | 50  | 7.8 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 2-Butanone (MEK)                   | ND      | 200 | 19  | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| tert-Butyl Alcohol (TBA)           | ND      | 200 | 42  | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| n-Butylbenzene                     | ND      | 10  | 2.1 | µg/L  | 10       | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| sec-Butylbenzene                   | ND      | 10  | 1.6 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| tert-Butylbenzene                  | ND      | 10  | 1.7 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| tert-Butyl Ethyl Ether (TBEE)      | ND      | 5.0 | 1.6 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Carbon Disulfide                   | ND      | 50  | 44  | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Carbon Tetrachloride               | ND      | 50  | 1.1 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Chlorobenzene                      | ND      | 10  | 1.5 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Chlorodibromomethane               | ND      | 5.0 | 2.1 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Chloroethane                       | ND      | 20  | 3.5 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Chloroform                         | ND      | 20  | 1.7 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Chloromethane                      | ND      | 20  | 4.5 | µg/L  | 10       | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 2-Chlorotoluene                    | ND      | 10  | 1.2 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 4-Chlorotoluene                    | ND      | 10  | 1.4 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND      | 50  | 5.3 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2-Dibromoethane (EDB)            | ND      | 5.0 | 1.9 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Dibromomethane                     | ND      | 10  | 3.7 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2-Dichlorobenzene                | ND      | 10  | 1.6 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,3-Dichlorobenzene                | ND      | 10  | 1.2 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,4-Dichlorobenzene                | ND      | 10  | 1.3 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| trans-1,4-Dichloro-2-butene        | ND      | 20  | 3.1 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Dichlorodifluoromethane (Freon 12) | ND      | 20  | 2.6 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,1-Dichloroethane                 | 21      | 10  | 1.6 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2-Dichloroethane                 | ND      | 10  | 4.1 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,1-Dichloroethylene               | ND      | 10  | 3.2 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| cis-1,2-Dichloroethylene           | 32      | 10  | 1.3 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| trans-1,2-Dichloroethylene         | ND      | 10  | 3.1 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2-Dichloropropane                | ND      | 10  | 2.0 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,3-Dichloropropane                | ND      | 5.0 | 1.1 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 2,2-Dichloropropane                | ND      | 10  | 2.0 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,1-Dichloropropene                | ND      | 20  | 1.6 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| cis-1,3-Dichloropropene            | ND      | 5.0 | 1.3 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| trans-1,3-Dichloropropene          | ND      | 5.0 | 2.3 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Diethyl Ether                      | ND      | 20  | 3.4 | µg/L  | 10       |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: OC-19D

Sampled: 8/9/2019 10:44

Sample ID: 19H0576-02

Sample Matrix: Ground Water

Sample Flags: RL-11

## Volatile Organic Compounds by GC/MS

| Analyte                                           | Results    | RL  | DL              | Units | Dilution  | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------------------------------------|------------|-----|-----------------|-------|-----------|-----------|--------------|---------------|--------------------|---------|
| Diisopropyl Ether (DIPE)                          | ND         | 5.0 | 1.7             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,4-Dioxane                                       | ND         | 500 | 220             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Ethylbenzene                                      | ND         | 10  | 1.3             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Hexachlorobutadiene                               | ND         | 6.0 | 4.7             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 2-Hexanone (MBK)                                  | ND         | 100 | 15              | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Isopropylbenzene (Cumene)                         | ND         | 10  | 1.7             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| p-Isopropyltoluene (p-Cymene)                     | ND         | 10  | 2.0             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Methyl Acetate                                    | ND         | 10  | 4.2             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Methyl tert-Butyl Ether (MTBE)                    | ND         | 10  | 2.5             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Methyl Cyclohexane                                | ND         | 10  | 2.0             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Methylene Chloride                                | ND         | 50  | 3.4             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 4-Methyl-2-pentanone (MIBK)                       | ND         | 100 | 17              | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Naphthalene                                       | ND         | 20  | 3.1             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| n-Propylbenzene                                   | ND         | 10  | 1.3             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Styrene                                           | ND         | 10  | 1.1             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,1,1,2-Tetrachloroethane                         | ND         | 10  | 2.7             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,1,2,2-Tetrachloroethane                         | ND         | 5.0 | 2.2             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Tetrachloroethylene                               | ND         | 10  | 1.8             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Tetrahydrofuran                                   | ND         | 100 | 5.1             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Toluene                                           | ND         | 10  | 1.4             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2,3-Trichlorobenzene                            | ND         | 50  | 5.7             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2,4-Trichlorobenzene                            | ND         | 10  | 4.0             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,3,5-Trichlorobenzene                            | ND         | 10  | 3.0             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,1,1-Trichloroethane                             | 200        | 10  | 2.0             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,1,2-Trichloroethane                             | ND         | 10  | 1.6             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Trichloroethylene                                 | 150        | 10  | 2.4             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Trichlorofluoromethane (Freon 11)                 | ND         | 20  | 3.3             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2,3-Trichloropropane                            | ND         | 20  | 2.5             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 500        | 10  | 3.2             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,2,4-Trimethylbenzene                            | ND         | 10  | 1.8             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| 1,3,5-Trimethylbenzene                            | ND         | 10  | 1.4             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Vinyl Chloride                                    | ND         | 20  | 4.5             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| m+p Xylene                                        | ND         | 20  | 3.0             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| o-Xylene                                          | ND         | 10  | 1.7             | µg/L  | 10        |           | SW-846 8260C | 8/13/19       | 8/14/19 4:11       | BRF     |
| Surrogates                                        | % Recovery |     | Recovery Limits |       | Flag/Qual |           |              |               |                    |         |
| 1,2-Dichloroethane-d4                             | 113        |     | 70-130          |       |           |           | 8/14/19 4:11 |               |                    |         |
| Toluene-d8                                        | 116        |     | 70-130          |       |           |           | 8/14/19 4:11 |               |                    |         |
| 4-Bromofluorobenzene                              | 99.0       |     | 70-130          |       |           |           | 8/14/19 4:11 |               |                    |         |



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: OC-19D

Sampled: 8/9/2019 10:44

Sample ID: 19H0576-02

Sample Matrix: Ground Water

**Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)**

| Analyte       | Results | Units | Response | RT | DF | CAS # | Q# | Method       | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------------|---------|-------|----------|----|----|-------|----|--------------|------------------|-----------------------|---------|
| No TICs Found | 0.0     | µg/L  |          |    | 10 |       |    | SW-846 8260C | 8/13/19          | 8/14/19 4:11          | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: MW-21R

Sampled: 8/9/2019 12:20

Sample ID: 19H0576-03

Sample Matrix: Ground Water

Sample Flags: RL-11

## Volatile Organic Compounds by GC/MS

| Analyte                            | Results | RL    | DL   | Units | Dilution | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------------------|---------|-------|------|-------|----------|-----------|--------------|---------------|--------------------|---------|
| Acetone                            | ND      | 50000 | 3800 | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Acrylonitrile                      | ND      | 5000  | 520  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| tert-Amyl Methyl Ether (TAME)      | ND      | 500   | 140  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Benzene                            | ND      | 1000  | 180  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Bromobenzene                       | ND      | 1000  | 150  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Bromochloromethane                 | ND      | 1000  | 320  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Bromodichloromethane               | ND      | 500   | 160  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Bromoform                          | ND      | 1000  | 460  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Bromomethane                       | ND      | 5000  | 780  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 2-Butanone (MEK)                   | ND      | 20000 | 1900 | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| tert-Butyl Alcohol (TBA)           | ND      | 20000 | 4200 | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| n-Butylbenzene                     | ND      | 1000  | 210  | µg/L  | 1000     | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| sec-Butylbenzene                   | ND      | 1000  | 160  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| tert-Butylbenzene                  | ND      | 1000  | 170  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| tert-Butyl Ethyl Ether (TBEE)      | ND      | 500   | 160  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Carbon Disulfide                   | ND      | 5000  | 4400 | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Carbon Tetrachloride               | ND      | 5000  | 110  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Chlorobenzene                      | ND      | 1000  | 150  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Chlorodibromomethane               | ND      | 500   | 210  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Chloroethane                       | ND      | 2000  | 350  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Chloroform                         | ND      | 2000  | 170  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Chloromethane                      | ND      | 2000  | 450  | µg/L  | 1000     | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 2-Chlorotoluene                    | ND      | 1000  | 120  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 4-Chlorotoluene                    | ND      | 1000  | 140  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND      | 5000  | 530  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2-Dibromoethane (EDB)            | ND      | 500   | 190  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Dibromomethane                     | ND      | 1000  | 370  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2-Dichlorobenzene                | ND      | 1000  | 160  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,3-Dichlorobenzene                | ND      | 1000  | 120  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,4-Dichlorobenzene                | ND      | 1000  | 130  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| trans-1,4-Dichloro-2-butene        | ND      | 2000  | 310  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Dichlorodifluoromethane (Freon 12) | ND      | 2000  | 260  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,1-Dichloroethane                 | 1800    | 1000  | 160  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2-Dichloroethane                 | ND      | 1000  | 410  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,1-Dichloroethylene               | ND      | 1000  | 320  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| cis-1,2-Dichloroethylene           | ND      | 1000  | 130  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| trans-1,2-Dichloroethylene         | ND      | 1000  | 310  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2-Dichloropropane                | ND      | 1000  | 200  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,3-Dichloropropane                | ND      | 500   | 110  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 2,2-Dichloropropane                | ND      | 1000  | 200  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,1-Dichloropropene                | ND      | 2000  | 160  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| cis-1,3-Dichloropropene            | ND      | 500   | 130  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| trans-1,3-Dichloropropene          | ND      | 500   | 230  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Diethyl Ether                      | ND      | 2000  | 340  | µg/L  | 1000     |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: MW-21R

Sampled: 8/9/2019 12:20

Sample ID: 19H0576-03

Sample Matrix: Ground Water

Sample Flags: RL-11

## Volatile Organic Compounds by GC/MS

| Analyte                                           | Results    | RL    | DL              | Units | Dilution  | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------------------------------------|------------|-------|-----------------|-------|-----------|-----------|--------------|---------------|--------------------|---------|
| Diisopropyl Ether (DIPE)                          | ND         | 500   | 170             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,4-Dioxane                                       | ND         | 50000 | 22000           | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Ethylbenzene                                      | ND         | 1000  | 130             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Hexachlorobutadiene                               | ND         | 600   | 470             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 2-Hexanone (MBK)                                  | ND         | 10000 | 1500            | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Isopropylbenzene (Cumene)                         | ND         | 1000  | 170             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| p-Isopropyltoluene (p-Cymene)                     | ND         | 1000  | 200             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Methyl Acetate                                    | ND         | 1000  | 420             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Methyl tert-Butyl Ether (MTBE)                    | ND         | 1000  | 250             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Methyl Cyclohexane                                | ND         | 1000  | 200             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Methylene Chloride                                | 8600       | 5000  | 340             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 4-Methyl-2-pentanone (MIBK)                       | ND         | 10000 | 1700            | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Naphthalene                                       | ND         | 2000  | 310             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| n-Propylbenzene                                   | ND         | 1000  | 130             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Styrene                                           | ND         | 1000  | 110             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,1,1,2-Tetrachloroethane                         | ND         | 1000  | 270             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,1,2,2-Tetrachloroethane                         | ND         | 500   | 220             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Tetrachloroethylene                               | ND         | 1000  | 180             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Tetrahydrofuran                                   | ND         | 10000 | 510             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Toluene                                           | ND         | 1000  | 140             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2,3-Trichlorobenzene                            | ND         | 5000  | 570             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2,4-Trichlorobenzene                            | ND         | 1000  | 400             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,3,5-Trichlorobenzene                            | ND         | 1000  | 300             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,1,1-Trichloroethane                             | 35000      | 1000  | 200             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,1,2-Trichloroethane                             | ND         | 1000  | 160             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Trichloroethylene                                 | 14000      | 1000  | 240             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Trichlorofluoromethane (Freon 11)                 | ND         | 2000  | 330             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2,3-Trichloropropane                            | ND         | 2000  | 250             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 72000      | 1000  | 320             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,2,4-Trimethylbenzene                            | ND         | 1000  | 180             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| 1,3,5-Trimethylbenzene                            | ND         | 1000  | 140             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Vinyl Chloride                                    | ND         | 2000  | 450             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| m+p Xylene                                        | ND         | 2000  | 300             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| o-Xylene                                          | ND         | 1000  | 170             | µg/L  | 1000      |           | SW-846 8260C | 8/13/19       | 8/14/19 4:42       | BRF     |
| Surrogates                                        | % Recovery |       | Recovery Limits |       | Flag/Qual |           |              |               |                    |         |
| 1,2-Dichloroethane-d4                             | 109        |       | 70-130          |       |           |           | 8/14/19 4:42 |               |                    |         |
| Toluene-d8                                        | 109        |       | 70-130          |       |           |           | 8/14/19 4:42 |               |                    |         |
| 4-Bromofluorobenzene                              | 98.3       |       | 70-130          |       |           |           | 8/14/19 4:42 |               |                    |         |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: MW-21R

Sampled: 8/9/2019 12:20

Sample ID: 19H0576-03

Sample Matrix: Ground Water

**Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)**

| Analyte       | Results | Units | Response | RT | DF   | CAS # | Q# | Method       | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------------|---------|-------|----------|----|------|-------|----|--------------|------------------|-----------------------|---------|
| No TICs Found | 0.0     | µg/L  |          |    | 1000 |       |    | SW-846 8260C | 8/13/19          | 8/14/19 4:42          | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Sampled: 8/9/2019 12:20

Field Sample #: MW-21R

Sample ID: 19H0576-03

Sample Matrix: Ground Water

## 1,4-Dioxane by isotope dilution GC/MS

| Analyte        | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------|------------|------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| 1,4-Dioxane    | 3.6        | 0.19 | 0.031           | µg/L  | 1         |           | SW-846 8270D  | 8/13/19       | 8/16/19 15:55      | CLA     |
| Surrogates     | % Recovery |      | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| 1,4-Dioxane-d8 | 25.0       |      | 15-110          |       |           |           | 8/16/19 15:55 |               |                    |         |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Controls Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Sampled: 8/9/2019 12:20

**Field Sample #: MW-21R**

**Sample ID: 19H0576-03**

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - LC/MS-MS

| Analyte                                | Results | RL         | Units           | Dilution | Flag/Qual | Method        | Date          | Date/Time     | Analyst |
|----------------------------------------|---------|------------|-----------------|----------|-----------|---------------|---------------|---------------|---------|
|                                        |         |            |                 |          |           |               | Prepared      | Analyzed      |         |
| Perfluorobutanoic acid (PFBA)          | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorobutanesulfonic acid (PFBS)    | 2.2     | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluoropentanoic acid (PFPeA)        | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorohexanoic acid (PFHxA)         | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorohexanesulfonic acid (PFHxS)   | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluoroheptanoic acid (PFHpA)        | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluoroheptanesulfonic acid (PFHpS)  | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorooctanoic acid (PFOA)          | 2.4     | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorooctanesulfonic acid (PFOS)    | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorooctanesulfonamide (FOSA)      | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | 3.2     | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorononanoic acid (PFNA)          | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorodecanoic acid (PFDA)          | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorodecanesulfonic acid (PFDS)    | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| N-EtFOSAA                              | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluoroundecanoic acid (PFUnA)       | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| N-MeFOSAA                              | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorododecanoic acid (PFDoA)       | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorotridecanoic acid (PFTrDA)     | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Perfluorotetradecanoic acid (PFTA)     | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 13:23 | BLM     |
| Surrogates                             |         | % Recovery | Recovery Limits |          | Flag/Qual |               |               |               |         |
| 13C-PFHxA                              |         | 95.2       | 70-130          |          |           |               | 8/21/19 13:23 |               |         |
| 13C-PFDA                               |         | 93.5       | 70-130          |          |           |               | 8/21/19 13:23 |               |         |
| d5-NetFOSAA                            |         | 80.9       | 70-130          |          |           |               | 8/21/19 13:23 |               |         |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: OC-19S

Sampled: 8/9/2019 11:50

Sample ID: 19H0576-04

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

| Analyte                            | Results | RL   | DL   | Units | Dilution | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------------------|---------|------|------|-------|----------|-----------|--------------|---------------|--------------------|---------|
| Acetone                            | ND      | 50   | 3.8  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Acrylonitrile                      | ND      | 5.0  | 0.52 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| tert-Amyl Methyl Ether (TAME)      | ND      | 0.50 | 0.14 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Benzene                            | ND      | 1.0  | 0.18 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Bromobenzene                       | ND      | 1.0  | 0.15 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Bromochloromethane                 | ND      | 1.0  | 0.32 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Bromodichloromethane               | ND      | 0.50 | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Bromoform                          | ND      | 1.0  | 0.46 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Bromomethane                       | ND      | 5.0  | 0.78 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 2-Butanone (MEK)                   | ND      | 20   | 1.9  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| tert-Butyl Alcohol (TBA)           | ND      | 20   | 4.2  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| n-Butylbenzene                     | ND      | 1.0  | 0.21 | µg/L  | 1        | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| sec-Butylbenzene                   | ND      | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| tert-Butylbenzene                  | ND      | 1.0  | 0.17 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| tert-Butyl Ethyl Ether (TBEE)      | ND      | 0.50 | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Carbon Disulfide                   | ND      | 5.0  | 4.4  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Carbon Tetrachloride               | ND      | 5.0  | 0.11 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Chlorobenzene                      | ND      | 1.0  | 0.15 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Chlorodibromomethane               | ND      | 0.50 | 0.21 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Chloroethane                       | ND      | 2.0  | 0.35 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Chloroform                         | ND      | 2.0  | 0.17 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Chloromethane                      | ND      | 2.0  | 0.45 | µg/L  | 1        | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 2-Chlorotoluene                    | ND      | 1.0  | 0.12 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 4-Chlorotoluene                    | ND      | 1.0  | 0.14 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND      | 5.0  | 0.53 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2-Dibromoethane (EDB)            | ND      | 0.50 | 0.19 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Dibromomethane                     | ND      | 1.0  | 0.37 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2-Dichlorobenzene                | ND      | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,3-Dichlorobenzene                | ND      | 1.0  | 0.12 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,4-Dichlorobenzene                | ND      | 1.0  | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| trans-1,4-Dichloro-2-butene        | ND      | 2.0  | 0.31 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Dichlorodifluoromethane (Freon 12) | ND      | 2.0  | 0.26 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,1-Dichloroethane                 | 3.0     | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2-Dichloroethane                 | ND      | 1.0  | 0.41 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,1-Dichloroethylene               | ND      | 1.0  | 0.32 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| cis-1,2-Dichloroethylene           | 2.2     | 1.0  | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| trans-1,2-Dichloroethylene         | ND      | 1.0  | 0.31 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2-Dichloropropane                | ND      | 1.0  | 0.20 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,3-Dichloropropane                | ND      | 0.50 | 0.11 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 2,2-Dichloropropane                | ND      | 1.0  | 0.20 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,1-Dichloropropene                | ND      | 2.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| cis-1,3-Dichloropropene            | ND      | 0.50 | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| trans-1,3-Dichloropropene          | ND      | 0.50 | 0.23 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Diethyl Ether                      | ND      | 2.0  | 0.34 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: OC-19S

Sampled: 8/9/2019 11:50

Sample ID: 19H0576-04

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

| Analyte                                           | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------------------------------------|------------|------|-----------------|-------|-----------|-----------|--------------|---------------|--------------------|---------|
| Diisopropyl Ether (DIPE)                          | ND         | 0.50 | 0.17            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,4-Dioxane                                       | ND         | 50   | 22              | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Ethylbenzene                                      | ND         | 1.0  | 0.13            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Hexachlorobutadiene                               | ND         | 0.60 | 0.47            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 2-Hexanone (MBK)                                  | ND         | 10   | 1.5             | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Isopropylbenzene (Cumene)                         | ND         | 1.0  | 0.17            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| p-Isopropyltoluene (p-Cymene)                     | ND         | 1.0  | 0.20            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Methyl Acetate                                    | ND         | 1.0  | 0.42            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Methyl tert-Butyl Ether (MTBE)                    | ND         | 1.0  | 0.25            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Methyl Cyclohexane                                | ND         | 1.0  | 0.20            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Methylene Chloride                                | ND         | 5.0  | 0.34            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 4-Methyl-2-pentanone (MIBK)                       | ND         | 10   | 1.7             | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Naphthalene                                       | ND         | 2.0  | 0.31            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| n-Propylbenzene                                   | ND         | 1.0  | 0.13            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Styrene                                           | ND         | 1.0  | 0.11            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,1,1,2-Tetrachloroethane                         | ND         | 1.0  | 0.27            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,1,2,2-Tetrachloroethane                         | ND         | 0.50 | 0.22            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Tetrachloroethylene                               | ND         | 1.0  | 0.18            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Tetrahydrofuran                                   | ND         | 10   | 0.51            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Toluene                                           | ND         | 1.0  | 0.14            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2,3-Trichlorobenzene                            | ND         | 5.0  | 0.57            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2,4-Trichlorobenzene                            | ND         | 1.0  | 0.40            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,3,5-Trichlorobenzene                            | ND         | 1.0  | 0.30            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,1,1-Trichloroethane                             | 0.62       | 1.0  | 0.20            | µg/L  | 1         | J         | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,1,2-Trichloroethane                             | ND         | 1.0  | 0.16            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Trichloroethylene                                 | 2.8        | 1.0  | 0.24            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Trichlorofluoromethane (Freon 11)                 | ND         | 2.0  | 0.33            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2,3-Trichloropropane                            | ND         | 2.0  | 0.25            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND         | 1.0  | 0.32            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,2,4-Trimethylbenzene                            | ND         | 1.0  | 0.18            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| 1,3,5-Trimethylbenzene                            | ND         | 1.0  | 0.14            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Vinyl Chloride                                    | ND         | 2.0  | 0.45            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| m+p Xylene                                        | ND         | 2.0  | 0.30            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| o-Xylene                                          | ND         | 1.0  | 0.17            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:10       | BRF     |
| Surrogates                                        | % Recovery |      | Recovery Limits |       | Flag/Qual |           |              |               |                    |         |
| 1,2-Dichloroethane-d4                             | 109        |      | 70-130          |       |           |           | 8/14/19 3:10 |               |                    |         |
| Toluene-d8                                        | 113        |      | 70-130          |       |           |           | 8/14/19 3:10 |               |                    |         |
| 4-Bromofluorobenzene                              | 99.2       |      | 70-130          |       |           |           | 8/14/19 3:10 |               |                    |         |



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Sampled: 8/9/2019 11:50

Field Sample #: OC-19S

Sample ID: 19H0576-04

Sample Matrix: Ground Water

**Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)**

| Analyte       | Results | Units | Response | RT | DF | CAS # | Q# | Method       | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------------|---------|-------|----------|----|----|-------|----|--------------|------------------|-----------------------|---------|
| No TICs Found | 0.0     | µg/L  |          |    | 1  |       |    | SW-846 8260C | 8/13/19          | 8/14/19 3:10          | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: MW-21S

Sampled: 8/9/2019 14:00

Sample ID: 19H0576-05

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

| Analyte                            | Results | RL   | DL   | Units | Dilution | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------------------|---------|------|------|-------|----------|-----------|--------------|---------------|--------------------|---------|
| Acetone                            | ND      | 50   | 3.8  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Acrylonitrile                      | ND      | 5.0  | 0.52 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| tert-Amyl Methyl Ether (TAME)      | ND      | 0.50 | 0.14 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Benzene                            | ND      | 1.0  | 0.18 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Bromobenzene                       | ND      | 1.0  | 0.15 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Bromochloromethane                 | ND      | 1.0  | 0.32 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Bromodichloromethane               | ND      | 0.50 | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Bromoform                          | ND      | 1.0  | 0.46 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Bromomethane                       | ND      | 5.0  | 0.78 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 2-Butanone (MEK)                   | ND      | 20   | 1.9  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| tert-Butyl Alcohol (TBA)           | ND      | 20   | 4.2  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| n-Butylbenzene                     | ND      | 1.0  | 0.21 | µg/L  | 1        | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| sec-Butylbenzene                   | ND      | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| tert-Butylbenzene                  | ND      | 1.0  | 0.17 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| tert-Butyl Ethyl Ether (TBEE)      | ND      | 0.50 | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Carbon Disulfide                   | ND      | 5.0  | 4.4  | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Carbon Tetrachloride               | ND      | 5.0  | 0.11 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Chlorobenzene                      | ND      | 1.0  | 0.15 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Chlorodibromomethane               | ND      | 0.50 | 0.21 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Chloroethane                       | ND      | 2.0  | 0.35 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Chloroform                         | ND      | 2.0  | 0.17 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Chloromethane                      | ND      | 2.0  | 0.45 | µg/L  | 1        | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 2-Chlorotoluene                    | ND      | 1.0  | 0.12 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 4-Chlorotoluene                    | ND      | 1.0  | 0.14 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND      | 5.0  | 0.53 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2-Dibromoethane (EDB)            | ND      | 0.50 | 0.19 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Dibromomethane                     | ND      | 1.0  | 0.37 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2-Dichlorobenzene                | ND      | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,3-Dichlorobenzene                | ND      | 1.0  | 0.12 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,4-Dichlorobenzene                | ND      | 1.0  | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| trans-1,4-Dichloro-2-butene        | ND      | 2.0  | 0.31 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Dichlorodifluoromethane (Freon 12) | ND      | 2.0  | 0.26 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,1-Dichloroethane                 | 1.8     | 1.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2-Dichloroethane                 | ND      | 1.0  | 0.41 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,1-Dichloroethylene               | ND      | 1.0  | 0.32 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| cis-1,2-Dichloroethylene           | ND      | 1.0  | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| trans-1,2-Dichloroethylene         | ND      | 1.0  | 0.31 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2-Dichloropropane                | ND      | 1.0  | 0.20 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,3-Dichloropropane                | ND      | 0.50 | 0.11 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 2,2-Dichloropropane                | ND      | 1.0  | 0.20 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,1-Dichloropropene                | ND      | 2.0  | 0.16 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| cis-1,3-Dichloropropene            | ND      | 0.50 | 0.13 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| trans-1,3-Dichloropropene          | ND      | 0.50 | 0.23 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Diethyl Ether                      | ND      | 2.0  | 0.34 | µg/L  | 1        |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: MW-21S

Sampled: 8/9/2019 14:00

Sample ID: 19H0576-05

Sample Matrix: Ground Water

## Volatile Organic Compounds by GC/MS

| Analyte                                           | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|---------------------------------------------------|------------|------|-----------------|-------|-----------|-----------|--------------|---------------|--------------------|---------|
| Diisopropyl Ether (DIPE)                          | ND         | 0.50 | 0.17            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,4-Dioxane                                       | ND         | 50   | 22              | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Ethylbenzene                                      | ND         | 1.0  | 0.13            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Hexachlorobutadiene                               | ND         | 0.60 | 0.47            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 2-Hexanone (MBK)                                  | ND         | 10   | 1.5             | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Isopropylbenzene (Cumene)                         | ND         | 1.0  | 0.17            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| p-Isopropyltoluene (p-Cymene)                     | ND         | 1.0  | 0.20            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Methyl Acetate                                    | ND         | 1.0  | 0.42            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Methyl tert-Butyl Ether (MTBE)                    | ND         | 1.0  | 0.25            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Methyl Cyclohexane                                | ND         | 1.0  | 0.20            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Methylene Chloride                                | 1.5        | 5.0  | 0.34            | µg/L  | 1         | J         | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 4-Methyl-2-pentanone (MIBK)                       | ND         | 10   | 1.7             | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Naphthalene                                       | ND         | 2.0  | 0.31            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| n-Propylbenzene                                   | ND         | 1.0  | 0.13            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Styrene                                           | ND         | 1.0  | 0.11            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,1,1,2-Tetrachloroethane                         | ND         | 1.0  | 0.27            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,1,2,2-Tetrachloroethane                         | ND         | 0.50 | 0.22            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Tetrachloroethylene                               | ND         | 1.0  | 0.18            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Tetrahydrofuran                                   | ND         | 10   | 0.51            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Toluene                                           | ND         | 1.0  | 0.14            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2,3-Trichlorobenzene                            | ND         | 5.0  | 0.57            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2,4-Trichlorobenzene                            | ND         | 1.0  | 0.40            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,3,5-Trichlorobenzene                            | ND         | 1.0  | 0.30            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,1,1-Trichloroethane                             | 44         | 1.0  | 0.20            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,1,2-Trichloroethane                             | ND         | 1.0  | 0.16            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Trichloroethylene                                 | 24         | 1.0  | 0.24            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Trichlorofluoromethane (Freon 11)                 | ND         | 2.0  | 0.33            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2,3-Trichloropropane                            | ND         | 2.0  | 0.25            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 130        | 1.0  | 0.32            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,2,4-Trimethylbenzene                            | ND         | 1.0  | 0.18            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| 1,3,5-Trimethylbenzene                            | ND         | 1.0  | 0.14            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Vinyl Chloride                                    | ND         | 2.0  | 0.45            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| m+p Xylene                                        | ND         | 2.0  | 0.30            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| o-Xylene                                          | ND         | 1.0  | 0.17            | µg/L  | 1         |           | SW-846 8260C | 8/13/19       | 8/14/19 3:41       | BRF     |
| Surrogates                                        | % Recovery |      | Recovery Limits |       | Flag/Qual |           |              |               |                    |         |
| 1,2-Dichloroethane-d4                             | 112        |      | 70-130          |       |           |           | 8/14/19 3:41 |               |                    |         |
| Toluene-d8                                        | 114        |      | 70-130          |       |           |           | 8/14/19 3:41 |               |                    |         |
| 4-Bromofluorobenzene                              | 97.0       |      | 70-130          |       |           |           | 8/14/19 3:41 |               |                    |         |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: MW-21S

Sampled: 8/9/2019 14:00

Sample ID: 19H0576-05

Sample Matrix: Ground Water

**Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)**

| Analyte             | Results | Units | Response | RT    | DF | CAS #       | Q# | Method       | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------------------|---------|-------|----------|-------|----|-------------|----|--------------|------------------|-----------------------|---------|
| Silanol, trimethyl- | 4.2     | µg/L  | 21652    | 3.741 | 1  | 001066-40-6 | 83 | SW-846 8260C | 8/13/19          | 8/14/19 3:41          | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: MW-21S

Sampled: 8/9/2019 14:00

Sample ID: 19H0576-05

Sample Matrix: Ground Water

## 1,4-Dioxane by isotope dilution GC/MS

| Analyte        | Results    | RL   | DL              | Units | Dilution  | Flag/Qual | Method        | Date Prepared | Date/Time Analyzed | Analyst |
|----------------|------------|------|-----------------|-------|-----------|-----------|---------------|---------------|--------------------|---------|
| 1,4-Dioxane    | ND         | 0.20 | 0.032           | µg/L  | 1         |           | SW-846 8270D  | 8/13/19       | 8/16/19 16:15      | CLA     |
| Surrogates     | % Recovery |      | Recovery Limits |       | Flag/Qual |           |               |               |                    |         |
| 1,4-Dioxane-d8 | 24.2       |      | 15-110          |       |           |           | 8/16/19 16:15 |               |                    |         |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Controls Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Sampled: 8/9/2019 14:00

**Field Sample #: MW-21S**

**Sample ID: 19H0576-05**

Sample Matrix: Ground Water

## Semivolatile Organic Compounds by - LC/MS-MS

| Analyte                                | Results | RL         | Units           | Dilution | Flag/Qual | Method        | Date          | Date/Time     | Analyst |
|----------------------------------------|---------|------------|-----------------|----------|-----------|---------------|---------------|---------------|---------|
|                                        |         |            |                 |          |           |               | Prepared      | Analyzed      |         |
| Perfluorobutanoic acid (PFBA)          | 2.5     | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorobutanesulfonic acid (PFBS)    | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluoropentanoic acid (PFPeA)        | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorohexanoic acid (PFHxA)         | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorohexanesulfonic acid (PFHxS)   | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluoroheptanoic acid (PFHpA)        | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluoroheptanesulfonic acid (PFHpS)  | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorooctanoic acid (PFOA)          | 2.7     | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorooctanesulfonic acid (PFOS)    | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorooctanesulfonamide (FOSA)      | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorononanoic acid (PFNA)          | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorodecanoic acid (PFDA)          | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorodecanesulfonic acid (PFDS)    | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| N-EtFOSAA                              | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluoroundecanoic acid (PFUnA)       | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| N-MeFOSAA                              | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorododecanoic acid (PFDoA)       | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorotridecanoic acid (PFTrDA)     | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Perfluorotetradecanoic acid (PFTA)     | ND      | 2.0        | ng/L            | 1        |           | SOP 434-PFAAS | 8/19/19       | 8/21/19 19:44 | BLM     |
| Surrogates                             |         | % Recovery | Recovery Limits |          | Flag/Qual |               |               |               |         |
| 13C-PFHxA                              |         | 110        | 70-130          |          |           |               | 8/21/19 19:44 |               |         |
| 13C-PFDA                               |         | 95.8       | 70-130          |          |           |               | 8/21/19 19:44 |               |         |
| d5-NetFOSAA                            |         | 76.3       | 70-130          |          |           |               | 8/21/19 19:44 |               |         |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: Drum Composite

Sampled: 8/9/2019 14:15

Sample ID: 19H0576-06

Sample Matrix: Ground Water

Sample Flags: RL-11

## Volatile Organic Compounds by GC/MS

| Analyte                            | Results | RL   | DL  | Units | Dilution | Flag/Qual | Method       | Date Prepared | Date/Time Analyzed | Analyst |
|------------------------------------|---------|------|-----|-------|----------|-----------|--------------|---------------|--------------------|---------|
| Acetone                            | ND      | 2500 | 190 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Acrylonitrile                      | ND      | 250  | 26  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| tert-Amyl Methyl Ether (TAME)      | ND      | 25   | 7.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Benzene                            | ND      | 50   | 9.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Bromobenzene                       | ND      | 50   | 7.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Bromochloromethane                 | ND      | 50   | 16  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Bromodichloromethane               | ND      | 25   | 8.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Bromoform                          | ND      | 50   | 23  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Bromomethane                       | ND      | 250  | 39  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 2-Butanone (MEK)                   | ND      | 1000 | 97  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| tert-Butyl Alcohol (TBA)           | ND      | 1000 | 210 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| n-Butylbenzene                     | ND      | 50   | 10  | µg/L  | 50       | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| sec-Butylbenzene                   | ND      | 50   | 8.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| tert-Butylbenzene                  | ND      | 50   | 8.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| tert-Butyl Ethyl Ether (TBEE)      | ND      | 25   | 8.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Carbon Disulfide                   | ND      | 250  | 220 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Carbon Tetrachloride               | ND      | 250  | 5.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Chlorobenzene                      | ND      | 50   | 7.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Chlorodibromomethane               | ND      | 25   | 10  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Chloroethane                       | ND      | 100  | 18  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Chloroform                         | ND      | 100  | 8.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Chloromethane                      | ND      | 100  | 22  | µg/L  | 50       | V-05      | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 2-Chlorotoluene                    | ND      | 50   | 6.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 4-Chlorotoluene                    | ND      | 50   | 7.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,2-Dibromo-3-chloropropane (DBCP) | ND      | 250  | 26  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,2-Dibromoethane (EDB)            | ND      | 25   | 9.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Dibromomethane                     | ND      | 50   | 18  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,2-Dichlorobenzene                | ND      | 50   | 8.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,3-Dichlorobenzene                | ND      | 50   | 6.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,4-Dichlorobenzene                | ND      | 50   | 6.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| trans-1,4-Dichloro-2-butene        | ND      | 100  | 16  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Dichlorodifluoromethane (Freon 12) | ND      | 100  | 13  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,1-Dichloroethane                 | 170     | 50   | 8.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,2-Dichloroethane                 | ND      | 50   | 20  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,1-Dichloroethylene               | ND      | 50   | 16  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| cis-1,2-Dichloroethylene           | ND      | 50   | 6.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| trans-1,2-Dichloroethylene         | ND      | 50   | 16  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,2-Dichloropropane                | ND      | 50   | 10  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,3-Dichloropropane                | ND      | 25   | 5.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 2,2-Dichloropropane                | ND      | 50   | 10  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| 1,1-Dichloropropene                | ND      | 100  | 8.0 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| cis-1,3-Dichloropropene            | ND      | 25   | 6.5 | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| trans-1,3-Dichloropropene          | ND      | 25   | 12  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |
| Diethyl Ether                      | ND      | 100  | 17  | µg/L  | 50       |           | SW-846 8260C | 8/13/19       | 8/14/19 5:13       | BRF     |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Controls Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

**Field Sample #: Drum Composite**

Sampled: 8/9/2019 14:15

**Sample ID: 19H0576-06**

Sample Matrix: Ground Water

Sample Flags: RL-11

## Volatile Organic Compounds by GC/MS

| Analyte                                           | Results | RL         | DL   | Units           | Dilution | Flag/Qual | Method       | Date         | Date/Time    | Analyst |
|---------------------------------------------------|---------|------------|------|-----------------|----------|-----------|--------------|--------------|--------------|---------|
|                                                   |         |            |      |                 |          |           |              | Prepared     | Analyzed     |         |
| Diisopropyl Ether (DIPE)                          | ND      | 25         | 8.5  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,4-Dioxane                                       | ND      | 2500       | 1100 | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Ethylbenzene                                      | ND      | 50         | 6.5  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Hexachlorobutadiene                               | ND      | 30         | 24   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 2-Hexanone (MBK)                                  | ND      | 500        | 76   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Isopropylbenzene (Cumene)                         | ND      | 50         | 8.5  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| p-Isopropyltoluene (p-Cymene)                     | ND      | 50         | 10   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Methyl Acetate                                    | ND      | 50         | 21   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Methyl tert-Butyl Ether (MTBE)                    | ND      | 50         | 12   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Methyl Cyclohexane                                | ND      | 50         | 10   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Methylene Chloride                                | 400     | 250        | 17   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 4-Methyl-2-pentanone (MIBK)                       | ND      | 500        | 84   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Naphthalene                                       | ND      | 100        | 16   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| n-Propylbenzene                                   | ND      | 50         | 6.5  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Styrene                                           | ND      | 50         | 5.5  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,1,1,2-Tetrachloroethane                         | ND      | 50         | 14   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,1,2,2-Tetrachloroethane                         | ND      | 25         | 11   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Tetrachloroethylene                               | ND      | 50         | 9.0  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Tetrahydrofuran                                   | ND      | 500        | 26   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Toluene                                           | ND      | 50         | 7.0  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,2,3-Trichlorobenzene                            | ND      | 250        | 28   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,2,4-Trichlorobenzene                            | ND      | 50         | 20   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,3,5-Trichlorobenzene                            | ND      | 50         | 15   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,1,1-Trichloroethane                             | 1800    | 50         | 10   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,1,2-Trichloroethane                             | ND      | 50         | 8.0  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Trichloroethylene                                 | 760     | 50         | 12   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Trichlorofluoromethane (Freon 11)                 | ND      | 100        | 16   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,2,3-Trichloropropane                            | ND      | 100        | 12   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 3200    | 50         | 16   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,2,4-Trimethylbenzene                            | ND      | 50         | 9.0  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| 1,3,5-Trimethylbenzene                            | ND      | 50         | 7.0  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Vinyl Chloride                                    | ND      | 100        | 22   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| m+p Xylene                                        | ND      | 100        | 15   | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| o-Xylene                                          | ND      | 50         | 8.5  | µg/L            | 50       |           | SW-846 8260C | 8/13/19      | 8/14/19 5:13 | BRF     |
| Surrogates                                        |         | % Recovery |      | Recovery Limits |          | Flag/Qual |              |              |              |         |
| 1,2-Dichloroethane-d4                             |         | 108        |      | 70-130          |          |           |              | 8/14/19 5:13 |              |         |
| Toluene-d8                                        |         | 110        |      | 70-130          |          |           |              | 8/14/19 5:13 |              |         |
| 4-Bromofluorobenzene                              |         | 95.3       |      | 70-130          |          |           |              | 8/1          |              |         |



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

Project Location: Farrand Contols Site

Sample Description:

Work Order: 19H0576

Date Received: 8/10/2019

Field Sample #: Drum Composite

Sampled: 8/9/2019 14:15

Sample ID: 19H0576-06

Sample Matrix: Ground Water

**Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED)**

| Analyte       | Results | Units | Response | RT | DF | CAS # | Q# | Method       | Date<br>Prepared | Date/Time<br>Analyzed | Analyst |
|---------------|---------|-------|----------|----|----|-------|----|--------------|------------------|-----------------------|---------|
| No TICs Found | 0.0     | µg/L  |          |    | 50 |       |    | SW-846 8260C | 8/13/19          | 8/14/19 5:13          | BRF     |

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

**Sample Extraction Data**

**Prep Method: SOP 434-PFAAS-SOP 434-PFAAS**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 19H0576-03 [MW-21R]   | B238243 | 250          | 1.00       | 08/19/19 |
| 19H0576-05 [MW-21S]   | B238243 | 250          | 1.00       | 08/19/19 |

**Prep Method: SW-846 5030B-SW-846 8260C**

| Lab Number [Field ID]          | Batch   | Initial [mL] | Final [mL] | Date     |
|--------------------------------|---------|--------------|------------|----------|
| 19H0576-01 [Trip Blank-8/9/19] | B237875 | 5            | 5.00       | 08/13/19 |
| 19H0576-02 [OC-19D]            | B237875 | 0.5          | 5.00       | 08/13/19 |
| 19H0576-03 [MW-21R]            | B237875 | 0.005        | 5.00       | 08/13/19 |
| 19H0576-04 [OC-19S]            | B237875 | 5            | 5.00       | 08/13/19 |
| 19H0576-05 [MW-21S]            | B237875 | 5            | 5.00       | 08/13/19 |
| 19H0576-06 [Drum Composite]    | B237875 | 0.1          | 5.00       | 08/13/19 |

**Prep Method: SW-846 3510C-SW-846 8270D**

| Lab Number [Field ID] | Batch   | Initial [mL] | Final [mL] | Date     |
|-----------------------|---------|--------------|------------|----------|
| 19H0576-03 [MW-21R]   | B237852 | 1040         | 1.00       | 08/13/19 |
| 19H0576-05 [MW-21S]   | B237852 | 1020         | 1.00       | 08/13/19 |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

| Analyte                             | Result | Reporting Limit | Units | Spike Level                   | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|-------------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------|-----|-----------|-------|
| <b>Batch B237875 - SW-846 5030B</b> |        |                 |       |                               |               |      |             |     |           |       |
| <b>Blank (B237875-BLK1)</b>         |        |                 |       | Prepared & Analyzed: 08/13/19 |               |      |             |     |           |       |
| Acetone                             | ND     | 50              | µg/L  |                               |               |      |             |     |           |       |
| Acrylonitrile                       | ND     | 5.0             | µg/L  |                               |               |      |             |     |           |       |
| tert-Amyl Methyl Ether (TAME)       | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| Benzene                             | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| Bromobenzene                        | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| Bromochloromethane                  | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| Bromodichloromethane                | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| Bromoform                           | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| Bromomethane                        | ND     | 2.0             | µg/L  |                               |               |      |             |     |           |       |
| 2-Butanone (MEK)                    | ND     | 20              | µg/L  |                               |               |      |             |     |           |       |
| tert-Butyl Alcohol (TBA)            | ND     | 20              | µg/L  |                               |               |      |             |     |           |       |
| n-Butylbenzene                      | ND     | 1.0             | µg/L  |                               |               |      |             |     |           | V-05  |
| sec-Butylbenzene                    | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| tert-Butylbenzene                   | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| tert-Butyl Ethyl Ether (TBEE)       | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| Carbon Disulfide                    | ND     | 5.0             | µg/L  |                               |               |      |             |     |           |       |
| Carbon Tetrachloride                | ND     | 5.0             | µg/L  |                               |               |      |             |     |           |       |
| Chlorobenzene                       | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| Chlorodibromomethane                | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| Chloroethane                        | ND     | 2.0             | µg/L  |                               |               |      |             |     |           |       |
| Chloroform                          | ND     | 2.0             | µg/L  |                               |               |      |             |     |           |       |
| Chloromethane                       | ND     | 2.0             | µg/L  |                               |               |      |             |     |           | V-05  |
| 2-Chlorotoluene                     | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 4-Chlorotoluene                     | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,2-Dibromo-3-chloropropane (DBCP)  | ND     | 5.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,2-Dibromoethane (EDB)             | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| Dibromomethane                      | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,2-Dichlorobenzene                 | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,3-Dichlorobenzene                 | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,4-Dichlorobenzene                 | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| trans-1,4-Dichloro-2-butene         | ND     | 2.0             | µg/L  |                               |               |      |             |     |           |       |
| Dichlorodifluoromethane (Freon 12)  | ND     | 2.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,1-Dichloroethane                  | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,2-Dichloroethane                  | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,1-Dichloroethylene                | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| cis-1,2-Dichloroethylene            | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| trans-1,2-Dichloroethylene          | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,2-Dichloropropane                 | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,3-Dichloropropane                 | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| 2,2-Dichloropropane                 | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| 1,1-Dichloropropene                 | ND     | 2.0             | µg/L  |                               |               |      |             |     |           |       |
| cis-1,3-Dichloropropene             | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| trans-1,3-Dichloropropene           | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| Diethyl Ether                       | ND     | 2.0             | µg/L  |                               |               |      |             |     |           |       |
| Diisopropyl Ether (DIPE)            | ND     | 0.50            | µg/L  |                               |               |      |             |     |           |       |
| 1,4-Dioxane                         | ND     | 50              | µg/L  |                               |               |      |             |     |           |       |
| Ethylbenzene                        | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| Hexachlorobutadiene                 | ND     | 0.60            | µg/L  |                               |               |      |             |     |           |       |
| 2-Hexanone (MBK)                    | ND     | 10              | µg/L  |                               |               |      |             |     |           |       |
| Isopropylbenzene (Cumene)           | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| p-Isopropyltoluene (p-Cymene)       | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |
| Methyl Acetate                      | ND     | 1.0             | µg/L  |                               |               |      |             |     |           |       |

## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

## Batch B237875 - SW-846 5030B

## Blank (B237875-BLK1)

Prepared &amp; Analyzed: 08/13/19

|                                                   |      |      |      |      |  |      |        |  |  |  |
|---------------------------------------------------|------|------|------|------|--|------|--------|--|--|--|
| Methyl tert-Butyl Ether (MTBE)                    | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| Methyl Cyclohexane                                | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| Methylene Chloride                                | ND   | 5.0  | µg/L |      |  |      |        |  |  |  |
| 4-Methyl-2-pentanone (MIBK)                       | ND   | 10   | µg/L |      |  |      |        |  |  |  |
| Naphthalene                                       | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| n-Propylbenzene                                   | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| Styrene                                           | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,1,2-Tetrachloroethane                         | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,2,2-Tetrachloroethane                         | ND   | 0.50 | µg/L |      |  |      |        |  |  |  |
| Tetrachloroethylene                               | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| Tetrahydrofuran                                   | ND   | 10   | µg/L |      |  |      |        |  |  |  |
| Toluene                                           | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,2,3-Trichlorobenzene                            | ND   | 5.0  | µg/L |      |  |      |        |  |  |  |
| 1,2,4-Trichlorobenzene                            | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,3,5-Trichlorobenzene                            | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,1-Trichloroethane                             | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,2-Trichloroethane                             | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| Trichloroethylene                                 | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| Trichlorofluoromethane (Freon 11)                 | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,2,3-Trichloropropane                            | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,2,4-Trimethylbenzene                            | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| 1,3,5-Trimethylbenzene                            | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| Vinyl Chloride                                    | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| m+p Xylene                                        | ND   | 2.0  | µg/L |      |  |      |        |  |  |  |
| o-Xylene                                          | ND   | 1.0  | µg/L |      |  |      |        |  |  |  |
| Surrogate: 1,2-Dichloroethane-d4                  | 27.5 |      | µg/L | 25.0 |  | 110  | 70-130 |  |  |  |
| Surrogate: Toluene-d8                             | 27.8 |      | µg/L | 25.0 |  | 111  | 70-130 |  |  |  |
| Surrogate: 4-Bromofluorobenzene                   | 24.5 |      | µg/L | 25.0 |  | 98.1 | 70-130 |  |  |  |

## LCS (B237875-BS1)

Prepared &amp; Analyzed: 08/13/19

|                               |      |      |      |      |  |      |        |      |      |      |
|-------------------------------|------|------|------|------|--|------|--------|------|------|------|
| Acetone                       | 97.2 | 50   | µg/L | 100  |  | 97.2 | 70-160 |      |      | †    |
| Acrylonitrile                 | 10.9 | 5.0  | µg/L | 10.0 |  | 109  | 70-130 |      |      |      |
| tert-Amyl Methyl Ether (TAME) | 9.42 | 0.50 | µg/L | 10.0 |  | 94.2 | 70-130 |      |      |      |
| Benzene                       | 9.65 | 1.0  | µg/L | 10.0 |  | 96.5 | 70-130 |      |      |      |
| Bromobenzene                  | 11.0 | 1.0  | µg/L | 10.0 |  | 110  | 70-130 |      |      |      |
| Bromochloromethane            | 11.7 | 1.0  | µg/L | 10.0 |  | 117  | 70-130 |      |      |      |
| Bromodichloromethane          | 10.9 | 0.50 | µg/L | 10.0 |  | 109  | 70-130 |      |      |      |
| Bromoform                     | 10.6 | 1.0  | µg/L | 10.0 |  | 106  | 70-130 |      |      |      |
| Bromomethane                  | 4.40 | 2.0  | µg/L | 10.0 |  | 44.0 | 40-160 | V-20 |      | †    |
| 2-Butanone (MEK)              | 101  | 20   | µg/L | 100  |  | 101  | 40-160 |      |      | †    |
| tert-Butyl Alcohol (TBA)      | 112  | 20   | µg/L | 100  |  | 112  | 40-160 |      |      | †    |
| n-Butylbenzene                | 8.39 | 1.0  | µg/L | 10.0 |  | 83.9 | 70-130 |      | V-05 |      |
| sec-Butylbenzene              | 9.13 | 1.0  | µg/L | 10.0 |  | 91.3 | 70-130 |      |      |      |
| tert-Butylbenzene             | 9.92 | 1.0  | µg/L | 10.0 |  | 99.2 | 70-130 |      |      |      |
| tert-Butyl Ethyl Ether (TBEE) | 10.1 | 0.50 | µg/L | 10.0 |  | 101  | 70-130 |      |      |      |
| Carbon Disulfide              | 10.2 | 5.0  | µg/L | 10.0 |  | 102  | 70-130 |      |      | V-36 |
| Carbon Tetrachloride          | 11.5 | 5.0  | µg/L | 10.0 |  | 115  | 70-130 |      |      |      |
| Chlorobenzene                 | 10.4 | 1.0  | µg/L | 10.0 |  | 104  | 70-130 |      |      |      |
| Chlorodibromomethane          | 12.1 | 0.50 | µg/L | 10.0 |  | 121  | 70-130 |      |      |      |
| Chloroethane                  | 10.0 | 2.0  | µg/L | 10.0 |  | 100  | 70-130 |      |      |      |
| Chloroform                    | 10.2 | 2.0  | µg/L | 10.0 |  | 102  | 70-130 |      |      |      |

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

| Analyte                             | Result | Reporting Limit | Units | Spike Level                   | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes  |
|-------------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------|-----|-----------|--------|
| <b>Batch B237875 - SW-846 5030B</b> |        |                 |       |                               |               |      |             |     |           |        |
| <b>LCS (B237875-BS1)</b>            |        |                 |       | Prepared & Analyzed: 08/13/19 |               |      |             |     |           |        |
| Chloromethane                       | 6.36   | 2.0             | µg/L  | 10.0                          |               | 63.6 | 40-160      |     |           | V-05 † |
| 2-Chlorotoluene                     | 9.95   | 1.0             | µg/L  | 10.0                          |               | 99.5 | 70-130      |     |           |        |
| 4-Chlorotoluene                     | 9.78   | 1.0             | µg/L  | 10.0                          |               | 97.8 | 70-130      |     |           |        |
| 1,2-Dibromo-3-chloropropane (DBCP)  | 11.6   | 5.0             | µg/L  | 10.0                          |               | 116  | 70-130      |     |           |        |
| 1,2-Dibromoethane (EDB)             | 10.7   | 0.50            | µg/L  | 10.0                          |               | 107  | 70-130      |     |           |        |
| Dibromomethane                      | 11.6   | 1.0             | µg/L  | 10.0                          |               | 116  | 70-130      |     |           |        |
| 1,2-Dichlorobenzene                 | 10.5   | 1.0             | µg/L  | 10.0                          |               | 105  | 70-130      |     |           |        |
| 1,3-Dichlorobenzene                 | 10.4   | 1.0             | µg/L  | 10.0                          |               | 104  | 70-130      |     |           |        |
| 1,4-Dichlorobenzene                 | 10.0   | 1.0             | µg/L  | 10.0                          |               | 100  | 70-130      |     |           |        |
| trans-1,4-Dichloro-2-butene         | 10.8   | 2.0             | µg/L  | 10.0                          |               | 108  | 70-130      |     |           |        |
| Dichlorodifluoromethane (Freon 12)  | 10.0   | 2.0             | µg/L  | 10.0                          |               | 100  | 40-160      |     |           | †      |
| 1,1-Dichloroethane                  | 10.6   | 1.0             | µg/L  | 10.0                          |               | 106  | 70-130      |     |           |        |
| 1,2-Dichloroethane                  | 12.1   | 1.0             | µg/L  | 10.0                          |               | 121  | 70-130      |     |           |        |
| 1,1-Dichloroethylene                | 10.2   | 1.0             | µg/L  | 10.0                          |               | 102  | 70-130      |     |           |        |
| cis-1,2-Dichloroethylene            | 10.4   | 1.0             | µg/L  | 10.0                          |               | 104  | 70-130      |     |           |        |
| trans-1,2-Dichloroethylene          | 11.0   | 1.0             | µg/L  | 10.0                          |               | 110  | 70-130      |     |           |        |
| 1,2-Dichloropropane                 | 10.6   | 1.0             | µg/L  | 10.0                          |               | 106  | 70-130      |     |           |        |
| 1,3-Dichloropropane                 | 10.3   | 0.50            | µg/L  | 10.0                          |               | 103  | 70-130      |     |           |        |
| 2,2-Dichloropropane                 | 10.1   | 1.0             | µg/L  | 10.0                          |               | 101  | 40-130      |     |           | †      |
| 1,1-Dichloropropene                 | 9.64   | 2.0             | µg/L  | 10.0                          |               | 96.4 | 70-130      |     |           |        |
| cis-1,3-Dichloropropene             | 9.93   | 0.50            | µg/L  | 10.0                          |               | 99.3 | 70-130      |     |           |        |
| trans-1,3-Dichloropropene           | 10.1   | 0.50            | µg/L  | 10.0                          |               | 101  | 70-130      |     |           |        |
| Diethyl Ether                       | 9.39   | 2.0             | µg/L  | 10.0                          |               | 93.9 | 70-130      |     |           |        |
| Diisopropyl Ether (DIPE)            | 9.84   | 0.50            | µg/L  | 10.0                          |               | 98.4 | 70-130      |     |           |        |
| 1,4-Dioxane                         | 122    | 50              | µg/L  | 100                           |               | 122  | 40-130      |     |           | †      |
| Ethylbenzene                        | 10.1   | 1.0             | µg/L  | 10.0                          |               | 101  | 70-130      |     |           |        |
| Hexachlorobutadiene                 | 12.2   | 0.60            | µg/L  | 10.0                          |               | 122  | 70-130      |     |           |        |
| 2-Hexanone (MBK)                    | 111    | 10              | µg/L  | 100                           |               | 111  | 70-160      |     |           | †      |
| Isopropylbenzene (Cumene)           | 10.8   | 1.0             | µg/L  | 10.0                          |               | 108  | 70-130      |     |           |        |
| p-Isopropyltoluene (p-Cymene)       | 9.98   | 1.0             | µg/L  | 10.0                          |               | 99.8 | 70-130      |     |           |        |
| Methyl Acetate                      | 9.47   | 1.0             | µg/L  | 10.0                          |               | 94.7 | 70-130      |     |           |        |
| Methyl tert-Butyl Ether (MTBE)      | 10.0   | 1.0             | µg/L  | 10.0                          |               | 100  | 70-130      |     |           |        |
| Methyl Cyclohexane                  | 9.26   | 1.0             | µg/L  | 10.0                          |               | 92.6 | 70-130      |     |           |        |
| Methylene Chloride                  | 10.1   | 5.0             | µg/L  | 10.0                          |               | 101  | 70-130      |     |           |        |
| 4-Methyl-2-pentanone (MIBK)         | 111    | 10              | µg/L  | 100                           |               | 111  | 70-160      |     |           | †      |
| Naphthalene                         | 11.3   | 2.0             | µg/L  | 10.0                          |               | 113  | 40-130      |     |           | †      |
| n-Propylbenzene                     | 9.26   | 1.0             | µg/L  | 10.0                          |               | 92.6 | 70-130      |     |           |        |
| Styrene                             | 10.2   | 1.0             | µg/L  | 10.0                          |               | 102  | 70-130      |     |           |        |
| 1,1,1,2-Tetrachloroethane           | 11.4   | 1.0             | µg/L  | 10.0                          |               | 114  | 70-130      |     |           |        |
| 1,1,2,2-Tetrachloroethane           | 10.4   | 0.50            | µg/L  | 10.0                          |               | 104  | 70-130      |     |           |        |
| Tetrachloroethylene                 | 12.0   | 1.0             | µg/L  | 10.0                          |               | 120  | 70-130      |     |           |        |
| Tetrahydrofuran                     | 9.65   | 10              | µg/L  | 10.0                          |               | 96.5 | 70-130      |     |           | J      |
| Toluene                             | 10.1   | 1.0             | µg/L  | 10.0                          |               | 101  | 70-130      |     |           |        |
| 1,2,3-Trichlorobenzene              | 11.3   | 5.0             | µg/L  | 10.0                          |               | 113  | 70-130      |     |           |        |
| 1,2,4-Trichlorobenzene              | 10.4   | 1.0             | µg/L  | 10.0                          |               | 104  | 70-130      |     |           |        |
| 1,3,5-Trichlorobenzene              | 10.3   | 1.0             | µg/L  | 10.0                          |               | 103  | 70-130      |     |           |        |
| 1,1,1-Trichloroethane               | 10.7   | 1.0             | µg/L  | 10.0                          |               | 107  | 70-130      |     |           |        |
| 1,1,2-Trichloroethane               | 10.5   | 1.0             | µg/L  | 10.0                          |               | 105  | 70-130      |     |           |        |
| Trichloroethylene                   | 10.9   | 1.0             | µg/L  | 10.0                          |               | 109  | 70-130      |     |           |        |
| Trichlorofluoromethane (Freon 11)   | 10.1   | 2.0             | µg/L  | 10.0                          |               | 101  | 70-130      |     |           |        |
| 1,2,3-Trichloropropane              | 10.9   | 2.0             | µg/L  | 10.0                          |               | 109  | 70-130      |     |           |        |

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## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

## Batch B237875 - SW-846 5030B

## LCS (B237875-BS1)

Prepared &amp; Analyzed: 08/13/19

|                                                   |      |     |      |      |  |      |        |  |  |   |
|---------------------------------------------------|------|-----|------|------|--|------|--------|--|--|---|
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.8 | 1.0 | µg/L | 10.0 |  | 108  | 70-130 |  |  |   |
| 1,2,4-Trimethylbenzene                            | 9.39 | 1.0 | µg/L | 10.0 |  | 93.9 | 70-130 |  |  |   |
| 1,3,5-Trimethylbenzene                            | 10.5 | 1.0 | µg/L | 10.0 |  | 105  | 70-130 |  |  |   |
| Vinyl Chloride                                    | 9.02 | 2.0 | µg/L | 10.0 |  | 90.2 | 40-160 |  |  | † |
| m+p Xylene                                        | 19.8 | 2.0 | µg/L | 20.0 |  | 99.0 | 70-130 |  |  |   |
| o-Xylene                                          | 9.88 | 1.0 | µg/L | 10.0 |  | 98.8 | 70-130 |  |  |   |
| Surrogate: 1,2-Dichloroethane-d4                  | 26.0 |     | µg/L | 25.0 |  | 104  | 70-130 |  |  |   |
| Surrogate: Toluene-d8                             | 26.3 |     | µg/L | 25.0 |  | 105  | 70-130 |  |  |   |
| Surrogate: 4-Bromofluorobenzene                   | 27.0 |     | µg/L | 25.0 |  | 108  | 70-130 |  |  |   |

## LCS Dup (B237875-BSD1)

Prepared &amp; Analyzed: 08/13/19

|                                    |      |      |      |      |  |      |        |        |    |        |
|------------------------------------|------|------|------|------|--|------|--------|--------|----|--------|
| Acetone                            | 93.9 | 50   | µg/L | 100  |  | 93.9 | 70-160 | 3.47   | 25 | †      |
| Acrylonitrile                      | 11.0 | 5.0  | µg/L | 10.0 |  | 110  | 70-130 | 0.912  | 25 |        |
| tert-Amyl Methyl Ether (TAME)      | 9.02 | 0.50 | µg/L | 10.0 |  | 90.2 | 70-130 | 4.34   | 25 |        |
| Benzene                            | 9.30 | 1.0  | µg/L | 10.0 |  | 93.0 | 70-130 | 3.69   | 25 |        |
| Bromobenzene                       | 10.5 | 1.0  | µg/L | 10.0 |  | 105  | 70-130 | 5.12   | 25 |        |
| Bromochloromethane                 | 11.0 | 1.0  | µg/L | 10.0 |  | 110  | 70-130 | 5.90   | 25 |        |
| Bromodichloromethane               | 11.0 | 0.50 | µg/L | 10.0 |  | 110  | 70-130 | 0.274  | 25 |        |
| Bromoform                          | 10.1 | 1.0  | µg/L | 10.0 |  | 101  | 70-130 | 5.00   | 25 |        |
| Bromomethane                       | 4.71 | 2.0  | µg/L | 10.0 |  | 47.1 | 40-160 | 6.81   | 25 | V-20 † |
| 2-Butanone (MEK)                   | 98.8 | 20   | µg/L | 100  |  | 98.8 | 40-160 | 2.36   | 25 | †      |
| tert-Butyl Alcohol (TBA)           | 109  | 20   | µg/L | 100  |  | 109  | 40-160 | 2.30   | 25 | †      |
| n-Butylbenzene                     | 8.41 | 1.0  | µg/L | 10.0 |  | 84.1 | 70-130 | 0.238  | 25 | V-05   |
| sec-Butylbenzene                   | 9.08 | 1.0  | µg/L | 10.0 |  | 90.8 | 70-130 | 0.549  | 25 |        |
| tert-Butylbenzene                  | 9.79 | 1.0  | µg/L | 10.0 |  | 97.9 | 70-130 | 1.32   | 25 |        |
| tert-Butyl Ethyl Ether (TBEE)      | 9.89 | 0.50 | µg/L | 10.0 |  | 98.9 | 70-130 | 2.10   | 25 |        |
| Carbon Disulfide                   | 9.92 | 5.0  | µg/L | 10.0 |  | 99.2 | 70-130 | 2.59   | 25 | V-36   |
| Carbon Tetrachloride               | 11.1 | 5.0  | µg/L | 10.0 |  | 111  | 70-130 | 3.90   | 25 |        |
| Chlorobenzene                      | 10.4 | 1.0  | µg/L | 10.0 |  | 104  | 70-130 | 0.865  | 25 |        |
| Chlorodibromomethane               | 12.3 | 0.50 | µg/L | 10.0 |  | 123  | 70-130 | 1.23   | 25 |        |
| Chloroethane                       | 9.93 | 2.0  | µg/L | 10.0 |  | 99.3 | 70-130 | 0.802  | 25 |        |
| Chloroform                         | 10.2 | 2.0  | µg/L | 10.0 |  | 102  | 70-130 | 0.0982 | 25 |        |
| Chloromethane                      | 6.25 | 2.0  | µg/L | 10.0 |  | 62.5 | 40-160 | 1.74   | 25 | V-05 † |
| 2-Chlorotoluene                    | 10.2 | 1.0  | µg/L | 10.0 |  | 102  | 70-130 | 2.68   | 25 |        |
| 4-Chlorotoluene                    | 9.82 | 1.0  | µg/L | 10.0 |  | 98.2 | 70-130 | 0.408  | 25 |        |
| 1,2-Dibromo-3-chloropropane (DBCP) | 11.7 | 5.0  | µg/L | 10.0 |  | 117  | 70-130 | 1.46   | 25 |        |
| 1,2-Dibromoethane (EDB)            | 10.8 | 0.50 | µg/L | 10.0 |  | 108  | 70-130 | 1.02   | 25 |        |
| Dibromomethane                     | 11.6 | 1.0  | µg/L | 10.0 |  | 116  | 70-130 | 0.00   | 25 |        |
| 1,2-Dichlorobenzene                | 10.4 | 1.0  | µg/L | 10.0 |  | 104  | 70-130 | 1.53   | 25 |        |
| 1,3-Dichlorobenzene                | 10.2 | 1.0  | µg/L | 10.0 |  | 102  | 70-130 | 1.94   | 25 |        |
| 1,4-Dichlorobenzene                | 10.3 | 1.0  | µg/L | 10.0 |  | 103  | 70-130 | 2.75   | 25 |        |
| trans-1,4-Dichloro-2-butene        | 10.3 | 2.0  | µg/L | 10.0 |  | 103  | 70-130 | 4.66   | 25 |        |
| Dichlorodifluoromethane (Freon 12) | 10.1 | 2.0  | µg/L | 10.0 |  | 101  | 40-160 | 1.09   | 25 | †      |
| 1,1-Dichloroethane                 | 10.7 | 1.0  | µg/L | 10.0 |  | 107  | 70-130 | 0.282  | 25 |        |
| 1,2-Dichloroethane                 | 12.2 | 1.0  | µg/L | 10.0 |  | 122  | 70-130 | 0.493  | 25 |        |
| 1,1-Dichloroethylene               | 9.97 | 1.0  | µg/L | 10.0 |  | 99.7 | 70-130 | 2.08   | 25 |        |
| cis-1,2-Dichloroethylene           | 10.3 | 1.0  | µg/L | 10.0 |  | 103  | 70-130 | 0.867  | 25 |        |
| trans-1,2-Dichloroethylene         | 11.0 | 1.0  | µg/L | 10.0 |  | 110  | 70-130 | 0.909  | 25 |        |
| 1,2-Dichloropropane                | 10.9 | 1.0  | µg/L | 10.0 |  | 109  | 70-130 | 2.79   | 25 |        |
| 1,3-Dichloropropane                | 10.3 | 0.50 | µg/L | 10.0 |  | 103  | 70-130 | 0.777  | 25 |        |
| 2,2-Dichloropropane                | 9.72 | 1.0  | µg/L | 10.0 |  | 97.2 | 40-130 | 3.64   | 25 | †      |
| 1,1-Dichloropropene                | 9.92 | 2.0  | µg/L | 10.0 |  | 99.2 | 70-130 | 2.86   | 25 |        |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## QUALITY CONTROL

## Volatile Organic Compounds by GC/MS - Quality Control

| Analyte                                           | Result | Reporting Limit | Units | Spike Level                   | Source Result | %REC | %REC Limits | RPD   | RPD Limit | Notes |
|---------------------------------------------------|--------|-----------------|-------|-------------------------------|---------------|------|-------------|-------|-----------|-------|
| <b>Batch B237875 - SW-846 5030B</b>               |        |                 |       |                               |               |      |             |       |           |       |
| <b>LCS Dup (B237875-BSD1)</b>                     |        |                 |       | Prepared & Analyzed: 08/13/19 |               |      |             |       |           |       |
| cis-1,3-Dichloropropene                           | 9.93   | 0.50            | µg/L  | 10.0                          |               | 99.3 | 70-130      | 0.00  | 25        |       |
| trans-1,3-Dichloropropene                         | 10.3   | 0.50            | µg/L  | 10.0                          |               | 103  | 70-130      | 1.77  | 25        |       |
| Diethyl Ether                                     | 9.29   | 2.0             | µg/L  | 10.0                          |               | 92.9 | 70-130      | 1.07  | 25        |       |
| Diisopropyl Ether (DIPE)                          | 9.82   | 0.50            | µg/L  | 10.0                          |               | 98.2 | 70-130      | 0.203 | 25        |       |
| 1,4-Dioxane                                       | 127    | 50              | µg/L  | 100                           |               | 127  | 40-130      | 3.55  | 50        | † ‡   |
| Ethylbenzene                                      | 9.94   | 1.0             | µg/L  | 10.0                          |               | 99.4 | 70-130      | 1.50  | 25        |       |
| Hexachlorobutadiene                               | 11.6   | 0.60            | µg/L  | 10.0                          |               | 116  | 70-130      | 4.70  | 25        |       |
| 2-Hexanone (MBK)                                  | 112    | 10              | µg/L  | 100                           |               | 112  | 70-160      | 0.876 | 25        | †     |
| Isopropylbenzene (Cumene)                         | 10.8   | 1.0             | µg/L  | 10.0                          |               | 108  | 70-130      | 0.185 | 25        |       |
| p-Isopropyltoluene (p-Cymene)                     | 9.88   | 1.0             | µg/L  | 10.0                          |               | 98.8 | 70-130      | 1.01  | 25        |       |
| Methyl Acetate                                    | 9.16   | 1.0             | µg/L  | 10.0                          |               | 91.6 | 70-130      | 3.33  | 25        |       |
| Methyl tert-Butyl Ether (MTBE)                    | 9.98   | 1.0             | µg/L  | 10.0                          |               | 99.8 | 70-130      | 0.699 | 25        |       |
| Methyl Cyclohexane                                | 9.20   | 1.0             | µg/L  | 10.0                          |               | 92.0 | 70-130      | 0.650 | 25        |       |
| Methylene Chloride                                | 9.73   | 5.0             | µg/L  | 10.0                          |               | 97.3 | 70-130      | 3.63  | 25        |       |
| 4-Methyl-2-pentanone (MIBK)                       | 111    | 10              | µg/L  | 100                           |               | 111  | 70-160      | 0.207 | 25        | †     |
| Naphthalene                                       | 11.2   | 2.0             | µg/L  | 10.0                          |               | 112  | 40-130      | 0.887 | 25        | †     |
| n-Propylbenzene                                   | 9.27   | 1.0             | µg/L  | 10.0                          |               | 92.7 | 70-130      | 0.108 | 25        |       |
| Styrene                                           | 10.2   | 1.0             | µg/L  | 10.0                          |               | 102  | 70-130      | 0.293 | 25        |       |
| 1,1,1,2-Tetrachloroethane                         | 11.2   | 1.0             | µg/L  | 10.0                          |               | 112  | 70-130      | 1.86  | 25        |       |
| 1,1,2,2-Tetrachloroethane                         | 10.3   | 0.50            | µg/L  | 10.0                          |               | 103  | 70-130      | 0.776 | 25        |       |
| Tetrachloroethylene                               | 11.5   | 1.0             | µg/L  | 10.0                          |               | 115  | 70-130      | 3.49  | 25        |       |
| Tetrahydrofuran                                   | 9.42   | 10              | µg/L  | 10.0                          |               | 94.2 | 70-130      | 2.41  | 25        | J     |
| Toluene                                           | 10.1   | 1.0             | µg/L  | 10.0                          |               | 101  | 70-130      | 0.00  | 25        |       |
| 1,2,3-Trichlorobenzene                            | 11.4   | 5.0             | µg/L  | 10.0                          |               | 114  | 70-130      | 1.23  | 25        |       |
| 1,2,4-Trichlorobenzene                            | 10.5   | 1.0             | µg/L  | 10.0                          |               | 105  | 70-130      | 0.191 | 25        |       |
| 1,3,5-Trichlorobenzene                            | 10.4   | 1.0             | µg/L  | 10.0                          |               | 104  | 70-130      | 0.873 | 25        |       |
| 1,1,1-Trichloroethane                             | 10.8   | 1.0             | µg/L  | 10.0                          |               | 108  | 70-130      | 0.747 | 25        |       |
| 1,1,2-Trichloroethane                             | 10.6   | 1.0             | µg/L  | 10.0                          |               | 106  | 70-130      | 0.944 | 25        |       |
| Trichloroethylene                                 | 11.0   | 1.0             | µg/L  | 10.0                          |               | 110  | 70-130      | 1.46  | 25        |       |
| Trichlorofluoromethane (Freon 11)                 | 9.73   | 2.0             | µg/L  | 10.0                          |               | 97.3 | 70-130      | 4.03  | 25        |       |
| 1,2,3-Trichloropropane                            | 11.0   | 2.0             | µg/L  | 10.0                          |               | 110  | 70-130      | 1.00  | 25        |       |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.9   | 1.0             | µg/L  | 10.0                          |               | 109  | 70-130      | 0.184 | 25        |       |
| 1,2,4-Trimethylbenzene                            | 9.59   | 1.0             | µg/L  | 10.0                          |               | 95.9 | 70-130      | 2.11  | 25        |       |
| 1,3,5-Trimethylbenzene                            | 10.1   | 1.0             | µg/L  | 10.0                          |               | 101  | 70-130      | 4.07  | 25        |       |
| Vinyl Chloride                                    | 8.74   | 2.0             | µg/L  | 10.0                          |               | 87.4 | 40-160      | 3.15  | 25        | †     |
| m+p Xylene                                        | 19.7   | 2.0             | µg/L  | 20.0                          |               | 98.6 | 70-130      | 0.456 | 25        |       |
| o-Xylene                                          | 9.87   | 1.0             | µg/L  | 10.0                          |               | 98.7 | 70-130      | 0.101 | 25        |       |
| Surrogate: 1,2-Dichloroethane-d4                  | 26.4   |                 | µg/L  | 25.0                          |               | 105  | 70-130      |       |           |       |
| Surrogate: Toluene-d8                             | 26.9   |                 | µg/L  | 25.0                          |               | 108  | 70-130      |       |           |       |
| Surrogate: 4-Bromofluorobenzene                   | 26.8   |                 | µg/L  | 25.0                          |               | 107  | 70-130      |       |           |       |

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39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

**QUALITY CONTROL**

**Tentatively Identified Compounds - Volatile Compounds (ESTIMATED VALUES REPORTED) - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch B237875 - SW-846 5030B**

**Blank (B237875-BLK1)**

Prepared & Analyzed: 08/13/19

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|               |     |  |      |  |  |  |  |  |  |  |
|---------------|-----|--|------|--|--|--|--|--|--|--|
| No TICs Found | 0.0 |  | µg/L |  |  |  |  |  |  |  |
|---------------|-----|--|------|--|--|--|--|--|--|--|



39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

**QUALITY CONTROL**
**1,4-Dioxane by isotope dilution GC/MS - Quality Control**

| Analyte | Result | Reporting<br>Limit | Units | Spike<br>Level | Source<br>Result | %REC | %REC<br>Limits | RPD | RPD<br>Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

**Batch B237852 - SW-846 3510C**
**Blank (B237852-BLK1)**

Prepared: 08/13/19 Analyzed: 08/16/19

|                           |      |      |      |      |  |      |        |  |  |  |
|---------------------------|------|------|------|------|--|------|--------|--|--|--|
| 1,4-Dioxane               | ND   | 0.20 | µg/L |      |  |      |        |  |  |  |
| Surrogate: 1,4-Dioxane-d8 | 2.45 |      | µg/L | 10.0 |  | 24.5 | 15-110 |  |  |  |

**LCS (B237852-BS1)**

Prepared: 08/13/19 Analyzed: 08/16/19

|                           |      |      |      |      |  |      |        |  |  |  |
|---------------------------|------|------|------|------|--|------|--------|--|--|--|
| 1,4-Dioxane               | 9.75 | 0.20 | µg/L | 10.0 |  | 97.5 | 40-140 |  |  |  |
| Surrogate: 1,4-Dioxane-d8 | 2.95 |      | µg/L | 10.0 |  | 29.5 | 15-110 |  |  |  |

**LCS Dup (B237852-BSD1)**

Prepared: 08/13/19 Analyzed: 08/16/19

|                           |      |      |      |      |  |      |        |      |    |  |
|---------------------------|------|------|------|------|--|------|--------|------|----|--|
| 1,4-Dioxane               | 10.2 | 0.20 | µg/L | 10.0 |  | 102  | 40-140 | 4.16 | 30 |  |
| Surrogate: 1,4-Dioxane-d8 | 2.76 |      | µg/L | 10.0 |  | 27.6 | 15-110 |      |    |  |

39 Spruce Street \* East Longmeadow, MA 01028 \* FAX 413/525-6405 \* TEL. 413/525-2332

## QUALITY CONTROL

## Semivolatile Organic Compounds by - LC/MS-MS - Quality Control

| Analyte                                | Result | Reporting Limit | Units | Spike Level | Source Result | %REC  | %REC Limits | RPD | RPD Limit | Notes |
|----------------------------------------|--------|-----------------|-------|-------------|---------------|-------|-------------|-----|-----------|-------|
| <b>Batch B238243 - SOP 434-PFAAS</b>   |        |                 |       |             |               |       |             |     |           |       |
| <b>Blank (B238243-BLK1)</b>            |        |                 |       |             |               |       |             |     |           |       |
| Prepared: 08/19/19 Analyzed: 08/21/19  |        |                 |       |             |               |       |             |     |           |       |
| Perfluorobutanoic acid (PFBA)          | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorobutanesulfonic acid (PFBS)    | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluoropentanoic acid (PFPeA)        | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorohexanoic acid (PFHxA)         | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorohexanesulfonic acid (PFHxS)   | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluoroheptanoic acid (PFHpA)        | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluoroheptanesulfonic acid (PFHpS)  | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorooctanoic acid (PFOA)          | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorooctanesulfonic acid (PFOS)    | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorooctanesulfonamide (FOSA)      | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorononanoic acid (PFNA)          | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorodecanoic acid (PFDA)          | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorodecanesulfonic acid (PFDS)    | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| N-EtFOSAA                              | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluoroundecanoic acid (PFUnA)       | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| N-MeFOSAA                              | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorododecanoic acid (PFDoA)       | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorotridecanoic acid (PFTrDA)     | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Perfluorotetradecanoic acid (PFTA)     | ND     | 2.0             | ng/L  |             |               |       |             |     |           |       |
| Surrogate: 13C-PFHxA                   | 42.6   |                 | ng/L  | 40.0        |               | 106   | 70-130      |     |           |       |
| Surrogate: 13C-PFDA                    | 34.9   |                 | ng/L  | 40.0        |               | 87.1  | 70-130      |     |           |       |
| Surrogate: d5-NEtFOSAA                 | 113    |                 | ng/L  | 160         |               | 70.4  | 70-130      |     |           |       |
| <b>LCS (B238243-BS1)</b>               |        |                 |       |             |               |       |             |     |           |       |
| Prepared: 08/19/19 Analyzed: 08/23/19  |        |                 |       |             |               |       |             |     |           |       |
| Perfluorobutanoic acid (PFBA)          | 7.80   | 2.0             | ng/L  | 10.0        |               | 78.0  | 30-110      |     |           |       |
| Perfluorobutanesulfonic acid (PFBS)    | 7.86   | 2.0             | ng/L  | 8.85        |               | 88.8  | 70-130      |     |           |       |
| Perfluoropentanoic acid (PFPeA)        | 11.2   | 2.0             | ng/L  | 10.0        |               | 112   | 70-130      |     |           |       |
| Perfluorohexanoic acid (PFHxA)         | 9.42   | 2.0             | ng/L  | 10.0        |               | 94.2  | 70-130      |     |           |       |
| Perfluorohexanesulfonic acid (PFHxS)   | 6.61   | 2.0             | ng/L  | 9.10        |               | 72.7  | 70-130      |     |           |       |
| Perfluoroheptanoic acid (PFHpA)        | 8.87   | 2.0             | ng/L  | 10.0        |               | 88.7  | 70-130      |     |           |       |
| Perfluoroheptanesulfonic acid (PFHpS)  | 7.48   | 2.0             | ng/L  | 9.50        |               | 78.7  | 70-130      |     |           |       |
| Perfluorooctanoic acid (PFOA)          | 10.4   | 2.0             | ng/L  | 10.0        |               | 104   | 70-130      |     |           |       |
| Perfluorooctanesulfonic acid (PFOS)    | 8.06   | 2.0             | ng/L  | 9.25        |               | 87.2  | 70-130      |     |           |       |
| Perfluorooctanesulfonamide (FOSA)      | 6.03   | 2.0             | ng/L  | 10.0        |               | 60.3  | 30-110      |     |           |       |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | 11.6   | 2.0             | ng/L  | 9.50        |               | 123   | 70-130      |     |           |       |
| Perfluorononanoic acid (PFNA)          | 9.57   | 2.0             | ng/L  | 10.0        |               | 95.7  | 70-130      |     |           |       |
| Perfluorodecanoic acid (PFDA)          | 10.8   | 2.0             | ng/L  | 10.0        |               | 108   | 70-130      |     |           |       |
| Perfluorodecanesulfonic acid (PFDS)    | 8.07   | 2.0             | ng/L  | 9.65        |               | 83.6  | 70-130      |     |           |       |
| N-EtFOSAA                              | 7.99   | 2.0             | ng/L  | 10.0        |               | 79.9  | 70-130      |     |           |       |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | 10.3   | 2.0             | ng/L  | 9.60        |               | 108   | 70-130      |     |           |       |
| Perfluoroundecanoic acid (PFUnA)       | 11.2   | 2.0             | ng/L  | 10.0        |               | 112   | 70-130      |     |           |       |
| N-MeFOSAA                              | 10.5   | 2.0             | ng/L  | 10.0        |               | 105   | 70-130      |     |           |       |
| Perfluorododecanoic acid (PFDoA)       | 9.60   | 2.0             | ng/L  | 10.0        |               | 96.0  | 70-130      |     |           |       |
| Perfluorotridecanoic acid (PFTrDA)     | 10.8   | 2.0             | ng/L  | 10.0        |               | 108   | 70-130      |     |           |       |
| Perfluorotetradecanoic acid (PFTA)     | 10.1   | 2.0             | ng/L  | 10.0        |               | 101   | 70-130      |     |           |       |
| Surrogate: 13C-PFHxA                   | 48.5   |                 | ng/L  | 40.0        |               | 121   | 70-130      |     |           |       |
| Surrogate: 13C-PFDA                    | 55.3   |                 | ng/L  | 40.0        |               | 138 * | 70-130      |     |           | S-23  |
| Surrogate: d5-NEtFOSAA                 | 180    |                 | ng/L  | 160         |               | 112   | 70-130      |     |           |       |

# FLAG/QUALIFIER SUMMARY

|       |                                                                                                                                                                                                                                 |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| *     | QC result is outside of established limits.                                                                                                                                                                                     |
| †     | Wide recovery limits established for difficult compound.                                                                                                                                                                        |
| ‡     | Wide RPD limits established for difficult compound.                                                                                                                                                                             |
| #     | Data exceeded client recommended or regulatory level                                                                                                                                                                            |
| ND    | Not Detected                                                                                                                                                                                                                    |
| RL    | Reporting Limit is at the level of quantitation (LOQ)                                                                                                                                                                           |
| DL    | Detection Limit is the lower limit of detection determined by the MDL study                                                                                                                                                     |
| MCL   | Maximum Contaminant Level                                                                                                                                                                                                       |
|       | Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.                                                                          |
|       | No results have been blank subtracted unless specified in the case narrative section.                                                                                                                                           |
| J     | Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).                                                                                             |
| RL-11 | Elevated reporting limit due to high concentration of target compounds.                                                                                                                                                         |
| S-23  | Surrogate recovery outside of control limits in BS/MS spiked sample, all reported analytes are within control criteria, data not significantly affected.                                                                        |
| V-05  | Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.                                                                                                  |
| V-06  | Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side for this compound.                                                                                                 |
| V-20  | Continuing calibration verification (CCV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.                         |
| V-26  | Opening calibration verification was within control criteria. Closing calibration verification was outside of criteria and biased on the low side. Re-analysis yielded similar non-conformance, matrix interference confirmed.  |
| V-32  | Opening calibration verification was within control criteria. Closing calibration verification was outside of criteria and biased on the high side. Re-analysis yielded similar non-conformance, matrix interference confirmed. |
| V-36  | Initial calibration verification (ICV) did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.                            |

# CERTIFICATIONS

## Certified Analyses included in this Report

| Analyte                                | Certifications |
|----------------------------------------|----------------|
| <b><i>SOP 434-PFAAS in Water</i></b>   |                |
| Perfluorobutanoic acid (PFBA)          | NH-P           |
| Perfluorobutanesulfonic acid (PFBS)    | NH-P           |
| Perfluoropentanoic acid (PFPeA)        | NH-P           |
| Perfluorohexanoic acid (PFHxA)         | NH-P           |
| Perfluorohexanesulfonic acid (PFHxS)   | NH-P           |
| Perfluoroheptanoic acid (PFHpA)        | NH-P           |
| Perfluorooctanoic acid (PFOA)          | NH-P           |
| Perfluorooctanesulfonic acid (PFOS)    | NH-P           |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | NH-P           |
| Perfluorononanoic acid (PFNA)          | NH-P           |
| Perfluorodecanoic acid (PFDA)          | NH-P           |
| N-EtFOSAA                              | NH-P           |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | NH-P           |
| Perfluoroundecanoic acid (PFUnA)       | NH-P           |
| N-MeFOSAA                              | NH-P           |
| Perfluorododecanoic acid (PFDoA)       | NH-P           |
| Perfluorotridecanoic acid (PFTrDA)     | NH-P           |
| Perfluorotetradecanoic acid (PFTA)     | NH-P           |
| <b><i>SW-846 8260C in Water</i></b>    |                |
| Acetone                                | CT,ME,NH,VA,NY |
| Acrylonitrile                          | CT,ME,NH,VA,NY |
| tert-Amyl Methyl Ether (TAME)          | ME,NH,VA,NY    |
| Benzene                                | CT,ME,NH,VA,NY |
| Bromobenzene                           | NY             |
| Bromochloromethane                     | ME,NH,VA,NY    |
| Bromodichloromethane                   | CT,ME,NH,VA,NY |
| Bromoform                              | CT,ME,NH,VA,NY |
| Bromomethane                           | CT,ME,NH,VA,NY |
| 2-Butanone (MEK)                       | CT,ME,NH,VA,NY |
| tert-Butyl Alcohol (TBA)               | ME,NH,VA,NY    |
| n-Butylbenzene                         | ME,VA,NY       |
| sec-Butylbenzene                       | ME,VA,NY       |
| tert-Butylbenzene                      | ME,VA,NY       |
| tert-Butyl Ethyl Ether (TBEE)          | ME,NH,VA,NY    |
| Carbon Disulfide                       | CT,ME,NH,VA,NY |
| Carbon Tetrachloride                   | CT,ME,NH,VA,NY |
| Chlorobenzene                          | CT,ME,NH,VA,NY |
| Chlorodibromomethane                   | CT,ME,NH,VA,NY |
| Chloroethane                           | CT,ME,NH,VA,NY |
| Chloroform                             | CT,ME,NH,VA,NY |
| Chloromethane                          | CT,ME,NH,VA,NY |
| 2-Chlorotoluene                        | ME,NH,VA,NY    |
| 4-Chlorotoluene                        | ME,NH,VA,NY    |
| 1,2-Dibromo-3-chloropropane (DBCP)     | NY             |
| 1,2-Dibromoethane (EDB)                | NY             |
| Dibromomethane                         | ME,NH,VA,NY    |

**CERTIFICATIONS**
**Certified Analyses included in this Report**

| Analyte                                           | Certifications |
|---------------------------------------------------|----------------|
| <b><i>SW-846 8260C in Water</i></b>               |                |
| 1,2-Dichlorobenzene                               | CT,ME,NH,VA,NY |
| 1,3-Dichlorobenzene                               | CT,ME,NH,VA,NY |
| 1,4-Dichlorobenzene                               | CT,ME,NH,VA,NY |
| trans-1,4-Dichloro-2-butene                       | ME,NH,VA,NY    |
| Dichlorodifluoromethane (Freon 12)                | ME,NH,VA,NY    |
| 1,1-Dichloroethane                                | CT,ME,NH,VA,NY |
| 1,2-Dichloroethane                                | CT,ME,NH,VA,NY |
| 1,1-Dichloroethylene                              | CT,ME,NH,VA,NY |
| cis-1,2-Dichloroethylene                          | ME,NY          |
| trans-1,2-Dichloroethylene                        | CT,ME,NH,VA,NY |
| 1,2-Dichloropropane                               | CT,ME,NH,VA,NY |
| 1,3-Dichloropropane                               | ME,VA,NY       |
| 2,2-Dichloropropane                               | ME,NH,VA,NY    |
| 1,1-Dichloropropene                               | ME,NH,VA,NY    |
| cis-1,3-Dichloropropene                           | CT,ME,NH,VA,NY |
| trans-1,3-Dichloropropene                         | CT,ME,NH,VA,NY |
| Diethyl Ether                                     | NY             |
| Diisopropyl Ether (DIPE)                          | ME,NH,VA,NY    |
| 1,4-Dioxane                                       | NY             |
| Ethylbenzene                                      | CT,ME,NH,VA,NY |
| Hexachlorobutadiene                               | CT,ME,NH,VA,NY |
| 2-Hexanone (MBK)                                  | CT,ME,NH,VA,NY |
| Isopropylbenzene (Cumene)                         | ME,VA,NY       |
| p-Isopropyltoluene (p-Cymene)                     | CT,ME,NH,VA,NY |
| Methyl Acetate                                    | NY             |
| Methyl tert-Butyl Ether (MTBE)                    | CT,ME,NH,VA,NY |
| Methyl Cyclohexane                                | NY             |
| Methylene Chloride                                | CT,ME,NH,VA,NY |
| 4-Methyl-2-pentanone (MIBK)                       | CT,ME,NH,VA,NY |
| Naphthalene                                       | ME,NH,VA,NY    |
| n-Propylbenzene                                   | CT,ME,NH,VA,NY |
| Styrene                                           | CT,ME,NH,VA,NY |
| 1,1,1,2-Tetrachloroethane                         | CT,ME,NH,VA,NY |
| 1,1,2,2-Tetrachloroethane                         | CT,ME,NH,VA,NY |
| Tetrachloroethylene                               | CT,ME,NH,VA,NY |
| Toluene                                           | CT,ME,NH,VA,NY |
| 1,2,3-Trichlorobenzene                            | ME,NH,VA,NY    |
| 1,2,4-Trichlorobenzene                            | CT,ME,NH,VA,NY |
| 1,3,5-Trichlorobenzene                            | ME             |
| 1,1,1-Trichloroethane                             | CT,ME,NH,VA,NY |
| 1,1,2-Trichloroethane                             | CT,ME,NH,VA,NY |
| Trichloroethylene                                 | CT,ME,NH,VA,NY |
| Trichlorofluoromethane (Freon 11)                 | CT,ME,NH,VA,NY |
| 1,2,3-Trichloropropane                            | ME,NH,VA,NY    |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | VA,NY          |
| 1,2,4-Trimethylbenzene                            | ME,VA,NY       |
| 1,3,5-Trimethylbenzene                            | ME,VA,NY       |

**CERTIFICATIONS**
**Certified Analyses included in this Report**

| Analyte                      | Certifications |
|------------------------------|----------------|
| <b>SW-846 8260C in Water</b> |                |
| Vinyl Chloride               | CT,ME,NH,VA,NY |
| m+p Xylene                   | CT,ME,NH,VA,NY |
| o-Xylene                     | CT,ME,NH,VA,NY |

**SW-846 8270D in Water**

|             |    |
|-------------|----|
| 1,4-Dioxane | NY |
|-------------|----|

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

| Code  | Description                                  | Number        | Expires    |
|-------|----------------------------------------------|---------------|------------|
| AIHA  | AIHA-LAP, LLC - ISO17025:2017                | 100033        | 03/1/2020  |
| MA    | Massachusetts DEP                            | M-MA100       | 06/30/2020 |
| CT    | Connecticut Department of Public Health      | PH-0567       | 09/30/2021 |
| NY    | New York State Department of Health          | 10899 NELAP   | 04/1/2020  |
| NH-S  | New Hampshire Environmental Lab              | 2516 NELAP    | 02/5/2020  |
| RI    | Rhode Island Department of Health            | LAO00112      | 12/30/2019 |
| NC    | North Carolina Div. of Water Quality         | 652           | 12/31/2019 |
| NJ    | New Jersey DEP                               | MA007 NELAP   | 06/30/2020 |
| FL    | Florida Department of Health                 | E871027 NELAP | 06/30/2020 |
| VT    | Vermont Department of Health Lead Laboratory | LL015036      | 07/30/2020 |
| ME    | State of Maine                               | 2011028       | 06/9/2021  |
| VA    | Commonwealth of Virginia                     | 460217        | 12/14/2019 |
| NH-P  | New Hampshire Environmental Lab              | 2557 NELAP    | 09/6/2020  |
| VT-DW | Vermont Department of Health Drinking Water  | VT-255716     | 06/12/2020 |
| NC-DW | North Carolina Department of Health          | 25703         | 07/31/2020 |
| PA    | Commonwealth of Pennsylvania DEP             | 68-05812      | 06/30/2020 |

Company Name: **D+B Engineers + Architects PC**  
Address: **330 Crossways Park Drive**  
**Woodbury NY 11797**  
Phone: **516-464-9890**  
Project Name:  
Project Location: **Fairford Controls Site**  
Project Number: **3150-16**  
Project Manager: **Maria Wright**  
Con-Test Quote Name/Number:  
Invoice Recipient: **Maria Wright**  
Sampled By: **Keith Robins**

**Requested Turnaround Time**  
7-Day ☐ 10-Day ☐  
Due Date: **Standard**

**Rush Approval Required**  
1-Day ☐ 3-Day ☐  
2-Day ☐ 4-Day ☐

**Data Delivery**  
Format: PDF ☒ EXCEL ☒  
Other: **CATGEN 3.0 deliverables**  
CLP Like Data Pkg Required: ☐  
Email To: **Labdata@db-engineers.com**  
Fax To #:

| Con-Test Work Order# | Client Sample ID / Description | Beginning Date/Time | Ending Date/Time | Composite | Grab | Matrix Code | Conc Code | TCL VOCs 7165 (8200) | 1,4-Dioxane 1511 (8200) | PFAS - Modified 1537 Standard 1554 | ANALYSIS REQUESTED |
|----------------------|--------------------------------|---------------------|------------------|-----------|------|-------------|-----------|----------------------|-------------------------|------------------------------------|--------------------|
| 1                    | Trip Blank - 8/9/19            | 8/9/19              | 8/9/19           | -         | -    | AWQ         | C         | ✓                    | -                       | -                                  |                    |
| 2                    | OE-19D                         | 8/9/19              | 8/9/19           | -         | ✓    | GW          | H         | ✓                    | -                       | -                                  |                    |
| 3                    | MW-21R                         | 8/9/19              | 8/9/19           | -         | ✓    | GW          | N         | ✓                    | ✓                       | ✓                                  |                    |
| 4                    | OE-19S                         | 8/9/19              | 8/9/19           | -         | ✓    | GW          | H         | ✓                    | -                       | -                                  |                    |
| 5                    | MW-21S                         | 8/9/19              | 8/9/19           | -         | ✓    | GW          | H         | ✓                    | ✓                       | ✓                                  |                    |
| 6                    | Drum Composite                 | 8/9/19              | 8/9/19           | ✓         | -    | GW          | H         | ✓                    | -                       | -                                  |                    |

# of Containers  
Preservation Code  
Container Code

**Dissolved Metals Samples**  
☐ Field Filtered  
☐ Lab to Filter

**Orthophosphate Samples**  
☐ Field Filtered  
☐ Lab to Filter

**1 Matrix Codes:**  
GW = Ground Water  
WW = Waste Water  
DW = Drinking Water  
A = Air  
S = Soil  
SL = Sludge  
SOL = Solid  
O = Other (please define)

**2 Preservation Codes:**  
I = Iced  
H = HCL  
M = Methanol  
N = Nitric Acid  
S = Sulfuric Acid  
B = Sodium Bisulfate  
X = Sodium Hydroxide  
T = Sodium Thiosulfate  
O = Other (please define)

**3 Container Codes:**  
A = Amber Glass  
G = Glass  
P = Plastic  
ST = Sterile  
V = Vial  
S = Summa Canister  
T = Tedlar Bag  
O = Other (please define)

Comments: **Provide category "B" Deliverables and EDDs**

Please use the following codes to indicate possible sample concentration within the Conc Code column above:  
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Relinquished by: (signature) **Keith Robins** Date/Time: **08/09/19 400 PM**  
Received by: (signature) **2.2** Date/Time: **8/10/19 1036**  
Relinquished by: (signature) Date/Time:  
Received by: (signature) Date/Time:  
Relinquished by: (signature) Date/Time:  
Received by: (signature) Date/Time:

**Project & Regulatory Information**  
☐ AWQ STDS ☐ NY TOGS  
☐ NYC Sewer Discharge ☐ NY CP-51  
☐ Part 360 GW (Landfill)  
☐ NY Restricted Use  
☐ NY Unrestricted Use  
☐ NY Part 375

**Deliverables**  
☐ Enhanced Data Package  
☒ NYSDEC EQUIS EDD  
☐ EQUIS (Standard) EDD  
☐ NY Regulatory EDD  
☐ NY Regs Hits-Only EDD

**Other:**  
**NELAC and AIHA-LAP, LLC Accredited**

**Project Entity**  
☐ Government ☐ Municipality ☐ MWRA ☐ WRTA  
☐ Federal ☐ 21 J ☐ School  
☐ City ☐ Brownfield ☐ MBTA

**Other**  
☐ Chromatogram  
☐ AIHA-LAP, LLC

**PCB ONLY**  
☐ Soxhlet  
☐ Non Soxhlet

813463935430 

Delivered  
Saturday 8/10/2019 at 10:36 am

**DELIVERED**

Signed for by: M.PROPITIC

**GET STATUS UPDATES****OBTAIN PROOF OF DELIVERY**

**FROM**  
WOODBURY, NY US

**TO**  
EAST LONGMEADOW, MA US

**Shipment Facts****TRACKING NUMBER**

813463935430

**SERVICE**

FedEx Priority Overnight

**WEIGHT**

56 lbs / 25.4 kgs

**DIMENSIONS**

24x13x13 in.

**DELIVERED TO**

Receptionist/Front Desk

**TOTAL PIECES**

1

**TOTAL SHIPMENT WEIGHT**

56 lbs / 25.4 kgs

**TERMS**

Third Party

**PACKAGING**

Your Packaging

**SPECIAL HANDLING SECTION**

Saturday Delivery

**STANDARD TRANSIT**

8/10/2019 by 12:00 pm

**SHIP DATE**

Fri 8/09/2019

**ACTUAL DELIVERY**

Sat 8/10/2019 10:36 am

**Travel History**

Local Scan Time



Saturday, 8/10/2019

|          |                     |                               |
|----------|---------------------|-------------------------------|
| 10:36 am | EAST LONGMEADOW, MA | Delivered                     |
| 8:37 am  | WINDSOR LOCKS, CT   | On FedEx vehicle for delivery |
| 8:11 am  | WINDSOR LOCKS, CT   | At local FedEx facility       |
| 6:34 am  | EAST GRANBY, CT     | At destination sort facility  |



I Have Not Confirmed Sample Container  
Numbers With Lab Staff Before Relinquishing  
Over Samples \_\_\_\_\_



**con-test®**  
ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False  
Statement will be brought to the attention of the Client - State True or False

Client D+B

Received By RAP Date 8/10/19 Time 1636

How were the samples received? In Cooler T No Cooler \_\_\_\_\_ On Ice T No Ice \_\_\_\_\_  
Direct from Sampling \_\_\_\_\_ Ambient \_\_\_\_\_ Melted Ice \_\_\_\_\_

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 2.2  
By Blank # \_\_\_\_\_ Actual Temp - \_\_\_\_\_

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all Client T Analysis T Sampler Name T  
pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? \_\_\_\_\_

Are there Rushes? F Who was notified? \_\_\_\_\_

Are there Short Holds? F Who was notified? \_\_\_\_\_

Is there enough Volume? T

Is there Headspace where applicable? F

Proper Media/Containers Used? T MS/MSD? F

Were trip blanks received? T Is splitting samples required? F

Do all samples have the proper pH? NA Acid \_\_\_\_\_ Base \_\_\_\_\_

| Vials        | #         | Containers:  | #        |                 | #        |               | # |
|--------------|-----------|--------------|----------|-----------------|----------|---------------|---|
| Unp-         |           | 1 Liter Amb. | <u>4</u> | 1 Liter Plastic |          | 16 oz Amb.    |   |
| HCL-         | <u>17</u> | 500 mL Amb.  |          | 500 mL Plastic  |          | 8oz Amb/Clear |   |
| Meoh-        |           | 250 mL Amb.  |          | 250 mL Plastic  | <u>4</u> | 4oz Amb/Clear |   |
| Bisulfate-   |           | Flashpoint   |          | Col./Bacteria   |          | 2oz Amb/Clear |   |
| DI-          |           | Other Glass  |          | Other Plastic   |          | Encore        |   |
| Thiosulfate- |           | SOC Kit      |          | Plastic Bag     |          | Frozen:       |   |
| Sulfuric-    |           | Perchlorate  |          | Ziplock         |          |               |   |

#### Unused Media

| Vials        | # | Containers:   | # |                 | # |               | # |
|--------------|---|---------------|---|-----------------|---|---------------|---|
| Unp-         |   | 1 Liter Amb.  |   | 1 Liter Plastic |   | 16 oz Amb.    |   |
| HCL-         |   | 500 mL Amb.   |   | 500 mL Plastic  |   | 8oz Amb/Clear |   |
| Meoh-        |   | 250 mL Amb.   |   | 250 mL Plastic  |   | 4oz Amb/Clear |   |
| Bisulfate-   |   | Col./Bacteria |   | Flashpoint      |   | 2oz Amb/Clear |   |
| DI-          |   | Other Plastic |   | Other Glass     |   | Encore        |   |
| Thiosulfate- |   | SOC Kit       |   | Plastic Bag     |   | Frozen:       |   |
| Sulfuric-    |   | Perchlorate   |   | Ziplock         |   |               |   |

Comments:

VOA

**SAMPLE DATA**

# 1 - FORM I

## ANALYSIS DATA SHEET

48

Trip Blank-8/9/19

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Trip Blank Water               | Laboratory ID: | 19H0576-01            |
|                |                                | File ID:       | B1922532.D            |
| Sampled:       | 08/09/19 00:00                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/13/19 22:33        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q    |
|----------|------------------------------------|--------------|------|------|------|
| 67-64-1  | Acetone                            |              | 3.8  | 50   |      |
| 107-13-1 | Acrylonitrile                      |              | 0.52 | 5.0  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      |              | 0.14 | 0.50 |      |
| 71-43-2  | Benzene                            |              | 0.18 | 1.0  |      |
| 108-86-1 | Bromobenzene                       |              | 0.15 | 1.0  |      |
| 74-97-5  | Bromochloromethane                 |              | 0.32 | 1.0  |      |
| 75-27-4  | Bromodichloromethane               |              | 0.16 | 0.50 |      |
| 75-25-2  | Bromoform                          |              | 0.46 | 1.0  |      |
| 74-83-9  | Bromomethane                       |              | 0.78 | 5.0  |      |
| 78-93-3  | 2-Butanone (MEK)                   |              | 1.9  | 20   |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           |              | 4.2  | 20   |      |
| 104-51-8 | n-Butylbenzene                     |              | 0.21 | 1.0  | V-05 |
| 135-98-8 | sec-Butylbenzene                   |              | 0.16 | 1.0  |      |
| 98-06-6  | tert-Butylbenzene                  |              | 0.17 | 1.0  |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      |              | 0.16 | 0.50 |      |
| 75-15-0  | Carbon Disulfide                   |              | 4.4  | 5.0  |      |
| 56-23-5  | Carbon Tetrachloride               |              | 0.11 | 5.0  |      |
| 108-90-7 | Chlorobenzene                      |              | 0.15 | 1.0  |      |
| 124-48-1 | Chlorodibromomethane               |              | 0.21 | 0.50 |      |
| 75-00-3  | Chloroethane                       |              | 0.35 | 2.0  |      |
| 67-66-3  | Chloroform                         |              | 0.17 | 2.0  |      |
| 74-87-3  | Chloromethane                      |              | 0.45 | 2.0  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    |              | 0.12 | 1.0  |      |
| 106-43-4 | 4-Chlorotoluene                    |              | 0.14 | 1.0  |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) |              | 0.53 | 5.0  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            |              | 0.19 | 0.50 |      |
| 74-95-3  | Dibromomethane                     |              | 0.37 | 1.0  |      |
| 95-50-1  | 1,2-Dichlorobenzene                |              | 0.16 | 1.0  |      |
| 541-73-1 | 1,3-Dichlorobenzene                |              | 0.12 | 1.0  |      |
| 106-46-7 | 1,4-Dichlorobenzene                |              | 0.13 | 1.0  |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

49

Trip Blank-8/9/19

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Trip Blank Water               | Laboratory ID: | 19H0576-01            |
|                |                                | File ID:       | B1922532.D            |
| Sampled:       | 08/09/19 00:00                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/13/19 22:33        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q |
|------------|------------------------------------|--------------|------|------|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        |              | 0.31 | 2.0  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) |              | 0.26 | 2.0  |   |
| 75-34-3    | 1,1-Dichloroethane                 |              | 0.16 | 1.0  |   |
| 107-06-2   | 1,2-Dichloroethane                 |              | 0.41 | 1.0  |   |
| 75-35-4    | 1,1-Dichloroethylene               |              | 0.32 | 1.0  |   |
| 156-59-2   | cis-1,2-Dichloroethylene           |              | 0.13 | 1.0  |   |
| 156-60-5   | trans-1,2-Dichloroethylene         |              | 0.31 | 1.0  |   |
| 78-87-5    | 1,2-Dichloropropane                |              | 0.20 | 1.0  |   |
| 142-28-9   | 1,3-Dichloropropane                |              | 0.11 | 0.50 |   |
| 594-20-7   | 2,2-Dichloropropane                |              | 0.20 | 1.0  |   |
| 563-58-6   | 1,1-Dichloropropene                |              | 0.16 | 2.0  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            |              | 0.13 | 0.50 |   |
| 10061-02-6 | trans-1,3-Dichloropropene          |              | 0.23 | 0.50 |   |
| 60-29-7    | Diethyl Ether                      |              | 0.34 | 2.0  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           |              | 0.17 | 0.50 |   |
| 123-91-1   | 1,4-Dioxane                        |              | 22   | 50   |   |
| 100-41-4   | Ethylbenzene                       |              | 0.13 | 1.0  |   |
| 87-68-3    | Hexachlorobutadiene                |              | 0.47 | 0.60 |   |
| 591-78-6   | 2-Hexanone (MBK)                   |              | 1.5  | 10   |   |
| 98-82-8    | Isopropylbenzene (Cumene)          |              | 0.17 | 1.0  |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      |              | 0.20 | 1.0  |   |
| 79-20-9    | Methyl Acetate                     |              | 0.42 | 1.0  |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     |              | 0.25 | 1.0  |   |
| 108-87-2   | Methyl Cyclohexane                 |              | 0.20 | 1.0  |   |
| 75-09-2    | Methylene Chloride                 |              | 0.34 | 5.0  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        |              | 1.7  | 10   |   |
| 91-20-3    | Naphthalene                        |              | 0.31 | 2.0  |   |
| 103-65-1   | n-Propylbenzene                    |              | 0.13 | 1.0  |   |
| 100-42-5   | Styrene                            |              | 0.11 | 1.0  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          |              | 0.27 | 1.0  |   |

# 1 - FORM I

## ANALYSIS DATA SHEET

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Trip Blank-8/9/19

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Trip Blank Water               | Laboratory ID: | 19H0576-01            |
|                |                                | File ID:       | B1922532.D            |
| Sampled:       | 08/09/19 00:00                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/13/19 22:33        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.       | COMPOUND                                          | CONC. (µg/L) | MDL  | RL   | Q |
|---------------|---------------------------------------------------|--------------|------|------|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                         |              | 0.22 | 0.50 |   |
| 127-18-4      | Tetrachloroethylene                               |              | 0.18 | 1.0  |   |
| 109-99-9      | Tetrahydrofuran                                   |              | 0.51 | 10   |   |
| 108-88-3      | Toluene                                           |              | 0.14 | 1.0  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                            |              | 0.57 | 5.0  |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                            |              | 0.40 | 1.0  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                            |              | 0.30 | 1.0  |   |
| 71-55-6       | 1,1,1-Trichloroethane                             |              | 0.20 | 1.0  |   |
| 79-00-5       | 1,1,2-Trichloroethane                             |              | 0.16 | 1.0  |   |
| 79-01-6       | Trichloroethylene                                 |              | 0.24 | 1.0  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                 |              | 0.33 | 2.0  |   |
| 96-18-4       | 1,2,3-Trichloropropane                            |              | 0.25 | 2.0  |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) |              | 0.32 | 1.0  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                            |              | 0.18 | 1.0  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                            |              | 0.14 | 1.0  |   |
| 75-01-4       | Vinyl Chloride                                    |              | 0.45 | 2.0  |   |
| 108383/106423 | m+p Xylene                                        |              | 0.30 | 2.0  |   |
| 95-47-6       | o-Xylene                                          |              | 0.17 | 1.0  |   |
|               | No TICs Found                                     | 0.0          |      |      |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922532.D  
 Acq On : 13 Aug 2019 10:33 pm  
 Operator :  
 Sample : 19H0576-01 @ TB (TICs)  
 Misc :  
 ALS Vial : 32 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 11:03:53 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc  | Units | Dev (Min) |
|-------------------------------|--------|------|----------|-------|-------|-----------|
| Internal Standards            |        |      |          |       |       |           |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301  | 168  | 55198    | 30.00 | UG/L  | 0.00      |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.014  | 114  | 76202    | 30.00 | UG/L  | 0.00      |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842  | 82   | 47743    | 30.00 | UG/L  | 0.00      |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.138 | 152  | 49244    | 30.00 | UG/L  | 0.00      |

|                             |        |       |          |          |      |         |
|-----------------------------|--------|-------|----------|----------|------|---------|
| System Monitoring Compounds |        |       |          |          |      |         |
| 2) 1,2-DICHLOROETHANE-D4 SS | 4.582  | 65    | 36303    | 25.52    | UG/L | 0.00    |
| Spiked Amount               | 25.000 | Range | 70 - 130 | Recovery | =    | 102.08% |
| 45) TOLUENE-D8 SS           | 6.444  | 98    | 83824    | 28.11    | UG/L | 0.00    |
| Spiked Amount               | 25.000 | Range | 70 - 130 | Recovery | =    | 112.44% |
| 66) 4-BROMOFLUROBENZENE SS  | 8.999  | 95    | 34987    | 24.90    | UG/L | 0.00    |
| Spiked Amount               | 25.000 | Range | 70 - 130 | Recovery | =    | 99.60%  |

| Target Compounds                                                           | Qvalue |
|----------------------------------------------------------------------------|--------|
| -----                                                                      |        |
| (#) = qualifier out of range (m) = manual integration (+) = signals summed |        |

Data Path : Y:\1\DATA\B081319\

Data File : B1922532.D

Acq On : 13 Aug 2019 10:33 pm

Operator :

Sample : 19H0576-01 @ TB (TICs)

Inst : GCMSVOA2

Misc :

ALS Vial : 32 Sample Multiplier: 1

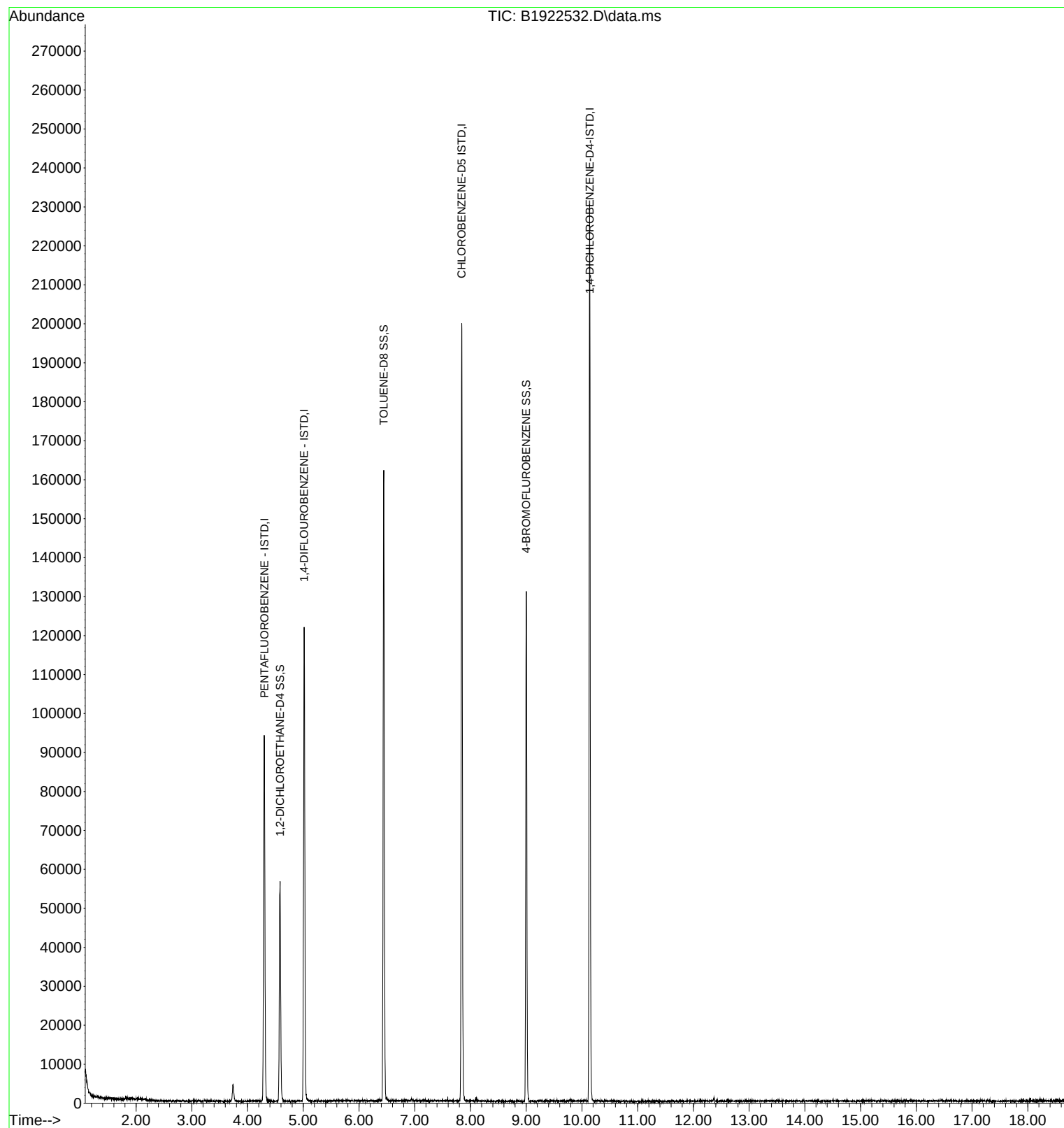
Quant Time: Aug 14 11:03:53 2019

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Fri Apr 19 05:25:51 2019

Response via : Initial Calibration





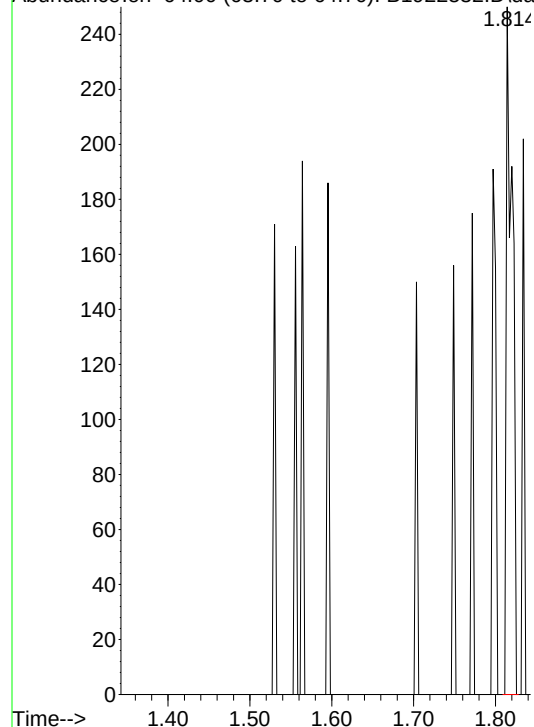
Data Path : Y:\1\DATA\B081319\  
Data File : B1922532.D  
Acq On : 13 Aug 2019 10:33 pm  
Operator :  
Sample : 19H0576-01 @ TB (TICs)  
Misc :

Quant Time : Wed Aug 14 11:03:53 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CHLOROETHANE

Abundance on 64.00 (63.70 to 64.70): B1922532.D\data



## Original Int. Results

-----

RT : 1.81  
Area : 132  
Amount: 0.162194

## Manual Int. Results

-----

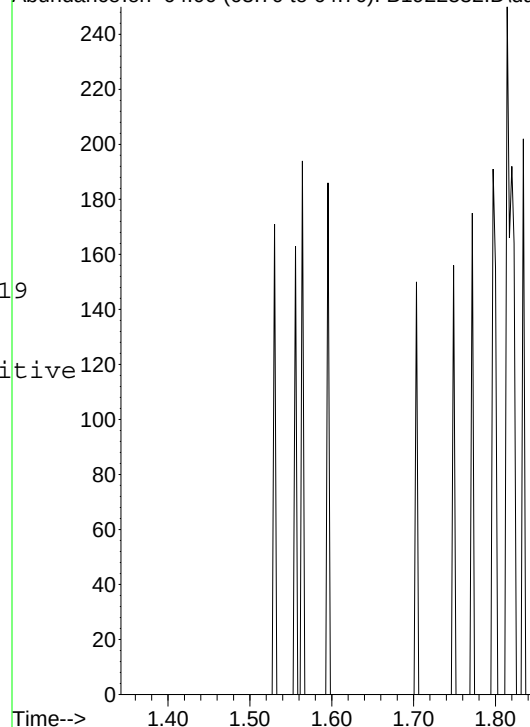
Wed Aug 14 11:03:42 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CHLOROETHANE

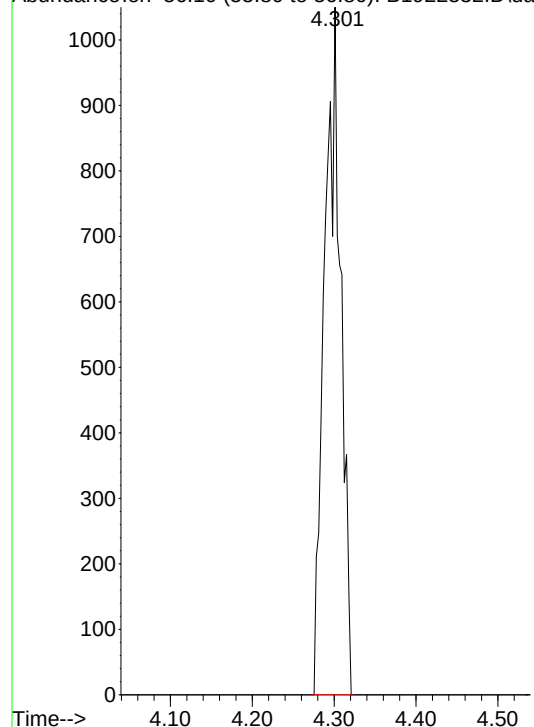
Abundance on 64.00 (63.70 to 64.70): B1922532.D\data



## Original Integration

CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922532.D\data



## Original Int. Results

-----

RT : 4.30  
Area : 1456  
Amount: 0.625277

## Manual Int. Results

-----

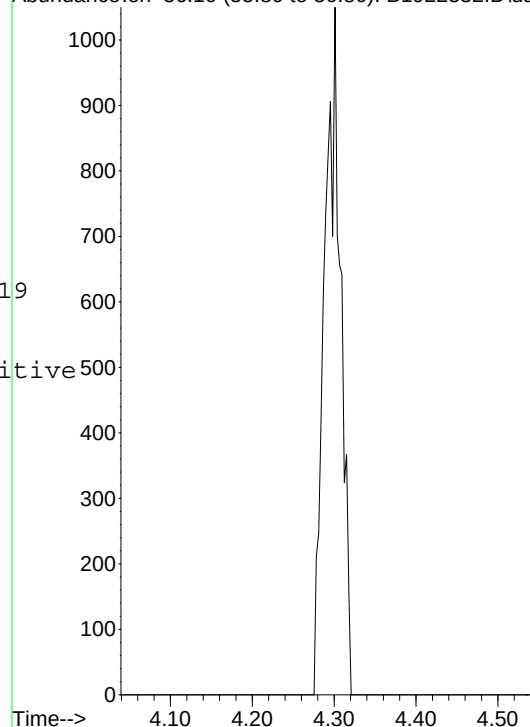
Wed Aug 14 11:03:45 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922532.D\data



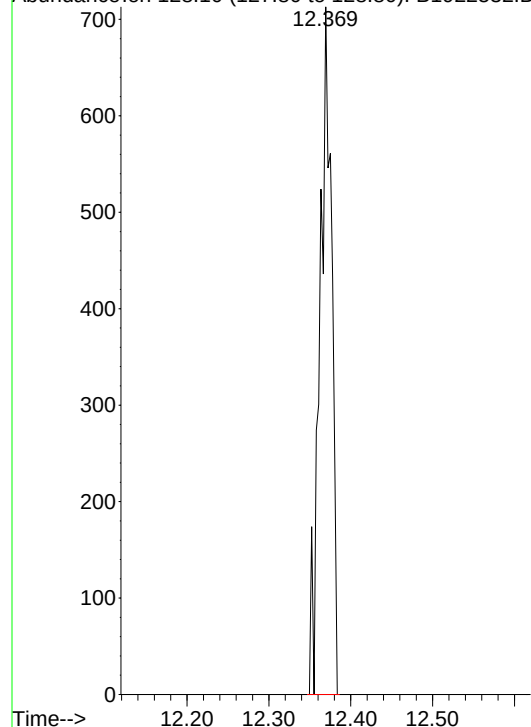
Data Path : Y:\1\DATA\B081319\  
Data File : B1922532.D  
Acq On : 13 Aug 2019 10:33 pm  
Operator :  
Sample : 19H0576-01 @ TB (TICs)  
Misc :

Quant Time : Wed Aug 14 11:03:53 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

NAPHTHALENE

Abundance on 128.10 (127.80 to 128.80): B1922532.D



## Original Int. Results

-----

RT : 12.37  
Area : 713  
Amount: 0.16007

## Manual Int. Results

-----

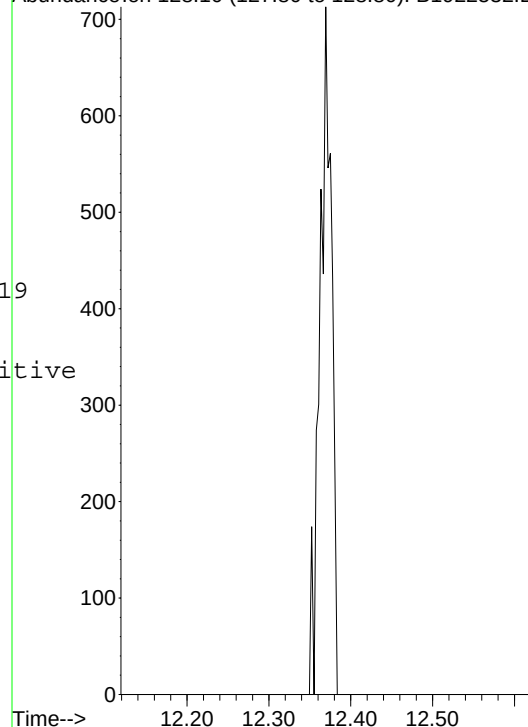
Wed Aug 14 11:03:50 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

NAPHTHALENE

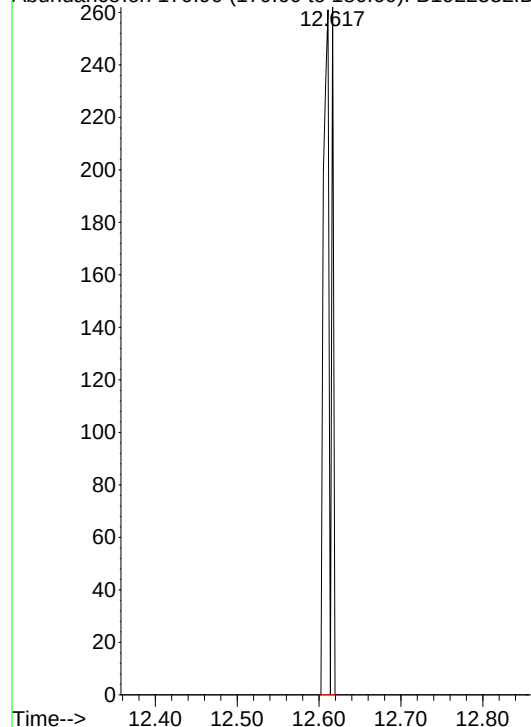
Abundance on 128.10 (127.80 to 128.80): B1922532.D



## Original Integration

1,2,3-TRICHLOROBENZENE

Abundance on 179.90 (179.60 to 180.60): B1922532.D



## Original Int. Results

-----

RT : 12.62  
Area : 163  
Amount: 0.106824

## Manual Int. Results

-----

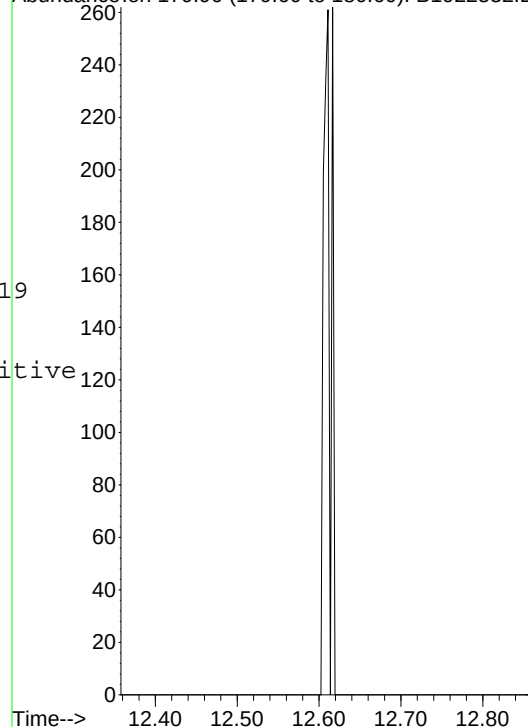
Wed Aug 14 11:03:52 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

1,2,3-TRICHLOROBENZENE

Abundance on 179.90 (179.60 to 180.60): B1922532.D



Data Path : Y:\1\DATA\B081319\  
 Data File : B1922532.D  
 Acq On : 13 Aug 2019 10:33 pm  
 Operator :  
 Sample : 19H0576-01 @ TB (TICs)  
 Misc :  
 ALS Vial : 32 Sample Multiplier: 1

Integration Parameters: 8260LOW.P  
 Integrator: RTE  
 Smoothing : OFF Filtering: 5  
 Sampling : 1 Min Area: 1 % of largest Peak  
 Start Thrs: 0.2 Max Peaks: 100  
 Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Y:\1\METHODS\B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973

Signal : TIC: B1922532.D\data.ms

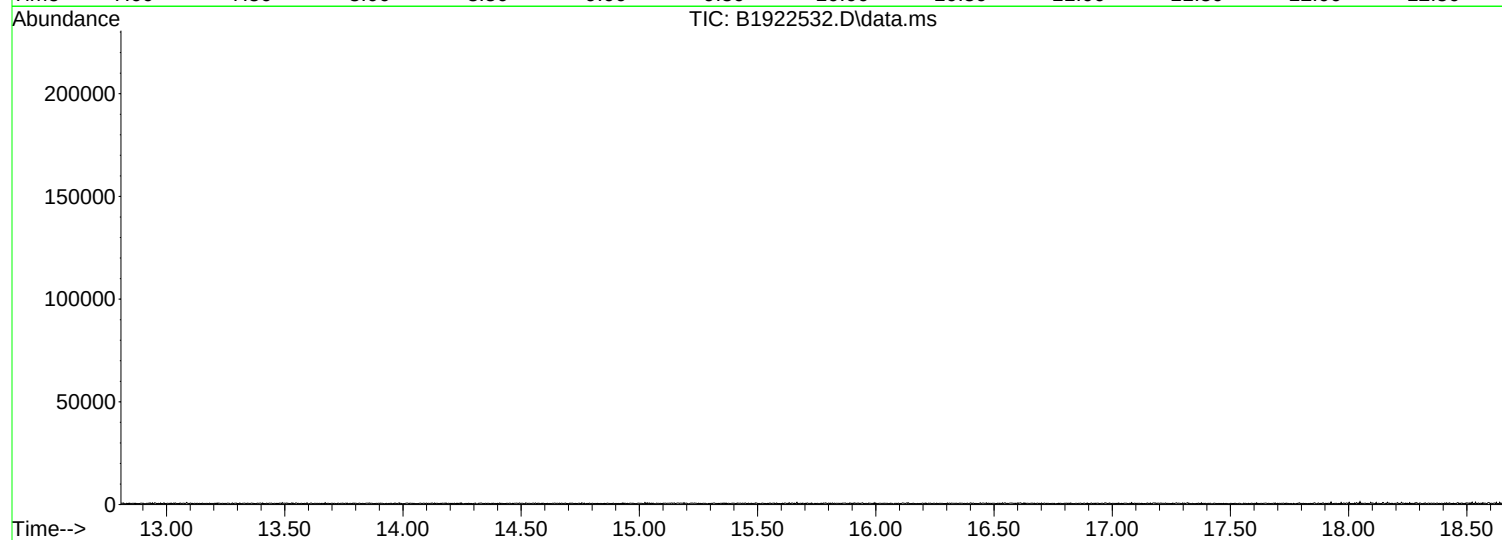
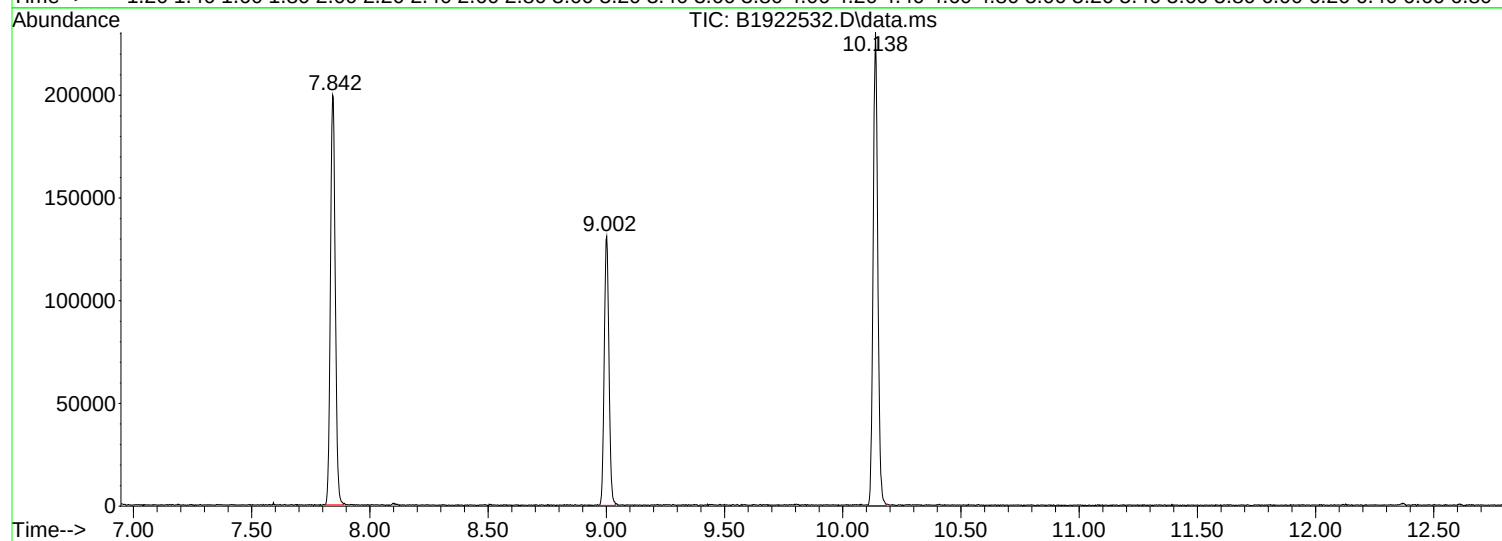
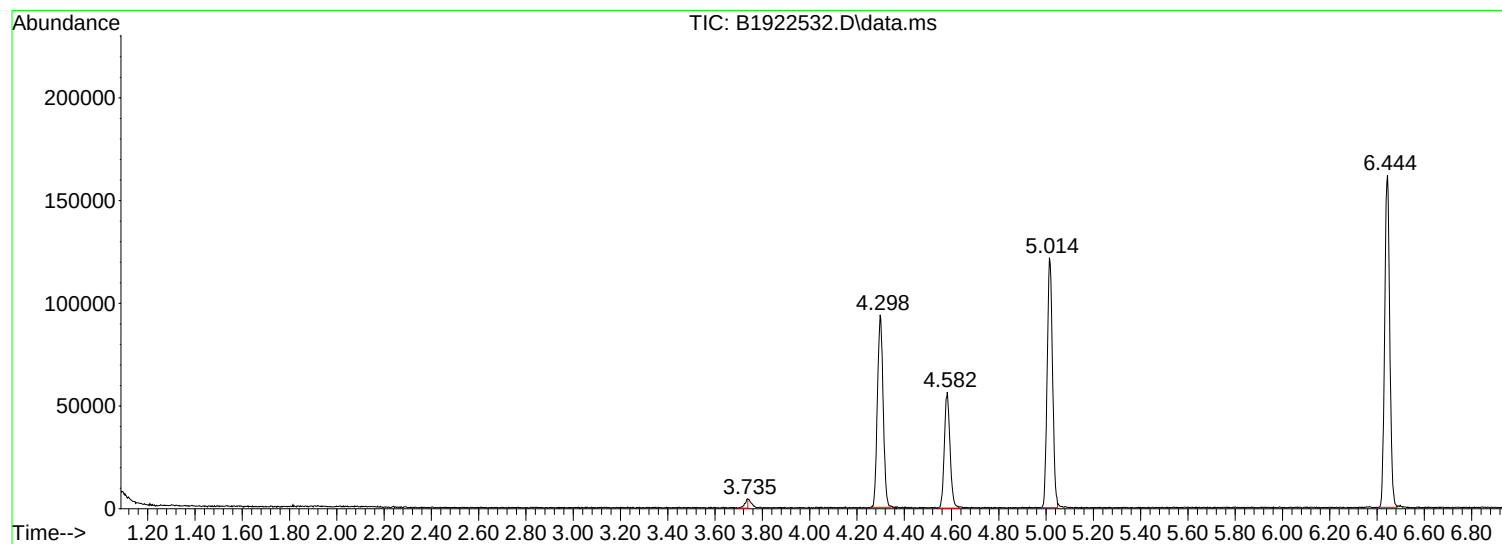
| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 3.735       | 919           | 933         | 934          | rBV3     | 4522           | 4215          | 1.33%           | 0.287%        |
| 2         | 4.298       | 1118          | 1131        | 1146         | rBV      | 93722          | 156463        | 49.53%          | 10.647%       |
| 3         | 4.582       | 1217          | 1231        | 1248         | rBV3     | 56599          | 93858         | 29.71%          | 6.387%        |
| 4         | 5.014       | 1370          | 1383        | 1395         | rBV      | 121651         | 190439        | 60.29%          | 12.959%       |
| 5         | 6.444       | 1874          | 1886        | 1900         | rBV      | 161761         | 241803        | 76.55%          | 16.455%       |
| 6         | 7.842       | 2367          | 2378        | 2394         | rBV      | 199479         | 285575        | 90.41%          | 19.433%       |
| 7         | 9.002       | 2774          | 2786        | 2799         | rBV3     | 130980         | 181295        | 57.40%          | 12.337%       |
| 8         | 10.138      | 3175          | 3186        | 3202         | rBV      | 230354         | 315870        | 100.00%         | 21.495%       |

Sum of corrected areas: 1469518

Data Path : Y:\1\DATA\B081319\  
Data File : B1922532.D  
Acq On : 13 Aug 2019 10:33 pm  
Operator :  
Sample : 19H0576-01 @ TB (TICs)  
Misc :  
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P



Data Path : Y:\1\DATA\B081319\  
Data File : B1922532.D  
Acq On : 13 Aug 2019 10:33 pm  
Operator :  
Sample : 19H0576-01 @ TB (TICs)  
Misc :  
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

\*\*\*\*\*

Data Path : Y:\1\DATA\B081319\  
Data File : B1922532.D  
Acq On : 13 Aug 2019 10:33 pm  
Operator :  
Sample : 19H0576-01 @ TB (TICs)  
Misc :  
ALS Vial : 32 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

| TIC Top Hit name | RT | EstConc | Units | Response | --Internal Standard-- |    |      |      |
|------------------|----|---------|-------|----------|-----------------------|----|------|------|
|                  |    |         |       |          | #                     | RT | Resp | Conc |

---

# 1 - FORM I

## ANALYSIS DATA SHEET

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OC-19D

|                |                                |                |                       |                          |
|----------------|--------------------------------|----------------|-----------------------|--------------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |                          |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |                          |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-02            | File ID: B1922543.D      |
| Sampled:       | 08/09/19 10:44                 | Prepared:      | 08/13/19 07:22        | Analyzed: 08/14/19 04:11 |
| Solids:        |                                | Preparation:   | SW-846 5030B          | Dilution: 10             |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |                          |
| Batch:         | B237875                        | Sequence:      | S039168               | Calibration: 1900126     |
|                |                                |                |                       | Instrument: GCMSVOA2     |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL | RL  | Q    |
|----------|------------------------------------|--------------|-----|-----|------|
| 67-64-1  | Acetone                            |              | 38  | 500 |      |
| 107-13-1 | Acrylonitrile                      |              | 5.2 | 50  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      |              | 1.4 | 5.0 |      |
| 71-43-2  | Benzene                            |              | 1.8 | 10  |      |
| 108-86-1 | Bromobenzene                       |              | 1.5 | 10  |      |
| 74-97-5  | Bromochloromethane                 |              | 3.2 | 10  |      |
| 75-27-4  | Bromodichloromethane               |              | 1.6 | 5.0 |      |
| 75-25-2  | Bromoform                          |              | 4.6 | 10  |      |
| 74-83-9  | Bromomethane                       |              | 7.8 | 50  |      |
| 78-93-3  | 2-Butanone (MEK)                   |              | 19  | 200 |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           |              | 42  | 200 |      |
| 104-51-8 | n-Butylbenzene                     |              | 2.1 | 10  | V-05 |
| 135-98-8 | sec-Butylbenzene                   |              | 1.6 | 10  |      |
| 98-06-6  | tert-Butylbenzene                  |              | 1.7 | 10  |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      |              | 1.6 | 5.0 |      |
| 75-15-0  | Carbon Disulfide                   |              | 44  | 50  |      |
| 56-23-5  | Carbon Tetrachloride               |              | 1.1 | 50  |      |
| 108-90-7 | Chlorobenzene                      |              | 1.5 | 10  |      |
| 124-48-1 | Chlorodibromomethane               |              | 2.1 | 5.0 |      |
| 75-00-3  | Chloroethane                       |              | 3.5 | 20  |      |
| 67-66-3  | Chloroform                         |              | 1.7 | 20  |      |
| 74-87-3  | Chloromethane                      |              | 4.5 | 20  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    |              | 1.2 | 10  |      |
| 106-43-4 | 4-Chlorotoluene                    |              | 1.4 | 10  |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) |              | 5.3 | 50  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            |              | 1.9 | 5.0 |      |
| 74-95-3  | Dibromomethane                     |              | 3.7 | 10  |      |
| 95-50-1  | 1,2-Dichlorobenzene                |              | 1.6 | 10  |      |
| 541-73-1 | 1,3-Dichlorobenzene                |              | 1.2 | 10  |      |
| 106-46-7 | 1,4-Dichlorobenzene                |              | 1.3 | 10  |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

60

OC-19D

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-02            |
|                |                                | File ID:       | B1922543.D            |
| Sampled:       | 08/09/19 10:44                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/14/19 04:11        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 10                    |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL | RL  | Q |
|------------|------------------------------------|--------------|-----|-----|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        |              | 3.1 | 20  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) |              | 2.6 | 20  |   |
| 75-34-3    | 1,1-Dichloroethane                 | 21           | 1.6 | 10  |   |
| 107-06-2   | 1,2-Dichloroethane                 |              | 4.1 | 10  |   |
| 75-35-4    | 1,1-Dichloroethylene               |              | 3.2 | 10  |   |
| 156-59-2   | cis-1,2-Dichloroethylene           | 32           | 1.3 | 10  |   |
| 156-60-5   | trans-1,2-Dichloroethylene         |              | 3.1 | 10  |   |
| 78-87-5    | 1,2-Dichloropropane                |              | 2.0 | 10  |   |
| 142-28-9   | 1,3-Dichloropropane                |              | 1.1 | 5.0 |   |
| 594-20-7   | 2,2-Dichloropropane                |              | 2.0 | 10  |   |
| 563-58-6   | 1,1-Dichloropropene                |              | 1.6 | 20  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            |              | 1.3 | 5.0 |   |
| 10061-02-6 | trans-1,3-Dichloropropene          |              | 2.3 | 5.0 |   |
| 60-29-7    | Diethyl Ether                      |              | 3.4 | 20  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           |              | 1.7 | 5.0 |   |
| 123-91-1   | 1,4-Dioxane                        |              | 220 | 500 |   |
| 100-41-4   | Ethylbenzene                       |              | 1.3 | 10  |   |
| 87-68-3    | Hexachlorobutadiene                |              | 4.7 | 6.0 |   |
| 591-78-6   | 2-Hexanone (MBK)                   |              | 15  | 100 |   |
| 98-82-8    | Isopropylbenzene (Cumene)          |              | 1.7 | 10  |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      |              | 2.0 | 10  |   |
| 79-20-9    | Methyl Acetate                     |              | 4.2 | 10  |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     |              | 2.5 | 10  |   |
| 108-87-2   | Methyl Cyclohexane                 |              | 2.0 | 10  |   |
| 75-09-2    | Methylene Chloride                 |              | 3.4 | 50  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        |              | 17  | 100 |   |
| 91-20-3    | Naphthalene                        |              | 3.1 | 20  |   |
| 103-65-1   | n-Propylbenzene                    |              | 1.3 | 10  |   |
| 100-42-5   | Styrene                            |              | 1.1 | 10  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          |              | 2.7 | 10  |   |



# 1 - FORM I

## ANALYSIS DATA SHEET

61

OC-19D

|                |                                |                |                       |                          |
|----------------|--------------------------------|----------------|-----------------------|--------------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |                          |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |                          |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-02            | File ID: B1922543.D      |
| Sampled:       | 08/09/19 10:44                 | Prepared:      | 08/13/19 07:22        | Analyzed: 08/14/19 04:11 |
| Solids:        |                                | Preparation:   | SW-846 5030B          | Dilution: 10             |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |                          |
| Batch:         | B237875                        | Sequence:      | S039168               | Calibration: 1900126     |
|                |                                |                |                       | Instrument: GCMSVOA2     |

| CAS NO.       | COMPOUND                                          | CONC. (µg/L) | MDL | RL  | Q |
|---------------|---------------------------------------------------|--------------|-----|-----|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                         |              | 2.2 | 5.0 |   |
| 127-18-4      | Tetrachloroethylene                               |              | 1.8 | 10  |   |
| 109-99-9      | Tetrahydrofuran                                   |              | 5.1 | 100 |   |
| 108-88-3      | Toluene                                           |              | 1.4 | 10  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                            |              | 5.7 | 50  |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                            |              | 4.0 | 10  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                            |              | 3.0 | 10  |   |
| 71-55-6       | 1,1,1-Trichloroethane                             | 200          | 2.0 | 10  |   |
| 79-00-5       | 1,1,2-Trichloroethane                             |              | 1.6 | 10  |   |
| 79-01-6       | Trichloroethylene                                 | 150          | 2.4 | 10  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                 |              | 3.3 | 20  |   |
| 96-18-4       | 1,2,3-Trichloropropane                            |              | 2.5 | 20  |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 500          | 3.2 | 10  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                            |              | 1.8 | 10  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                            |              | 1.4 | 10  |   |
| 75-01-4       | Vinyl Chloride                                    |              | 4.5 | 20  |   |
| 108383/106423 | m+p Xylene                                        |              | 3.0 | 20  |   |
| 95-47-6       | o-Xylene                                          |              | 1.7 | 10  |   |
|               | No TICs Found                                     | 0.0          |     |     |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922543.D  
 Acq On : 14 Aug 2019 4:11 am  
 Operator :  
 Sample : 19H0576-02 @ 10X (TICs)  
 Misc : 10  
 ALS Vial : 43 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 11:28:02 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response | Conc  | Units   | Dev(Min) |
|-------------------------------|----------------|------|----------|-------|---------|----------|
| Internal Standards            |                |      |          |       |         |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298          | 168  | 51337    | 30.00 | UG/L    | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.014          | 114  | 72519    | 30.00 | UG/L    | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842          | 82   | 46218    | 30.00 | UG/L    | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.136         | 152  | 48015    | 30.00 | UG/L    | 0.00     |
| System Monitoring Compounds   |                |      |          |       |         |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.580          | 65   | 37405    | 28.27 | UG/L    | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery | =     | 113.08% |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 82365    | 29.02 | UG/L    | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery | =     | 116.08% |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 33671    | 24.76 | UG/L    | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery | =     | 99.04%  |          |
| Target Compounds              |                |      |          |       |         | Qvalue   |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.101          | 101  | 36397    | 50.25 | UG/L    | 88       |
| 25) 1,1-DICHLOROETHANE        | 3.167          | 63   | 4361     | 2.09  | UG/L #  | 87       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.755          | 61   | 6532     | 3.17  | UG/L    | 98       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.247          | 97   | 33432    | 20.11 | UG/L    | 99       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 13490    | 14.66 | UG/L    | 95       |

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

Data Path : Y:\1\DATA\B081319\

Data File : B1922543.D

Acq On : 14 Aug 2019 4:11 am

Operator :

Sample : 19H0576-02 @ 10X (TICs)

Inst : GCMSVOA2

Misc : 10

ALS Vial : 43 Sample Multiplier: 1

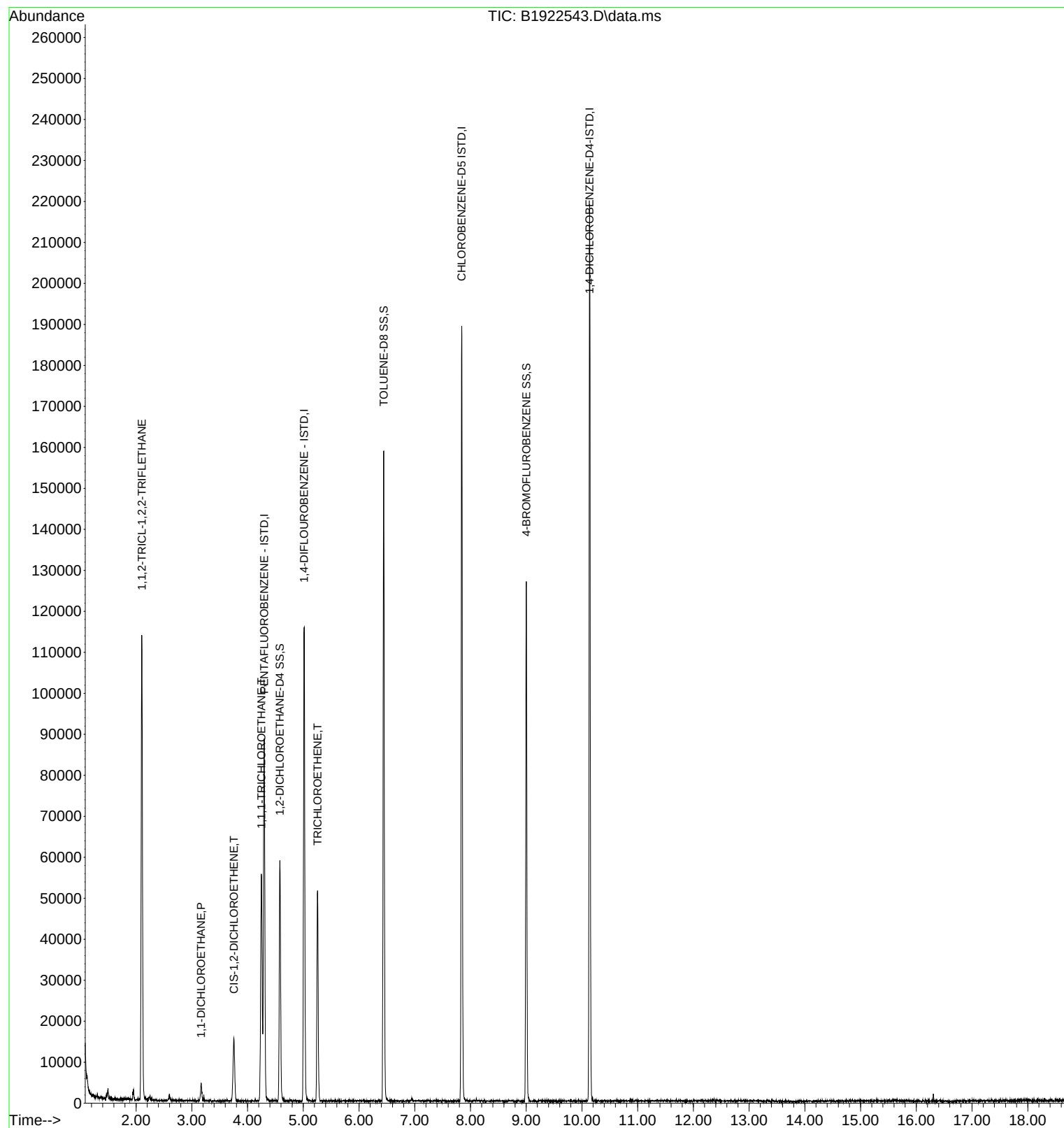
Quant Time: Aug 14 11:28:02 2019

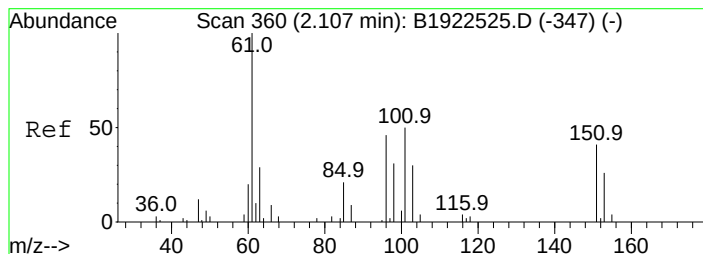
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Fri Apr 19 05:25:51 2019

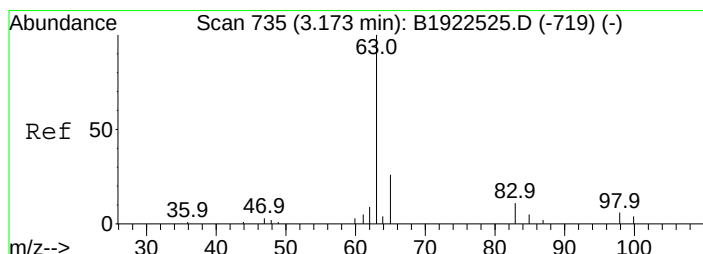
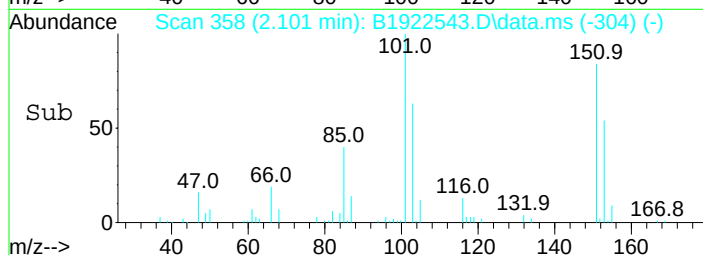
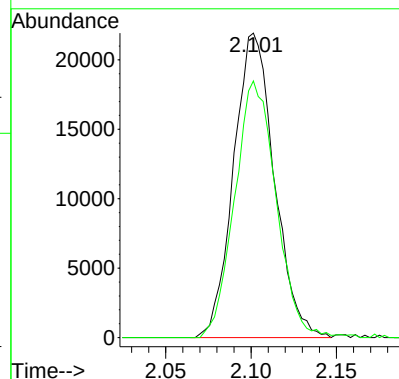
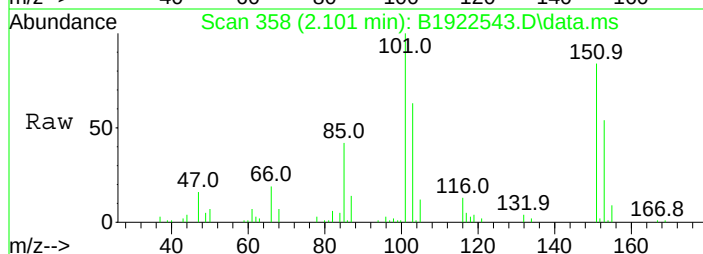
Response via : Initial Calibration





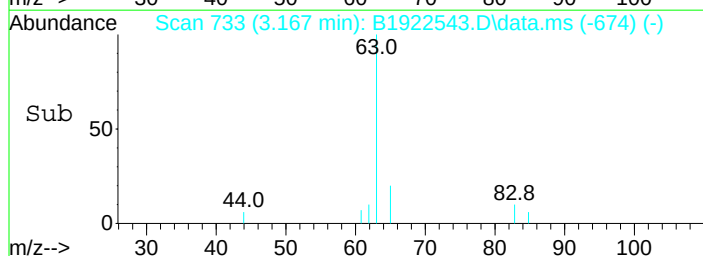
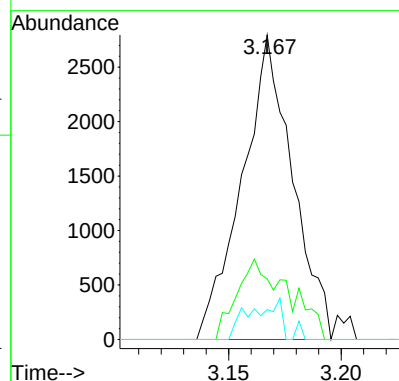
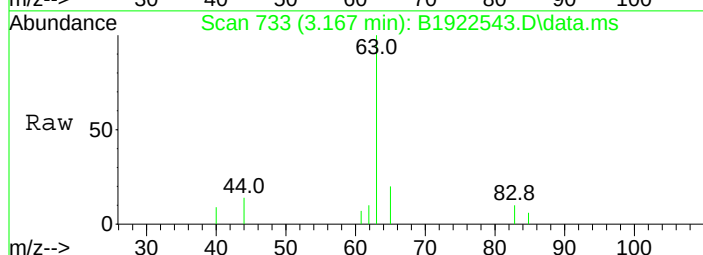
#16  
 1,1,2-TRICL-1,2,2-TRIFLETHANE  
 Concen: 50.25 UG/L  
 RT: 2.101 min Scan# 358  
 Delta R.T. -0.003 min  
 Lab File: B1922543.D  
 Acq: 14 Aug 2019 4:11 am

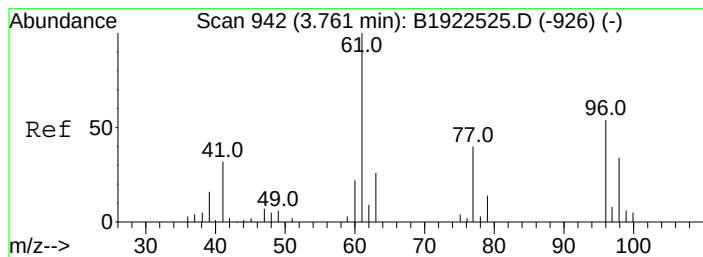
Tgt Ion: 101 Resp: 36397  
 Ion Ratio Lower Upper  
 101 100  
 151 85.7 60.5 90.7



#25  
 1,1-DICHLOROETHANE  
 Concen: 2.09 UG/L  
 RT: 3.167 min Scan# 733  
 Delta R.T. -0.003 min  
 Lab File: B1922543.D  
 Acq: 14 Aug 2019 4:11 am

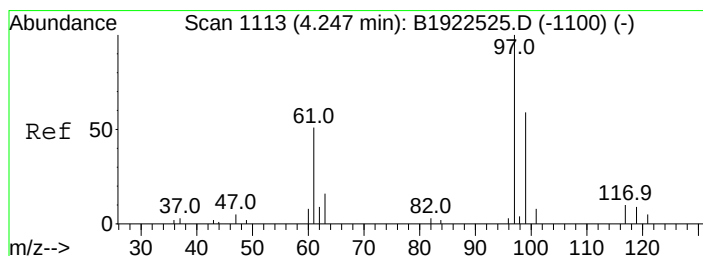
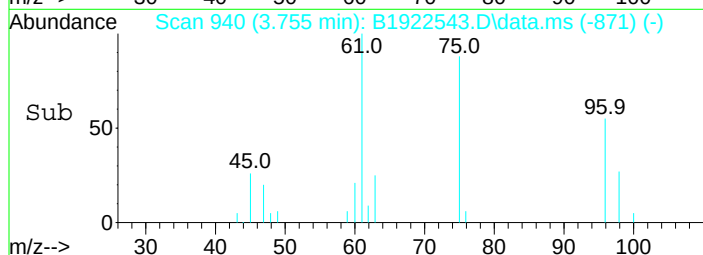
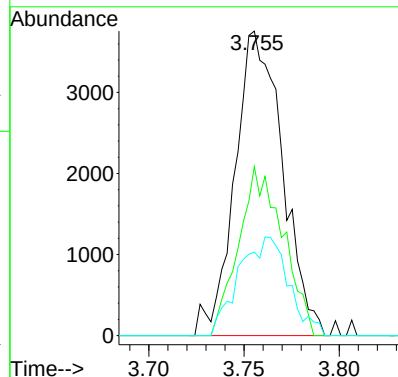
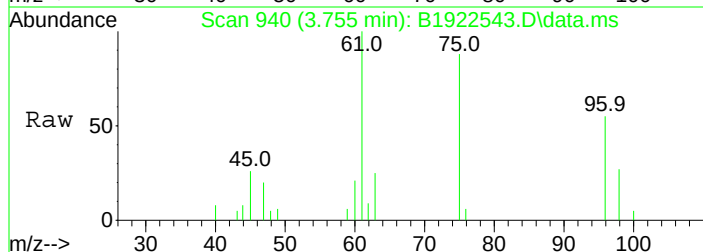
Tgt Ion: 63 Resp: 4361  
 Ion Ratio Lower Upper  
 63 100  
 65 27.1 24.0 36.0  
 83 0.0 9.8 14.6#





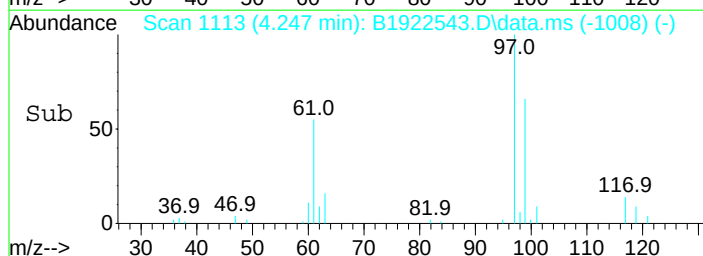
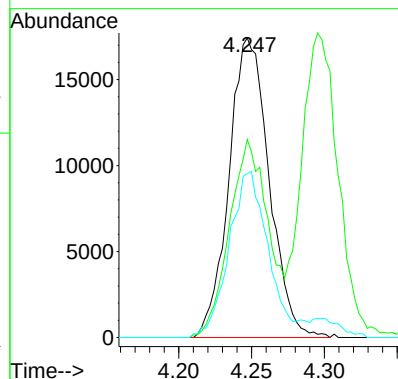
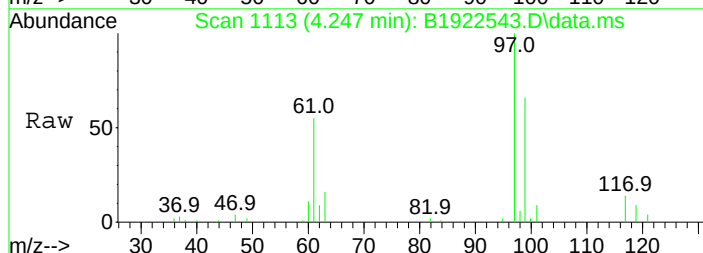
#30  
 CIS-1,2-DICHLOROETHENE  
 Concen: 3.17 UG/L  
 RT: 3.755 min Scan# 940  
 Delta R.T. -0.003 min  
 Lab File: B1922543.D  
 Acq: 14 Aug 2019 4:11 am

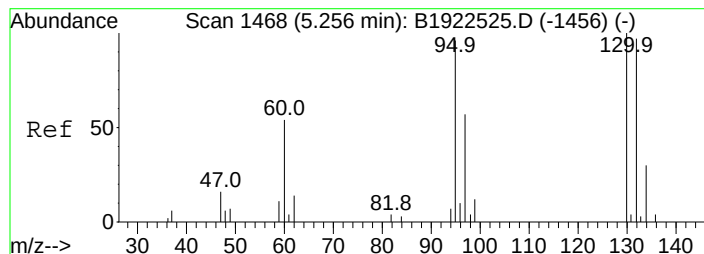
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 51.6  | 43.0  | 64.4  |
| 98      | 33.9  | 27.2  | 40.8  |



#37  
 1,1,1-TRICHLOROETHANE  
 Concen: 20.11 UG/L  
 RT: 4.247 min Scan# 1113  
 Delta R.T. -0.003 min  
 Lab File: B1922543.D  
 Acq: 14 Aug 2019 4:11 am

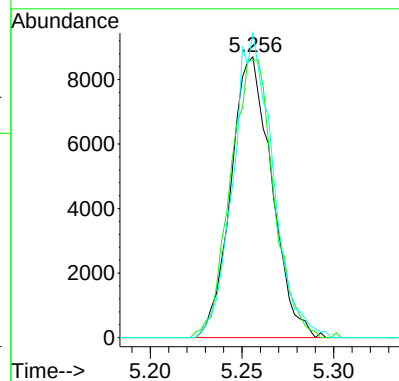
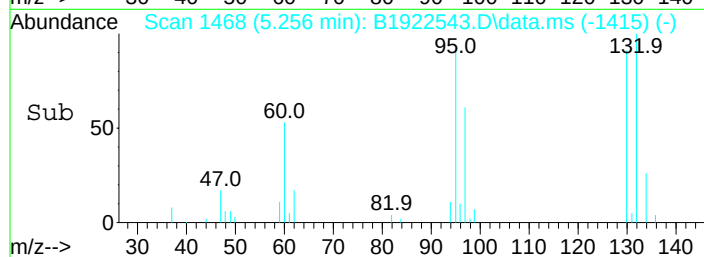
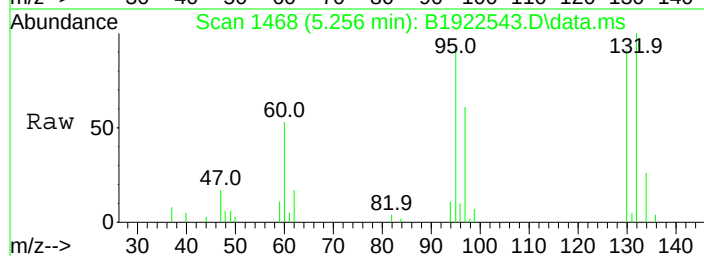
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 64.3  | 50.8  | 76.2  |
| 61      | 55.1  | 45.1  | 67.7  |





#47  
TRICHLOROETHENE  
Concen: 14.66 UG/L  
RT: 5.256 min Scan# 1468  
Delta R.T. -0.000 min  
Lab File: B1922543.D  
Acq: 14 Aug 2019 4:11 am

| Tgt Ion   | 95    | Resp  | 13490 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 95        | 100   |       |       |
| 130       | 104.6 | 79.8  | 119.6 |
| 132       | 105.7 | 80.6  | 121.0 |

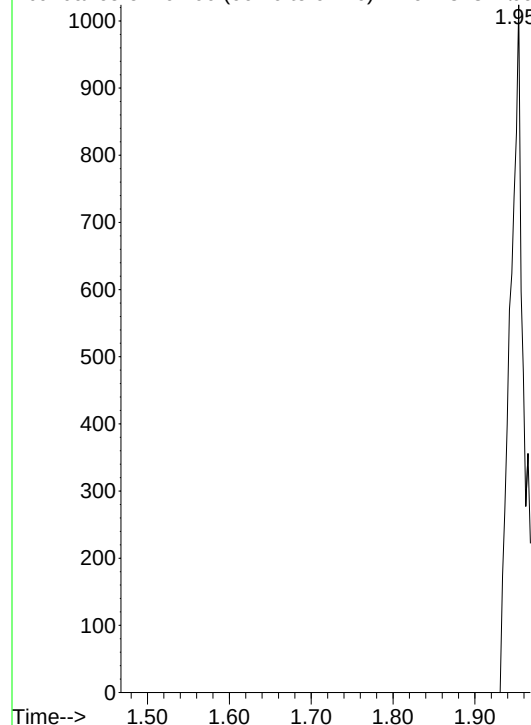


Data Path : Y:\1\DATA\B081319\  
Data File : B1922543.D  
Acq On : 14 Aug 2019 4:11 am  
Operator :  
Sample : 19H0576-02 @ 10X (TICs)  
Misc : 10

Quant Time : Wed Aug 14 11:28:02 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
FLUORODICHLOROMETHANE

Abundance on 67.00 (66.70 to 67.70): B1922543.D\data



Original Int. Results

-----

RT : 1.95  
Area : 1119  
Amount: 0.571215

Manual Int. Results

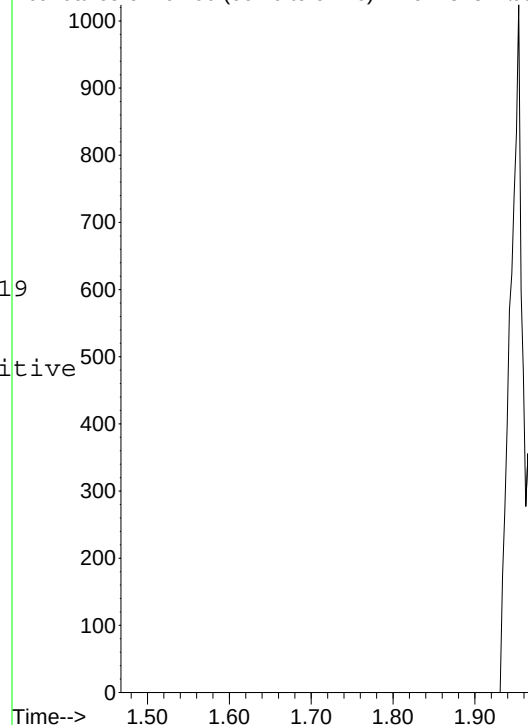
-----

Wed Aug 14 11:27:34 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

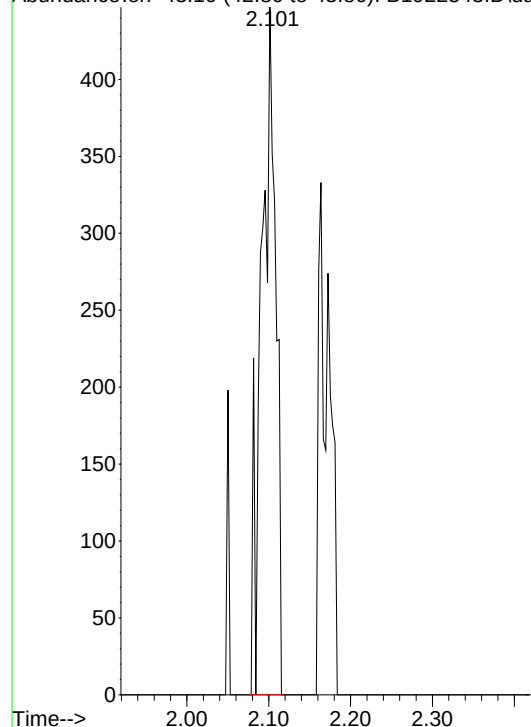
Manual Integration  
FLUORODICHLOROMETHANE

Abundance on 67.00 (66.70 to 67.70): B1922543.D\data



Original Integration  
ACETONE

Abundance on 43.10 (42.80 to 43.80): B1922543.D\data



Original Int. Results

-----

RT : 2.10  
Area : 542  
Amount: 1.14356

Manual Int. Results

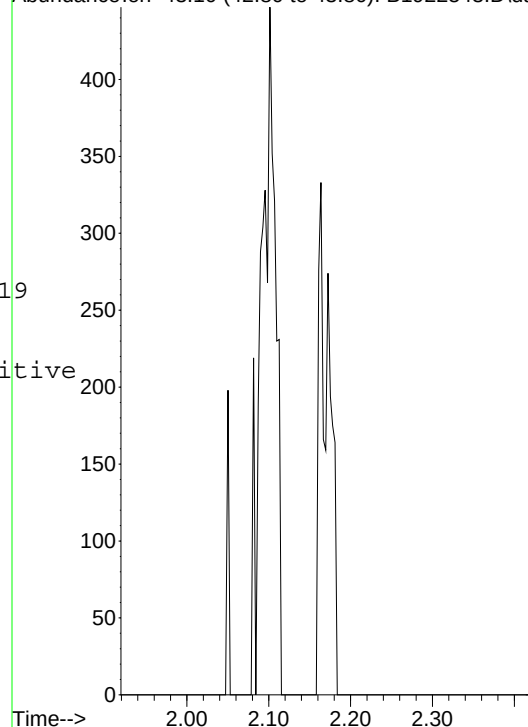
-----

Wed Aug 14 11:27:39 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
ACETONE

Abundance on 43.10 (42.80 to 43.80): B1922543.D\data



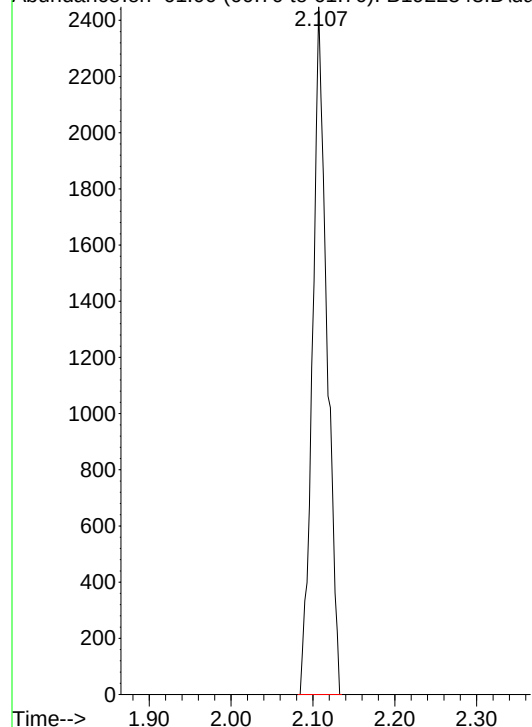
Data Path : Y:\1\DATA\B081319\  
Data File : B1922543.D  
Acq On : 14 Aug 2019 4:11 am  
Operator :  
Sample : 19H0576-02 @ 10X (TICs)  
Misc : 10

Quant Time : Wed Aug 14 11:28:02 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

1,1-DICHLOROETHENE

Abundance on 61.00 (60.70 to 61.70): B1922543.D\data



## Original Int. Results

-----

RT : 2.11  
Area : 2978  
Amount: 1.71403

## Manual Int. Results

-----

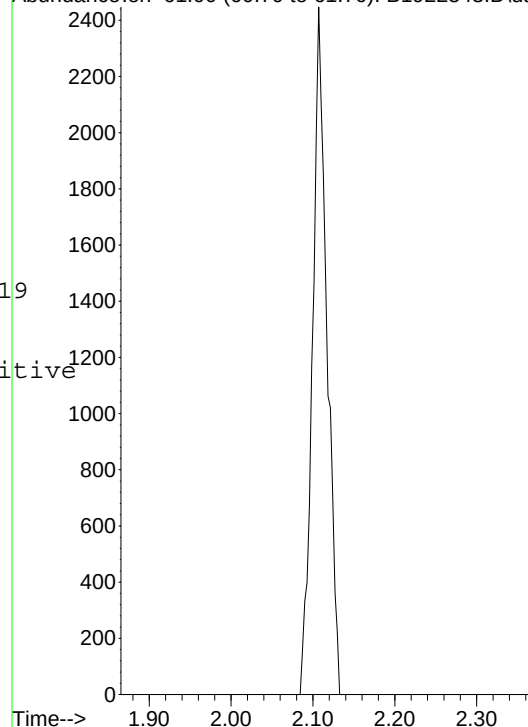
Wed Aug 14 11:27:41 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

1,1-DICHLOROETHENE

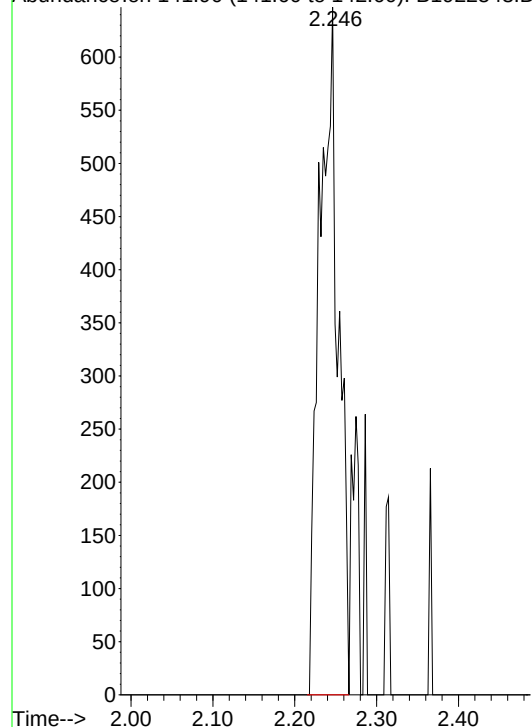
Abundance on 61.00 (60.70 to 61.70): B1922543.D\data



## Original Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922543.D\data



## Original Int. Results

-----

RT : 2.25  
Area : 1035  
Amount: 0.834865

## Manual Int. Results

-----

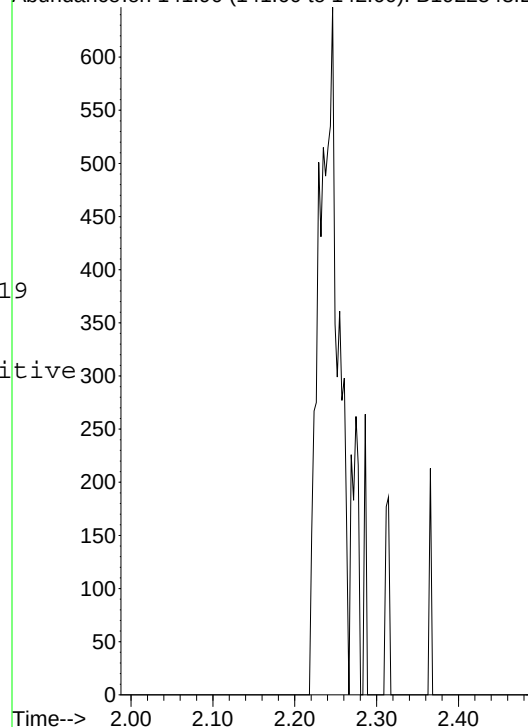
Wed Aug 14 11:27:45 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922543.D\data





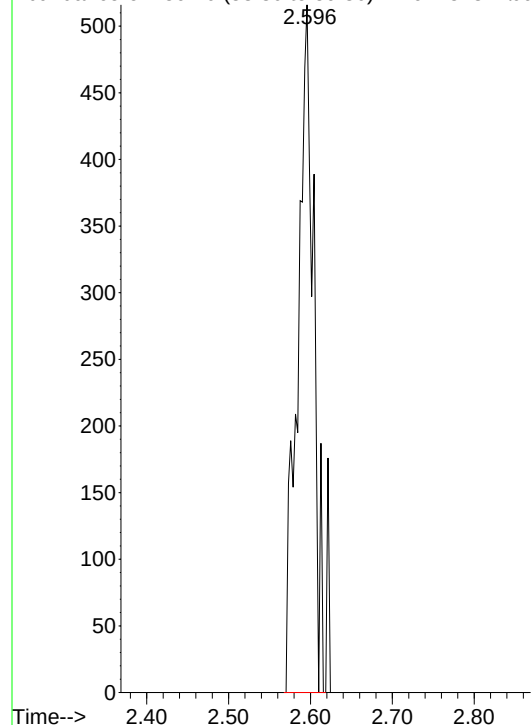
Data Path : Y:\1\DATA\B081319\  
Data File : B1922543.D  
Acq On : 14 Aug 2019 4:11 am  
Operator :  
Sample : 19H0576-02 @ 10X (TICs)  
Misc : 10

Quant Time : Wed Aug 14 11:28:02 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

T-BUTYL ALCOHOL

Abundance on 59.10 (58.80 to 59.80): B1922543.D\data



## Original Int. Results

-----

RT : 2.60  
Area : 697  
Amount: 5.14889

## Manual Int. Results

-----

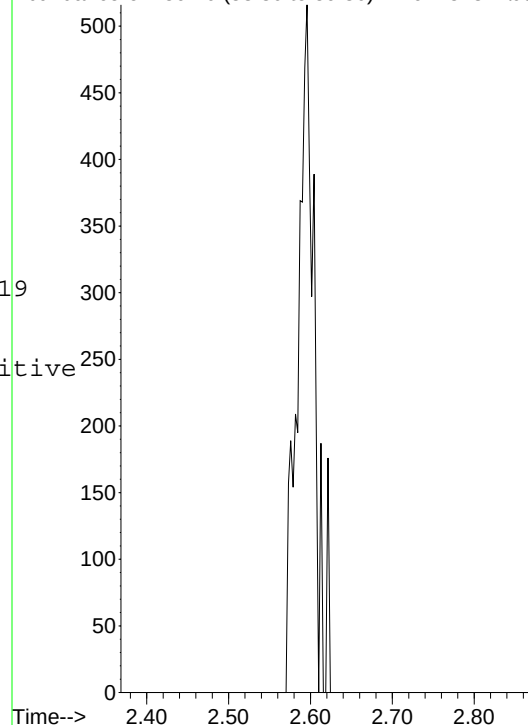
Wed Aug 14 11:27:48 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL ALCOHOL

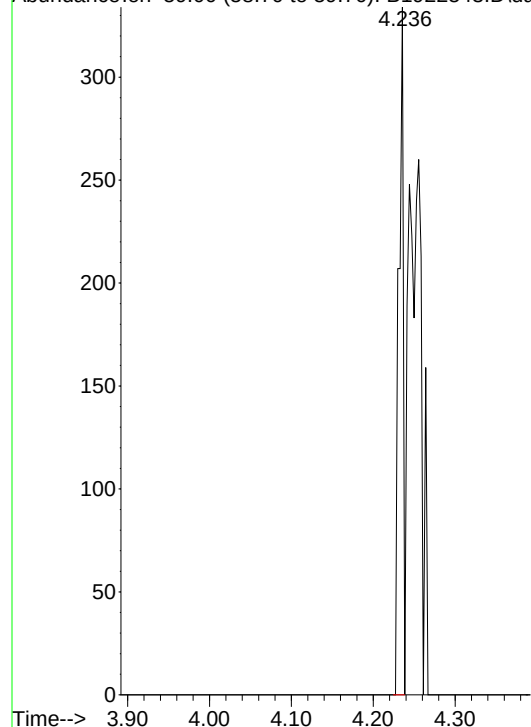
Abundance on 59.10 (58.80 to 59.80): B1922543.D\data



## Original Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922543.D\data



## Original Int. Results

-----

RT : 4.24  
Area : 127  
Amount: 0.121007

## Manual Int. Results

-----

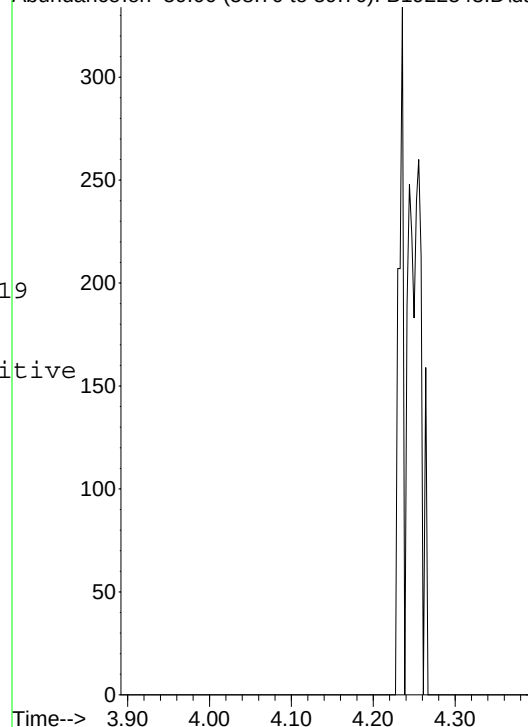
Wed Aug 14 11:27:53 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922543.D\data



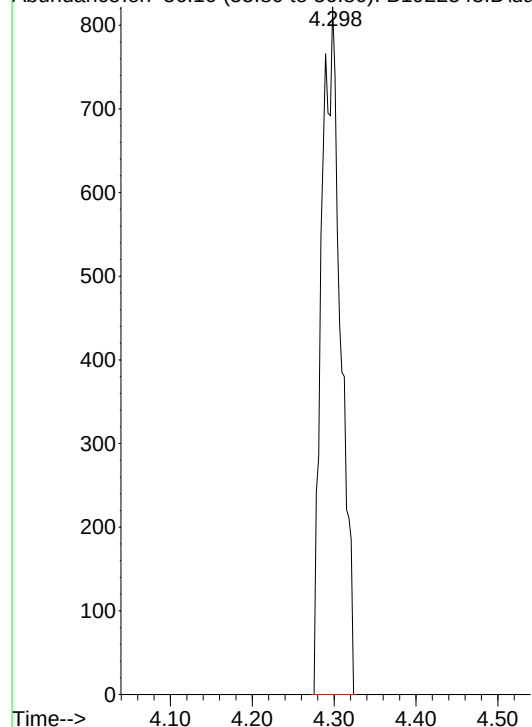
Data Path : Y:\1\DATA\B081319\  
Data File : B1922543.D  
Acq On : 14 Aug 2019 4:11 am  
Operator :  
Sample : 19H0576-02 @ 10X (TICs)  
Misc : 10

Quant Time : Wed Aug 14 11:28:02 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922543.D\data



## Original Int. Results

-----

RT : 4.30  
Area : 1334  
Amount: 0.615971

## Manual Int. Results

-----

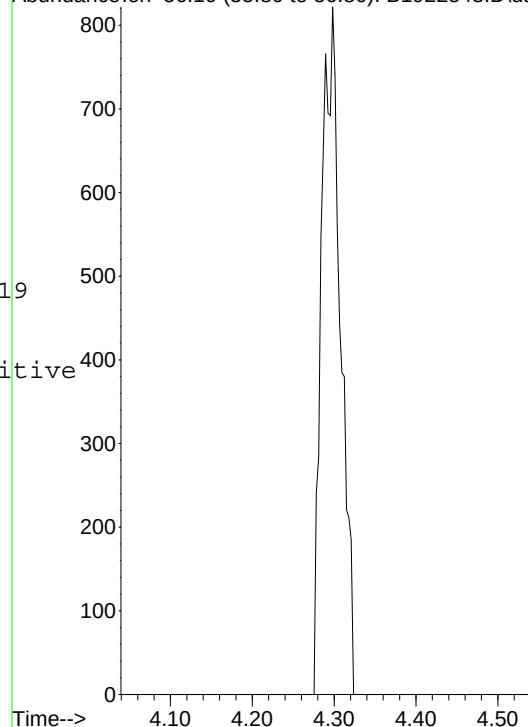
Wed Aug 14 11:27:56 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CYCLOHEXANE

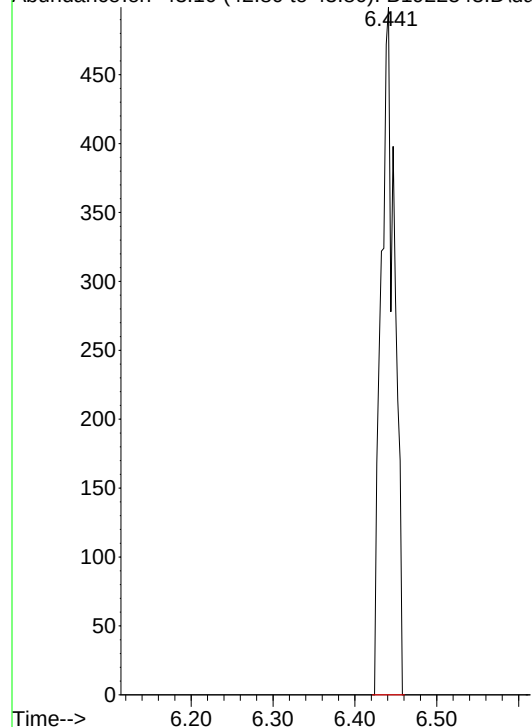
Abundance on 56.10 (55.80 to 56.80): B1922543.D\data



## Original Integration

MIBK

Abundance on 43.10 (42.80 to 43.80): B1922543.D\data



## Original Int. Results

-----

RT : 6.44  
Area : 576  
Amount: 0.441633

## Manual Int. Results

-----

Wed Aug 14 11:28:01 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

MIBK

Abundance on 43.10 (42.80 to 43.80): B1922543.D\data



Data Path : Y:\1\DATA\B081319\  
 Data File : B1922543.D  
 Acq On : 14 Aug 2019 4:11 am  
 Operator :  
 Sample : 19H0576-02 @ 10X (TICs)  
 Misc : 10  
 ALS Vial : 43 Sample Multiplier: 1

Integration Parameters: 8260LOW.P  
 Integrator: RTE  
 Smoothing : OFF  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0  
 Filtering: 5  
 Min Area: 1 % of largest Peak  
 Max Peaks: 100  
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Y:\1\METHODS\B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973

Signal : TIC: B1922543.D\data.ms

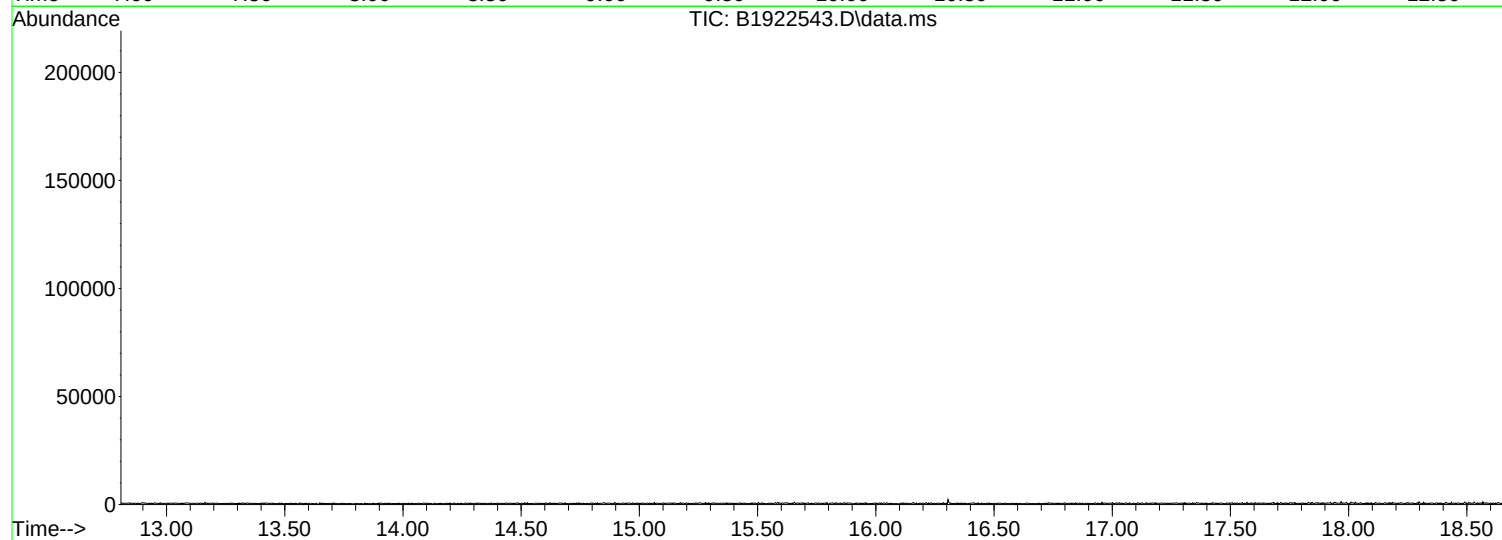
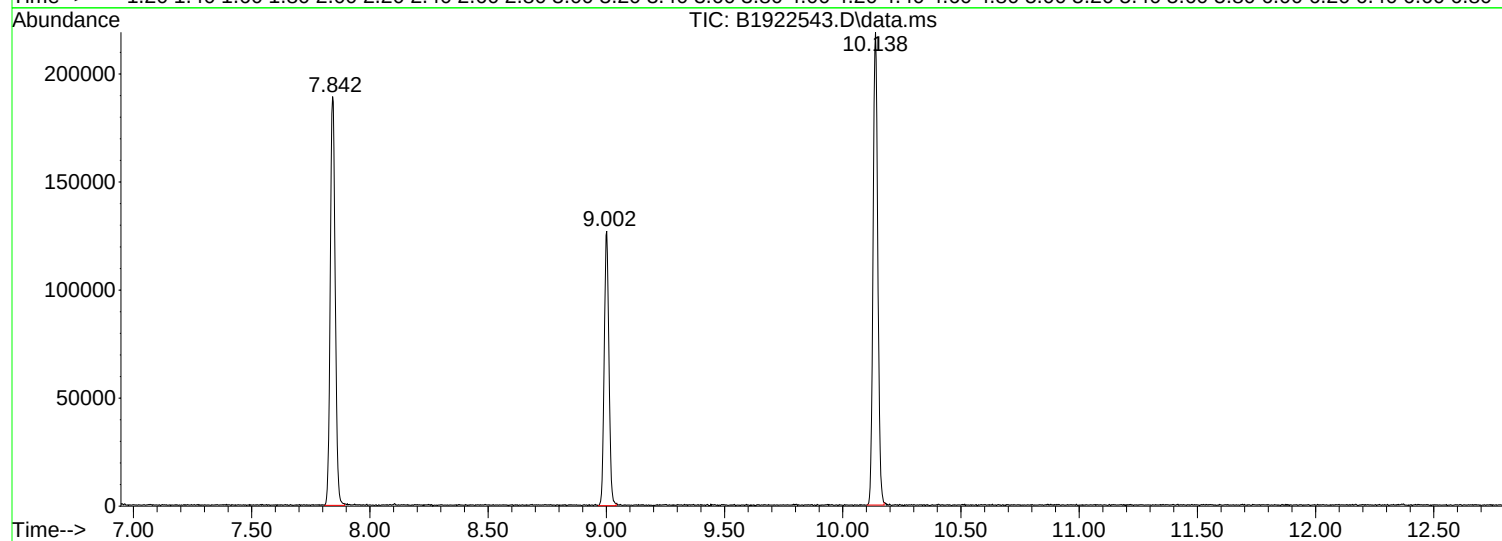
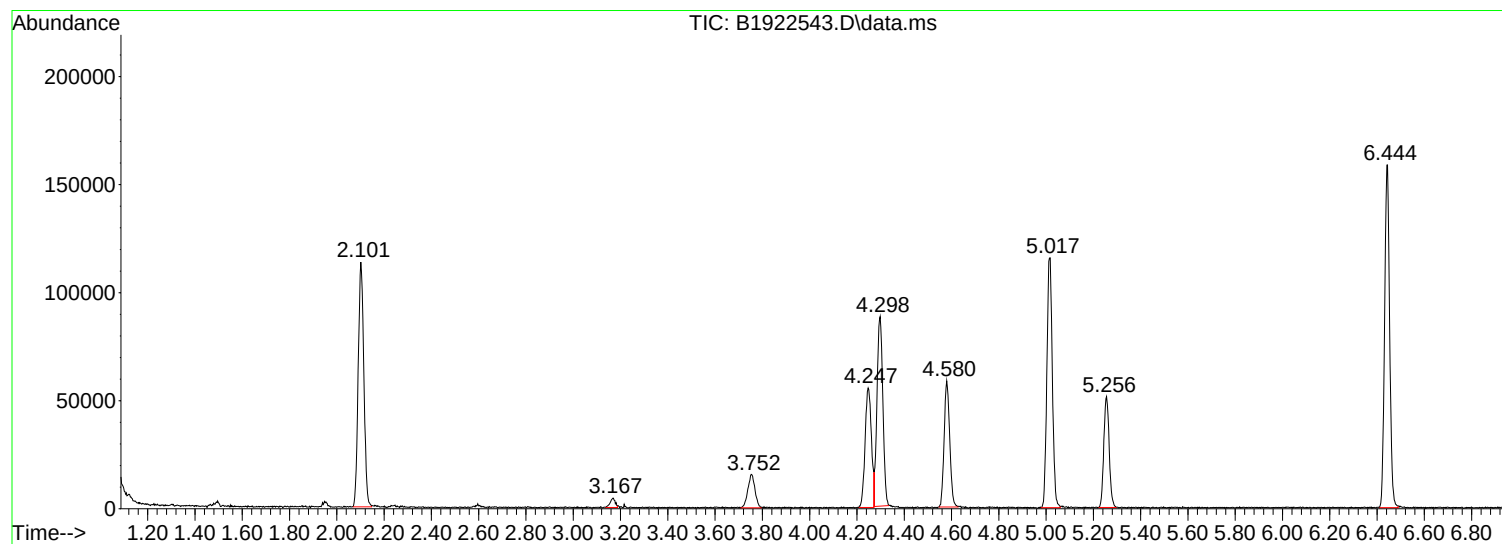
| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 2.101       | 346           | 358         | 374          | rBV2     | 113298         | 185587        | 60.60%          | 10.123%       |
| 2         | 3.167       | 722           | 733         | 740          | rBV2     | 4309           | 6513          | 2.13%           | 0.355%        |
| 3         | 3.753       | 923           | 939         | 954          | rBV6     | 15430          | 31947         | 10.43%          | 1.743%        |
| 4         | 4.247       | 1099          | 1113        | 1122         | rBV3     | 55337          | 104986        | 34.28%          | 5.727%        |
| 5         | 4.298       | 1122          | 1131        | 1144         | rVB2     | 87586          | 149497        | 48.82%          | 8.155%        |
| 6         | 4.580       | 1218          | 1230        | 1247         | rBV2     | 58388          | 95778         | 31.27%          | 5.224%        |
| 7         | 5.017       | 1370          | 1384        | 1399         | rBV2     | 115611         | 184267        | 60.17%          | 10.051%       |
| 8         | 5.256       | 1456          | 1468        | 1483         | rBV3     | 51284          | 80958         | 26.44%          | 4.416%        |
| 9         | 6.444       | 1874          | 1886        | 1902         | rBV      | 158624         | 235161        | 76.79%          | 12.827%       |
| 10        | 7.842       | 2366          | 2378        | 2396         | rBV      | 189181         | 277210        | 90.52%          | 15.121%       |
| 11        | 9.002       | 2773          | 2786        | 2800         | rBV2     | 127047         | 175111        | 57.18%          | 9.552%        |
| 12        | 10.138      | 3173          | 3186        | 3199         | rBV      | 218815         | 306252        | 100.00%         | 16.705%       |

Sum of corrected areas: 1833267

Data Path : Y:\1\DATA\B081319\  
Data File : B1922543.D  
Acq On : 14 Aug 2019 4:11 am  
Operator :  
Sample : 19H0576-02 @ 10X (TICs)  
Misc : 10  
ALS Vial : 43 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P



Data Path : Y:\1\DATA\B081319\  
Data File : B1922543.D  
Acq On : 14 Aug 2019 4:11 am  
Operator :  
Sample : 19H0576-02 @ 10X (TICs)  
Misc : 10  
ALS Vial : 43 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

\*\*\*\*\*

Data Path : Y:\1\DATA\B081319\  
Data File : B1922543.D  
Acq On : 14 Aug 2019 4:11 am  
Operator :  
Sample : 19H0576-02 @ 10X (TICs)  
Misc : 10  
ALS Vial : 43 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

| TIC Top Hit name | RT | EstConc | Units | Response | --Internal Standard-- |
|------------------|----|---------|-------|----------|-----------------------|
|                  |    |         |       |          | # RT Resp Conc        |

---

# 1 - FORM I

## ANALYSIS DATA SHEET

75

MW-21R

|                |                                |                |                       |                          |
|----------------|--------------------------------|----------------|-----------------------|--------------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |                          |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |                          |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-03            | File ID: B1922544.D      |
| Sampled:       | 08/09/19 12:20                 | Prepared:      | 08/13/19 07:22        | Analyzed: 08/14/19 04:42 |
| Solids:        |                                | Preparation:   | SW-846 5030B          | Dilution: 1000           |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |                          |
| Batch:         | B237875                        | Sequence:      | S039168               | Calibration: 1900126     |
|                |                                |                |                       | Instrument: GCMSVOA2     |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL  | RL    | Q    |
|----------|------------------------------------|--------------|------|-------|------|
| 67-64-1  | Acetone                            |              | 3800 | 50000 |      |
| 107-13-1 | Acrylonitrile                      |              | 520  | 5000  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      |              | 140  | 500   |      |
| 71-43-2  | Benzene                            |              | 180  | 1000  |      |
| 108-86-1 | Bromobenzene                       |              | 150  | 1000  |      |
| 74-97-5  | Bromochloromethane                 |              | 320  | 1000  |      |
| 75-27-4  | Bromodichloromethane               |              | 160  | 500   |      |
| 75-25-2  | Bromoform                          |              | 460  | 1000  |      |
| 74-83-9  | Bromomethane                       |              | 780  | 5000  |      |
| 78-93-3  | 2-Butanone (MEK)                   |              | 1900 | 20000 |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           |              | 4200 | 20000 |      |
| 104-51-8 | n-Butylbenzene                     |              | 210  | 1000  | V-05 |
| 135-98-8 | sec-Butylbenzene                   |              | 160  | 1000  |      |
| 98-06-6  | tert-Butylbenzene                  |              | 170  | 1000  |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      |              | 160  | 500   |      |
| 75-15-0  | Carbon Disulfide                   |              | 4400 | 5000  |      |
| 56-23-5  | Carbon Tetrachloride               |              | 110  | 5000  |      |
| 108-90-7 | Chlorobenzene                      |              | 150  | 1000  |      |
| 124-48-1 | Chlorodibromomethane               |              | 210  | 500   |      |
| 75-00-3  | Chloroethane                       |              | 350  | 2000  |      |
| 67-66-3  | Chloroform                         |              | 170  | 2000  |      |
| 74-87-3  | Chloromethane                      |              | 450  | 2000  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    |              | 120  | 1000  |      |
| 106-43-4 | 4-Chlorotoluene                    |              | 140  | 1000  |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) |              | 530  | 5000  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            |              | 190  | 500   |      |
| 74-95-3  | Dibromomethane                     |              | 370  | 1000  |      |
| 95-50-1  | 1,2-Dichlorobenzene                |              | 160  | 1000  |      |
| 541-73-1 | 1,3-Dichlorobenzene                |              | 120  | 1000  |      |
| 106-46-7 | 1,4-Dichlorobenzene                |              | 130  | 1000  |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

76

MW-21R

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-03            |
|                |                                | File ID:       | B1922544.D            |
| Sampled:       | 08/09/19 12:20                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/14/19 04:42        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1000                  |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL   | RL    | Q |
|------------|------------------------------------|--------------|-------|-------|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        |              | 310   | 2000  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) |              | 260   | 2000  |   |
| 75-34-3    | 1,1-Dichloroethane                 | 1800         | 160   | 1000  |   |
| 107-06-2   | 1,2-Dichloroethane                 |              | 410   | 1000  |   |
| 75-35-4    | 1,1-Dichloroethylene               |              | 320   | 1000  |   |
| 156-59-2   | cis-1,2-Dichloroethylene           |              | 130   | 1000  |   |
| 156-60-5   | trans-1,2-Dichloroethylene         |              | 310   | 1000  |   |
| 78-87-5    | 1,2-Dichloropropane                |              | 200   | 1000  |   |
| 142-28-9   | 1,3-Dichloropropane                |              | 110   | 500   |   |
| 594-20-7   | 2,2-Dichloropropane                |              | 200   | 1000  |   |
| 563-58-6   | 1,1-Dichloropropene                |              | 160   | 2000  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            |              | 130   | 500   |   |
| 10061-02-6 | trans-1,3-Dichloropropene          |              | 230   | 500   |   |
| 60-29-7    | Diethyl Ether                      |              | 340   | 2000  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           |              | 170   | 500   |   |
| 123-91-1   | 1,4-Dioxane                        |              | 22000 | 50000 |   |
| 100-41-4   | Ethylbenzene                       |              | 130   | 1000  |   |
| 87-68-3    | Hexachlorobutadiene                |              | 470   | 600   |   |
| 591-78-6   | 2-Hexanone (MBK)                   |              | 1500  | 10000 |   |
| 98-82-8    | Isopropylbenzene (Cumene)          |              | 170   | 1000  |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      |              | 200   | 1000  |   |
| 79-20-9    | Methyl Acetate                     |              | 420   | 1000  |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     |              | 250   | 1000  |   |
| 108-87-2   | Methyl Cyclohexane                 |              | 200   | 1000  |   |
| 75-09-2    | Methylene Chloride                 | 8600         | 340   | 5000  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        |              | 1700  | 10000 |   |
| 91-20-3    | Naphthalene                        |              | 310   | 2000  |   |
| 103-65-1   | n-Propylbenzene                    |              | 130   | 1000  |   |
| 100-42-5   | Styrene                            |              | 110   | 1000  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          |              | 270   | 1000  |   |



# 1 - FORM I

## ANALYSIS DATA SHEET

77

MW-21R

|                |                                |                |                       |                          |
|----------------|--------------------------------|----------------|-----------------------|--------------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |                          |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |                          |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-03            | File ID: B1922544.D      |
| Sampled:       | 08/09/19 12:20                 | Prepared:      | 08/13/19 07:22        | Analyzed: 08/14/19 04:42 |
| Solids:        |                                | Preparation:   | SW-846 5030B          | Dilution: 1000           |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |                          |
| Batch:         | B237875                        | Sequence:      | S039168               | Calibration: 1900126     |
|                |                                |                |                       | Instrument: GCMSVOA2     |

| CAS NO.       | COMPOUND                                          | CONC. (µg/L) | MDL | RL    | Q |
|---------------|---------------------------------------------------|--------------|-----|-------|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                         |              | 220 | 500   |   |
| 127-18-4      | Tetrachloroethylene                               |              | 180 | 1000  |   |
| 109-99-9      | Tetrahydrofuran                                   |              | 510 | 10000 |   |
| 108-88-3      | Toluene                                           |              | 140 | 1000  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                            |              | 570 | 5000  |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                            |              | 400 | 1000  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                            |              | 300 | 1000  |   |
| 71-55-6       | 1,1,1-Trichloroethane                             | 35000        | 200 | 1000  |   |
| 79-00-5       | 1,1,2-Trichloroethane                             |              | 160 | 1000  |   |
| 79-01-6       | Trichloroethylene                                 | 14000        | 240 | 1000  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                 |              | 330 | 2000  |   |
| 96-18-4       | 1,2,3-Trichloropropane                            |              | 250 | 2000  |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 72000        | 320 | 1000  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                            |              | 180 | 1000  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                            |              | 140 | 1000  |   |
| 75-01-4       | Vinyl Chloride                                    |              | 450 | 2000  |   |
| 108383/106423 | m+p Xylene                                        |              | 300 | 2000  |   |
| 95-47-6       | o-Xylene                                          |              | 170 | 1000  |   |
|               | No TICs Found                                     | 0.0          |     |       |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922544.D  
 Acq On : 14 Aug 2019 4:42 am  
 Operator :  
 Sample : 19H0576-03 @ 1000X (TICs)  
 Misc : 1000  
 ALS Vial : 44 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 11:29:44 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon     | Response | Conc      | Units  | Dev (Min) |
|-------------------------------|--------|----------|----------|-----------|--------|-----------|
| Internal Standards            |        |          |          |           |        |           |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298  | 168      | 54320    | 30.00     | UG/L   | 0.00      |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017  | 114      | 76694    | 30.00     | UG/L   | 0.00      |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842  | 82       | 47381    | 30.00     | UG/L   | 0.00      |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.141 | 152      | 49034    | 30.00     | UG/L   | 0.00      |
| System Monitoring Compounds   |        |          |          |           |        |           |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582  | 65       | 38261    | 27.33     | UG/L   | 0.00      |
| Spiked Amount 25.000          | Range  | 70 - 130 | Recovery | = 109.32% |        |           |
| 45) TOLUENE-D8 SS             | 6.441  | 98       | 81919    | 27.29     | UG/L   | 0.00      |
| Spiked Amount 25.000          | Range  | 70 - 130 | Recovery | = 109.16% |        |           |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002  | 95       | 34262    | 24.57     | UG/L   | 0.00      |
| Spiked Amount 25.000          | Range  | 70 - 130 | Recovery | = 98.28%  |        |           |
| Target Compounds              |        |          |          |           |        | Qvalue    |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.107  | 101      | 55457    | 72.36     | UG/L   | 87        |
| 21) METHYLENE CHLORIDE        | 2.505  | 49       | 18576    | 8.63      | UG/L   | 95        |
| 25) 1,1-DICHLOROETHANE        | 3.167  | 63       | 3966     | 1.80      | UG/L # | 88        |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250  | 97       | 61484    | 34.96     | UG/L   | 100       |
| 47) TRICHLOROETHENE           | 5.253  | 95       | 13368    | 13.74     | UG/L   | 96        |

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

Data Path : Y:\1\DATA\B081319\

Data File : B1922544.D

Acq On : 14 Aug 2019 4:42 am

Operator :

Sample : 19H0576-03 @ 1000X (TICs)

Inst : GCMSVOA2

Misc : 1000

ALS Vial : 44 Sample Multiplier: 1

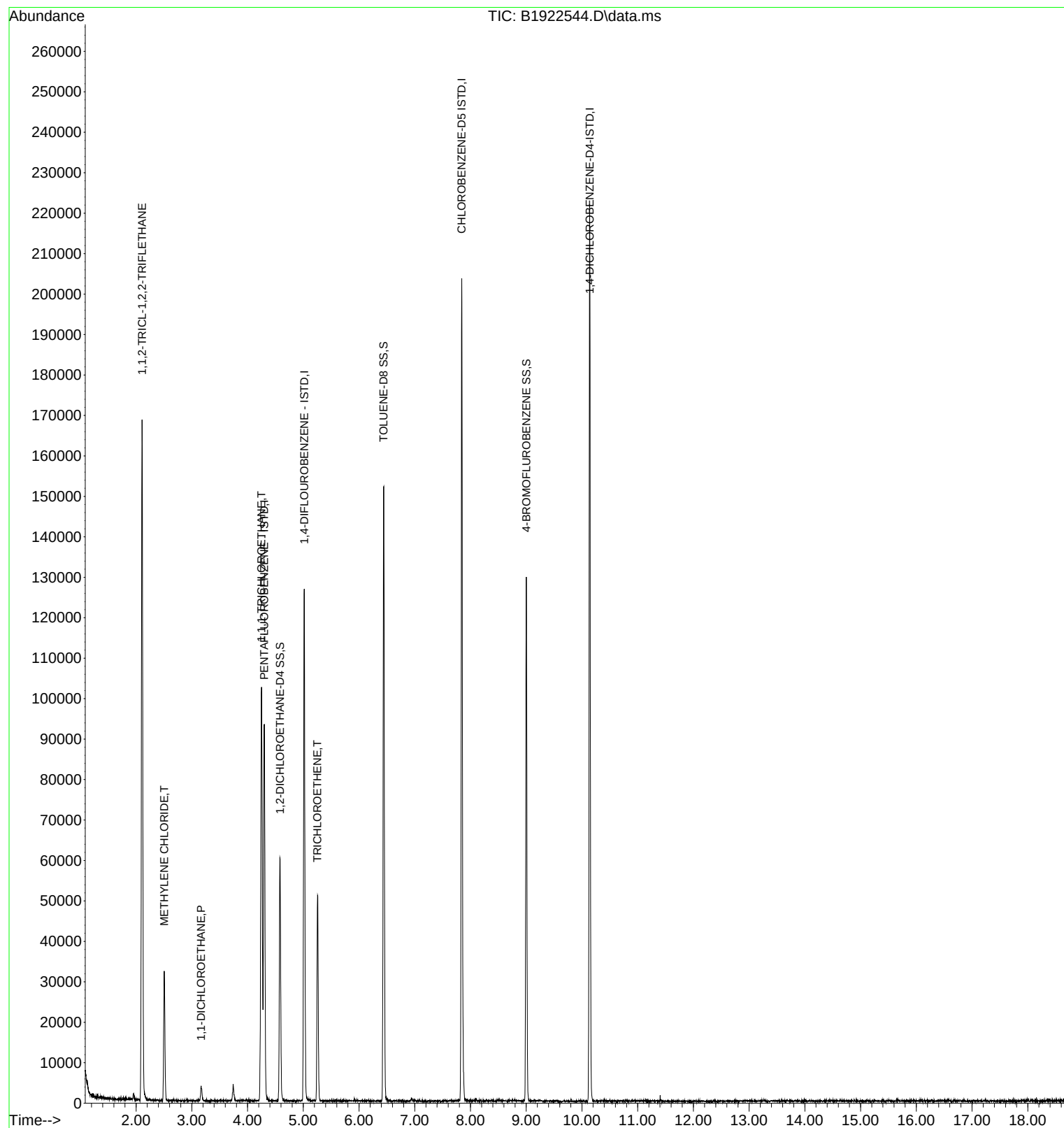
Quant Time: Aug 14 11:29:44 2019

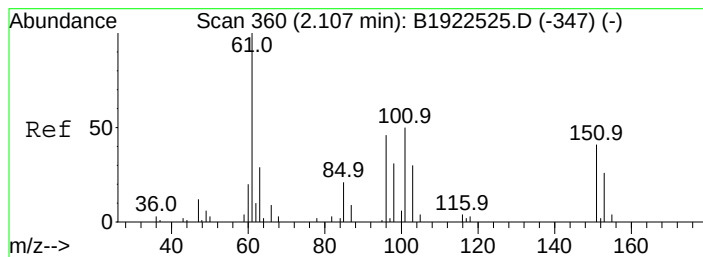
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Fri Apr 19 05:25:51 2019

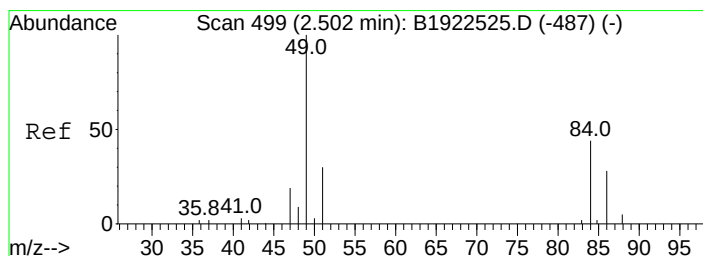
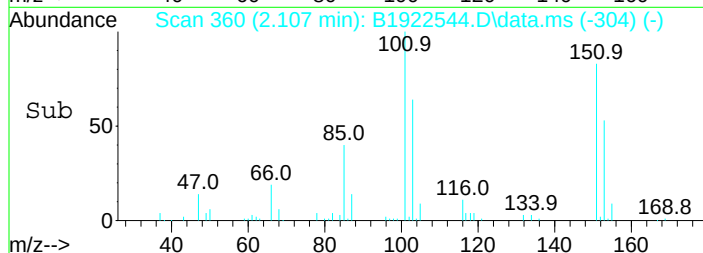
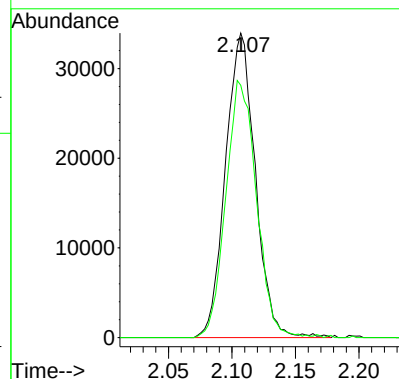
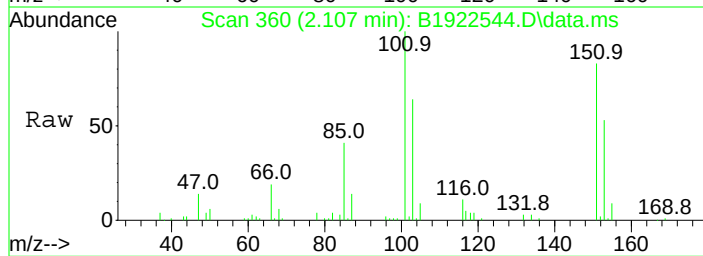
Response via : Initial Calibration





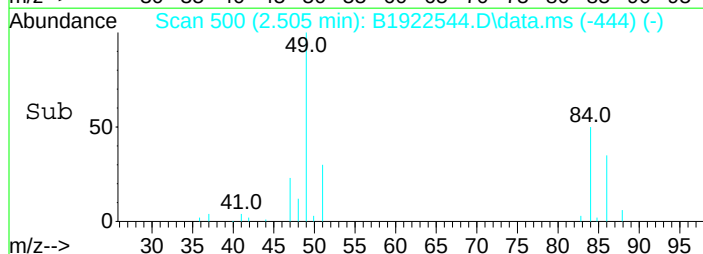
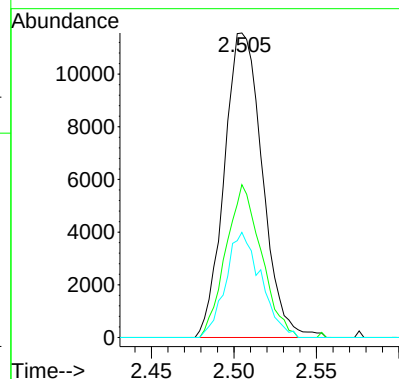
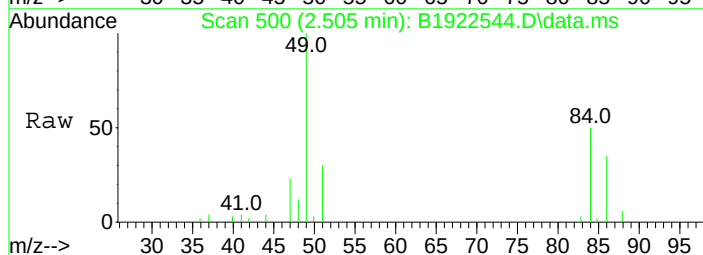
#16  
 1,1,2-TRICL-1,2,2-TRIFLETHANE  
 Concen: 72.36 UG/L  
 RT: 2.107 min Scan# 360  
 Delta R.T. 0.003 min  
 Lab File: B1922544.D  
 Acq: 14 Aug 2019 4:42 am

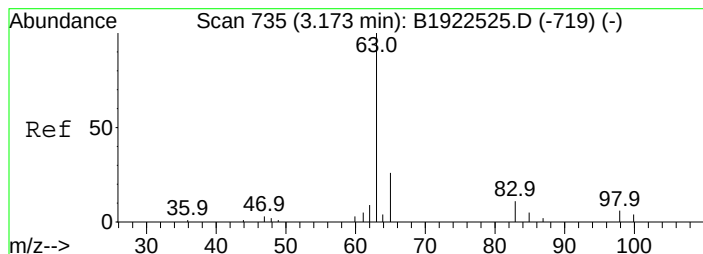
| Tgt Ion   | 101  | Resp  | 55457 |
|-----------|------|-------|-------|
| Ion Ratio | 100  | Lower | Upper |
| 101       | 100  |       |       |
| 151       | 86.6 | 60.5  | 90.7  |



#21  
 METHYLENE CHLORIDE  
 Concen: 8.63 UG/L  
 RT: 2.505 min Scan# 500  
 Delta R.T. -0.000 min  
 Lab File: B1922544.D  
 Acq: 14 Aug 2019 4:42 am

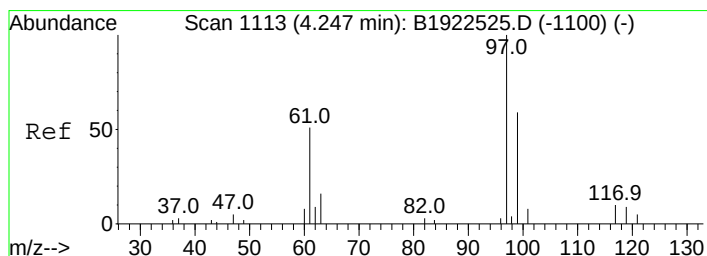
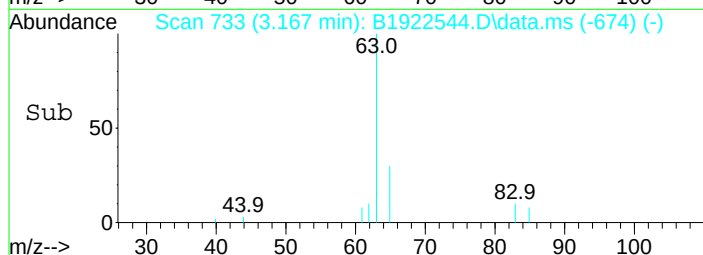
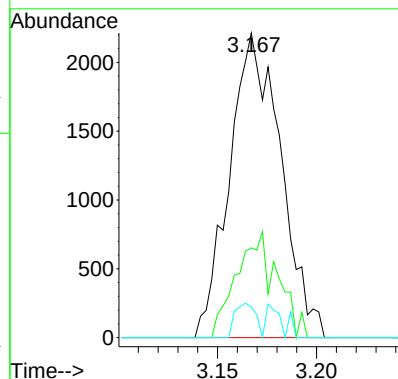
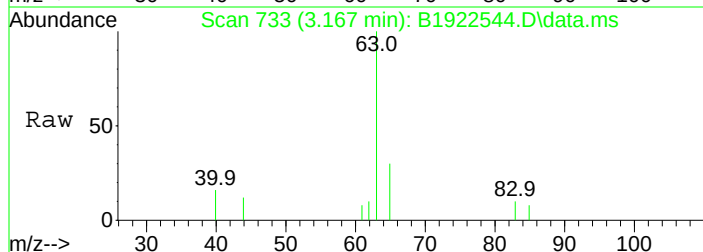
| Tgt Ion                                              | 49   | Resp  | 18576 |
|------------------------------------------------------|------|-------|-------|
| Ion Ratio <td>100</td> <td>Lower</td> <td>Upper</td> | 100  | Lower | Upper |
| 49                                                   | 100  |       |       |
| 84                                                   | 46.7 | 41.1  | 61.7  |
| 86                                                   | 32.0 | 26.5  | 39.7  |





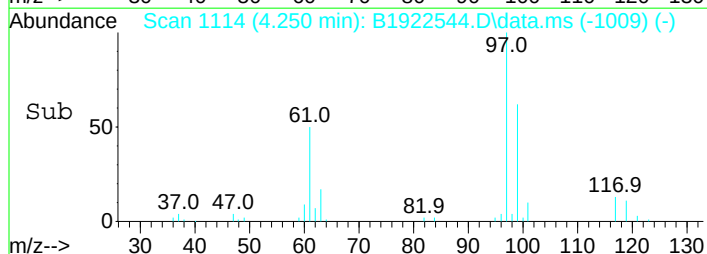
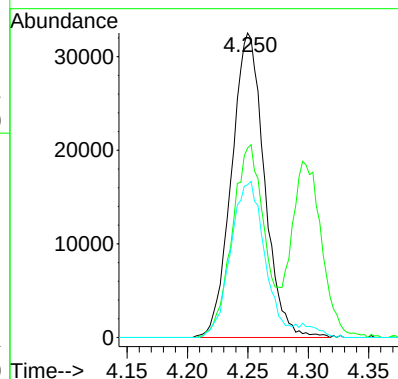
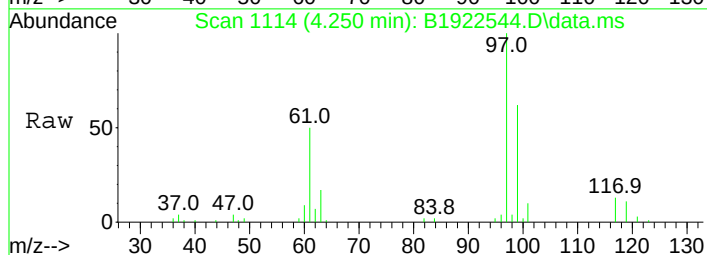
#25  
 1,1-DICHLOROETHANE  
 Concen: 1.80 UG/L  
 RT: 3.167 min Scan# 733  
 Delta R.T. -0.003 min  
 Lab File: B1922544.D  
 Acq: 14 Aug 2019 4:42 am

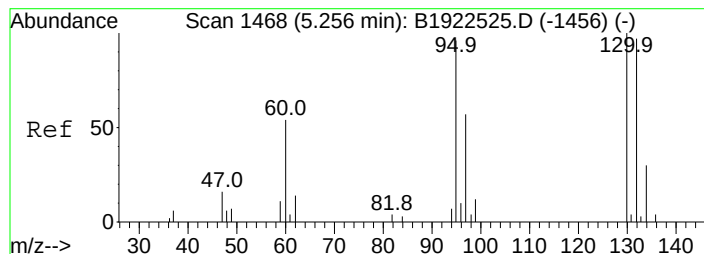
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 65      | 27.7  | 24.0  | 36.0  |
| 83      | 0.0   | 9.8   | 14.6# |



#37  
 1,1,1-TRICHLOROETHANE  
 Concen: 34.96 UG/L  
 RT: 4.250 min Scan# 1114  
 Delta R.T. -0.000 min  
 Lab File: B1922544.D  
 Acq: 14 Aug 2019 4:42 am

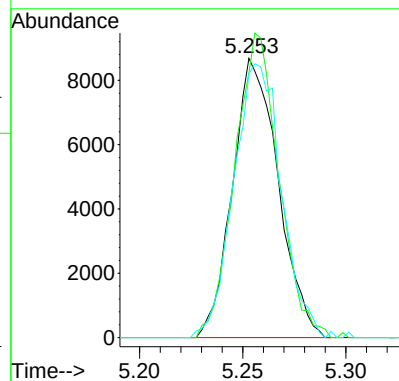
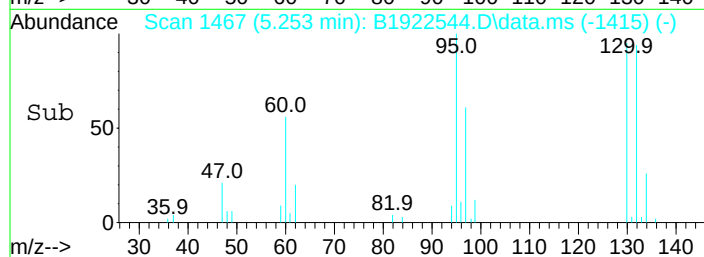
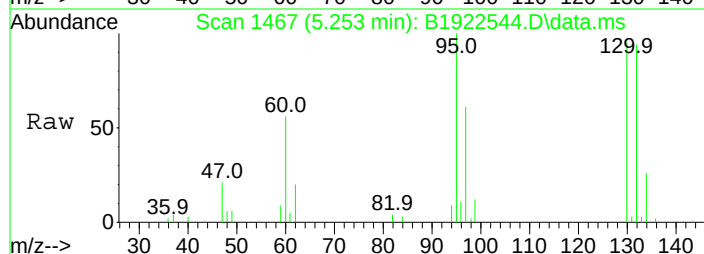
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 63.6  | 50.8  | 76.2  |
| 61      | 55.9  | 45.1  | 67.7  |





#47  
TRICHLOROETHENE  
Concen: 13.74 UG/L  
RT: 5.253 min Scan# 1467  
Delta R.T. -0.003 min  
Lab File: B1922544.D  
Acq: 14 Aug 2019 4:42 am

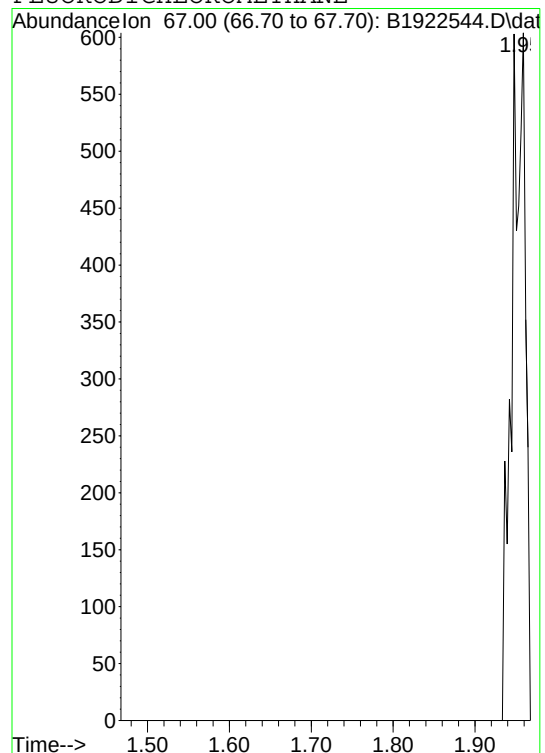
Tgt Ion: 95 Resp: 13368  
Ion Ratio Lower Upper  
95 100  
130 105.1 79.8 119.6  
132 103.0 80.6 121.0



Data Path : Y:\1\DATA\B081319\  
Data File : B1922544.D  
Acq On : 14 Aug 2019 4:42 am  
Operator :  
Sample : 19H0576-03 @ 1000X (TICs)  
Misc : 1000

Quant Time : Wed Aug 14 11:29:44 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
FLUORODICHLOROMETHANE



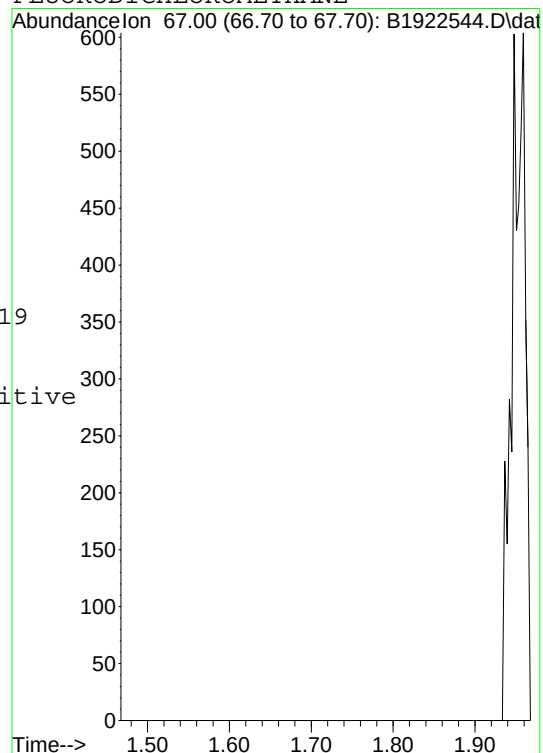
Original Int. Results

-----  
RT : 1.96  
Area : 699  
Amount: 0.337223

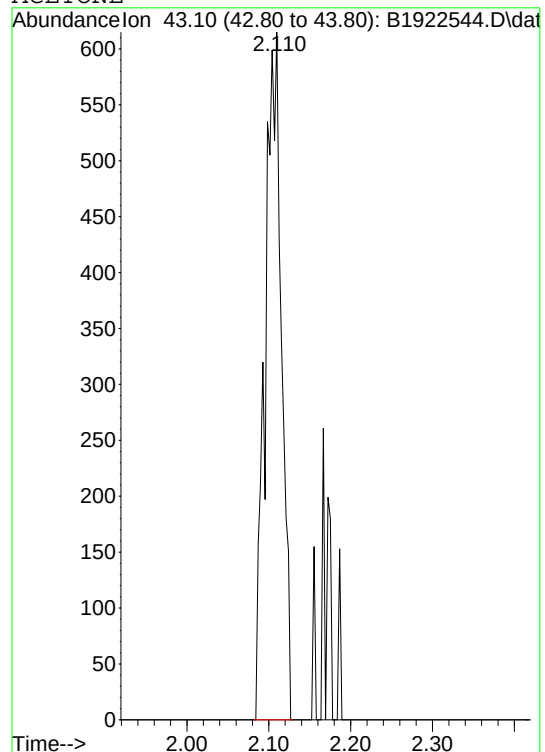
Manual Int. Results

-----  
Wed Aug 14 11:29:03 2019  
MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
FLUORODICHLOROMETHANE



Original Integration  
ACETONE



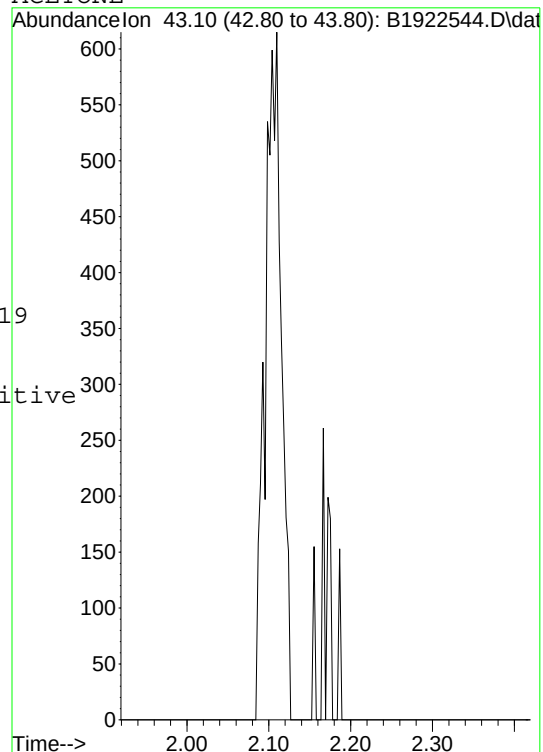
Original Int. Results

-----  
RT : 2.11  
Area : 856  
Amount: 1.70689

Manual Int. Results

-----  
Wed Aug 14 11:29:20 2019  
MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
ACETONE



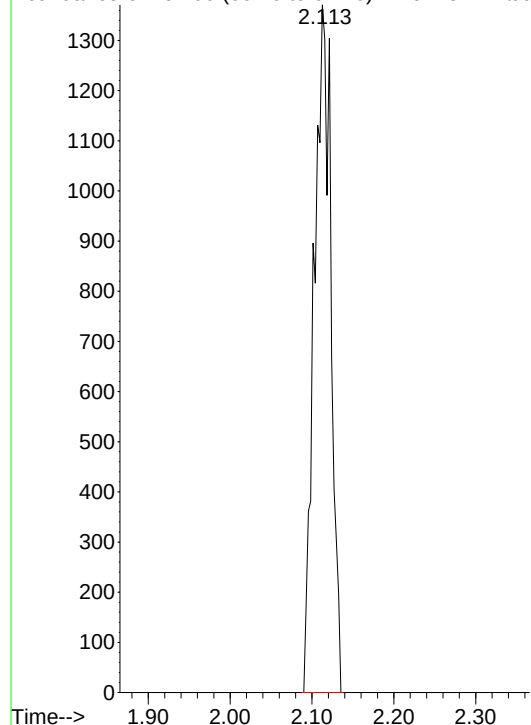
Data Path : Y:\1\DATA\B081319\  
Data File : B1922544.D  
Acq On : 14 Aug 2019 4:42 am  
Operator :  
Sample : 19H0576-03 @ 1000X (TICs)  
Misc : 1000

Quant Time : Wed Aug 14 11:29:44 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

1,1-DICHLOROETHENE

Abundance on 61.00 (60.70 to 61.70): B1922544.D\data



## Original Int. Results

-----

RT : 2.11  
Area : 1943  
Amount: 1.05691

## Manual Int. Results

-----

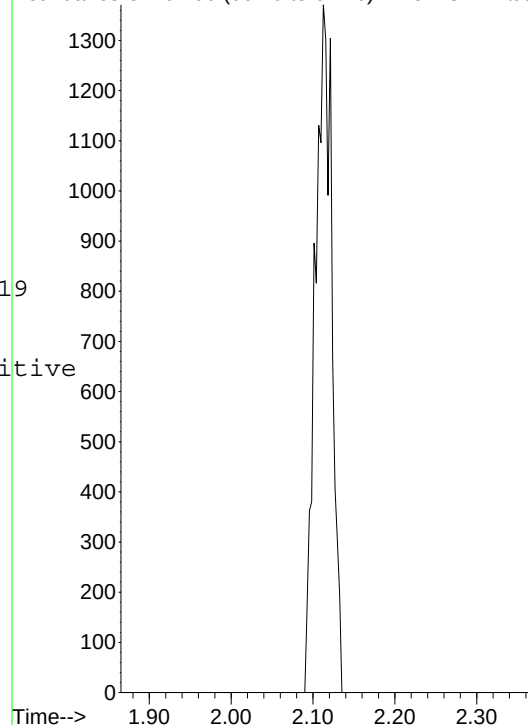
Wed Aug 14 11:29:27 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

1,1-DICHLOROETHENE

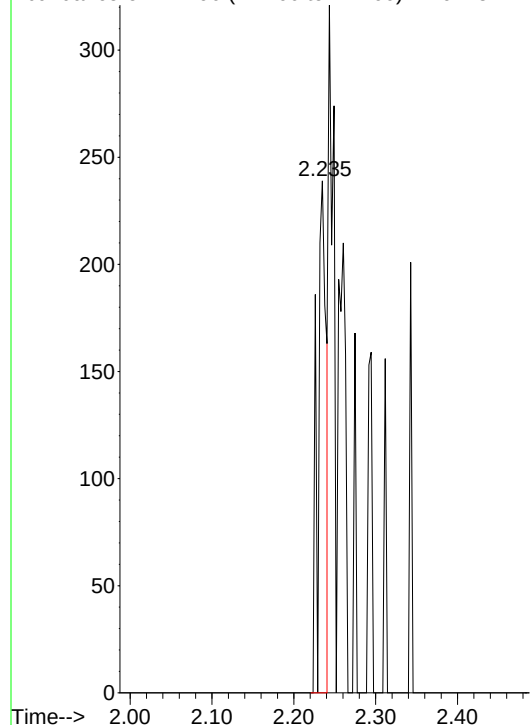
Abundance on 61.00 (60.70 to 61.70): B1922544.D\data



## Original Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922544.D\data



## Original Int. Results

-----

RT : 2.23  
Area : 167  
Amount: 0.12731

## Manual Int. Results

-----

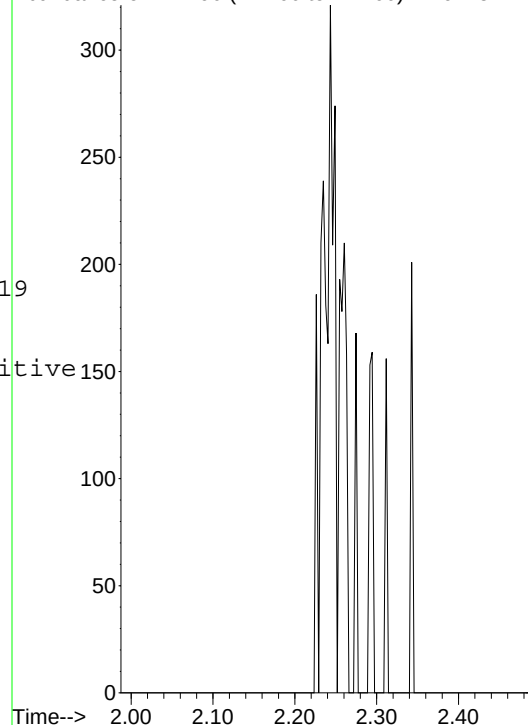
Wed Aug 14 11:29:24 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922544.D\data



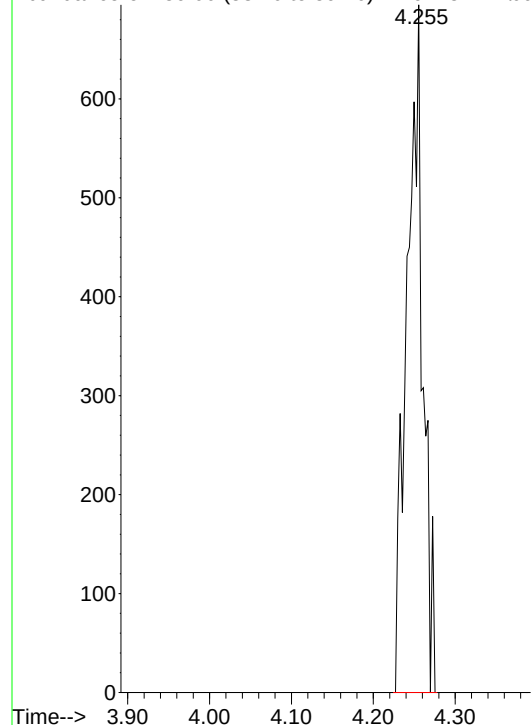


Data Path : Y:\1\DATA\B081319\  
Data File : B1922544.D  
Acq On : 14 Aug 2019 4:42 am  
Operator :  
Sample : 19H0576-03 @ 1000X (TICs)  
Misc : 1000

Quant Time : Wed Aug 14 11:29:44 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922544.D\data



Original Int. Results  
-----

RT : 4.26  
Area : 932  
Amount: 0.839256

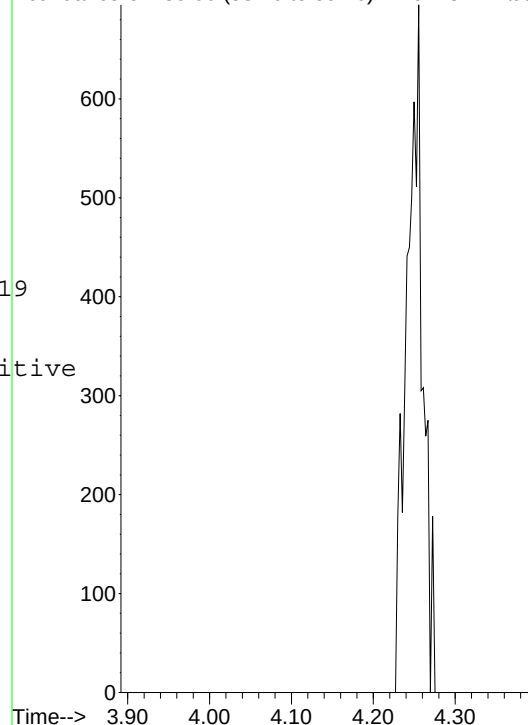
Manual Int. Results  
-----

Wed Aug 14 11:29:34 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

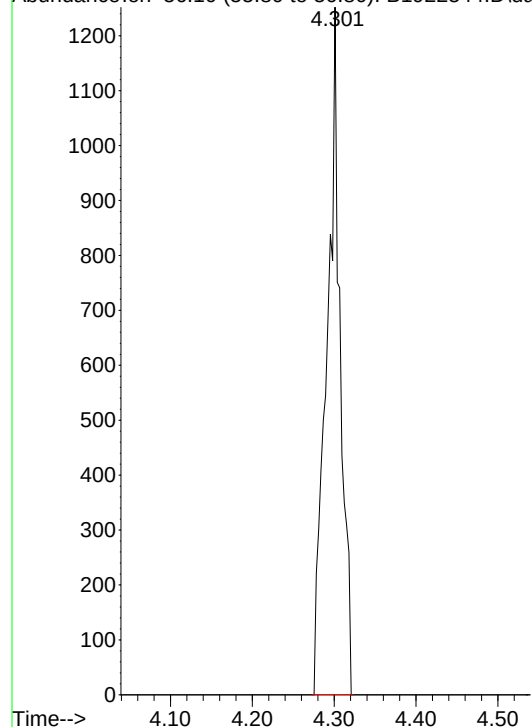
Manual Integration  
T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922544.D\data



Original Integration  
CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922544.D\data



Original Int. Results  
-----

RT : 4.30  
Area : 1430  
Amount: 0.624038

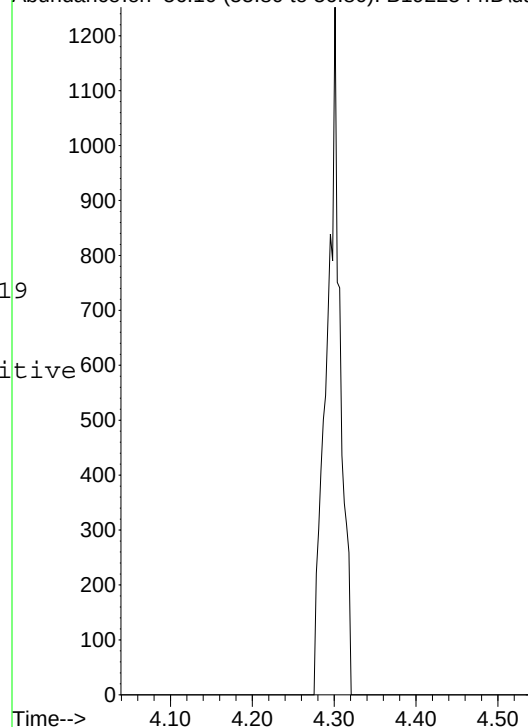
Manual Int. Results  
-----

Wed Aug 14 11:29:36 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922544.D\data



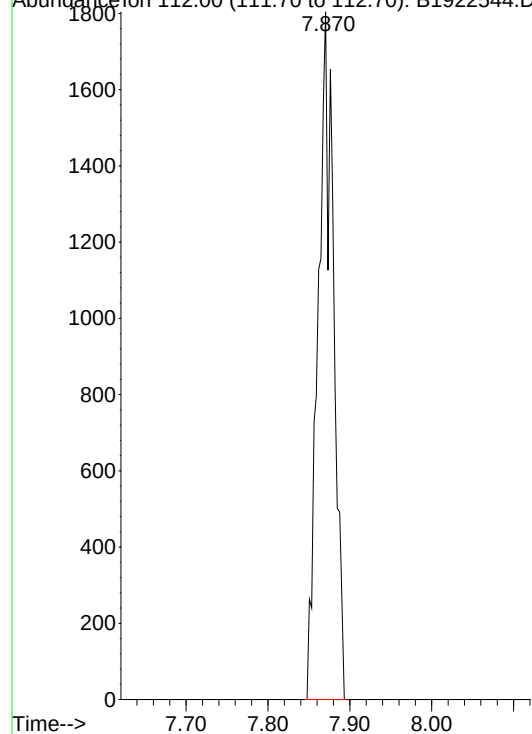
Data Path : Y:\1\DATA\B081319\  
Data File : B1922544.D  
Acq On : 14 Aug 2019 4:42 am  
Operator :  
Sample : 19H0576-03 @ 1000X (TICs)  
Misc : 1000

Quant Time : Wed Aug 14 11:29:44 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CHLOROBENZENE

Abundance on 112.00 (111.70 to 112.70): B1922544.D



## Original Int. Results

-----

RT : 7.87  
Area : 2364  
Amount: 0.790923

## Manual Int. Results

-----

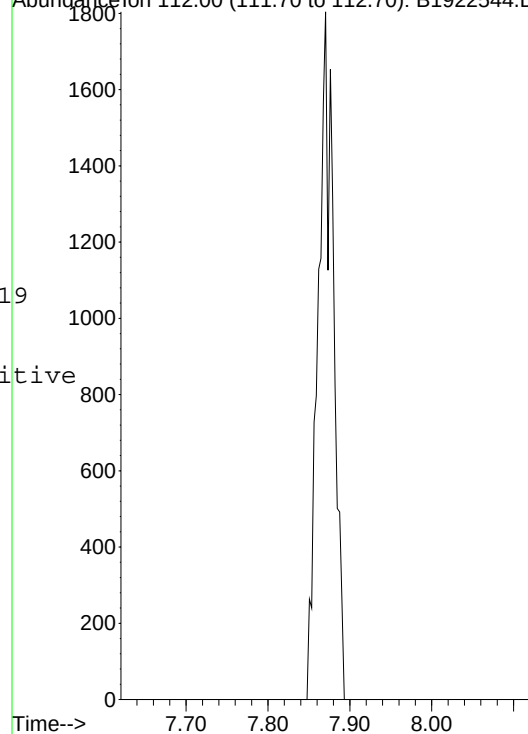
Wed Aug 14 11:29:43 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CHLOROBENZENE

Abundance on 112.00 (111.70 to 112.70): B1922544.D



Data Path : Y:\1\DATA\B081319\  
 Data File : B1922544.D  
 Acq On : 14 Aug 2019 4:42 am  
 Operator :  
 Sample : 19H0576-03 @ 1000X (TICs)  
 Misc : 1000  
 ALS Vial : 44 Sample Multiplier: 1

Integration Parameters: 8260LOW.P  
 Integrator: RTE  
 Smoothing : OFF  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0

Filtering: 5  
 Min Area: 1 % of largest Peak  
 Max Peaks: 100  
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Y:\1\METHODS\B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973

Signal : TIC: B1922544.D\data.ms

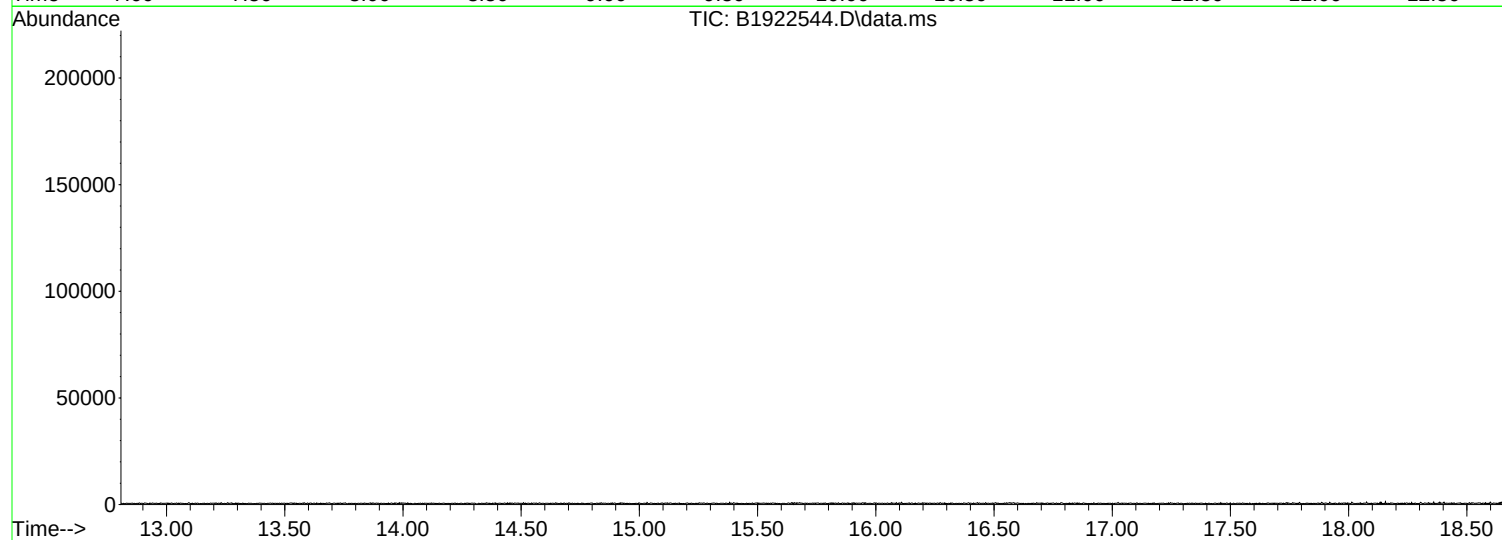
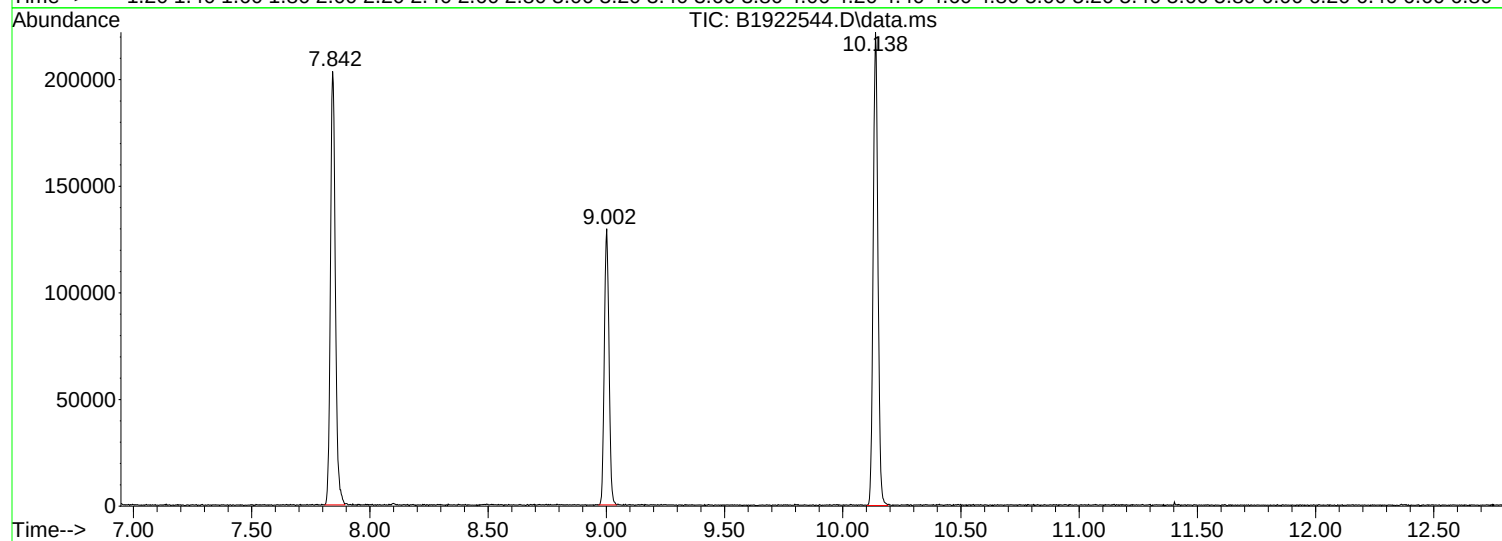
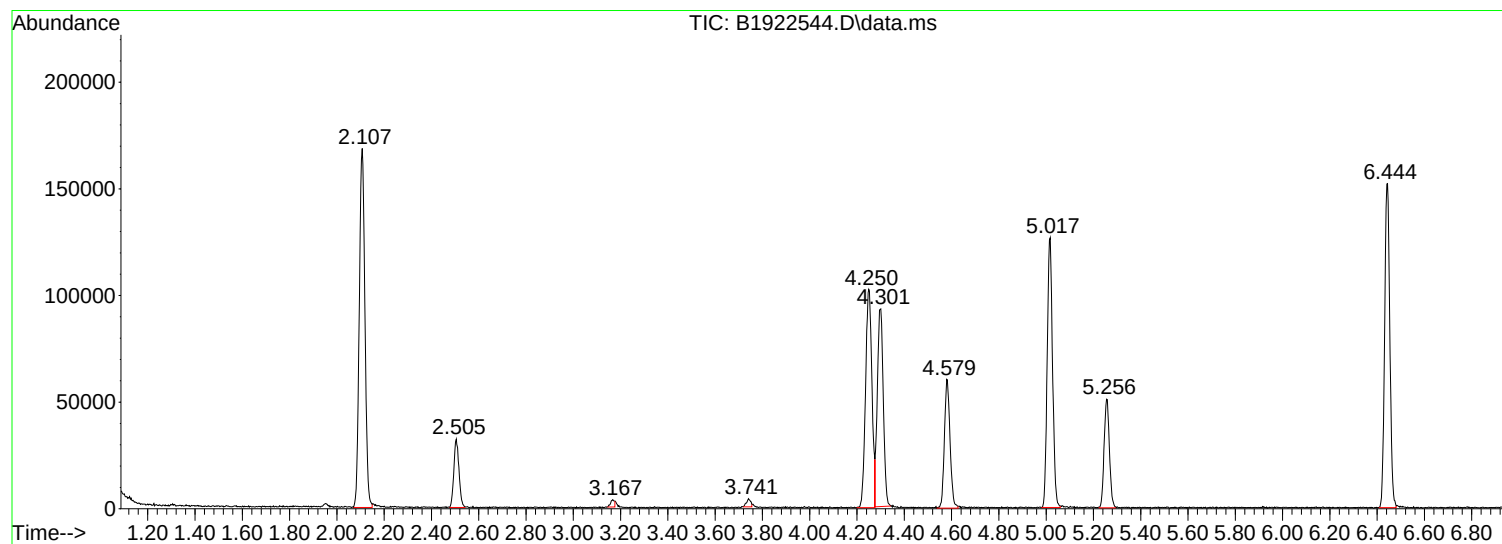
| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 2.107       | 347           | 360         | 375          | rBV2     | 168346         | 278474        | 89.47%          | 13.380%       |
| 2         | 2.505       | 490           | 500         | 513          | rBV      | 32071          | 48361         | 15.54%          | 2.324%        |
| 3         | 3.167       | 725           | 733         | 736          | rBV3     | 3478           | 3953          | 1.27%           | 0.190%        |
| 4         | 3.741       | 927           | 935         | 940          | rBV2     | 3795           | 4701          | 1.51%           | 0.226%        |
| 5         | 4.250       | 1096          | 1114        | 1123         | rBV      | 102343         | 193308        | 62.11%          | 9.288%        |
| 6         | 4.301       | 1123          | 1132        | 1147         | rVB2     | 92511          | 161077        | 51.75%          | 7.739%        |
| 7         | 4.579       | 1215          | 1230        | 1247         | rBV2     | 60363          | 99543         | 31.98%          | 4.783%        |
| 8         | 5.017       | 1371          | 1384        | 1399         | rBV2     | 126529         | 196926        | 63.27%          | 9.462%        |
| 9         | 5.256       | 1457          | 1468        | 1482         | rVB3     | 50908          | 79173         | 25.44%          | 3.804%        |
| 10        | 6.444       | 1873          | 1886        | 1899         | rBV2     | 151910         | 232228        | 74.61%          | 11.158%       |
| 11        | 7.842       | 2366          | 2378        | 2396         | rBV      | 203274         | 294639        | 94.66%          | 14.157%       |
| 12        | 9.002       | 2774          | 2786        | 2801         | rVB2     | 129500         | 177643        | 57.07%          | 8.535%        |
| 13        | 10.138      | 3173          | 3186        | 3204         | rBV2     | 221962         | 311246        | 100.00%         | 14.955%       |

Sum of corrected areas: 2081272

Data Path : Y:\1\DATA\B081319\  
Data File : B1922544.D  
Acq On : 14 Aug 2019 4:42 am  
Operator :  
Sample : 19H0576-03 @ 1000X (TICs)  
Misc : 1000  
ALS Vial : 44 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P



Data Path : Y:\1\DATA\B081319\  
Data File : B1922544.D  
Acq On : 14 Aug 2019 4:42 am  
Operator :  
Sample : 19H0576-03 @ 1000X (TICs)  
Misc : 1000  
ALS Vial : 44 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

\*\*\*\*\*

Data Path : Y:\1\DATA\B081319\  
Data File : B1922544.D  
Acq On : 14 Aug 2019 4:42 am  
Operator :  
Sample : 19H0576-03 @ 1000X (TICs)  
Misc : 1000  
ALS Vial : 44 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

| TIC Top Hit name | RT | EstConc | Units | Response | --Internal Standard-- |
|------------------|----|---------|-------|----------|-----------------------|
|                  |    |         |       |          | # RT Resp Conc        |

---

# 1 - FORM I

## ANALYSIS DATA SHEET

91

OC-19S

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-04            |
|                |                                | File ID:       | B1922541.D            |
| Sampled:       | 08/09/19 11:50                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/14/19 03:10        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q    |
|----------|------------------------------------|--------------|------|------|------|
| 67-64-1  | Acetone                            |              | 3.8  | 50   |      |
| 107-13-1 | Acrylonitrile                      |              | 0.52 | 5.0  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      |              | 0.14 | 0.50 |      |
| 71-43-2  | Benzene                            |              | 0.18 | 1.0  |      |
| 108-86-1 | Bromobenzene                       |              | 0.15 | 1.0  |      |
| 74-97-5  | Bromochloromethane                 |              | 0.32 | 1.0  |      |
| 75-27-4  | Bromodichloromethane               |              | 0.16 | 0.50 |      |
| 75-25-2  | Bromoform                          |              | 0.46 | 1.0  |      |
| 74-83-9  | Bromomethane                       |              | 0.78 | 5.0  |      |
| 78-93-3  | 2-Butanone (MEK)                   |              | 1.9  | 20   |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           |              | 4.2  | 20   |      |
| 104-51-8 | n-Butylbenzene                     |              | 0.21 | 1.0  | V-05 |
| 135-98-8 | sec-Butylbenzene                   |              | 0.16 | 1.0  |      |
| 98-06-6  | tert-Butylbenzene                  |              | 0.17 | 1.0  |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      |              | 0.16 | 0.50 |      |
| 75-15-0  | Carbon Disulfide                   |              | 4.4  | 5.0  |      |
| 56-23-5  | Carbon Tetrachloride               |              | 0.11 | 5.0  |      |
| 108-90-7 | Chlorobenzene                      |              | 0.15 | 1.0  |      |
| 124-48-1 | Chlorodibromomethane               |              | 0.21 | 0.50 |      |
| 75-00-3  | Chloroethane                       |              | 0.35 | 2.0  |      |
| 67-66-3  | Chloroform                         |              | 0.17 | 2.0  |      |
| 74-87-3  | Chloromethane                      |              | 0.45 | 2.0  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    |              | 0.12 | 1.0  |      |
| 106-43-4 | 4-Chlorotoluene                    |              | 0.14 | 1.0  |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) |              | 0.53 | 5.0  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            |              | 0.19 | 0.50 |      |
| 74-95-3  | Dibromomethane                     |              | 0.37 | 1.0  |      |
| 95-50-1  | 1,2-Dichlorobenzene                |              | 0.16 | 1.0  |      |
| 541-73-1 | 1,3-Dichlorobenzene                |              | 0.12 | 1.0  |      |
| 106-46-7 | 1,4-Dichlorobenzene                |              | 0.13 | 1.0  |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

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OC-19S

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-04            |
|                |                                | File ID:       | B1922541.D            |
| Sampled:       | 08/09/19 11:50                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/14/19 03:10        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q |
|------------|------------------------------------|--------------|------|------|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        |              | 0.31 | 2.0  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) |              | 0.26 | 2.0  |   |
| 75-34-3    | 1,1-Dichloroethane                 | 3.0          | 0.16 | 1.0  |   |
| 107-06-2   | 1,2-Dichloroethane                 |              | 0.41 | 1.0  |   |
| 75-35-4    | 1,1-Dichloroethylene               |              | 0.32 | 1.0  |   |
| 156-59-2   | cis-1,2-Dichloroethylene           | 2.2          | 0.13 | 1.0  |   |
| 156-60-5   | trans-1,2-Dichloroethylene         |              | 0.31 | 1.0  |   |
| 78-87-5    | 1,2-Dichloropropane                |              | 0.20 | 1.0  |   |
| 142-28-9   | 1,3-Dichloropropane                |              | 0.11 | 0.50 |   |
| 594-20-7   | 2,2-Dichloropropane                |              | 0.20 | 1.0  |   |
| 563-58-6   | 1,1-Dichloropropene                |              | 0.16 | 2.0  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            |              | 0.13 | 0.50 |   |
| 10061-02-6 | trans-1,3-Dichloropropene          |              | 0.23 | 0.50 |   |
| 60-29-7    | Diethyl Ether                      |              | 0.34 | 2.0  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           |              | 0.17 | 0.50 |   |
| 123-91-1   | 1,4-Dioxane                        |              | 22   | 50   |   |
| 100-41-4   | Ethylbenzene                       |              | 0.13 | 1.0  |   |
| 87-68-3    | Hexachlorobutadiene                |              | 0.47 | 0.60 |   |
| 591-78-6   | 2-Hexanone (MBK)                   |              | 1.5  | 10   |   |
| 98-82-8    | Isopropylbenzene (Cumene)          |              | 0.17 | 1.0  |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      |              | 0.20 | 1.0  |   |
| 79-20-9    | Methyl Acetate                     |              | 0.42 | 1.0  |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     |              | 0.25 | 1.0  |   |
| 108-87-2   | Methyl Cyclohexane                 |              | 0.20 | 1.0  |   |
| 75-09-2    | Methylene Chloride                 |              | 0.34 | 5.0  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        |              | 1.7  | 10   |   |
| 91-20-3    | Naphthalene                        |              | 0.31 | 2.0  |   |
| 103-65-1   | n-Propylbenzene                    |              | 0.13 | 1.0  |   |
| 100-42-5   | Styrene                            |              | 0.11 | 1.0  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          |              | 0.27 | 1.0  |   |



# 1 - FORM I

## ANALYSIS DATA SHEET

93

OC-19S

|                |                                |                |                       |                          |
|----------------|--------------------------------|----------------|-----------------------|--------------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |                          |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |                          |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-04            | File ID: B1922541.D      |
| Sampled:       | 08/09/19 11:50                 | Prepared:      | 08/13/19 07:22        | Analyzed: 08/14/19 03:10 |
| Solids:        |                                | Preparation:   | SW-846 5030B          | Dilution: 1              |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |                          |
| Batch:         | B237875                        | Sequence:      | S039168               | Calibration: 1900126     |
|                |                                |                |                       | Instrument: GCMSVOA2     |

| CAS NO.       | COMPOUND                                          | CONC. (µg/L) | MDL  | RL   | Q |
|---------------|---------------------------------------------------|--------------|------|------|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                         |              | 0.22 | 0.50 |   |
| 127-18-4      | Tetrachloroethylene                               |              | 0.18 | 1.0  |   |
| 109-99-9      | Tetrahydrofuran                                   |              | 0.51 | 10   |   |
| 108-88-3      | Toluene                                           |              | 0.14 | 1.0  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                            |              | 0.57 | 5.0  |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                            |              | 0.40 | 1.0  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                            |              | 0.30 | 1.0  |   |
| 71-55-6       | 1,1,1-Trichloroethane                             | 0.62         | 0.20 | 1.0  | J |
| 79-00-5       | 1,1,2-Trichloroethane                             |              | 0.16 | 1.0  |   |
| 79-01-6       | Trichloroethylene                                 | 2.8          | 0.24 | 1.0  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                 |              | 0.33 | 2.0  |   |
| 96-18-4       | 1,2,3-Trichloropropane                            |              | 0.25 | 2.0  |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) |              | 0.32 | 1.0  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                            |              | 0.18 | 1.0  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                            |              | 0.14 | 1.0  |   |
| 75-01-4       | Vinyl Chloride                                    |              | 0.45 | 2.0  |   |
| 108383/106423 | m+p Xylene                                        |              | 0.30 | 2.0  |   |
| 95-47-6       | o-Xylene                                          |              | 0.17 | 1.0  |   |
|               | No TICs Found                                     | 0.0          |      |      |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922541.D  
 Acq On : 14 Aug 2019 3:10 am  
 Operator :  
 Sample : 19H0576-04 @ (TICs)  
 Misc :  
 ALS Vial : 41 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 11:24:36 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

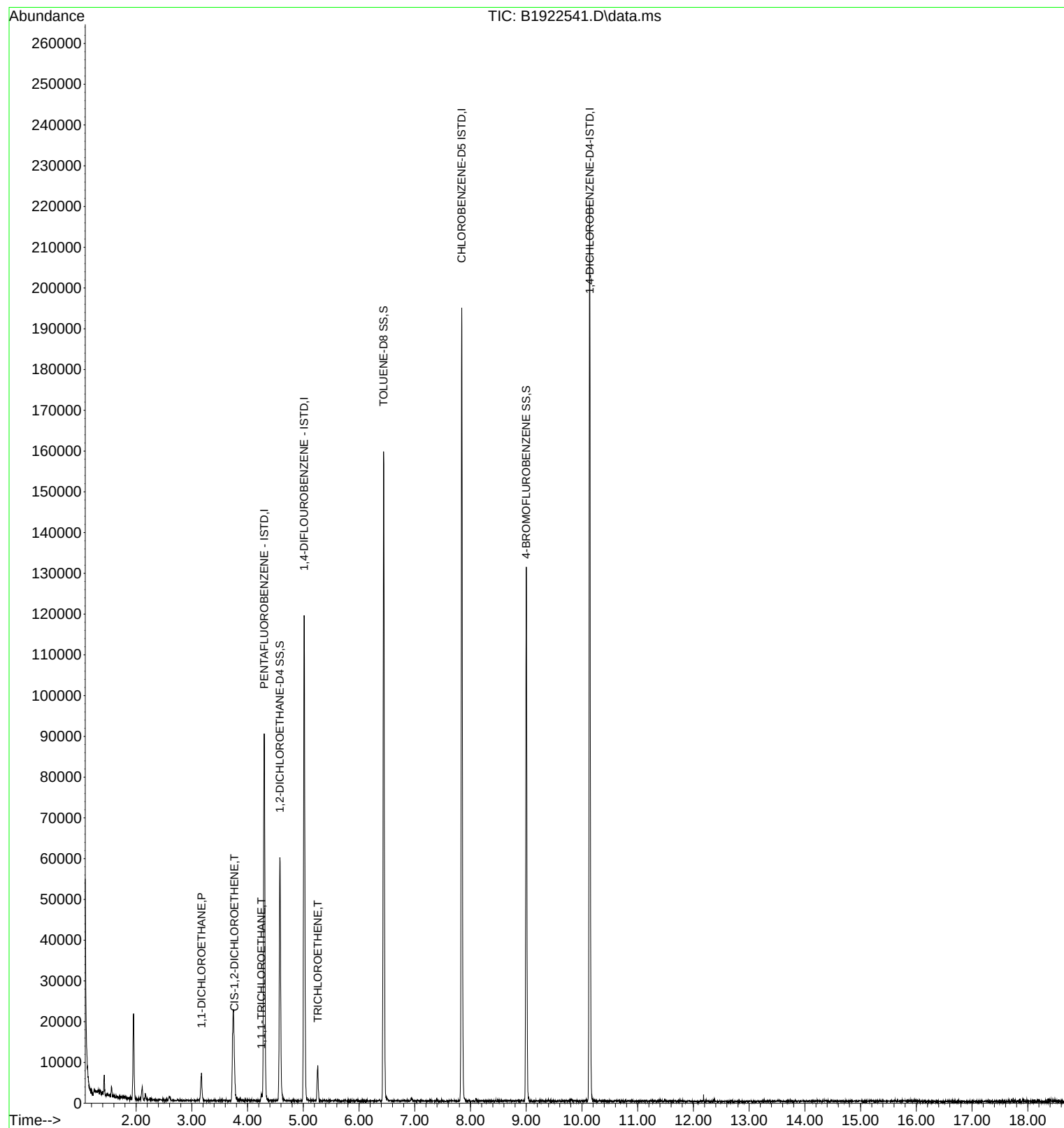
| Compound                      | R.T.   | QIon  | Response | Conc     | Units  | Dev(Min) |
|-------------------------------|--------|-------|----------|----------|--------|----------|
| Internal Standards            |        |       |          |          |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298  | 168   | 52900    | 30.00    | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.014  | 114   | 72461    | 30.00    | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842  | 82    | 46385    | 30.00    | UG/L   | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.138 | 152   | 48283    | 30.00    | UG/L   | 0.00     |
| System Monitoring Compounds   |        |       |          |          |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.579  | 65    | 36977    | 27.13    | UG/L   | 0.00     |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 108.52%  |
| 45) TOLUENE-D8 SS             | 6.441  | 98    | 79884    | 28.17    | UG/L   | 0.00     |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 112.68%  |
| 66) 4-BROMOFLUROBENZENE SS    | 8.999  | 95    | 33863    | 24.81    | UG/L   | 0.00     |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 99.24%   |
| Target Compounds              |        |       |          |          |        |          |
| 25) 1,1-DICHLOROETHANE        | 3.173  | 63    | 6358     | 2.96     | UG/L # | 74       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.764  | 61    | 4738     | 2.23     | UG/L # | 86       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.247  | 97    | 1070     | 0.62     | UG/L # | 53       |
| 47) TRICHLOROETHENE           | 5.261  | 95    | 2563     | 2.79     | UG/L   | 90       |

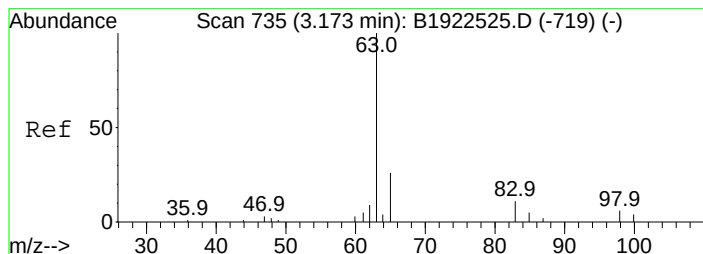
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :  
ALS Vial : 41 Sample Multiplier: 1

Inst : GCMSVOA2

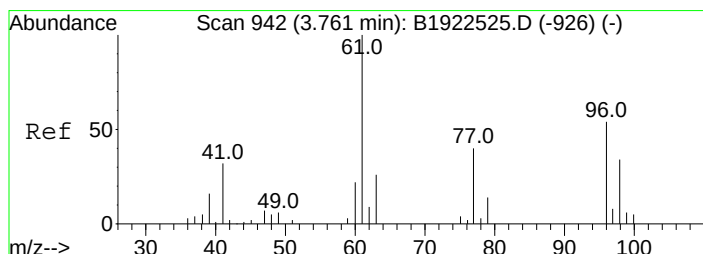
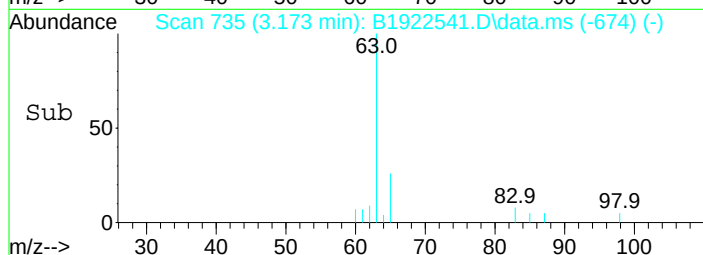
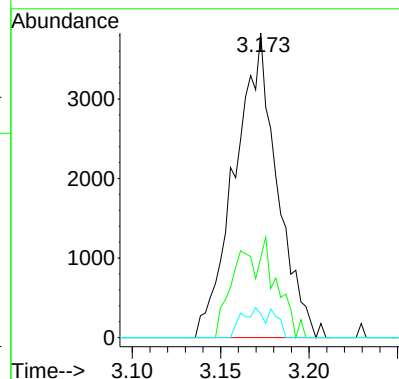
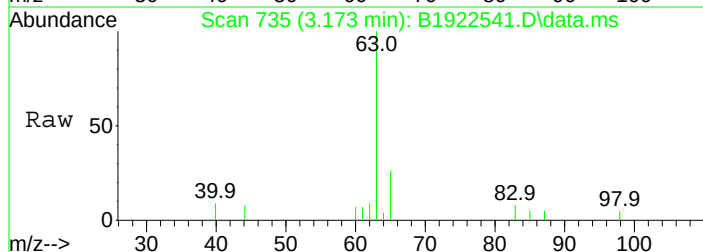
Quant Time: Aug 14 11:24:36 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973  
QLast Update : Fri Apr 19 05:25:51 2019  
Response via : Initial Calibration





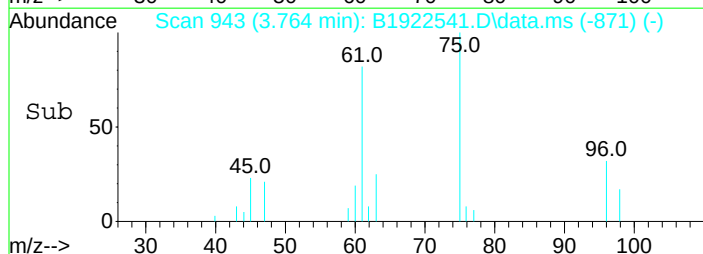
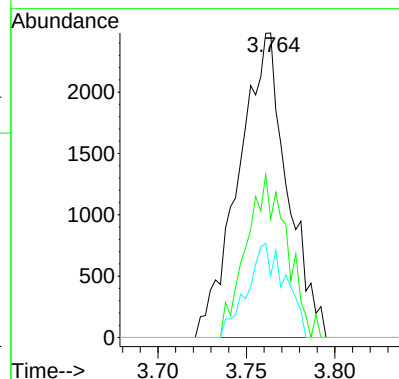
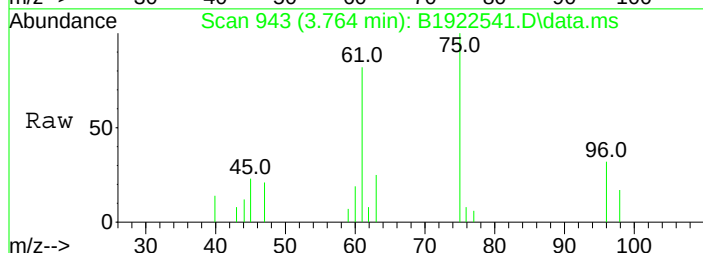
#25  
 1,1-DICHLOROETHANE  
 Concen: 2.96 UG/L  
 RT: 3.173 min Scan# 735  
 Delta R.T. 0.003 min  
 Lab File: B1922541.D  
 Acq: 14 Aug 2019 3:10 am

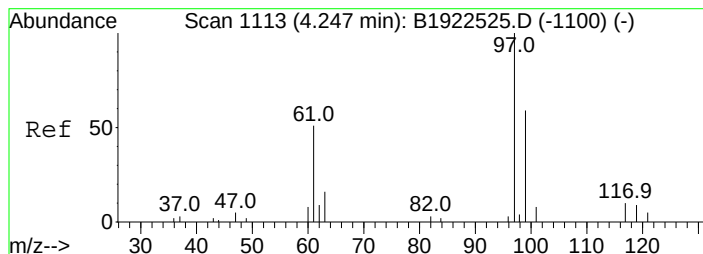
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 65      | 16.8  | 24.0  | 36.0# |
| 83      | 0.0   | 9.8   | 14.6# |



#30  
 CIS-1,2-DICHLOROETHENE  
 Concen: 2.23 UG/L  
 RT: 3.764 min Scan# 943  
 Delta R.T. 0.006 min  
 Lab File: B1922541.D  
 Acq: 14 Aug 2019 3:10 am

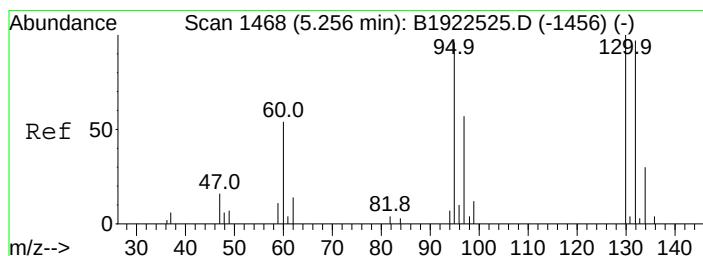
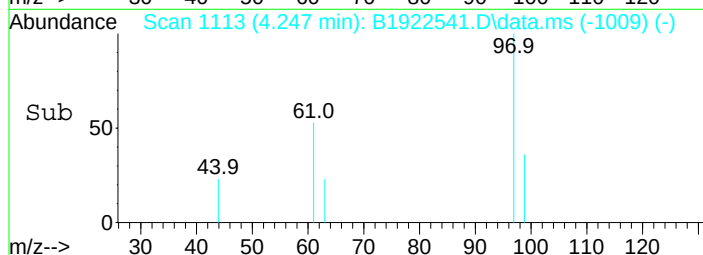
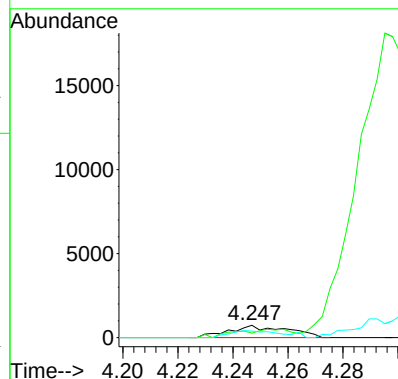
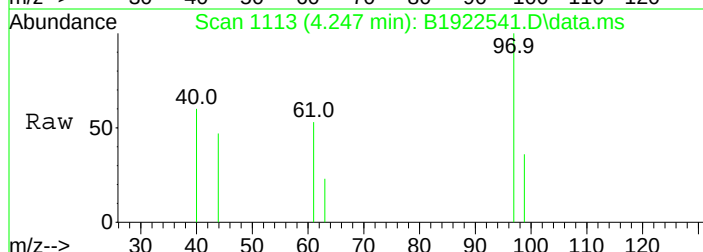
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 61      | 100   |       |       |
| 96      | 44.8  | 43.0  | 64.4  |
| 98      | 24.3  | 27.2  | 40.8# |





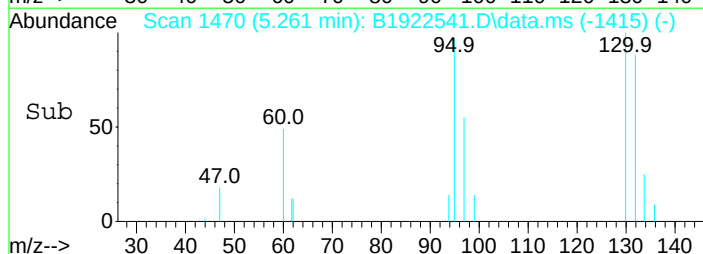
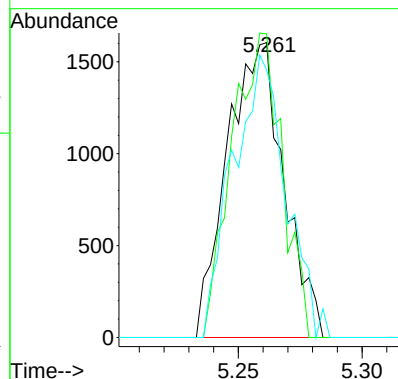
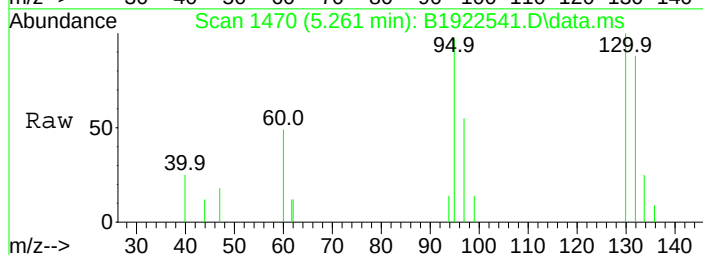
#37  
1,1,1-TRICHLOROETHANE  
Concen: 0.62 UG/L  
RT: 4.247 min Scan# 1113  
Delta R.T. -0.003 min  
Lab File: B1922541.D  
Acq: 14 Aug 2019 3:10 am

| Tgt Ion | 97    | Resp  | 1070  |
|---------|-------|-------|-------|
| Ion     | Ratio | Lower | Upper |
| 97      | 100   |       |       |
| 99      | 0.0   | 50.8  | 76.2# |
| 61      | 50.7  | 45.1  | 67.7  |



#47  
TRICHLOROETHENE  
Concen: 2.79 UG/L  
RT: 5.261 min Scan# 1470  
Delta R.T. 0.005 min  
Lab File: B1922541.D  
Acq: 14 Aug 2019 3:10 am

| Tgt Ion | 95    | Resp  | 2563  |
|---------|-------|-------|-------|
| Ion     | Ratio | Lower | Upper |
| 95      | 100   |       |       |
| 130     | 90.9  | 79.8  | 119.6 |
| 132     | 89.4  | 80.6  | 121.0 |

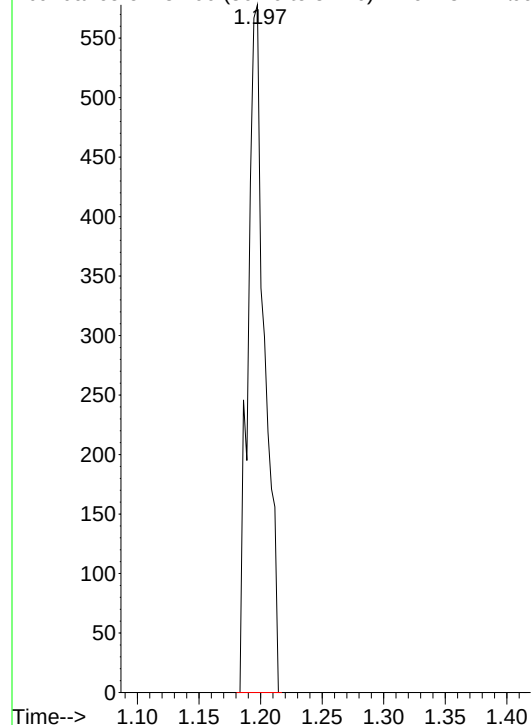


Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:24:36 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
DIFLUOROCHLOROMETHANE

Abundance on 51.00 (50.70 to 51.70): B1922541.D\data



Original Int. Results  
-----

RT : 1.20  
Area : 546  
Amount: 0.298046

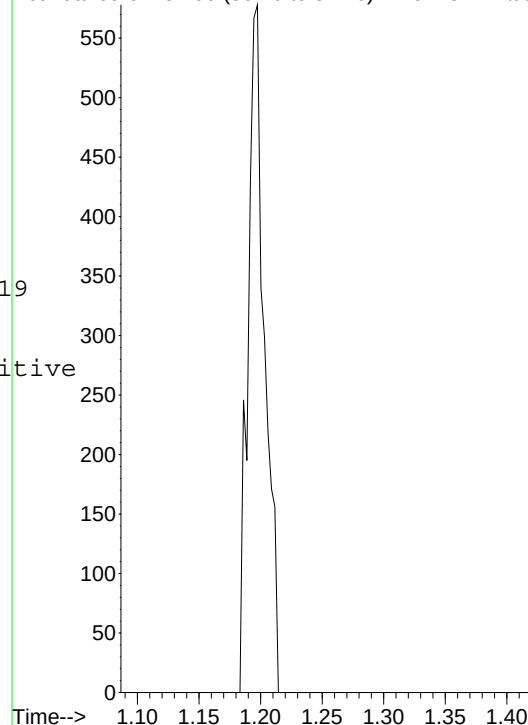
Manual Int. Results  
-----

Wed Aug 14 11:24:08 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

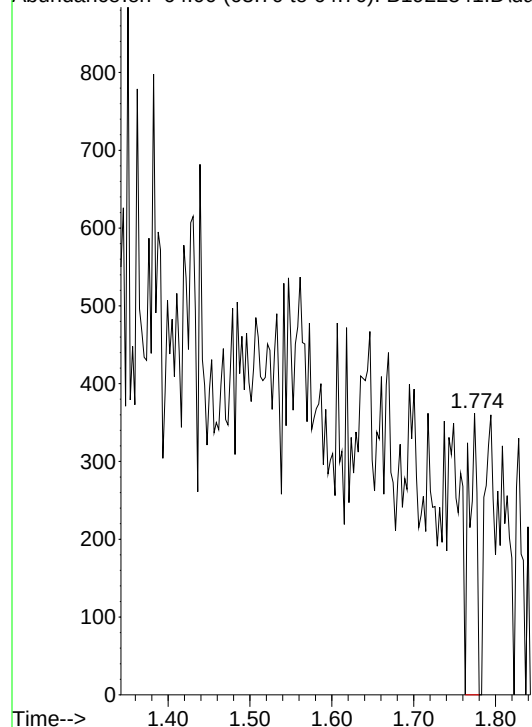
Manual Integration  
DIFLUOROCHLOROMETHANE

Abundance on 51.00 (50.70 to 51.70): B1922541.D\data



Original Integration  
CHLOROETHANE

Abundance on 64.00 (63.70 to 64.70): B1922541.D\data



Original Int. Results  
-----

RT : 1.77  
Area : 240  
Amount: 0.307709

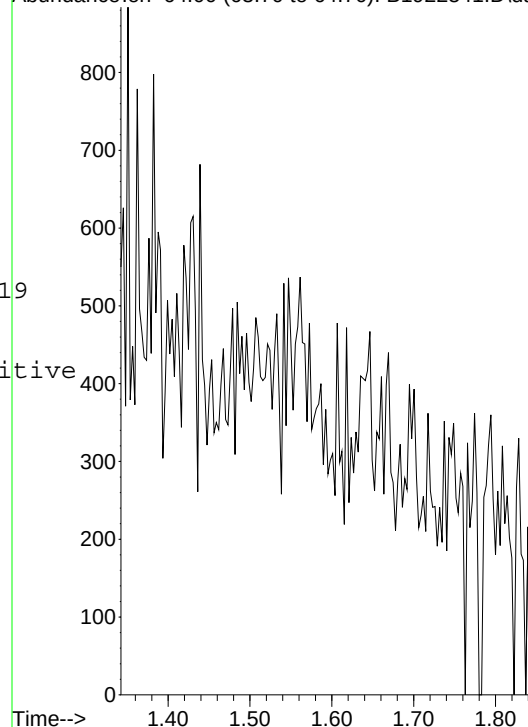
Manual Int. Results  
-----

Wed Aug 14 11:24:11 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
CHLOROETHANE

Abundance on 64.00 (63.70 to 64.70): B1922541.D\data

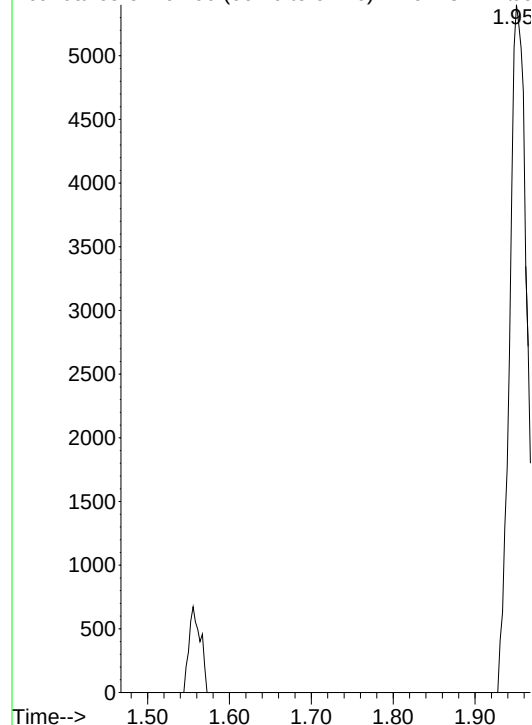


Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:24:36 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
FLUORODICHLOROMETHANE

Abundance on 67.00 (66.70 to 67.70): B1922541.D\data



Original Int. Results

RT : 1.95  
Area : 8020  
Amount: 3.973

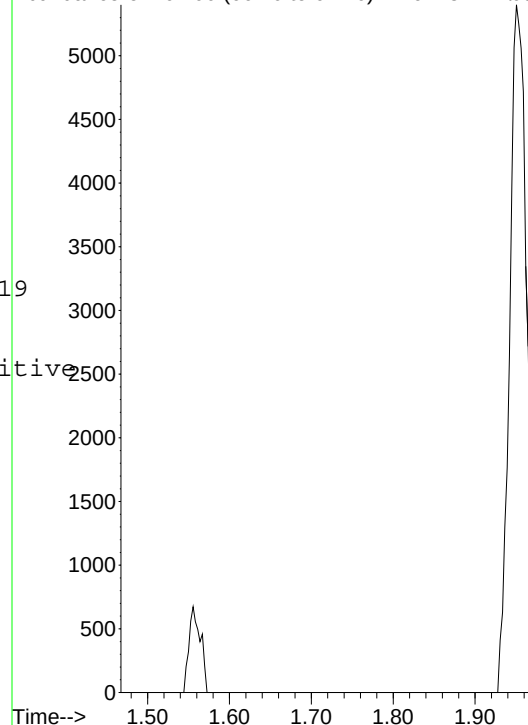
Manual Int. Results

Wed Aug 14 11:24:13 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

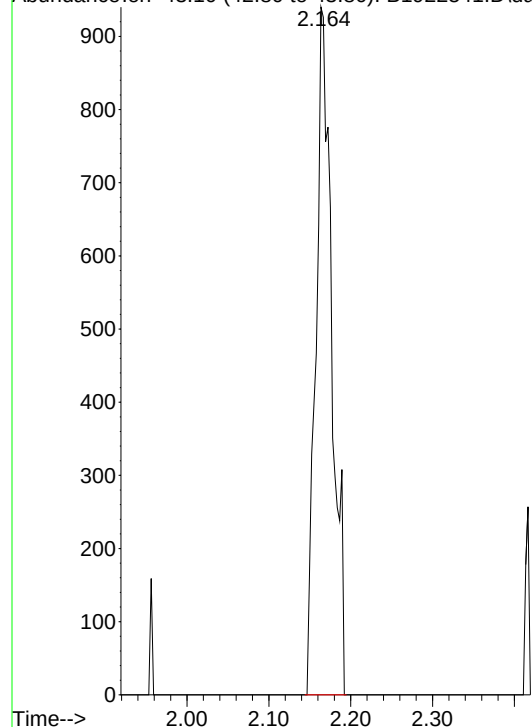
Manual Integration  
FLUORODICHLOROMETHANE

Abundance on 67.00 (66.70 to 67.70): B1922541.D\data



Original Integration  
ACETONE

Abundance on 43.10 (42.80 to 43.80): B1922541.D\data



Original Int. Results

RT : 2.16  
Area : 1281  
Amount: 2.62292

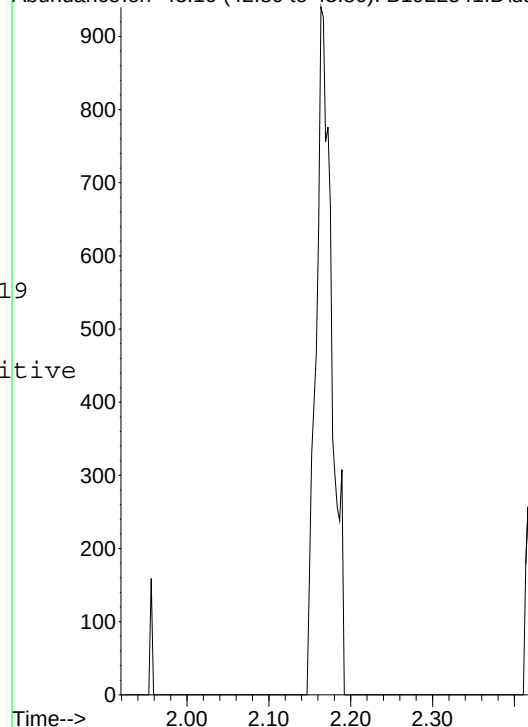
Manual Int. Results

Wed Aug 14 11:24:16 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
ACETONE

Abundance on 43.10 (42.80 to 43.80): B1922541.D\data



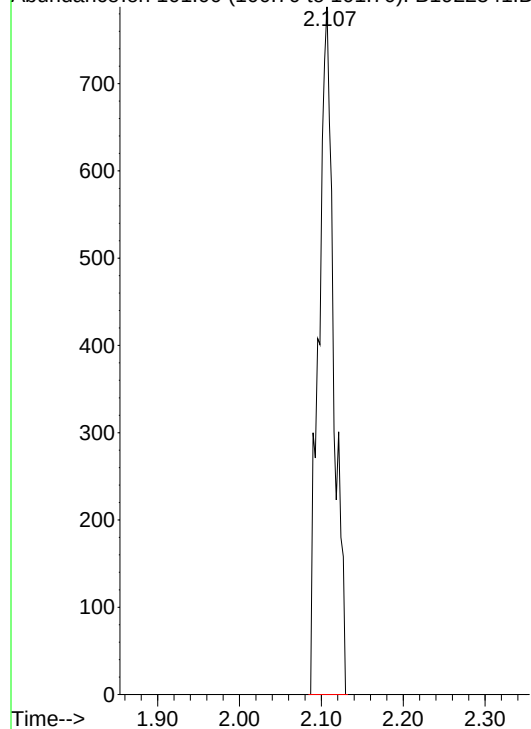
Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:24:36 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

1,1,2-TRICL-1,2,2-TRIFLETHANE

Abundance on 101.00 (100.70 to 101.70): B1922541.D



## Original Int. Results

-----

RT : 2.11  
Area : 1010  
Amount: 1.35331

## Manual Int. Results

-----

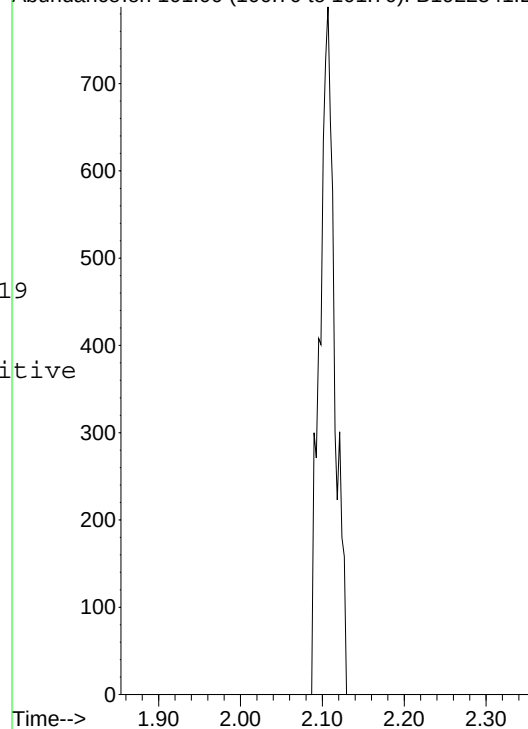
Wed Aug 14 11:24:20 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

1,1,2-TRICL-1,2,2-TRIFLETHANE

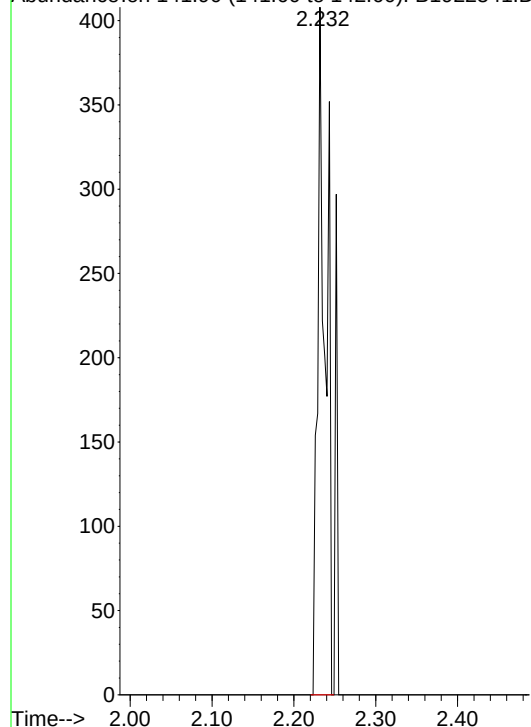
Abundance on 101.00 (100.70 to 101.70): B1922541.D



## Original Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922541.D



## Original Int. Results

-----

RT : 2.23  
Area : 287  
Amount: 0.224664

## Manual Int. Results

-----

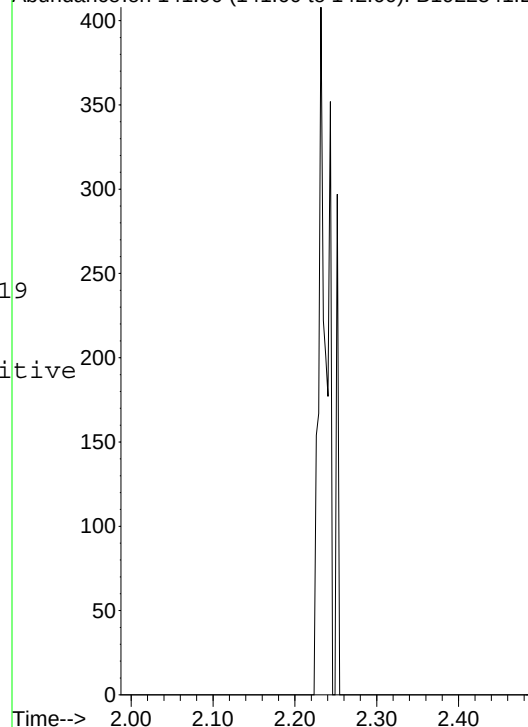
Wed Aug 14 11:24:22 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922541.D





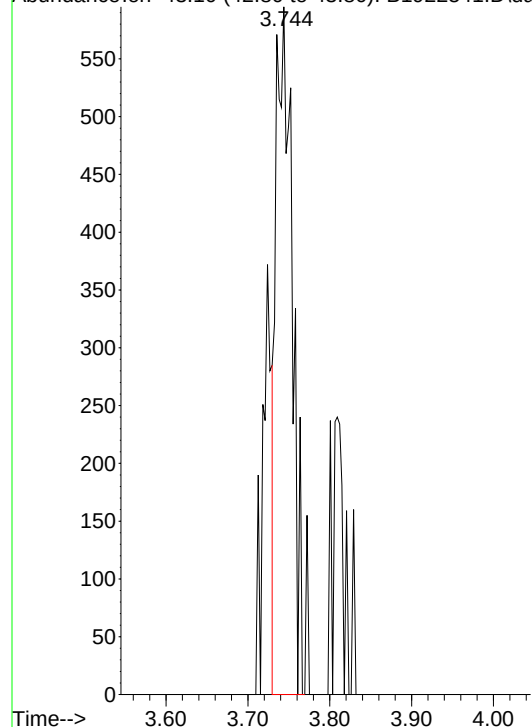
Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:24:36 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

## 2-BUTANONE

Abundance on 43.10 (42.80 to 43.80): B1922541.D\data



## Original Int. Results

-----

RT : 3.74  
Area : 819  
Amount: 1.1089

## Manual Int. Results

-----

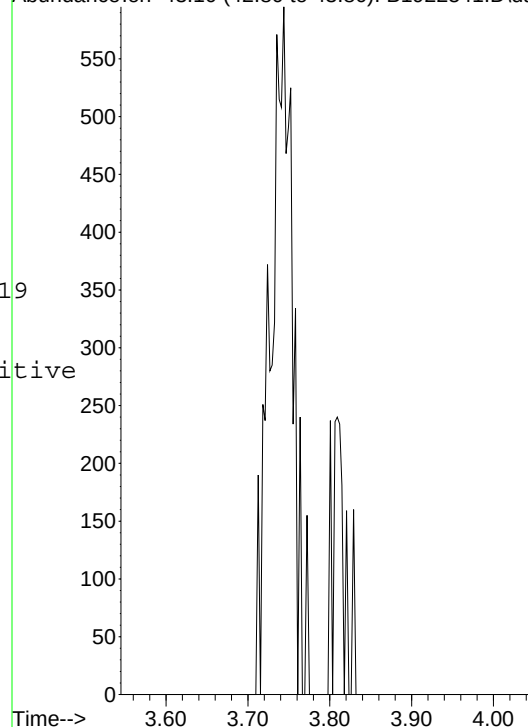
Wed Aug 14 11:24:26 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

## 2-BUTANONE

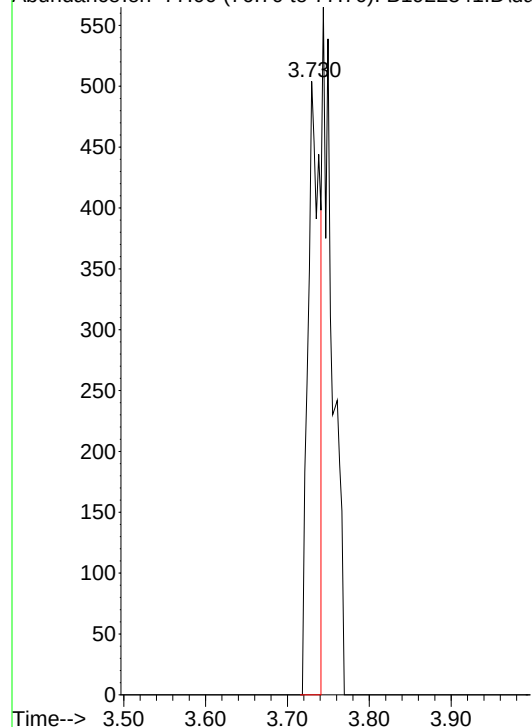
Abundance on 43.10 (42.80 to 43.80): B1922541.D\data



## Original Integration

## 2,2-DICHLOROPROPANE

Abundance on 77.00 (76.70 to 77.70): B1922541.D\data



## Original Int. Results

-----

RT : 3.73  
Area : 508  
Amount: 0.318594

## Manual Int. Results

-----

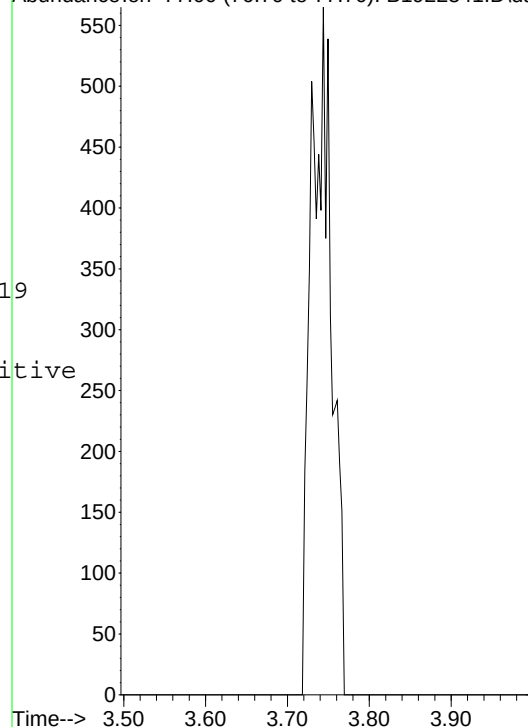
Wed Aug 14 11:24:30 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

## 2,2-DICHLOROPROPANE

Abundance on 77.00 (76.70 to 77.70): B1922541.D\data



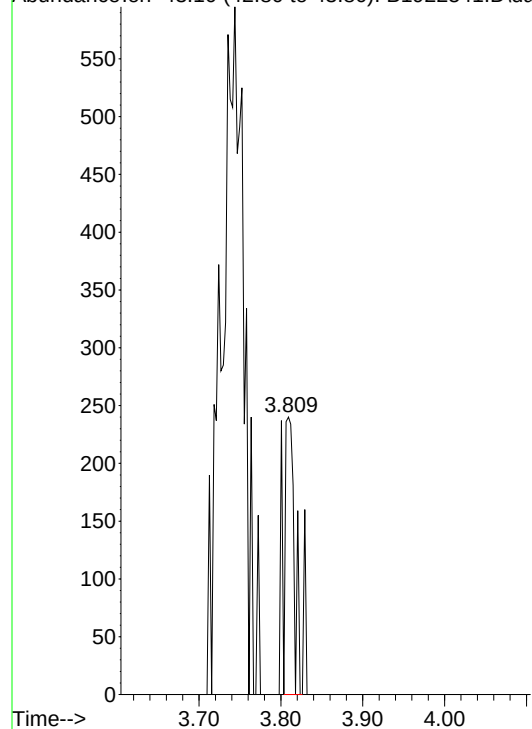
Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:24:36 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): B1922541.D\data



## Original Int. Results

-----

RT : 3.81  
Area : 179  
Amount: 0.0954748

## Manual Int. Results

-----

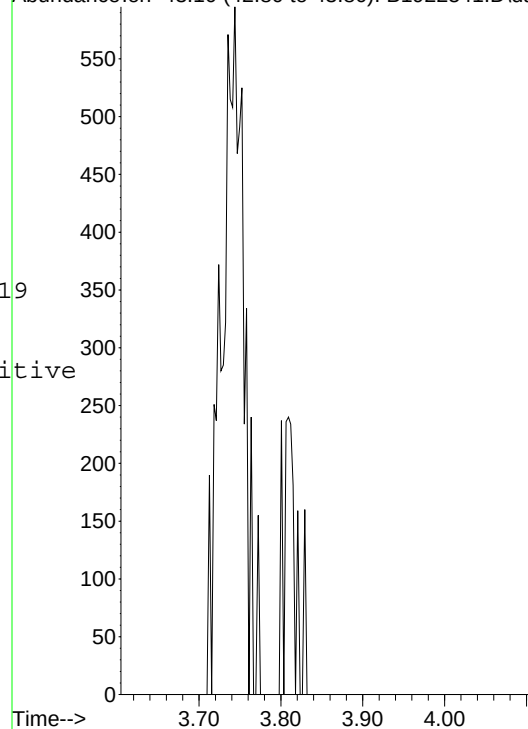
Wed Aug 14 11:24:32 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL ACETATE

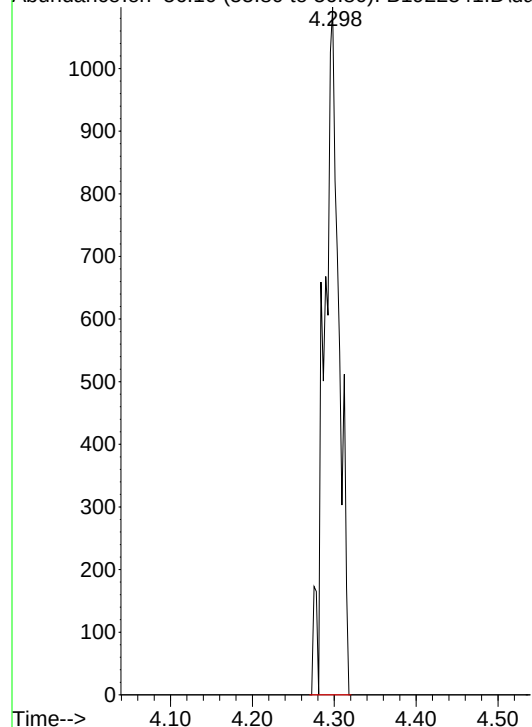
Abundance on 43.10 (42.80 to 43.80): B1922541.D\data



## Original Integration

CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922541.D\data



## Original Int. Results

-----

RT : 4.30  
Area : 1357  
Amount: 0.608077

## Manual Int. Results

-----

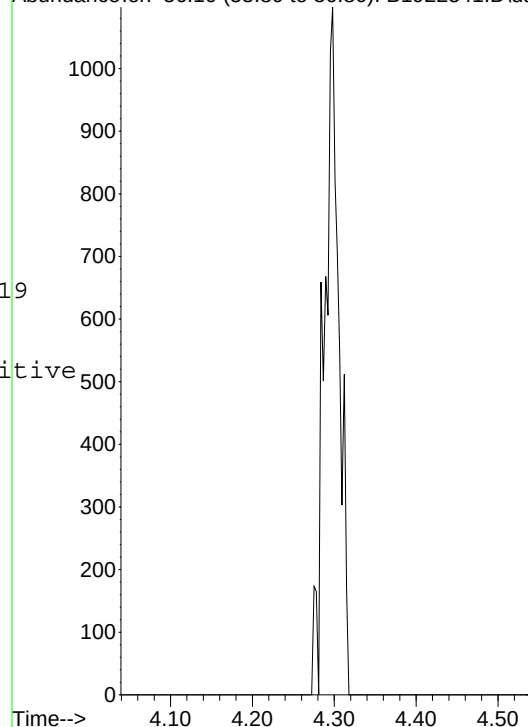
Wed Aug 14 11:24:35 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922541.D\data



Data Path : Y:\1\DATA\B081319\  
 Data File : B1922541.D  
 Acq On : 14 Aug 2019 3:10 am  
 Operator :  
 Sample : 19H0576-04 @ (TICs)  
 Misc :  
 ALS Vial : 41 Sample Multiplier: 1

Integration Parameters: 8260LOW.P  
 Integrator: RTE  
 Smoothing : OFF Filtering: 5  
 Sampling : 1 Min Area: 1 % of largest Peak  
 Start Thrs: 0.2 Max Peaks: 100  
 Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Y:\1\METHODS\B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973

Signal : TIC: B1922541.D\data.ms

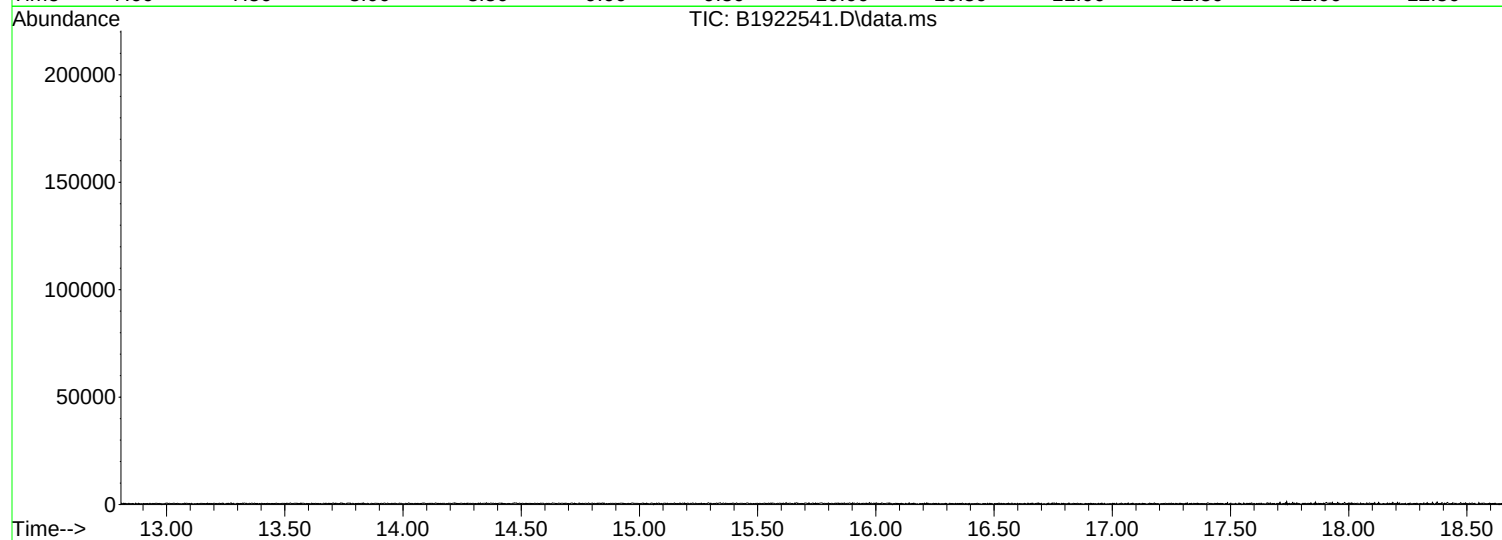
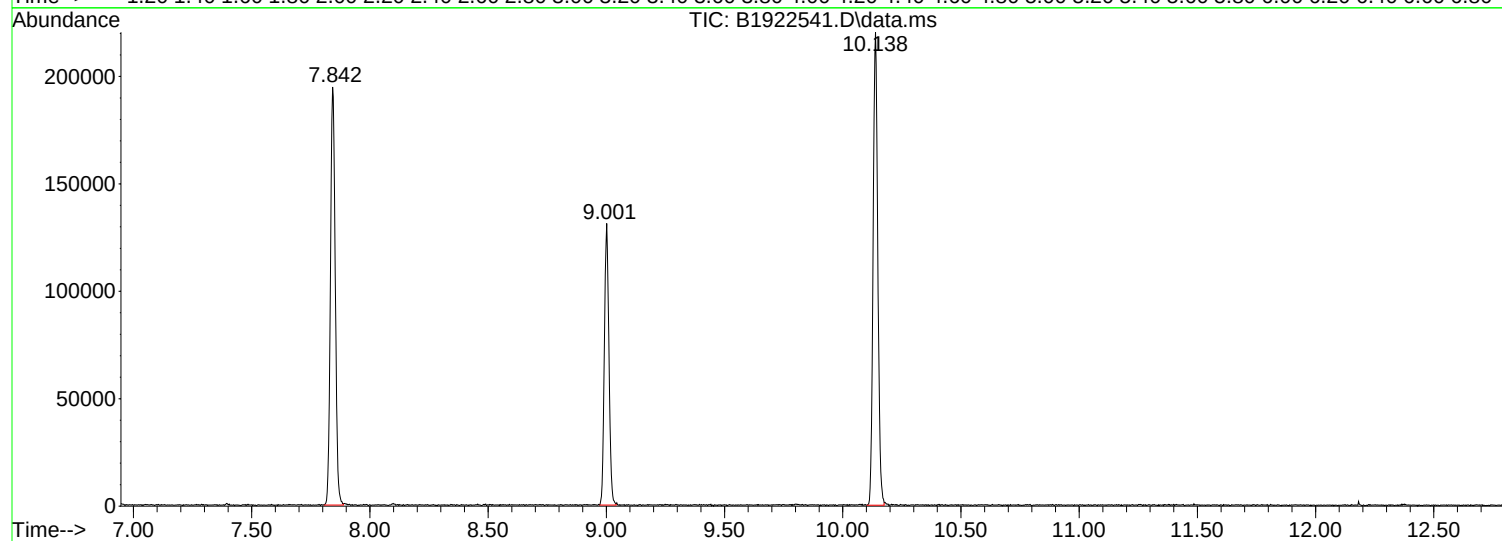
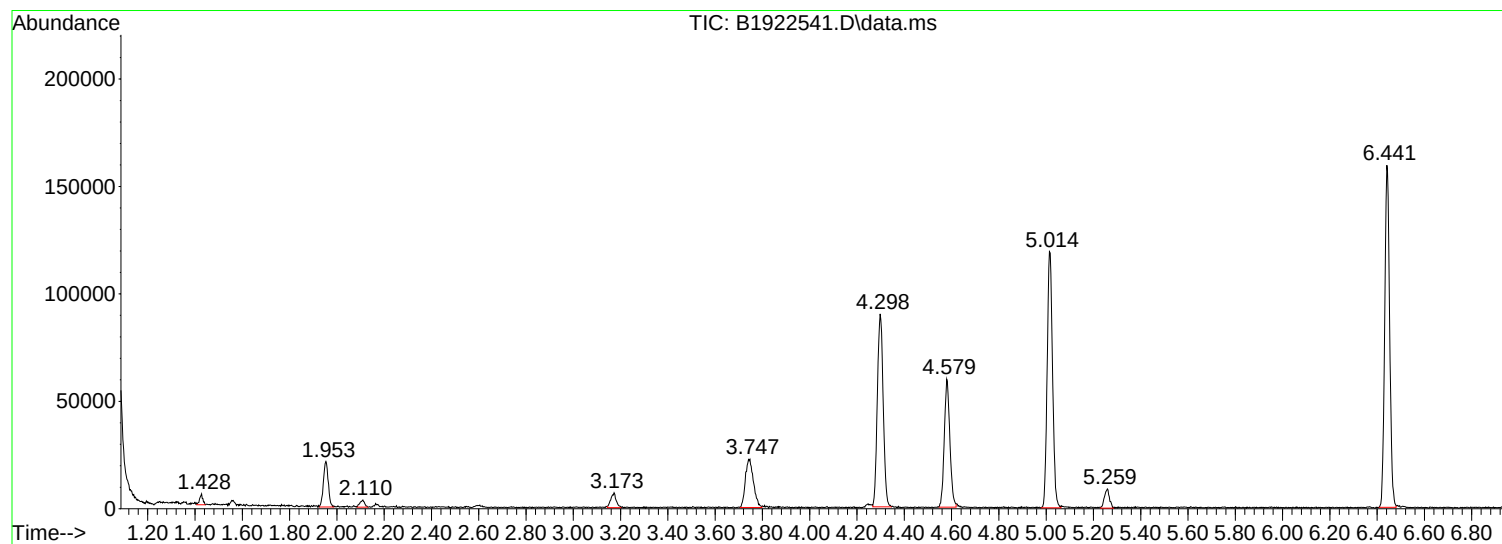
| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 1.428       | 114           | 121         | 127          | rVB      | 5073           | 4575          | 1.50%           | 0.297%        |
| 2         | 1.953       | 296           | 306         | 318          | rBV4     | 21130          | 29817         | 9.79%           | 1.934%        |
| 3         | 2.110       | 352           | 361         | 369          | rVB6     | 3335           | 4518          | 1.48%           | 0.293%        |
| 4         | 3.173       | 725           | 735         | 746          | rVB3     | 6887           | 10740         | 3.53%           | 0.697%        |
| 5         | 3.747       | 922           | 937         | 955          | rBV3     | 22417          | 52747         | 17.33%          | 3.422%        |
| 6         | 4.298       | 1120          | 1131        | 1148         | rVB3     | 89792          | 153142        | 50.31%          | 9.934%        |
| 7         | 4.579       | 1218          | 1230        | 1244         | rBV      | 59536          | 97334         | 31.97%          | 6.314%        |
| 8         | 5.014       | 1370          | 1383        | 1400         | rBV      | 119279         | 187603        | 61.63%          | 12.170%       |
| 9         | 5.259       | 1459          | 1469        | 1479         | rVB5     | 8948           | 13255         | 4.35%           | 0.860%        |
| 10        | 6.441       | 1873          | 1885        | 1899         | rBV2     | 159241         | 231561        | 76.07%          | 15.021%       |
| 11        | 7.842       | 2365          | 2378        | 2394         | rBV      | 194583         | 276999        | 90.99%          | 17.969%       |
| 12        | 9.001       | 2775          | 2786        | 2800         | rBV2     | 131011         | 174850        | 57.44%          | 11.342%       |
| 13        | 10.138      | 3173          | 3186        | 3199         | rBV2     | 220103         | 304412        | 100.00%         | 19.747%       |

Sum of corrected areas: 1541553

Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :  
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P



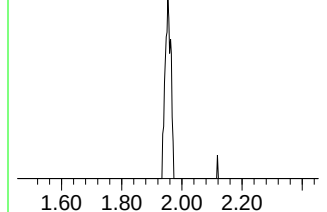
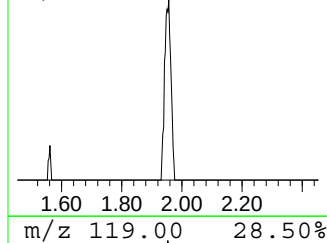
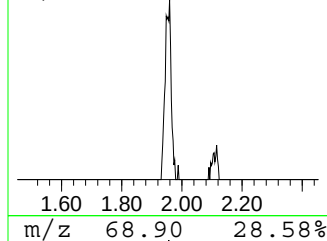
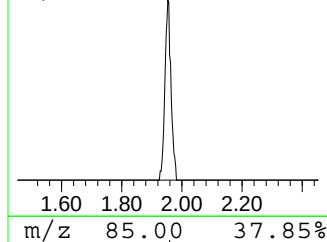
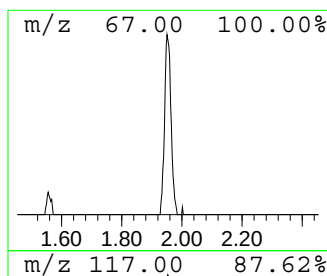
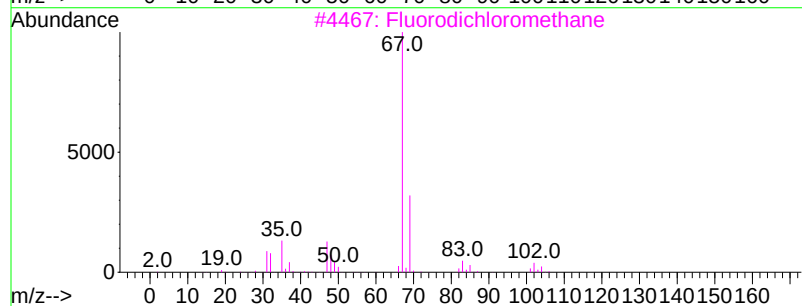
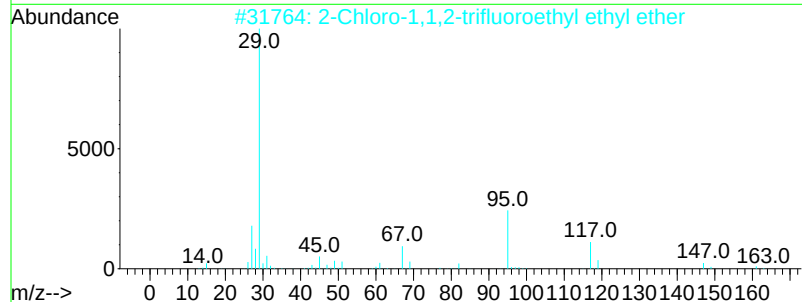
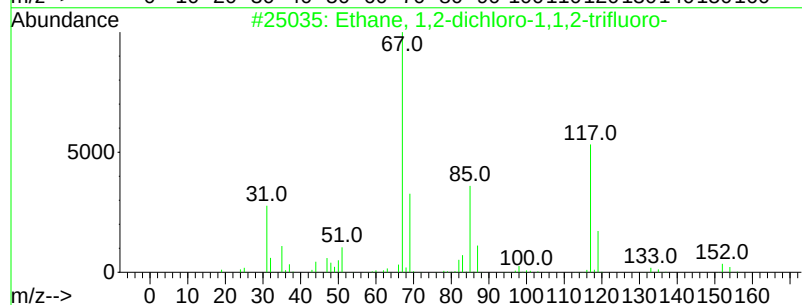
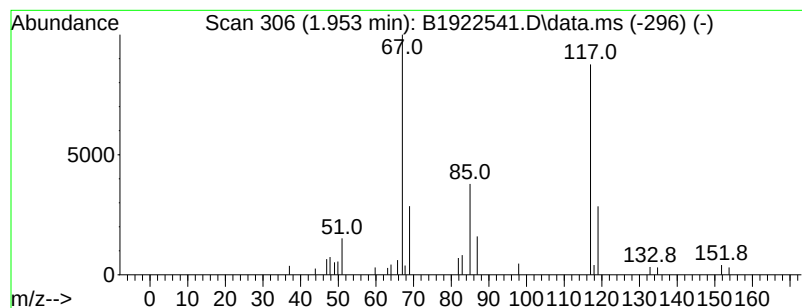
Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :  
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJ\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 1 Ethane, 1,2-dichloro-1,1,2-... Concentration Rank 1

| R.T.      | EstConc                             | Area  | Relative to ISTD          | R.T.        |      |
|-----------|-------------------------------------|-------|---------------------------|-------------|------|
| 1.953     | 5.84 UG/L                           | 29817 | PENTAFLUOROBENZENE - ISTD | 4.298       |      |
| Hit# of 5 | Tentative ID                        | MW    | MolForm                   | CAS#        | Qual |
| 1         | Ethane, 1,2-dichloro-1,1,2-trifl... | 152   | C2HCl2F3                  | 000354-23-4 | 64   |
| 2         | 2-Chloro-1,1,2-trifluoroethyl et... | 162   | C4H6ClF3O                 | 000310-71-4 | 39   |
| 3         | Fluorodichloromethane               | 102   | CHCl2F                    | 000075-43-4 | 12   |
| 4         | Fluorodichloromethane               | 102   | CHCl2F                    | 000075-43-4 | 12   |
| 5         | Cyclopropane, 1,2-dimethyl-3-met... | 82    | C6H10                     | 062338-02-7 | 12   |



Data Path : Y:\1\DATA\B081319\  
Data File : B1922541.D  
Acq On : 14 Aug 2019 3:10 am  
Operator :  
Sample : 19H0576-04 @ (TICs)  
Misc :  
ALS Vial : 41 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

| TIC Top Hit name   | RT    | EstConc | Units | Response | --Internal Standard-- |       |        |      |
|--------------------|-------|---------|-------|----------|-----------------------|-------|--------|------|
|                    |       |         |       |          | #                     | RT    | Resp   | Conc |
| Ethane, 1,2-dic... | 1.953 | 5.8     | UG/L  | 29817    | 1                     | 4.298 | 153142 | 30.0 |

# 1 - FORM I

## ANALYSIS DATA SHEET

107

MW-21S

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-05            |
|                |                                | File ID:       | B1922542.D            |
| Sampled:       | 08/09/19 14:00                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/14/19 03:41        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q    |
|----------|------------------------------------|--------------|------|------|------|
| 67-64-1  | Acetone                            |              | 3.8  | 50   |      |
| 107-13-1 | Acrylonitrile                      |              | 0.52 | 5.0  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      |              | 0.14 | 0.50 |      |
| 71-43-2  | Benzene                            |              | 0.18 | 1.0  |      |
| 108-86-1 | Bromobenzene                       |              | 0.15 | 1.0  |      |
| 74-97-5  | Bromochloromethane                 |              | 0.32 | 1.0  |      |
| 75-27-4  | Bromodichloromethane               |              | 0.16 | 0.50 |      |
| 75-25-2  | Bromoform                          |              | 0.46 | 1.0  |      |
| 74-83-9  | Bromomethane                       |              | 0.78 | 5.0  |      |
| 78-93-3  | 2-Butanone (MEK)                   |              | 1.9  | 20   |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           |              | 4.2  | 20   |      |
| 104-51-8 | n-Butylbenzene                     |              | 0.21 | 1.0  | V-05 |
| 135-98-8 | sec-Butylbenzene                   |              | 0.16 | 1.0  |      |
| 98-06-6  | tert-Butylbenzene                  |              | 0.17 | 1.0  |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      |              | 0.16 | 0.50 |      |
| 75-15-0  | Carbon Disulfide                   |              | 4.4  | 5.0  |      |
| 56-23-5  | Carbon Tetrachloride               |              | 0.11 | 5.0  |      |
| 108-90-7 | Chlorobenzene                      |              | 0.15 | 1.0  |      |
| 124-48-1 | Chlorodibromomethane               |              | 0.21 | 0.50 |      |
| 75-00-3  | Chloroethane                       |              | 0.35 | 2.0  |      |
| 67-66-3  | Chloroform                         |              | 0.17 | 2.0  |      |
| 74-87-3  | Chloromethane                      |              | 0.45 | 2.0  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    |              | 0.12 | 1.0  |      |
| 106-43-4 | 4-Chlorotoluene                    |              | 0.14 | 1.0  |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) |              | 0.53 | 5.0  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            |              | 0.19 | 0.50 |      |
| 74-95-3  | Dibromomethane                     |              | 0.37 | 1.0  |      |
| 95-50-1  | 1,2-Dichlorobenzene                |              | 0.16 | 1.0  |      |
| 541-73-1 | 1,3-Dichlorobenzene                |              | 0.12 | 1.0  |      |
| 106-46-7 | 1,4-Dichlorobenzene                |              | 0.13 | 1.0  |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

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MW-21S

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-05            |
|                |                                | File ID:       | B1922542.D            |
| Sampled:       | 08/09/19 14:00                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/14/19 03:41        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q |
|------------|------------------------------------|--------------|------|------|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        |              | 0.31 | 2.0  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) |              | 0.26 | 2.0  |   |
| 75-34-3    | 1,1-Dichloroethane                 | 1.8          | 0.16 | 1.0  |   |
| 107-06-2   | 1,2-Dichloroethane                 |              | 0.41 | 1.0  |   |
| 75-35-4    | 1,1-Dichloroethylene               |              | 0.32 | 1.0  |   |
| 156-59-2   | cis-1,2-Dichloroethylene           |              | 0.13 | 1.0  |   |
| 156-60-5   | trans-1,2-Dichloroethylene         |              | 0.31 | 1.0  |   |
| 78-87-5    | 1,2-Dichloropropane                |              | 0.20 | 1.0  |   |
| 142-28-9   | 1,3-Dichloropropane                |              | 0.11 | 0.50 |   |
| 594-20-7   | 2,2-Dichloropropane                |              | 0.20 | 1.0  |   |
| 563-58-6   | 1,1-Dichloropropene                |              | 0.16 | 2.0  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            |              | 0.13 | 0.50 |   |
| 10061-02-6 | trans-1,3-Dichloropropene          |              | 0.23 | 0.50 |   |
| 60-29-7    | Diethyl Ether                      |              | 0.34 | 2.0  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           |              | 0.17 | 0.50 |   |
| 123-91-1   | 1,4-Dioxane                        |              | 22   | 50   |   |
| 100-41-4   | Ethylbenzene                       |              | 0.13 | 1.0  |   |
| 87-68-3    | Hexachlorobutadiene                |              | 0.47 | 0.60 |   |
| 591-78-6   | 2-Hexanone (MBK)                   |              | 1.5  | 10   |   |
| 98-82-8    | Isopropylbenzene (Cumene)          |              | 0.17 | 1.0  |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      |              | 0.20 | 1.0  |   |
| 79-20-9    | Methyl Acetate                     |              | 0.42 | 1.0  |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     |              | 0.25 | 1.0  |   |
| 108-87-2   | Methyl Cyclohexane                 |              | 0.20 | 1.0  |   |
| 75-09-2    | Methylene Chloride                 | 1.5          | 0.34 | 5.0  | J |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        |              | 1.7  | 10   |   |
| 91-20-3    | Naphthalene                        |              | 0.31 | 2.0  |   |
| 103-65-1   | n-Propylbenzene                    |              | 0.13 | 1.0  |   |
| 100-42-5   | Styrene                            |              | 0.11 | 1.0  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          |              | 0.27 | 1.0  |   |



# 1 - FORM I

## ANALYSIS DATA SHEET

109

MW-21S

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-05            |
|                |                                | File ID:       | B1922542.D            |
| Sampled:       | 08/09/19 14:00                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/14/19 03:41        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.       | COMPOUND                                          | CONC. (µg/L) | MDL  | RL   | Q |
|---------------|---------------------------------------------------|--------------|------|------|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                         |              | 0.22 | 0.50 |   |
| 127-18-4      | Tetrachloroethylene                               |              | 0.18 | 1.0  |   |
| 109-99-9      | Tetrahydrofuran                                   |              | 0.51 | 10   |   |
| 108-88-3      | Toluene                                           |              | 0.14 | 1.0  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                            |              | 0.57 | 5.0  |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                            |              | 0.40 | 1.0  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                            |              | 0.30 | 1.0  |   |
| 71-55-6       | 1,1,1-Trichloroethane                             | 44           | 0.20 | 1.0  |   |
| 79-00-5       | 1,1,2-Trichloroethane                             |              | 0.16 | 1.0  |   |
| 79-01-6       | Trichloroethylene                                 | 24           | 0.24 | 1.0  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                 |              | 0.33 | 2.0  |   |
| 96-18-4       | 1,2,3-Trichloropropane                            |              | 0.25 | 2.0  |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 130          | 0.32 | 1.0  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                            |              | 0.18 | 1.0  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                            |              | 0.14 | 1.0  |   |
| 75-01-4       | Vinyl Chloride                                    |              | 0.45 | 2.0  |   |
| 108383/106423 | m+p Xylene                                        |              | 0.30 | 2.0  |   |
| 95-47-6       | o-Xylene                                          |              | 0.17 | 1.0  |   |

| CAS NO.     | TENTATIVELY IDENTIFIED COMPOUNDS | CONC. (µg/L) | Q |
|-------------|----------------------------------|--------------|---|
| 001066-40-6 | Silanol, trimethyl-              | 4.2          |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922542.D  
 Acq On : 14 Aug 2019 3:41 am  
 Operator :  
 Sample : 19H0576-05 @ (TICs)  
 Misc :  
 ALS Vial : 42 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 11:26:30 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon  | Response | Conc     | Units  | Dev (Min) |
|-------------------------------|--------|-------|----------|----------|--------|-----------|
| Internal Standards            |        |       |          |          |        |           |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298  | 168   | 52947    | 30.00    | UG/L   | 0.00      |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017  | 114   | 73497    | 30.00    | UG/L   | 0.00      |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845  | 82    | 47486    | 30.00    | UG/L   | 0.00      |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.138 | 152   | 48364    | 30.00    | UG/L   | 0.00      |
| System Monitoring Compounds   |        |       |          |          |        |           |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.579  | 65    | 38048    | 27.89    | UG/L   | 0.00      |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 111.56%   |
| 45) TOLUENE-D8 SS             | 6.444  | 98    | 81981    | 28.50    | UG/L   | 0.00      |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 114.00%   |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002  | 95    | 33904    | 24.26    | UG/L   | 0.00      |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 97.04%    |
| Target Compounds              |        |       |          |          |        |           |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.104  | 101   | 99007    | 132.54   | UG/L   | Qvalue 89 |
| 21) METHYLENE CHLORIDE        | 2.505  | 49    | 3059     | 1.46     | UG/L   | 96        |
| 25) 1,1-DICHLOROETHANE        | 3.167  | 63    | 3764     | 1.75     | UG/L # | 70        |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250  | 97    | 74909    | 43.70    | UG/L   | 97        |
| 47) TRICHLOROETHENE           | 5.256  | 95    | 22725    | 24.37    | UG/L   | 97        |

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

Data Path : Y:\1\DATA\B081319\

Data File : B1922542.D

Acq On : 14 Aug 2019 3:41 am

Operator :

Sample : 19H0576-05 @ (TICs)

Inst : GCMSVOA2

Misc :

ALS Vial : 42 Sample Multiplier: 1

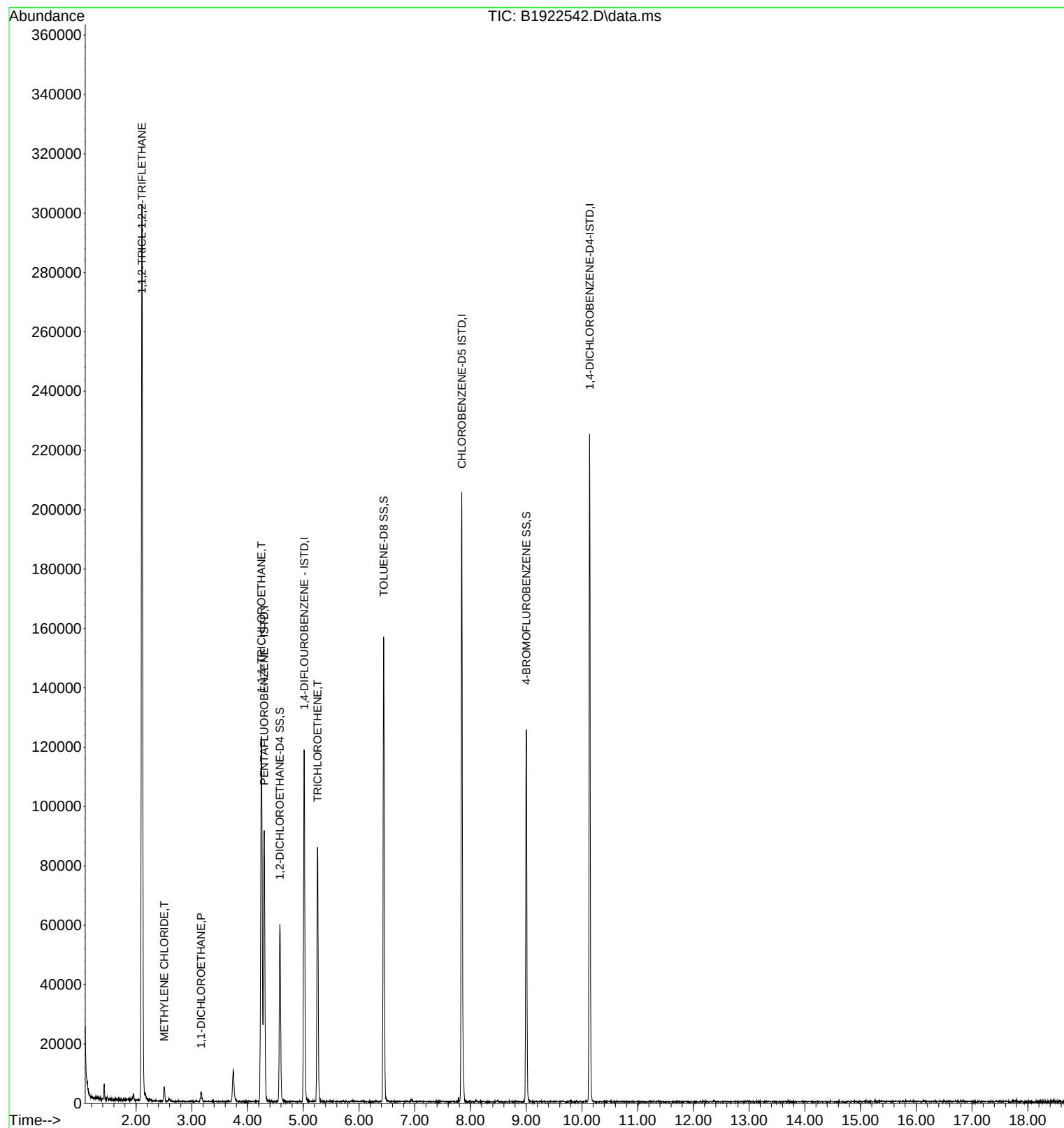
Quant Time: Aug 14 11:26:30 2019

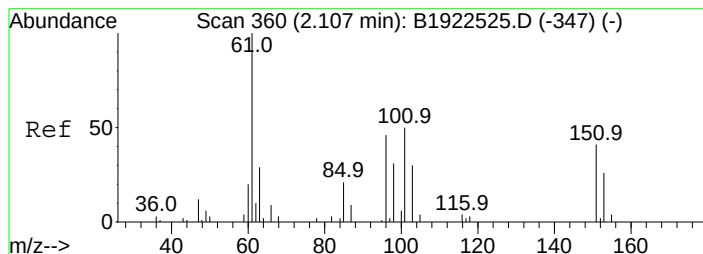
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Fri Apr 19 05:25:51 2019

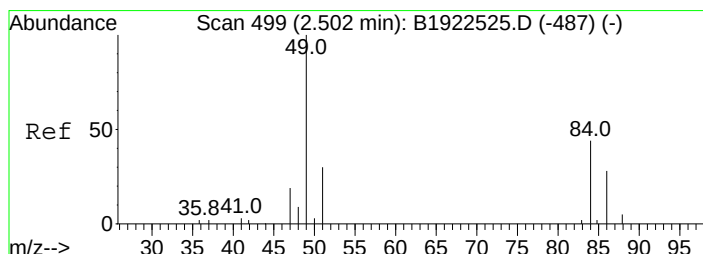
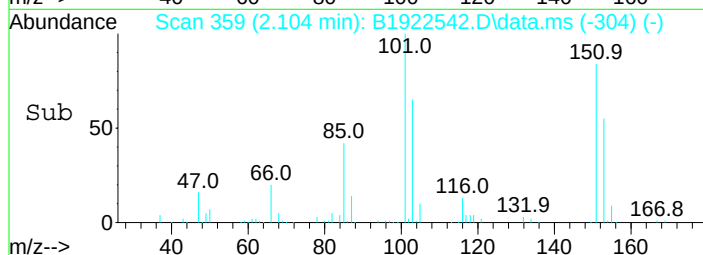
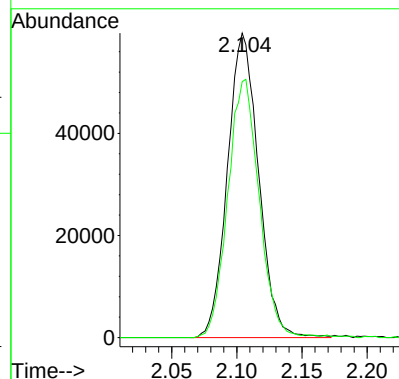
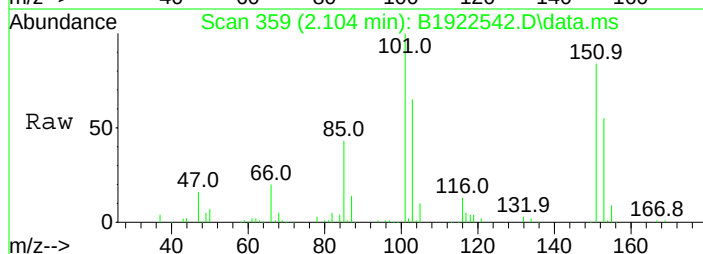
Response via : Initial Calibration





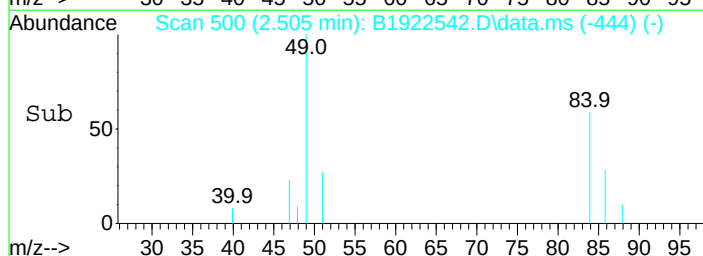
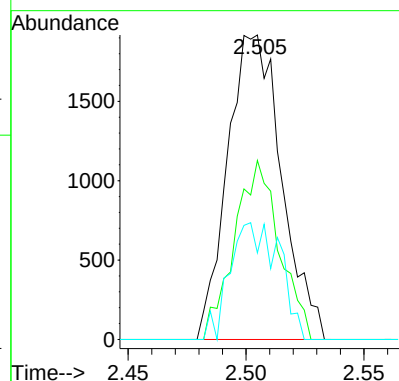
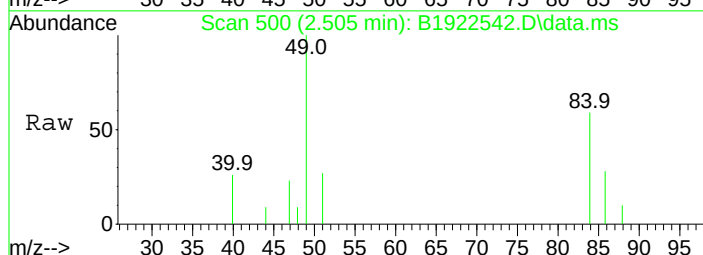
#16  
 1,1,2-TRICL-1,2,2-TRIFLETHANE  
 Concen: 132.54 UG/L  
 RT: 2.104 min Scan# 359  
 Delta R.T. 0.000 min  
 Lab File: B1922542.D  
 Acq: 14 Aug 2019 3:41 am

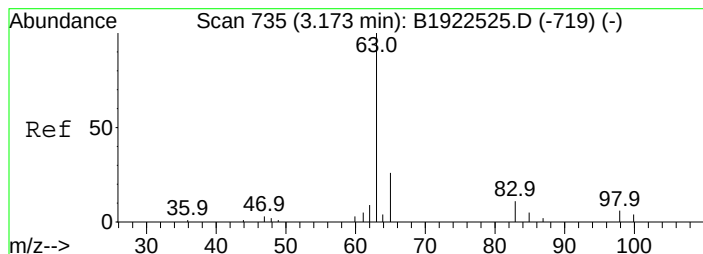
Tgt Ion: 101 Resp: 99007  
 Ion Ratio Lower Upper  
 101 100  
 151 85.2 60.5 90.7



#21  
 METHYLENE CHLORIDE  
 Concen: 1.46 UG/L  
 RT: 2.505 min Scan# 500  
 Delta R.T. -0.000 min  
 Lab File: B1922542.D  
 Acq: 14 Aug 2019 3:41 am

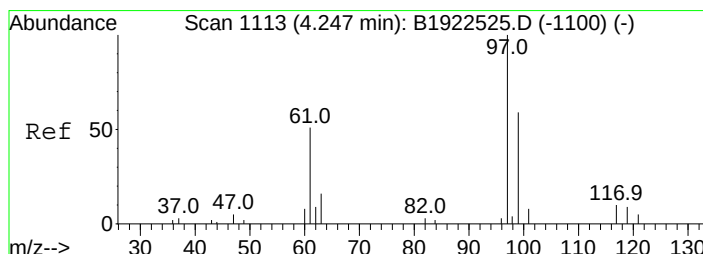
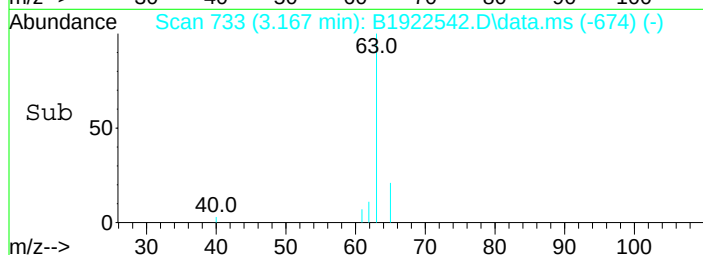
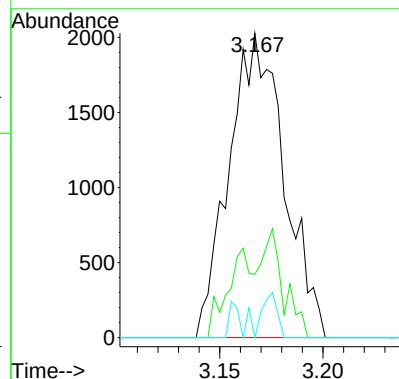
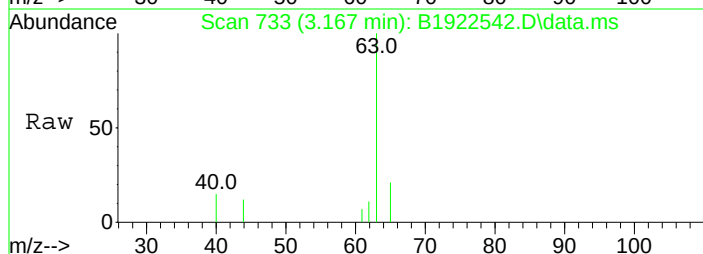
Tgt Ion: 49 Resp: 3059  
 Ion Ratio Lower Upper  
 49 100  
 84 48.7 41.1 61.7  
 86 34.9 26.5 39.7





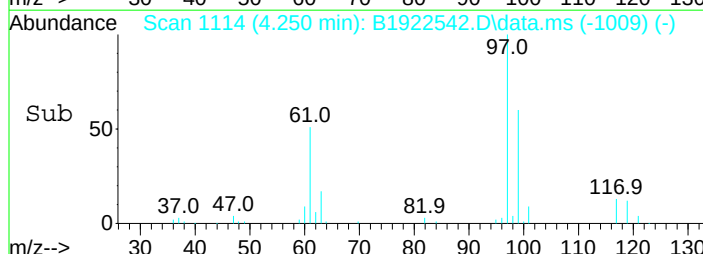
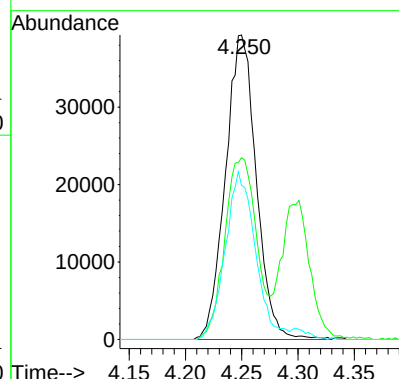
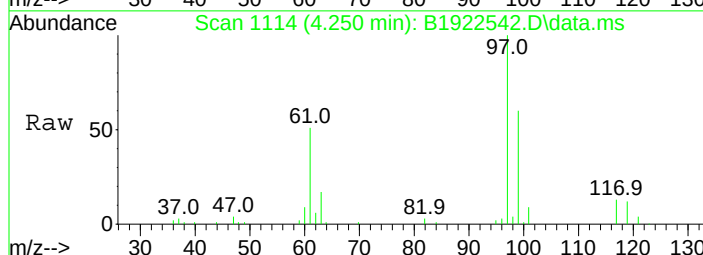
#25  
1,1-DICHLOROETHANE  
Concen: 1.75 UG/L  
RT: 3.167 min Scan# 733  
Delta R.T. -0.003 min  
Lab File: B1922542.D  
Acq: 14 Aug 2019 3:41 am

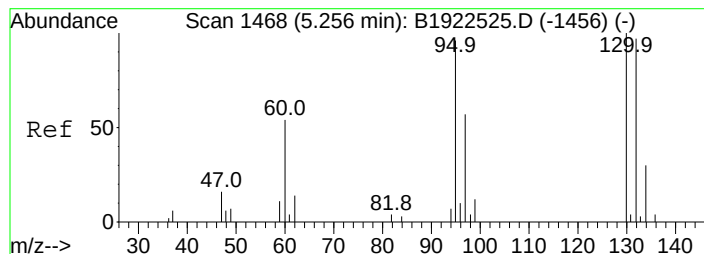
| Tgt Ion   | 63    | Resp  | 3764  |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 63        | 100   |       |       |
| 65        | 13.8  | 24.0  | 36.0# |
| 83        | 0.0   | 9.8   | 14.6# |



#37  
1,1,1-TRICHLOROETHANE  
Concen: 43.70 UG/L  
RT: 4.250 min Scan# 1114  
Delta R.T. -0.000 min  
Lab File: B1922542.D  
Acq: 14 Aug 2019 3:41 am

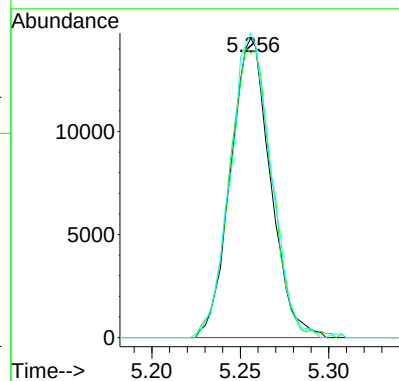
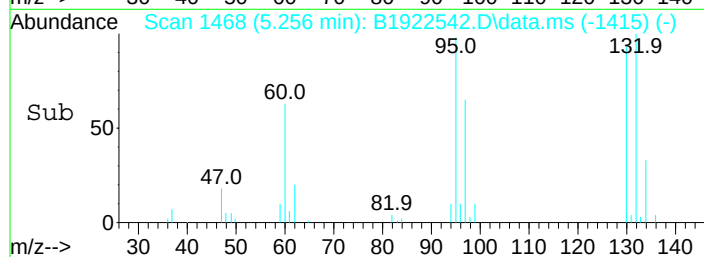
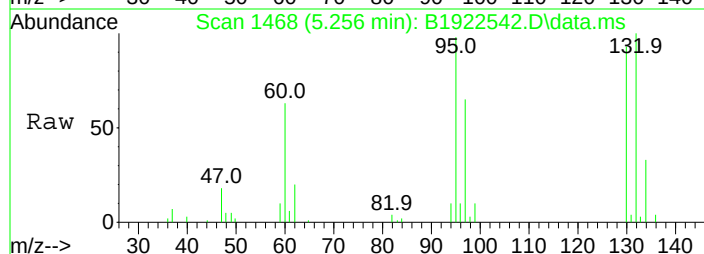
| Tgt Ion   | 97    | Resp  | 74909 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 97        | 100   |       |       |
| 99        | 61.7  | 50.8  | 76.2  |
| 61        | 53.9  | 45.1  | 67.7  |





#47  
TRICHLOROETHENE  
Concen: 24.37 UG/L  
RT: 5.256 min Scan# 1468  
Delta R.T. -0.000 min  
Lab File: B1922542.D  
Acq: 14 Aug 2019 3:41 am

Tgt Ion: 95 Resp: 22725  
Ion Ratio Lower Upper  
95 100  
130 102.9 79.8 119.6  
132 103.8 80.6 121.0



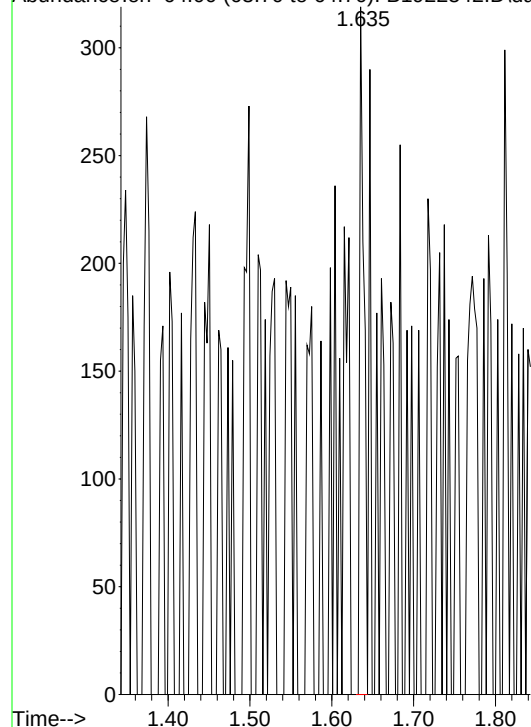
Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:26:30 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CHLOROETHANE

Abundance on 64.00 (63.70 to 64.70): B1922542.D\data



## Original Int. Results

-----

RT : 1.64  
Area : 119  
Amount: 0.152437

## Manual Int. Results

-----

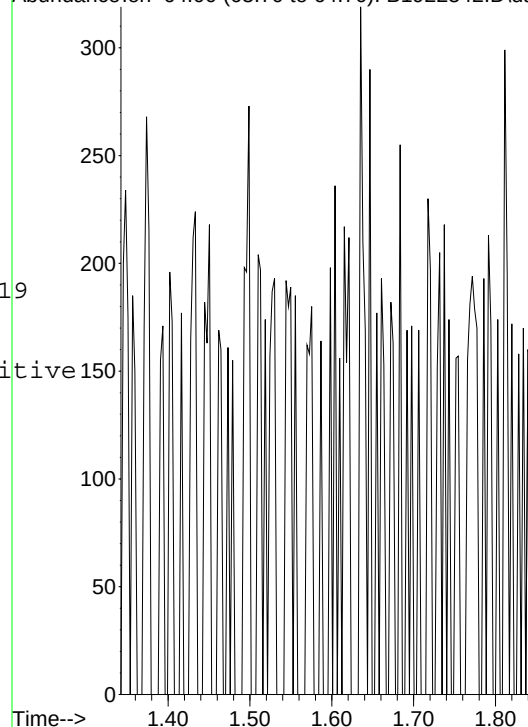
Wed Aug 14 11:25:25 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CHLOROETHANE

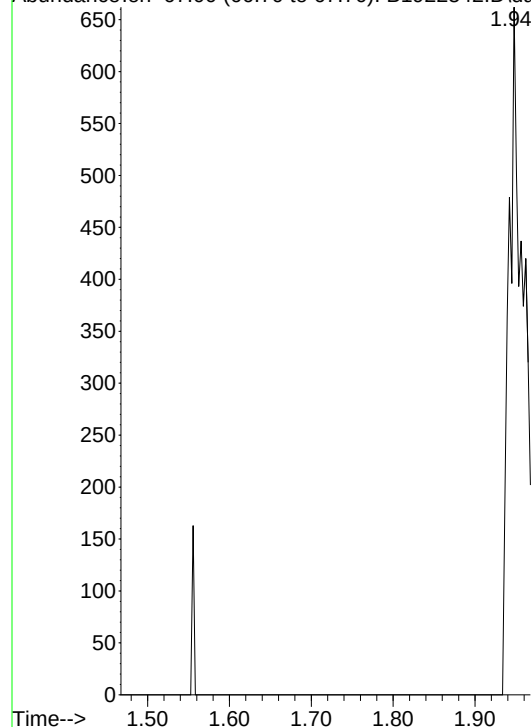
Abundance on 64.00 (63.70 to 64.70): B1922542.D\data



## Original Integration

FLUORODICHLOROMETHANE

Abundance on 67.00 (66.70 to 67.70): B1922542.D\data



## Original Int. Results

-----

RT : 1.95  
Area : 806  
Amount: 0.398928

## Manual Int. Results

-----

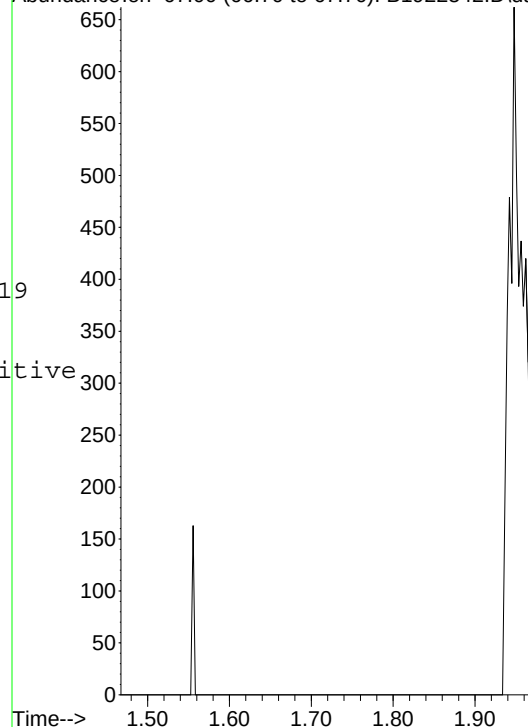
Wed Aug 14 11:25:27 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

FLUORODICHLOROMETHANE

Abundance on 67.00 (66.70 to 67.70): B1922542.D\data



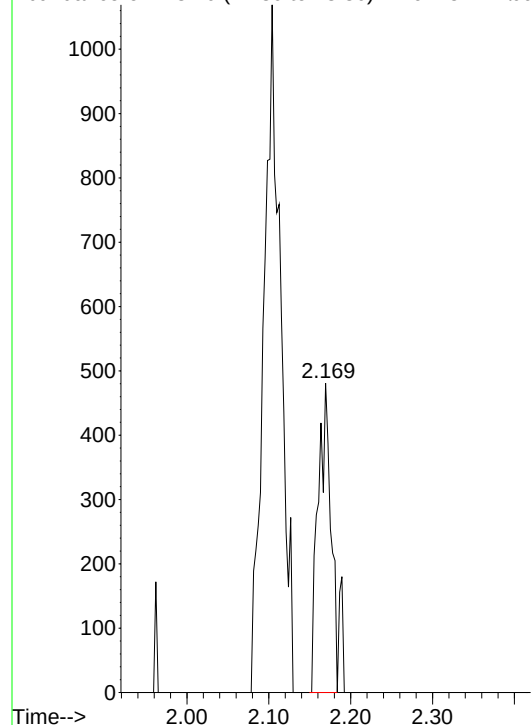
Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:26:30 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

ACETONE

Abundance 43.10 (42.80 to 43.80): B1922542.D\data



## Original Int. Results

-----

RT : 2.17  
Area : 522  
Amount: 1.06788

## Manual Int. Results

-----

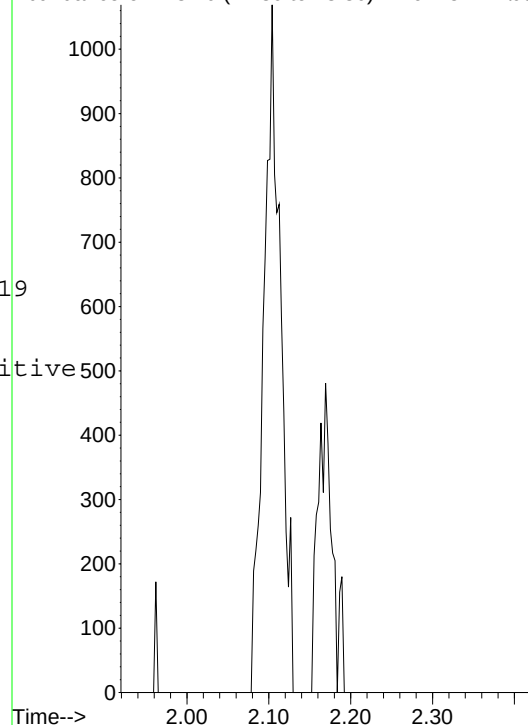
Wed Aug 14 11:25:37 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ACETONE

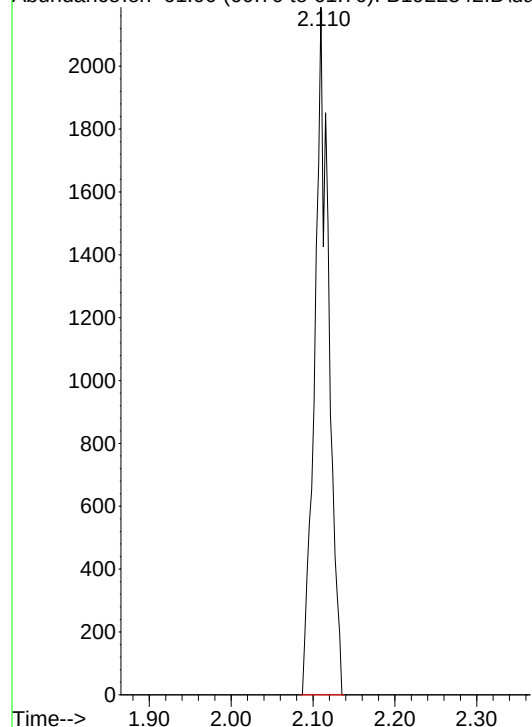
Abundance 43.10 (42.80 to 43.80): B1922542.D\data



## Original Integration

1,1-DICHLOROETHENE

Abundance 61.00 (60.70 to 61.70): B1922542.D\data



## Original Int. Results

-----

RT : 2.11  
Area : 2617  
Amount: 1.46045

## Manual Int. Results

-----

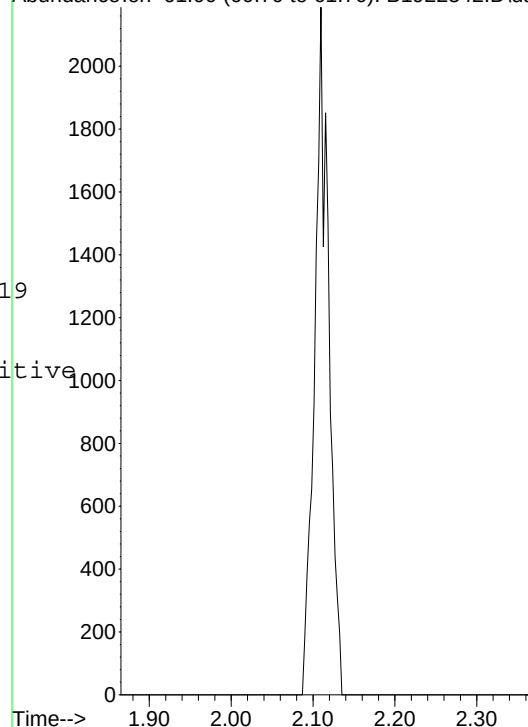
Wed Aug 14 11:26:03 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

1,1-DICHLOROETHENE

Abundance 61.00 (60.70 to 61.70): B1922542.D\data





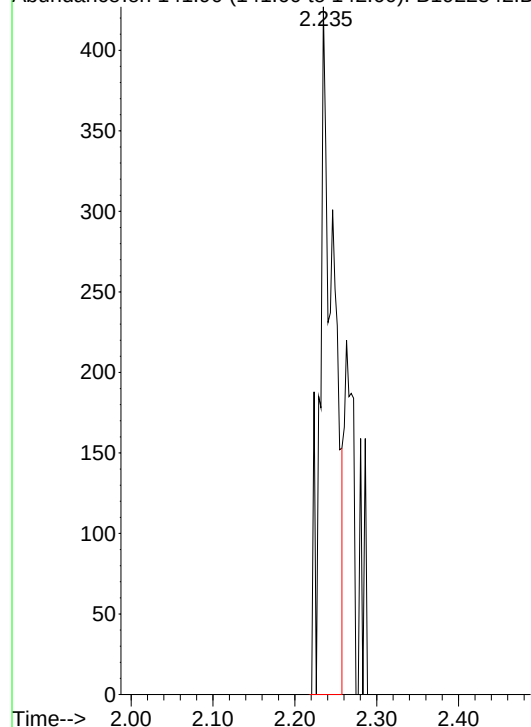
Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:26:30 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922542.D



## Original Int. Results

-----

RT : 2.23  
Area : 490  
Amount: 0.383232

## Manual Int. Results

-----

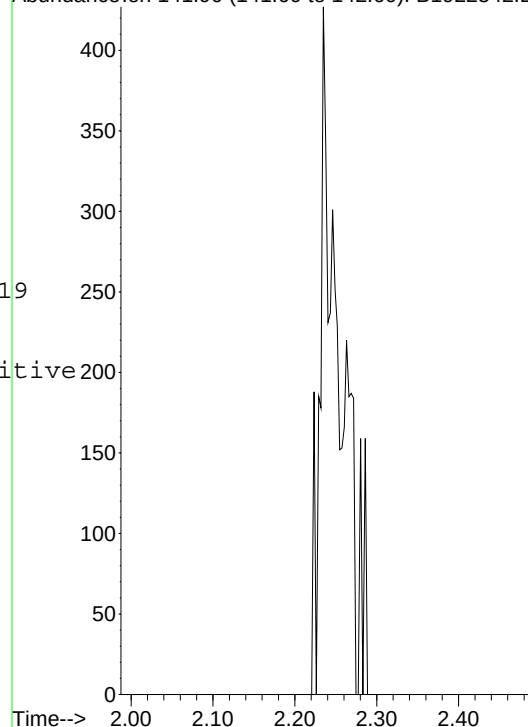
Wed Aug 14 11:26:06 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

IODOMETHANE

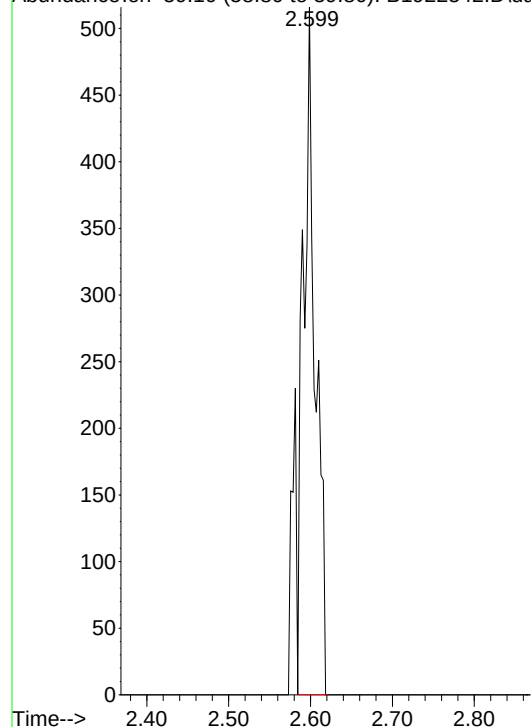
Abundance on 141.90 (141.60 to 142.60): B1922542.D



## Original Integration

T-BUTYL ALCOHOL

Abundance on 59.10 (58.80 to 59.80): B1922542.D



## Original Int. Results

-----

RT : 2.60  
Area : 532  
Amount: 3.81049

## Manual Int. Results

-----

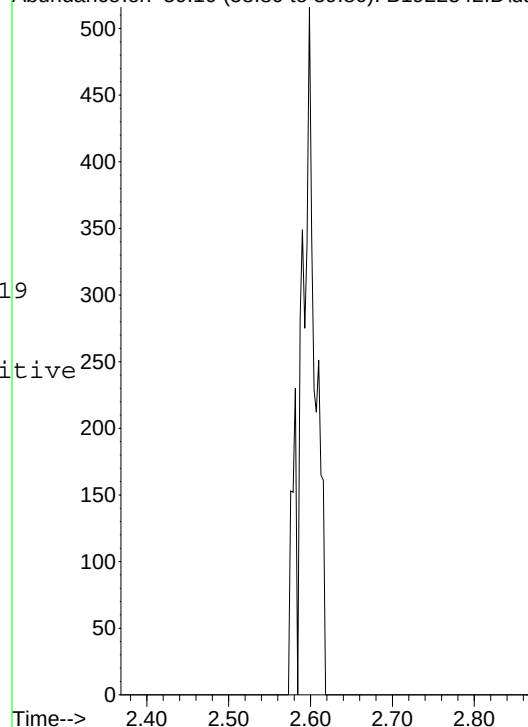
Wed Aug 14 11:26:09 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL ALCOHOL

Abundance on 59.10 (58.80 to 59.80): B1922542.D

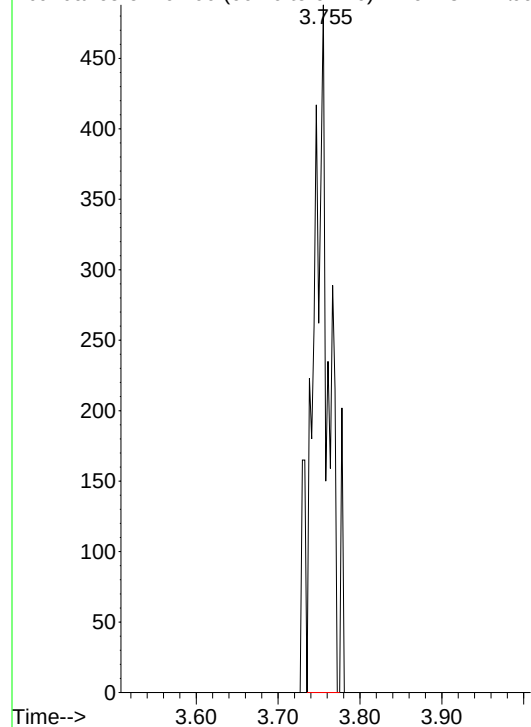


Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:26:30 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
CIS-1,2-DICHLOROETHENE

Abundance on 61.00 (60.70 to 61.70): B1922542.D\data



Original Int. Results  
-----

RT : 3.76  
Area : 553  
Amount: 0.26057

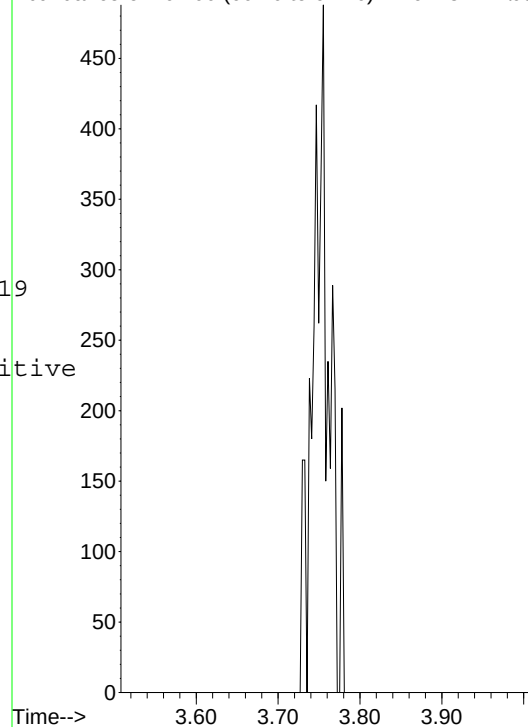
Manual Int. Results  
-----

Wed Aug 14 11:26:15 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

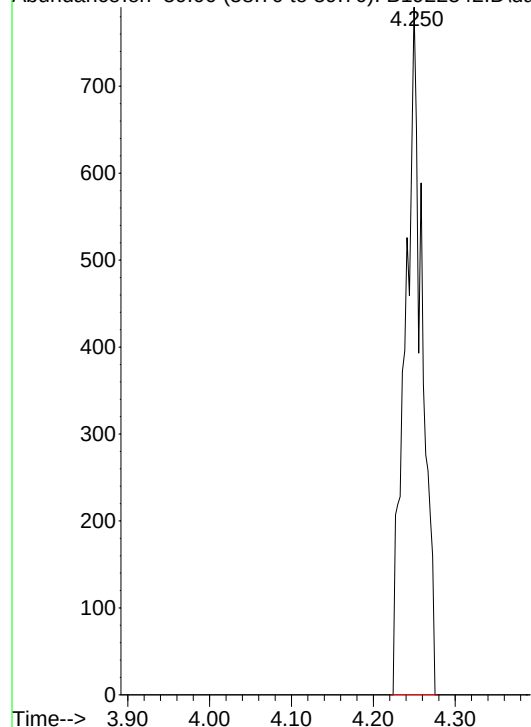
Manual Integration  
CIS-1,2-DICHLOROETHENE

Abundance on 61.00 (60.70 to 61.70): B1922542.D\data



Original Integration  
T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922542.D\data



Original Int. Results  
-----

RT : 4.25  
Area : 1143  
Amount: 1.05595

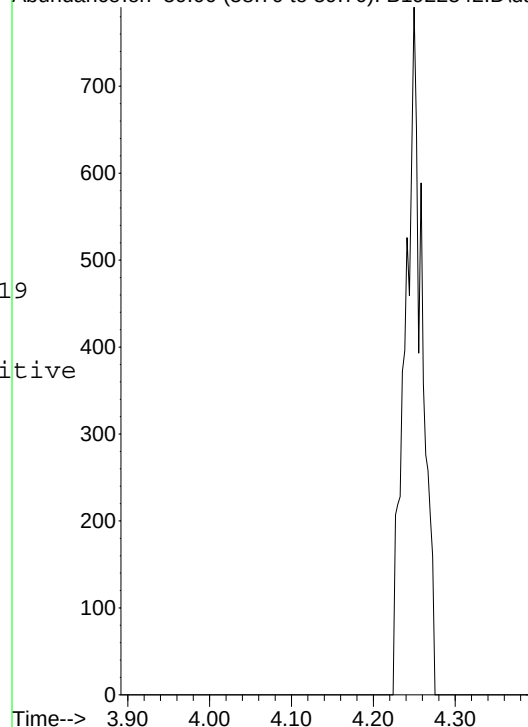
Manual Int. Results  
-----

Wed Aug 14 11:26:17 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922542.D\data



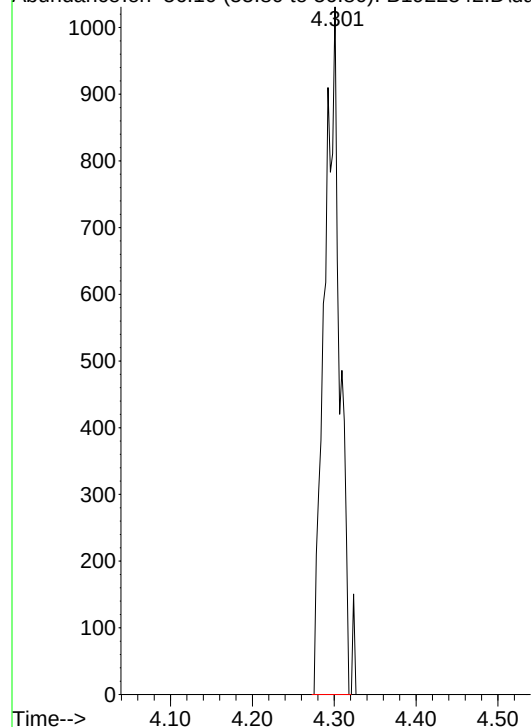
Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:26:30 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922542.D\data



## Original Int. Results

-----

RT : 4.30  
Area : 1336  
Amount: 0.598136

## Manual Int. Results

-----

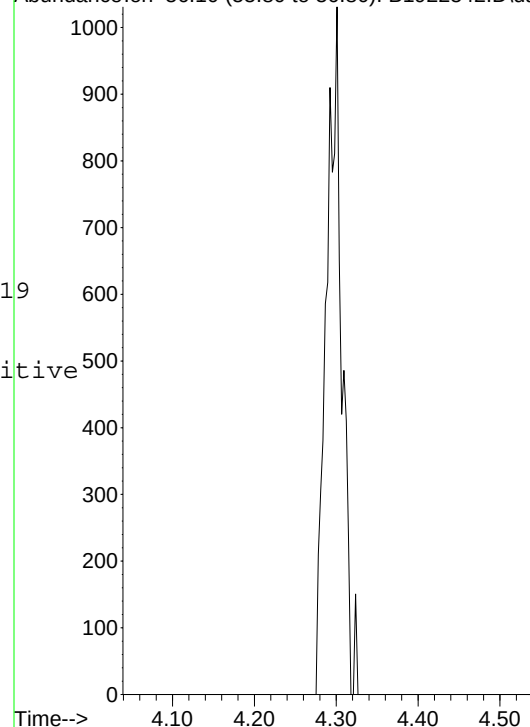
Wed Aug 14 11:26:20 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CYCLOHEXANE

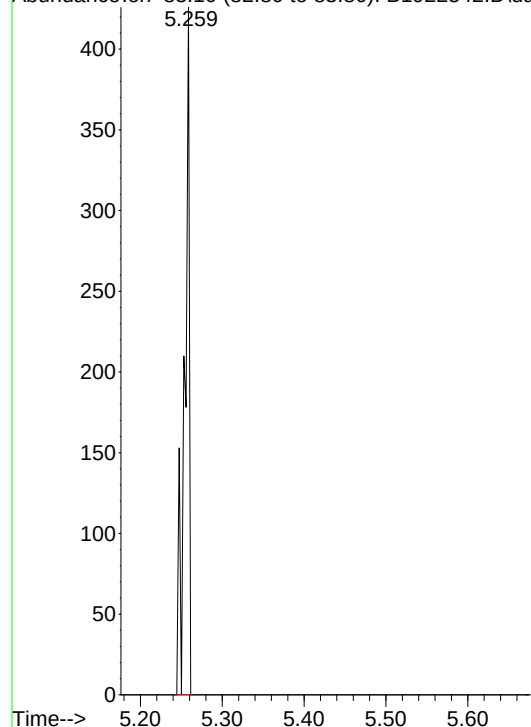
Abundance on 56.10 (55.80 to 56.80): B1922542.D\data



## Original Integration

METHYLCYCLOHEXANE

Abundance on 83.10 (82.80 to 83.80): B1922542.D\data



## Original Int. Results

-----

RT : 5.26  
Area : 165  
Amount: 0.130445

## Manual Int. Results

-----

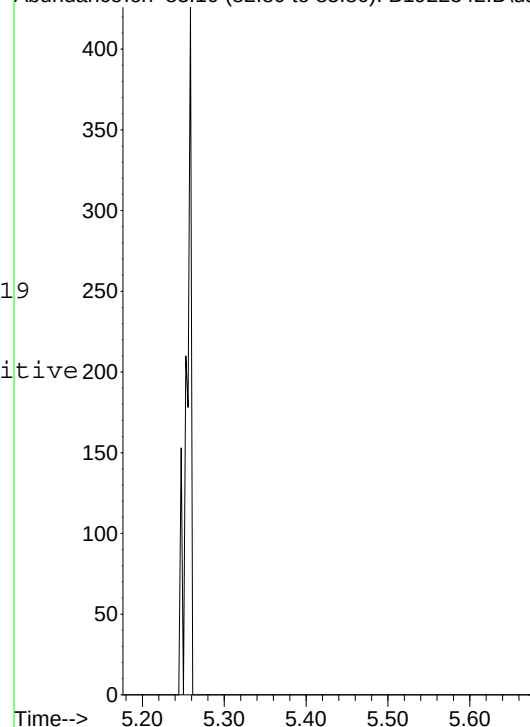
Wed Aug 14 11:26:23 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

METHYLCYCLOHEXANE

Abundance on 83.10 (82.80 to 83.80): B1922542.D\data



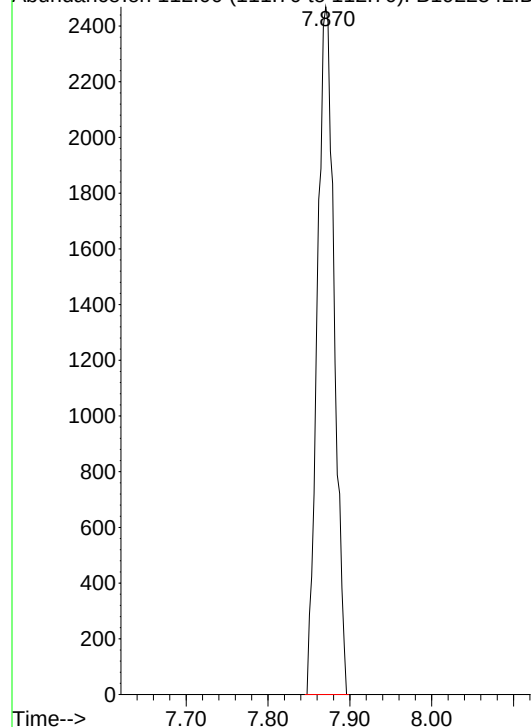
Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 11:26:30 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CHLOROBENZENE

Abundance on 112.00 (111.70 to 112.70): B1922542.D



## Original Int. Results

-----

RT : 7.87  
Area : 3525  
Amount: 1.17675

## Manual Int. Results

-----

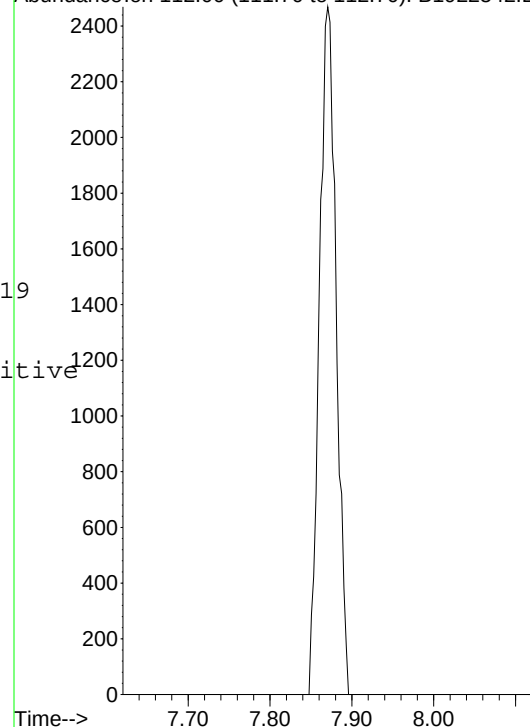
Wed Aug 14 11:26:26 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CHLOROBENZENE

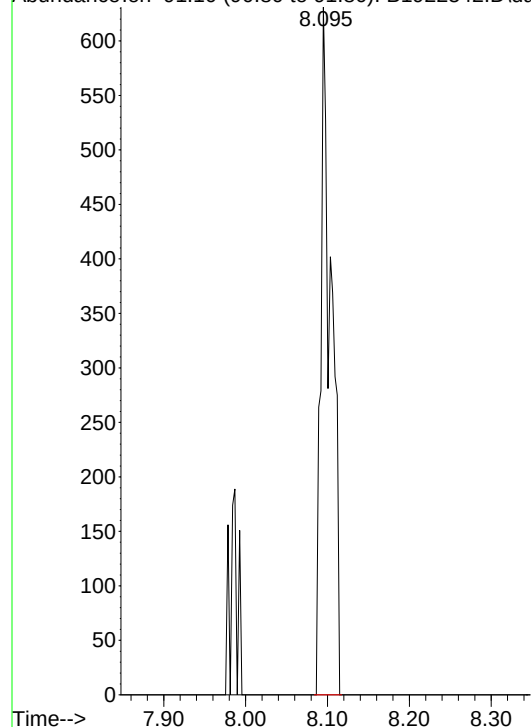
Abundance on 112.00 (111.70 to 112.70): B1922542.D



## Original Integration

M/P-XYLENES

Abundance on 91.10 (90.80 to 91.80): B1922542.D



## Original Int. Results

-----

RT : 8.09  
Area : 566  
Amount: 0.136439

## Manual Int. Results

-----

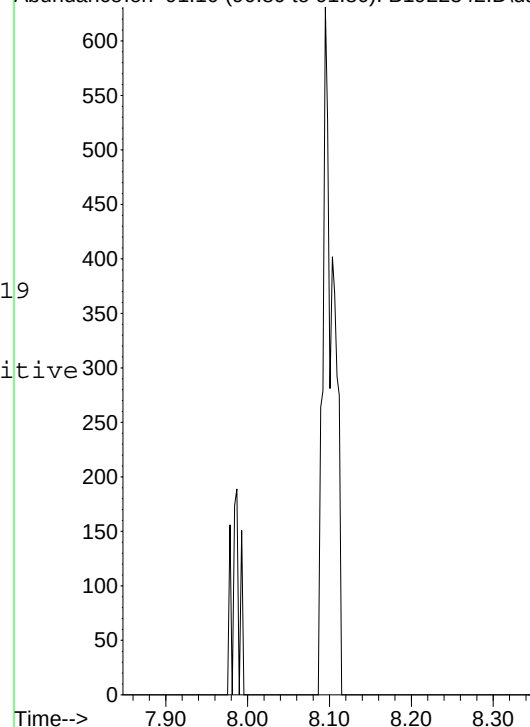
Wed Aug 14 11:26:29 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

M/P-XYLENES

Abundance on 91.10 (90.80 to 91.80): B1922542.D



Data Path : Y:\1\DATA\B081319\  
 Data File : B1922542.D  
 Acq On : 14 Aug 2019 3:41 am  
 Operator :  
 Sample : 19H0576-05 @ (TICs)  
 Misc :  
 ALS Vial : 42 Sample Multiplier: 1

Integration Parameters: 8260LOW.P  
 Integrator: RTE  
 Smoothing : OFF  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0  
 Filtering: 5  
 Min Area: 1 % of largest Peak  
 Max Peaks: 100  
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Y:\1\METHODS\B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973

Signal : TIC: B1922542.D\data.ms

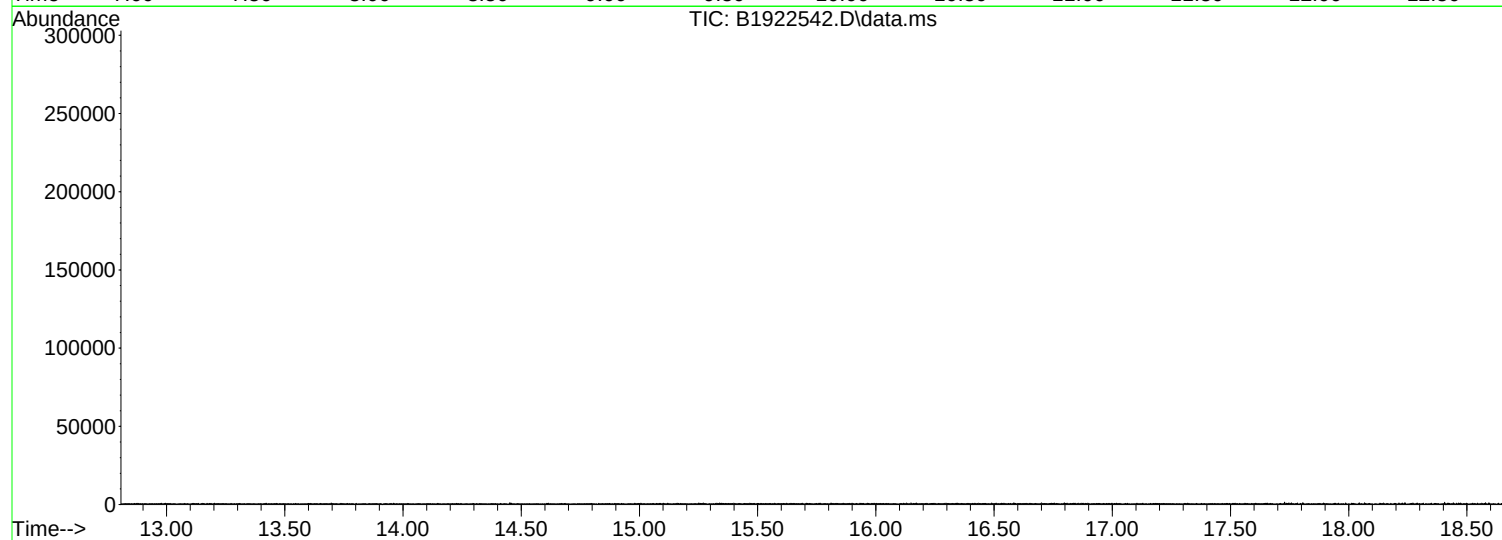
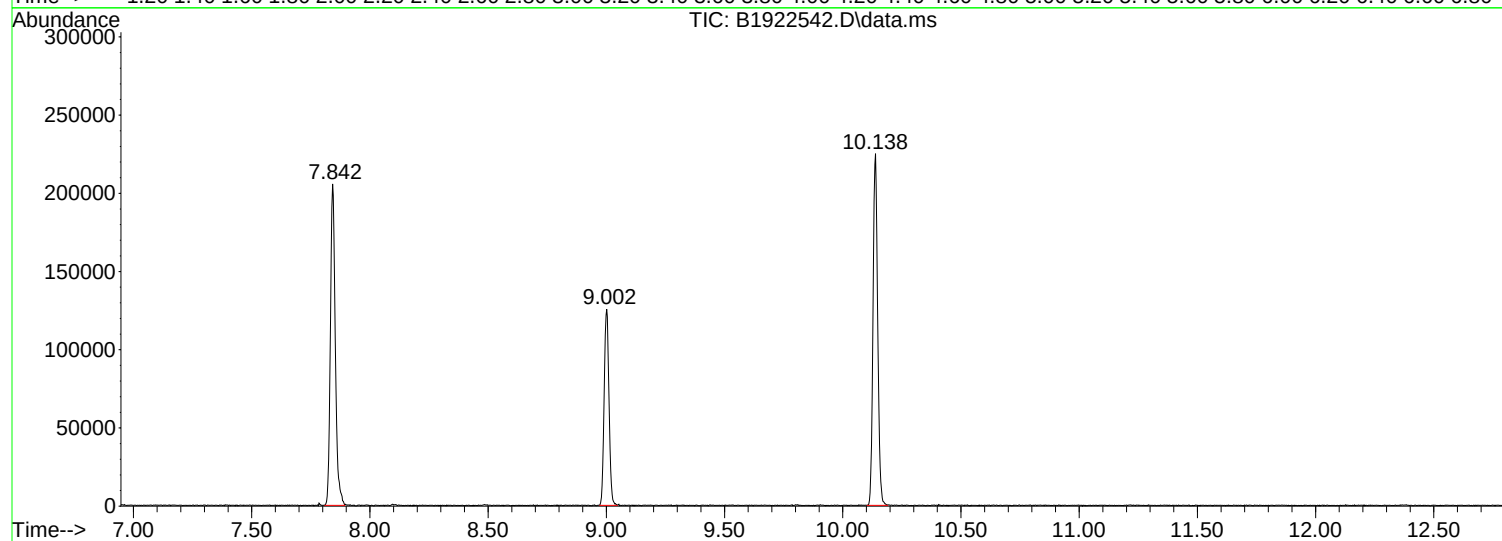
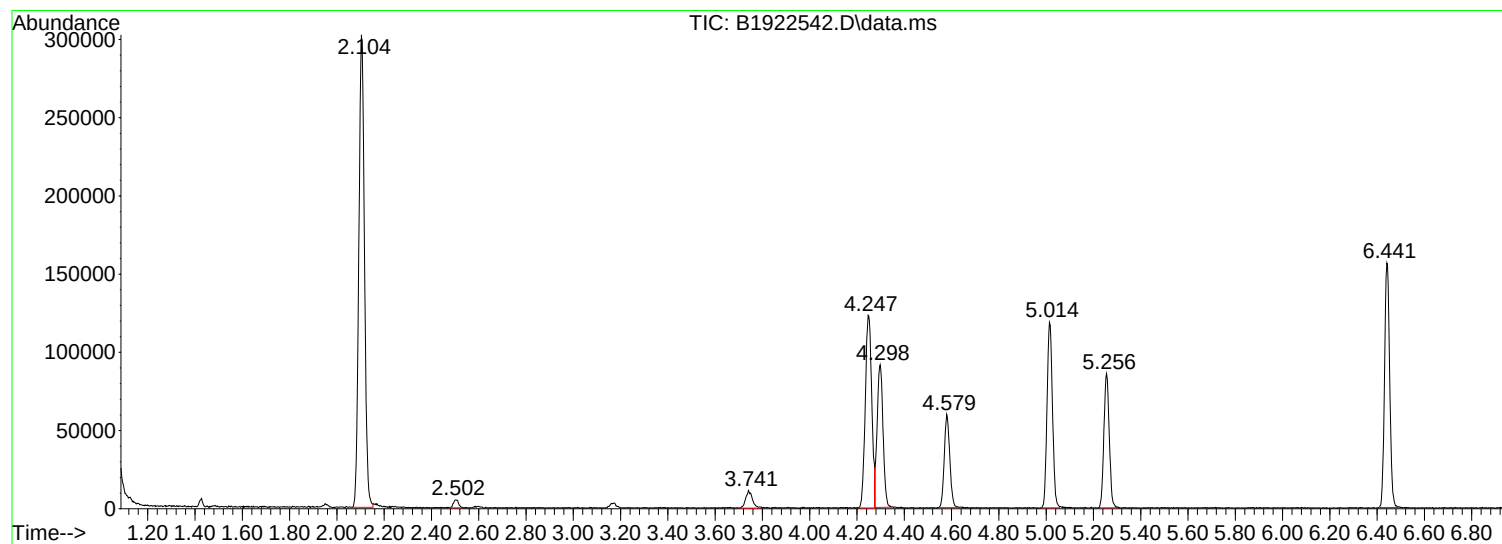
| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 2.104       | 345           | 359         | 376          | rBV      | 302087         | 498452        | 100.00%         | 21.129%       |
| 2         | 2.502       | 490           | 499         | 508          | rBV5     | 4945           | 7587          | 1.52%           | 0.322%        |
| 3         | 3.741       | 921           | 935         | 950          | rBV2     | 11297          | 21652         | 4.34%           | 0.918%        |
| 4         | 4.247       | 1099          | 1113        | 1123         | rBV2     | 123163         | 236038        | 47.35%          | 10.006%       |
| 5         | 4.298       | 1123          | 1131        | 1148         | rVB2     | 90969          | 156230        | 31.34%          | 6.623%        |
| 6         | 4.579       | 1218          | 1230        | 1248         | rBV2     | 59568          | 96398         | 19.34%          | 4.086%        |
| 7         | 5.014       | 1371          | 1383        | 1398         | rBV2     | 118608         | 188421        | 37.80%          | 7.987%        |
| 8         | 5.256       | 1457          | 1468        | 1483         | rBV      | 85717          | 134683        | 27.02%          | 5.709%        |
| 9         | 6.441       | 1873          | 1885        | 1903         | rBV      | 156380         | 235842        | 47.31%          | 9.997%        |
| 10        | 7.842       | 2366          | 2378        | 2396         | rBV      | 205432         | 297314        | 59.65%          | 12.603%       |
| 11        | 9.002       | 2775          | 2786        | 2802         | rBV3     | 125361         | 176882        | 35.49%          | 7.498%        |
| 12        | 10.138      | 3173          | 3186        | 3204         | rBV      | 224905         | 309569        | 62.11%          | 13.123%       |

Sum of corrected areas: 2359068

Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :  
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJ\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P



Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :  
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

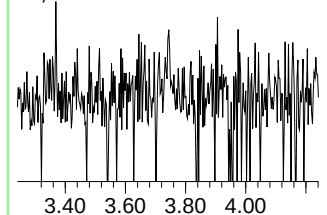
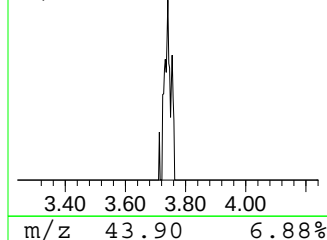
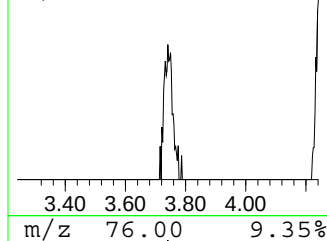
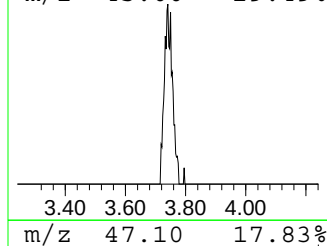
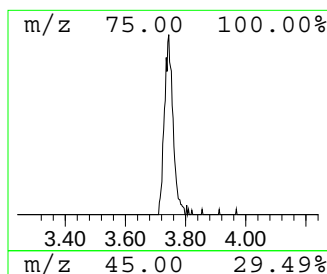
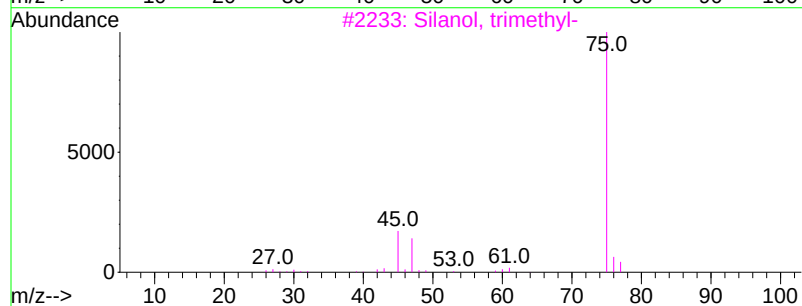
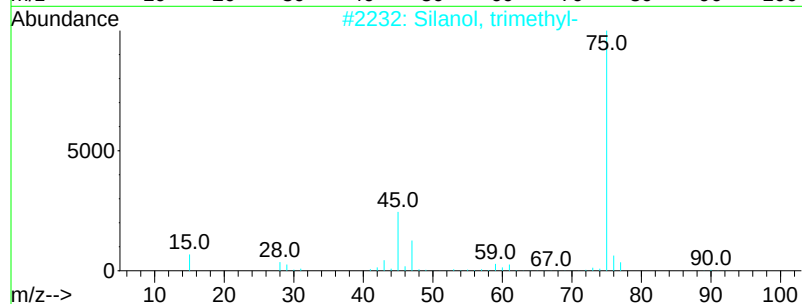
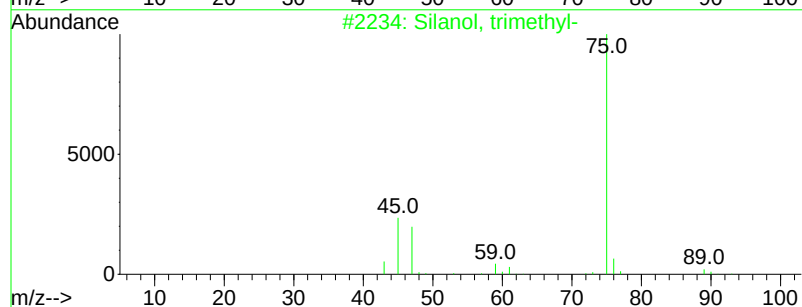
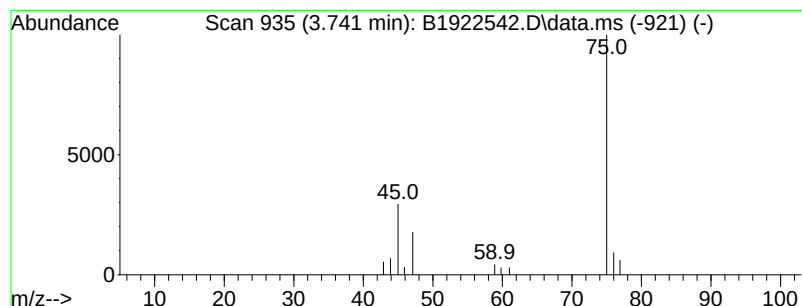
TIC Library : F:\CTAL-Laboratory\Management\DJJ\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

\*\*\*\*\*  
Peak Number 1 Silanol, trimethyl- Concentration Rank 1

| R.T.  | EstConc   | Area  | Relative to ISTD          | R.T.  |
|-------|-----------|-------|---------------------------|-------|
| 3.741 | 4.16 UG/L | 21652 | PENTAFLUOROBENZENE - ISTD | 4.298 |

| Hit# | of | 5 | Tentative ID            | MW | MolForm  | CAS#        | Qual |
|------|----|---|-------------------------|----|----------|-------------|------|
| 1    |    |   | Silanol, trimethyl-     | 90 | C3H10OSi | 001066-40-6 | 83   |
| 2    |    |   | Silanol, trimethyl-     | 90 | C3H10OSi | 001066-40-6 | 83   |
| 3    |    |   | Silanol, trimethyl-     | 90 | C3H10OSi | 001066-40-6 | 78   |
| 4    |    |   | Formamide, N-methylthio | 75 | C2H5NS   | 018952-41-5 | 64   |
| 5    |    |   | Ethanethioamide         | 75 | C2H5NS   | 000062-55-5 | 9    |



Data Path : Y:\1\DATA\B081319\  
Data File : B1922542.D  
Acq On : 14 Aug 2019 3:41 am  
Operator :  
Sample : 19H0576-05 @ (TICs)  
Misc :  
ALS Vial : 42 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

| TIC Top Hit name   | RT    | EstConc | Units | Response | --Internal Standard-- |       |        |      |
|--------------------|-------|---------|-------|----------|-----------------------|-------|--------|------|
|                    |       |         |       |          | #                     | RT    | Resp   | Conc |
| Silanol, trimet... | 3.741 | 4.2     | UG/L  | 21652    | 1                     | 4.298 | 156230 | 30.0 |



# 1 - FORM I

## ANALYSIS DATA SHEET

125

### Drum Composite

|                |                                |                |                       |                          |
|----------------|--------------------------------|----------------|-----------------------|--------------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |                          |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |                          |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-06            | File ID: B1922545.D      |
| Sampled:       | 08/09/19 14:15                 | Prepared:      | 08/13/19 07:22        | Analyzed: 08/14/19 05:13 |
| Solids:        |                                | Preparation:   | SW-846 5030B          | Dilution: 50             |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |                          |
| Batch:         | B237875                        | Sequence:      | S039168               | Calibration: 1900126     |
|                |                                |                |                       | Instrument: GCMSVOA2     |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL | RL   | Q    |
|----------|------------------------------------|--------------|-----|------|------|
| 67-64-1  | Acetone                            |              | 190 | 2500 |      |
| 107-13-1 | Acrylonitrile                      |              | 26  | 250  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      |              | 7.0 | 25   |      |
| 71-43-2  | Benzene                            |              | 9.0 | 50   |      |
| 108-86-1 | Bromobenzene                       |              | 7.5 | 50   |      |
| 74-97-5  | Bromochloromethane                 |              | 16  | 50   |      |
| 75-27-4  | Bromodichloromethane               |              | 8.0 | 25   |      |
| 75-25-2  | Bromoform                          |              | 23  | 50   |      |
| 74-83-9  | Bromomethane                       |              | 39  | 250  |      |
| 78-93-3  | 2-Butanone (MEK)                   |              | 97  | 1000 |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           |              | 210 | 1000 |      |
| 104-51-8 | n-Butylbenzene                     |              | 10  | 50   | V-05 |
| 135-98-8 | sec-Butylbenzene                   |              | 8.0 | 50   |      |
| 98-06-6  | tert-Butylbenzene                  |              | 8.5 | 50   |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      |              | 8.0 | 25   |      |
| 75-15-0  | Carbon Disulfide                   |              | 220 | 250  |      |
| 56-23-5  | Carbon Tetrachloride               |              | 5.5 | 250  |      |
| 108-90-7 | Chlorobenzene                      |              | 7.5 | 50   |      |
| 124-48-1 | Chlorodibromomethane               |              | 10  | 25   |      |
| 75-00-3  | Chloroethane                       |              | 18  | 100  |      |
| 67-66-3  | Chloroform                         |              | 8.5 | 100  |      |
| 74-87-3  | Chloromethane                      |              | 22  | 100  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    |              | 6.0 | 50   |      |
| 106-43-4 | 4-Chlorotoluene                    |              | 7.0 | 50   |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) |              | 26  | 250  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            |              | 9.5 | 25   |      |
| 74-95-3  | Dibromomethane                     |              | 18  | 50   |      |
| 95-50-1  | 1,2-Dichlorobenzene                |              | 8.0 | 50   |      |
| 541-73-1 | 1,3-Dichlorobenzene                |              | 6.0 | 50   |      |
| 106-46-7 | 1,4-Dichlorobenzene                |              | 6.5 | 50   |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

126

### Drum Composite

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-06            |
|                |                                | File ID:       | B1922545.D            |
| Sampled:       | 08/09/19 14:15                 | Prepared:      | 08/13/19 07:22        |
|                |                                | Analyzed:      | 08/14/19 05:13        |
| Solids:        |                                | Preparation:   | SW-846 5030B          |
|                |                                | Dilution:      | 50                    |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |
| Batch:         | B237875                        | Sequence:      | S039168               |
|                |                                | Calibration:   | 1900126               |
|                |                                | Instrument:    | GCMSVOA2              |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q |
|------------|------------------------------------|--------------|------|------|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        |              | 16   | 100  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) |              | 13   | 100  |   |
| 75-34-3    | 1,1-Dichloroethane                 | 170          | 8.0  | 50   |   |
| 107-06-2   | 1,2-Dichloroethane                 |              | 20   | 50   |   |
| 75-35-4    | 1,1-Dichloroethylene               |              | 16   | 50   |   |
| 156-59-2   | cis-1,2-Dichloroethylene           |              | 6.5  | 50   |   |
| 156-60-5   | trans-1,2-Dichloroethylene         |              | 16   | 50   |   |
| 78-87-5    | 1,2-Dichloropropane                |              | 10   | 50   |   |
| 142-28-9   | 1,3-Dichloropropane                |              | 5.5  | 25   |   |
| 594-20-7   | 2,2-Dichloropropane                |              | 10   | 50   |   |
| 563-58-6   | 1,1-Dichloropropene                |              | 8.0  | 100  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            |              | 6.5  | 25   |   |
| 10061-02-6 | trans-1,3-Dichloropropene          |              | 12   | 25   |   |
| 60-29-7    | Diethyl Ether                      |              | 17   | 100  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           |              | 8.5  | 25   |   |
| 123-91-1   | 1,4-Dioxane                        |              | 1100 | 2500 |   |
| 100-41-4   | Ethylbenzene                       |              | 6.5  | 50   |   |
| 87-68-3    | Hexachlorobutadiene                |              | 24   | 30   |   |
| 591-78-6   | 2-Hexanone (MBK)                   |              | 76   | 500  |   |
| 98-82-8    | Isopropylbenzene (Cumene)          |              | 8.5  | 50   |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      |              | 10   | 50   |   |
| 79-20-9    | Methyl Acetate                     |              | 21   | 50   |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     |              | 12   | 50   |   |
| 108-87-2   | Methyl Cyclohexane                 |              | 10   | 50   |   |
| 75-09-2    | Methylene Chloride                 | 400          | 17   | 250  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        |              | 84   | 500  |   |
| 91-20-3    | Naphthalene                        |              | 16   | 100  |   |
| 103-65-1   | n-Propylbenzene                    |              | 6.5  | 50   |   |
| 100-42-5   | Styrene                            |              | 5.5  | 50   |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          |              | 14   | 50   |   |

# 1 - FORM I

## ANALYSIS DATA SHEET

127

### Drum Composite

|                |                                |                |                       |                          |
|----------------|--------------------------------|----------------|-----------------------|--------------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |                          |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |                          |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-06            | File ID: B1922545.D      |
| Sampled:       | 08/09/19 14:15                 | Prepared:      | 08/13/19 07:22        | Analyzed: 08/14/19 05:13 |
| Solids:        |                                | Preparation:   | SW-846 5030B          | Dilution: 50             |
| Initial/Final: | 5 mL / 5 mL                    |                |                       |                          |
| Batch:         | B237875                        | Sequence:      | S039168               | Calibration: 1900126     |
|                |                                |                |                       | Instrument: GCMSVOA2     |

| CAS NO.       | COMPOUND                                          | CONC. (µg/L) | MDL | RL  | Q |
|---------------|---------------------------------------------------|--------------|-----|-----|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                         |              | 11  | 25  |   |
| 127-18-4      | Tetrachloroethylene                               |              | 9.0 | 50  |   |
| 109-99-9      | Tetrahydrofuran                                   |              | 26  | 500 |   |
| 108-88-3      | Toluene                                           |              | 7.0 | 50  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                            |              | 28  | 250 |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                            |              | 20  | 50  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                            |              | 15  | 50  |   |
| 71-55-6       | 1,1,1-Trichloroethane                             | 1800         | 10  | 50  |   |
| 79-00-5       | 1,1,2-Trichloroethane                             |              | 8.0 | 50  |   |
| 79-01-6       | Trichloroethylene                                 | 760          | 12  | 50  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                 |              | 16  | 100 |   |
| 96-18-4       | 1,2,3-Trichloropropane                            |              | 12  | 100 |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 3200         | 16  | 50  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                            |              | 9.0 | 50  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                            |              | 7.0 | 50  |   |
| 75-01-4       | Vinyl Chloride                                    |              | 22  | 100 |   |
| 108383/106423 | m+p Xylene                                        |              | 15  | 100 |   |
| 95-47-6       | o-Xylene                                          |              | 8.5 | 50  |   |
|               | No TICs Found                                     | 0.0          |     |     |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922545.D  
 Acq On : 14 Aug 2019 5:13 am  
 Operator :  
 Sample : 19H0576-06 @ 50X (TICs)  
 Misc : 50  
 ALS Vial : 45 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 11:30:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

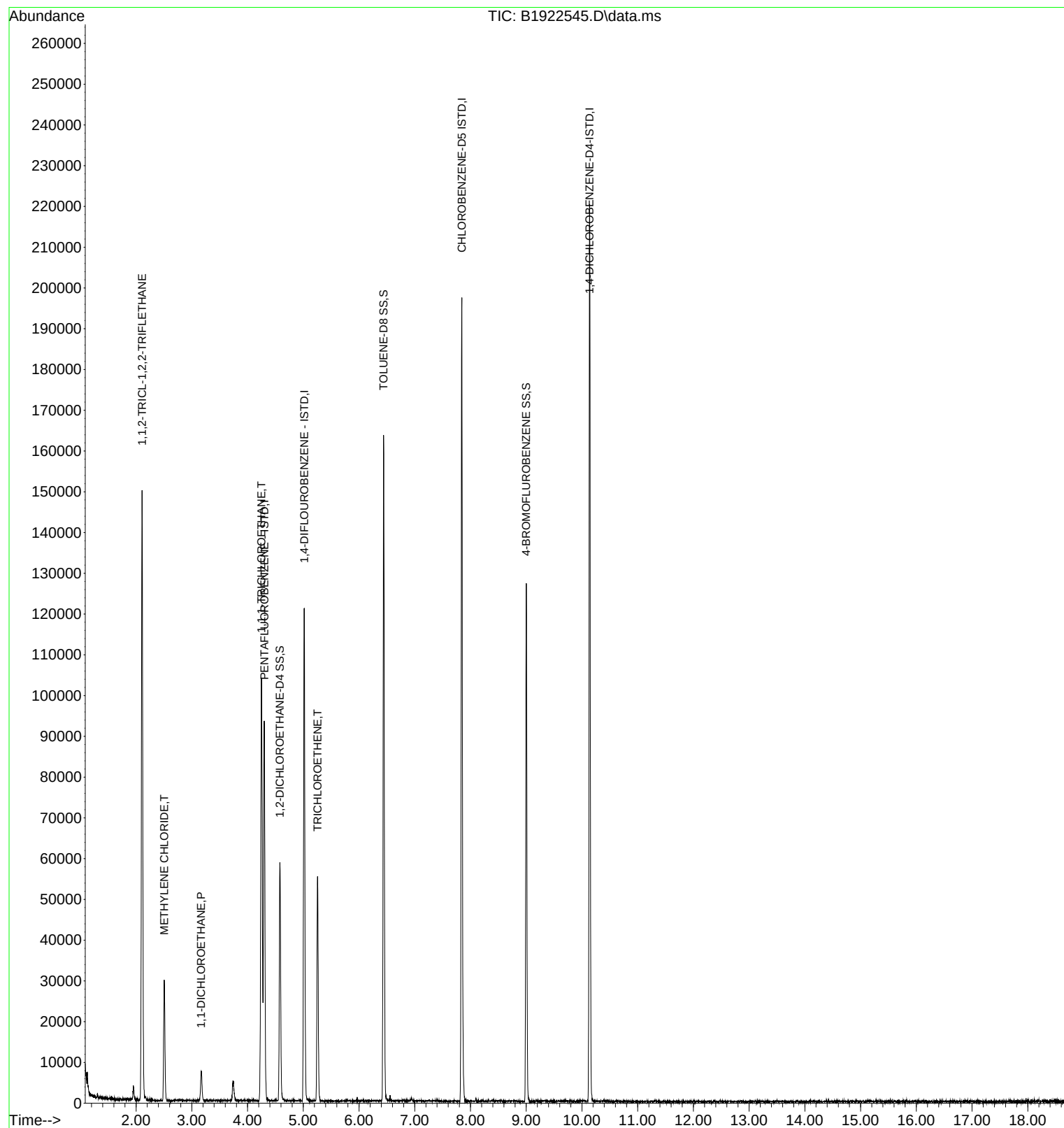
| Compound                      | R.T.           | QIon | Response   | Conc    | Units | Dev (Min) |
|-------------------------------|----------------|------|------------|---------|-------|-----------|
| Internal Standards            |                |      |            |         |       |           |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301          | 168  | 54102      | 30.00   | UG/L  | 0.00      |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 76265      | 30.00   | UG/L  | 0.00      |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845          | 82   | 47480      | 30.00   | UG/L  | 0.00      |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.136         | 152  | 50337      | 30.00   | UG/L  | 0.00      |
| System Monitoring Compounds   |                |      |            |         |       |           |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.580          | 65   | 37760      | 27.08   | UG/L  | 0.00      |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 108.32% |       |           |
| 45) TOLUENE-D8 SS             | 6.441          | 98   | 81746      | 27.39   | UG/L  | 0.00      |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 109.56% |       |           |
| 66) 4-BROMOFLUROBENZENE SS    | 8.999          | 95   | 33282      | 23.82   | UG/L  | 0.00      |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 95.28%  |       |           |
| Target Compounds              |                |      |            |         |       |           |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.107          | 101  | 48557      | 63.62   | UG/L  | 90        |
| 21) METHYLENE CHLORIDE        | 2.505          | 49   | 17199      | 8.02    | UG/L  | 100       |
| 25) 1,1-DICHLOROETHANE        | 3.167          | 63   | 7378       | 3.36    | UG/L  | 98        |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 62990      | 35.96   | UG/L  | 97        |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 14797      | 15.29   | UG/L  | 97        |

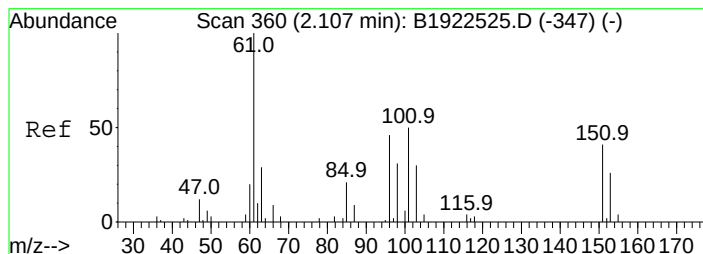
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : Y:\1\DATA\B081319\  
Data File : B1922545.D  
Acq On : 14 Aug 2019 5:13 am  
Operator :  
Sample : 19H0576-06 @ 50X (TICs)  
Misc : 50  
ALS Vial : 45 Sample Multiplier: 1

Inst : GCMSVOA2

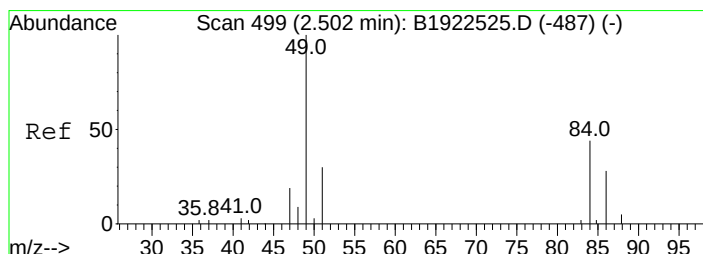
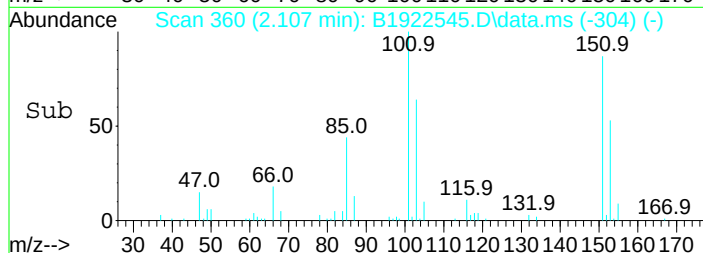
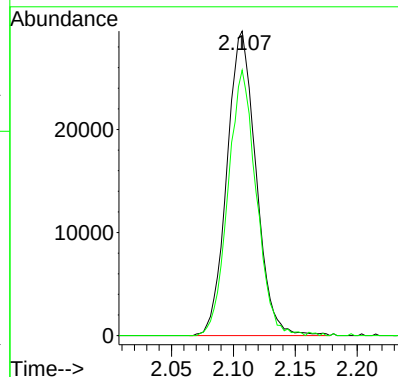
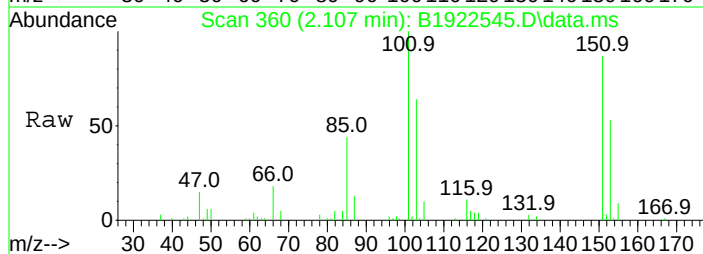
Quant Time: Aug 14 11:30:32 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973  
QLast Update : Fri Apr 19 05:25:51 2019  
Response via : Initial Calibration





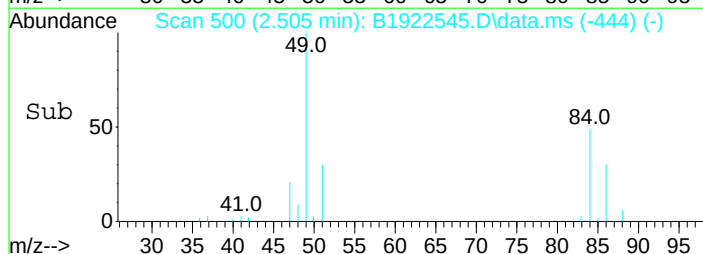
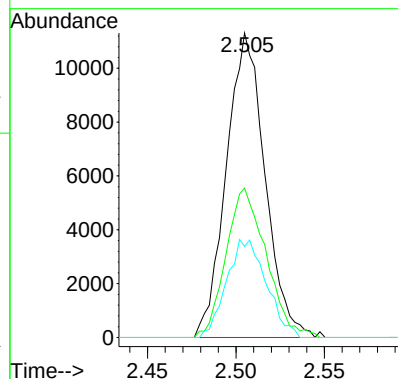
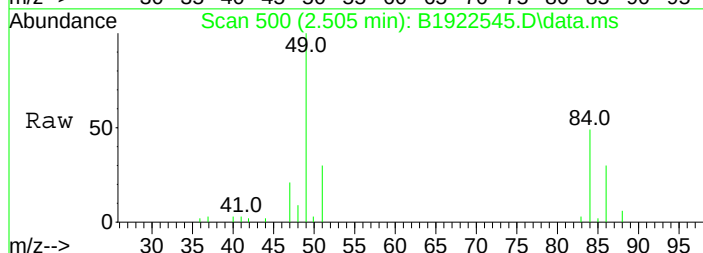
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 RT: 2.107 min Scan# 360  
 Delta R.T. 0.003 min  
 Lab File: B1922545.D  
 Acq: 14 Aug 2019 5:13 am

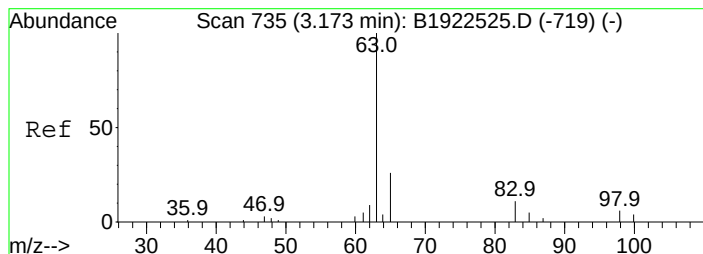
Tgt Ion: 101 Resp: 48557  
 Ion Ratio Lower Upper  
 101 100  
 151 84.4 60.5 90.7



#21  
 METHYLENE CHLORIDE  
 Concen: 8.02 UG/L  
 RT: 2.505 min Scan# 500  
 Delta R.T. -0.000 min  
 Lab File: B1922545.D  
 Acq: 14 Aug 2019 5:13 am

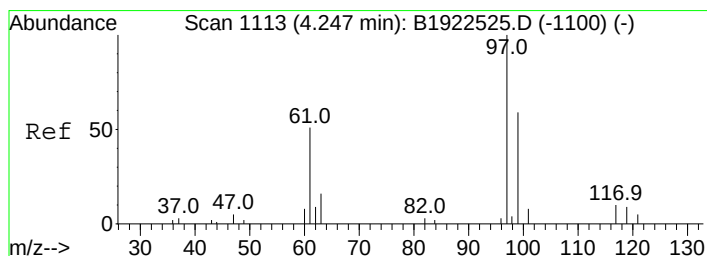
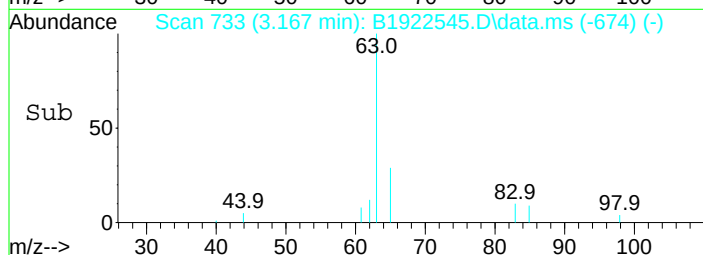
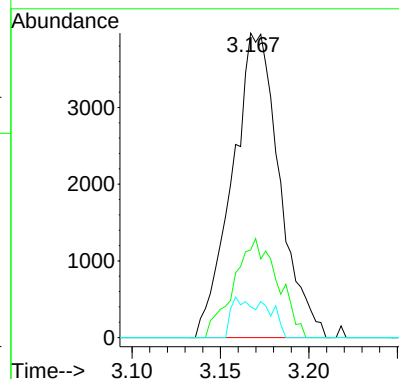
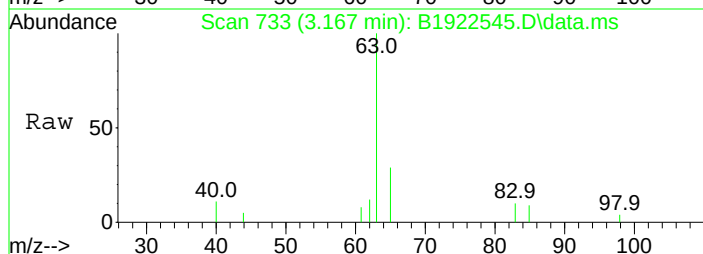
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 Ion Ratio Lower Upper  
 49 100  
 84 50.9 41.1 61.7  
 86 33.0 26.5 39.7





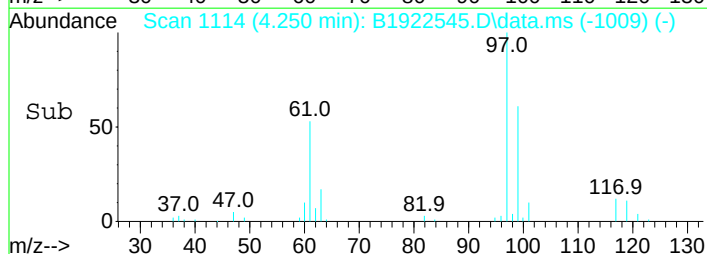
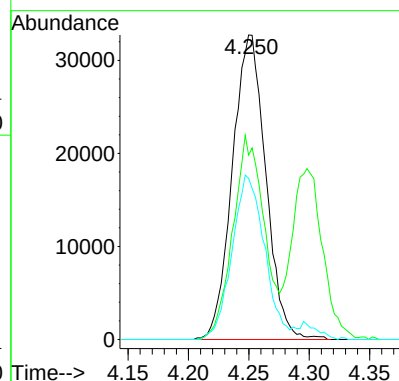
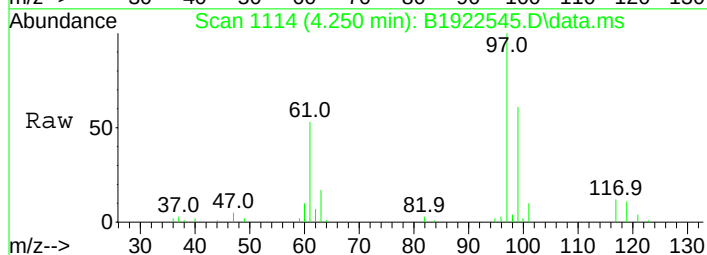
#25  
 1,1-DICHLOROETHANE  
 Concen: 3.36 UG/L  
 RT: 3.167 min Scan# 733  
 Delta R.T. -0.003 min  
 Lab File: B1922545.D  
 Acq: 14 Aug 2019 5:13 am

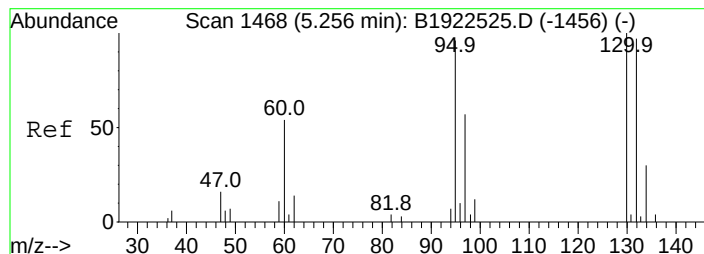
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 63      | 100   |       |       |
| 65      | 30.2  | 24.0  | 36.0  |
| 83      | 10.0  | 9.8   | 14.6  |



#37  
 1,1,1-TRICHLOROETHANE  
 Concen: 35.96 UG/L  
 RT: 4.250 min Scan# 1114  
 Delta R.T. -0.000 min  
 Lab File: B1922545.D  
 Acq: 14 Aug 2019 5:13 am

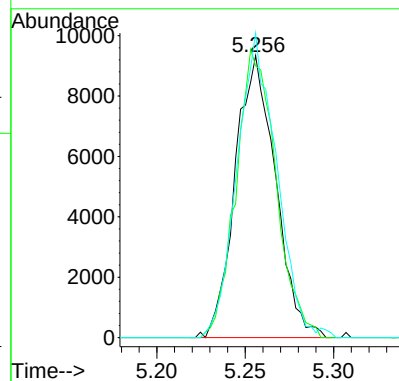
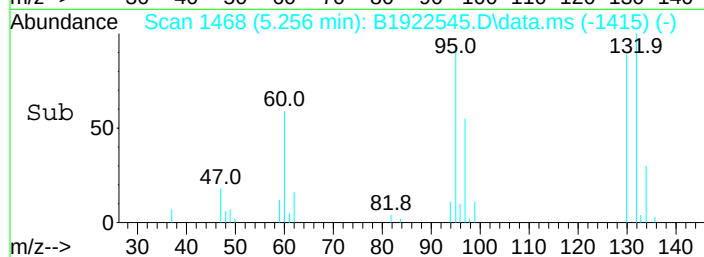
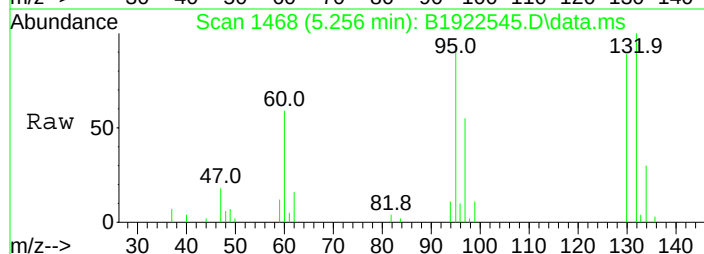
| Tgt Ion | Ratio | Lower | Upper |
|---------|-------|-------|-------|
| 97      | 100   |       |       |
| 99      | 62.8  | 50.8  | 76.2  |
| 61      | 52.9  | 45.1  | 67.7  |





#47  
TRICHLOROETHENE  
Concen: 15.29 UG/L  
RT: 5.256 min Scan# 1468  
Delta R.T. -0.000 min  
Lab File: B1922545.D  
Acq: 14 Aug 2019 5:13 am

| Tgt Ion:  | 95    | Resp: | 14797 |
|-----------|-------|-------|-------|
| Ion Ratio | Lower | Upper |       |
| 95        | 100   |       |       |
| 130       | 100.9 | 79.8  | 119.6 |
| 132       | 106.1 | 80.6  | 121.0 |

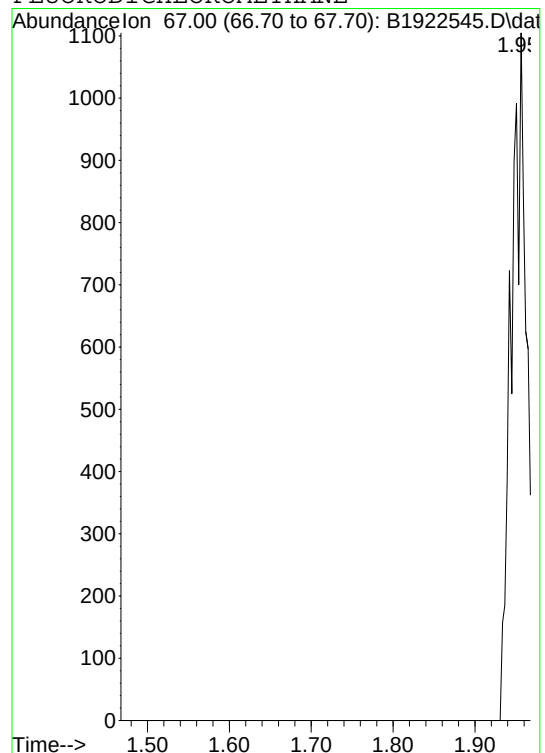




Data Path : Y:\1\DATA\B081319\  
Data File : B1922545.D  
Acq On : 14 Aug 2019 5:13 am  
Operator :  
Sample : 19H0576-06 @ 50X (TICs)  
Misc : 50

Quant Time : Wed Aug 14 11:30:32 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
FLUORODICHLOROMETHANE



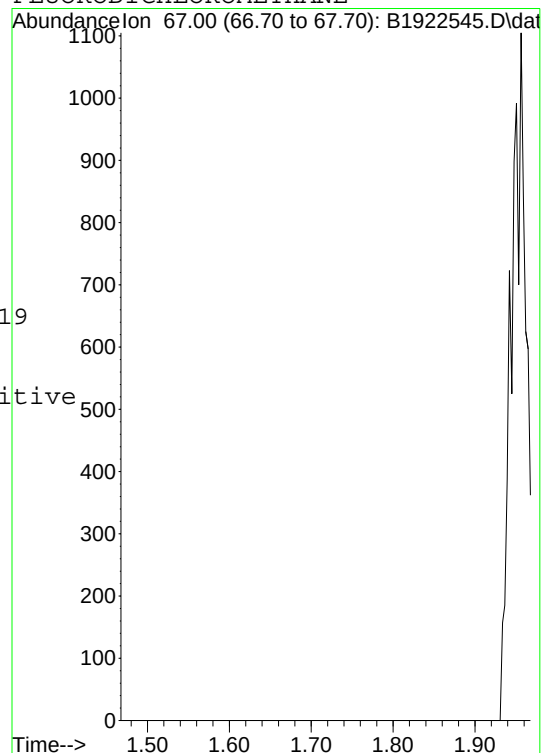
Original Int. Results

-----  
RT : 1.96  
Area : 1517  
Amount: 0.734806

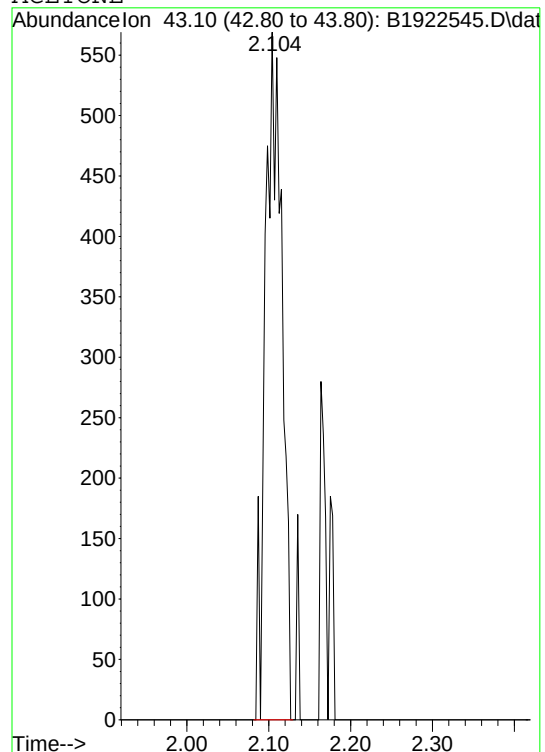
Manual Int. Results

-----  
Wed Aug 14 11:30:09 2019  
MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
FLUORODICHLOROMETHANE



Original Integration  
ACETONE



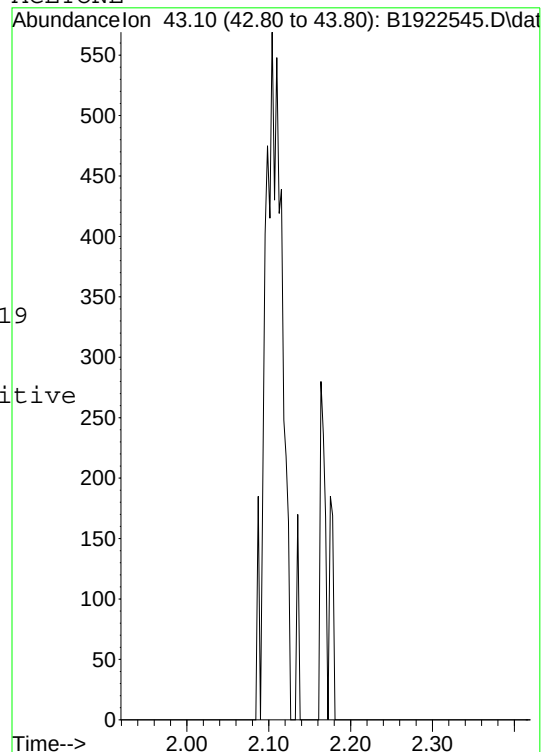
Original Int. Results

-----  
RT : 2.10  
Area : 804  
Amount: 1.60966

Manual Int. Results

-----  
Wed Aug 14 11:30:11 2019  
MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
ACETONE



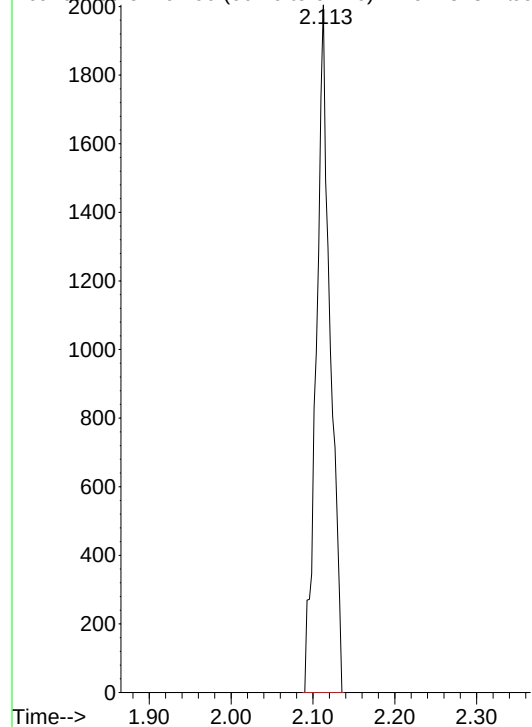
Data Path : Y:\1\DATA\B081319\  
Data File : B1922545.D  
Acq On : 14 Aug 2019 5:13 am  
Operator :  
Sample : 19H0576-06 @ 50X (TICs)  
Misc : 50

Quant Time : Wed Aug 14 11:30:32 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

1,1-DICHLOROETHENE

Abundance on 61.00 (60.70 to 61.70): B1922545.D\data



## Original Int. Results

-----

RT : 2.11  
Area : 2356  
Amount: 1.28673

## Manual Int. Results

-----

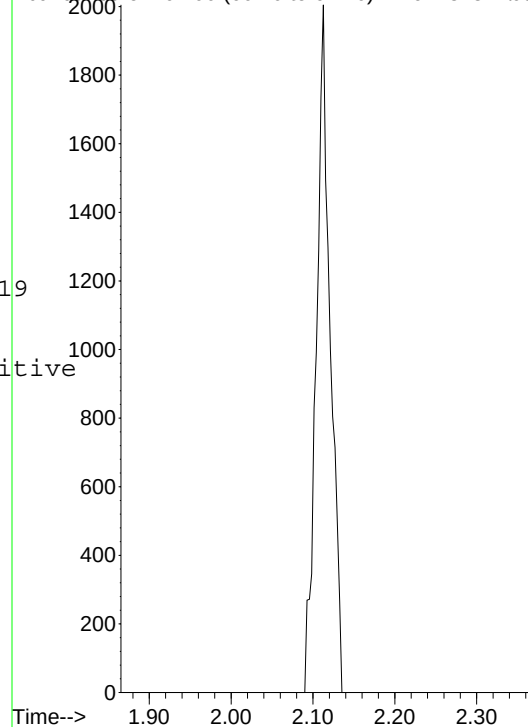
Wed Aug 14 11:30:14 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

1,1-DICHLOROETHENE

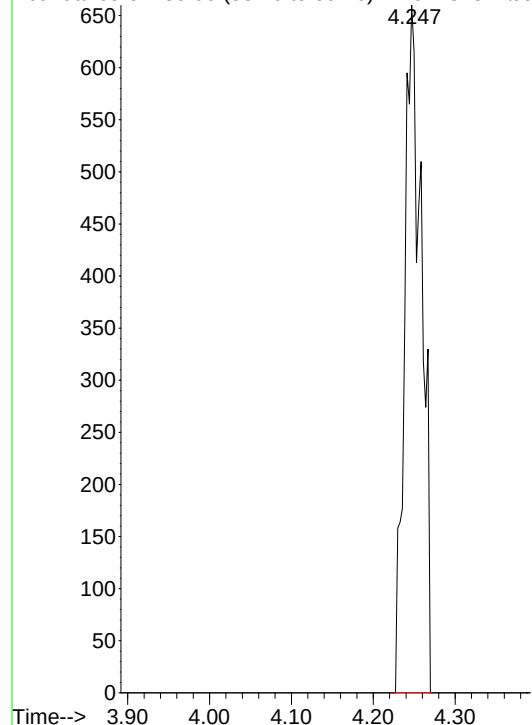
Abundance on 61.00 (60.70 to 61.70): B1922545.D\data



## Original Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922545.D\data



## Original Int. Results

-----

RT : 4.25  
Area : 955  
Amount: 0.863433

## Manual Int. Results

-----

Wed Aug 14 11:30:21 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922545.D\data



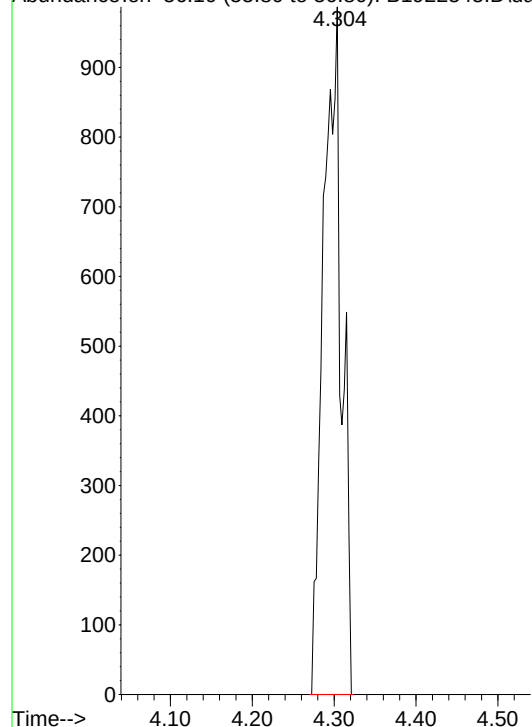
Data Path : Y:\1\DATA\B081319\  
Data File : B1922545.D  
Acq On : 14 Aug 2019 5:13 am  
Operator :  
Sample : 19H0576-06 @ 50X (TICs)  
Misc : 50

Quant Time : Wed Aug 14 11:30:32 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922545.D\data



## Original Int. Results

-----

RT : 4.30  
Area : 1524  
Amount: 0.667738

## Manual Int. Results

-----

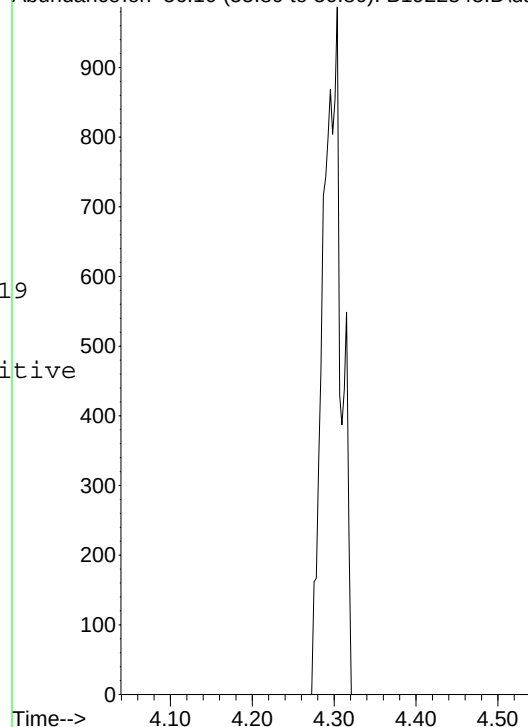
Wed Aug 14 11:30:24 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CYCLOHEXANE

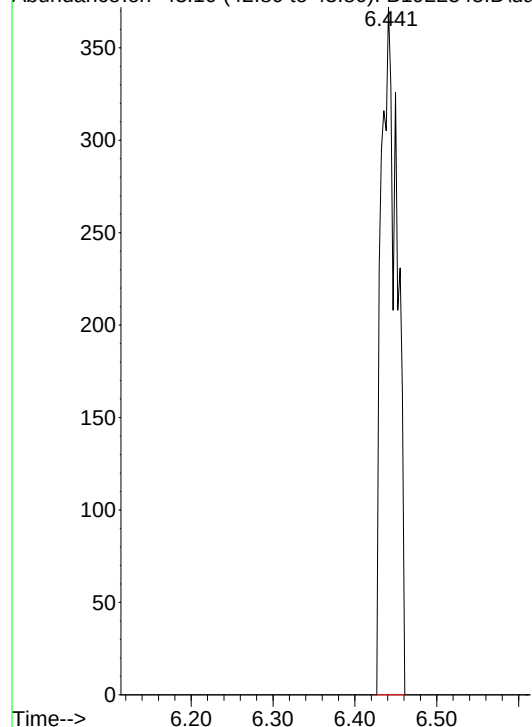
Abundance on 56.10 (55.80 to 56.80): B1922545.D\data



## Original Integration

MIBK

Abundance on 43.10 (42.80 to 43.80): B1922545.D\data



## Original Int. Results

-----

RT : 6.44  
Area : 509  
Amount: 0.371093

## Manual Int. Results

-----

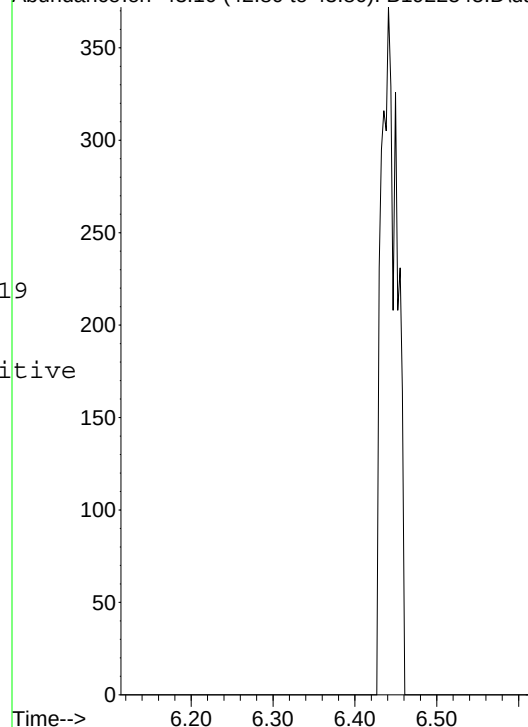
Wed Aug 14 11:30:28 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

MIBK

Abundance on 43.10 (42.80 to 43.80): B1922545.D\data



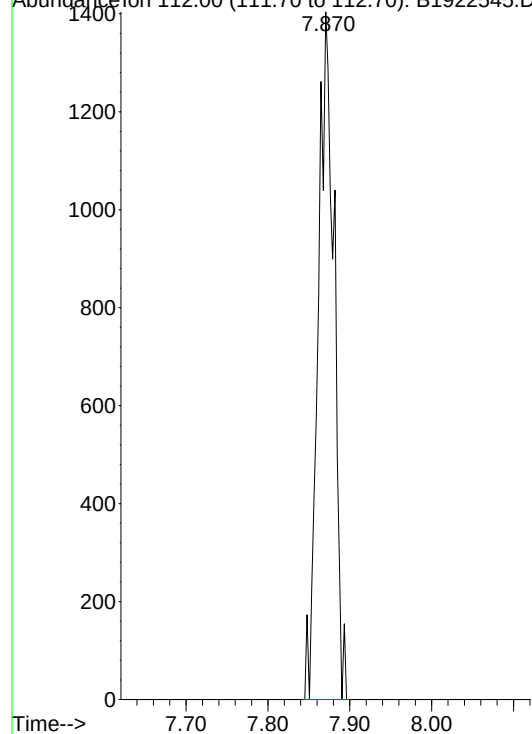
Data Path : Y:\1\DATA\B081319\  
Data File : B1922545.D  
Acq On : 14 Aug 2019 5:13 am  
Operator :  
Sample : 19H0576-06 @ 50X (TICs)  
Misc : 50

Quant Time : Wed Aug 14 11:30:32 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CHLOROBENZENE

Abundance on 112.00 (111.70 to 112.70): B1922545.D



## Original Int. Results

-----

RT : 7.87  
Area : 1889  
Amount: 0.630685

## Manual Int. Results

-----

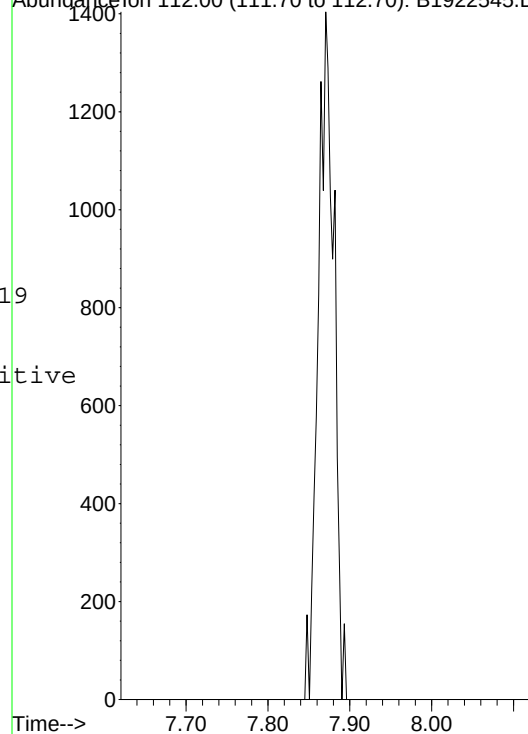
Wed Aug 14 11:30:31 2019

MIuser: BRF  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CHLOROBENZENE

Abundance on 112.00 (111.70 to 112.70): B1922545.D



Data Path : Y:\1\DATA\B081319\  
 Data File : B1922545.D  
 Acq On : 14 Aug 2019 5:13 am  
 Operator :  
 Sample : 19H0576-06 @ 50X (TICs)  
 Misc : 50  
 ALS Vial : 45 Sample Multiplier: 1

Integration Parameters: 8260LOW.P  
 Integrator: RTE  
 Smoothing : OFF  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0  
 Filtering: 5  
 Min Area: 1 % of largest Peak  
 Max Peaks: 100  
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Y:\1\METHODS\B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973

Signal : TIC: B1922545.D\data.ms

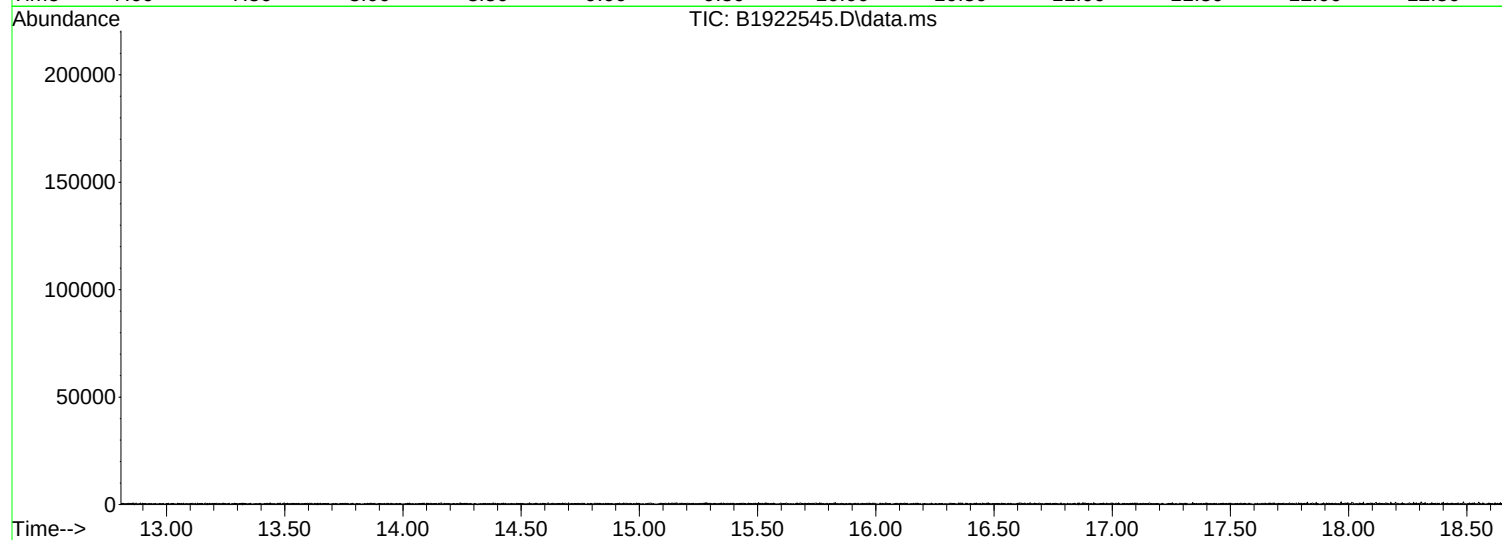
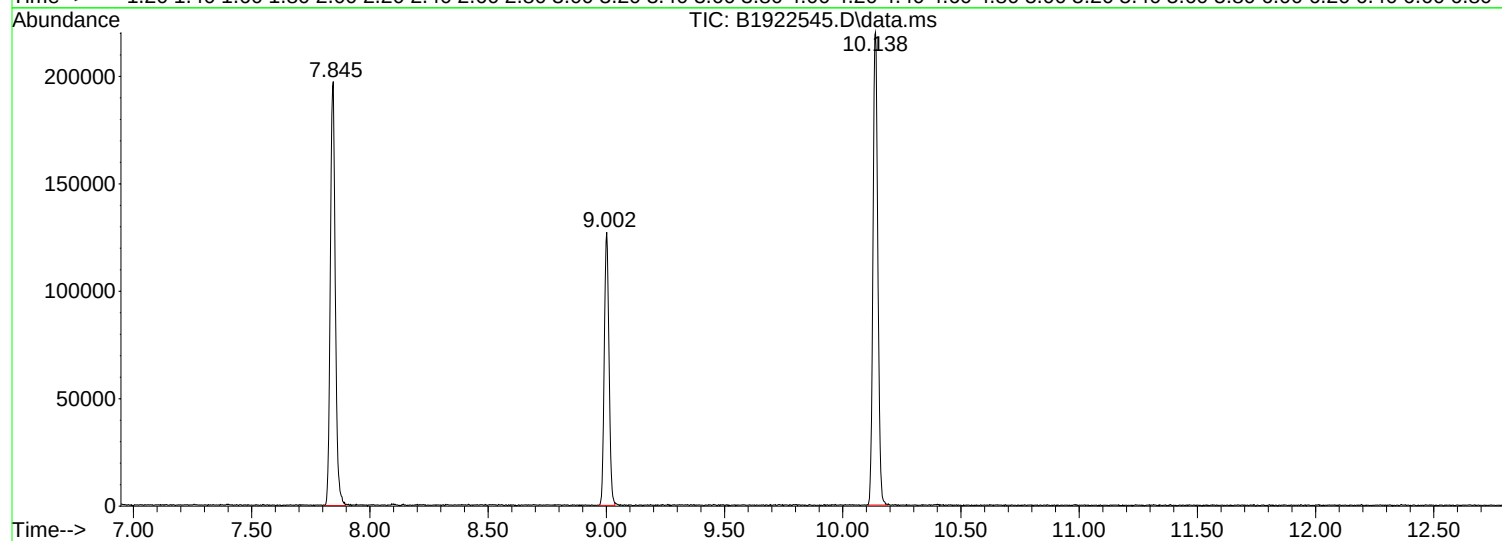
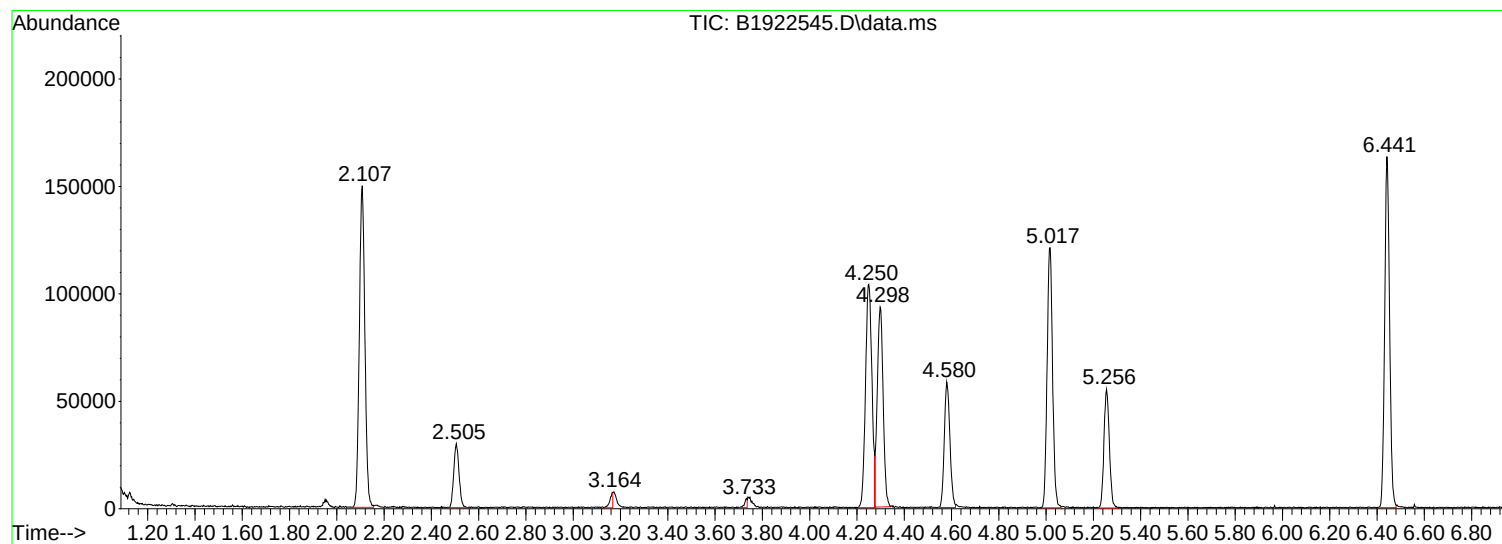
| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 2.107       | 345           | 360         | 377          | rBV      | 149677         | 243699        | 77.44%          | 11.885%       |
| 2         | 2.505       | 489           | 500         | 518          | rVB2     | 29759          | 46333         | 14.72%          | 2.260%        |
| 3         | 3.164       | 720           | 732         | 733          | rBV3     | 7199           | 6474          | 2.06%           | 0.316%        |
| 4         | 3.733       | 921           | 932         | 933          | rBV2     | 4303           | 3392          | 1.08%           | 0.165%        |
| 5         | 4.250       | 1098          | 1114        | 1123         | rBV2     | 103849         | 197944        | 62.90%          | 9.653%        |
| 6         | 4.298       | 1123          | 1131        | 1146         | rVB3     | 92887          | 159187        | 50.59%          | 7.763%        |
| 7         | 4.580       | 1217          | 1230        | 1243         | rBV2     | 58474          | 95976         | 30.50%          | 4.681%        |
| 8         | 5.017       | 1371          | 1384        | 1400         | rBV3     | 120971         | 192934        | 61.31%          | 9.409%        |
| 9         | 5.256       | 1456          | 1468        | 1485         | rVB2     | 55241          | 87634         | 27.85%          | 4.274%        |
| 10        | 6.441       | 1872          | 1885        | 1899         | rBV2     | 163372         | 236588        | 75.18%          | 11.538%       |
| 11        | 7.845       | 2366          | 2379        | 2397         | rBV      | 197355         | 290551        | 92.33%          | 14.169%       |
| 12        | 9.002       | 2774          | 2786        | 2798         | rBV2     | 127175         | 175145        | 55.66%          | 8.541%        |
| 13        | 10.138      | 3175          | 3186        | 3204         | rBV      | 220062         | 314689        | 100.00%         | 15.347%       |

Sum of corrected areas: 2050546

Data Path : Y:\1\DATA\B081319\  
Data File : B1922545.D  
Acq On : 14 Aug 2019 5:13 am  
Operator :  
Sample : 19H0576-06 @ 50X (TICs)  
Misc : 50  
ALS Vial : 45 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P



Data Path : Y:\1\DATA\B081319\  
Data File : B1922545.D  
Acq On : 14 Aug 2019 5:13 am  
Operator :  
Sample : 19H0576-06 @ 50X (TICs)  
Misc : 50  
ALS Vial : 45 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

\*\*\*\*\*

Data Path : Y:\1\DATA\B081319\  
Data File : B1922545.D  
Acq On : 14 Aug 2019 5:13 am  
Operator :  
Sample : 19H0576-06 @ 50X (TICs)  
Misc : 50  
ALS Vial : 45 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

| TIC Top Hit name | RT | EstConc | Units | Response | --Internal Standard-- |
|------------------|----|---------|-------|----------|-----------------------|
|                  |    |         |       |          | # RT Resp Conc        |

---



**QC DATA**

**2 - FORM II**  
**SYSTEM MONITORING COMPOUND SUMMARY**  
**SW-846 8260C**

142

|             |                                |             |                       |
|-------------|--------------------------------|-------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | SDG:        | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:    | Farrand Controls Site |
| Matrix:     | Water                          | Instrument: | GCMSVOA2              |

|              | 1,2-DCA-d4<br>(70% - 130%) | BFB<br>(70% - 130%) | TOL-d8<br>(70% - 130%) |
|--------------|----------------------------|---------------------|------------------------|
| 19H0576-01   | 102                        | 99.6                | 112                    |
| 19H0576-02   | 113                        | 99.0                | 116                    |
| 19H0576-03   | 109                        | 98.3                | 109                    |
| 19H0576-04   | 109                        | 99.2                | 113                    |
| 19H0576-05   | 112                        | 97.0                | 114                    |
| 19H0576-06   | 108                        | 95.3                | 110                    |
| B237875-BLK1 | 110                        | 98.1                | 111                    |
| B237875-BS1  | 104                        | 108                 | 105                    |
| B237875-BSD1 | 105                        | 107                 | 108                    |

## LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Matrix: Water

Preparation: SW-846 5030B

Batch: B237875

Laboratory ID: B237875-BS1

Column:

Initial/Final: 5 mL / 5 mL

| ANALYTE                            | SPIKE<br>ADDED<br>(µg/L) | LCS<br>CONCENTRATION<br>(µg/L) | LCS<br>%<br>REC. | QC<br>LIMITS<br>REC. |
|------------------------------------|--------------------------|--------------------------------|------------------|----------------------|
| Acetone                            | 100                      | 97.2                           | 97.2             | 70 - 160             |
| Acrylonitrile                      | 10.0                     | 10.9                           | 109              | 70 - 130             |
| tert-Amyl Methyl Ether (TAME)      | 10.0                     | 9.42                           | 94.2             | 70 - 130             |
| Benzene                            | 10.0                     | 9.65                           | 96.5             | 70 - 130             |
| Bromobenzene                       | 10.0                     | 11.0                           | 110              | 70 - 130             |
| Bromochloromethane                 | 10.0                     | 11.7                           | 117              | 70 - 130             |
| Bromodichloromethane               | 10.0                     | 10.9                           | 109              | 70 - 130             |
| Bromoform                          | 10.0                     | 10.6                           | 106              | 70 - 130             |
| Bromomethane                       | 10.0                     | 4.40                           | 44.0             | 40 - 160             |
| 2-Butanone (MEK)                   | 100                      | 101                            | 101              | 40 - 160             |
| tert-Butyl Alcohol (TBA)           | 100                      | 112                            | 112              | 40 - 160             |
| n-Butylbenzene                     | 10.0                     | 8.39                           | 83.9             | 70 - 130             |
| sec-Butylbenzene                   | 10.0                     | 9.13                           | 91.3             | 70 - 130             |
| tert-Butylbenzene                  | 10.0                     | 9.92                           | 99.2             | 70 - 130             |
| tert-Butyl Ethyl Ether (TBEE)      | 10.0                     | 10.1                           | 101              | 70 - 130             |
| Carbon Disulfide                   | 10.0                     | 10.2                           | 102              | 70 - 130             |
| Carbon Tetrachloride               | 10.0                     | 11.5                           | 115              | 70 - 130             |
| Chlorobenzene                      | 10.0                     | 10.4                           | 104              | 70 - 130             |
| Chlorodibromomethane               | 10.0                     | 12.1                           | 121              | 70 - 130             |
| Chloroethane                       | 10.0                     | 10.0                           | 100              | 70 - 130             |
| Chloroform                         | 10.0                     | 10.2                           | 102              | 70 - 130             |
| Chloromethane                      | 10.0                     | 6.36                           | 63.6             | 40 - 160             |
| 2-Chlorotoluene                    | 10.0                     | 9.95                           | 99.5             | 70 - 130             |
| 4-Chlorotoluene                    | 10.0                     | 9.78                           | 97.8             | 70 - 130             |
| 1,2-Dibromo-3-chloropropane (DBCP) | 10.0                     | 11.6                           | 116              | 70 - 130             |
| 1,2-Dibromoethane (EDB)            | 10.0                     | 10.7                           | 107              | 70 - 130             |
| Dibromomethane                     | 10.0                     | 11.6                           | 116              | 70 - 130             |
| 1,2-Dichlorobenzene                | 10.0                     | 10.5                           | 105              | 70 - 130             |
| 1,3-Dichlorobenzene                | 10.0                     | 10.4                           | 104              | 70 - 130             |
| 1,4-Dichlorobenzene                | 10.0                     | 10.0                           | 100              | 70 - 130             |
| trans-1,4-Dichloro-2-butene        | 10.0                     | 10.8                           | 108              | 70 - 130             |
| Dichlorodifluoromethane (Freon 12) | 10.0                     | 10.0                           | 100              | 40 - 160             |
| 1,1-Dichloroethane                 | 10.0                     | 10.6                           | 106              | 70 - 130             |
| 1,2-Dichloroethane                 | 10.0                     | 12.1                           | 121              | 70 - 130             |
| 1,1-Dichloroethylene               | 10.0                     | 10.2                           | 102              | 70 - 130             |
| cis-1,2-Dichloroethylene           | 10.0                     | 10.4                           | 104              | 70 - 130             |
| trans-1,2-Dichloroethylene         | 10.0                     | 11.0                           | 110              | 70 - 130             |

## LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Matrix: Water

Preparation: SW-846 5030B

Batch: B237875

Laboratory ID: B237875-BS1

Column:

Initial/Final: 5 mL / 5 mL

| ANALYTE                                           | SPIKE<br>ADDED<br>(µg/L) | LCS<br>CONCENTRATION<br>(µg/L) | LCS<br>%<br>REC. | QC<br>LIMITS<br>REC. |
|---------------------------------------------------|--------------------------|--------------------------------|------------------|----------------------|
| 1,2-Dichloropropane                               | 10.0                     | 10.6                           | 106              | 70 - 130             |
| 1,3-Dichloropropane                               | 10.0                     | 10.3                           | 103              | 70 - 130             |
| 2,2-Dichloropropane                               | 10.0                     | 10.1                           | 101              | 40 - 130             |
| 1,1-Dichloropropene                               | 10.0                     | 9.64                           | 96.4             | 70 - 130             |
| cis-1,3-Dichloropropene                           | 10.0                     | 9.93                           | 99.3             | 70 - 130             |
| trans-1,3-Dichloropropene                         | 10.0                     | 10.1                           | 101              | 70 - 130             |
| Diethyl Ether                                     | 10.0                     | 9.39                           | 93.9             | 70 - 130             |
| Diisopropyl Ether (DIPE)                          | 10.0                     | 9.84                           | 98.4             | 70 - 130             |
| 1,4-Dioxane                                       | 100                      | 122                            | 122              | 40 - 130             |
| Ethylbenzene                                      | 10.0                     | 10.1                           | 101              | 70 - 130             |
| Hexachlorobutadiene                               | 10.0                     | 12.2                           | 122              | 70 - 130             |
| 2-Hexanone (MBK)                                  | 100                      | 111                            | 111              | 70 - 160             |
| Isopropylbenzene (Cumene)                         | 10.0                     | 10.8                           | 108              | 70 - 130             |
| p-Isopropyltoluene (p-Cymene)                     | 10.0                     | 9.98                           | 99.8             | 70 - 130             |
| Methyl Acetate                                    | 10.0                     | 9.47                           | 94.7             | 70 - 130             |
| Methyl tert-Butyl Ether (MTBE)                    | 10.0                     | 10.0                           | 100              | 70 - 130             |
| Methyl Cyclohexane                                | 10.0                     | 9.26                           | 92.6             | 70 - 130             |
| Methylene Chloride                                | 10.0                     | 10.1                           | 101              | 70 - 130             |
| 4-Methyl-2-pentanone (MIBK)                       | 100                      | 111                            | 111              | 70 - 160             |
| Naphthalene                                       | 10.0                     | 11.3                           | 113              | 40 - 130             |
| n-Propylbenzene                                   | 10.0                     | 9.26                           | 92.6             | 70 - 130             |
| Styrene                                           | 10.0                     | 10.2                           | 102              | 70 - 130             |
| 1,1,1,2-Tetrachloroethane                         | 10.0                     | 11.4                           | 114              | 70 - 130             |
| 1,1,2,2-Tetrachloroethane                         | 10.0                     | 10.4                           | 104              | 70 - 130             |
| Tetrachloroethylene                               | 10.0                     | 12.0                           | 120              | 70 - 130             |
| Tetrahydrofuran                                   | 10.0                     | 9.65                           | 96.5             | 70 - 130             |
| Toluene                                           | 10.0                     | 10.1                           | 101              | 70 - 130             |
| 1,2,3-Trichlorobenzene                            | 10.0                     | 11.3                           | 113              | 70 - 130             |
| 1,2,4-Trichlorobenzene                            | 10.0                     | 10.4                           | 104              | 70 - 130             |
| 1,3,5-Trichlorobenzene                            | 10.0                     | 10.3                           | 103              | 70 - 130             |
| 1,1,1-Trichloroethane                             | 10.0                     | 10.7                           | 107              | 70 - 130             |
| 1,1,2-Trichloroethane                             | 10.0                     | 10.5                           | 105              | 70 - 130             |
| Trichloroethylene                                 | 10.0                     | 10.9                           | 109              | 70 - 130             |
| Trichlorofluoromethane (Freon 11)                 | 10.0                     | 10.1                           | 101              | 70 - 130             |
| 1,2,3-Trichloropropane                            | 10.0                     | 10.9                           | 109              | 70 - 130             |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.0                     | 10.8                           | 108              | 70 - 130             |

## LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Matrix: Water

Preparation: SW-846 5030B

Batch: B237875

Laboratory ID: B237875-BS1

Column:

Initial/Final: 5 mL / 5 mL

| ANALYTE                | SPIKE<br>ADDED<br>(µg/L) | LCS<br>CONCENTRATION<br>(µg/L) | LCS<br>%<br>REC. | QC<br>LIMITS<br>REC. |
|------------------------|--------------------------|--------------------------------|------------------|----------------------|
| 1,2,4-Trimethylbenzene | 10.0                     | 9.39                           | 93.9             | 70 - 130             |
| 1,3,5-Trimethylbenzene | 10.0                     | 10.5                           | 105              | 70 - 130             |
| Vinyl Chloride         | 10.0                     | 9.02                           | 90.2             | 40 - 160             |
| m+p Xylene             | 20.0                     | 19.8                           | 99.0             | 70 - 130             |
| o-Xylene               | 10.0                     | 9.88                           | 98.8             | 70 - 130             |

| ANALYTE                               | SPIKE<br>ADDED<br>(µg/L) | LCSD<br>CONCENTRATION<br>(µg/L) | LCSD<br>%<br>REC. # | %<br>RPD # | QC LIMITS<br>RPD | REC.     |
|---------------------------------------|--------------------------|---------------------------------|---------------------|------------|------------------|----------|
| Acetone                               | 100                      | 93.9                            | 93.9                | 3.47       | 25               | 70 - 160 |
| Acrylonitrile                         | 10.0                     | 11.0                            | 110                 | 0.912      | 25               | 70 - 130 |
| tert-Amyl Methyl Ether (TAME)         | 10.0                     | 9.02                            | 90.2                | 4.34       | 25               | 70 - 130 |
| Benzene                               | 10.0                     | 9.30                            | 93.0                | 3.69       | 25               | 70 - 130 |
| Bromobenzene                          | 10.0                     | 10.5                            | 105                 | 5.12       | 25               | 70 - 130 |
| Bromochloromethane                    | 10.0                     | 11.0                            | 110                 | 5.90       | 25               | 70 - 130 |
| Bromodichloromethane                  | 10.0                     | 11.0                            | 110                 | 0.274      | 25               | 70 - 130 |
| Bromoform                             | 10.0                     | 10.1                            | 101                 | 5.00       | 25               | 70 - 130 |
| Bromomethane                          | 10.0                     | 4.71                            | 47.1                | 6.81       | 25               | 40 - 160 |
| 2-Butanone (MEK)                      | 100                      | 98.8                            | 98.8                | 2.36       | 25               | 40 - 160 |
| tert-Butyl Alcohol (TBA)              | 100                      | 109                             | 109                 | 2.30       | 25               | 40 - 160 |
| n-Butylbenzene                        | 10.0                     | 8.41                            | 84.1                | 0.238      | 25               | 70 - 130 |
| sec-Butylbenzene                      | 10.0                     | 9.08                            | 90.8                | 0.549      | 25               | 70 - 130 |
| tert-Butylbenzene                     | 10.0                     | 9.79                            | 97.9                | 1.32       | 25               | 70 - 130 |
| tert-Butyl Ethyl Ether (TBEE)         | 10.0                     | 9.89                            | 98.9                | 2.10       | 25               | 70 - 130 |
| Carbon Disulfide                      | 10.0                     | 9.92                            | 99.2                | 2.59       | 25               | 70 - 130 |
| Carbon Tetrachloride                  | 10.0                     | 11.1                            | 111                 | 3.90       | 25               | 70 - 130 |
| Chlorobenzene                         | 10.0                     | 10.4                            | 104                 | 0.865      | 25               | 70 - 130 |
| Chlorodibromomethane                  | 10.0                     | 12.3                            | 123                 | 1.23       | 25               | 70 - 130 |
| Chloroethane                          | 10.0                     | 9.93                            | 99.3                | 0.802      | 25               | 70 - 130 |
| Chloroform                            | 10.0                     | 10.2                            | 102                 | 0.0982     | 25               | 70 - 130 |
| Chloromethane                         | 10.0                     | 6.25                            | 62.5                | 1.74       | 25               | 40 - 160 |
| 2-Chlorotoluene                       | 10.0                     | 10.2                            | 102                 | 2.68       | 25               | 70 - 130 |
| 4-Chlorotoluene                       | 10.0                     | 9.82                            | 98.2                | 0.408      | 25               | 70 - 130 |
| 1,2-Dibromo-3-chloropropane<br>(DBCP) | 10.0                     | 11.7                            | 117                 | 1.46       | 25               | 70 - 130 |
| 1,2-Dibromoethane (EDB)               | 10.0                     | 10.8                            | 108                 | 1.02       | 25               | 70 - 130 |
| Dibromomethane                        | 10.0                     | 11.6                            | 116                 | 0.00       | 25               | 70 - 130 |

## LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Matrix: Water

Preparation: SW-846 5030B

Batch: B237875

Laboratory ID: B237875-BSD1

Column:

Initial/Final: 5 mL / 5 mL

| ANALYTE                            | SPIKE<br>ADDED<br>(µg/L) | LCSD<br>CONCENTRATION<br>(µg/L) | LCSD<br>%<br>REC. # | %<br>RPD # | QC LIMITS |          |
|------------------------------------|--------------------------|---------------------------------|---------------------|------------|-----------|----------|
|                                    |                          |                                 |                     |            | RPD       | REC.     |
| 1,2-Dichlorobenzene                | 10.0                     | 10.4                            | 104                 | 1.53       | 25        | 70 - 130 |
| 1,3-Dichlorobenzene                | 10.0                     | 10.2                            | 102                 | 1.94       | 25        | 70 - 130 |
| 1,4-Dichlorobenzene                | 10.0                     | 10.3                            | 103                 | 2.75       | 25        | 70 - 130 |
| trans-1,4-Dichloro-2-butene        | 10.0                     | 10.3                            | 103                 | 4.66       | 25        | 70 - 130 |
| Dichlorodifluoromethane (Freon 12) | 10.0                     | 10.1                            | 101                 | 1.09       | 25        | 40 - 160 |
| 1,1-Dichloroethane                 | 10.0                     | 10.7                            | 107                 | 0.282      | 25        | 70 - 130 |
| 1,2-Dichloroethane                 | 10.0                     | 12.2                            | 122                 | 0.493      | 25        | 70 - 130 |
| 1,1-Dichloroethylene               | 10.0                     | 9.97                            | 99.7                | 2.08       | 25        | 70 - 130 |
| cis-1,2-Dichloroethylene           | 10.0                     | 10.3                            | 103                 | 0.867      | 25        | 70 - 130 |
| trans-1,2-Dichloroethylene         | 10.0                     | 11.0                            | 110                 | 0.909      | 25        | 70 - 130 |
| 1,2-Dichloropropane                | 10.0                     | 10.9                            | 109                 | 2.79       | 25        | 70 - 130 |
| 1,3-Dichloropropane                | 10.0                     | 10.3                            | 103                 | 0.777      | 25        | 70 - 130 |
| 2,2-Dichloropropane                | 10.0                     | 9.72                            | 97.2                | 3.64       | 25        | 40 - 130 |
| 1,1-Dichloropropene                | 10.0                     | 9.92                            | 99.2                | 2.86       | 25        | 70 - 130 |
| cis-1,3-Dichloropropene            | 10.0                     | 9.93                            | 99.3                | 0.00       | 25        | 70 - 130 |
| trans-1,3-Dichloropropene          | 10.0                     | 10.3                            | 103                 | 1.77       | 25        | 70 - 130 |
| Diethyl Ether                      | 10.0                     | 9.29                            | 92.9                | 1.07       | 25        | 70 - 130 |
| Diisopropyl Ether (DIPE)           | 10.0                     | 9.82                            | 98.2                | 0.203      | 25        | 70 - 130 |
| 1,4-Dioxane                        | 100                      | 127                             | 127                 | 3.55       | 50        | 40 - 130 |
| Ethylbenzene                       | 10.0                     | 9.94                            | 99.4                | 1.50       | 25        | 70 - 130 |
| Hexachlorobutadiene                | 10.0                     | 11.6                            | 116                 | 4.70       | 25        | 70 - 130 |
| 2-Hexanone (MBK)                   | 100                      | 112                             | 112                 | 0.876      | 25        | 70 - 160 |
| Isopropylbenzene (Cumene)          | 10.0                     | 10.8                            | 108                 | 0.185      | 25        | 70 - 130 |
| p-Isopropyltoluene (p-Cymene)      | 10.0                     | 9.88                            | 98.8                | 1.01       | 25        | 70 - 130 |
| Methyl Acetate                     | 10.0                     | 9.16                            | 91.6                | 3.33       | 25        | 70 - 130 |
| Methyl tert-Butyl Ether (MTBE)     | 10.0                     | 9.98                            | 99.8                | 0.699      | 25        | 70 - 130 |
| Methyl Cyclohexane                 | 10.0                     | 9.20                            | 92.0                | 0.650      | 25        | 70 - 130 |
| Methylene Chloride                 | 10.0                     | 9.73                            | 97.3                | 3.63       | 25        | 70 - 130 |
| 4-Methyl-2-pentanone (MIBK)        | 100                      | 111                             | 111                 | 0.207      | 25        | 70 - 160 |
| Naphthalene                        | 10.0                     | 11.2                            | 112                 | 0.887      | 25        | 40 - 130 |
| n-Propylbenzene                    | 10.0                     | 9.27                            | 92.7                | 0.108      | 25        | 70 - 130 |
| Styrene                            | 10.0                     | 10.2                            | 102                 | 0.293      | 25        | 70 - 130 |
| 1,1,1,2-Tetrachloroethane          | 10.0                     | 11.2                            | 112                 | 1.86       | 25        | 70 - 130 |
| 1,1,2,2-Tetrachloroethane          | 10.0                     | 10.3                            | 103                 | 0.776      | 25        | 70 - 130 |
| Tetrachloroethylene                | 10.0                     | 11.5                            | 115                 | 3.49       | 25        | 70 - 130 |
| Tetrahydrofuran                    | 10.0                     | 9.42                            | 94.2                | 2.41       | 25        | 70 - 130 |

## LCS / LCS DUPLICATE RECOVERY

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Matrix: Water

Preparation: SW-846 5030B

Batch: B237875

Laboratory ID: B237875-BSD1

Column:

Initial/Final: 5 mL / 5 mL

| ANALYTE                                           | SPIKE<br>ADDED<br>(µg/L) | LCSD<br>CONCENTRATION<br>(µg/L) | LCSD<br>%<br>REC. # | %<br>RPD # | QC LIMITS |          |
|---------------------------------------------------|--------------------------|---------------------------------|---------------------|------------|-----------|----------|
|                                                   |                          |                                 |                     |            | RPD       | REC.     |
| Toluene                                           | 10.0                     | 10.1                            | 101                 | 0.00       | 25        | 70 - 130 |
| 1,2,3-Trichlorobenzene                            | 10.0                     | 11.4                            | 114                 | 1.23       | 25        | 70 - 130 |
| 1,2,4-Trichlorobenzene                            | 10.0                     | 10.5                            | 105                 | 0.191      | 25        | 70 - 130 |
| 1,3,5-Trichlorobenzene                            | 10.0                     | 10.4                            | 104                 | 0.873      | 25        | 70 - 130 |
| 1,1,1-Trichloroethane                             | 10.0                     | 10.8                            | 108                 | 0.747      | 25        | 70 - 130 |
| 1,1,2-Trichloroethane                             | 10.0                     | 10.6                            | 106                 | 0.944      | 25        | 70 - 130 |
| Trichloroethylene                                 | 10.0                     | 11.0                            | 110                 | 1.46       | 25        | 70 - 130 |
| Trichlorofluoromethane (Freon 11)                 | 10.0                     | 9.73                            | 97.3                | 4.03       | 25        | 70 - 130 |
| 1,2,3-Trichloropropane                            | 10.0                     | 11.0                            | 110                 | 1.00       | 25        | 70 - 130 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.0                     | 10.9                            | 109                 | 0.184      | 25        | 70 - 130 |
| 1,2,4-Trimethylbenzene                            | 10.0                     | 9.59                            | 95.9                | 2.11       | 25        | 70 - 130 |
| 1,3,5-Trimethylbenzene                            | 10.0                     | 10.1                            | 101                 | 4.07       | 25        | 70 - 130 |
| Vinyl Chloride                                    | 10.0                     | 8.74                            | 87.4                | 3.15       | 25        | 40 - 160 |
| m+p Xylene                                        | 20.0                     | 19.7                            | 98.6                | 0.456      | 25        | 70 - 130 |
| o-Xylene                                          | 10.0                     | 9.87                            | 98.7                | 0.101      | 25        | 70 - 130 |

**4 - FORM IV**  
**METHOD BLANK SUMMARY**

148

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Blank ID: B237875-BLK1

Batch: B237875

Prepared: 08/13/2019 07:22

| Client Sample ID  | Laboratory Sample ID | Lab File ID | Time Analyzed |
|-------------------|----------------------|-------------|---------------|
| LCS               | B237875-BS1          | B1922527.D  | 19:59         |
| LCS Dup           | B237875-BSD1         | B1922528.D  | 20:30         |
| Trip Blank-8/9/19 | 19H0576-01           | B1922532.D  | 22:33         |
| OC-19S            | 19H0576-04           | B1922541.D  | 03:10         |
| MW-21S            | 19H0576-05           | B1922542.D  | 03:41         |
| OC-19D            | 19H0576-02           | B1922543.D  | 04:11         |
| MW-21R            | 19H0576-03           | B1922544.D  | 04:42         |
| Drum Composite    | 19H0576-06           | B1922545.D  | 05:13         |



# 5 - FORM V

## INSTRUMENT PERFORMANCE CHECK

149

SW-846 8260C

|                                            |                                |
|--------------------------------------------|--------------------------------|
| Laboratory: Con-Test Analytical Laboratory | Work Order: 19H0576            |
| Client: Dvirka And Bartilucci              | Project: Farrand Controls Site |
| Lab File ID: B1922525.D                    | Injection Date: 08/13/19       |
| Instrument ID: GCMSVOA2                    | Injection Time: 18:57          |
| Sequence: S039168                          | Lab Sample ID: S039168-TUN1    |

| m/z | ION ABUNDANCE CRITERIA             | % RELATIVE ABUNDANCE | PASS/FAIL |
|-----|------------------------------------|----------------------|-----------|
| 50  | 15 - 40% of 95                     | 28.9                 | PASS      |
| 75  | 30 - 60% of 95                     | 54.9                 | PASS      |
| 95  | Base peak, 100% relative abundance | 100                  | PASS      |
| 96  | 5 - 9% of 95                       | 6.28                 | PASS      |
| 173 | Less than 2% of 174                | 0                    | PASS      |
| 174 | 50 - 200% of 95                    | 90.1                 | PASS      |
| 175 | 5 - 9% of 174                      | 7.82                 | PASS      |
| 176 | 95 - 101% of 174                   | 95.7                 | PASS      |
| 177 | 5 - 9% of 176                      | 6.94                 | PASS      |

| Client ID         | Sample ID    | File ID    | Date Analyzed | Time Analyzed |
|-------------------|--------------|------------|---------------|---------------|
| Calibration Check | S039168-CCV1 | B1922525.D | 08/13/2019    | 18:57:00      |
| LCS               | B237875-BS1  | B1922527.D | 08/13/2019    | 19:59:00      |
| LCS Dup           | B237875-BSD1 | B1922528.D | 08/13/2019    | 20:30:00      |
| Blank             | B237875-BLK1 | B1922531.D | 08/13/2019    | 22:02:00      |
| Trip Blank-8/9/19 | 19H0576-01   | B1922532.D | 08/13/2019    | 22:33:00      |
| Trip Blank-8/9/19 | 19H0576-01   | B1922532.D | 08/13/2019    | 22:33:00      |
| OC-19S            | 19H0576-04   | B1922541.D | 08/14/2019    | 3:10:00       |
| OC-19S            | 19H0576-04   | B1922541.D | 08/14/2019    | 3:10:00       |
| MW-21S            | 19H0576-05   | B1922542.D | 08/14/2019    | 3:41:00       |
| MW-21S            | 19H0576-05   | B1922542.D | 08/14/2019    | 3:41:00       |
| OC-19D            | 19H0576-02   | B1922543.D | 08/14/2019    | 4:11:00       |
| OC-19D            | 19H0576-02   | B1922543.D | 08/14/2019    | 4:11:00       |
| MW-21R            | 19H0576-03   | B1922544.D | 08/14/2019    | 4:42:00       |
| MW-21R            | 19H0576-03   | B1922544.D | 08/14/2019    | 4:42:00       |
| Drum Composite    | 19H0576-06   | B1922545.D | 08/14/2019    | 5:13:00       |
| Drum Composite    | 19H0576-06   | B1922545.D | 08/14/2019    | 5:13:00       |

Data Path : Y:\1\DATA\B081319\

Data File : B1922525.D

Acq On : 13 Aug 2019 6:57 pm

Operator :

Sample : BFB / 8260 STD 10PPB 1906029

Inst : GCMSVOA2

Misc :

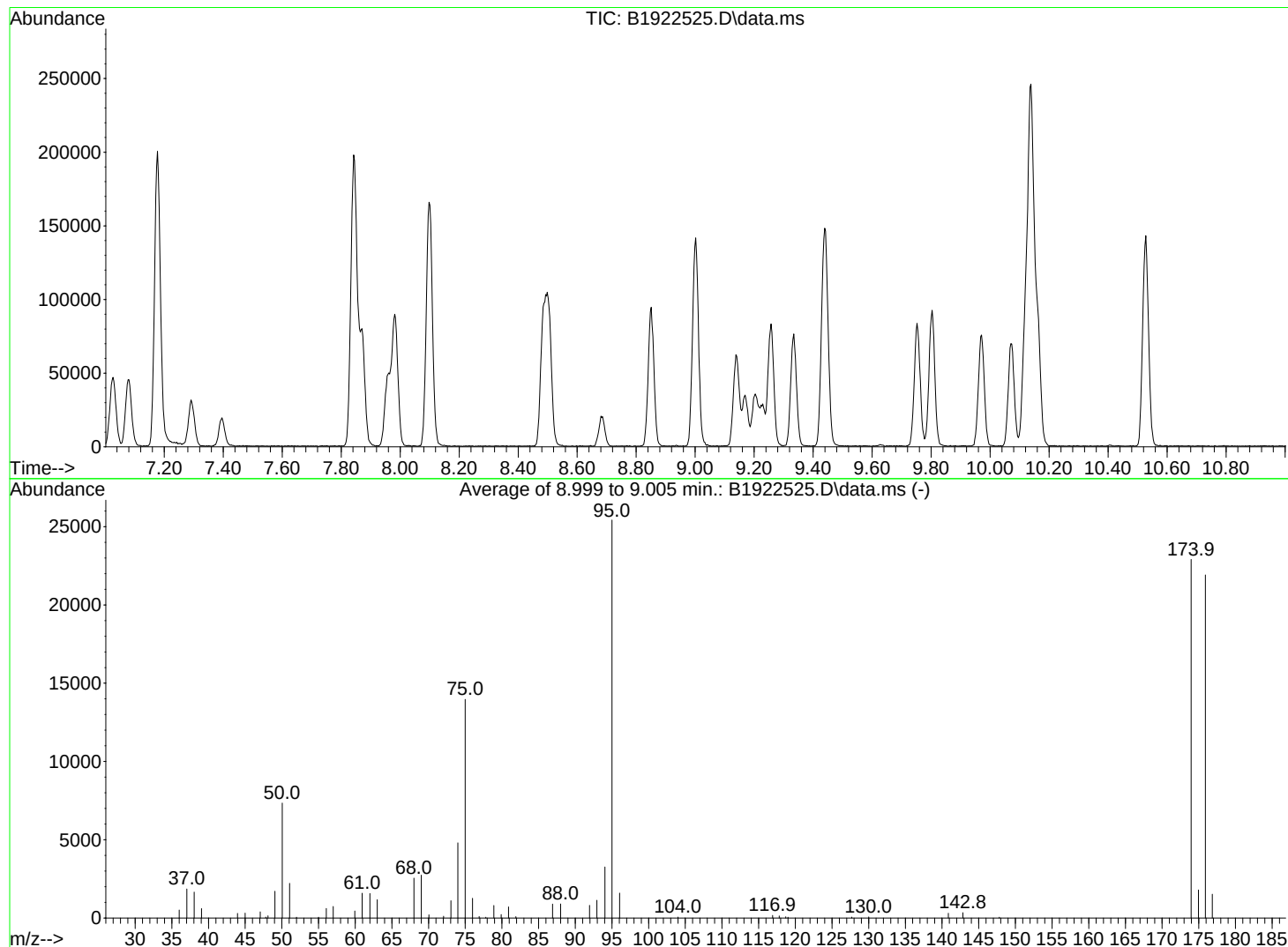
ALS Vial : 25 Sample Multiplier: 1

Integration File: 8260LOW.P

Method : Y:\1\METHODS\B041819W.M

Title : 8260 CALIBRATION VOAMS 5973

Last Update : Fri Apr 19 05:42:51 2019



AutoFind: Scans 2785, 2786, 2787; Background Corrected with Scan 2773

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|-------------|--------------|--------------|--------------|-----------|---------|------------------|
| 50          | 95           | 15           | 40           | 28.9      | 7341    | PASS             |
| 75          | 95           | 30           | 60           | 54.9      | 13966   | PASS             |
| 95          | 95           | 100          | 100          | 100.0     | 25421   | PASS             |
| 96          | 95           | 5            | 9            | 6.3       | 1596    | PASS             |
| 173         | 174          | 0.00         | 2            | 0.0       | 0       | PASS             |
| 174         | 95           | 50           | 100          | 90.1      | 22904   | PASS             |
| 175         | 174          | 5            | 9            | 7.8       | 1790    | PASS             |
| 176         | 174          | 95           | 101          | 95.7      | 21917   | PASS             |
| 177         | 176          | 5            | 9            | 6.9       | 1522    | PASS             |

## CALIBRATION DATA

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET

152

*SW-846 8260C*

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| Compound                           | Level 01 |           | Level 02 |           | Level 03 |              | Level 04 |              | Level 05 |              | Level 06 |           |
|------------------------------------|----------|-----------|----------|-----------|----------|--------------|----------|--------------|----------|--------------|----------|-----------|
|                                    |          | RF        |          | RF        |          | RF           |          | RF           |          | RF           |          | RF        |
| Acetone                            |          |           |          |           | 10       | 0.3554227    | 20       | 0.3167215    | 50       | 0.2604235    | 100      | 0.2709784 |
| Acrolein                           |          |           |          |           |          |              | 20       | 0.2036672    | 50       | 0.1779516    | 100      | 0.1807268 |
| Acrylonitrile                      |          |           |          |           | 1        | 0.2315594    | 2        | 0.306658     | 5        | 0.303319     | 10       | 0.3117378 |
| tert-Amyl Methyl Ether (TAME)      | 0.4      | 1.298043  | 0.5      | 1.447822  | 1        | 1.516083     | 2        | 1.587637     | 5        | 1.565961     | 10       | 1.619902  |
| Benzene                            | 0.4      | 2.180179  | 0.5      | 2.338915  | 1        | 2.217918     | 2        | 2.26212      | 5        | 2.121221     | 10       | 2.292671  |
| Bromobenzene                       | 0.4      | 1.276931  | 0.5      | 1.382589  | 1        | 1.368836     | 2        | 1.395511     | 5        | 1.273864     | 10       | 1.333103  |
| Bromochloromethane                 |          |           |          |           | 1        | 0.2618727    | 2        | 0.3320751    | 5        | 0.3105269    | 10       | 0.3366536 |
| Bromodichloromethane               | 0.4      | 0.4860925 | 0.5      | 0.5245991 | 1        | 0.5507571    | 2        | 0.56234      | 5        | 0.54838      | 10       | 0.5748657 |
| Bromoform                          |          |           | 0.5      | 0.4353643 | 1        | 0.4932699    | 2        | 0.5595492    | 5        | 0.5366665    | 10       | 0.5704558 |
| Bromomethane                       |          |           |          |           |          |              |          |              | 5        | 0.3900654    | 10       | 0.3480768 |
| 2-Butanone (MEK)                   | 4        | 0.4185779 | 5        | 0.418732  | 10       | 0.4191647    | 20       | 0.4197743    | 50       | 0.4038945    | 100      | 0.4274805 |
| tert-Butyl Alcohol (TBA)           |          |           |          |           | 10       | 7.713035E-02 | 20       | 8.185124E-02 | 50       | 7.626138E-02 | 100      | 0.0790064 |
| n-Butylbenzene                     | 0.4      | 2.429439  | 0.5      | 2.692969  | 1        | 2.365127     | 2        | 2.462072     | 5        | 2.257107     | 10       | 2.422416  |
| sec-Butylbenzene                   | 0.4      | 3.11881   | 0.5      | 3.423025  | 1        | 3.126224     | 2        | 3.304028     | 5        | 2.952429     | 10       | 3.12716   |
| tert-Butylbenzene                  | 0.4      | 2.230947  | 0.5      | 2.374813  | 1        | 2.247184     | 2        | 2.313534     | 5        | 2.103586     | 10       | 2.244813  |
| tert-Butyl Ethyl Ether (TBEE)      | 0.4      | 1.980954  | 0.5      | 2.066682  | 1        | 2.148872     | 2        | 2.28671      | 5        | 2.22297      | 10       | 2.344324  |
| Carbon Disulfide                   | 4        | 1.679241  | 5        | 1.773439  | 10       | 1.736485     | 20       | 1.787544     | 50       | 1.571501     | 100      | 1.692059  |
| Carbon Tetrachloride               | 0.4      | 0.6633987 | 0.5      | 0.8052539 | 1        | 0.7936174    | 2        | 0.9389852    | 5        | 0.8160865    | 10       | 0.8878235 |
| Chlorobenzene                      | 0.4      | 1.819925  | 0.5      | 1.953001  | 1        | 1.89926      | 2        | 1.977634     | 5        | 1.864043     | 10       | 1.937622  |
| Chlorodibromomethane               | 0.4      | 0.2977398 | 0.5      | 0.3478543 | 1        | 0.3720188    | 2        | 0.4147934    | 5        | 0.4093563    | 10       | 0.4413187 |
| Chloroethane                       | 0.4      | 0.3850999 | 0.5      | 0.4381889 | 1        | 0.4862748    | 2        | 0.4878838    | 5        | 0.4399341    | 10       | 0.469883  |
| 2-Chloroethyl Vinyl Ether          | 4        | 0.2600045 | 5        | 0.2991854 | 10       | 0.2911107    | 20       | 0.3052552    | 50       | 0.2963355    | 100      | 0.3013932 |
| Chloroform                         | 0.4      | 1.065956  | 0.5      | 1.157604  | 1        | 1.091277     | 2        | 1.199355     | 5        | 1.096441     | 10       | 1.162767  |
| Chloromethane                      | 0.4      | 1.408952  | 0.5      | 1.392231  | 1        | 1.621758     | 2        | 1.56718      | 5        | 1.812036     | 10       | 1.642252  |
| 2-Chlorotoluene                    | 0.4      | 2.508513  | 0.5      | 2.629185  | 1        | 2.437017     | 2        | 2.470181     | 5        | 2.217537     | 10       | 2.396396  |
| 4-Chlorotoluene                    | 0.4      | 2.861757  | 0.5      | 3.141989  | 1        | 2.857445     | 2        | 2.919982     | 5        | 2.714788     | 10       | 2.923971  |
| Cyclohexane                        |          |           |          |           |          |              |          |              | 5        | 1.309745     | 10       | 1.337592  |
| 1,2-Dibromo-3-chloropropane (DBCP) |          |           |          |           | 1        | 0.1371995    | 2        | 0.1747231    | 5        | 0.180759     | 10       | 0.1983514 |
| 1,2-Dibromoethane (EDB)            | 0.4      | 0.3631131 | 0.5      | 0.3278745 | 1        | 0.3839171    | 2        | 0.3928857    | 5        | 0.3931871    | 10       | 0.4078409 |
| Dibromomethane                     | 0.4      | 0.1650514 | 0.5      | 0.2295121 | 1        | 0.2490702    | 2        | 0.2847993    | 5        | 0.273186     | 10       | 0.2823254 |
| 1,2-Dichlorobenzene                | 0.4      | 1.513051  | 0.5      | 1.841711  | 1        | 1.600661     | 2        | 1.588218     | 5        | 1.570356     | 10       | 1.615522  |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET

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*SW-846 8260C*

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| Compound                           | Level 01 |           | Level 02 |           | Level 03 |           | Level 04 |           | Level 05 |              | Level 06 |              |
|------------------------------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|--------------|----------|--------------|
|                                    |          | RF        |          | RF        |          | RF        |          | RF        |          | RF           |          | RF           |
| 1,3-Dichlorobenzene                | 0.4      | 1.659245  | 0.5      | 1.783003  | 1        | 1.715235  | 2        | 1.689148  | 5        | 1.579023     | 10       | 1.657159     |
| 1,4-Dichlorobenzene                | 0.4      | 1.858925  | 0.5      | 1.764065  | 1        | 1.716198  | 2        | 1.803409  | 5        | 1.649688     | 10       | 1.722355     |
| trans-1,4-Dichloro-2-butene        |          |           |          |           | 1        | 0.361275  | 2        | 0.4337106 | 5        | 0.3931974    | 10       | 0.4134841    |
| Dichlorodifluoromethane (Freon 22) | 0.4      | 0.5648132 | 0.5      | 0.7562029 | 1        | 0.711194  | 2        | 0.7610657 | 5        | 0.6790524    | 10       | 0.7545941    |
| 1,1-Dichloroethane                 | 0.4      | 0.9868826 | 0.5      | 1.299034  | 1        | 1.291681  | 2        | 1.328714  | 5        | 1.221071     | 10       | 1.277413     |
| 1,2-Dichloroethane                 | 0.4      | 0.6213699 | 0.5      | 0.6834133 | 1        | 0.7641325 | 2        | 0.7667673 | 5        | 0.7178927    | 10       | 0.749922     |
| 1,1-Dichloroethylene               | 0.4      | 0.9725056 | 0.5      | 1.103647  | 1        | 1.070226  | 2        | 1.116078  | 5        | 0.9614181    | 10       | 1.063062     |
| cis-1,2-Dichloroethylene           | 0.4      | 1.086495  | 0.5      | 1.199297  | 1        | 1.215056  | 2        | 1.293584  | 5        | 1.200117     | 10       | 1.271577     |
| trans-1,2-Dichloroethylene         | 0.4      | 0.8646776 | 0.5      | 0.9703923 | 1        | 1.002021  | 2        | 1.083635  | 5        | 1.011287     | 10       | 1.03736      |
| Dichlorofluoromethane (Freon 21)   | 0.4      | 1.176865  | 0.5      | 1.297399  | 1        | 1.20453   | 2        | 1.210927  | 5        | 1.08588      | 10       | 1.14319      |
| 1,2-Dichloropropane                | 0.4      | 0.3760583 | 0.5      | 0.3770556 | 1        | 0.4473745 | 2        | 0.477085  | 5        | 0.4336102    | 10       | 0.4592272    |
| 1,3-Dichloropropane                | 0.4      | 0.5436987 | 0.5      | 0.5491897 | 1        | 0.59174   | 2        | 0.6503664 | 5        | 0.6283807    | 10       | 0.6560388    |
| 2,2-Dichloropropane                | 0.4      | 0.9488861 | 0.5      | 0.9924652 | 1        | 0.979707  | 2        | 0.9912659 | 5        | 0.875426     | 10       | 0.9273495    |
| 1,1-Dichloropropene                | 0.4      | 0.7024222 | 0.5      | 0.7537504 | 1        | 0.7658302 | 2        | 0.8100401 | 5        | 0.7591775    | 10       | 0.8399371    |
| cis-1,3-Dichloropropene            | 0.4      | 0.5553494 | 0.5      | 0.5645588 | 1        | 0.5962349 | 2        | 0.6363772 | 5        | 0.6396358    | 10       | 0.6654999    |
| trans-1,3-Dichloropropene          | 0.4      | 0.5605275 | 0.5      | 0.5153777 | 1        | 0.5671502 | 2        | 0.6132818 | 5        | 0.6046024    | 10       | 0.6272656    |
| Diethyl Ether                      | 0.4      | 0.5463284 | 0.5      | 0.5493712 | 1        | 0.5283766 | 2        | 0.6007109 | 5        | 0.5735319    | 10       | 0.5930136    |
| Difluorochloromethane (Freon 21)   |          |           |          |           | 1        | 1.210424  | 2        | 1.091901  | 5        | 0.9899983    | 10       | 1.054909     |
| Diisopropyl Ether (DIPE)           | 0.4      | 2.342434  | 0.5      | 2.450915  | 1        | 2.507578  | 2        | 2.683878  | 5        | 2.555372     | 10       | 2.6876       |
| 1,4-Dioxane                        |          |           |          |           |          |           |          |           | 50       | 1.923399E-03 | 100      | 2.383469E-03 |
| Ethanol                            |          |           |          |           |          |           |          |           |          |              | 100      | 9.126152E-03 |
| Ethylbenzene                       | 0.4      | 3.3057    | 0.5      | 3.524468  | 1        | 3.396669  | 2        | 3.443749  | 5        | 3.133303     | 10       | 3.405679     |
| Hexachlorobutadiene                | 0.4      | 0.2864455 | 0.5      | 0.2717589 | 1        | 0.3937867 | 2        | 0.3718221 | 5        | 0.3579943    | 10       | 0.376048     |
| 2-Hexanone (MBK)                   | 4        | 0.4042141 | 5        | 0.4286446 | 10       | 0.3997814 | 20       | 0.4174724 | 50       | 0.3868409    | 100      | 0.4001551    |
| Iodomethane                        |          |           |          |           | 10       | 0.5584372 | 20       | 0.6563391 | 50       | 0.6803682    | 100      | 0.7985238    |
| Isopropylbenzene (Cumene)          | 0.4      | 2.952455  | 0.5      | 3.223207  | 1        | 3.204543  | 2        | 3.273483  | 5        | 3.017358     | 10       | 3.232326     |
| p-Isopropyltoluene (p-Cymene)      | 0.4      | 2.791953  | 0.5      | 2.758305  | 1        | 2.679964  | 2        | 2.784143  | 5        | 2.55015      | 10       | 2.728959     |
| Methyl Acetate                     |          |           |          |           | 1        | 1.007494  | 2        | 0.912535  | 5        | 0.8004973    | 10       | 0.7217731    |
| Methyl tert-Butyl Ether (MTBE)     | 0.4      | 1.577369  | 0.5      | 1.59661   | 1        | 1.553132  | 2        | 1.71121   | 5        | 1.671733     | 10       | 1.733803     |
| Methyl Cyclohexane                 | 0.4      | 0.5016268 | 0.5      | 0.5281852 | 1        | 0.4939099 | 2        | 0.5009722 | 5        | 0.4616685    | 10       | 0.5156299    |
| Methylene Chloride                 | 0.4      | 1.241562  | 0.5      | 1.276144  | 1        | 1.165797  | 2        | 1.27726   | 5        | 1.185869     | 10       | 1.216903     |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET

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*SW-846 8260C*

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| Compound                              | Level 01 |           | Level 02 |           | Level 03 |           | Level 04 |           | Level 05 |           | Level 06 |           |
|---------------------------------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|
|                                       |          | RF        |          | RF        |          | RF        |          | RF        |          | RF        |          | RF        |
| 4-Methyl-2-pentanone (MIBK)           | 4        | 0.5304299 | 5        | 0.5367407 | 10       | 0.5462093 | 20       | 0.5554642 | 50       | 0.536549  | 100      | 0.5480393 |
| Naphthalene                           | 0.4      | 2.843061  | 0.5      | 2.977038  | 1        | 2.677557  | 2        | 2.731298  | 5        | 2.610054  | 10       | 2.688492  |
| n-Propylbenzene                       | 0.4      | 4.002641  | 0.5      | 3.948499  | 1        | 3.983313  | 2        | 4.000656  | 5        | 3.618567  | 10       | 3.93099   |
| Styrene                               | 0.4      | 1.99416   | 0.5      | 2.221208  | 1        | 2.129518  | 2        | 2.219225  | 5        | 2.117608  | 10       | 2.273151  |
| 1,1,1,2-Tetrachloroethane             | 0.4      | 0.4857111 | 0.5      | 0.615743  | 1        | 0.6790405 | 2        | 0.6897104 | 5        | 0.6931782 | 10       | 0.7340282 |
| 1,1,2,2-Tetrachloroethane             | 0.4      | 0.8771441 | 0.5      | 0.7800671 | 1        | 0.8926767 | 2        | 0.9010423 | 5        | 0.8830637 | 10       | 0.9155719 |
| Tetrachloroethylene                   | 0.4      | 0.2258939 | 0.5      | 0.3248006 | 1        | 0.2739243 | 2        | 0.3100062 | 5        | 0.2894081 | 10       | 0.3135418 |
| Tetrahydrofuran                       |          |           |          |           |          |           | 2        | 0.2946727 | 5        | 0.2732302 | 10       | 0.2822692 |
| Toluene                               | 0.4      | 1.4531    | 0.5      | 1.624003  | 1        | 1.554177  | 2        | 1.672899  | 5        | 1.511348  | 10       | 1.564564  |
| 1,2,3-Trichlorobenzene                | 0.4      | 0.9877023 | 0.5      | 0.9610984 | 1        | 0.8857794 | 2        | 0.9850192 | 5        | 0.8975096 | 10       | 0.9287621 |
| 1,2,4-Trichlorobenzene                | 0.4      | 1.067336  | 0.5      | 1.060522  | 1        | 1.064379  | 2        | 1.060955  | 5        | 1.000936  | 10       | 1.036766  |
| 1,3,5-Trichlorobenzene                | 0.4      | 1.142216  | 0.5      | 1.037797  | 1        | 1.026349  | 2        | 1.079046  | 5        | 0.9817939 | 10       | 1.045478  |
| 1,1,1-Trichloroethane                 | 0.4      | 0.8872701 | 0.5      | 0.9058085 | 1        | 1.021809  | 2        | 0.9910593 | 5        | 0.9663631 | 10       | 1.025233  |
| 1,1,2-Trichloroethane                 | 0.4      | 0.3042124 | 0.5      | 0.3504158 | 1        | 0.3360596 | 2        | 0.371506  | 5        | 0.3324732 | 10       | 0.3625368 |
| Trichloroethylene                     | 0.4      | 0.2854418 | 0.5      | 0.4144538 | 1        | 0.3693748 | 2        | 0.4046314 | 5        | 0.3681935 | 10       | 0.4098163 |
| Trichlorofluoromethane (Freon 11)     | 0.4      | 0.7876576 | 0.5      | 0.8878231 | 1        | 0.9089761 | 2        | 0.981967  | 5        | 0.9145667 | 10       | 0.9749462 |
| 1,2,3-Trichloropropane                |          |           | 0.5      | 0.2719846 | 1        | 0.2625232 | 2        | 0.2963449 | 5        | 0.268525  | 10       | 0.2842643 |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 0.4      | 0.3255378 | 0.5      | 0.3866854 | 1        | 0.4197541 | 2        | 0.4438689 | 5        | 0.3971057 | 10       | 0.4449672 |
| 1,2,4-Trimethylbenzene                | 0.4      | 2.847815  | 0.5      | 2.938215  | 1        | 2.765172  | 2        | 2.870076  | 5        | 2.664243  | 10       | 2.740293  |
| 1,3,5-Trimethylbenzene                | 0.4      | 2.699456  | 0.5      | 2.836951  | 1        | 2.703451  | 2        | 2.732665  | 5        | 2.492392  | 10       | 2.72913   |
| Vinyl Acetate                         | 4        | 1.948503  | 5        | 1.896639  | 10       | 1.987833  | 20       | 2.029605  | 50       | 2.107342  | 100      | 2.112466  |
| Vinyl Chloride                        | 0.4      | 0.705503  | 0.5      | 0.9107136 | 1        | 0.8534018 | 2        | 0.906129  | 5        | 0.7771973 | 10       | 0.8797114 |
| m+p Xylene                            | 0.8      | 2.751965  | 1        | 2.852061  | 2        | 2.698563  | 4        | 2.845055  | 10       | 2.532335  | 20       | 2.698054  |
| o-Xylene                              | 0.4      | 2.786574  | 0.5      | 2.863394  | 1        | 2.845713  | 2        | 2.849378  | 5        | 2.565085  | 10       | 2.748595  |
| 1,2-Dichloroethane-d4                 | 25       | 0.7899662 | 25       | 0.7912907 | 25       | 0.7938868 | 25       | 0.7838708 | 25       | 0.786467  | 25       | 0.7758016 |
| Toluene-d8                            | 25       | 1.174244  | 25       | 1.177346  | 25       | 1.175262  | 25       | 1.196336  | 25       | 1.180491  | 25       | 1.168456  |
| 4-Bromofluorobenzene                  | 25       | 0.8961525 | 25       | 0.8778493 | 25       | 0.8966855 | 25       | 0.8987368 | 25       | 0.8991177 | 25       | 0.8902579 |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

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*SW-846 8260C*

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| Compound                           | Level 07 |              | Level 08 |              | Level 09 |              | Level 10 |              | Level 11 |    | Level 12 |    |
|------------------------------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|----|----------|----|
|                                    |          | RF           |          | RF           |          | RF           |          | RF           |          | RF |          | RF |
| Acetone                            | 200      | 0.26474      | 500      | 0.258101     | 1000     | 0.2530512    | 2000     | 0.2363047    |          |    |          |    |
| Acrolein                           | 200      | 0.1827299    | 500      | 0.1447897    | 1000     | 0.1424612    | 2000     | 0.1431627    |          |    |          |    |
| Acrylonitrile                      | 20       | 0.3233385    | 50       | 0.3588806    | 100      | 0.3604812    | 200      | 0.3596863    |          |    |          |    |
| tert-Amyl Methyl Ether (TAME)      | 20       | 1.62424      | 50       | 1.768353     | 100      | 1.807387     | 200      | 1.748482     |          |    |          |    |
| Benzene                            | 20       | 2.264257     | 50       | 2.169122     | 100      | 2.182966     | 200      | 2.101797     |          |    |          |    |
| Bromobenzene                       | 20       | 1.33055      | 50       | 1.241017     | 100      | 1.27057      | 200      | 1.229612     |          |    |          |    |
| Bromochloromethane                 | 20       | 0.3235553    | 50       | 0.297954     | 100      | 0.2883061    | 200      | 0.2624706    |          |    |          |    |
| Bromodichloromethane               | 20       | 0.5672935    | 50       | 0.5472545    | 100      | 0.5496425    | 200      | 0.5426642    |          |    |          |    |
| Bromoform                          | 20       | 0.5949988    | 50       | 0.595426     | 100      | 0.6212688    | 200      | 0.6119892    |          |    |          |    |
| Bromomethane                       | 20       | 0.3452504    | 50       | 0.3724047    | 100      | 0.4129159    | 200      | 0.4452956    |          |    |          |    |
| 2-Butanone (MEK)                   | 200      | 0.4243619    | 500      | 0.4283996    | 1000     | 0.4224117    | 2000     | 0.4056814    |          |    |          |    |
| tert-Butyl Alcohol (TBA)           | 200      | 7.696754E-02 | 500      | 8.169379E-02 | 1000     | 7.955764E-02 | 2000     | 8.038085E-02 |          |    |          |    |
| n-Butylbenzene                     | 20       | 2.416441     | 50       | 2.372037     | 100      | 2.334408     | 200      | 2.281176     |          |    |          |    |
| sec-Butylbenzene                   | 20       | 3.127405     | 50       | 3.031126     | 100      | 2.951205     | 200      | 2.843996     |          |    |          |    |
| tert-Butylbenzene                  | 20       | 2.217812     | 50       | 2.142195     | 100      | 2.104603     | 200      | 2.048721     |          |    |          |    |
| tert-Butyl Ethyl Ether (TBEE)      | 20       | 2.392496     | 50       | 2.451124     | 100      | 2.487951     | 200      | 2.449064     |          |    |          |    |
| Carbon Disulfide                   | 200      | 1.634108     | 500      | 1.487228     | 1000     | 1.368284     | 2000     | 1.135692     |          |    |          |    |
| Carbon Tetrachloride               | 20       | 0.8802005    | 50       | 0.8317479    | 100      | 0.8389809    | 200      | 0.8166954    |          |    |          |    |
| Chlorobenzene                      | 20       | 1.974069     | 50       | 1.863302     | 100      | 1.85853      | 200      | 1.777361     |          |    |          |    |
| Chlorodibromomethane               | 20       | 0.4405604    | 50       | 0.4330679    | 100      | 0.4407412    | 200      | 0.4367621    |          |    |          |    |
| Chloroethane                       | 20       | 0.4684852    | 50       | 0.4254573    | 100      | 0.4184275    | 200      | 0.4035625    |          |    |          |    |
| 2-Chloroethyl Vinyl Ether          | 200      | 0.3044818    | 500      | 0.3052646    | 1000     | 0.2926538    | 2000     | 0.2675396    |          |    |          |    |
| Chloroform                         | 20       | 1.145094     | 50       | 1.073677     | 100      | 1.094821     | 200      | 1.072979     |          |    |          |    |
| Chloromethane                      | 20       | 1.4065       | 50       | 1.085317     |          |              |          |              |          |    |          |    |
| 2-Chlorotoluene                    | 20       | 2.335413     | 50       | 2.164198     | 100      | 2.180678     | 200      | 2.076568     |          |    |          |    |
| 4-Chlorotoluene                    | 20       | 2.852643     | 50       | 2.637499     | 100      | 2.667838     | 200      | 2.525833     |          |    |          |    |
| Cyclohexane                        | 20       | 1.263225     | 50       | 1.247554     | 100      | 1.240866     | 200      | 1.194445     |          |    |          |    |
| 1,2-Dibromo-3-chloropropane (DBCP) | 20       | 0.1909585    | 50       | 0.1978492    | 100      | 0.1949682    | 200      | 0.1950423    |          |    |          |    |
| 1,2-Dibromoethane (EDB)            | 20       | 0.4132678    | 50       | 0.4060478    | 100      | 0.401872     | 200      | 0.3962882    |          |    |          |    |
| Dibromomethane                     | 20       | 0.2793707    | 50       | 0.2657074    | 100      | 0.2623016    | 200      | 0.2591558    |          |    |          |    |
| 1,2-Dichlorobenzene                | 20       | 1.608777     | 50       | 1.546073     | 100      | 1.531956     | 200      | 1.487162     |          |    |          |    |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

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*SW-846 8260C*

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| Compound                           | Level 07 |              | Level 08 |              | Level 09 |              | Level 10 |              | Level 11 |    | Level 12 |    |
|------------------------------------|----------|--------------|----------|--------------|----------|--------------|----------|--------------|----------|----|----------|----|
|                                    |          | RF           |          | RF           |          | RF           |          | RF           |          | RF |          | RF |
| 1,3-Dichlorobenzene                | 20       | 1.672445     | 50       | 1.599237     | 100      | 1.569932     | 200      | 1.537088     |          |    |          |    |
| 1,4-Dichlorobenzene                | 20       | 1.733168     | 50       | 1.668765     | 100      | 1.646377     | 200      | 1.596977     |          |    |          |    |
| trans-1,4-Dichloro-2-butene        | 20       | 0.4284849    | 50       | 0.4485067    | 100      | 0.4573303    | 200      | 0.450342     |          |    |          |    |
| Dichlorodifluoromethane (Freon 22) | 20       | 0.7232899    | 50       | 0.5841689    | 100      | 0.5682747    | 200      | 0.5216579    |          |    |          |    |
| 1,1-Dichloroethane                 | 20       | 1.252663     | 50       | 1.172581     | 100      | 1.193696     | 200      | 1.170235     |          |    |          |    |
| 1,2-Dichloroethane                 | 20       | 0.7421171    | 50       | 0.698047     | 100      | 0.6969168    | 200      | 0.6789413    |          |    |          |    |
| 1,1-Dichloroethylene               | 20       | 1.02115      | 50       | 0.9679193    | 100      | 0.957869     | 200      | 0.9191775    |          |    |          |    |
| cis-1,2-Dichloroethylene           | 20       | 1.251028     | 50       | 1.170335     | 100      | 1.178955     | 200      | 1.158432     |          |    |          |    |
| trans-1,2-Dichloroethylene         | 20       | 1.03183      | 50       | 0.9740838    | 100      | 0.9800042    | 200      | 0.9503742    |          |    |          |    |
| Dichlorofluoromethane (Freon 21)   | 20       | 1.117015     | 50       | 1.093759     | 100      | 1.079454     | 200      | 1.03875      |          |    |          |    |
| 1,2-Dichloropropane                | 20       | 0.4526078    | 50       | 0.4350621    | 100      | 0.4379743    | 200      | 0.4296779    |          |    |          |    |
| 1,3-Dichloropropane                | 20       | 0.6448084    | 50       | 0.625378     | 100      | 0.6247717    | 200      | 0.6140571    |          |    |          |    |
| 2,2-Dichloropropane                | 20       | 0.8942107    | 50       | 0.8272625    | 100      | 0.8158142    | 200      | 0.7901785    |          |    |          |    |
| 1,1-Dichloropropene                | 20       | 0.8296179    | 50       | 0.7953886    | 100      | 0.8071303    | 200      | 0.7917261    |          |    |          |    |
| cis-1,3-Dichloropropene            | 20       | 0.6671803    | 50       | 0.6491901    | 100      | 0.6486242    | 200      | 0.6329637    |          |    |          |    |
| trans-1,3-Dichloropropene          | 20       | 0.6424286    | 50       | 0.6245308    | 100      | 0.6288969    | 200      | 0.6170411    |          |    |          |    |
| Diethyl Ether                      | 20       | 0.5787147    | 50       | 0.6079042    | 100      | 0.6028001    | 200      | 0.5917068    |          |    |          |    |
| Difluorochloromethane (Freon 21)   | 20       | 1.009268     | 50       | 0.9991655    | 100      | 1.009316     | 200      | 0.9462267    |          |    |          |    |
| Diisopropyl Ether (DIPE)           | 20       | 2.746437     | 50       | 2.876256     | 100      | 2.866651     | 200      | 2.736396     |          |    |          |    |
| 1,4-Dioxane                        | 200      | 2.744129E-03 | 500      | 3.31456E-03  | 1000     | 3.391619E-03 | 2000     | 3.50979E-03  |          |    |          |    |
| Ethanol                            | 200      | 7.188366E-03 | 500      | 7.535077E-03 | 1000     | 6.782394E-03 | 2000     | 6.896322E-03 |          |    |          |    |
| Ethylbenzene                       | 20       | 3.379521     | 50       | 3.191321     | 100      | 3.18616      | 200      | 2.980872     |          |    |          |    |
| Hexachlorobutadiene                | 20       | 0.3648642    | 50       | 0.3648401    | 100      | 0.3736784    | 200      | 0.3591927    |          |    |          |    |
| 2-Hexanone (MBK)                   | 200      | 0.3944444    | 500      | 0.4049426    | 1000     | 0.3809477    | 2000     | 0.3537869    |          |    |          |    |
| Iodomethane                        | 200      | 0.824601     | 500      | 0.8039864    | 1000     | 0.7845236    | 2000     | 0.6889045    |          |    |          |    |
| Isopropylbenzene (Cumene)          | 20       | 3.208649     | 50       | 2.969635     | 100      | 3.014859     | 200      | 2.838579     |          |    |          |    |
| p-Isopropyltoluene (p-Cymene)      | 20       | 2.714578     | 50       | 2.659503     | 100      | 2.627514     | 200      | 2.527712     |          |    |          |    |
| Methyl Acetate                     | 20       | 0.7359602    | 50       | 0.871231     | 100      | 0.956679     | 200      | 0.9598777    |          |    |          |    |
| Methyl tert-Butyl Ether (MTBE)     | 20       | 1.739218     | 50       | 1.867802     | 100      | 1.883088     | 200      | 1.820325     |          |    |          |    |
| Methyl Cyclohexane                 | 20       | 0.5110848    | 50       | 0.5542987    | 100      | 0.5536945    | 200      | 0.5419826    |          |    |          |    |
| Methylene Chloride                 | 20       | 1.192741     | 50       | 1.11853      | 100      | 1.130467     | 200      | 1.082251     |          |    |          |    |



# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

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*SW-846 8260C*

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| Compound                              | Level 07 |           | Level 08 |           | Level 09 |           | Level 10 |           | Level 11 |    | Level 12 |    |
|---------------------------------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|----|----------|----|
|                                       |          | RF        |          | RF        |          | RF        |          | RF        |          | RF |          | RF |
| 4-Methyl-2-pentanone (MIBK)           | 200      | 0.5510829 | 500      | 0.5705007 | 1000     | 0.5339101 | 2000     | 0.4865593 |          |    |          |    |
| Naphthalene                           | 20       | 2.705675  | 50       | 2.715974  | 100      | 2.643712  | 200      | 2.543295  |          |    |          |    |
| n-Propylbenzene                       | 20       | 3.925416  | 50       | 3.623001  | 100      | 3.649072  | 200      | 3.421669  |          |    |          |    |
| Styrene                               | 20       | 2.285004  | 50       | 2.148928  | 100      | 2.13921   | 200      | 2.034708  |          |    |          |    |
| 1,1,1,2-Tetrachloroethane             | 20       | 0.7676185 | 50       | 0.7386109 | 100      | 0.755356  | 200      | 0.7340508 |          |    |          |    |
| 1,1,1,2,2-Tetrachloroethane           | 20       | 0.9458082 | 50       | 0.8965586 | 100      | 0.9141821 | 200      | 0.9100892 |          |    |          |    |
| Tetrachloroethylene                   | 20       | 0.3157112 | 50       | 0.3019133 | 100      | 0.3080789 | 200      | 0.3038403 |          |    |          |    |
| Tetrahydrofuran                       | 20       | 0.2643813 | 50       | 0.2891497 | 100      | 0.2826728 | 200      | 0.2846397 |          |    |          |    |
| Toluene                               | 20       | 1.565282  | 50       | 1.503598  | 100      | 1.484526  | 200      | 1.440518  |          |    |          |    |
| 1,2,3-Trichlorobenzene                | 20       | 0.9236547 | 50       | 0.9127392 | 100      | 0.9187908 | 200      | 0.8947653 |          |    |          |    |
| 1,2,4-Trichlorobenzene                | 20       | 1.029646  | 50       | 1.011382  | 100      | 1.01098   | 200      | 0.9810156 |          |    |          |    |
| 1,3,5-Trichlorobenzene                | 20       | 1.050899  | 50       | 1.053644  | 100      | 1.054782  | 200      | 1.028828  |          |    |          |    |
| 1,1,1-Trichloroethane                 | 20       | 1.018923  | 50       | 0.9631163 | 100      | 0.9769278 | 200      | 0.9561114 |          |    |          |    |
| 1,1,2-Trichloroethane                 | 20       | 0.3646568 | 50       | 0.3532595 | 100      | 0.3577801 | 200      | 0.3528926 |          |    |          |    |
| Trichloroethylene                     | 20       | 0.3933872 | 50       | 0.3902366 | 100      | 0.3887716 | 200      | 0.3813814 |          |    |          |    |
| Trichlorofluoromethane (Freon 11)     | 20       | 0.9512762 | 50       | 0.905011  | 100      | 0.8754922 | 200      | 0.8628395 |          |    |          |    |
| 1,2,3-Trichloropropane                | 20       | 0.2861149 | 50       | 0.2808687 | 100      | 0.2900941 | 200      | 0.2869869 |          |    |          |    |
| 1,1,2-Trichloro-1,2,2-trifluoroethane | 20       | 0.4289177 | 50       | 0.471347  | 100      | 0.4643226 | 200      | 0.4499332 |          |    |          |    |
| 1,2,4-Trimethylbenzene                | 20       | 2.771261  | 50       | 2.710005  | 100      | 2.666249  | 200      | 2.627825  |          |    |          |    |
| 1,3,5-Trimethylbenzene                | 20       | 2.715307  | 50       | 2.53506   | 100      | 2.597687  | 200      | 2.477178  |          |    |          |    |
| Vinyl Acetate                         | 200      | 2.20616   | 500      | 1.942278  | 1000     | 1.772882  | 2000     | 1.590601  |          |    |          |    |
| Vinyl Chloride                        | 20       | 0.8357067 | 50       | 0.7706171 | 100      | 0.758822  | 200      | 0.7222043 |          |    |          |    |
| m+p Xylene                            | 40       | 2.66498   | 100      | 2.48399   | 200      | 2.443074  | 400      | 2.237953  |          |    |          |    |
| o-Xylene                              | 20       | 2.747258  | 50       | 2.591785  | 100      | 2.590759  | 200      | 2.444574  |          |    |          |    |
| 1,2-Dichloroethane-d4                 | 25       | 0.7684143 | 25       | 0.7395449 | 25       | 0.7441217 | 25       | 0.7573903 |          |    |          |    |
| Toluene-d8                            | 25       | 1.161111  | 25       | 1.161933  | 25       | 1.164556  | 25       | 1.181214  |          |    |          |    |
| 4-Bromofluorobenzene                  | 25       | 0.8867814 | 25       | 0.8584447 | 25       | 0.8706315 | 25       | 0.8537711 |          |    |          |    |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

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SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| COMPOUND                           | Mean RF      | RF RSD | Linear r <sup>2</sup> | Quad COD | LIMIT | Q |
|------------------------------------|--------------|--------|-----------------------|----------|-------|---|
| Acetone                            | 0.2769679    | 14.2   |                       |          | 15    |   |
| Acrolein                           | 0.167927     | 14.5   |                       |          | 15    |   |
| Acrylonitrile                      | 0.3194576    | 13.5   |                       |          | 15    |   |
| tert-Amyl Methyl Ether (TAME)      | 1.598391     | 9.7    |                       |          | 15    |   |
| Benzene                            | 2.213117     | 3.4    |                       |          | 15    |   |
| Bromobenzene                       | 1.310258     | 4.6    |                       |          | 15    |   |
| Bromochloromethane                 | 0.3016768    | 9.7    |                       |          | 15    |   |
| Bromodichloromethane               | 0.5453889    | 4.6    |                       |          | 15    |   |
| Bromoform                          | 0.5576654    | 10.9   |                       |          | 15    |   |
| Bromomethane                       | 0.3856681    | 10.1   |                       |          | 15    |   |
| 2-Butanone (MEK)                   | 0.4188478    | 2.0    |                       |          | 15    |   |
| tert-Butyl Alcohol (TBA)           | 7.910615E-02 | 2.7    |                       |          | 15    |   |
| n-Butylbenzene                     | 2.403319     | 5.0    |                       |          | 15    |   |
| sec-Butylbenzene                   | 3.100541     | 5.5    |                       |          | 15    |   |
| tert-Butylbenzene                  | 2.202821     | 4.6    |                       |          | 15    |   |
| tert-Butyl Ethyl Ether (TBEE)      | 2.283115     | 7.6    |                       |          | 15    |   |
| Carbon Disulfide                   | 1.586558     | 13.0   |                       |          | 15    |   |
| Carbon Tetrachloride               | 0.827279     | 8.8    |                       |          | 15    |   |
| Chlorobenzene                      | 1.892475     | 3.6    |                       |          | 15    |   |
| Chlorodibromomethane               | 0.4034213    | 12.1   |                       |          | 15    |   |
| Chloroethane                       | 0.4423197    | 7.9    |                       |          | 15    |   |
| 2-Chloroethyl Vinyl Ether          | 0.2923224    | 5.5    |                       |          | 15    |   |
| Chloroform                         | 1.115997     | 4.1    |                       |          | 15    |   |
| Chloromethane                      | 1.492028     | 14.7   |                       |          | 15    |   |
| 2-Chlorotoluene                    | 2.341569     | 7.6    |                       |          | 15    |   |
| 4-Chlorotoluene                    | 2.810374     | 6.3    |                       |          | 15    |   |
| Cyclohexane                        | 1.265571     | 4.1    |                       |          | 15    |   |
| 1,2-Dibromo-3-chloropropane (DBCP) | 0.1837314    | 11.2   |                       |          | 15    |   |
| 1,2-Dibromoethane (EDB)            | 0.3886294    | 6.6    |                       |          | 15    |   |
| Dibromomethane                     | 0.255048     | 14.0   |                       |          | 15    |   |
| 1,2-Dichlorobenzene                | 1.590349     | 6.2    |                       |          | 15    |   |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

159

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| COMPOUND                           | Mean RF      | RF RSD | Linear r <sup>2</sup> | Quad COD | LIMIT | Q |
|------------------------------------|--------------|--------|-----------------------|----------|-------|---|
| 1,3-Dichlorobenzene                | 1.646151     | 4.6    |                       |          | 15    |   |
| 1,4-Dichlorobenzene                | 1.715993     | 4.6    |                       |          | 15    |   |
| trans-1,4-Dichloro-2-butene        | 0.4232914    | 7.7    |                       |          | 15    |   |
| Dichlorodifluoromethane (Freon 12) | 0.662506     | 14.0   |                       |          | 15    |   |
| 1,1-Dichloroethane                 | 1.219397     | 8.1    |                       |          | 15    |   |
| 1,2-Dichloroethane                 | 0.711952     | 6.4    |                       |          | 15    |   |
| 1,1-Dichloroethylene               | 1.015305     | 6.8    |                       |          | 15    |   |
| cis-1,2-Dichloroethylene           | 1.202488     | 5.0    |                       |          | 15    |   |
| trans-1,2-Dichloroethylene         | 0.9905665    | 6.0    |                       |          | 15    |   |
| Dichlorofluoromethane (Freon 21)   | 1.144777     | 6.8    |                       |          | 15    |   |
| 1,2-Dichloropropane                | 0.4325733    | 7.6    |                       |          | 15    |   |
| 1,3-Dichloropropane                | 0.612843     | 6.5    |                       |          | 15    |   |
| 2,2-Dichloropropane                | 0.9042566    | 8.3    |                       |          | 15    |   |
| 1,1-Dichloropropene                | 0.785502     | 5.2    |                       |          | 15    |   |
| cis-1,3-Dichloropropene            | 0.6255614    | 6.4    |                       |          | 15    |   |
| trans-1,3-Dichloropropene          | 0.6001103    | 6.6    |                       |          | 15    |   |
| Diethyl Ether                      | 0.5772458    | 4.7    |                       |          | 15    |   |
| Difluorochloromethane (Freon 22)   | 1.038901     | 7.9    |                       |          | 15    |   |
| Diisopropyl Ether (DIPE)           | 2.645352     | 6.7    |                       |          | 15    |   |
| 1,4-Dioxane                        | 2.877828E-03 | 22.1   |                       |          |       |   |
| Ethanol                            | 7.505662E-03 | 12.7   |                       |          | 15    |   |
| Ethylbenzene                       | 3.294744     | 5.1    |                       |          | 15    |   |
| Hexachlorobutadiene                | 0.3520431    | 11.3   |                       |          | 15    |   |
| 2-Hexanone (MBK)                   | 0.397123     | 5.2    |                       |          | 15    |   |
| Iodomethane                        | 0.7244605    | 12.9   |                       |          | 15    |   |
| Isopropylbenzene (Cumene)          | 3.093509     | 4.9    |                       |          | 15    |   |
| p-Isopropyltoluene (p-Cymene)      | 2.682278     | 3.4    |                       |          | 15    |   |
| Methyl Acetate                     | 0.8707559    | 12.4   |                       |          | 15    |   |
| Methyl tert-Butyl Ether (MTBE)     | 1.715429     | 6.9    |                       |          | 15    |   |
| Methyl Cyclohexane                 | 0.5163053    | 5.6    |                       |          | 15    |   |
| Methylene Chloride                 | 1.188752     | 5.6    |                       |          | 15    |   |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

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SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Calibration: 1900126

Instrument: GCMSVOA2

Calibration Date: 4/18/2019 10:04:37AM

| COMPOUND                                       | Mean RF   | RF RSD | Linear r <sup>2</sup> | Quad COD | LIMIT | Q |
|------------------------------------------------|-----------|--------|-----------------------|----------|-------|---|
| 4-Methyl-2-pentanone (MIBK)                    | 0.5395485 | 4.1    |                       |          | 15    |   |
| Naphthalene                                    | 2.713616  | 4.5    |                       |          | 15    |   |
| n-Propylbenzene                                | 3.810382  | 5.5    |                       |          | 15    |   |
| Styrene                                        | 2.156272  | 4.4    |                       |          | 15    |   |
| 1,1,1,2-Tetrachloroethane                      | 0.6893048 | 12.2   |                       |          | 15    |   |
| 1,1,2,2-Tetrachloroethane                      | 0.8916204 | 4.9    |                       |          | 15    |   |
| Tetrachloroethylene                            | 0.2967119 | 9.7    |                       |          | 15    |   |
| Tetrahydrofuran                                | 0.2815737 | 3.6    |                       |          | 15    |   |
| Toluene                                        | 1.537402  | 4.8    |                       |          | 15    |   |
| 1,2,3-Trichlorobenzene                         | 0.9295821 | 3.9    |                       |          | 15    |   |
| 1,2,4-Trichlorobenzene                         | 1.032392  | 3.0    |                       |          | 15    |   |
| 1,3,5-Trichlorobenzene                         | 1.050083  | 3.9    |                       |          | 15    |   |
| 1,1,1-Trichloroethane                          | 0.9712622 | 4.8    |                       |          | 15    |   |
| 1,1,2-Trichloroethane                          | 0.3485793 | 5.7    |                       |          | 15    |   |
| Trichloroethylene                              | 0.3805688 | 9.7    |                       |          | 15    |   |
| Trichlorofluoromethane (Freon 11)              | 0.9050556 | 6.4    |                       |          | 15    |   |
| 1,2,3-Trichloropropane                         | 0.2808563 | 3.9    |                       |          | 15    |   |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 1 | 0.423244  | 10.3   |                       |          | 15    |   |
| 1,2,4-Trimethylbenzene                         | 2.760115  | 3.6    |                       |          | 15    |   |
| 1,3,5-Trimethylbenzene                         | 2.651928  | 4.5    |                       |          | 15    |   |
| Vinyl Acetate                                  | 1.959431  | 9.1    |                       |          | 15    |   |
| Vinyl Chloride                                 | 0.8120006 | 9.2    |                       |          | 15    |   |
| m+p Xylene                                     | 2.620803  | 7.4    |                       |          | 15    |   |
| o-Xylene                                       | 2.703311  | 5.4    |                       |          | 15    |   |
| 1,2-Dichloroethane-d4                          | 0.7730754 | 2.6    |                       |          | 15    |   |
| Toluene-d8                                     | 1.174095  | 0.9    |                       |          | 15    |   |
| 4-Bromofluorobenzene                           | 0.8828428 | 1.9    |                       |          | 15    |   |

# INITIAL CALIBRATION STANDARDS

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SW-846 8260C

|              |                                |             |                       |
|--------------|--------------------------------|-------------|-----------------------|
| Laboratory:  | Con-Test Analytical Laboratory | Work Order: | 19H0576               |
| Client:      | Dvirka And Bartilucci          | Project:    | Farrand Controls Site |
| Sequence:    | S035040                        | Instrument: | GCMSVOA2              |
| Calibration: | 1900126                        |             |                       |

| Standard ID | Description                      | Lab Sample ID | Lab File ID | Analysis Date/Time |
|-------------|----------------------------------|---------------|-------------|--------------------|
| 1704244     | 10ppb 8260 Calibration Standard  | S035040-TUN1  | VB108006.D  | 04/18/19 10:04     |
| 1704239     | 0.4ppb 8260 Calibration Standard | S035040-CAL1  | VB108007.D  | 04/18/19 10:35     |
| 1704240     | 0.5ppb 8260 Calibration Standard | S035040-CAL2  | VB108008.D  | 04/18/19 11:06     |
| 1704241     | 1ppb 8260 Calibration Standard   | S035040-CAL3  | VB108009.D  | 04/18/19 11:37     |
| 1704242     | 2ppb 8260 Calibration Standard   | S035040-CAL4  | VB108010.D  | 04/18/19 12:08     |
| 1704243     | 5ppb 8260 Calibration Standard   | S035040-CAL5  | VB108011.D  | 04/18/19 12:38     |
| 1704244     | 10ppb 8260 Calibration Standard  | S035040-CAL6  | VB108012.D  | 04/18/19 13:09     |
| 1704245     | 20ppb 8260 Calibration Standard  | S035040-CAL7  | VB108013.D  | 04/18/19 13:40     |
| 1704246     | 50ppb 8260 Calibration Standard  | S035040-CAL8  | VB108014.D  | 04/18/19 14:11     |
| 1704247     | 100ppb 8260 Calibration Standard | S035040-CAL9  | VB108015.D  | 04/18/19 14:42     |
| 1704248     | 200ppb 8260 Calibration Standard | S035040-CALA  | VB108016.D  | 04/18/19 15:13     |

Y:\1\DATA\B041819\

| Date        |          | Filename           | Lab ID             | Sample Info |
|-------------|----------|--------------------|--------------------|-------------|
| 18 Apr 2019 | 7:18 am  | VB108001.D         | CLEAN UP           |             |
| 18 Apr 2019 | 7:49 am  | VB108002.D         | CLEAN UP           |             |
| 18 Apr 2019 | 8:20 am  | VB108003.D         | 8260STD 10PPB      | 1904257     |
| 18 Apr 2019 | 9:02 am  | VB108004.D         | CLEAN UP           |             |
| 18 Apr 2019 | 9:33 am  | VB108005.D         | CLEAN UP           |             |
| 18 Apr 2019 | 10:04 am | VB108006.D         | BFB                |             |
| 18 Apr 2019 | 10:35 am | VB108007.D         | 8260 STD 0.4 PPB   | 1904257     |
| 18 Apr 2019 | 11:06 am | VB108008.D         | 8260 STD 0.5 PPB   | 1904257     |
| 18 Apr 2019 | 11:37 am | VB108009.D         | 8260 STD 1.0 PPB   | 1904257     |
| 18 Apr 2019 | 12:08 pm | VB108010.D         | 8260 STD 2.0 PPB   | 1904257     |
| 18 Apr 2019 | 12:38 pm | VB108011.D         | 8260 STD 5.0 PPB   | 1904257     |
| 18 Apr 2019 | 12:38 pm | Copy of VB108011.D | 8260 STD 5.0 PPB   | 1904257     |
| 18 Apr 2019 | 1:09 pm  | VB108012.D         | 8260 STD 10 PPB    | 1904257     |
| 18 Apr 2019 | 1:40 pm  | VB108013.D         | 8260 STD 20 PPB    | 1904257     |
| 18 Apr 2019 | 2:11 pm  | VB108014.D         | 8260 STD 50 PPB    | 1901533     |
| 18 Apr 2019 | 2:42 pm  | VB108015.D         | 8260 STD 100 PPB   | 1901533     |
| 18 Apr 2019 | 3:13 pm  | VB108016.D         | 8260 STD 200 PPB   | 1901533     |
| 18 Apr 2019 | 3:43 pm  | VB108017.D         | 8260 ETOH 500 PPB  |             |
| 18 Apr 2019 | 4:14 pm  | VB108018.D         | 8260 ETOH 1000 PPB |             |
| 18 Apr 2019 | 4:45 pm  | VB108019.D         | 8260 ETOH 2000 PPB |             |
| 18 Apr 2019 | 5:15 pm  | VB108020.D         | CLEAN UP           |             |
| 18 Apr 2019 | 5:46 pm  | VB108021.D         | CLEAN UP           |             |
| 18 Apr 2019 | 6:17 pm  | VB108022.D         | CLEAN UP           |             |
| 18 Apr 2019 | 6:48 pm  | VB108023.D         | ICV                |             |
| 18 Apr 2019 | 7:18 pm  | VB108024.D         | ICVD               |             |
| 18 Apr 2019 | 7:49 pm  | VB108025.D         | CLEAN UP           |             |
| 18 Apr 2019 | 8:20 pm  | VB108026.D         | CLEAN UP           |             |
| 18 Apr 2019 | 8:51 pm  | VB108027.D         | CLEAN UP           |             |
| 18 Apr 2019 | 9:21 pm  | VB108028.D         | CLEAN UP           |             |
| 18 Apr 2019 | 9:52 pm  | VB108029.D         | CLEAN UP           |             |
| 18 Apr 2019 | 10:23 pm | VB108030.D         | CLEAN UP           |             |
| 18 Apr 2019 | 10:54 pm | VB108031.D         | CLEAN UP           |             |
| 18 Apr 2019 | 11:24 pm | VB108032.D         | CLEAN UP           |             |
| 18 Apr 2019 | 11:55 pm | VB108033.D         | CLEAN UP           |             |
| 19 Apr 2019 | 12:26 am | VB108034.D         | CLEAN UP           |             |
| 19 Apr 2019 | 12:56 am | VB108035.D         | CLEAN UP           |             |

**REVIEWED***By Cathy Rouleau at 12:35 pm, Apr 22, 2019*

Method Path : Y:\1\METHODS\  
 Method File : B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973  
 Last Update : Fri Apr 19 05:42:51 2019  
 Response Via : Initial Calibration

## Calibration Files

0.4 =VB108007.D 0.5 =VB108008.D 1.0 =VB108009.D 2.0 =VB108010.D 5.0 =VB108011.D 10 =VB108012.D 20 =VB108013.D  
 50 =VB108014.D 100 =VB108015.D 200 =VB108016.D

|       | Compound              | 0.4            | 0.5   | 1.0   | 2.0   | 5.0   | 10    | 20    | 50    | 100   | 200   | Avg   | %RSD  |
|-------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 1) I  | PENTAFLUOROBENZENE... | -----ISTD----- |       |       |       |       |       |       |       |       |       |       |       |
| 2) S  | 1,2-DICHLOROET...     | 0.790          | 0.791 | 0.794 | 0.784 | 0.786 | 0.776 | 0.768 | 0.740 | 0.744 | 0.757 | 0.773 | 2.58  |
| 3) T  | DICHLORODIFLOU...     | 0.565          | 0.756 | 0.712 | 0.761 | 0.679 | 0.755 | 0.723 | 0.584 | 0.568 | 0.522 | 0.663 | 14.03 |
| 4)    | DIFLUOROCHLORO...     |                |       | 1.210 | 1.092 | 0.990 | 1.055 | 1.009 | 0.999 | 1.009 | 0.946 | 1.039 | 7.87  |
| 5) P  | CHLOROMETHANE         | 1.409          | 1.392 | 1.622 | 1.567 | 1.812 | 1.642 | 1.407 | 1.085 |       | 1.492 |       | 14.71 |
| 6) C  | VINYL CHLORIDE        | 0.706          | 0.911 | 0.853 | 0.906 | 0.777 | 0.880 | 0.836 | 0.771 | 0.759 | 0.722 | 0.812 | 9.24# |
| 7) T  | BROMOMETHANE          |                |       |       |       | 0.390 | 0.348 | 0.345 | 0.372 | 0.413 | 0.445 | 0.386 | 10.07 |
| 8)    | CHLOROETHANE          | 0.385          | 0.438 | 0.486 | 0.488 | 0.440 | 0.470 | 0.468 | 0.425 | 0.418 | 0.404 | 0.442 | 7.94  |
| 9)    | FLUORODICHLORO...     | 1.177          | 1.297 | 1.205 | 1.211 | 1.086 | 1.143 | 1.117 | 1.094 | 1.079 | 1.039 | 1.145 | 6.81  |
| 10) T | TRICHLOROFLUOR...     | 0.788          | 0.888 | 0.909 | 0.982 | 0.915 | 0.975 | 0.951 | 0.905 | 0.875 | 0.863 | 0.905 | 6.36  |
| 11)   | ETHANOL               |                |       |       |       |       | 0.009 | 0.007 | 0.008 | 0.007 | 0.007 | 0.008 | 12.68 |
| 12) T | DI ETHYL ETHER        | 0.546          | 0.549 | 0.528 | 0.601 | 0.574 | 0.593 | 0.579 | 0.608 | 0.603 | 0.592 | 0.577 | 4.74  |
| 13)   | ACROLEIN              |                |       |       | 0.204 | 0.178 | 0.181 | 0.183 | 0.145 | 0.142 | 0.143 | 0.168 | 14.50 |
| 14) T | ACETONE               |                | 0.355 | 0.317 | 0.260 | 0.271 | 0.265 | 0.258 | 0.253 | 0.236 | 0.277 |       | 14.17 |
| 15) C | 1,1-DICHLOROET...     | 0.973          | 1.104 | 1.070 | 1.116 | 0.961 | 1.063 | 1.021 | 0.968 | 0.958 | 0.919 | 1.015 | 6.79# |
| 16)   | 1,1,2-TRICL-1,...     | 0.326          | 0.387 | 0.420 | 0.444 | 0.397 | 0.445 | 0.429 | 0.471 | 0.464 | 0.450 | 0.423 | 10.34 |
| 17)   | IODOMETHANE           |                |       | 0.558 | 0.656 | 0.680 | 0.799 | 0.825 | 0.804 | 0.785 | 0.689 | 0.724 | 12.87 |
| 18)   | METHYL ACETATE        |                |       | 1.007 | 0.913 | 0.800 | 0.722 | 0.736 | 0.871 | 0.957 | 0.960 | 0.871 | 12.36 |
| 19)   | T-BUTYL ALCOHOL       |                |       | 0.077 | 0.082 | 0.076 | 0.079 | 0.077 | 0.082 | 0.080 | 0.080 | 0.079 | 2.73  |
| 20)   | ACRYLONITRILE         |                |       | 0.232 | 0.307 | 0.303 | 0.312 | 0.323 | 0.359 | 0.360 | 0.360 | 0.319 | 13.53 |
| 21) T | METHYLENE CHLO...     | 1.242          | 1.276 | 1.166 | 1.277 | 1.186 | 1.217 | 1.193 | 1.119 | 1.130 | 1.082 | 1.189 | 5.56  |
| 22)   | CARBON DISULFIDE      | 1.679          | 1.773 | 1.736 | 1.788 | 1.572 | 1.692 | 1.634 | 1.487 | 1.368 | 1.136 | 1.587 | 12.96 |
| 23) T | METHYL TERT-BU...     | 1.577          | 1.597 | 1.553 | 1.711 | 1.672 | 1.734 | 1.739 | 1.868 | 1.883 | 1.820 | 1.715 | 6.86  |
| 24) T | TRANS 1,2-DICH...     | 0.865          | 0.970 | 1.002 | 1.084 | 1.011 | 1.037 | 1.032 | 0.974 | 0.980 | 0.950 | 0.991 | 5.96  |
| 25) P | 1,1-DICHLOROET...     | 0.987          | 1.299 | 1.292 | 1.329 | 1.221 | 1.277 | 1.253 | 1.173 | 1.194 | 1.170 | 1.219 | 8.08  |
| 26)   | VINYL ACETATE         | 1.949          | 1.897 | 1.988 | 2.030 | 2.107 | 2.112 | 2.206 | 1.942 | 1.773 | 1.591 | 1.959 | 9.12  |
| 27)   | DI ISOPROPYL E...     | 2.342          | 2.451 | 2.508 | 2.684 | 2.555 | 2.688 | 2.746 | 2.876 | 2.867 | 2.736 | 2.645 | 6.68  |
| 28) T | 2-BUTANONE            | 0.419          | 0.419 | 0.419 | 0.420 | 0.404 | 0.427 | 0.424 | 0.428 | 0.422 | 0.406 | 0.419 | 1.96  |
| 29)   | T-BUTYL ETHYL ...     | 1.981          | 2.067 | 2.149 | 2.287 | 2.223 | 2.344 | 2.392 | 2.451 | 2.488 | 2.449 | 2.283 | 7.63  |
| 30) T | CIS-1,2-DICHL...      | 1.086          | 1.199 | 1.215 | 1.294 | 1.200 | 1.272 | 1.251 | 1.170 | 1.179 | 1.158 | 1.202 | 5.00  |
| 31)   | 2,2-DICHLOROPR...     | 0.949          | 0.992 | 0.980 | 0.991 | 0.875 | 0.927 | 0.894 | 0.827 | 0.816 | 0.790 | 0.904 | 8.35  |
| 32)   | ETHYL ACETATE         |                |       |       | 1.161 | 1.087 | 1.061 | 1.017 | 1.031 | 1.037 | 1.049 | 1.063 | 4.56  |
| 33)   | BROMOCHLOROMET...     |                |       | 0.262 | 0.332 | 0.311 | 0.337 | 0.324 | 0.298 | 0.288 | 0.262 | 0.302 | 9.72  |
| 34) T | TETRAHYDROFURAN       |                |       |       | 0.295 | 0.273 | 0.282 | 0.264 | 0.289 | 0.283 | 0.285 | 0.282 | 3.57  |
| 35)   | T-BUTYL FORMATE       |                |       |       | 0.477 | 0.549 | 0.552 | 0.676 | 0.685 | 0.701 | 0.653 | 0.613 | 14.10 |
| 36) C | CHLOROFORM            | 1.066          | 1.158 | 1.091 | 1.199 | 1.096 | 1.163 | 1.145 | 1.074 | 1.095 | 1.073 | 1.116 | 4.15# |
| 37) T | 1,1,1-TRICHLOR...     | 0.887          | 0.906 | 1.022 | 0.991 | 0.966 | 1.025 | 1.019 | 0.963 | 0.977 | 0.956 | 0.971 | 4.83  |
| 38)   | CYCLOHEXANE           |                |       |       |       | 1.310 | 1.338 | 1.263 | 1.248 | 1.241 | 1.194 | 1.266 | 4.05  |
| 39) T | CARBON TETRACH...     | 0.663          | 0.805 | 0.794 | 0.939 | 0.816 | 0.888 | 0.880 | 0.832 | 0.839 | 0.817 | 0.827 | 8.81  |
| 40)   | 1,1-DICHLOROPR...     | 0.702          | 0.754 | 0.766 | 0.810 | 0.759 | 0.840 | 0.830 | 0.795 | 0.807 | 0.792 | 0.786 | 5.22  |
| 41) T | BENZENE               | 2.180          | 2.339 | 2.218 | 2.262 | 2.121 | 2.293 | 2.264 | 2.169 | 2.183 | 2.102 | 2.213 | 3.43  |
| 42)   | T-AMYL ALCOHOL        |                |       | 0.048 | 0.051 | 0.053 | 0.055 | 0.057 | 0.061 | 0.063 | 0.064 | 0.057 | 10.05 |
| 43)   | T-AMYLMETHYL E...     | 1.298          | 1.448 | 1.516 | 1.588 | 1.566 | 1.620 | 1.624 | 1.768 | 1.807 | 1.748 | 1.598 | 9.72  |

Method Path : Y:\1\METHODS\  
 Method File : B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973

|     |   |                       |       |       |       |       |       |       |       |       |       |       |       |       |
|-----|---|-----------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 44) | I | 1,4-DIFLOUROBENZEN... | ----- | ISTD  | ----- |       |       |       |       |       |       |       |       |       |
| 45) | S | TOLUENE-D8 SS         | 1.174 | 1.177 | 1.175 | 1.196 | 1.180 | 1.168 | 1.161 | 1.162 | 1.165 | 1.181 | 1.174 | 0.91  |
| 46) | T | 1,2-DICHLOROET...     | 0.621 | 0.683 | 0.764 | 0.767 | 0.718 | 0.750 | 0.742 | 0.698 | 0.697 | 0.679 | 0.712 | 6.39  |
| 47) | T | TRICHLOROETHENE       | 0.285 | 0.414 | 0.369 | 0.405 | 0.368 | 0.410 | 0.393 | 0.390 | 0.389 | 0.381 | 0.381 | 9.69  |
| 48) |   | METHYLCYCLOHEXANE     | 0.502 | 0.528 | 0.494 | 0.501 | 0.462 | 0.516 | 0.511 | 0.554 | 0.554 | 0.542 | 0.516 | 5.63  |
| 49) | C | 1,2-DICHLOROPR...     | 0.376 | 0.377 | 0.447 | 0.477 | 0.434 | 0.459 | 0.453 | 0.435 | 0.438 | 0.430 | 0.433 | 7.56# |
| 50) | T | DIBROMOMETHANE        | 0.165 | 0.230 | 0.249 | 0.285 | 0.273 | 0.282 | 0.279 | 0.266 | 0.262 | 0.259 | 0.255 | 14.03 |
| 51) |   | 1,4-DIOXANE           |       |       |       |       | 0.002 | 0.002 | 0.003 | 0.003 | 0.003 | 0.004 | 0.003 | 22.13 |
| 52) | T | BROMODICHLOROM...     | 0.486 | 0.525 | 0.551 | 0.562 | 0.548 | 0.575 | 0.567 | 0.547 | 0.550 | 0.543 | 0.545 | 4.59  |
| 53) |   | 2-CHLOROETHYL...      | 0.260 | 0.299 | 0.291 | 0.305 | 0.296 | 0.301 | 0.304 | 0.305 | 0.293 | 0.268 | 0.292 | 5.45  |
| 54) | T | MIBK                  | 0.530 | 0.537 | 0.546 | 0.555 | 0.537 | 0.548 | 0.551 | 0.571 | 0.534 | 0.487 | 0.540 | 4.10  |
| 55) | T | CIS-1,3-DICHL...      | 0.555 | 0.565 | 0.596 | 0.636 | 0.640 | 0.665 | 0.667 | 0.649 | 0.649 | 0.633 | 0.626 | 6.37  |
| 56) | C | TOLUENE               | 1.453 | 1.624 | 1.554 | 1.673 | 1.511 | 1.565 | 1.565 | 1.504 | 1.485 | 1.441 | 1.537 | 4.79# |
| 57) | T | TRANS-1,3,-DIC...     | 0.561 | 0.515 | 0.567 | 0.613 | 0.605 | 0.627 | 0.642 | 0.625 | 0.629 | 0.617 | 0.600 | 6.63  |
| 58) |   | ETHYL METHACRY...     |       |       |       |       |       |       |       |       |       | 0.000 |       | -1.00 |
| 59) | T | 1,1,2-TRICHLOR...     | 0.304 | 0.350 | 0.336 | 0.372 | 0.332 | 0.363 | 0.365 | 0.353 | 0.358 | 0.353 | 0.349 | 5.65  |
| 60) |   | 2-HEXANONE            | 0.404 | 0.429 | 0.400 | 0.417 | 0.387 | 0.400 | 0.394 | 0.405 | 0.381 | 0.354 | 0.397 | 5.17  |
| 61) | T | TETRACHLOROETHENE     | 0.226 | 0.325 | 0.274 | 0.310 | 0.289 | 0.314 | 0.316 | 0.302 | 0.308 | 0.304 | 0.297 | 9.67  |
| 62) |   | 1,3-DICHLOROPR...     | 0.544 | 0.549 | 0.592 | 0.650 | 0.628 | 0.656 | 0.645 | 0.625 | 0.625 | 0.614 | 0.613 | 6.46  |
| 63) | T | DIBROMOCHLOROM...     | 0.298 | 0.348 | 0.372 | 0.415 | 0.409 | 0.441 | 0.441 | 0.433 | 0.441 | 0.437 | 0.403 | 12.15 |
| 64) | T | 1,2-DIBROMOETHANE     | 0.363 | 0.328 | 0.384 | 0.393 | 0.393 | 0.408 | 0.413 | 0.406 | 0.402 | 0.396 | 0.389 | 6.60  |
| 65) | I | CHLOROBENZENE-D5      | ISTD  | ----- | ISTD  | ----- |       |       |       |       |       |       |       |       |
| 66) | S | 4-BROMOFLUROBE...     | 0.896 | 0.878 | 0.897 | 0.899 | 0.899 | 0.890 | 0.887 | 0.858 | 0.871 | 0.854 | 0.883 | 1.91  |
| 67) | P | CHLOROBENZENE         | 1.820 | 1.953 | 1.899 | 1.978 | 1.864 | 1.938 | 1.974 | 1.863 | 1.859 | 1.777 | 1.892 | 3.57  |
| 68) | T | 1,1,1,2-TETRAC...     | 0.486 | 0.616 | 0.679 | 0.690 | 0.693 | 0.734 | 0.768 | 0.739 | 0.755 | 0.734 | 0.689 | 12.23 |
| 69) | C | ETHYLBENZENE          | 3.306 | 3.524 | 3.397 | 3.444 | 3.133 | 3.406 | 3.380 | 3.191 | 3.186 | 2.981 | 3.295 | 5.08# |
| 70) | T | M/P-XYLENES           | 2.752 | 2.852 | 2.699 | 2.845 | 2.532 | 2.698 | 2.665 | 2.484 | 2.443 | 2.238 | 2.621 | 7.41  |
| 71) | T | 0-XYLENE              | 2.787 | 2.863 | 2.846 | 2.849 | 2.565 | 2.749 | 2.747 | 2.592 | 2.591 | 2.445 | 2.703 | 5.37  |
| 72) | T | STYRENE               | 1.994 | 2.221 | 2.130 | 2.219 | 2.118 | 2.273 | 2.285 | 2.149 | 2.139 | 2.035 | 2.156 | 4.43  |
| 73) | P | BROMOFORM             |       | 0.435 | 0.493 | 0.560 | 0.537 | 0.570 | 0.595 | 0.595 | 0.621 | 0.612 | 0.558 | 10.89 |
| 74) | T | ISOPROPYLBENZENE      | 2.952 | 3.223 | 3.205 | 3.273 | 3.017 | 3.232 | 3.209 | 2.970 | 3.015 | 2.839 | 3.094 | 4.89  |
| 75) |   | CIS-1,4-DICHL...      |       |       |       |       |       |       |       |       |       | 0.000 |       | -1.00 |
| 76) | P | 1,1,2,2-TETRAC...     | 0.877 | 0.780 | 0.893 | 0.901 | 0.883 | 0.916 | 0.946 | 0.897 | 0.914 | 0.910 | 0.892 | 4.90  |
| 77) |   | 1,4-DICHLORO-2...     |       |       | 0.361 | 0.434 | 0.393 | 0.413 | 0.428 | 0.449 | 0.457 | 0.450 | 0.423 | 7.74  |
| 78) |   | BROMOBENZENE          | 1.277 | 1.383 | 1.369 | 1.396 | 1.274 | 1.333 | 1.331 | 1.241 | 1.271 | 1.230 | 1.310 | 4.56  |
| 79) | T | 1,2,3-TRICHLOR...     |       | 0.272 | 0.263 | 0.296 | 0.269 | 0.284 | 0.286 | 0.281 | 0.290 | 0.287 | 0.281 | 3.92  |
| 80) | T | N-PROPYLBENZENE       | 4.003 | 3.948 | 3.983 | 4.001 | 3.619 | 3.931 | 3.925 | 3.623 | 3.649 | 3.422 | 3.810 | 5.53  |
| 81) | T | 2-CHLOROTOLUENE       | 2.509 | 2.629 | 2.437 | 2.470 | 2.218 | 2.396 | 2.335 | 2.164 | 2.181 | 2.077 | 2.342 | 7.56  |
| 82) | T | 1,3,5-TRIMETHY...     | 2.699 | 2.837 | 2.703 | 2.733 | 2.492 | 2.729 | 2.715 | 2.535 | 2.598 | 2.477 | 2.652 | 4.50  |
| 83) |   | 4-CHLOROTOLUENE       | 2.862 | 3.142 | 2.857 | 2.920 | 2.715 | 2.924 | 2.853 | 2.637 | 2.668 | 2.526 | 2.810 | 6.30  |
| 84) | I | 1,4-DICHLOROBENZEN... | ----- | ISTD  | ----- |       |       |       |       |       |       |       |       |       |
| 85) | T | TERT-BUTYLBENZENE     | 2.231 | 2.375 | 2.247 | 2.314 | 2.104 | 2.245 | 2.218 | 2.142 | 2.105 | 2.049 | 2.203 | 4.63  |
| 86) | T | 1,2,4-TRIMETHY...     | 2.848 | 2.938 | 2.765 | 2.870 | 2.664 | 2.740 | 2.771 | 2.710 | 2.666 | 2.628 | 2.760 | 3.62  |
| 87) |   | SEC-BUTYLBENZENE      | 3.119 | 3.423 | 3.126 | 3.304 | 2.952 | 3.127 | 3.127 | 3.031 | 2.951 | 2.844 | 3.101 | 5.51  |
| 88) | T | 1,3-DICHLOROB...      | 1.659 | 1.783 | 1.715 | 1.689 | 1.579 | 1.657 | 1.672 | 1.599 | 1.570 | 1.537 | 1.646 | 4.56  |
| 89) | T | P-ISOPROPYLTOL...     | 2.792 | 2.758 | 2.680 | 2.784 | 2.550 | 2.729 | 2.715 | 2.660 | 2.628 | 2.528 | 2.682 | 3.43  |
| 90) | T | 1,4-DICHLOROB...      | 1.859 | 1.764 | 1.716 | 1.803 | 1.650 | 1.722 | 1.733 | 1.669 | 1.646 | 1.597 | 1.716 | 4.61  |
| 91) | T | N-BUTYLBENZENE        | 2.429 | 2.693 | 2.365 | 2.462 | 2.257 | 2.422 | 2.416 | 2.372 | 2.334 | 2.281 | 2.403 | 5.04  |
| 92) | T | 1,2-DICHLOROB...      | 1.513 | 1.842 | 1.601 | 1.588 | 1.570 | 1.616 | 1.609 | 1.546 | 1.532 | 1.487 | 1.590 | 6.17  |
| 93) |   | 1,2-DIBROMO-3-...     |       |       | 0.137 | 0.175 | 0.181 | 0.198 | 0.191 | 0.198 | 0.195 | 0.195 | 0.184 | 11.22 |



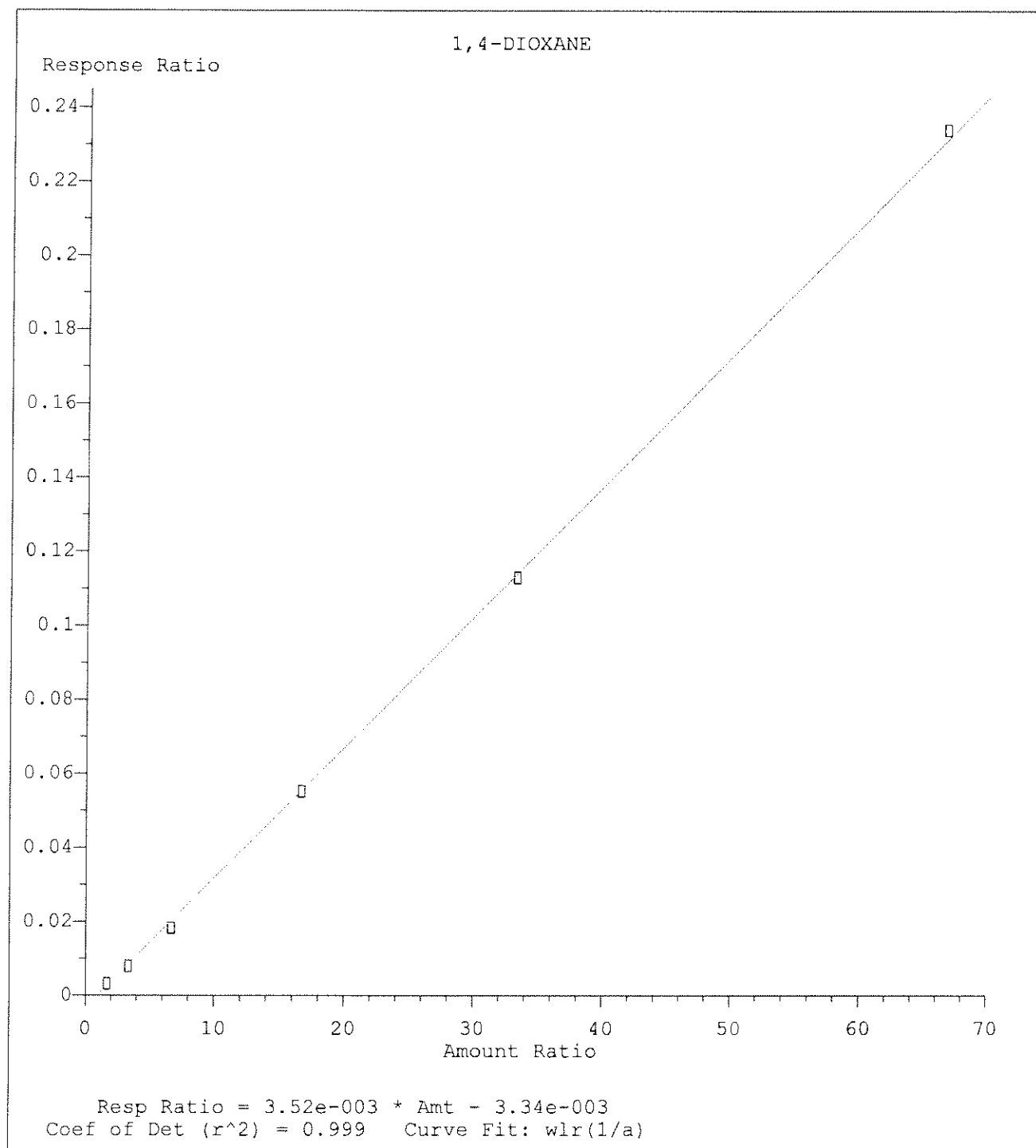
Method Path : Y:\1\METHODS\

Method File : B041819W.M

Title : 8260 CALIBRATION VOAMS 5973

|       |                   |       |       |       |       |       |       |       |       |       |       |       |       |
|-------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 94)   | 1,3,5-TRICHLOR... | 1.142 | 1.038 | 1.026 | 1.079 | 0.982 | 1.045 | 1.051 | 1.054 | 1.055 | 1.029 | 1.050 | 3.92  |
| 95) T | 1,2,4-TRICHLOR... | 1.067 | 1.061 | 1.064 | 1.061 | 1.001 | 1.037 | 1.030 | 1.011 | 1.011 | 0.981 | 1.032 | 2.96  |
| 96) T | HEXACHLOROBUTA... | 0.286 | 0.272 | 0.394 | 0.372 | 0.358 | 0.376 | 0.365 | 0.365 | 0.374 | 0.359 | 0.352 | 11.34 |
| 97) T | NAPHTHALENE       | 2.843 | 2.977 | 2.678 | 2.731 | 2.610 | 2.688 | 2.706 | 2.716 | 2.644 | 2.543 | 2.714 | 4.48  |
| 98)   | 1,2,3-TRICHLOR... | 0.988 | 0.961 | 0.886 | 0.985 | 0.898 | 0.929 | 0.924 | 0.913 | 0.919 | 0.895 | 0.930 | 3.93  |

-----  
(#) = Out of Range



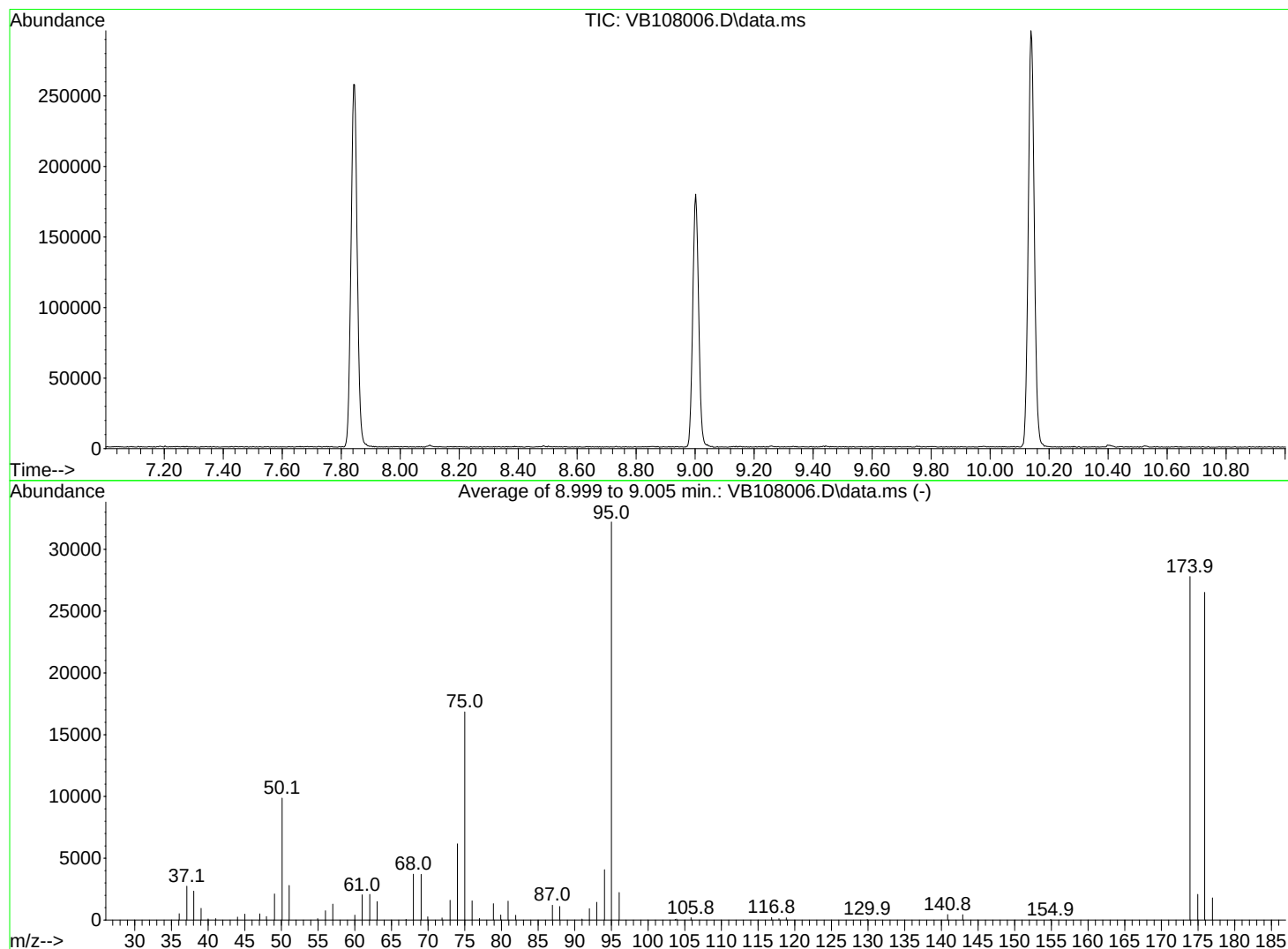
Method Name: C:\MSDCHEM\1\METHODS\B041819W.M  
Calibration Table Last Updated: Fri Apr 19 05:25:51 2019

Data Path : Y:\1\DATA\B041819\  
Data File : VB108006.D  
Acq On : 18 Apr 2019 10:04 am  
Operator :  
Sample : BFB  
Misc :  
ALS Vial : 3 Sample Multiplier: 1

Inst : GCMSVOA2

Integration File: 8260LOW.P

Method : Y:\1\METHODS\B041819W.M  
Title : 8260 CALIBRATION VOAMS 5973  
Last Update : Fri Apr 19 05:42:51 2019



AutoFind: Scans 2785, 2786, 2787; Background Corrected with Scan 2773

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|-------------|--------------|--------------|--------------|-----------|---------|------------------|
| 50          | 95           | 15           | 40           | 30.6      | 9866    | PASS             |
| 75          | 95           | 30           | 60           | 52.3      | 16848   | PASS             |
| 95          | 95           | 100          | 100          | 100.0     | 32216   | PASS             |
| 96          | 95           | 5            | 9            | 6.9       | 2229    | PASS             |
| 173         | 174          | 0.00         | 2            | 0.0       | 0       | PASS             |
| 174         | 95           | 50           | 100          | 86.3      | 27792   | PASS             |
| 175         | 174          | 5            | 9            | 7.5       | 2084    | PASS             |
| 176         | 174          | 95           | 101          | 95.4      | 26520   | PASS             |
| 177         | 176          | 5            | 9            | 6.8       | 1791    | PASS             |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108007.D  
 Acq On : 18 Apr 2019 10:35 am  
 Operator :  
 Sample : 8260 STD 0.4 PPB 1904257  
 Misc :  
 ALS Vial : 4 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 11:27:39 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon  | Response | Conc     | Units | Dev     | (Min) |
|-------------------------------|--------|-------|----------|----------|-------|---------|-------|
| Internal Standards            |        |       |          |          |       |         |       |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298  | 168   | 73033    | 30.00    | UG/L  |         | 0.00  |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017  | 114   | 115873   | 30.00    | UG/L  |         | 0.00  |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842  | 82    | 62846    | 30.00    | UG/L  |         | 0.00  |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.138 | 152   | 63101    | 30.00    | UG/L  |         | 0.00  |
| System Monitoring Compounds   |        |       |          |          |       |         |       |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582  | 65    | 48078    | 34.90    | UG/L  |         | 0.00  |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =     | 139.60% | #     |
| 45) TOLUENE-D8 SS             | 6.444  | 98    | 113386   | 24.87    | UG/L  |         | 0.00  |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =     | 99.48%  |       |
| 66) 4-BROMOFLUROBENZENE SS    | 8.999  | 95    | 46933    | 24.90    | UG/L  |         | 0.00  |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =     | 99.60%  |       |
| Target Compounds              |        |       |          |          |       |         |       |
|                               |        |       |          |          |       | Qvalue  |       |
| 3) DICHLORODIFLOUROMETHANE    | 1.146  | 85    | 550      | 0.38     | UG/L  | #       | 43    |
| 4) DIFLUOROCHLOROMETHANE      | 0.000  |       | 0        | N.D.     | d     |         |       |
| 5) CHLOROMETHANE              | 1.254  | 50    | 1372m    | 0.62     | UG/L  |         |       |
| 6) VINYL CHLORIDE             | 1.328  | 62    | 687      | 0.41     | UG/L  | #       | 43    |
| 7) BROMOMETHANE               | 1.533  | 94    | 1047     | 1.11     | UG/L  | #       | 79    |
| 8) CHLOROETHANE               | 1.598  | 64    | 375      | 0.42     | UG/L  | #       | 44    |
| 9) FLUORODICHLOROMETHANE      | 1.720  | 67    | 1146     | 0.55     | UG/L  |         | 93    |
| 10) TRICHLOROFLUOROMETHANE    | 1.755  | 101   | 767      | 0.45     | UG/L  | #       | 18    |
| 11) ETHANOL                   | 0.000  |       | 0        | N.D.     | d     |         |       |
| 12) DI ETHYL ETHER            | 1.951  | 59    | 532      | 0.47     | UG/L  | #       | 4     |
| 13) ACROLEIN                  | 2.050  | 56    | 2557     | 7.60     | UG/L  | #       | 82    |
| 14) ACETONE                   | 2.169  | 43    | 4373m    | 9.99     | UG/L  |         |       |
| 15) 1,1-DICHLOROETHENE        | 2.115  | 61    | 947      | 0.53     | UG/L  | #       | 30    |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.118  | 101   | 317m     | 0.33     | UG/L  |         |       |
| 17) IODOMETHANE               | 2.235  | 142   | 4476     | 2.52     | UG/L  |         | 94    |
| 18) METHYL ACETATE            | 0.000  |       | 0        | N.D.     | d     |         |       |
| 19) T-BUTYL ALCOHOL           | 0.000  |       | 0        | N.D.     | d     |         |       |
| 20) ACRYLONITRILE             | 0.000  |       | 0        | N.D.     |       |         |       |
| 21) METHYLENE CHLORIDE        | 2.508  | 49    | 1209     | 0.60     | UG/L  | #       | 58    |
| 22) CARBON DISULFIDE          | 2.286  | 76    | 16352    | 4.30     | UG/L  |         | 100   |
| 23) METHYL TERT-BUTYL ETHE... | 2.744  | 73    | 1536     | 0.42     | UG/L  | #       | 47    |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.749  | 61    | 842      | 0.43     | UG/L  | #       | 27    |
| 25) 1,1-DICHLOROETHANE        | 3.176  | 63    | 961      | 0.38     | UG/L  | #       | 51    |
| 26) VINYL ACETATE             | 3.232  | 43    | 18974    | 5.73     | UG/L  | #       | 92    |
| 27) DI ISOPROPYL ETHER        | 3.238  | 45    | 2281     | 0.48     | UG/L  | #       | 52    |
| 28) 2-BUTANONE                | 3.801  | 43    | 4076     | 5.34     | UG/L  | #       | 61    |
| 29) T-BUTYL ETHYL ETHER       | 3.610  | 59    | 1929     | 0.42     | UG/L  |         | 91    |
| 30) CIS-1,2-DICHLOROETHENE    | 3.761  | 61    | 1058     | 0.46     | UG/L  | #       | 26    |
| 31) 2,2-DICHLOROPROPANE       | 3.761  | 77    | 924      | 0.61     | UG/L  | #       | 47    |
| 32) ETHYL ACETATE             | 0.000  |       | 0        | N.D.     |       |         |       |
| 33) BROMOCHLOROMETHANE        | 3.997  | 128   | 59m      | 0.09     | UG/L  |         |       |
| 34) TETRAHYDROFURAN           | 0.000  |       | 0        | N.D.     |       |         |       |
| 35) T-BUTYL FORMATE           | 4.145  | 59    | 194m     | 0.15     | UG/L  |         |       |
| 36) CHLOROFORM                | 4.091  | 83    | 1038     | 0.46     | UG/L  |         | 86    |
| 37) 1,1,1-TRICHLOROETHANE     | 4.244  | 97    | 864      | 0.47     | UG/L  | #       | 23    |
| 38) CYCLOHEXANE               | 4.295  | 56    | 3384     | 1.26     | UG/L  | #       | 89    |
| 39) CARBON TETRACHLORIDE      | 4.406  | 117   | 646      | 0.40     | UG/L  |         | 92    |
| 40) 1,1-DICHLOROPROPENE       | 4.420  | 75    | 684      | 0.43     | UG/L  | #       | 40    |
| 41) BENZENE                   | 4.622  | 78    | 2123     | 0.41     | UG/L  | #       | 52    |
| 42) T-AMYL ALCOHOL            | 0.000  |       | 0        | N.D.     | d     |         |       |
| 43) T-AMYLMETHYL ETHER        | 4.739  | 73    | 1264     | 0.36     | UG/L  | #       | 66    |
| 46) 1,2-DICHLOROETHANE        | 4.653  | 62    | 960      | 0.46     | UG/L  | #       | 52    |
| 47) TRICHLOROETHENE           | 5.256  | 95    | 441m     | 0.32     | UG/L  |         |       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108007.D  
 Acq On : 18 Apr 2019 10:35 am  
 Operator :  
 Sample : 8260 STD 0.4 PPB 1904257  
 Misc :  
 ALS Vial : 4 Sample Multiplier: 1

Inst : GCMSVOA2

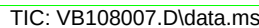
Quant Time: Apr 18 11:27:39 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.429  | 83   | 775      | 0.38 | UG/L # | 76       |
| 49) 1,2-DICHLOROPROPANE       | 5.489  | 63   | 581      | 0.36 | UG/L # | 8        |
| 50) DIBROMOMETHANE            | 5.608  | 93   | 255m     | 0.29 | UG/L   |          |
| 51) 1,4-DIOXANE               | 0.000  |      | 0        | N.D. |        |          |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 751      | 0.43 | UG/L # | 26       |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.074  | 63   | 4017     | 3.78 | UG/L # | 60       |
| 54) MIBK                      | 6.367  | 43   | 8195     | 4.99 | UG/L # | 86       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.202  | 75   | 858      | 0.40 | UG/L # | 39       |
| 56) TOLUENE                   | 6.503  | 91   | 2245     | 0.39 | UG/L   | 97       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.751  | 75   | 866      | 0.44 | UG/L # | 42       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D. | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.924  | 97   | 470m     | 0.36 | UG/L   |          |
| 60) 2-HEXANONE                | 7.177  | 43   | 6245     | 5.45 | UG/L # | 82       |
| 61) TETRACHLOROETHENE         | 7.029  | 164  | 349m     | 0.31 | UG/L   |          |
| 62) 1,3-DICHLOROPROPANE       | 7.080  | 76   | 840      | 0.37 | UG/L # | 31       |
| 63) DIBROMOCHLOROMETHANE      | 7.294  | 129  | 460m     | 0.30 | UG/L   |          |
| 64) 1,2-DIBROMOETHANE         | 7.399  | 107  | 561      | 0.39 | UG/L # | 4        |
| 67) CHLOROBENZENE             | 7.870  | 112  | 1525     | 0.37 | UG/L # | 29       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.961  | 131  | 407m     | 0.26 | UG/L   |          |
| 69) ETHYLBENZENE              | 7.987  | 91   | 2770     | 0.40 | UG/L   | 93       |
| 70) M/P-XYLENES               | 8.098  | 91   | 4612     | 0.86 | UG/L   | 88       |
| 71) O-XYLENE                  | 8.490  | 91   | 2335     | 0.42 | UG/L   | 92       |
| 72) STYRENE                   | 8.504  | 104  | 1671     | 0.36 | UG/L # | 69       |
| 73) BROMOFORM                 | 8.683  | 173  | 304m     | 0.25 | UG/L   |          |
| 74) ISOPROPYLBENZENE          | 8.854  | 105  | 2474     | 0.37 | UG/L   | 95       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D. |        |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.172  | 83   | 735      | 0.38 | UG/L # | 26       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 0.000  |      | 0        | N.D. |        |          |
| 78) BROMOBENZENE              | 9.138  | 77   | 1070     | 0.40 | UG/L   | 89       |
| 79) 1,2,3-TRICHLOROPROPANE    | 0.000  |      | 0        | N.D. |        |          |
| 80) N-PROPYLBENZENE           | 9.257  | 91   | 3354     | 0.43 | UG/L   | 91       |
| 81) 2-CHLOROTOLUENE           | 9.337  | 91   | 2102     | 0.44 | UG/L   | 89       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.434  | 105  | 2262     | 0.40 | UG/L   | 89       |
| 83) 4-CHLOROTOLUENE           | 9.442  | 91   | 2398     | 0.43 | UG/L # | 88       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 1877     | 0.40 | UG/L # | 79       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.806  | 105  | 2396     | 0.43 | UG/L # | 84       |
| 87) SEC-BUTYLBENZENE          | 9.976  | 105  | 2624     | 0.42 | UG/L # | 55       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 1396     | 0.42 | UG/L   | 98       |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 2349     | 0.41 | UG/L # | 90       |
| 90) 1,4-DICHLOROBENZENE       | 10.161 | 146  | 1564     | 0.44 | UG/L # | 72       |
| 91) N-BUTYLBENZENE            | 10.528 | 91   | 2044     | 0.46 | UG/L # | 78       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 1273     | 0.39 | UG/L   | 91       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 0.000  |      | 0        | N.D. |        |          |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 961      | 0.43 | UG/L   | 97       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 898      | 0.43 | UG/L # | 78       |
| 96) HEXACHLOROBUTADIENE       | 12.295 | 225  | 241m     | 0.33 | UG/L   |          |
| 97) NAPHTHALENE               | 12.366 | 128  | 2392     | 0.43 | UG/L # | 69       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180  | 831      | 0.44 | UG/L   | 94       |

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

170

Inst : GCMSVOA2

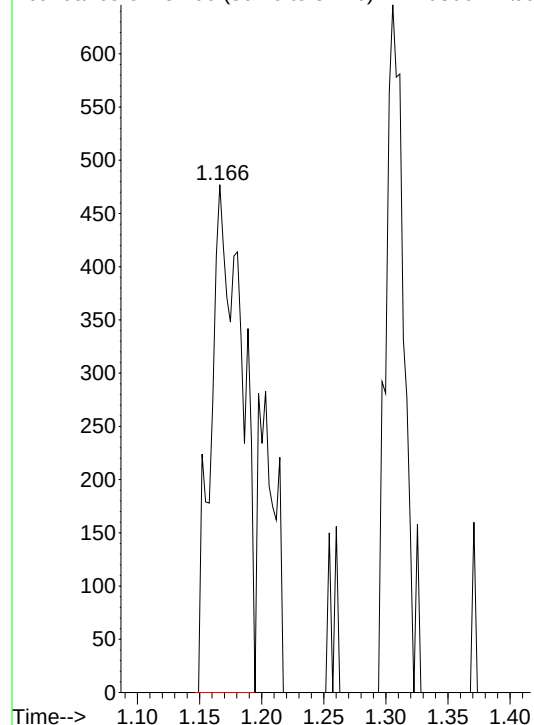


Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
DIFLUOROCHLOROMETHANE

Abundance on 51.00 (50.70 to 51.70): VB108007.D\data



Original Int. Results

-----

RT : 1.17  
Area : 827  
Amount: 0.40237

Manual Int. Results

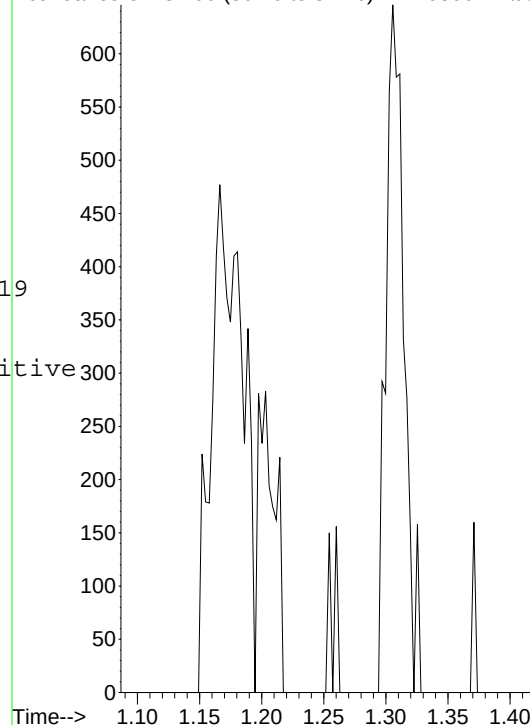
-----

Thu Apr 18 11:25:55 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

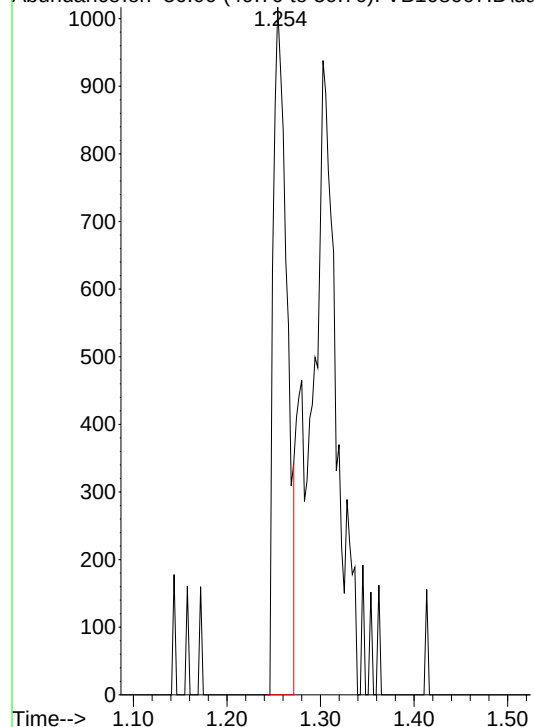
Manual Integration  
DIFLUOROCHLOROMETHANE

Abundance on 51.00 (50.70 to 51.70): VB108007.D\data



Original Integration  
CHLOROMETHANE

Abundance on 50.00 (49.70 to 50.70): VB108007.D\data



Original Int. Results

-----

RT : 1.25  
Area : 1044  
Amount: 0.473491

Manual Int. Results

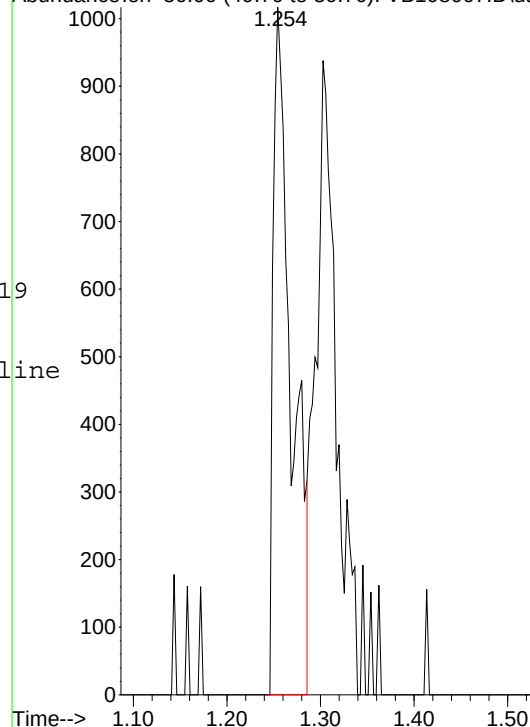
-----

Thu Apr 18 11:26:01 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 1.25  
Area : 1372  
Amount: 0.622251

Manual Integration  
CHLOROMETHANE

Abundance on 50.00 (49.70 to 50.70): VB108007.D\data



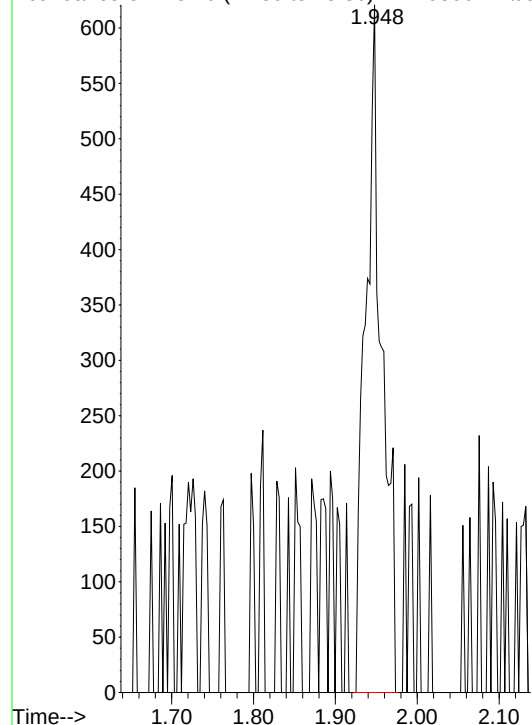
Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHANOL

Abundance on 45.10 (44.80 to 45.80): VB108007.D\data



## Original Int. Results

-----

RT : 1.95  
Area : 863  
Amount: 50.7468

## Manual Int. Results

-----

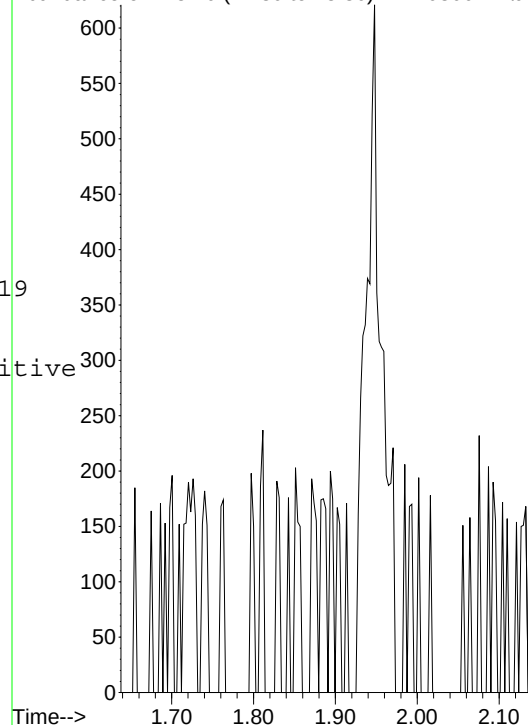
Thu Apr 18 11:26:10 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHANOL

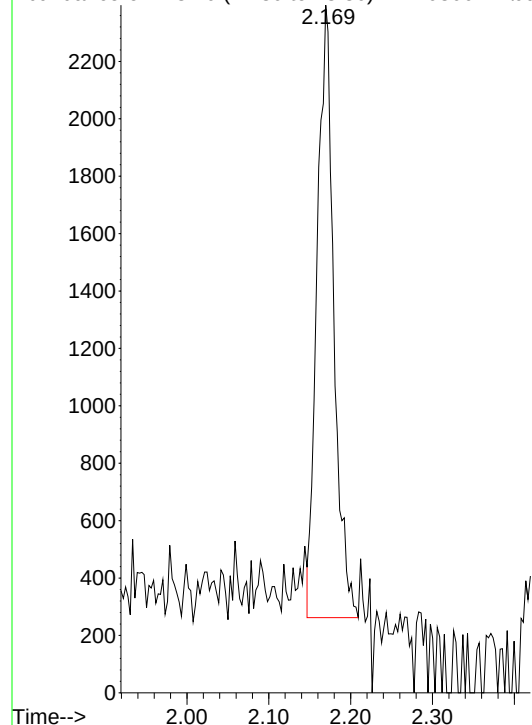
Abundance on 45.10 (44.80 to 45.80): VB108007.D\data



## Original Integration

ACETONE

Abundance on 43.10 (42.80 to 43.80): VB108007.D\data



## Original Int. Results

-----

RT : 2.17  
Area : 3025  
Amount: 6.91303

## Manual Int. Results

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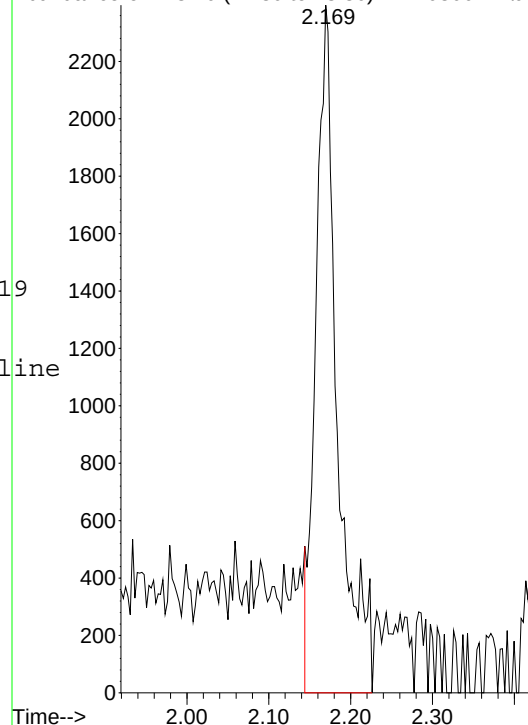
Thu Apr 18 11:26:19 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 2.17  
Area : 4373  
Amount: 9.99361

## Manual Integration

ACETONE

Abundance on 43.10 (42.80 to 43.80): VB108007.D\data





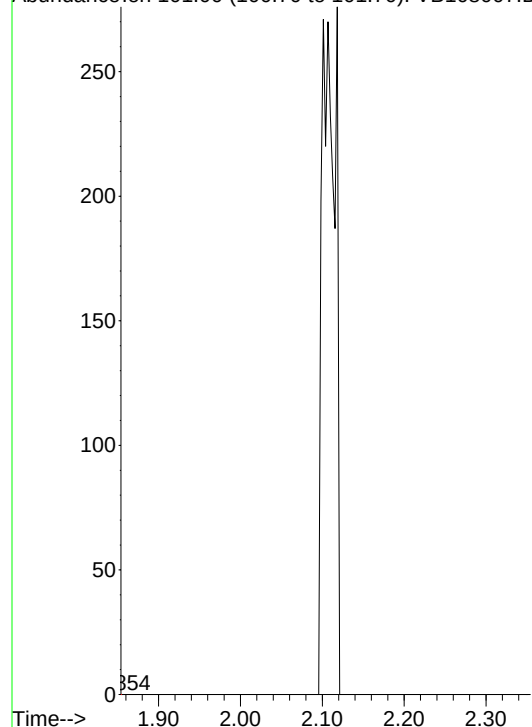
Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

1,1,2-TRICL-1,2,2-TRIFLETHANE

Abundance on 101.00 (100.70 to 101.70): VB108007.D



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:26:25 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 2.12

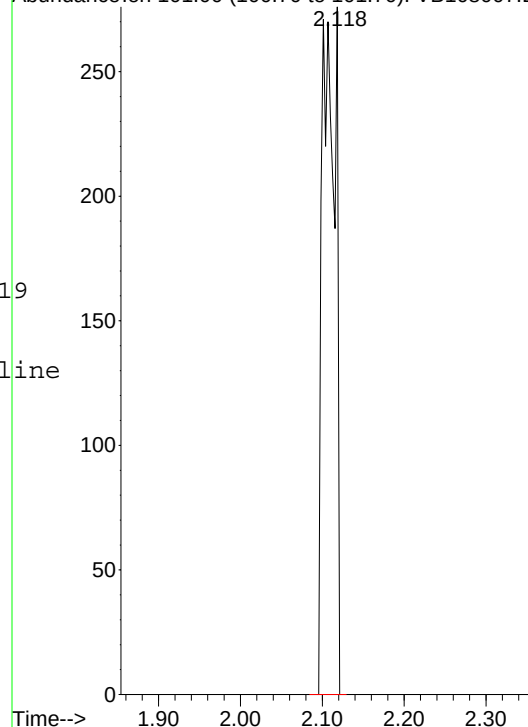
Area : 317

Amount: 0.328126

## Manual Integration

1,1,2-TRICL-1,2,2-TRIFLETHANE

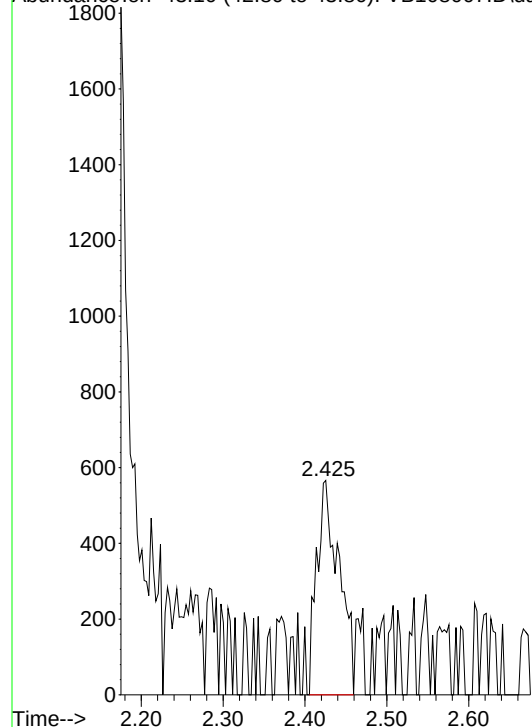
Abundance on 101.00 (100.70 to 101.70): VB108007.D



## Original Integration

METHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108007.D\data



## Original Int. Results

-----

RT : 2.43

Area : 1073

Amount: 0.410949

## Manual Int. Results

-----

Thu Apr 18 11:26:29 2019

MIuser: LBD

Reason: Qdel False Positive

RT : 0.00

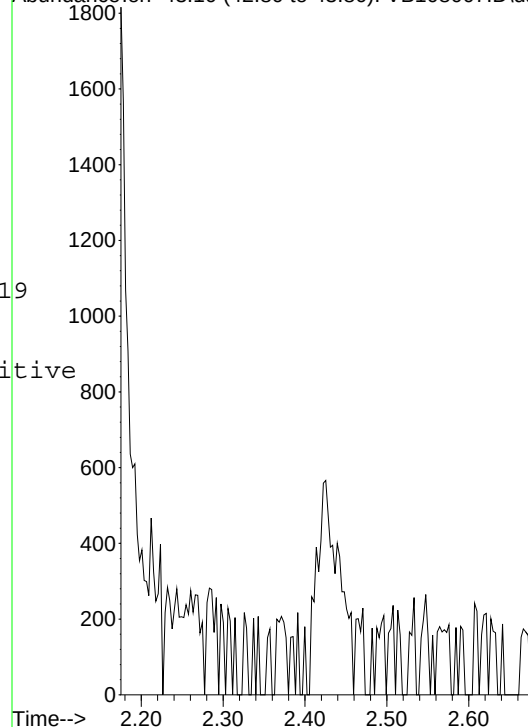
Area : 0

Amount: 0

## Manual Integration

METHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108007.D\data



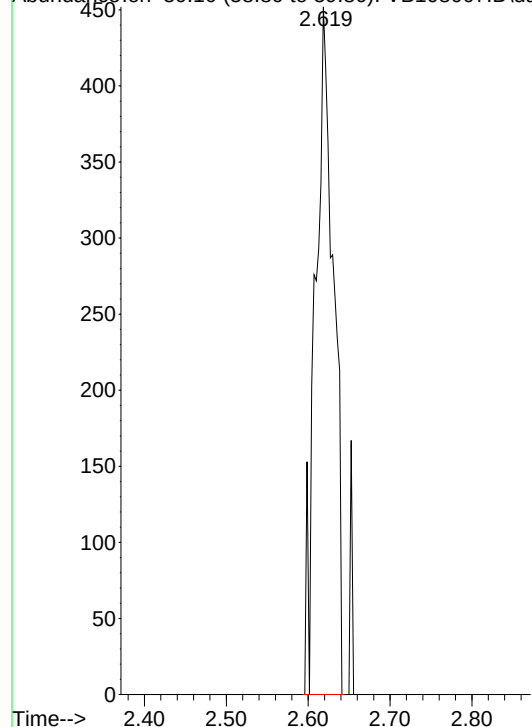
Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

T-BUTYL ALCOHOL

Abundance on 59.10 (58.80 to 59.80): VB108007.D\data



## Original Int. Results

-----

RT : 2.62  
Area : 690  
Amount: 4.1067

## Manual Int. Results

-----

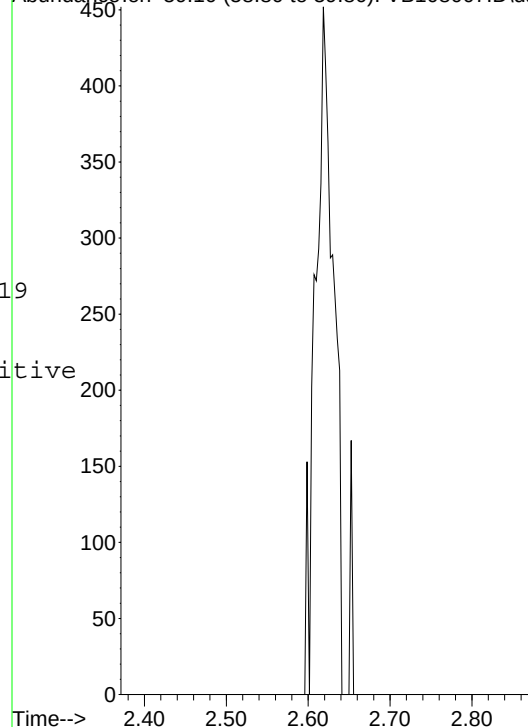
Thu Apr 18 11:26:37 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL ALCOHOL

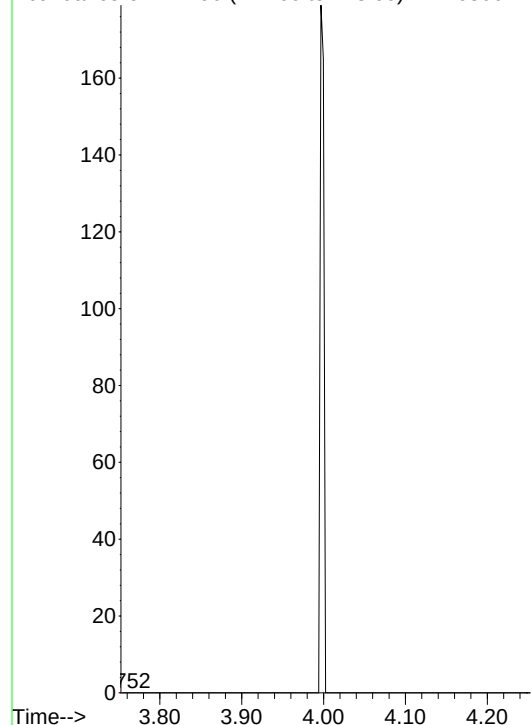
Abundance on 59.10 (58.80 to 59.80): VB108007.D\data



## Original Integration

BROMOCHLOROMETHANE

Abundance on 127.90 (127.60 to 128.60): VB108007.D



## Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

## Manual Int. Results

-----

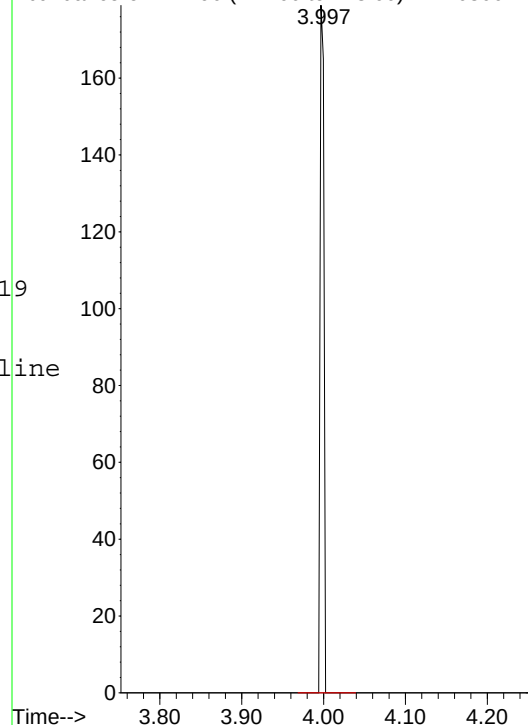
Thu Apr 18 11:26:48 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 4.00  
Area : 59  
Amount: 0.0867979

## Manual Integration

BROMOCHLOROMETHANE

Abundance on 127.90 (127.60 to 128.60): VB108007.D



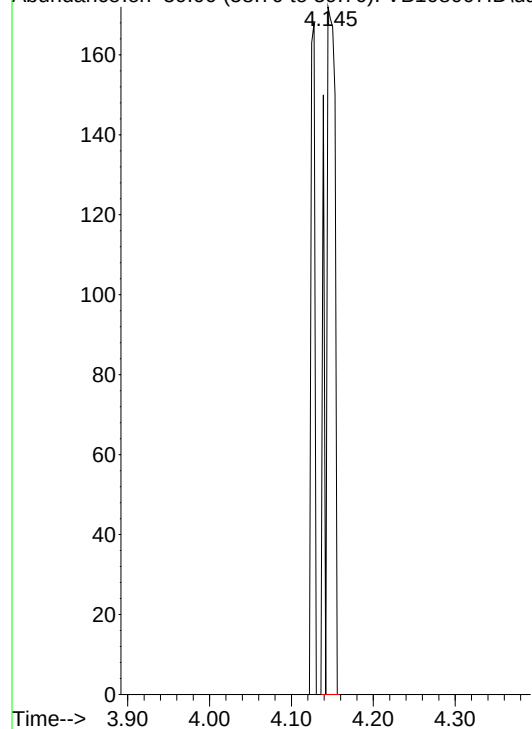
Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): VB108007.D\data



## Original Int. Results

-----

RT : 4.14  
Area : 138  
Amount: 0.108285

## Manual Int. Results

-----

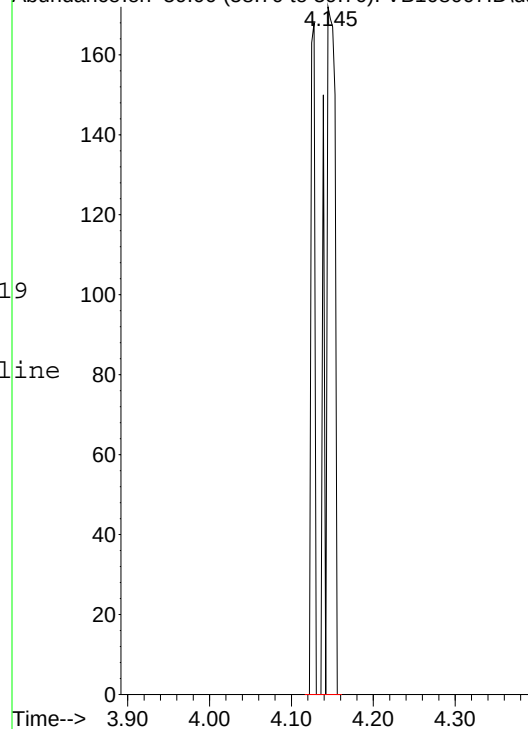
Thu Apr 18 11:26:55 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 4.14  
Area : 194  
Amount: 0.152227

## Manual Integration

T-BUTYL FORMATE

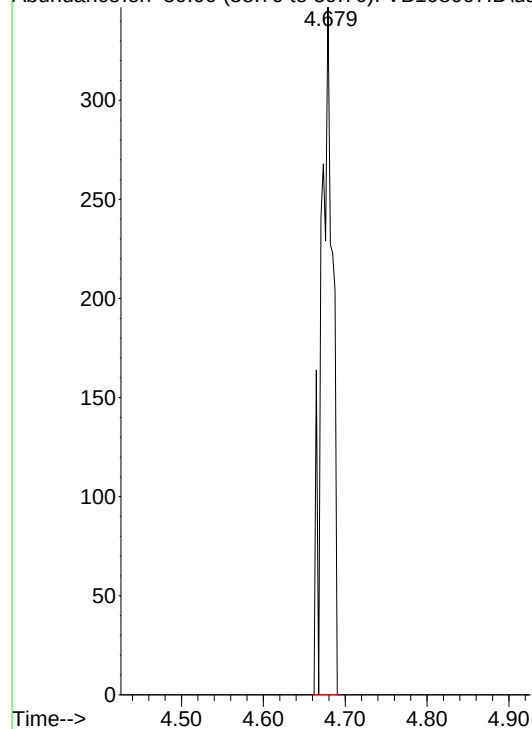
Abundance on 59.00 (58.70 to 59.70): VB108007.D\data



## Original Integration

T-AMYL ALCOHOL

Abundance on 59.00 (58.70 to 59.70): VB108007.D\data



## Original Int. Results

-----

RT : 4.68  
Area : 324  
Amount: 2.30494

## Manual Int. Results

-----

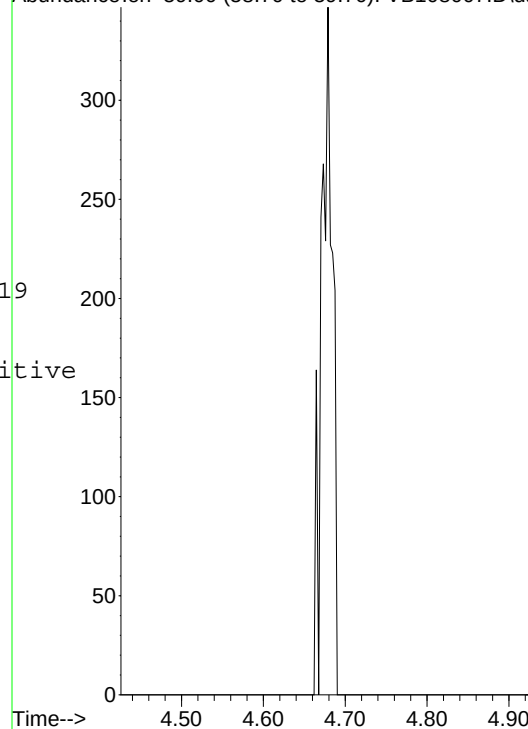
Thu Apr 18 11:27:04 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-AMYL ALCOHOL

Abundance on 59.00 (58.70 to 59.70): VB108007.D\data



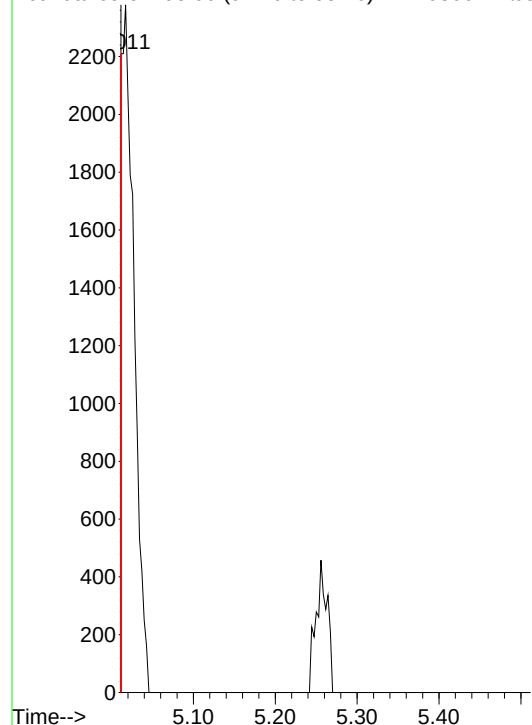
Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

TRICHLOROETHENE

Abundance on 95.00 (94.70 to 95.70): VB108007.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:27:12 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 5.26

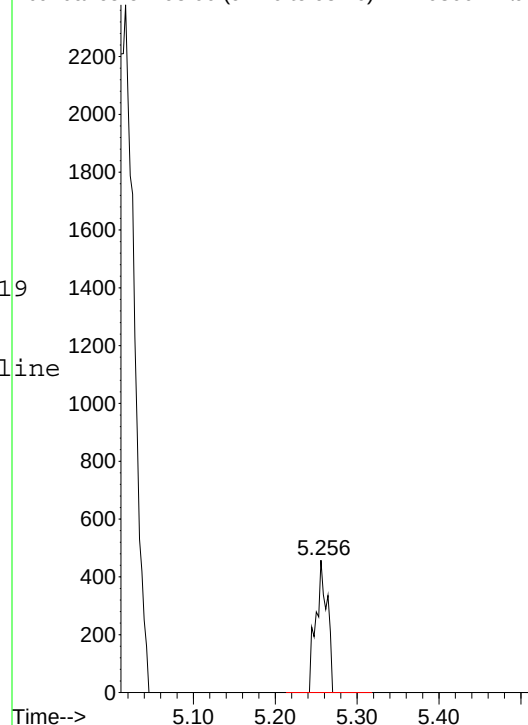
Area : 441

Amount: 0.316387

## Manual Integration

TRICHLOROETHENE

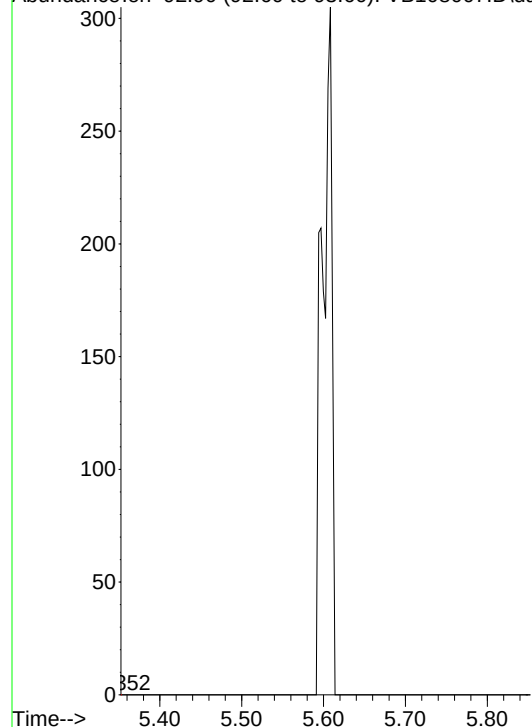
Abundance on 95.00 (94.70 to 95.70): VB108007.D\data



## Original Integration

DIBROMOMETHANE

Abundance on 92.90 (92.60 to 93.60): VB108007.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:27:25 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 5.61

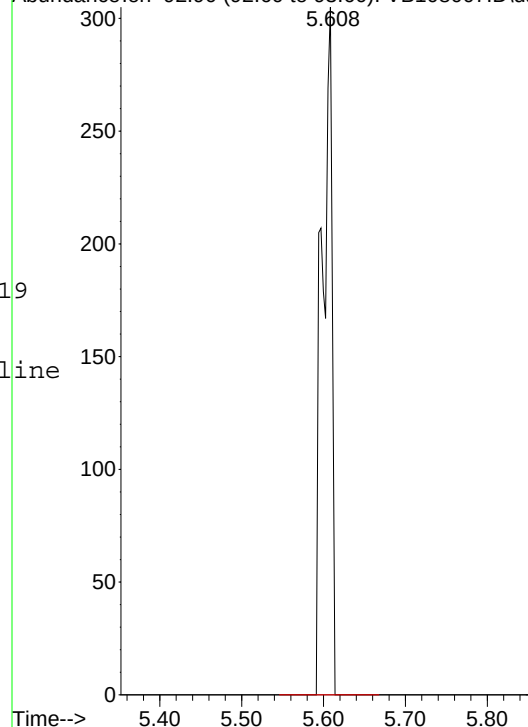
Area : 255

Amount: 0.292058

## Manual Integration

DIBROMOMETHANE

Abundance on 92.90 (92.60 to 93.60): VB108007.D\data



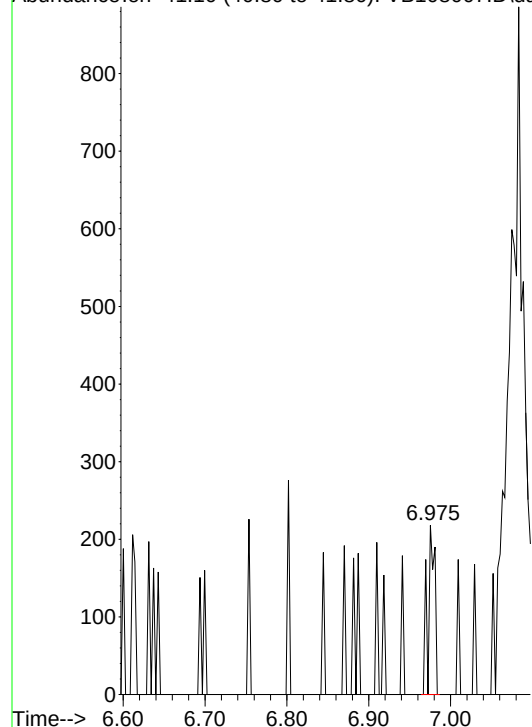
Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108007.D\data



## Original Int. Results

-----

RT : 6.98

Area : 127

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:27:35 2019

MIuser: LBD

Reason: Qdel False Positive

RT : 0.00

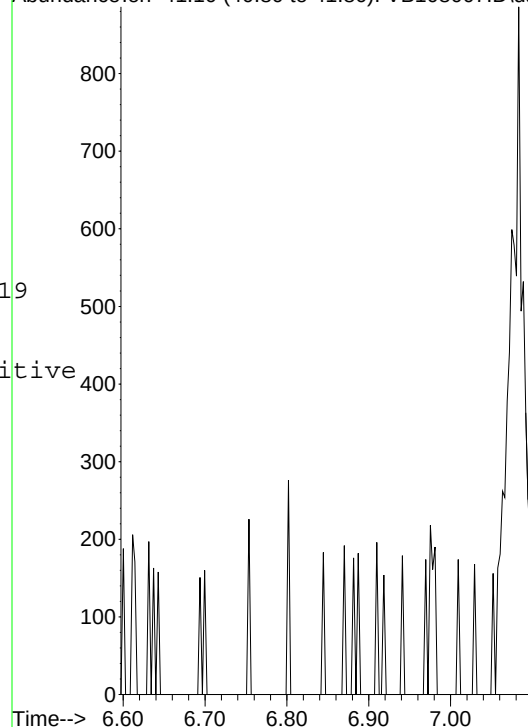
Area : 0

Amount: 0

## Manual Integration

ETHYL METHACRYLATE

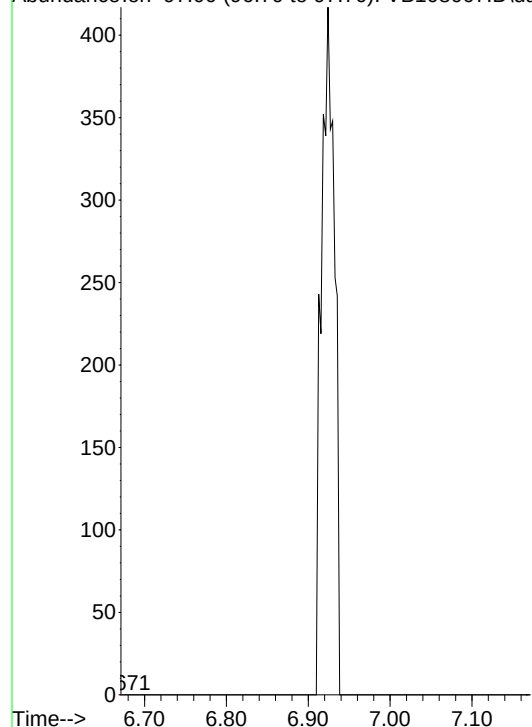
Abundance on 41.10 (40.80 to 41.80): VB108007.D\data



## Original Integration

1,1,2-TRICHLOROETHANE

Abundance on 97.00 (96.70 to 97.70): VB108007.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:27:39 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 6.92

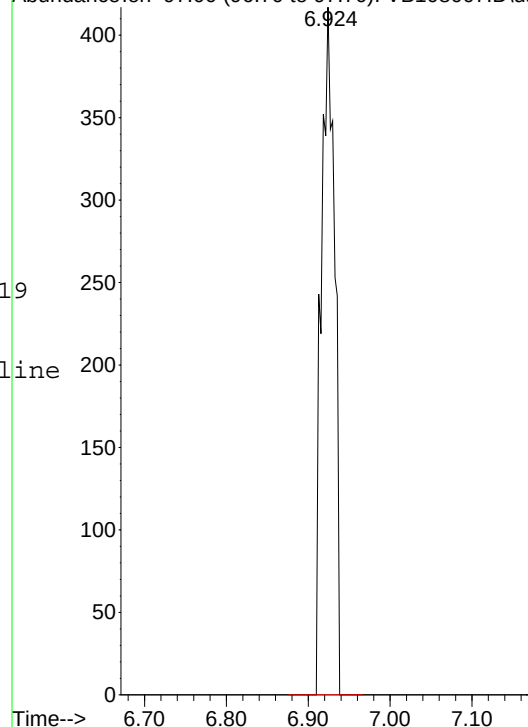
Area : 470

Amount: 0.359218

## Manual Integration

1,1,2-TRICHLOROETHANE

Abundance on 97.00 (96.70 to 97.70): VB108007.D\data



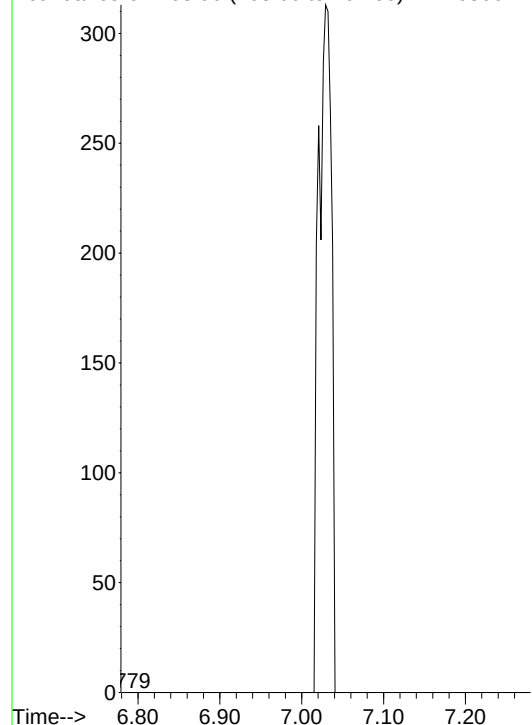
Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

## TETRACHLOROETHENE

Abundance on 163.90 (163.60 to 164.60): VB108007.D



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

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Thu Apr 18 11:27:44 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 7.03

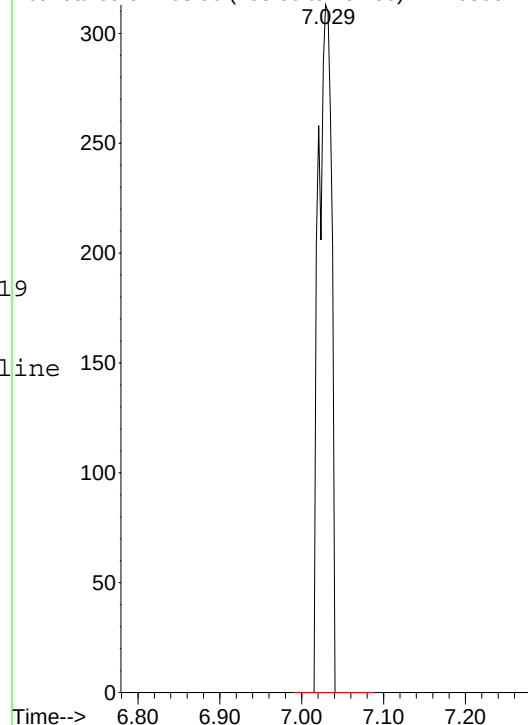
Area : 349

Amount: 0.306979

## Manual Integration

## TETRACHLOROETHENE

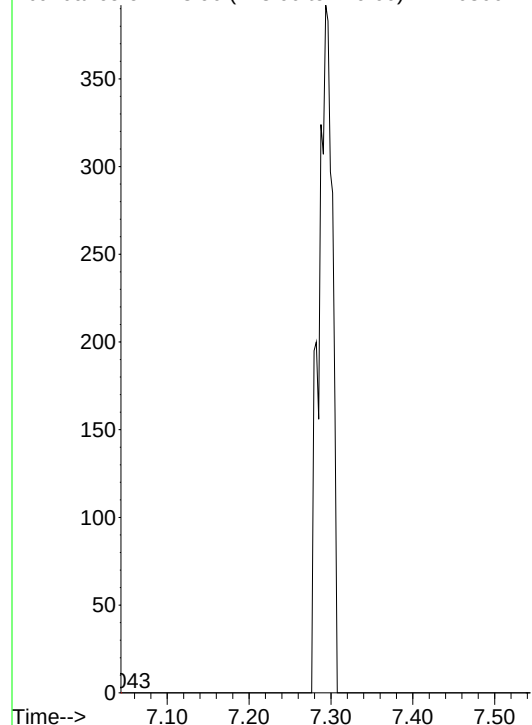
Abundance on 163.90 (163.60 to 164.60): VB108007.D



## Original Integration

## DIBROMOCHLOROMETHANE

Abundance on 128.90 (128.60 to 129.60): VB108007.D



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:27:47 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 7.29

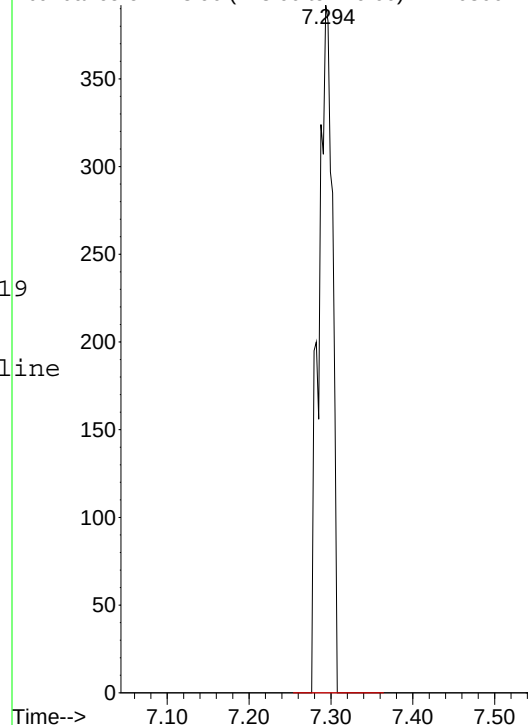
Area : 460

Amount: 0.299933

## Manual Integration

## DIBROMOCHLOROMETHANE

Abundance on 128.90 (128.60 to 129.60): VB108007.D

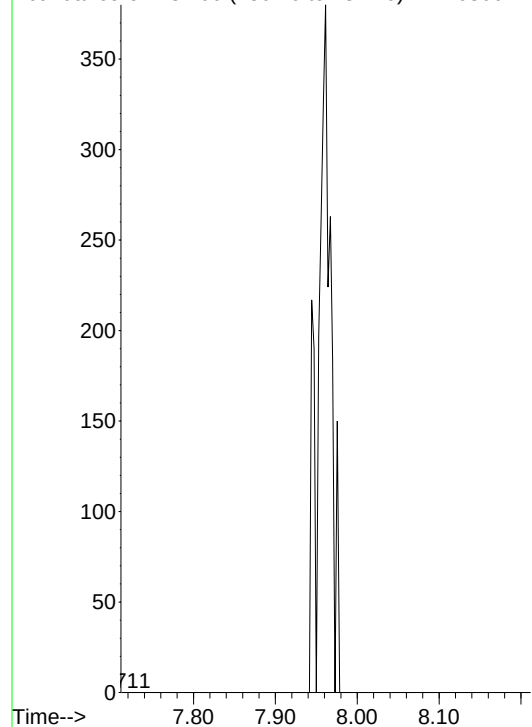


Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
1,1,1,2-TETRACHLOROETHANE

Abundance on 131.00 (130.70 to 131.70): VB108007.D



Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

Manual Int. Results

-----

Thu Apr 18 11:27:53 2019

MIuser: LBD

Reason: Incorrect Baseline

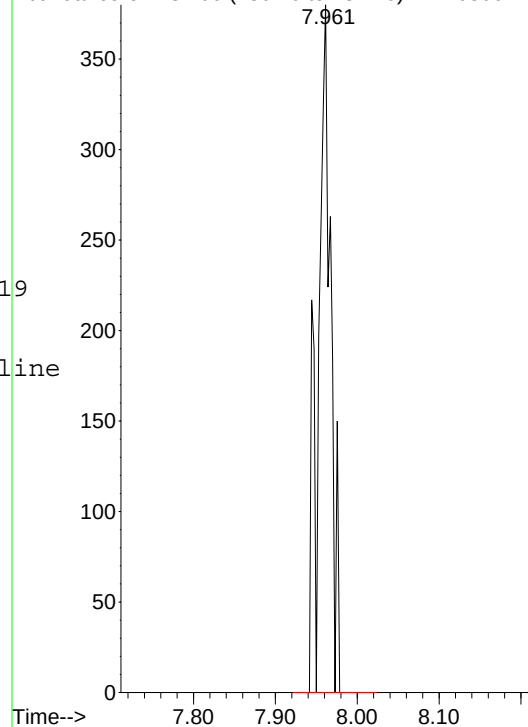
RT : 7.96

Area : 407

Amount: 0.26399

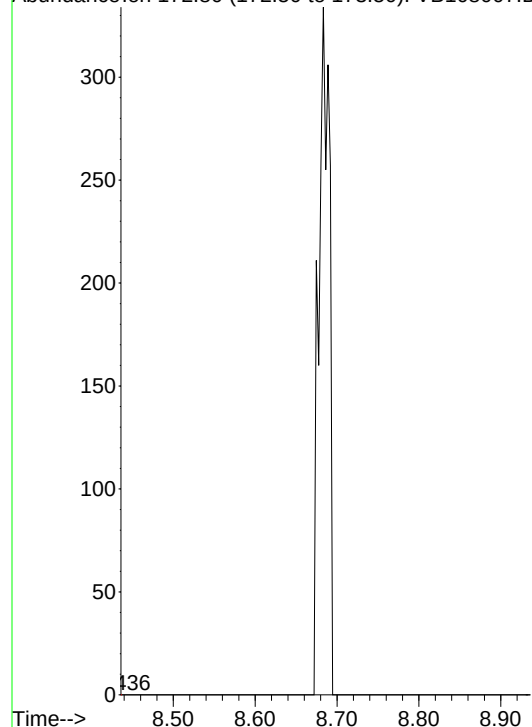
Manual Integration  
1,1,1,2-TETRACHLOROETHANE

Abundance on 131.00 (130.70 to 131.70): VB108007.D



Original Integration  
BROMOFORM

Abundance on 172.80 (172.50 to 173.50): VB108007.D



Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

Manual Int. Results

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Thu Apr 18 11:27:58 2019

MIuser: LBD

Reason: Incorrect Baseline

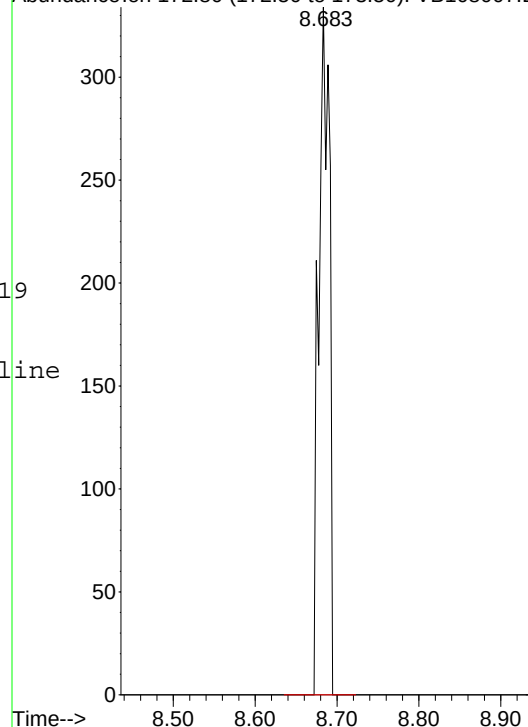
RT : 8.68

Area : 304

Amount: 0.251294

Manual Integration  
BROMOFORM

Abundance on 172.80 (172.50 to 173.50): VB108007.D



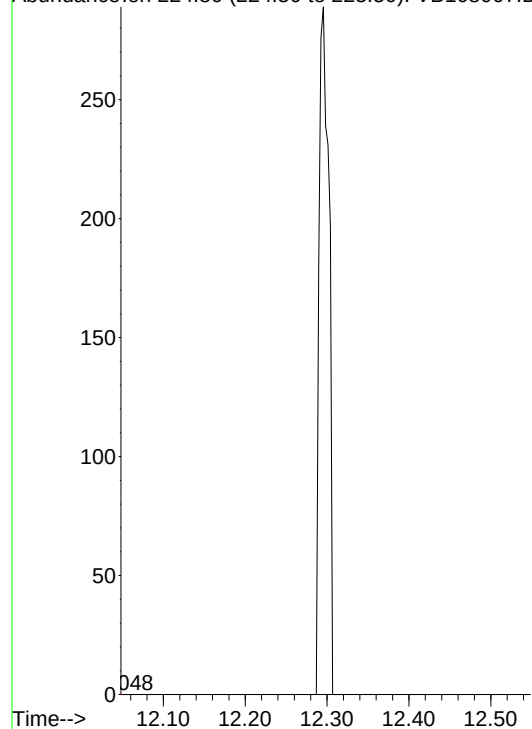
Data Path : Y:\1\DATA\B041819\  
Data File : VB108007.D  
Acq On : 18 Apr 2019 10:35 am  
Operator :  
Sample : 8260 STD 0.4 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:27:39 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

HEXACHLOROBUTADIENE

Abundance on 224.80 (224.50 to 225.50): VB108007.D



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

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Thu Apr 18 11:28:13 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 12.30

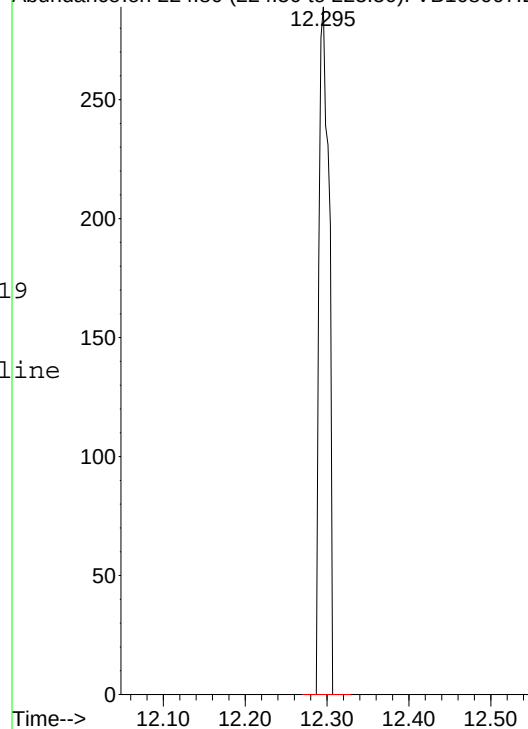
Area : 241

Amount: 0.32503

## Manual Integration

HEXACHLOROBUTADIENE

Abundance on 224.80 (224.50 to 225.50): VB108007.D





Data Path : Y:\1\DATA\B041819\  
 Data File : VB108008.D  
 Acq On : 18 Apr 2019 11:06 am  
 Operator :  
 Sample : 8260 STD 0.5 PPB 1904257  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 11:33:05 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon  | Response | Conc     | Units | Dev (Min)      |
|-------------------------------|--------|-------|----------|----------|-------|----------------|
| Internal Standards            |        |       |          |          |       |                |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301  | 168   | 73393    | 30.00    | UG/L  | 0.00           |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.014  | 114   | 117118   | 30.00    | UG/L  | 0.00           |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845  | 82    | 63533    | 30.00    | UG/L  | 0.00           |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.141 | 152   | 63365    | 30.00    | UG/L  | 0.00           |
| System Monitoring Compounds   |        |       |          |          |       |                |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582  | 65    | 48396    | 34.96    | UG/L  | 0.00           |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =     | 139.84%#       |
| 45) TOLUENE-D8 SS             | 6.444  | 98    | 114907   | 24.93    | UG/L  | 0.00           |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =     | 99.72%         |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002  | 95    | 46477    | 24.39    | UG/L  | 0.00           |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =     | 97.56%         |
| Target Compounds              |        |       |          |          |       |                |
| 3) DICHLORODIFLOUROMETHANE    | 1.146  | 85    | 925      | 0.63     | UG/L  | Qvalue<br># 43 |
| 4) DIFLUOROCHLOROMETHANE      | 0.000  |       | 0        | N.D.     | d     |                |
| 5) CHLOROMETHANE              | 1.260  | 50    | 1703     | 0.77     | UG/L  | # 43           |
| 6) VINYL CHLORIDE             | 1.328  | 62    | 1114     | 0.65     | UG/L  | # 43           |
| 7) BROMOMETHANE               | 1.533  | 94    | 1071     | 1.13     | UG/L  | 96             |
| 8) CHLOROETHANE               | 1.598  | 64    | 536      | 0.59     | UG/L  | 99             |
| 9) FLUORODICHLOROMETHANE      | 1.723  | 67    | 1587     | 0.76     | UG/L  | 94             |
| 10) TRICHLOROFLUOROMETHANE    | 1.757  | 101   | 1086     | 0.63     | UG/L  | 88             |
| 11) ETHANOL                   | 0.000  |       | 0        | N.D.     | d     |                |
| 12) DI ETHYL ETHER            | 1.948  | 59    | 672      | 0.59     | UG/L  | # 14           |
| 13) ACROLEIN                  | 2.056  | 56    | 2990     | 8.85     | UG/L  | # 76           |
| 14) ACETONE                   | 2.167  | 43    | 4943m    | 11.24    | UG/L  |                |
| 15) 1,1-DICHLOROETHENE        | 2.110  | 61    | 1350     | 0.76     | UG/L  | # 68           |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.113  | 101   | 473m     | 0.49     | UG/L  |                |
| 17) IODOMETHANE               | 2.238  | 142   | 6442     | 3.61     | UG/L  | 93             |
| 18) METHYL ACETATE            | 0.000  |       | 0        | N.D.     | d     |                |
| 19) T-BUTYL ALCOHOL           | 0.000  |       | 0        | N.D.     | d     |                |
| 20) ACRYLONITRILE             | 2.752  | 53    | 282m     | 0.41     | UG/L  |                |
| 21) METHYLENE CHLORIDE        | 2.502  | 49    | 1561     | 0.78     | UG/L  | # 61           |
| 22) CARBON DISULFIDE          | 2.283  | 76    | 21693    | 5.68     | UG/L  | 100            |
| 23) METHYL TERT-BUTYL ETHE... | 2.746  | 73    | 1953     | 0.53     | UG/L  | # 89           |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.741  | 61    | 1187     | 0.61     | UG/L  | # 65           |
| 25) 1,1-DICHLOROETHANE        | 3.167  | 63    | 1589     | 0.63     | UG/L  | # 51           |
| 26) VINYL ACETATE             | 3.229  | 43    | 23200    | 6.97     | UG/L  | # 94           |
| 27) DI ISOPROPYL ETHER        | 3.232  | 45    | 2998     | 0.63     | UG/L  | # 52           |
| 28) 2-BUTANONE                | 3.801  | 43    | 5122     | 6.67     | UG/L  | # 83           |
| 29) T-BUTYL ETHYL ETHER       | 3.602  | 59    | 2528     | 0.55     | UG/L  | 94             |
| 30) CIS-1,2-DICHLOROETHENE    | 3.761  | 61    | 1467     | 0.63     | UG/L  | # 68           |
| 31) 2,2-DICHLOROPROPANE       | 3.747  | 77    | 1214     | 0.80     | UG/L  | # 47           |
| 32) ETHYL ACETATE             | 0.000  |       | 0        | N.D.     |       |                |
| 33) BROMOCHLOROMETHANE        | 4.000  | 128   | 148m     | 0.22     | UG/L  |                |
| 34) TETRAHYDROFURAN           | 0.000  |       | 0        | N.D.     |       |                |
| 35) T-BUTYL FORMATE           | 4.139  | 59    | 449m     | 0.35     | UG/L  |                |
| 36) CHLOROFORM                | 4.091  | 83    | 1416     | 0.63     | UG/L  | 98             |
| 37) 1,1,1-TRICHLOROETHANE     | 4.244  | 97    | 1108     | 0.60     | UG/L  | # 62           |
| 38) CYCLOHEXANE               | 4.295  | 56    | 3842     | 1.42     | UG/L  | # 88           |
| 39) CARBON TETRACHLORIDE      | 4.409  | 117   | 985      | 0.61     | UG/L  | 88             |
| 40) 1,1-DICHLOROPROPENE       | 4.412  | 75    | 922      | 0.57     | UG/L  | # 40           |
| 41) BENZENE                   | 4.622  | 78    | 2861     | 0.55     | UG/L  | 97             |
| 42) T-AMYL ALCOHOL            | 0.000  |       | 0        | N.D.     | d     |                |
| 43) T-AMYLMETHYL ETHER        | 4.741  | 73    | 1771     | 0.50     | UG/L  | # 70           |
| 46) 1,2-DICHLOROETHANE        | 4.662  | 62    | 1334     | 0.63     | UG/L  | # 52           |
| 47) TRICHLOROETHENE           | 5.259  | 95    | 809      | 0.57     | UG/L  | # 68           |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108008.D  
 Acq On : 18 Apr 2019 11:06 am  
 Operator :  
 Sample : 8260 STD 0.5 PPB 1904257  
 Misc :  
 ALS Vial : 5 Sample Multiplier: 1

Inst : GCMSVOA2

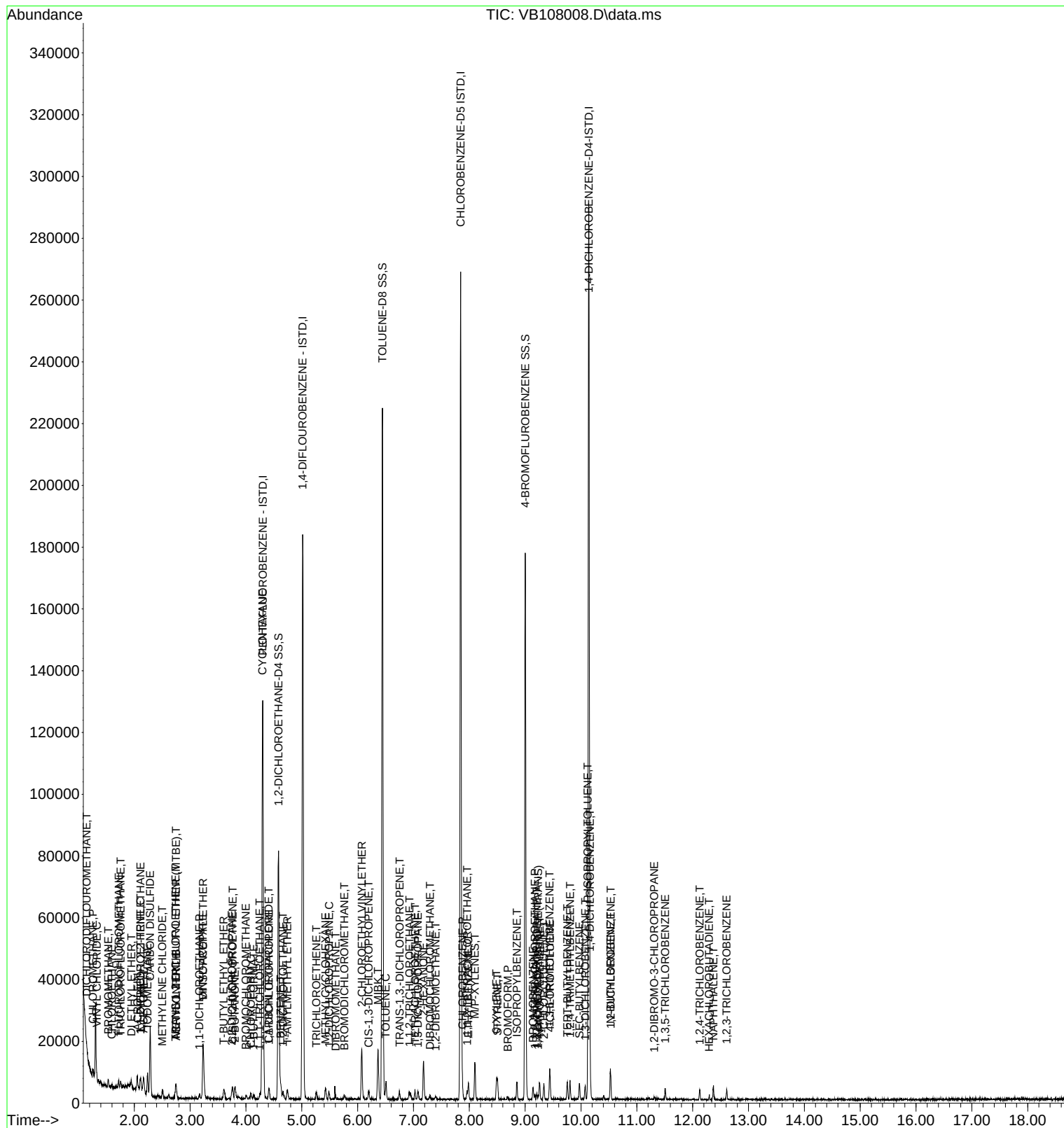
Quant Time: Apr 18 11:33:05 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.421  | 83   | 1031     | 0.51 | UG/L # | 64       |
| 49) 1,2-DICHLOROPROPANE       | 5.489  | 63   | 736      | 0.46 | UG/L # | 49       |
| 50) DIBROMOMETHANE            | 5.608  | 93   | 448m     | 0.51 | UG/L   |          |
| 51) 1,4-DIOXANE               | 0.000  |      | 0        | N.D. |        |          |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 1024     | 0.58 | UG/L # | 96       |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.077  | 63   | 5840     | 5.44 | UG/L # | 74       |
| 54) MIBK                      | 6.364  | 43   | 10477    | 6.31 | UG/L # | 88       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.196  | 75   | 1102     | 0.50 | UG/L # | 30       |
| 56) TOLUENE                   | 6.503  | 91   | 3170     | 0.55 | UG/L   | 90       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.751  | 75   | 1006     | 0.51 | UG/L # | 36       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D. | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.930  | 97   | 684      | 0.52 | UG/L # | 68       |
| 60) 2-HEXANONE                | 7.180  | 43   | 8367     | 7.22 | UG/L # | 80       |
| 61) TETRACHLOROETHENE         | 7.026  | 164  | 634m     | 0.55 | UG/L   |          |
| 62) 1,3-DICHLOROPROPANE       | 7.080  | 76   | 1072     | 0.46 | UG/L # | 38       |
| 63) DIBROMOCHLOROMETHANE      | 7.296  | 129  | 679      | 0.44 | UG/L   | 93       |
| 64) 1,2-DIBROMOETHANE         | 7.396  | 107  | 640      | 0.43 | UG/L # | 100      |
| 67) CHLOROBENZENE             | 7.876  | 112  | 2068     | 0.49 | UG/L # | 47       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.961  | 131  | 652      | 0.42 | UG/L # | 67       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 3732     | 0.53 | UG/L   | 91       |
| 70) M/P-XYLENES               | 8.101  | 91   | 6040     | 1.11 | UG/L   | 97       |
| 71) O-XYLENE                  | 8.487  | 91   | 3032     | 0.54 | UG/L   | 92       |
| 72) STYRENE                   | 8.507  | 104  | 2352     | 0.50 | UG/L # | 84       |
| 73) BROMOFORM                 | 8.689  | 173  | 461m     | 0.38 | UG/L   |          |
| 74) ISOPROPYLBENZENE          | 8.854  | 105  | 3413     | 0.51 | UG/L   | 94       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D. |        |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.175  | 83   | 826      | 0.42 | UG/L # | 95       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.232  | 53   | 277m     | 0.42 | UG/L   |          |
| 78) BROMOBENZENE              | 9.141  | 77   | 1464     | 0.54 | UG/L   | 90       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.206  | 110  | 288m     | 0.46 | UG/L   |          |
| 80) N-PROPYLBENZENE           | 9.260  | 91   | 4181     | 0.54 | UG/L   | 93       |
| 81) 2-CHLOROTOLUENE           | 9.337  | 91   | 2784     | 0.58 | UG/L # | 87       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.436  | 105  | 3004     | 0.52 | UG/L   | 87       |
| 83) 4-CHLOROTOLUENE           | 9.448  | 91   | 3327     | 0.59 | UG/L # | 87       |
| 85) TERT-BUTYLBENZENE         | 9.755  | 119  | 2508     | 0.53 | UG/L # | 82       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.806  | 105  | 3103     | 0.55 | UG/L   | 89       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 3615     | 0.58 | UG/L # | 90       |
| 88) 1,3-DICHLOROBENZENE       | 10.076 | 146  | 1883     | 0.56 | UG/L   | 94       |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 2913     | 0.50 | UG/L # | 90       |
| 90) 1,4-DICHLOROBENZENE       | 10.161 | 146  | 1863     | 0.53 | UG/L # | 86       |
| 91) N-BUTYLBENZENE            | 10.528 | 91   | 2844     | 0.63 | UG/L   | 94       |
| 92) 1,2-DICHLOROBENZENE       | 10.530 | 146  | 1945     | 0.59 | UG/L   | 94       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.312 | 75   | 124m     | 0.35 | UG/L   |          |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 1096     | 0.49 | UG/L   | 92       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 1120     | 0.53 | UG/L # | 79       |
| 96) HEXACHLOROBUTADIENE       | 12.293 | 225  | 287m     | 0.39 | UG/L   |          |
| 97) NAPHTHALENE               | 12.372 | 128  | 3144     | 0.56 | UG/L # | 69       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 1015     | 0.53 | UG/L   | 93       |

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

183

Inst : GCMSVOA2

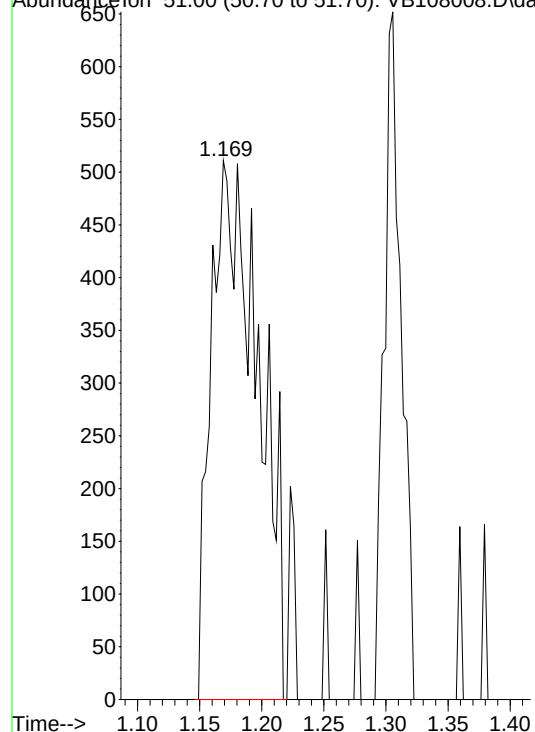


Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
DIFLUOROCHLOROMETHANE

Abundance on 51.00 (50.70 to 51.70): VB108008.D\data



Original Int. Results

-----

RT : 1.17  
Area : 1342  
Amount: 0.649737

Manual Int. Results

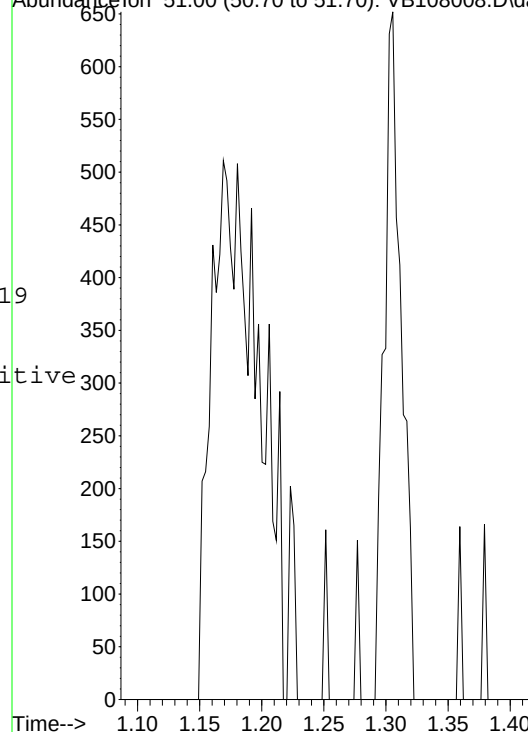
-----

Thu Apr 18 11:31:27 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

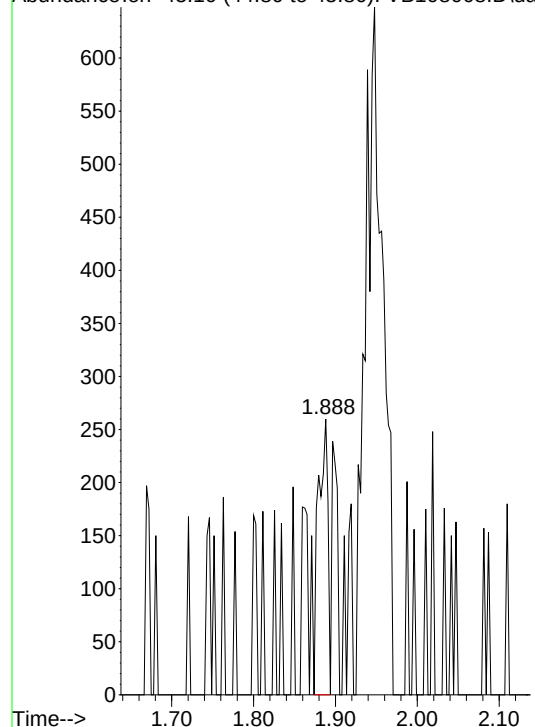
Manual Integration  
DIFLUOROCHLOROMETHANE

Abundance on 51.00 (50.70 to 51.70): VB108008.D\data



Original Integration  
ETHANOL

Abundance on 45.10 (44.80 to 45.80): VB108008.D\data



Original Int. Results

-----

RT : 1.89  
Area : 208  
Amount: 12.171

Manual Int. Results

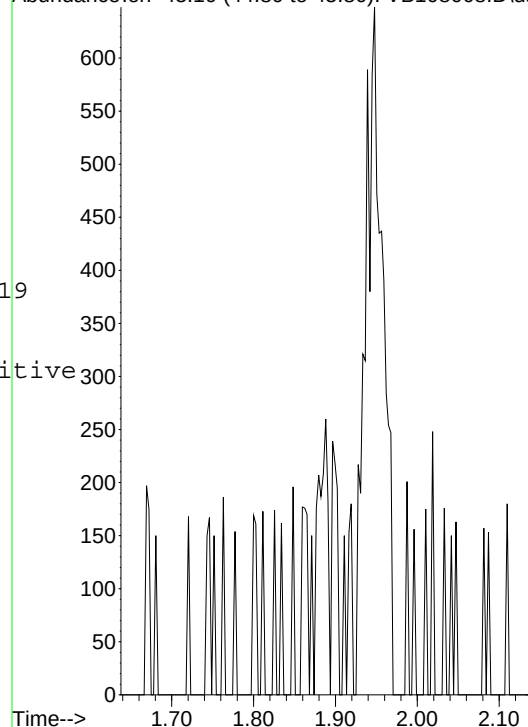
-----

Thu Apr 18 11:31:34 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
ETHANOL

Abundance on 45.10 (44.80 to 45.80): VB108008.D\data



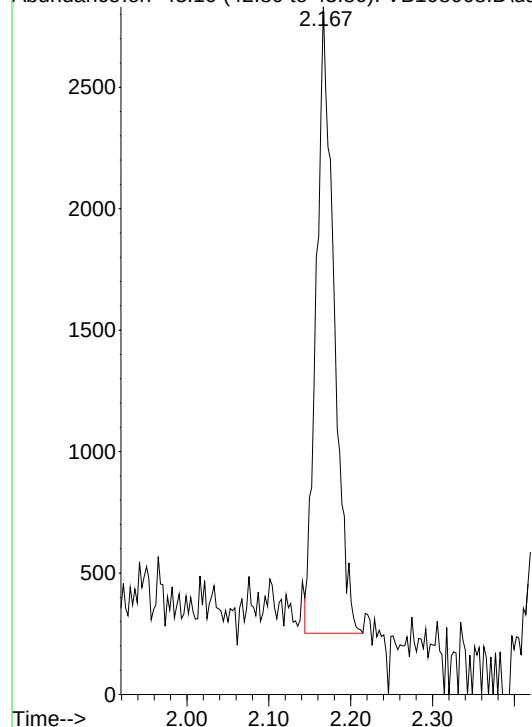
Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ACETONE

Abundance on 43.10 (42.80 to 43.80): VB108008.D\data



## Original Int. Results

-----

RT : 2.17  
Area : 3869  
Amount: 8.79845

## Manual Int. Results

-----

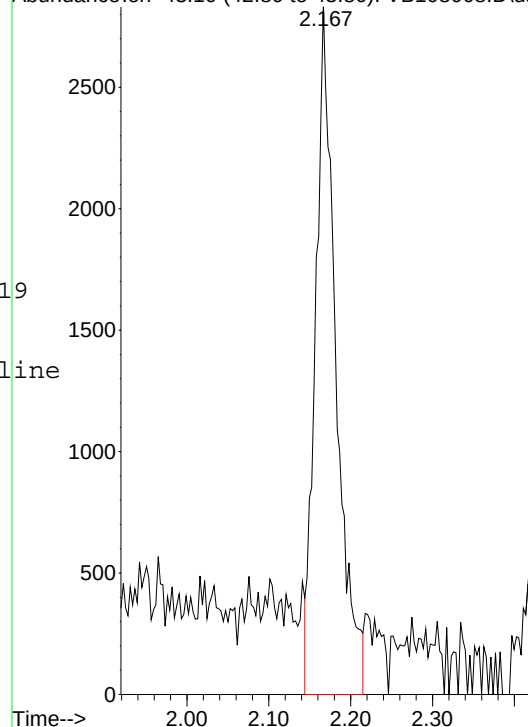
Thu Apr 18 11:31:42 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 2.17  
Area : 4943  
Amount: 11.2408

## Manual Integration

ACETONE

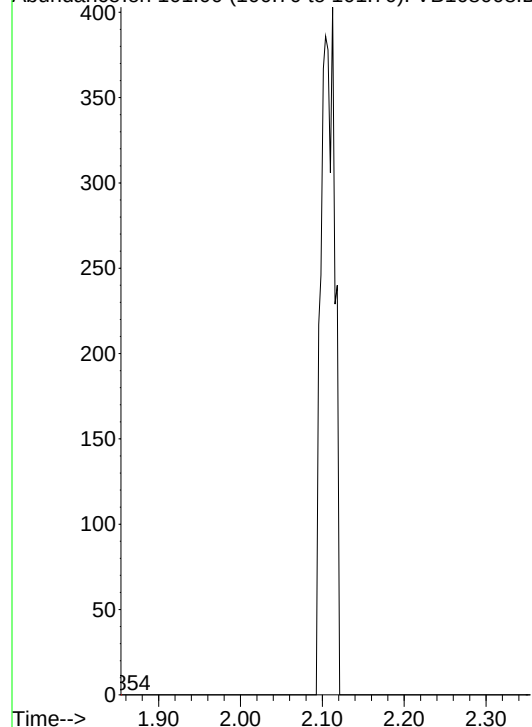
Abundance on 43.10 (42.80 to 43.80): VB108008.D\data



## Original Integration

1,1,2-TRICL-1,2,2-TRIFLETHANE

Abundance on 101.00 (100.70 to 101.70): VB108008.D



## Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

## Manual Int. Results

-----

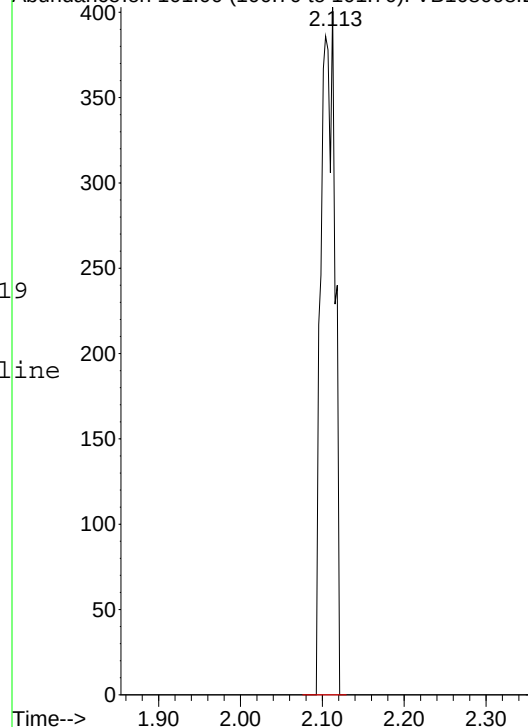
Thu Apr 18 11:31:50 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 2.11  
Area : 473  
Amount: 0.4872

## Manual Integration

1,1,2-TRICL-1,2,2-TRIFLETHANE

Abundance on 101.00 (100.70 to 101.70): VB108008.D



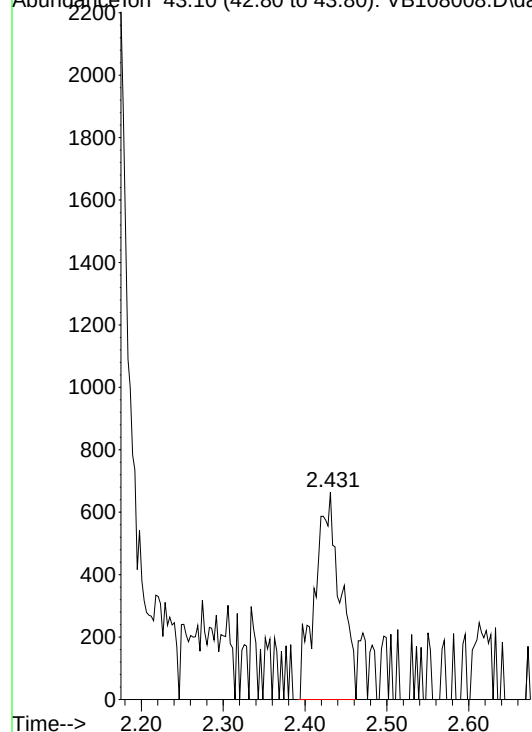
Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

METHYL ACETATE

Abundance Ion 43.10 (42.80 to 43.80): VB108008.D\data



## Original Int. Results

-----

RT : 2.43  
Area : 1426  
Amount: 0.543466

## Manual Int. Results

-----

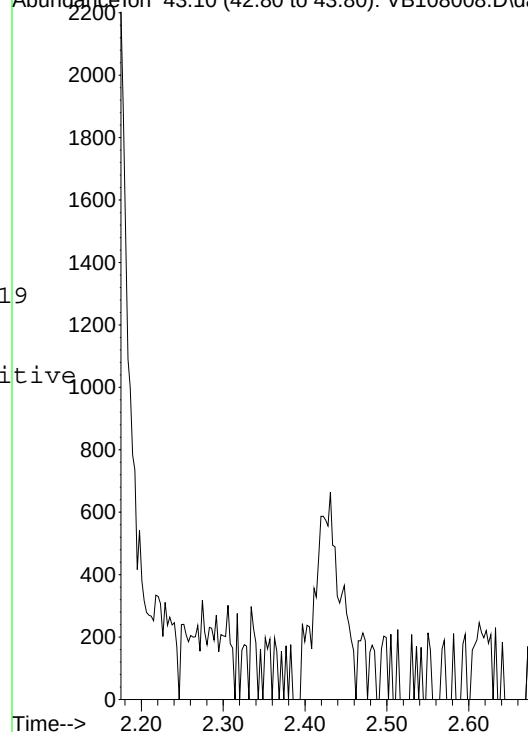
Thu Apr 18 11:32:15 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

METHYL ACETATE

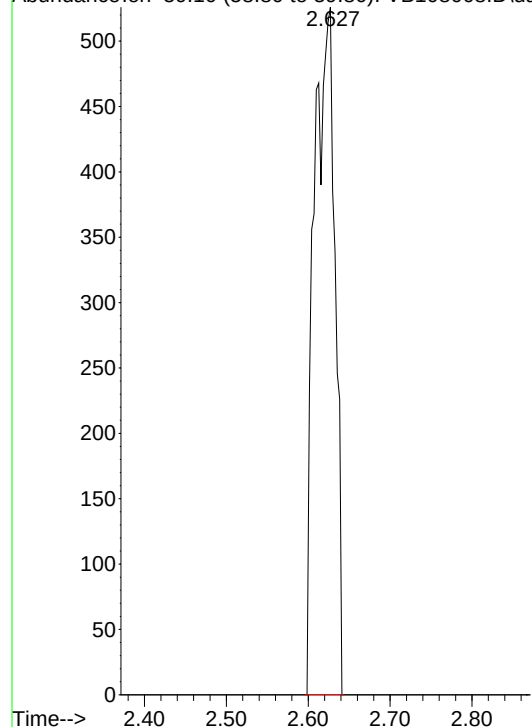
Abundance Ion 43.10 (42.80 to 43.80): VB108008.D\data



## Original Integration

T-BUTYL ALCOHOL

Abundance Ion 59.10 (58.80 to 59.80): VB108008.D\data



## Original Int. Results

-----

RT : 2.63  
Area : 933  
Amount: 5.52574

## Manual Int. Results

-----

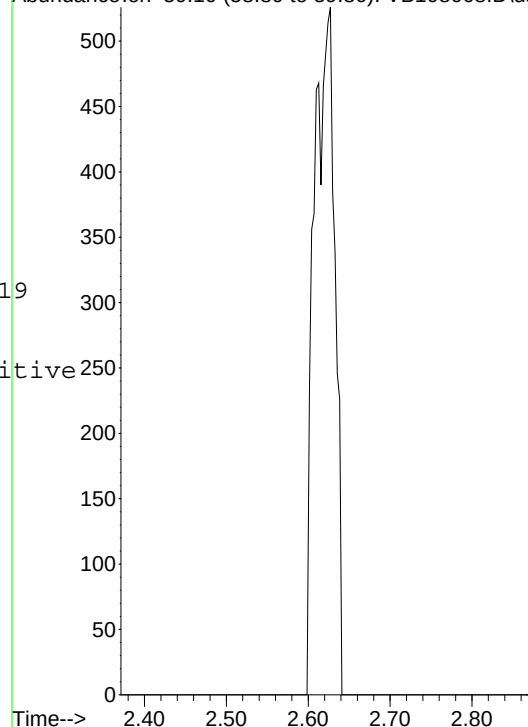
Thu Apr 18 11:32:23 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL ALCOHOL

Abundance Ion 59.10 (58.80 to 59.80): VB108008.D\data



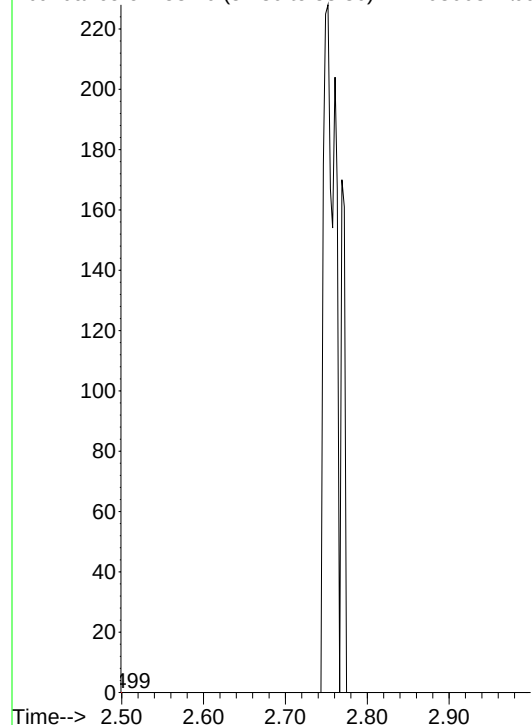
Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

## ACRYLONITRILE

Abundance on 53.10 (52.80 to 53.80): VB108008.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:32:26 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 2.75

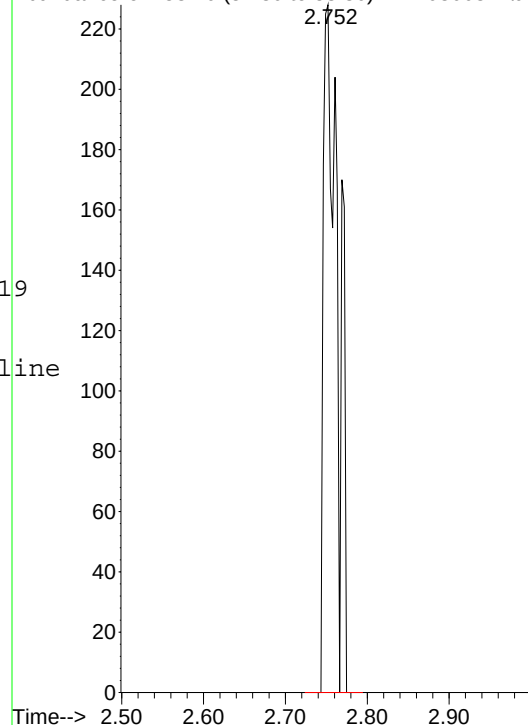
Area : 282

Amount: 0.406062

## Manual Integration

## ACRYLONITRILE

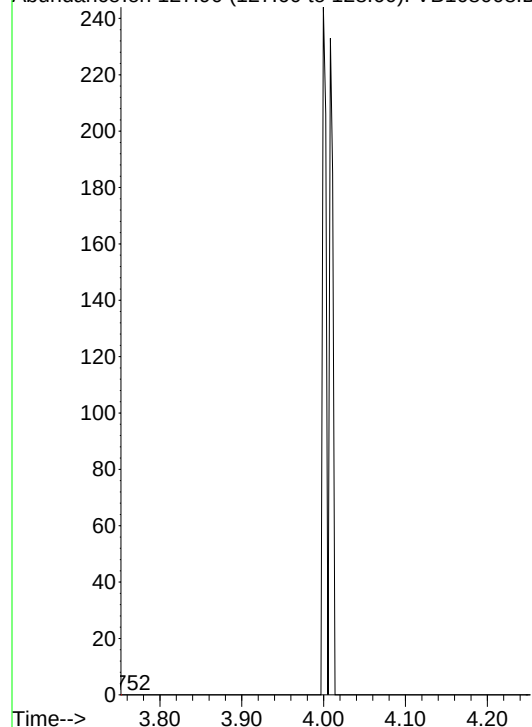
Abundance on 53.10 (52.80 to 53.80): VB108008.D\data



## Original Integration

## BROMOCHLOROMETHANE

Abundance on 127.90 (127.60 to 128.60): VB108008.D



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:32:35 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 4.00

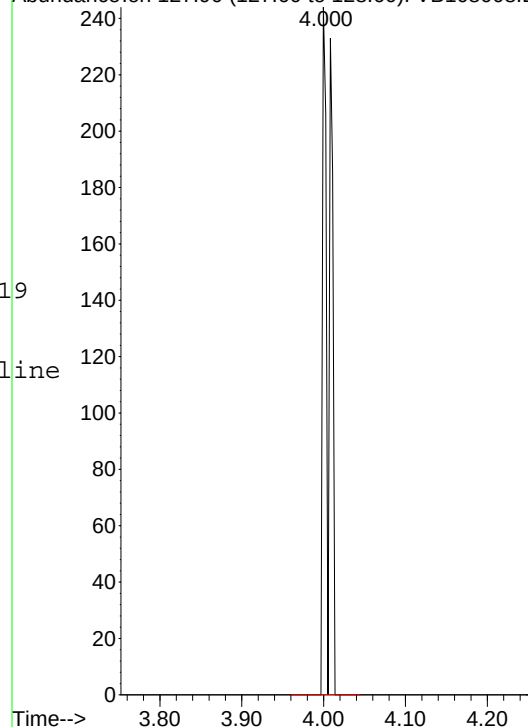
Area : 148

Amount: 0.216662

## Manual Integration

## BROMOCHLOROMETHANE

Abundance on 127.90 (127.60 to 128.60): VB108008.D



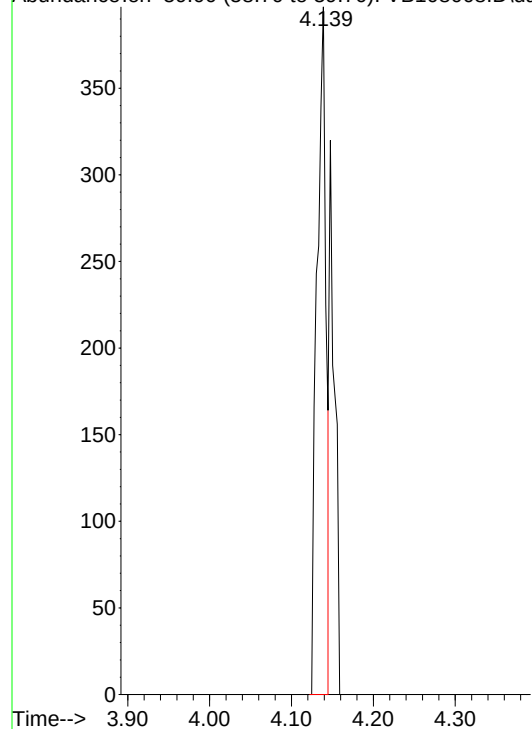
Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): VB108008.D\data



## Original Int. Results

-----

RT : 4.14  
Area : 306  
Amount: 0.238933

## Manual Int. Results

-----

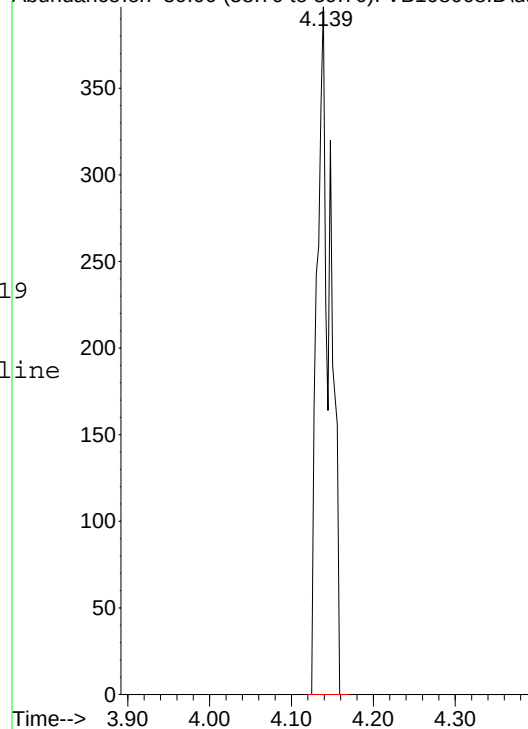
Thu Apr 18 11:32:40 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 4.14  
Area : 449  
Amount: 0.350591

## Manual Integration

T-BUTYL FORMATE

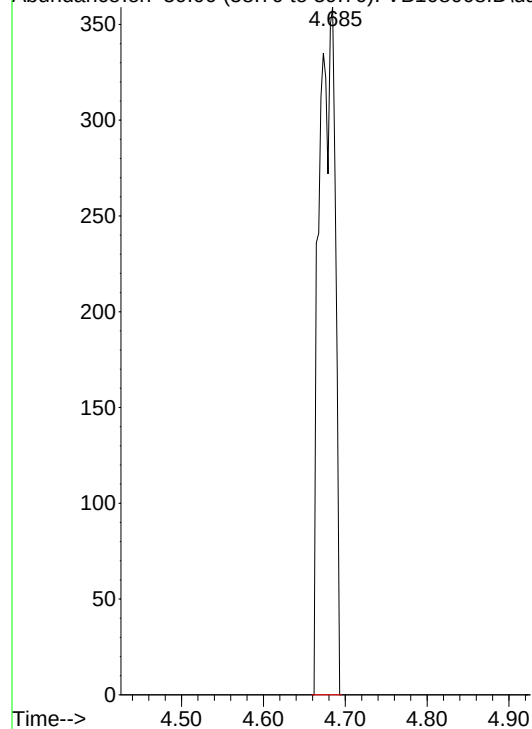
Abundance on 59.00 (58.70 to 59.70): VB108008.D\data



## Original Integration

T-AMYL ALCOHOL

Abundance on 59.00 (58.70 to 59.70): VB108008.D\data



## Original Int. Results

-----

RT : 4.68  
Area : 489  
Amount: 3.46168

## Manual Int. Results

-----

Thu Apr 18 11:32:49 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-AMYL ALCOHOL

Abundance on 59.00 (58.70 to 59.70): VB108008.D\data



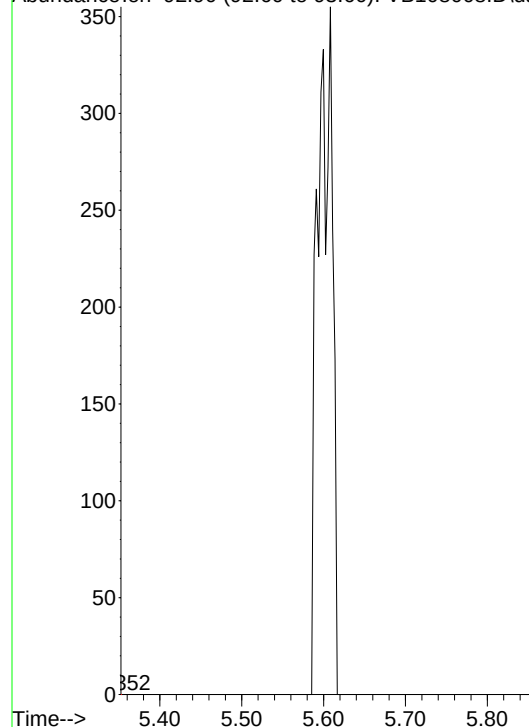


Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
DIBROMOMETHANE

Abundance on 92.90 (92.60 to 93.60): VB108008.D\data



Original Int. Results  
-----

RT : 0.00  
Area : 0  
Amount: 0

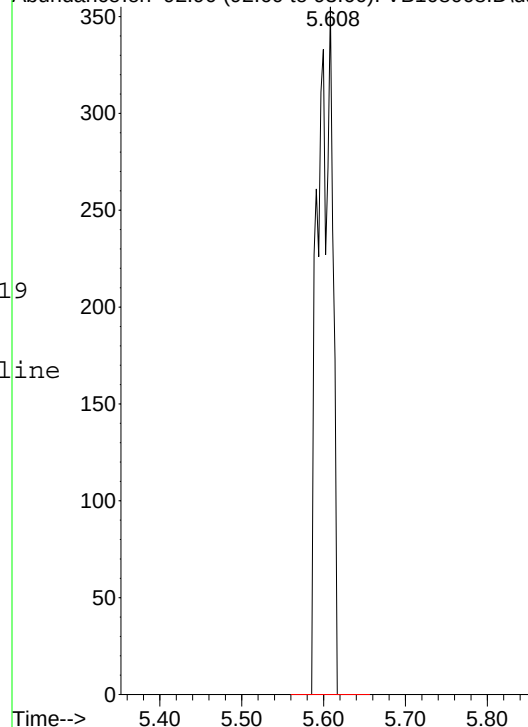
Manual Int. Results  
-----

Thu Apr 18 11:32:59 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 5.61  
Area : 448  
Amount: 0.507651

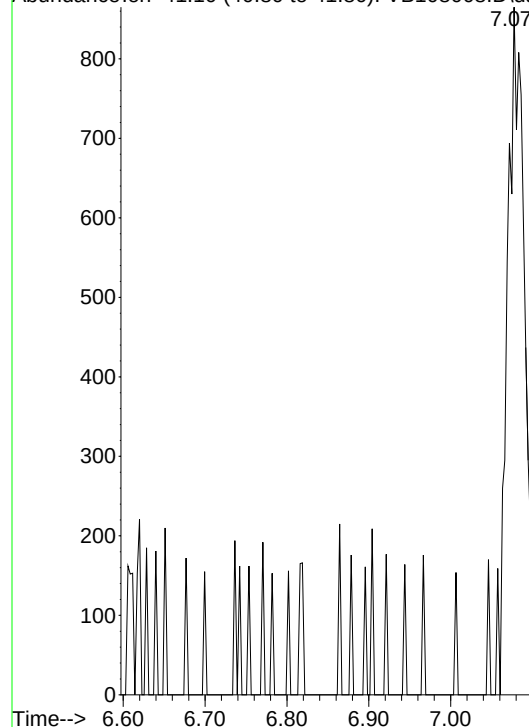
Manual Integration  
DIBROMOMETHANE

Abundance on 92.90 (92.60 to 93.60): VB108008.D\data



Original Integration  
ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108008.D\data



Original Int. Results  
-----

RT : 7.08  
Area : 1318  
Amount: 0

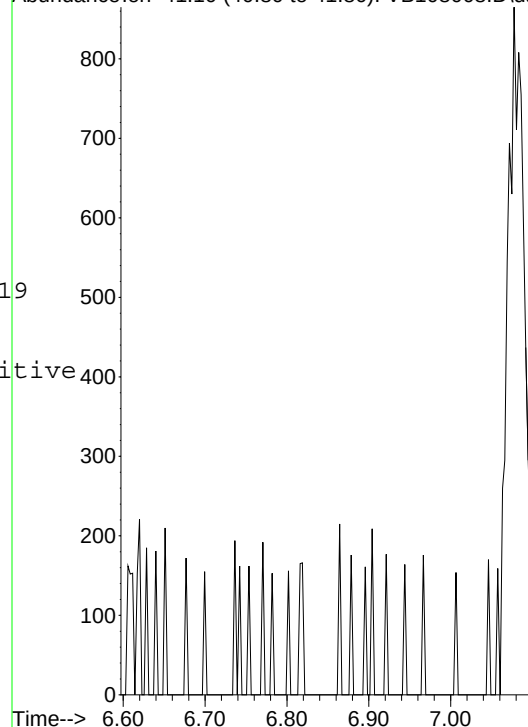
Manual Int. Results  
-----

Thu Apr 18 11:33:06 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108008.D\data



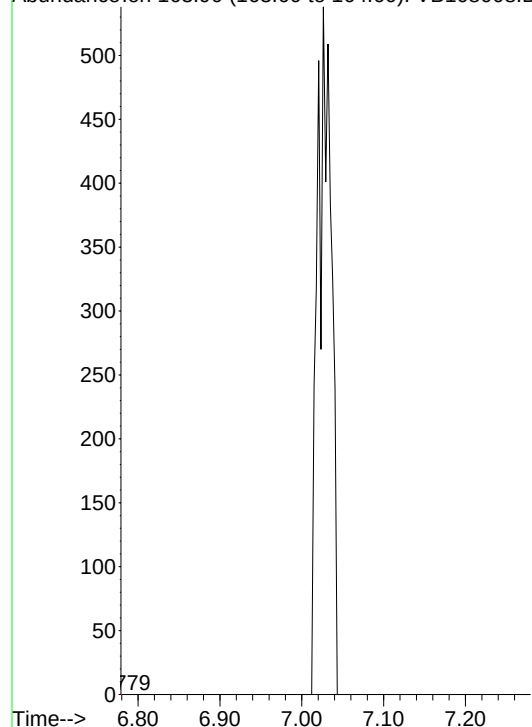
Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

TETRACHLOROETHENE

Abundance on 163.90 (163.60 to 164.60): VB108008.D



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:33:10 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 7.03

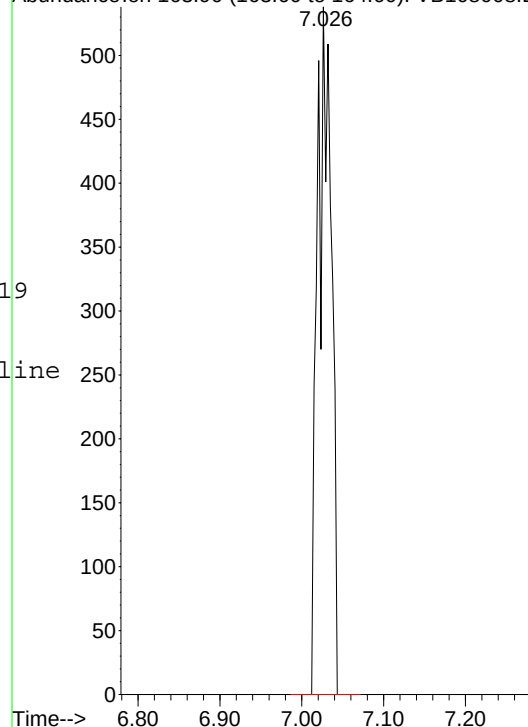
Area : 634

Amount: 0.551736

## Manual Integration

TETRACHLOROETHENE

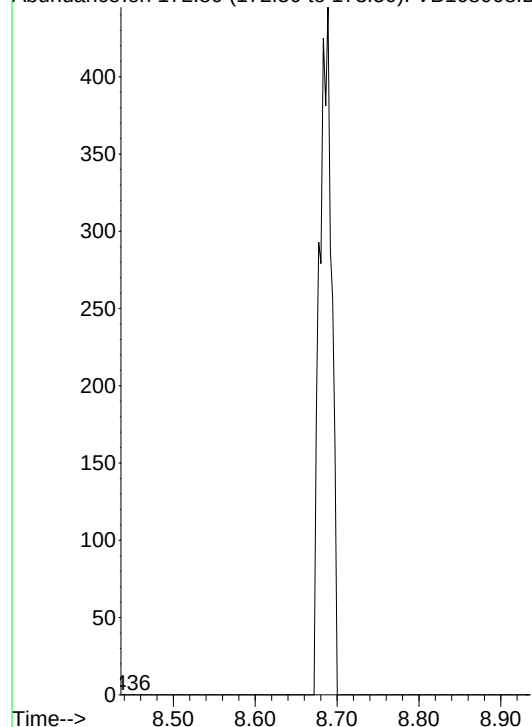
Abundance on 163.90 (163.60 to 164.60): VB108008.D



## Original Integration

BROMOFORM

Abundance on 172.80 (172.50 to 173.50): VB108008.D



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:33:18 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 8.69

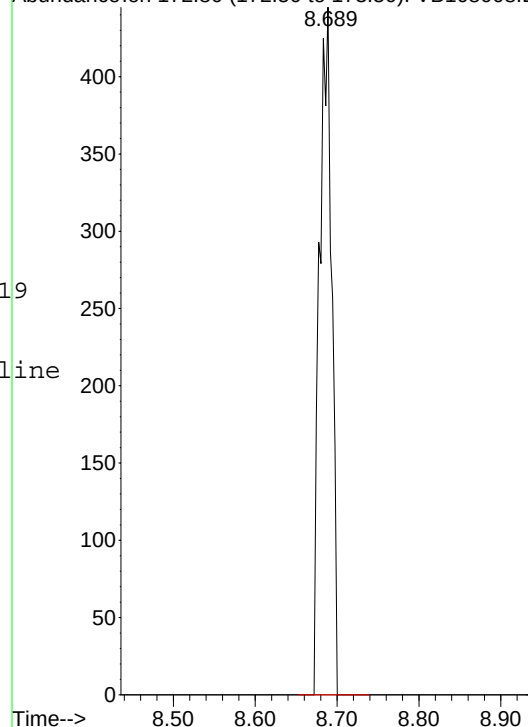
Area : 461

Amount: 0.376953

## Manual Integration

BROMOFORM

Abundance on 172.80 (172.50 to 173.50): VB108008.D

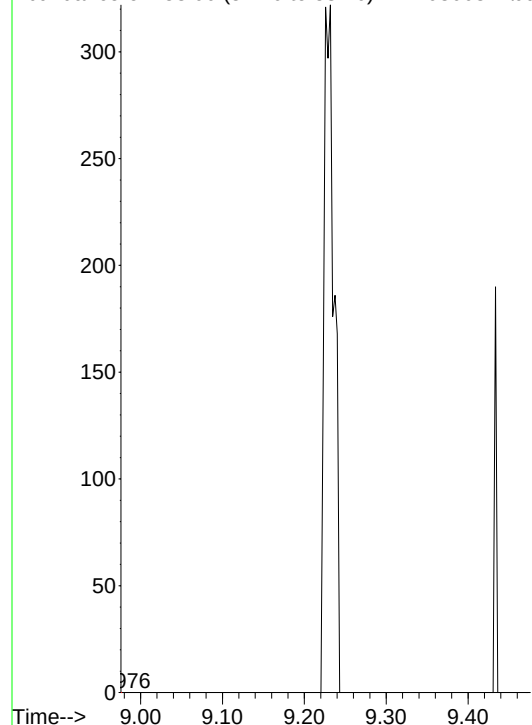


Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
1,4-DICHLORO-2-BUTENE (TRANS)

Abundance on 53.00 (52.70 to 53.70): VB108008.D\data



Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

Manual Int. Results

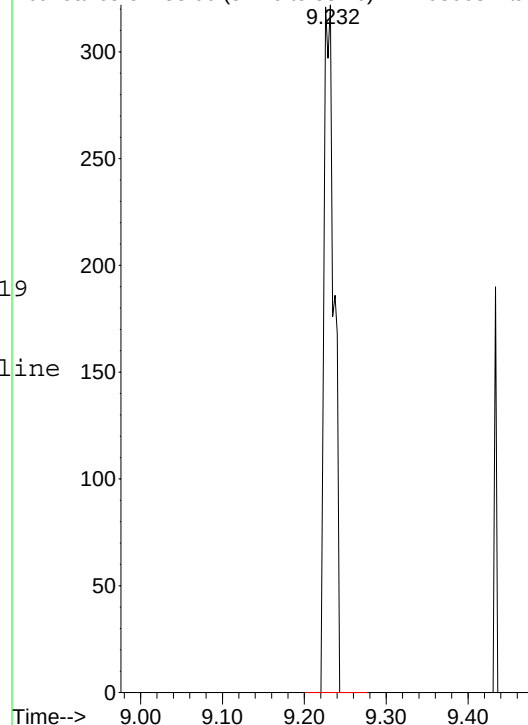
-----

Thu Apr 18 11:33:23 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 9.23  
Area : 277  
Amount: 0.417215

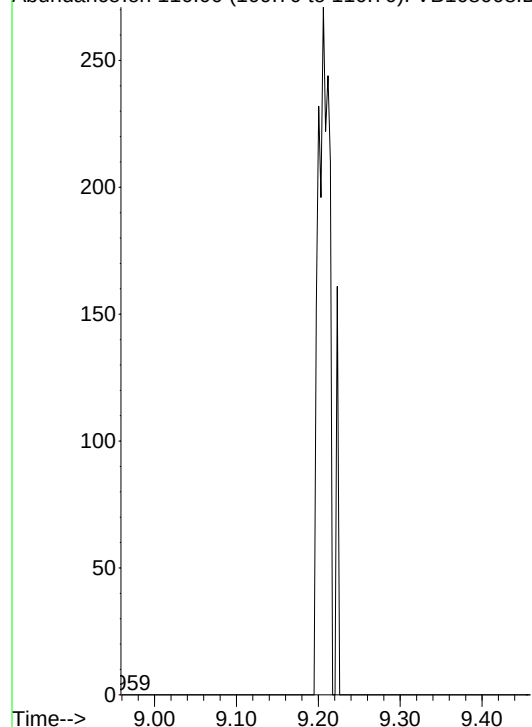
Manual Integration  
1,4-DICHLORO-2-BUTENE (TRANS)

Abundance on 53.00 (52.70 to 53.70): VB108008.D\data



Original Integration  
1,2,3-TRICHLOROPROPANE

Abundance on 110.00 (109.70 to 110.70): VB108008.D



Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

Manual Int. Results

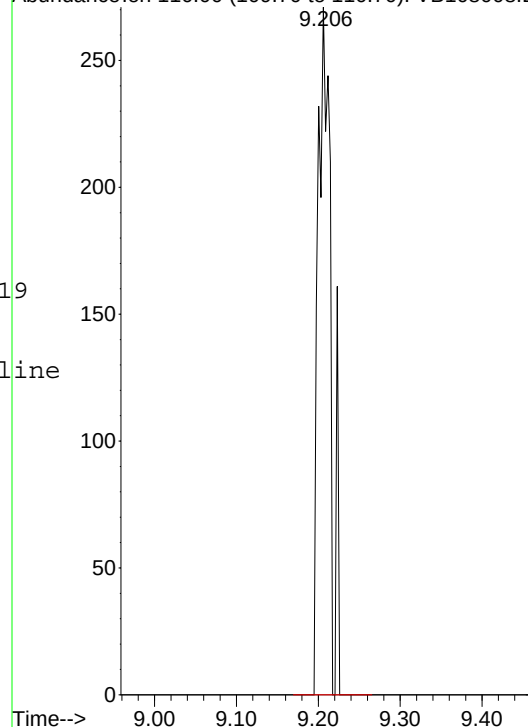
-----

Thu Apr 18 11:33:26 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 9.21  
Area : 288  
Amount: 0.464167

Manual Integration  
1,2,3-TRICHLOROPROPANE

Abundance on 110.00 (109.70 to 110.70): VB108008.D



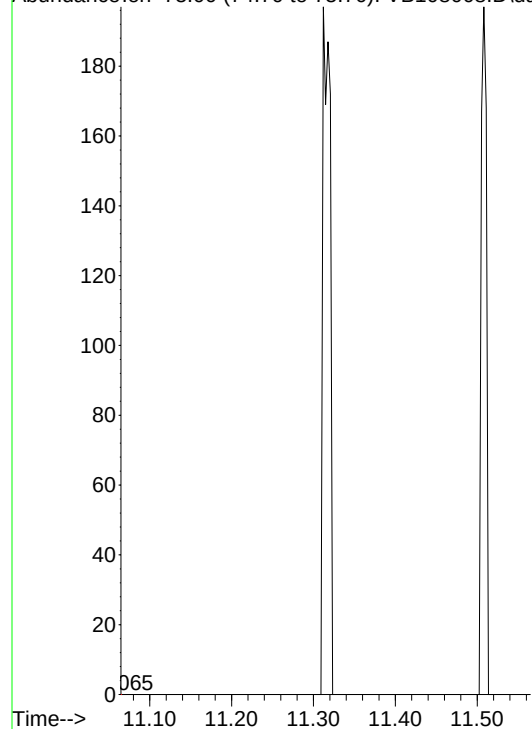
Data Path : Y:\1\DATA\B041819\  
Data File : VB108008.D  
Acq On : 18 Apr 2019 11:06 am  
Operator :  
Sample : 8260 STD 0.5 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 11:33:05 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

1,2-DIBROMO-3-CHLOROPROPANE

Abundance on 75.00 (74.70 to 75.70): VB108008.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:33:34 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 11.31

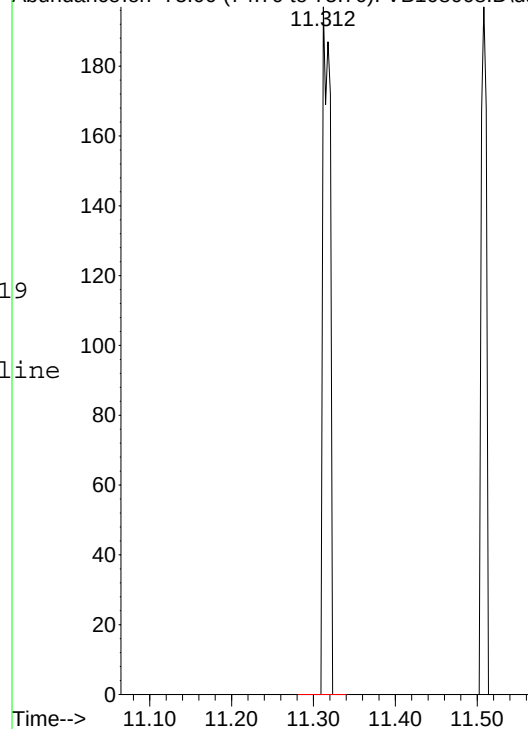
Area : 124

Amount: 0.347724

## Manual Integration

1,2-DIBROMO-3-CHLOROPROPANE

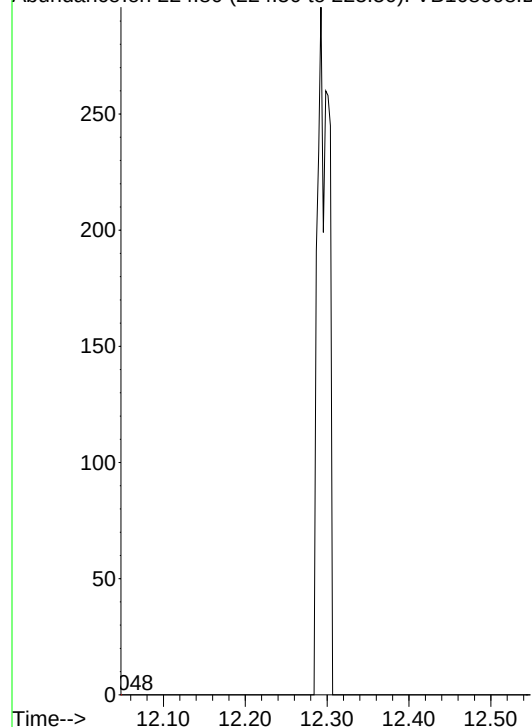
Abundance on 75.00 (74.70 to 75.70): VB108008.D\data



## Original Integration

HEXACHLOROBUTADIENE

Abundance on 224.80 (224.50 to 225.50): VB108008.D



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 11:33:39 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 12.29

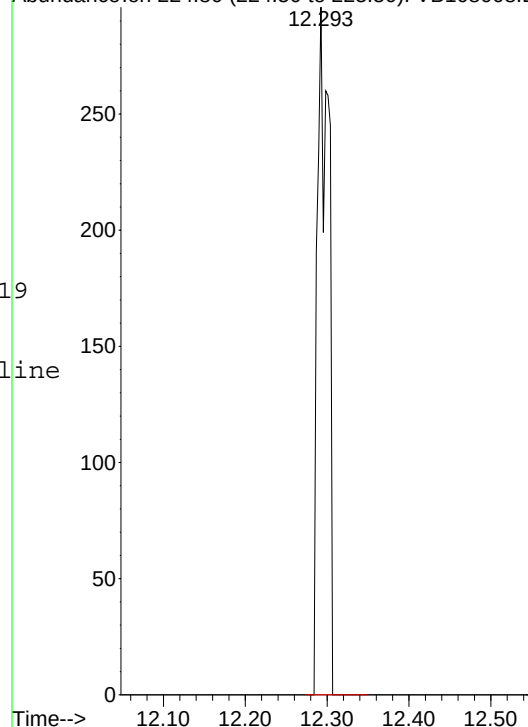
Area : 287

Amount: 0.385456

## Manual Integration

HEXACHLOROBUTADIENE

Abundance on 224.80 (224.50 to 225.50): VB108008.D



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108009.D  
 Acq On : 18 Apr 2019 11:37 am  
 Operator :  
 Sample : 8260 STD 1.0 PPB 1904257  
 Misc :  
 ALS Vial : 6 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 12:27:33 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response   | Conc     | Units  | Dev(Min) |
|-------------------------------|----------------|------|------------|----------|--------|----------|
| Internal Standards            |                |      |            |          |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301          | 168  | 71256      | 30.00    | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 113462     | 30.00    | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845          | 82   | 61366      | 30.00    | UG/L   | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.138         | 152  | 62318      | 30.00    | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |            |          |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 47141      | 35.07    | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 140.28%# |        |          |
| 45) TOLUENE-D8 SS             | 6.441          | 98   | 111123     | 24.89    | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 99.56%   |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 45855      | 24.92    | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 99.68%   |        |          |
| Target Compounds              |                |      |            |          |        |          |
|                               |                |      |            |          | Qvalue |          |
| 3) DICHLORODIFLOUROMETHANE    | 1.149          | 85   | 1691       | 1.19     | UG/L # | 43       |
| 4) DIFLUOROCHLOROMETHANE      | 1.166          | 51   | 2875       | 1.43     | UG/L # | 75       |
| 5) CHLOROMETHANE              | 1.257          | 50   | 3852       | 1.79     | UG/L # | 88       |
| 6) VINYL CHLORIDE             | 1.326          | 62   | 2027       | 1.23     | UG/L   | 100      |
| 7) BROMOMETHANE               | 1.533          | 94   | 1724       | 1.87     | UG/L   | 95       |
| 8) CHLOROETHANE               | 1.593          | 64   | 1155       | 1.31     | UG/L   | 94       |
| 9) FLUORODICHLOROMETHANE      | 1.715          | 67   | 2861       | 1.41     | UG/L   | 92       |
| 10) TRICHLOROFLUOROMETHANE    | 1.758          | 101  | 2159       | 1.29     | UG/L   | 99       |
| 11) ETHANOL                   | 0.000          |      | 0          | N.D.     | d      |          |
| 12) DI ETHYL ETHER            | 1.948          | 59   | 1255       | 1.13     | UG/L # | 59       |
| 13) ACROLEIN                  | 2.053          | 56   | 5470       | 16.67    | UG/L # | 79       |
| 14) ACETONE                   | 2.170          | 43   | 8442m      | 19.77    | UG/L   |          |
| 15) 1,1-DICHLOROETHENE        | 2.116          | 61   | 2542       | 1.47     | UG/L # | 86       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.104          | 101  | 997        | 1.06     | UG/L # | 72       |
| 17) IODOMETHANE               | 2.235          | 142  | 13264      | 7.67     | UG/L   | 92       |
| 18) METHYL ACETATE            | 2.428          | 43   | 2393       | 0.94     | UG/L # | 58       |
| 19) T-BUTYL ALCOHOL           | 2.619          | 59   | 1832       | 11.18    | UG/L # | 61       |
| 20) ACRYLONITRILE             | 2.749          | 53   | 550        | 0.82     | UG/L # | 19       |
| 21) METHYLENE CHLORIDE        | 2.508          | 49   | 2769       | 1.42     | UG/L # | 85       |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 41245      | 11.12    | UG/L   | 99       |
| 23) METHYL TERT-BUTYL ETHE... | 2.738          | 73   | 3689       | 1.03     | UG/L # | 87       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.744          | 61   | 2380       | 1.25     | UG/L   | 93       |
| 25) 1,1-DICHLOROETHANE        | 3.167          | 63   | 3068       | 1.26     | UG/L # | 85       |
| 26) VINYL ACETATE             | 3.232          | 43   | 47215      | 14.62    | UG/L # | 93       |
| 27) DI ISOPROPYL ETHER        | 3.232          | 45   | 5956       | 1.28     | UG/L # | 88       |
| 28) 2-BUTANONE                | 3.801          | 43   | 9956       | 13.36    | UG/L # | 88       |
| 29) T-BUTYL ETHYL ETHER       | 3.602          | 59   | 5104       | 1.13     | UG/L   | 91       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.761          | 61   | 2886       | 1.28     | UG/L   | 94       |
| 31) 2,2-DICHLOROPROPANE       | 3.753          | 77   | 2327       | 1.57     | UG/L # | 75       |
| 32) ETHYL ACETATE             | 0.000          |      | 0          | N.D.     | d      |          |
| 33) BROMOCHLOROMETHANE        | 4.011          | 128  | 622        | 0.94     | UG/L # | 46       |
| 34) TETRAHYDROFURAN           | 0.000          |      | 0          | N.D.     | d      |          |
| 35) T-BUTYL FORMATE           | 4.145          | 59   | 826        | 0.66     | UG/L # | 77       |
| 36) CHLOROFORM                | 4.094          | 83   | 2592       | 1.18     | UG/L   | 94       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 2427       | 1.35     | UG/L   | 94       |
| 38) CYCLOHEXANE               | 4.295          | 56   | 5269       | 2.01     | UG/L   | 95       |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 1885       | 1.19     | UG/L   | 93       |
| 40) 1,1-DICHLOROPROPENE       | 4.412          | 75   | 1819       | 1.16     | UG/L # | 66       |
| 41) BENZENE                   | 4.622          | 78   | 5268       | 1.05     | UG/L   | 100      |
| 42) T-AMYL ALCOHOL            | 4.676          | 59   | 1142       | 8.33     | UG/L # | 78       |
| 43) T-AMYLMETHYL ETHER        | 4.742          | 73   | 3601       | 1.04     | UG/L # | 89       |
| 46) 1,2-DICHLOROETHANE        | 4.659          | 62   | 2890       | 1.41     | UG/L # | 92       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 1397       | 1.02     | UG/L   | 93       |

Data Path : Y:\1\DATA\B041819\

Data File : VB108009.D

Acq On : 18 Apr 2019 11:37 am

Operator :

Sample : 8260 STD 1.0 PPB 1904257

Inst : GCMSVOA2

Misc :

ALS Vial : 6 Sample Multiplier: 1

Quant Time: Apr 18 12:27:33 2019

Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Thu Apr 11 08:23:37 2019

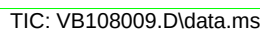
Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|-------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.424  | 83   | 1868     | 0.95  | UG/L # | 70       |
| 49) 1,2-DICHLOROPROPANE       | 5.483  | 63   | 1692     | 1.08  | UG/L # | 67       |
| 50) DIBROMOMETHANE            | 5.600  | 93   | 942      | 1.10  | UG/L   | 89       |
| 51) 1,4-DIOXANE               | 0.000  |      | 0        | N.D.  |        |          |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 2083     | 1.22  | UG/L # | 94       |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.069  | 63   | 11010    | 10.59 | UG/L # | 74       |
| 54) MIBK                      | 6.361  | 43   | 20658    | 12.85 | UG/L # | 88       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.199  | 75   | 2255     | 1.06  | UG/L # | 47       |
| 56) TOLUENE                   | 6.506  | 91   | 5878     | 1.05  | UG/L   | 96       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.745  | 75   | 2145     | 1.12  | UG/L # | 54       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D.  | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.921  | 97   | 1271     | 0.99  | UG/L   | 98       |
| 60) 2-HEXANONE                | 7.177  | 43   | 15120    | 13.47 | UG/L # | 86       |
| 61) TETRACHLOROETHENE         | 7.027  | 164  | 1036     | 0.93  | UG/L   | 96       |
| 62) 1,3-DICHLOROPROPANE       | 7.083  | 76   | 2238     | 1.00  | UG/L # | 58       |
| 63) DIBROMOCHLOROMETHANE      | 7.294  | 129  | 1407     | 0.94  | UG/L   | 96       |
| 64) 1,2-DIBROMOETHANE         | 7.390  | 107  | 1452     | 1.02  | UG/L # | 95       |
| 67) CHLOROBENZENE             | 7.873  | 112  | 3885     | 0.96  | UG/L   | 98       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.959  | 131  | 1389     | 0.92  | UG/L   | 93       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 6948     | 1.03  | UG/L   | 94       |
| 70) M/P-XYLENES               | 8.101  | 91   | 11040    | 2.11  | UG/L   | 95       |
| 71) O-XYLENE                  | 8.487  | 91   | 5821     | 1.07  | UG/L   | 97       |
| 72) STYRENE                   | 8.507  | 104  | 4356     | 0.97  | UG/L # | 82       |
| 73) BROMOFORM                 | 8.689  | 173  | 1009     | 0.85  | UG/L # | 96       |
| 74) ISOPROPYLBENZENE          | 8.854  | 105  | 6555     | 1.02  | UG/L   | 94       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.  |        |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.169  | 83   | 1826     | 0.97  | UG/L # | 96       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.232  | 53   | 739      | 1.15  | UG/L # | 36       |
| 78) BROMOBENZENE              | 9.144  | 77   | 2800     | 1.06  | UG/L   | 95       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.206  | 110  | 537      | 0.90  | UG/L   | 74       |
| 80) N-PROPYLBENZENE           | 9.257  | 91   | 8148     | 1.08  | UG/L   | 91       |
| 81) 2-CHLOROTOLUENE           | 9.331  | 91   | 4985     | 1.08  | UG/L   | 92       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.437  | 105  | 5530     | 0.99  | UG/L   | 90       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 5845     | 1.07  | UG/L   | 91       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 4668     | 1.00  | UG/L # | 83       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 5744     | 1.04  | UG/L   | 94       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 6494     | 1.06  | UG/L   | 94       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 3563     | 1.08  | UG/L   | 96       |
| 89) P-ISOPROPYLTOLUENE        | 10.119 | 119  | 5567     | 0.97  | UG/L # | 91       |
| 90) 1,4-DICHLOROBENZENE       | 10.161 | 146  | 3565     | 1.02  | UG/L # | 67       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 4913     | 1.11  | UG/L   | 99       |
| 92) 1,2-DICHLOROBENZENE       | 10.534 | 146  | 3325     | 1.02  | UG/L   | 97       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.318 | 75   | 285m     | 0.81  | UG/L   |          |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 2132     | 0.98  | UG/L   | 99       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.128 | 180  | 2211     | 1.06  | UG/L   | 96       |
| 96) HEXACHLOROBUTADIENE       | 12.301 | 225  | 818      | 1.12  | UG/L # | 23       |
| 97) NAPHTHALENE               | 12.369 | 128  | 5562     | 1.01  | UG/L   | 99       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 1840     | 0.99  | UG/L   | 97       |

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

195

Inst : GCMSVOA2



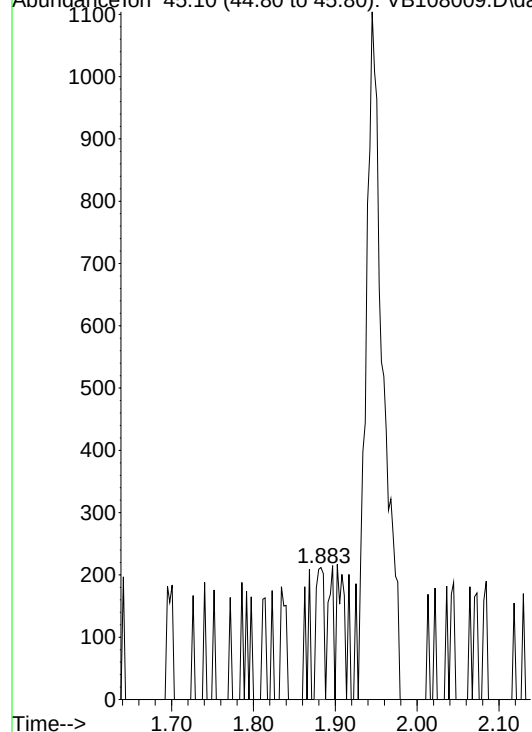
Data Path : Y:\1\DATA\B041819\  
Data File : VB108009.D  
Acq On : 18 Apr 2019 11:37 am  
Operator :  
Sample : 8260 STD 1.0 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 12:27:33 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHANOL

Abundance on 45.10 (44.80 to 45.80): VB108009.D\data



## Original Int. Results

-----

RT : 1.88  
Area : 137  
Amount: 8.25688

## Manual Int. Results

-----

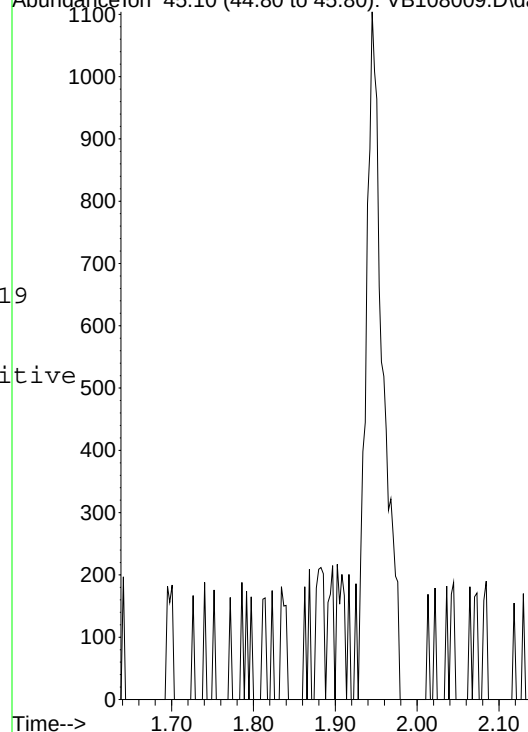
Thu Apr 18 12:27:05 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHANOL

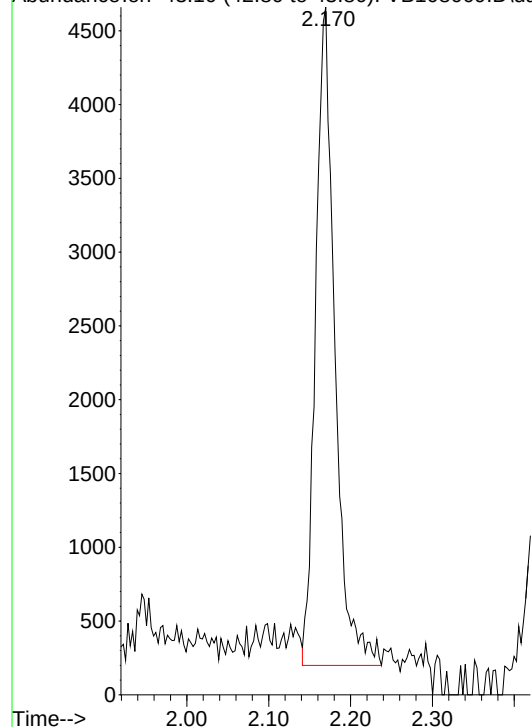
Abundance on 45.10 (44.80 to 45.80): VB108009.D\data



## Original Integration

ACETONE

Abundance on 43.10 (42.80 to 43.80): VB108009.D\data



## Original Int. Results

-----

RT : 2.17  
Area : 7283  
Amount: 17.0589

## Manual Int. Results

-----

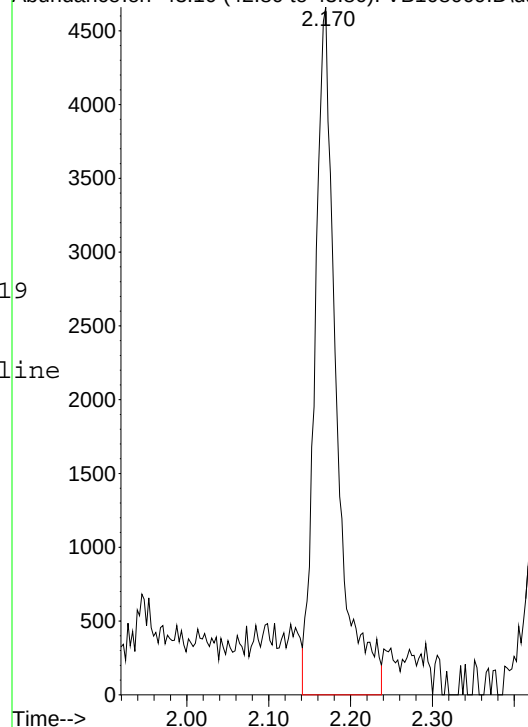
Thu Apr 18 12:27:11 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 2.17  
Area : 8442  
Amount: 19.7736

## Manual Integration

ACETONE

Abundance on 43.10 (42.80 to 43.80): VB108009.D\data





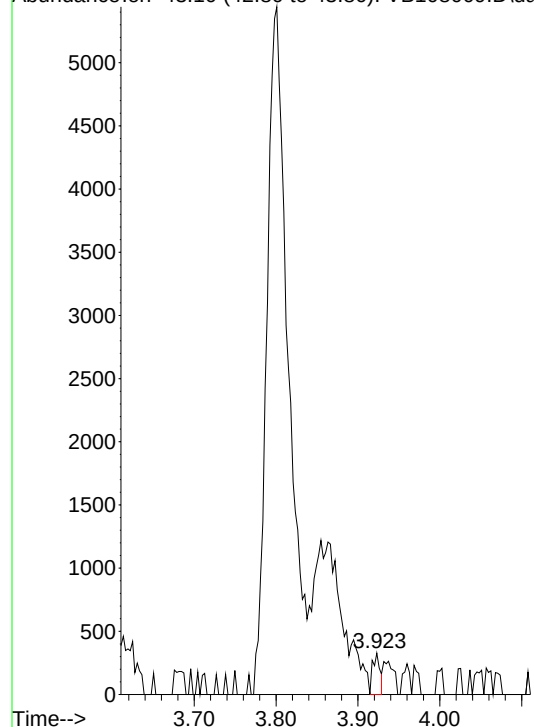
Data Path : Y:\1\DATA\B041819\  
Data File : VB108009.D  
Acq On : 18 Apr 2019 11:37 am  
Operator :  
Sample : 8260 STD 1.0 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 12:27:33 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108009.D\data



## Original Int. Results

-----

RT : 3.92  
Area : 205  
Amount: 0.122325

## Manual Int. Results

-----

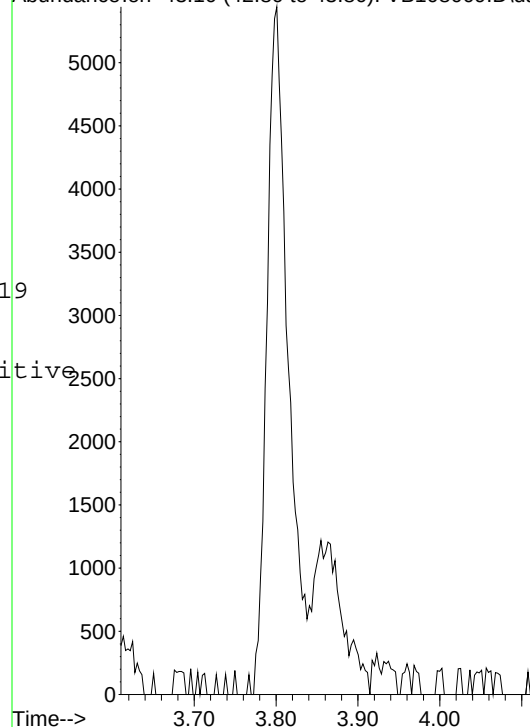
Thu Apr 18 12:27:34 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL ACETATE

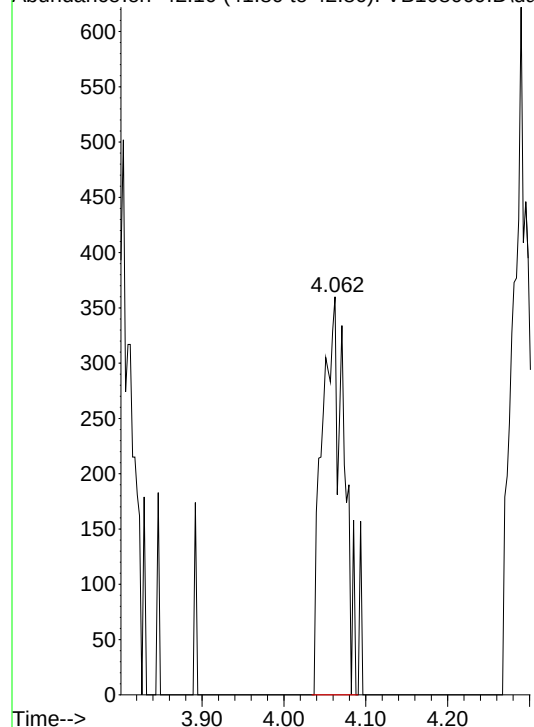
Abundance on 43.10 (42.80 to 43.80): VB108009.D\data



## Original Integration

TETRAHYDROFURAN

Abundance on 42.10 (41.80 to 42.80): VB108009.D\data



## Original Int. Results

-----

RT : 4.06  
Area : 668  
Amount: 1.28665

## Manual Int. Results

-----

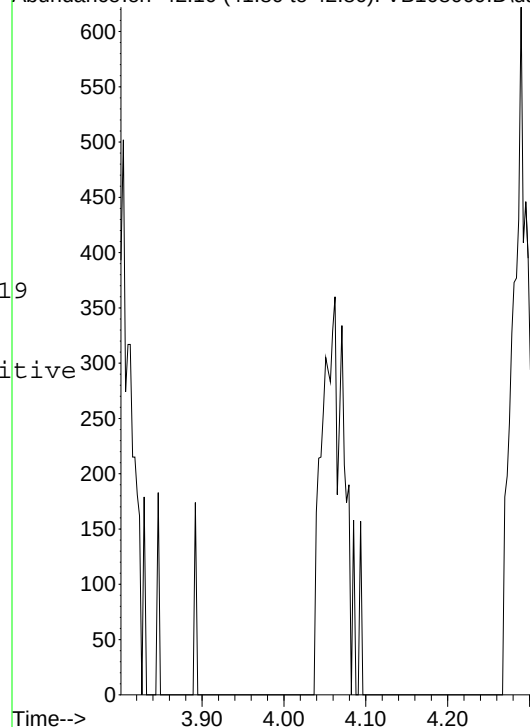
Thu Apr 18 12:27:40 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

TETRAHYDROFURAN

Abundance on 42.10 (41.80 to 42.80): VB108009.D\data



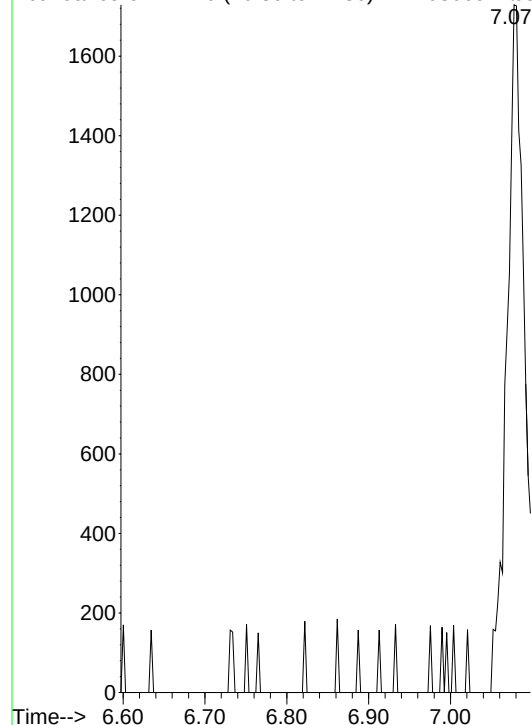
Data Path : Y:\1\DATA\B041819\  
Data File : VB108009.D  
Acq On : 18 Apr 2019 11:37 am  
Operator :  
Sample : 8260 STD 1.0 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 12:27:33 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108009.D\data



## Original Int. Results

-----

RT : 7.08  
Area : 2694  
Amount: 0

## Manual Int. Results

-----

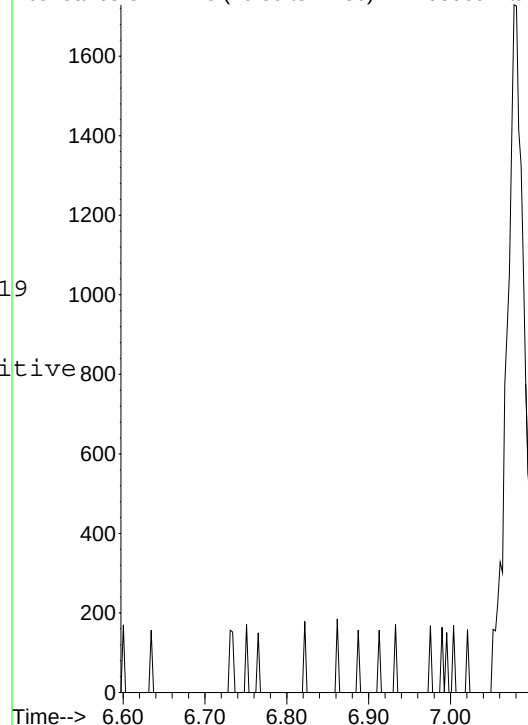
Thu Apr 18 12:27:58 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL METHACRYLATE

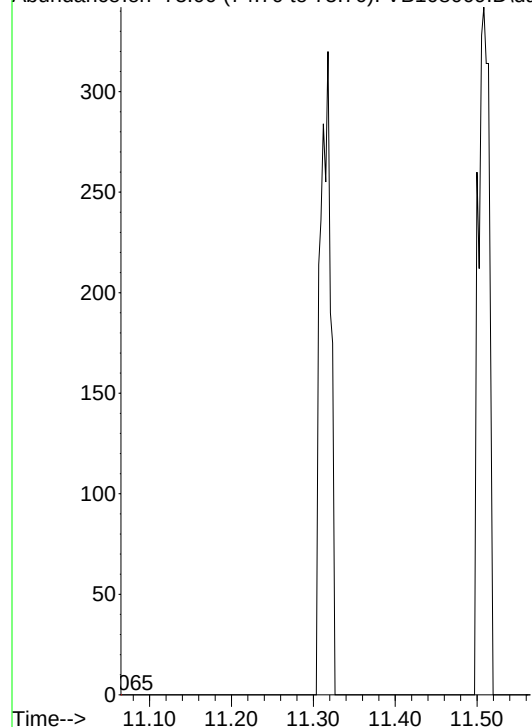
Abundance on 41.10 (40.80 to 41.80): VB108009.D\data



## Original Integration

1,2-DIBROMO-3-CHLOROPROPANE

Abundance on 75.00 (74.70 to 75.70): VB108009.D\data



## Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

## Manual Int. Results

-----

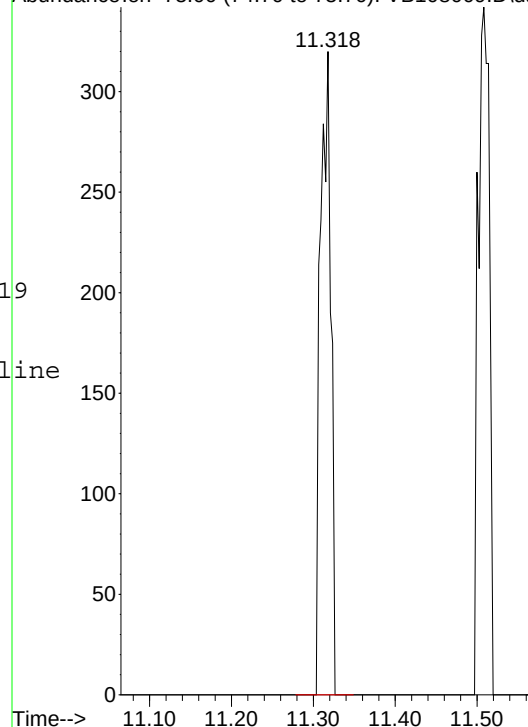
Thu Apr 18 12:28:16 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 11.32  
Area : 285  
Amount: 0.812632

## Manual Integration

1,2-DIBROMO-3-CHLOROPROPANE

Abundance on 75.00 (74.70 to 75.70): VB108009.D\data



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108010.D  
 Acq On : 18 Apr 2019 12:08 pm  
 Operator :  
 Sample : 8260 STD 2.0 PPB 1904257  
 Misc :  
 ALS Vial : 7 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 12:41:03 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response            | Conc  | Units  | Dev(Min) |
|-------------------------------|----------------|------|---------------------|-------|--------|----------|
| Internal Standards            |                |      |                     |       |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301          | 168  | 72589               | 30.00 | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 113659              | 30.00 | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842          | 82   | 62461               | 30.00 | UG/L   | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.138         | 152  | 63014               | 30.00 | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |                     |       |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 47417               | 34.63 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 138.52%# |       |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 113312              | 25.33 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 101.32%  |       |        |          |
| 66) 4-BROMOFLUOROBENZENE SS   | 8.999          | 95   | 46780               | 24.97 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 99.88%   |       |        |          |
| Target Compounds              |                |      |                     |       |        |          |
|                               |                |      |                     |       | Qvalue |          |
| 3) DICHLORODIFLOUROMETHANE    | 1.146          | 85   | 3683                | 2.55  | UG/L   | 98       |
| 4) DIFLUOROCHLOROMETHANE      | 1.169          | 51   | 5284                | 2.59  | UG/L   | 100      |
| 5) CHLOROMETHANE              | 1.257          | 50   | 7584                | 3.46  | UG/L   | 91       |
| 6) VINYL CHLORIDE             | 1.328          | 62   | 4385                | 2.60  | UG/L   | 97       |
| 7) BROMOMETHANE               | 1.533          | 94   | 2679                | 2.86  | UG/L   | 99       |
| 8) CHLOROETHANE               | 1.595          | 64   | 2361                | 2.63  | UG/L   | 99       |
| 9) FLUORODICHLOROMETHANE      | 1.721          | 67   | 5860                | 2.84  | UG/L   | 93       |
| 10) TRICHLOROFLUOROMETHANE    | 1.758          | 101  | 4752                | 2.78  | UG/L   | 99       |
| 11) ETHANOL                   | 0.000          |      | 0                   | N.D.  | d      |          |
| 12) DI ETHYL ETHER            | 1.948          | 59   | 2907                | 2.58  | UG/L # | 76       |
| 13) ACROLEIN                  | 2.056          | 56   | 9856                | 29.48 | UG/L # | 94       |
| 14) ACETONE                   | 2.170          | 43   | 15327m              | 35.24 | UG/L   |          |
| 15) 1,1-DICHLOROETHENE        | 2.116          | 61   | 5401                | 3.06  | UG/L # | 89       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.104          | 101  | 2148                | 2.24  | UG/L   | 99       |
| 17) IODOMETHANE               | 2.238          | 142  | 31762               | 18.02 | UG/L   | 91       |
| 18) METHYL ACETATE            | 2.425          | 43   | 4416                | 1.70  | UG/L # | 80       |
| 19) T-BUTYL ALCOHOL           | 2.616          | 59   | 3961                | 23.72 | UG/L # | 65       |
| 20) ACRYLONITRILE             | 2.749          | 53   | 1484                | 2.16  | UG/L # | 37       |
| 21) METHYLENE CHLORIDE        | 2.505          | 49   | 6181                | 3.10  | UG/L # | 82       |
| 22) CARBON DISULFIDE          | 2.286          | 76   | 86504               | 22.90 | UG/L   | 100      |
| 23) METHYL TERT-BUTYL ETHE... | 2.744          | 73   | 8281                | 2.27  | UG/L   | 95       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.747          | 61   | 5244                | 2.71  | UG/L   | 92       |
| 25) 1,1-DICHLOROETHANE        | 3.170          | 63   | 6430                | 2.59  | UG/L   | 98       |
| 26) VINYL ACETATE             | 3.232          | 43   | 98218               | 29.85 | UG/L # | 95       |
| 27) DI ISOPROPYL ETHER        | 3.232          | 45   | 12988               | 2.74  | UG/L # | 87       |
| 28) 2-BUTANONE                | 3.798          | 43   | 20314               | 26.76 | UG/L # | 92       |
| 29) T-BUTYL ETHYL ETHER       | 3.605          | 59   | 11066               | 2.42  | UG/L   | 95       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.755          | 61   | 6260                | 2.72  | UG/L   | 90       |
| 31) 2,2-DICHLOROPROPANE       | 3.753          | 77   | 4797                | 3.19  | UG/L   | 96       |
| 32) ETHYL ACETATE             | 3.861          | 43   | 5616m               | 3.29  | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.003          | 128  | 1607                | 2.38  | UG/L # | 75       |
| 34) TETRAHYDROFURAN           | 4.054          | 42   | 1426                | 2.70  | UG/L # | 56       |
| 35) T-BUTYL FORMATE           | 4.142          | 59   | 2308                | 1.82  | UG/L # | 92       |
| 36) CHLOROFORM                | 4.085          | 83   | 5804                | 2.59  | UG/L   | 99       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.247          | 97   | 4796                | 2.61  | UG/L # | 92       |
| 38) CYCLOHEXANE               | 4.295          | 56   | 8336                | 3.13  | UG/L   | 92       |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 4544                | 2.83  | UG/L   | 86       |
| 40) 1,1-DICHLOROPROPENE       | 4.418          | 75   | 3920                | 2.45  | UG/L   | 97       |
| 41) BENZENE                   | 4.622          | 78   | 10947               | 2.14  | UG/L   | 98       |
| 42) T-AMYL ALCOHOL            | 4.673          | 59   | 2478                | 17.74 | UG/L # | 83       |
| 43) T-AMYLMETHYL ETHER        | 4.739          | 73   | 7683                | 2.18  | UG/L   | 95       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 5810                | 2.83  | UG/L # | 93       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 3066                | 2.24  | UG/L   | 92       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108010.D  
 Acq On : 18 Apr 2019 12:08 pm  
 Operator :  
 Sample : 8260 STD 2.0 PPB 1904257  
 Misc :  
 ALS Vial : 7 Sample Multiplier: 1

Inst : GCMSVOA2

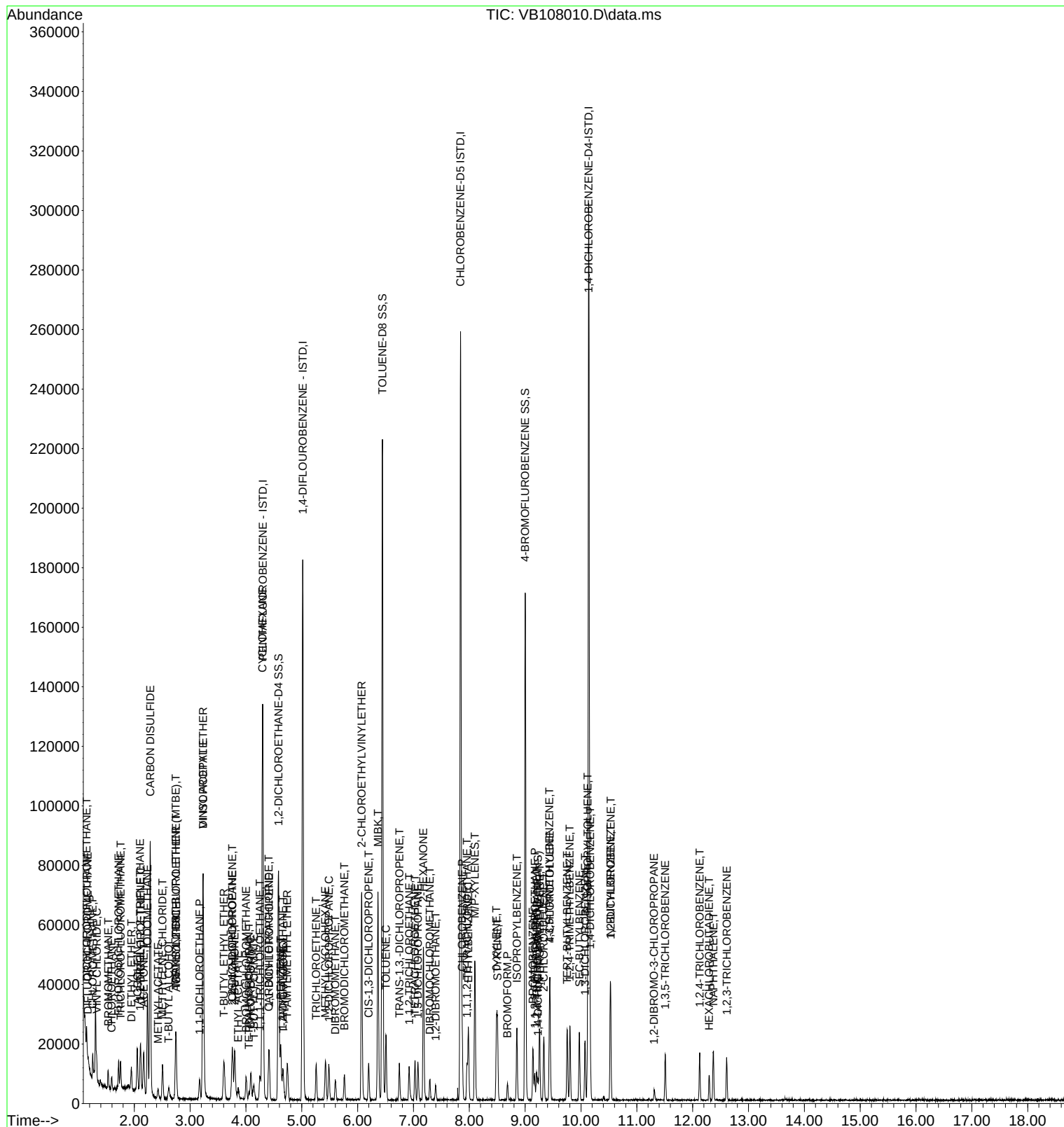
Quant Time: Apr 18 12:41:03 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|-------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.421  | 83   | 3796     | 1.92  | UG/L # | 76       |
| 49) 1,2-DICHLOROPROPANE       | 5.486  | 63   | 3615     | 2.30  | UG/L # | 76       |
| 50) DIBROMOMETHANE            | 5.600  | 93   | 2158     | 2.52  | UG/L   | 92       |
| 51) 1,4-DIOXANE               | 0.000  |      | 0        | N.D.  |        |          |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 4261     | 2.50  | UG/L # | 94       |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.072  | 63   | 23130    | 22.22 | UG/L # | 77       |
| 54) MIBK                      | 6.364  | 43   | 42089    | 26.14 | UG/L # | 89       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.197  | 75   | 4822     | 2.27  | UG/L # | 65       |
| 56) TOLUENE                   | 6.506  | 91   | 12676    | 2.27  | UG/L   | 95       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.748  | 75   | 4647     | 2.42  | UG/L # | 66       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D.  | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.924  | 97   | 2815     | 2.19  | UG/L   | 97       |
| 60) 2-HEXANONE                | 7.177  | 43   | 31633    | 28.14 | UG/L # | 86       |
| 61) TETRACHLOROETHENE         | 7.027  | 164  | 2349     | 2.11  | UG/L   | 96       |
| 62) 1,3-DICHLOROPROPANE       | 7.080  | 76   | 4928     | 2.20  | UG/L # | 69       |
| 63) DIBROMOCHLOROMETHANE      | 7.294  | 129  | 3143     | 2.09  | UG/L   | 97       |
| 64) 1,2-DIBROMOETHANE         | 7.399  | 107  | 2977     | 2.08  | UG/L # | 96       |
| 67) CHLOROBENZENE             | 7.871  | 112  | 8235     | 2.00  | UG/L   | 92       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.956  | 131  | 2872     | 1.87  | UG/L   | 97       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 14340    | 2.09  | UG/L   | 97       |
| 70) M/P-XYLENES               | 8.101  | 91   | 23694    | 4.44  | UG/L   | 93       |
| 71) O-XYLENE                  | 8.487  | 91   | 11865    | 2.14  | UG/L   | 94       |
| 72) STYRENE                   | 8.507  | 104  | 9241     | 2.02  | UG/L # | 82       |
| 73) BROMOFORM                 | 8.683  | 173  | 2330     | 1.94  | UG/L # | 93       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 13631    | 2.07  | UG/L   | 96       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.  |        |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.172  | 83   | 3752     | 1.95  | UG/L # | 96       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.229  | 53   | 1806     | 2.77  | UG/L # | 36       |
| 78) BROMOBENZENE              | 9.138  | 77   | 5811     | 2.16  | UG/L   | 97       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.209  | 110  | 1234     | 2.02  | UG/L   | 95       |
| 80) N-PROPYLBENZENE           | 9.260  | 91   | 16659    | 2.17  | UG/L   | 97       |
| 81) 2-CHLOROTOLUENE           | 9.334  | 91   | 10286    | 2.18  | UG/L   | 93       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.437  | 105  | 11379    | 2.01  | UG/L   | 93       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 12159    | 2.19  | UG/L   | 94       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 9719     | 2.06  | UG/L   | 86       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.800  | 105  | 12057    | 2.15  | UG/L   | 94       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 13880    | 2.23  | UG/L   | 96       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 7096     | 2.12  | UG/L   | 97       |
| 89) P-ISOPROPYLTOLUENE        | 10.119 | 119  | 11696    | 2.02  | UG/L # | 92       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 7576     | 2.15  | UG/L # | 93       |
| 91) N-BUTYLBENZENE            | 10.528 | 91   | 10343    | 2.32  | UG/L   | 97       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 6672     | 2.03  | UG/L   | 94       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.309 | 75   | 734      | 2.07  | UG/L   | 92       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 4533     | 2.05  | UG/L   | 95       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 4457     | 2.12  | UG/L   | 96       |
| 96) HEXACHLOROBUTADIENE       | 12.293 | 225  | 1562     | 2.11  | UG/L # | 89       |
| 97) NAPHTHALENE               | 12.372 | 128  | 11474    | 2.05  | UG/L   | 99       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180  | 4138     | 2.19  | UG/L   | 96       |

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

201

Inst : GCMSVOA2



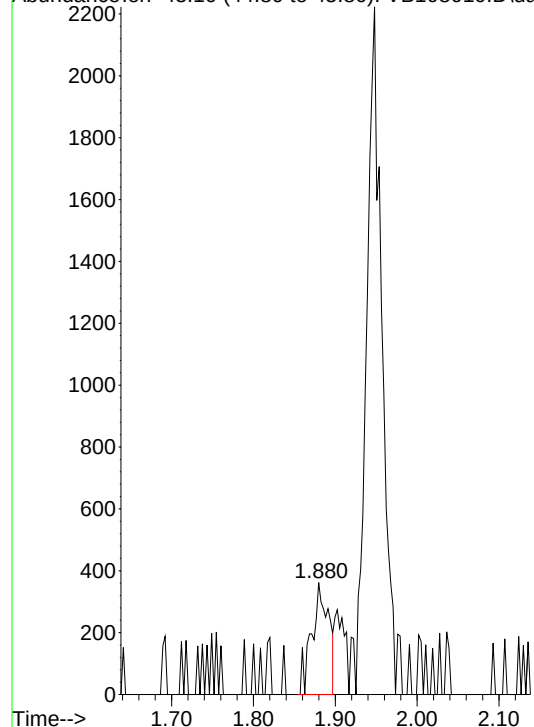
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Data File : VB108010.D  
Acq On : 18 Apr 2019 12:08 pm  
Operator :  
Sample : 8260 STD 2.0 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 12:41:03 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHANOL

Abundance 45.10 (44.80 to 45.80): VB108010.D\data



## Original Int. Results

-----

RT : 1.88  
Area : 517  
Amount: 30.587

## Manual Int. Results

-----

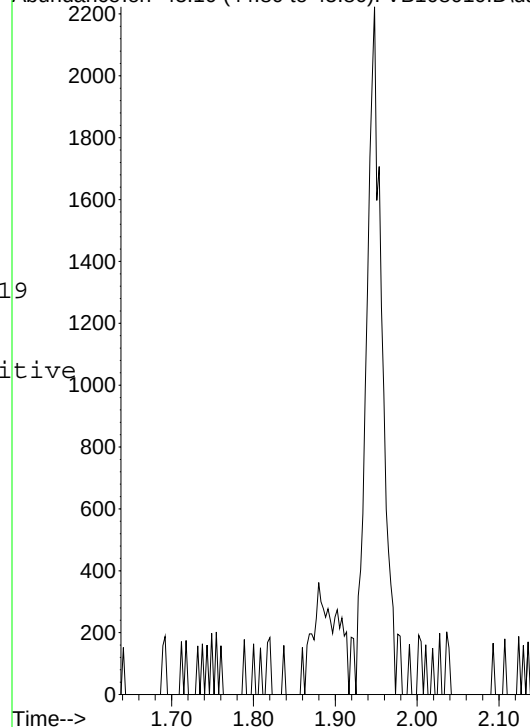
Thu Apr 18 12:41:13 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHANOL

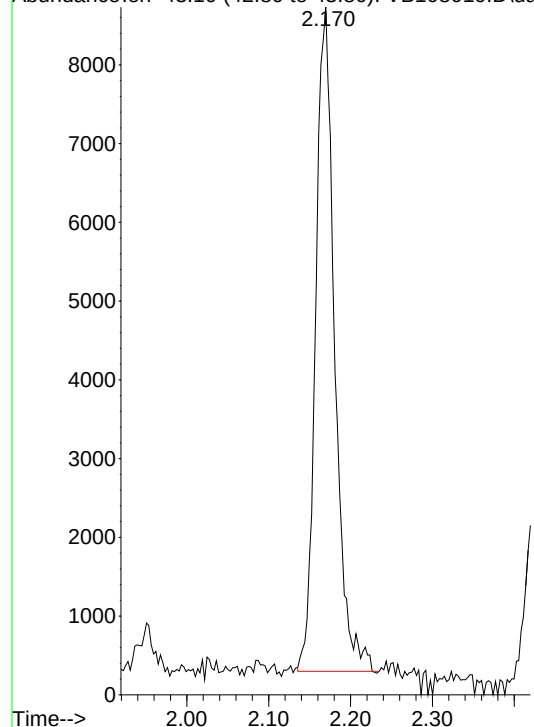
Abundance 45.10 (44.80 to 45.80): VB108010.D\data



## Original Integration

ACETONE

Abundance 43.10 (42.80 to 43.80): VB108010.D\data



## Original Int. Results

-----

RT : 2.17  
Area : 13601  
Amount: 31.2725

## Manual Int. Results

-----

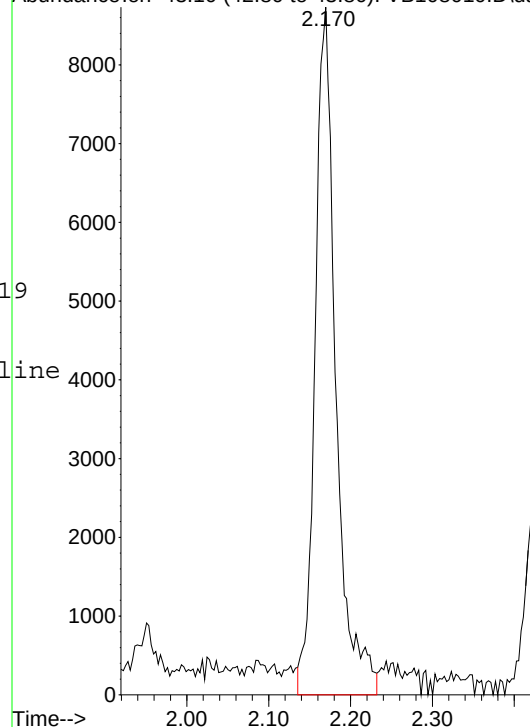
Thu Apr 18 12:41:19 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 2.17  
Area : 15327  
Amount: 35.241

## Manual Integration

ACETONE

Abundance 43.10 (42.80 to 43.80): VB108010.D\data



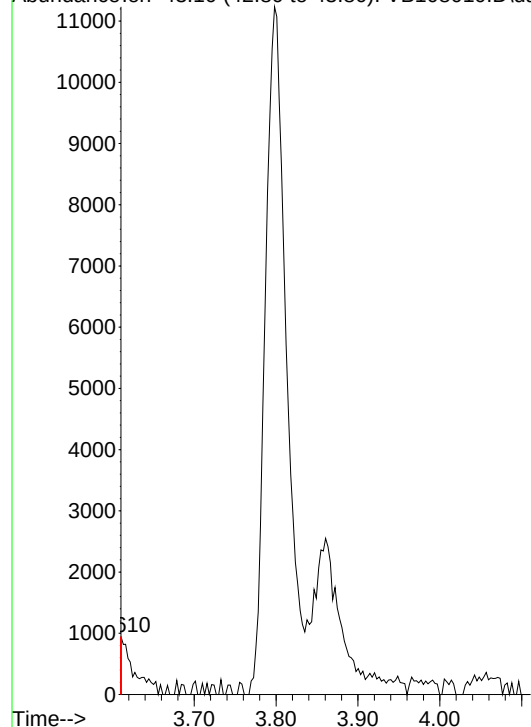
Data Path : Y:\1\DATA\B041819\  
Data File : VB108010.D  
Acq On : 18 Apr 2019 12:08 pm  
Operator :  
Sample : 8260 STD 2.0 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 12:41:03 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108010.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 12:41:31 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 3.86

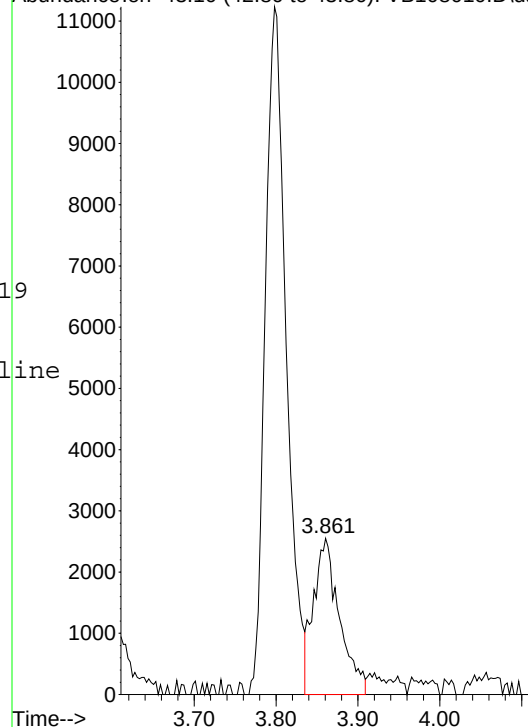
Area : 5616

Amount: 3.28957

## Manual Integration

ETHYL ACETATE

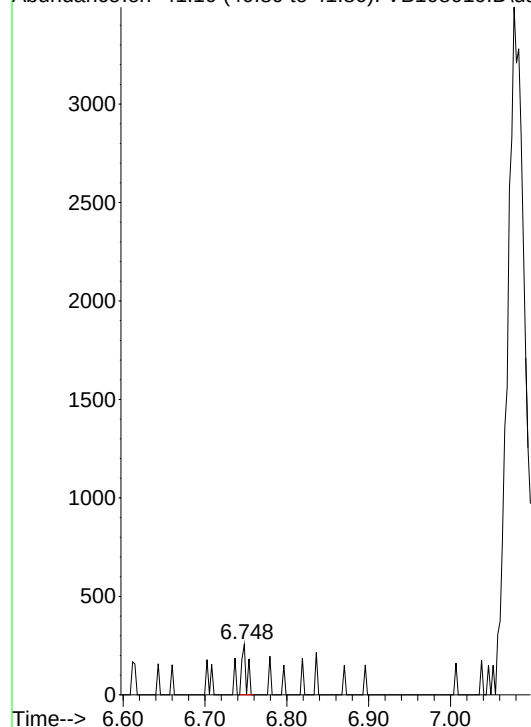
Abundance on 43.10 (42.80 to 43.80): VB108010.D\data



## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108010.D\data



## Original Int. Results

-----

RT : 6.75

Area : 106

Amount: 0

## Manual Int. Results

-----

Thu Apr 18 12:41:47 2019

MIuser: LBD

Reason: Qdel False Positive

RT : 0.00

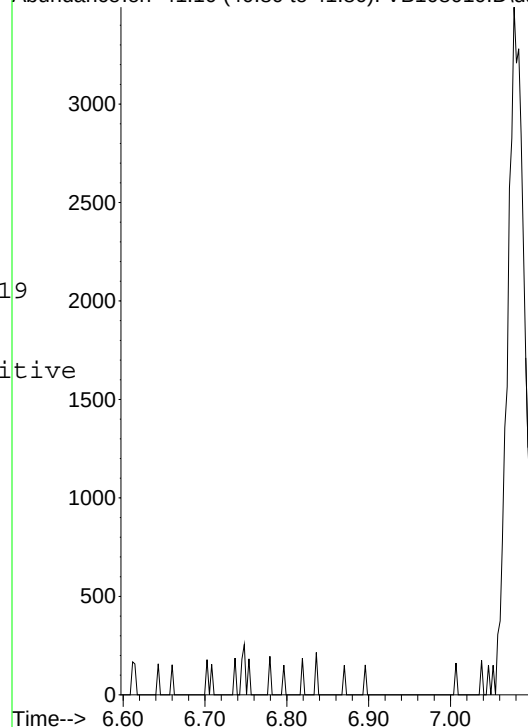
Area : 0

Amount: 0

## Manual Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108010.D\data



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108011.D  
 Acq On : 18 Apr 2019 12:38 pm  
 Operator :  
 Sample : 8260 STD 5.0 PPB 1904257  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 13:55:58 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response            | Conc  | Units  | Dev(Min) |
|-------------------------------|----------------|------|---------------------|-------|--------|----------|
| Internal Standards            |                |      |                     |       |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301          | 168  | 71588               | 30.00 | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 113549              | 30.00 | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842          | 82   | 62564               | 30.00 | UG/L   | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.141         | 152  | 63001               | 30.00 | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |                     |       |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 46918               | 34.75 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 139.00%# |       |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 111703              | 25.00 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 100.00%  |       |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 46877               | 24.98 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 99.92%   |       |        |          |
| Target Compounds              |                |      |                     |       |        |          |
|                               |                |      |                     |       | Qvalue |          |
| 3) DICHLORODIFLOUROMETHANE    | 1.147          | 85   | 8102                | 5.70  | UG/L   | 97       |
| 4) DIFLUOROCHLOROMETHANE      | 1.169          | 51   | 11812               | 5.86  | UG/L # | 82       |
| 5) CHLOROMETHANE              | 1.254          | 50   | 21620               | 10.00 | UG/L   | 98       |
| 6) VINYL CHLORIDE             | 1.326          | 62   | 9273                | 5.58  | UG/L   | 99       |
| 7) BROMOMETHANE               | 1.536          | 94   | 4654                | 5.03  | UG/L   | 94       |
| 8) CHLOROETHANE               | 1.593          | 64   | 5249                | 5.93  | UG/L   | 96       |
| 9) FLUORODICHLOROMETHANE      | 1.718          | 67   | 12956               | 6.36  | UG/L   | 97       |
| 10) TRICHLOROFLUOROMETHANE    | 1.755          | 101  | 10912               | 6.48  | UG/L   | 98       |
| 11) ETHANOL                   | 1.885          | 45   | 1257                | 75.41 | UG/L # | 77       |
| 12) DI ETHYL ETHER            | 1.948          | 59   | 6843                | 6.15  | UG/L # | 81       |
| 13) ACROLEIN                  | 2.053          | 56   | 21232               | 64.39 | UG/L # | 96       |
| 14) ACETONE                   | 2.167          | 43   | 31072               | 72.44 | UG/L # | 87       |
| 15) 1,1-DICHLOROETHENE        | 2.113          | 61   | 11471               | 6.58  | UG/L   | 90       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.107          | 101  | 4738                | 5.00  | UG/L   | 92       |
| 17) IODOMETHANE               | 2.235          | 142  | 81177               | 46.70 | UG/L   | 90       |
| 18) METHYL ACETATE            | 2.423          | 43   | 9551                | 3.73  | UG/L # | 85       |
| 19) T-BUTYL ALCOHOL           | 2.613          | 59   | 9099                | 55.25 | UG/L # | 85       |
| 20) ACRYLONITRILE             | 2.749          | 53   | 3619                | 5.34  | UG/L # | 95       |
| 21) METHYLENE CHLORIDE        | 2.505          | 49   | 14149               | 7.21  | UG/L # | 82       |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 187501              | 50.33 | UG/L   | 100      |
| 23) METHYL TERT-BUTYL ETHE... | 2.744          | 73   | 19946               | 5.55  | UG/L   | 98       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.744          | 61   | 12066               | 6.32  | UG/L   | 92       |
| 25) 1,1-DICHLOROETHANE        | 3.170          | 63   | 14569               | 5.95  | UG/L   | 99       |
| 26) VINYL ACETATE             | 3.230          | 43   | 251434              | 77.48 | UG/L # | 94       |
| 27) DI ISOPROPYL ETHER        | 3.233          | 45   | 30489               | 6.53  | UG/L # | 90       |
| 28) 2-BUTANONE                | 3.795          | 43   | 48190               | 64.36 | UG/L # | 93       |
| 29) T-BUTYL ETHYL ETHER       | 3.605          | 59   | 26523               | 5.87  | UG/L   | 97       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.761          | 61   | 14319               | 6.32  | UG/L   | 90       |
| 31) 2,2-DICHLOROPROPANE       | 3.753          | 77   | 10445               | 7.04  | UG/L   | 97       |
| 32) ETHYL ACETATE             | 3.855          | 43   | 12971m              | 7.70  | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.003          | 128  | 3705                | 5.56  | UG/L # | 72       |
| 34) TETRAHYDROFURAN           | 4.057          | 42   | 3260                | 6.25  | UG/L # | 77       |
| 35) T-BUTYL FORMATE           | 4.139          | 59   | 6554                | 5.25  | UG/L   | 96       |
| 36) CHLOROFORM                | 4.091          | 83   | 13082               | 5.92  | UG/L   | 99       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.253          | 97   | 11530               | 6.37  | UG/L   | 94       |
| 38) CYCLOHEXANE               | 4.293          | 56   | 15627               | 5.94  | UG/L # | 89       |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 9737                | 6.14  | UG/L   | 96       |
| 40) 1,1-DICHLOROPROPENE       | 4.415          | 75   | 9058                | 5.75  | UG/L   | 93       |
| 41) BENZENE                   | 4.622          | 78   | 25309               | 5.01  | UG/L   | 99       |
| 42) T-AMYL ALCOHOL            | 4.671          | 59   | 6374                | 46.26 | UG/L # | 91       |
| 43) T-AMYLMETHYL ETHER        | 4.739          | 73   | 18684               | 5.38  | UG/L   | 96       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 13586               | 6.63  | UG/L # | 93       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 6968                | 5.10  | UG/L   | 91       |



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108011.D  
 Acq On : 18 Apr 2019 12:38 pm  
 Operator :  
 Sample : 8260 STD 5.0 PPB 1904257  
 Misc :  
 ALS Vial : 8 Sample Multiplier: 1

Inst : GCMSVOA2

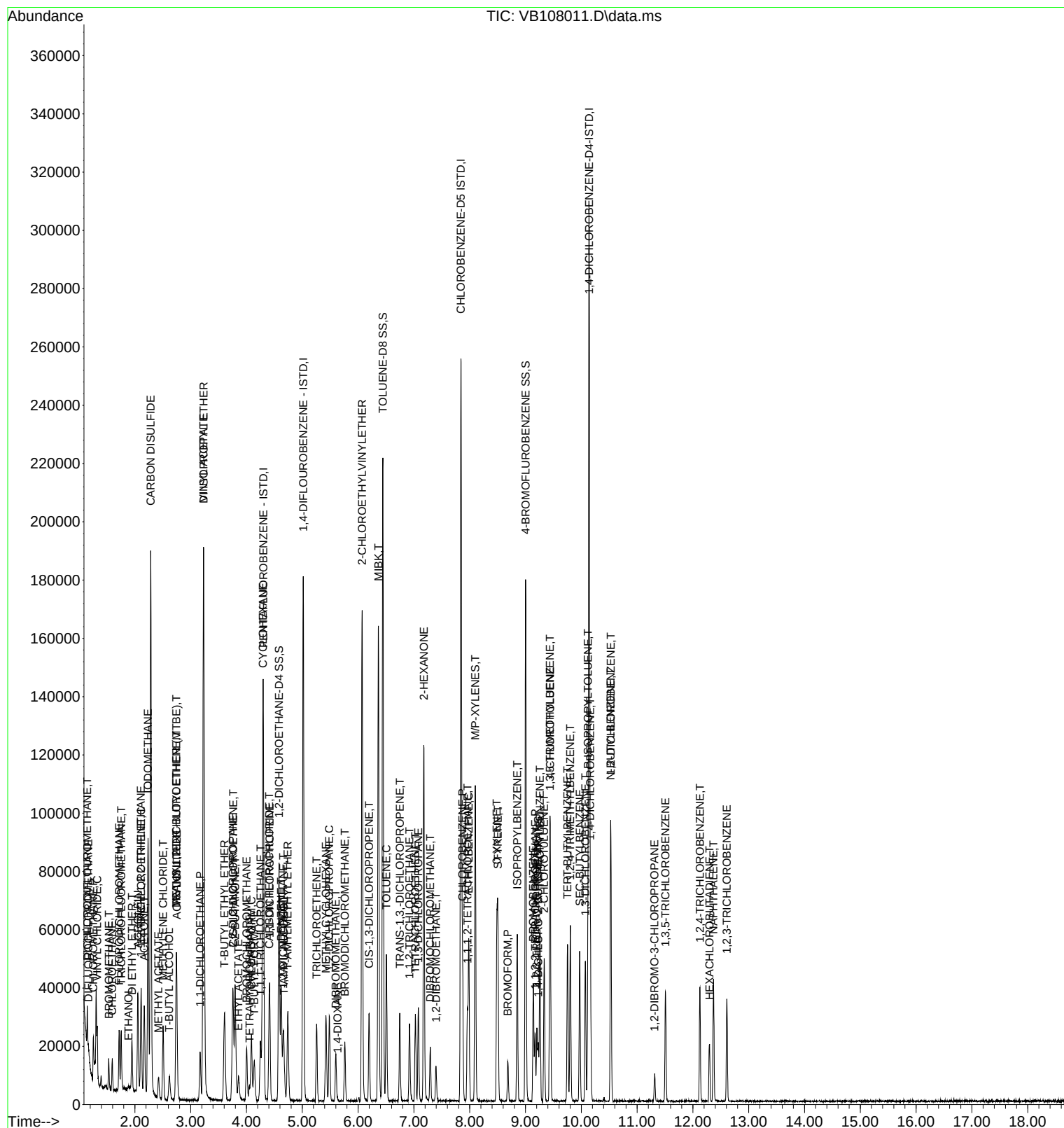
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 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|-------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.427  | 83   | 8737     | 4.42  | UG/L # | 83       |
| 49) 1,2-DICHLOROPROPANE       | 5.483  | 63   | 8206     | 5.23  | UG/L # | 79       |
| 50) DIBROMOMETHANE            | 5.600  | 93   | 5170     | 6.04  | UG/L   | 93       |
| 51) 1,4-DIOXANE               | 5.634  | 88   | 364m     | 40.75 | UG/L   |          |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 10378    | 6.09  | UG/L   | 100      |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.072  | 63   | 56081    | 53.92 | UG/L # | 76       |
| 54) MIBK                      | 6.364  | 43   | 101541   | 63.11 | UG/L # | 89       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.197  | 75   | 12105    | 5.69  | UG/L # | 70       |
| 56) TOLUENE                   | 6.506  | 91   | 28602    | 5.12  | UG/L   | 98       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.748  | 75   | 11442    | 5.97  | UG/L # | 73       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D.  | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.919  | 97   | 6292     | 4.91  | UG/L   | 94       |
| 60) 2-HEXANONE                | 7.177  | 43   | 73209    | 65.18 | UG/L # | 87       |
| 61) TETRACHLOROETHENE         | 7.024  | 164  | 5477     | 4.92  | UG/L   | 98       |
| 62) 1,3-DICHLOROPROPANE       | 7.081  | 76   | 11892    | 5.31  | UG/L # | 71       |
| 63) DIBROMOCHLOROMETHANE      | 7.294  | 129  | 7747     | 5.15  | UG/L   | 96       |
| 64) 1,2-DIBROMOETHANE         | 7.399  | 107  | 7441     | 5.22  | UG/L # | 99       |
| 67) CHLOROBENZENE             | 7.871  | 112  | 19437    | 4.71  | UG/L   | 94       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.962  | 131  | 7228     | 4.71  | UG/L   | 97       |
| 69) ETHYLBENZENE              | 7.981  | 91   | 32672    | 4.75  | UG/L   | 95       |
| 70) M/P-XYLENES               | 8.101  | 91   | 52811    | 9.88  | UG/L   | 94       |
| 71) O-XYLENE                  | 8.487  | 91   | 26747    | 4.82  | UG/L   | 96       |
| 72) STYRENE                   | 8.504  | 104  | 22081    | 4.81  | UG/L # | 84       |
| 73) BROMOFORM                 | 8.681  | 173  | 5596     | 4.65  | UG/L # | 96       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 31463    | 4.78  | UG/L   | 97       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.  | d      |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.172  | 83   | 9208     | 4.79  | UG/L   | 99       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.229  | 53   | 4100     | 6.27  | UG/L   | 92       |
| 78) BROMOBENZENE              | 9.138  | 77   | 13283    | 4.93  | UG/L   | 98       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.201  | 110  | 2800     | 4.58  | UG/L   | 88       |
| 80) N-PROPYLBENZENE           | 9.258  | 91   | 37732    | 4.91  | UG/L   | 95       |
| 81) 2-CHLOROTOLUENE           | 9.334  | 91   | 23123    | 4.89  | UG/L   | 97       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.437  | 105  | 25989    | 4.58  | UG/L   | 95       |
| 83) 4-CHLOROTOLUENE           | 9.442  | 91   | 28308    | 5.08  | UG/L   | 92       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 22088    | 4.67  | UG/L   | 86       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 27975    | 4.99  | UG/L   | 93       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 31001    | 4.99  | UG/L   | 97       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 16580    | 4.95  | UG/L   | 99       |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 26777    | 4.63  | UG/L # | 94       |
| 90) 1,4-DICHLOROBENZENE       | 10.161 | 146  | 17322    | 4.92  | UG/L   | 97       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 23700    | 5.31  | UG/L   | 96       |
| 92) 1,2-DICHLOROBENZENE       | 10.528 | 146  | 16489    | 5.01  | UG/L   | 98       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.312 | 75   | 1898     | 5.35  | UG/L   | 87       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 10309    | 4.66  | UG/L   | 93       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 10510    | 5.00  | UG/L   | 98       |
| 96) HEXACHLOROBUTADIENE       | 12.296 | 225  | 3759     | 5.08  | UG/L   | 98       |
| 97) NAPHTHALENE               | 12.369 | 128  | 27406    | 4.90  | UG/L   | 99       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 9424     | 5.00  | UG/L   | 96       |

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

206

Inst : GCMSVOA2



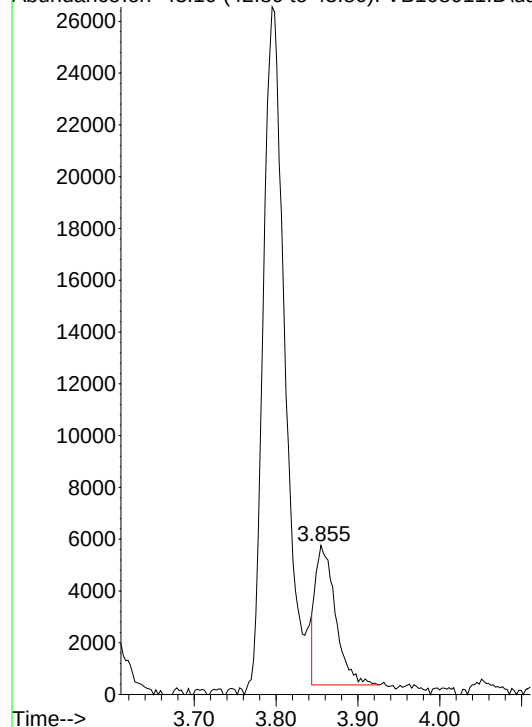
Data Path : Y:\1\DATA\B041819\  
Data File : VB108011.D  
Acq On : 18 Apr 2019 12:38 pm  
Operator :  
Sample : 8260 STD 5.0 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 13:55:58 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108011.D\data



## Original Int. Results

-----

RT : 3.85  
Area : 9172  
Amount: 5.44762

## Manual Int. Results

-----

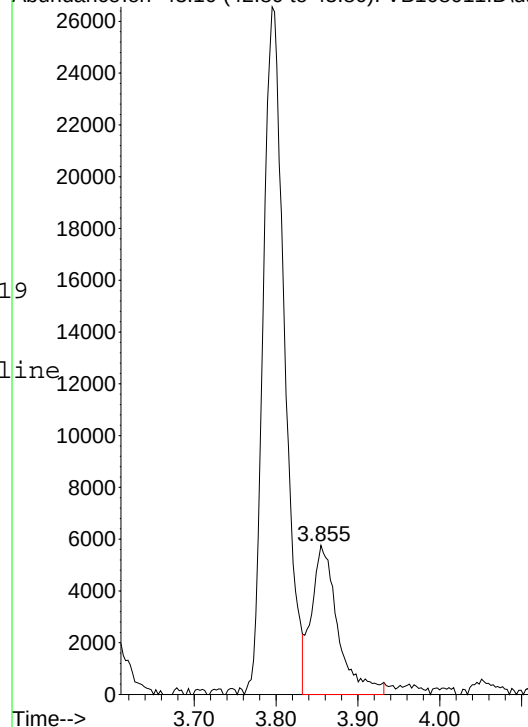
Thu Apr 18 13:55:13 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.85  
Area : 12971  
Amount: 7.704

## Manual Integration

ETHYL ACETATE

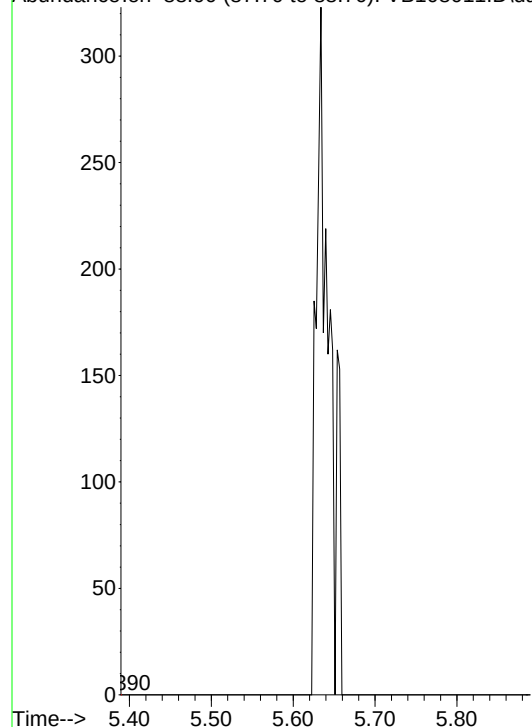
Abundance on 43.10 (42.80 to 43.80): VB108011.D\data



## Original Integration

1,4-DIOXANE

Abundance on 88.00 (87.70 to 88.70): VB108011.D\data



## Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

## Manual Int. Results

-----

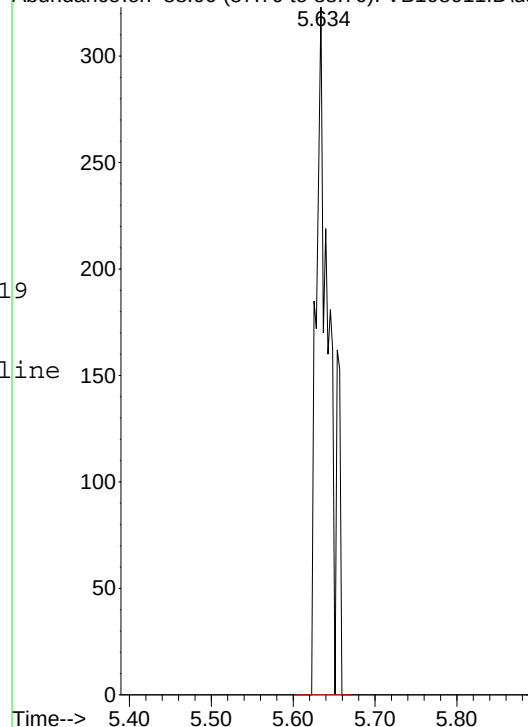
Thu Apr 18 13:56:49 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 5.63  
Area : 364  
Amount: 40.7476

## Manual Integration

1,4-DIOXANE

Abundance on 88.00 (87.70 to 88.70): VB108011.D\data



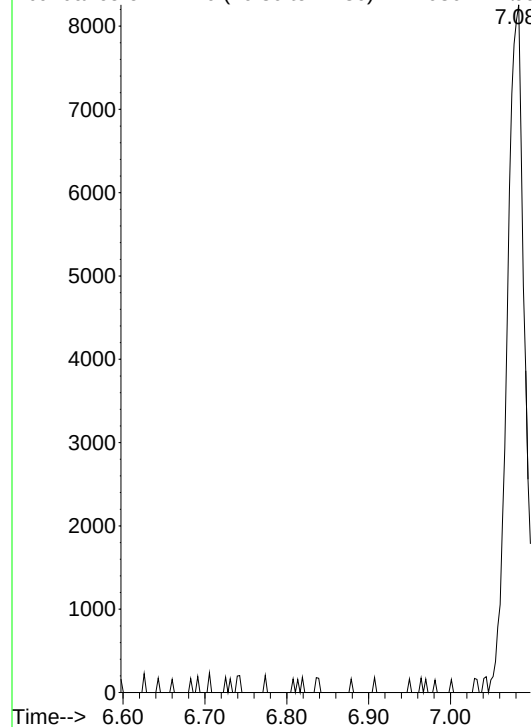
Data Path : Y:\1\DATA\B041819\  
Data File : VB108011.D  
Acq On : 18 Apr 2019 12:38 pm  
Operator :  
Sample : 8260 STD 5.0 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 13:55:58 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108011.D\data



## Original Int. Results

-----

RT : 7.08  
Area : 12447  
Amount: 0

## Manual Int. Results

-----

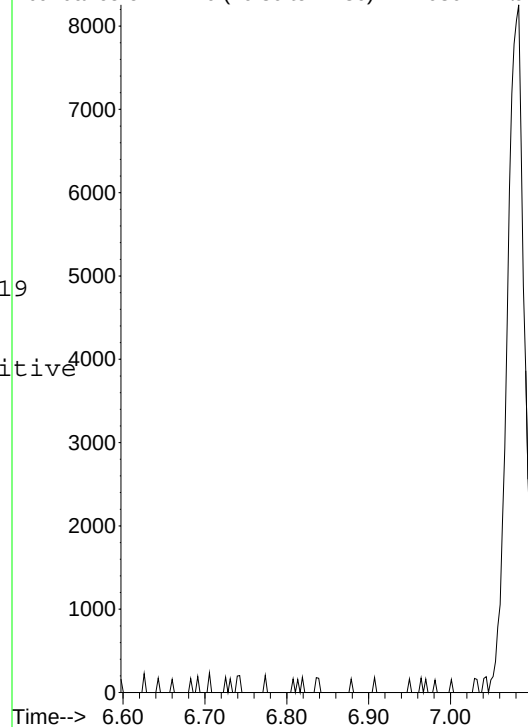
Thu Apr 18 13:55:34 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL METHACRYLATE

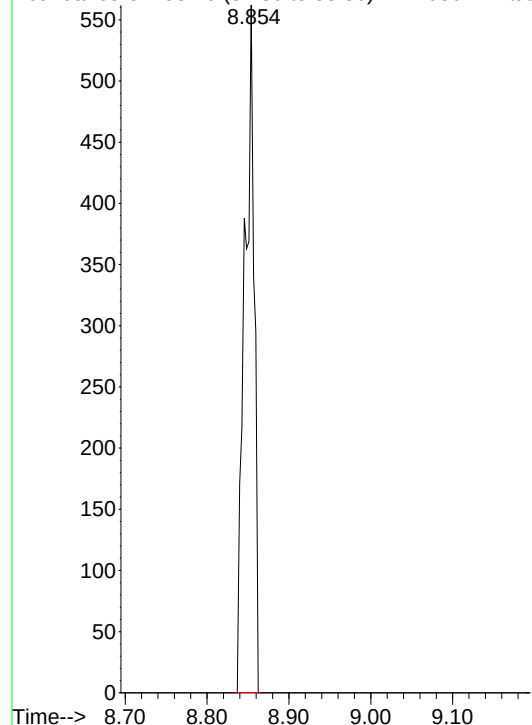
Abundance on 41.10 (40.80 to 41.80): VB108011.D\data



## Original Integration

CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108011.D\data



## Original Int. Results

-----

RT : 8.85  
Area : 461  
Amount: 0

## Manual Int. Results

-----

Thu Apr 18 13:55:44 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108011.D\data



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108012.D  
 Acq On : 18 Apr 2019 1:09 pm  
 Operator :  
 Sample : 8260 STD 10 PPB 1904257  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 13:58:20 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response            | Conc   | Units  | Dev(Min) |
|-------------------------------|----------------|------|---------------------|--------|--------|----------|
| Internal Standards            |                |      |                     |        |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301          | 168  | 72484               | 30.00  | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 115420              | 30.00  | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842          | 82   | 62266               | 30.00  | UG/L   | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.139         | 152  | 64053               | 30.00  | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |                     |        |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 46861               | 34.28  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 137.12%# |        |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 112386              | 24.74  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 98.96%   |        |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 46194               | 24.74  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 98.96%   |        |        |          |
| Target Compounds              |                |      |                     |        |        |          |
|                               |                |      |                     |        | Qvalue |          |
| 3) DICHLORODIFLOUROMETHANE    | 1.147          | 85   | 18232               | 12.67  | UG/L   | 99       |
| 4) DIFLUOROCHLOROMETHANE      | 1.169          | 51   | 25488               | 12.49  | UG/L   | 98       |
| 5) CHLOROMETHANE              | 1.255          | 50   | 39679               | 18.13  | UG/L   | 99       |
| 6) VINYL CHLORIDE             | 1.326          | 62   | 21255               | 12.64  | UG/L   | 98       |
| 7) BROMOMETHANE               | 1.527          | 94   | 8410                | 8.98   | UG/L   | 94       |
| 8) CHLOROETHANE               | 1.593          | 64   | 11353               | 12.67  | UG/L   | 99       |
| 9) FLUORODICHLOROMETHANE      | 1.718          | 67   | 27621               | 13.40  | UG/L   | 99       |
| 10) TRICHLOROFLUOROMETHANE    | 1.755          | 101  | 23556               | 13.81  | UG/L   | 99       |
| 11) ETHANOL                   | 1.883          | 45   | 2205                | 130.64 | UG/L # | 81       |
| 12) DI ETHYL ETHER            | 1.948          | 59   | 14328               | 12.72  | UG/L   | 86       |
| 13) ACROLEIN                  | 2.050          | 56   | 43666               | 130.80 | UG/L # | 99       |
| 14) ACETONE                   | 2.170          | 43   | 65472               | 150.76 | UG/L # | 87       |
| 15) 1,1-DICHLOROETHENE        | 2.116          | 61   | 25685               | 14.56  | UG/L   | 90       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.104          | 101  | 10751               | 11.21  | UG/L   | 94       |
| 17) IODOMETHANE               | 2.238          | 142  | 192934              | 109.61 | UG/L   | 89       |
| 18) METHYL ACETATE            | 2.425          | 43   | 17439               | 6.73   | UG/L # | 91       |
| 19) T-BUTYL ALCOHOL           | 2.619          | 59   | 19089               | 114.47 | UG/L # | 90       |
| 20) ACRYLONITRILE             | 2.744          | 53   | 7532                | 10.98  | UG/L   | 94       |
| 21) METHYLENE CHLORIDE        | 2.505          | 49   | 29402               | 14.79  | UG/L # | 83       |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 408824              | 108.38 | UG/L   | 100      |
| 23) METHYL TERT-BUTYL ETHE... | 2.747          | 73   | 41891               | 11.51  | UG/L   | 98       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.744          | 61   | 25064               | 12.97  | UG/L   | 95       |
| 25) 1,1-DICHLOROETHANE        | 3.170          | 63   | 30864               | 12.44  | UG/L   | 99       |
| 26) VINYL ACETATE             | 3.230          | 43   | 510400              | 155.33 | UG/L # | 95       |
| 27) DI ISOPROPYL ETHER        | 3.233          | 45   | 64936               | 13.74  | UG/L # | 90       |
| 28) 2-BUTANONE                | 3.795          | 43   | 103285              | 136.24 | UG/L   | 94       |
| 29) T-BUTYL ETHYL ETHER       | 3.608          | 59   | 56642               | 12.38  | UG/L   | 97       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.758          | 61   | 30723               | 13.39  | UG/L   | 90       |
| 31) 2,2-DICHLOROPROPANE       | 3.747          | 77   | 22406               | 14.90  | UG/L   | 97       |
| 32) ETHYL ACETATE             | 3.855          | 43   | 25639m              | 15.04  | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.003          | 128  | 8134                | 12.06  | UG/L # | 74       |
| 34) TETRAHYDROFURAN           | 4.051          | 42   | 6820                | 12.91  | UG/L # | 88       |
| 35) T-BUTYL FORMATE           | 4.142          | 59   | 13325               | 10.54  | UG/L   | 96       |
| 36) CHLOROFORM                | 4.091          | 83   | 28094               | 12.56  | UG/L   | 98       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 24771               | 13.51  | UG/L   | 94       |
| 38) CYCLOHEXANE               | 4.290          | 56   | 32318               | 12.14  | UG/L # | 86       |
| 39) CARBON TETRACHLORIDE      | 4.409          | 117  | 21451               | 13.37  | UG/L   | 95       |
| 40) 1,1-DICHLOROPROPENE       | 4.418          | 75   | 20294               | 12.73  | UG/L   | 95       |
| 41) BENZENE                   | 4.622          | 78   | 55394               | 10.83  | UG/L   | 99       |
| 42) T-AMYL ALCOHOL            | 4.673          | 59   | 13356               | 95.73  | UG/L # | 93       |
| 43) T-AMYLMETHYL ETHER        | 4.742          | 73   | 39139               | 11.13  | UG/L   | 98       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 28852               | 13.85  | UG/L # | 94       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 15767               | 11.36  | UG/L   | 92       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108012.D  
 Acq On : 18 Apr 2019 1:09 pm  
 Operator :  
 Sample : 8260 STD 10 PPB 1904257  
 Misc :  
 ALS Vial : 9 Sample Multiplier: 1

Inst : GCMSVOA2

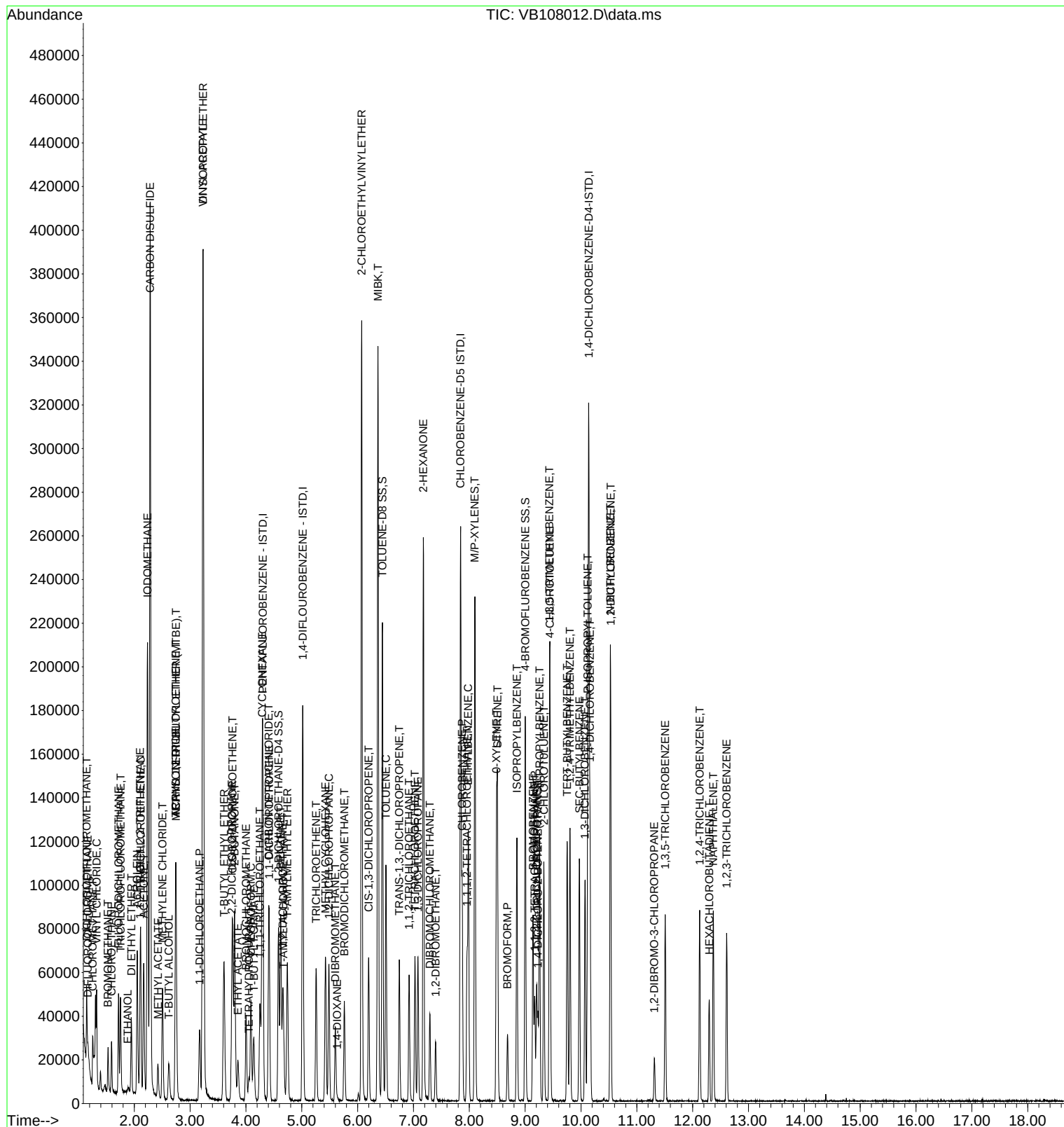
Quant Time: Apr 18 13:58:20 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.427  | 83   | 19838    | 9.87   | UG/L # | 85       |
| 49) 1,2-DICHLOROPROPANE       | 5.486  | 63   | 17668    | 11.08  | UG/L # | 81       |
| 50) DIBROMOMETHANE            | 5.600  | 93   | 10862    | 12.49  | UG/L   | 91       |
| 51) 1,4-DIOXANE               | 5.631  | 88   | 917      | 72.05  | UG/L # | 83       |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 22117    | 12.77  | UG/L   | 100      |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.072  | 63   | 115956   | 109.68 | UG/L # | 76       |
| 54) MIBK                      | 6.364  | 43   | 210849   | 128.93 | UG/L # | 90       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.197  | 75   | 25604    | 11.84  | UG/L # | 72       |
| 56) TOLUENE                   | 6.507  | 91   | 60194    | 10.60  | UG/L   | 99       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.745  | 75   | 24133    | 12.38  | UG/L # | 72       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D.   | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.921  | 97   | 13948    | 10.70  | UG/L   | 97       |
| 60) 2-HEXANONE                | 7.177  | 43   | 153953   | 134.85 | UG/L # | 87       |
| 61) TETRACHLOROETHENE         | 7.027  | 164  | 12063    | 10.65  | UG/L   | 98       |
| 62) 1,3-DICHLOROPROPANE       | 7.081  | 76   | 25240    | 11.08  | UG/L # | 76       |
| 63) DIBROMOCHLOROMETHANE      | 7.294  | 129  | 16979    | 11.11  | UG/L   | 99       |
| 64) 1,2-DIBROMOETHANE         | 7.396  | 107  | 15691    | 10.82  | UG/L # | 98       |
| 67) CHLOROBENZENE             | 7.871  | 112  | 40216    | 9.79   | UG/L   | 97       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.959  | 131  | 15235    | 9.97   | UG/L   | 98       |
| 69) ETHYLBENZENE              | 7.981  | 91   | 70686    | 10.33  | UG/L   | 96       |
| 70) M/P-XYLENES               | 8.098  | 91   | 111998   | 21.05  | UG/L   | 95       |
| 71) O-XYLENE                  | 8.485  | 91   | 57048    | 10.33  | UG/L   | 96       |
| 72) STYRENE                   | 8.504  | 104  | 47180    | 10.33  | UG/L # | 86       |
| 73) BROMOFORM                 | 8.683  | 173  | 11840    | 9.88   | UG/L   | 98       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 67088    | 10.24  | UG/L   | 96       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.   | d      |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.169  | 83   | 19003    | 9.92   | UG/L   | 98       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.229  | 53   | 8582     | 13.19  | UG/L   | 93       |
| 78) BROMOBENZENE              | 9.141  | 77   | 27669    | 10.33  | UG/L   | 97       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.206  | 110  | 5900     | 9.70   | UG/L   | 92       |
| 80) N-PROPYLBENZENE           | 9.258  | 91   | 81589    | 10.68  | UG/L   | 95       |
| 81) 2-CHLOROTOLUENE           | 9.337  | 91   | 49738    | 10.57  | UG/L   | 94       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.437  | 105  | 56644    | 10.03  | UG/L   | 94       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 60688    | 10.95  | UG/L   | 92       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 47929    | 9.97   | UG/L   | 87       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 58508    | 10.26  | UG/L   | 94       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 66768    | 10.57  | UG/L   | 98       |
| 88) 1,3-DICHLOROBENZENE       | 10.070 | 146  | 35382    | 10.40  | UG/L   | 100      |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 58266    | 9.92   | UG/L   | 95       |
| 90) 1,4-DICHLOROBENZENE       | 10.161 | 146  | 36774    | 10.26  | UG/L   | 98       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 51721    | 11.39  | UG/L   | 94       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 34493    | 10.31  | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.312 | 75   | 4235     | 11.75  | UG/L   | 81       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 22322    | 9.93   | UG/L   | 94       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 22136    | 10.36  | UG/L   | 95       |
| 96) HEXACHLOROBUTADIENE       | 12.296 | 225  | 8029     | 10.67  | UG/L   | 97       |
| 97) NAPHTHALENE               | 12.369 | 128  | 57402    | 10.10  | UG/L   | 100      |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 19830    | 10.34  | UG/L   | 96       |

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

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Inst : GCMSVOA2



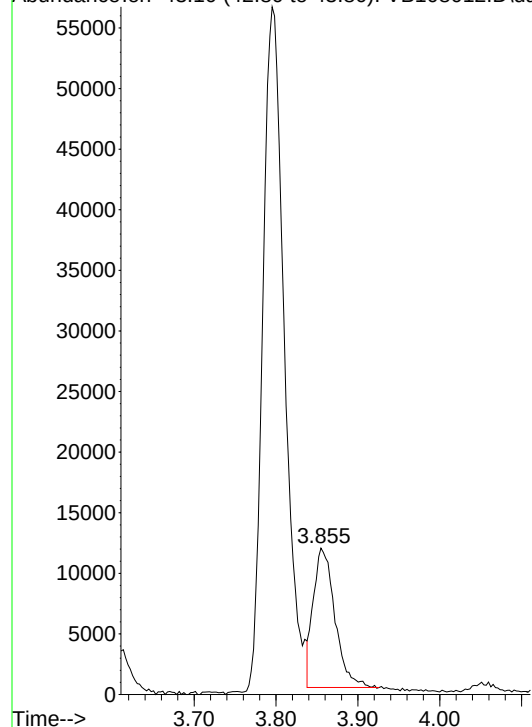
Data Path : Y:\1\DATA\B041819\  
Data File : VB108012.D  
Acq On : 18 Apr 2019 1:09 pm  
Operator :  
Sample : 8260 STD 10 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 13:58:20 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108012.D\data



## Original Int. Results

-----

RT : 3.85  
Area : 21025  
Amount: 12.3332

## Manual Int. Results

-----

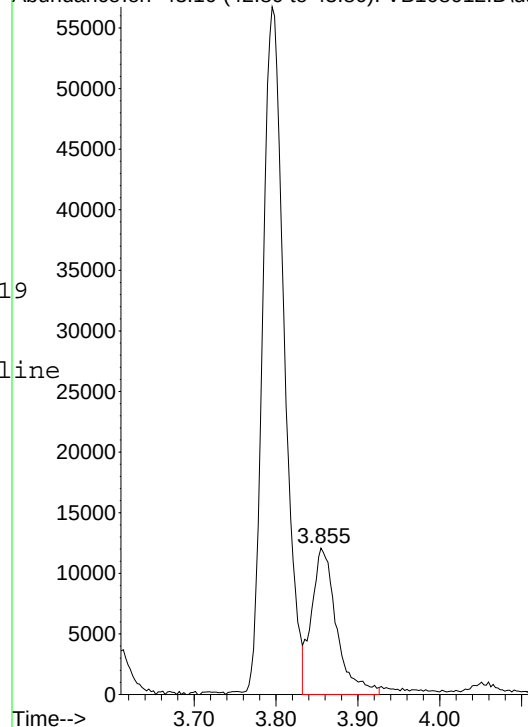
Thu Apr 18 13:58:40 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.85  
Area : 25639  
Amount: 15.0398

## Manual Integration

ETHYL ACETATE

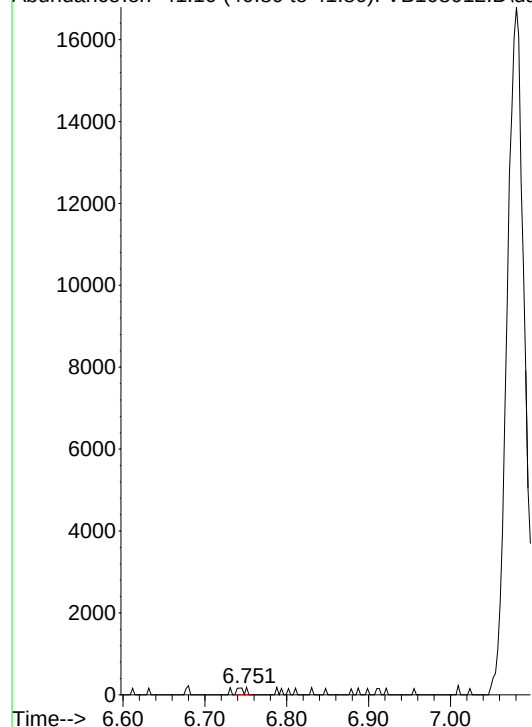
Abundance on 43.10 (42.80 to 43.80): VB108012.D\data



## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108012.D\data



## Original Int. Results

-----

RT : 6.75  
Area : 115  
Amount: 0

## Manual Int. Results

-----

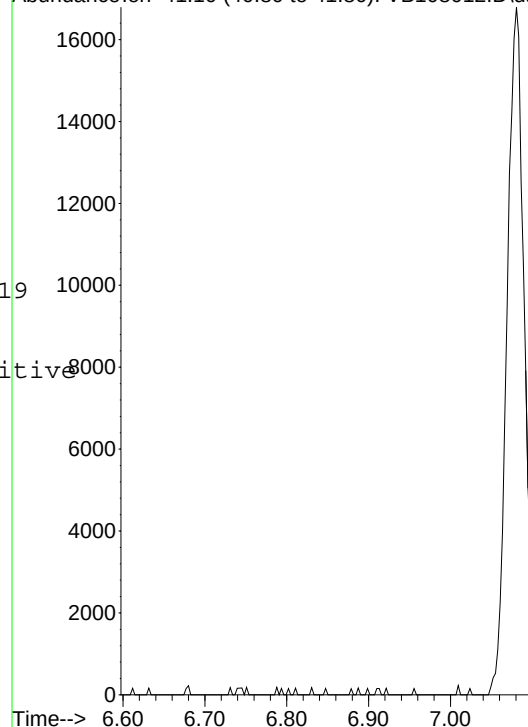
Thu Apr 18 13:59:01 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108012.D\data



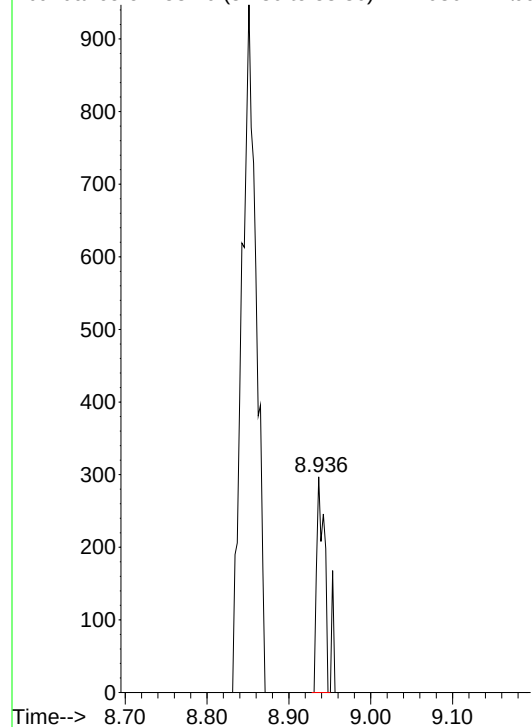


Data Path : Y:\1\DATA\B041819\  
Data File : VB108012.D  
Acq On : 18 Apr 2019 1:09 pm  
Operator :  
Sample : 8260 STD 10 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 13:58:20 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108012.D\data



Original Int. Results

-----  
RT : 8.94  
Area : 190  
Amount: 0

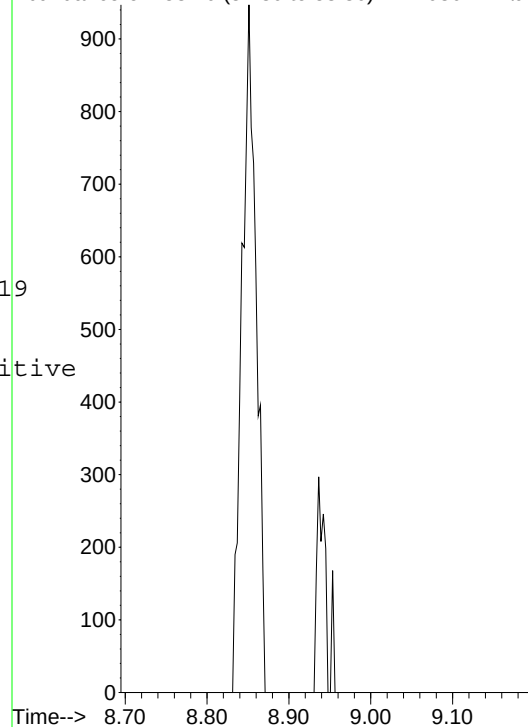
Manual Int. Results

-----  
Thu Apr 18 13:59:10 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108012.D\data



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108013.D  
 Acq On : 18 Apr 2019 1:40 pm  
 Operator :  
 Sample : 8260 STD 20 PPB 1904257  
 Misc :  
 ALS Vial : 10 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 14:00:44 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response   | Conc     | Units  | Dev(Min) |
|-------------------------------|----------------|------|------------|----------|--------|----------|
| Internal Standards            |                |      |            |          |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301          | 168  | 76123      | 30.00    | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.014          | 114  | 121022     | 30.00    | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842          | 82   | 64364      | 30.00    | UG/L   | 0.00     |
| 84) 1,4-DICHLOROENZENE-D4...  | 10.139         | 152  | 65708      | 30.00    | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |            |          |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 48745      | 33.95    | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 135.80%# |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 117100     | 24.59    | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 98.36%   |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 47564      | 24.64    | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 98.56%   |        |          |
| Target Compounds              |                |      |            |          |        |          |
|                               |                |      |            |          | Qvalue |          |
| 3) DICHLORODIFLOUROMETHANE    | 1.147          | 85   | 36706      | 24.28    | UG/L   | 99       |
| 4) DIFLUOROCHLOROMETHANE      | 1.172          | 51   | 51219      | 23.91    | UG/L   | 98       |
| 5) CHLOROMETHANE              | 1.257          | 50   | 71378      | 31.06    | UG/L   | 99       |
| 6) VINYL CHLORIDE             | 1.326          | 62   | 42411      | 24.02    | UG/L   | 99       |
| 7) BROMOMETHANE               | 1.527          | 94   | 17521      | 17.82    | UG/L   | 88       |
| 8) CHLOROETHANE               | 1.593          | 64   | 23775      | 25.26    | UG/L   | 99       |
| 9) FLUORODICHLOROMETHANE      | 1.715          | 67   | 56687      | 26.19    | UG/L   | 99       |
| 10) TRICHLOROFLUOROMETHANE    | 1.752          | 101  | 48276      | 26.94    | UG/L   | 97       |
| 11) ETHANOL                   | 1.888          | 45   | 3648       | 205.80   | UG/L # | 82       |
| 12) DI ETHYL ETHER            | 1.948          | 59   | 29369      | 24.83    | UG/L # | 86       |
| 13) ACROLEIN                  | 2.053          | 56   | 92733      | 264.49   | UG/L # | 97       |
| 14) ACETONE                   | 2.170          | 43   | 134352     | 294.57   | UG/L # | 86       |
| 15) 1,1-DICHLOROETHENE        | 2.113          | 61   | 51822      | 27.96    | UG/L   | 90       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.104          | 101  | 21767      | 21.62    | UG/L   | 94       |
| 17) IODOMETHANE               | 2.235          | 142  | 418474     | 226.38   | UG/L   | 88       |
| 18) METHYL ACETATE            | 2.420          | 43   | 37349      | 13.72    | UG/L # | 91       |
| 19) T-BUTYL ALCOHOL           | 2.621          | 59   | 39060      | 223.04   | UG/L # | 92       |
| 20) ACRYLONITRILE             | 2.744          | 53   | 16409      | 22.78    | UG/L   | 96       |
| 21) METHYLENE CHLORIDE        | 2.505          | 49   | 60530      | 28.99    | UG/L # | 83       |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 829288     | 209.34   | UG/L   | 99       |
| 23) METHYL TERT-BUTYL ETHE... | 2.744          | 73   | 88263      | 23.10    | UG/L   | 98       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.741          | 61   | 52364      | 25.80    | UG/L   | 94       |
| 25) 1,1-DICHLOROETHANE        | 3.167          | 63   | 63571      | 24.40    | UG/L   | 99       |
| 26) VINYL ACETATE             | 3.230          | 43   | 1119597    | 324.45   | UG/L # | 95       |
| 27) DI ISOPROPYL ETHER        | 3.233          | 45   | 139378     | 28.07    | UG/L # | 90       |
| 28) 2-BUTANONE                | 3.792          | 43   | 215358     | 270.49   | UG/L   | 93       |
| 29) T-BUTYL ETHYL ETHER       | 3.602          | 59   | 121416     | 25.27    | UG/L   | 97       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.758          | 61   | 63488      | 26.35    | UG/L   | 90       |
| 31) 2,2-DICHLOROPROPANE       | 3.753          | 77   | 45380      | 28.74    | UG/L   | 97       |
| 32) ETHYL ACETATE             | 3.855          | 43   | 51609m     | 28.83    | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.006          | 128  | 16420      | 23.18    | UG/L # | 71       |
| 34) TETRAHYDROFURAN           | 4.054          | 42   | 13417      | 24.19    | UG/L   | 90       |
| 35) T-BUTYL FORMATE           | 4.142          | 59   | 34291      | 25.82    | UG/L # | 92       |
| 36) CHLOROFORM                | 4.088          | 83   | 58112      | 24.73    | UG/L   | 98       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 51709      | 26.86    | UG/L   | 96       |
| 38) CYCLOHEXANE               | 4.290          | 56   | 64107      | 22.92    | UG/L # | 84       |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 44669      | 26.50    | UG/L   | 94       |
| 40) 1,1-DICHLOROPROPENE       | 4.415          | 75   | 42102      | 25.14    | UG/L   | 96       |
| 41) BENZENE                   | 4.622          | 78   | 114908     | 21.38    | UG/L   | 98       |
| 42) T-AMYL ALCOHOL            | 4.671          | 59   | 28805      | 196.60   | UG/L # | 93       |
| 43) T-AMYLMETHYL ETHER        | 4.742          | 73   | 82428      | 22.31    | UG/L   | 99       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 59875      | 27.41    | UG/L   | 94       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 31739      | 21.80    | UG/L   | 94       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108013.D  
 Acq On : 18 Apr 2019 1:40 pm  
 Operator :  
 Sample : 8260 STD 20 PPB 1904257  
 Misc :  
 ALS Vial : 10 Sample Multiplier: 1

Inst : GCMSVOA2

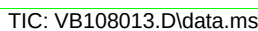
Quant Time: Apr 18 14:00:44 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.424  | 83   | 41235    | 19.57  | UG/L # | 85       |
| 49) 1,2-DICHLOROPROPANE       | 5.483  | 63   | 36517    | 21.85  | UG/L # | 82       |
| 50) DIBROMOMETHANE            | 5.597  | 93   | 22540    | 24.72  | UG/L   | 91       |
| 51) 1,4-DIOXANE               | 5.628  | 88   | 2214     | 140.42 | UG/L # | 96       |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 45770    | 25.19  | UG/L   | 99       |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.072  | 63   | 245660   | 221.62 | UG/L # | 76       |
| 54) MIBK                      | 6.364  | 43   | 444621   | 259.29 | UG/L # | 90       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.197  | 75   | 53829    | 23.75  | UG/L # | 72       |
| 56) TOLUENE                   | 6.506  | 91   | 126289   | 21.21  | UG/L   | 98       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.745  | 75   | 51832    | 25.36  | UG/L # | 74       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D.   | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.919  | 97   | 29421    | 21.53  | UG/L   | 96       |
| 60) 2-HEXANONE                | 7.177  | 43   | 318243   | 265.85 | UG/L # | 88       |
| 61) TETRACHLOROETHENE         | 7.027  | 164  | 25472    | 21.45  | UG/L   | 97       |
| 62) 1,3-DICHLOROPROPANE       | 7.081  | 76   | 52024    | 21.78  | UG/L # | 74       |
| 63) DIBROMOCHLOROMETHANE      | 7.297  | 129  | 35545    | 22.19  | UG/L   | 99       |
| 64) 1,2-DIBROMOETHANE         | 7.396  | 107  | 33343    | 21.93  | UG/L # | 100      |
| 67) CHLOROBENZENE             | 7.871  | 112  | 84706    | 19.94  | UG/L   | 99       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.959  | 131  | 32938    | 20.86  | UG/L   | 97       |
| 69) ETHYLBENZENE              | 7.981  | 91   | 145013   | 20.51  | UG/L   | 97       |
| 70) M/P-XYLENES               | 8.101  | 91   | 228705   | 41.58  | UG/L   | 95       |
| 71) O-XYLENE                  | 8.484  | 91   | 117883   | 20.66  | UG/L   | 94       |
| 72) STYRENE                   | 8.504  | 104  | 98048    | 20.77  | UG/L # | 87       |
| 73) BROMOFORM                 | 8.683  | 173  | 25531    | 20.61  | UG/L   | 99       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 137681   | 20.33  | UG/L   | 98       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.   | d      |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.169  | 83   | 40584    | 20.50  | UG/L   | 100      |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.229  | 53   | 18386    | 27.34  | UG/L   | 94       |
| 78) BROMOBENZENE              | 9.141  | 77   | 57093    | 20.62  | UG/L   | 98       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.206  | 110  | 12277    | 19.53  | UG/L   | 89       |
| 80) N-PROPYLBENZENE           | 9.258  | 91   | 168437   | 21.32  | UG/L   | 95       |
| 81) 2-CHLOROTOLUENE           | 9.331  | 91   | 100211   | 20.60  | UG/L   | 96       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.437  | 105  | 116512   | 19.96  | UG/L   | 94       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 122405   | 21.36  | UG/L   | 93       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 97152    | 19.71  | UG/L   | 86       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 121396   | 20.76  | UG/L   | 95       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 136997   | 21.13  | UG/L   | 98       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 73262    | 20.99  | UG/L   | 99       |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 118913   | 19.73  | UG/L # | 95       |
| 90) 1,4-DICHLOROBENZENE       | 10.161 | 146  | 75922    | 20.66  | UG/L   | 99       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 105853   | 22.73  | UG/L   | 97       |
| 92) 1,2-DICHLOROBENZENE       | 10.528 | 146  | 70473    | 20.54  | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.312 | 75   | 8365     | 22.62  | UG/L   | 87       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 46035    | 19.97  | UG/L   | 96       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 45104    | 20.59  | UG/L   | 94       |
| 96) HEXACHLOROBTADIENE        | 12.296 | 225  | 15983    | 20.70  | UG/L   | 99       |
| 97) NAPHTHALENE               | 12.369 | 128  | 118523   | 20.33  | UG/L   | 100      |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 40461    | 20.57  | UG/L   | 95       |

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

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Inst : GCMSVOA2



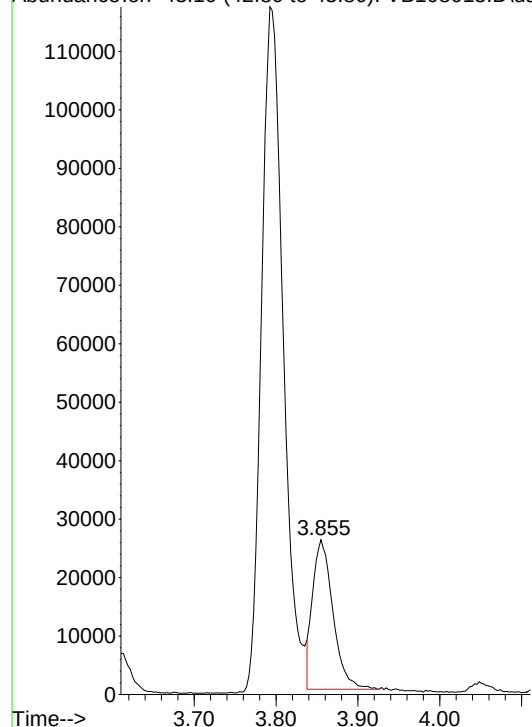
Data Path : Y:\1\DATA\B041819\  
Data File : VB108013.D  
Acq On : 18 Apr 2019 1:40 pm  
Operator :  
Sample : 8260 STD 20 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 14:00:44 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108013.D\data



## Original Int. Results

-----

RT : 3.85  
Area : 43983  
Amount: 24.567

## Manual Int. Results

-----

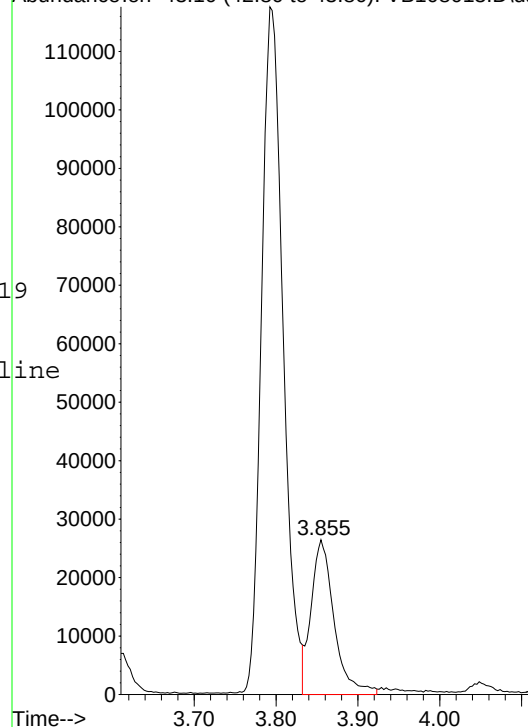
Thu Apr 18 14:01:10 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.85  
Area : 51609  
Amount: 28.8266

## Manual Integration

ETHYL ACETATE

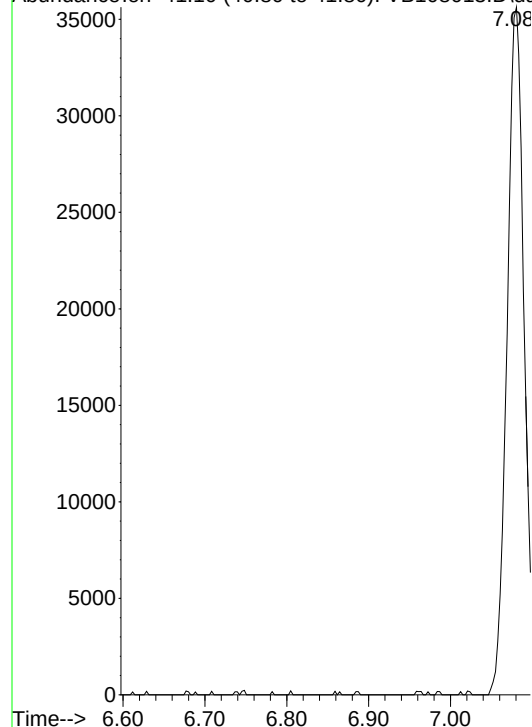
Abundance on 43.10 (42.80 to 43.80): VB108013.D\data



## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108013.D\data



## Original Int. Results

-----

RT : 7.08  
Area : 52253  
Amount: 0

## Manual Int. Results

-----

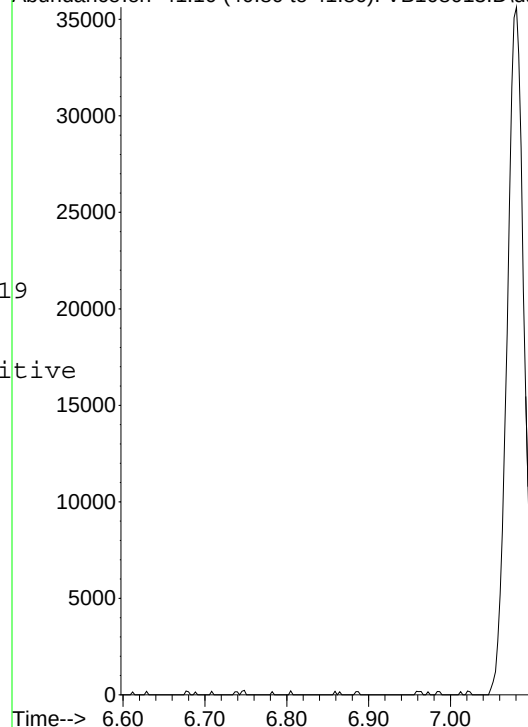
Thu Apr 18 14:01:24 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108013.D\data

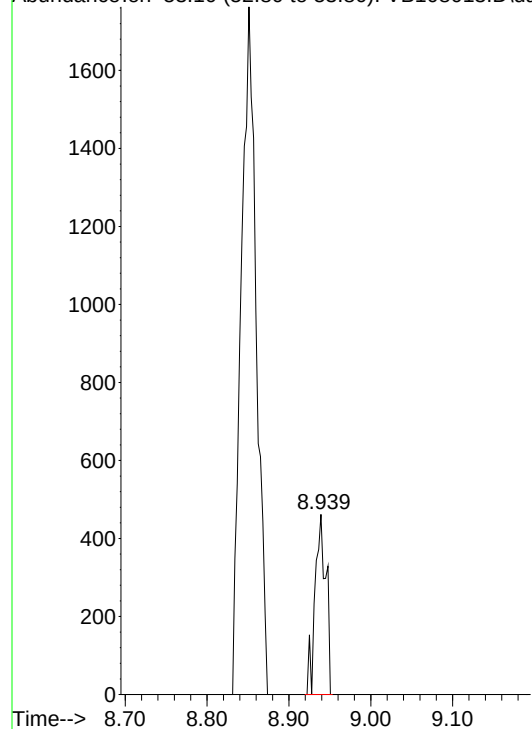


Data Path : Y:\1\DATA\B041819\  
Data File : VB108013.D  
Acq On : 18 Apr 2019 1:40 pm  
Operator :  
Sample : 8260 STD 20 PPB 1904257  
Misc :

Quant Time : Thu Apr 18 14:00:44 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108013.D\data



Original Int. Results

-----  
RT : 8.94  
Area : 424  
Amount: 0

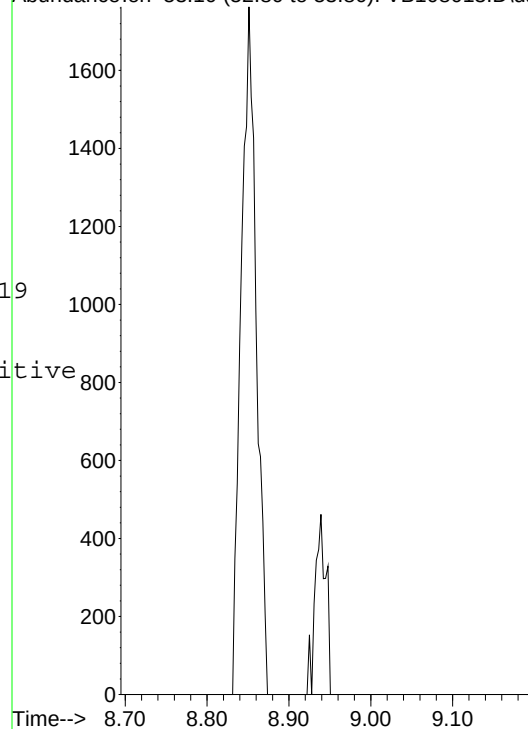
Manual Int. Results

-----  
Thu Apr 18 14:01:35 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108013.D\data



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108014.D  
 Acq On : 18 Apr 2019 2:11 pm  
 Operator :  
 Sample : 8260 STD 50 PPB 1901533  
 Misc :  
 ALS Vial : 11 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 19 04:55:40 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response   | Conc    | Units | Dev(Min) |
|-------------------------------|----------------|------|------------|---------|-------|----------|
| Internal Standards            |                |      |            |         |       |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298          | 168  | 79325      | 30.00   | UG/L  | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 126062     | 30.00   | UG/L  | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845          | 82   | 68605      | 30.00   | UG/L  | 0.00     |
| 84) 1,4-DICHLOROENZENE-D4...  | 10.139         | 152  | 67139      | 30.00   | UG/L  | # 0.00   |
| System Monitoring Compounds   |                |      |            |         |       |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.580          | 65   | 48887      | 32.67   | UG/L  | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 130.68% | #     |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 122063     | 24.60   | UG/L  | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 98.40%  |       |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 49078      | 23.85   | UG/L  | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 95.40%  |       |          |
| Target Compounds              |                |      |            |         |       |          |
|                               |                |      |            |         |       | Qvalue   |
| 3) DICHLORODIFLOUROMETHANE    | 1.147          | 85   | 77232      | 49.02   | UG/L  | 99       |
| 4) DIFLUOROCHLOROMETHANE      | 1.169          | 51   | 132098     | 59.17   | UG/L  | 97       |
| 5) CHLOROMETHANE              | 1.289          | 50   | 143488     | 59.92   | UG/L  | 98       |
| 6) VINYL CHLORIDE             | 1.326          | 62   | 101882     | 55.37   | UG/L  | 99       |
| 7) BROMOMETHANE               | 1.530          | 94   | 49235      | 48.06   | UG/L  | 93       |
| 8) CHLOROETHANE               | 1.593          | 64   | 56249      | 57.36   | UG/L  | 98       |
| 9) FLUORODICHLOROMETHANE      | 1.718          | 67   | 144604     | 64.11   | UG/L  | 99       |
| 10) TRICHLOROFLUOROMETHANE    | 1.752          | 101  | 119650     | 64.08   | UG/L  | 98       |
| 11) ETHANOL                   | 0.000          |      | 0          | N.D.    | d     |          |
| 12) DI ETHYL ETHER            | 1.945          | 59   | 80370      | 65.20   | UG/L  | 87       |
| 13) ACROLEIN                  | 2.050          | 56   | 191424     | 523.94  | UG/L  | # 99     |
| 14) ACETONE                   | 2.167          | 43   | 341231     | 717.96  | UG/L  | # 86     |
| 15) 1,1-DICHLOROETHENE        | 2.113          | 61   | 127967     | 66.27   | UG/L  | 91       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.107          | 101  | 62316      | 59.39   | UG/L  | 93       |
| 17) IODOMETHANE               | 2.235          | 142  | 1062937    | 551.81  | UG/L  | # 86     |
| 18) METHYL ACETATE            | 2.423          | 43   | 115184     | 40.62   | UG/L  | # 90     |
| 19) T-BUTYL ALCOHOL           | 2.619          | 59   | 108006     | 591.84  | UG/L  | 96       |
| 20) ACRYLONITRILE             | 2.744          | 53   | 47447      | 63.21   | UG/L  | 96       |
| 21) METHYLENE CHLORIDE        | 2.505          | 49   | 147879     | 67.97   | UG/L  | # 83     |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 1966239    | 476.31  | UG/L  | 98       |
| 23) METHYL TERT-BUTYL ETHE... | 2.744          | 73   | 246939     | 62.01   | UG/L  | 98       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.741          | 61   | 128782     | 60.89   | UG/L  | 94       |
| 25) 1,1-DICHLOROETHANE        | 3.167          | 63   | 155025     | 57.10   | UG/L  | 99       |
| 26) VINYL ACETATE             | 3.233          | 43   | 2567854    | 714.10  | UG/L  | 96       |
| 27) DI ISOPROPYL ETHER        | 3.233          | 45   | 380265     | 73.50   | UG/L  | # 90     |
| 28) 2-BUTANONE                | 3.795          | 43   | 566380     | 682.65  | UG/L  | 94       |
| 29) T-BUTYL ETHYL ETHER       | 3.605          | 59   | 324059     | 64.72   | UG/L  | 98       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.761          | 61   | 154728     | 61.62   | UG/L  | 91       |
| 31) 2,2-DICHLOROPROPANE       | 3.753          | 77   | 109371     | 66.48   | UG/L  | 97       |
| 32) ETHYL ACETATE             | 3.855          | 43   | 136288m    | 73.05   | UG/L  |          |
| 33) BROMOCHLOROMETHANE        | 4.003          | 128  | 39392      | 53.35   | UG/L  | # 73     |
| 34) TETRAHYDROFURAN           | 4.045          | 42   | 38228      | 66.14   | UG/L  | 92       |
| 35) T-BUTYL FORMATE           | 4.139          | 59   | 90586      | 65.44   | UG/L  | # 93     |
| 36) CHLOROFORM                | 4.088          | 83   | 141949     | 57.97   | UG/L  | 97       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 127332     | 63.47   | UG/L  | 93       |
| 38) CYCLOHEXANE               | 4.293          | 56   | 164937     | 56.60   | UG/L  | # 85     |
| 39) CARBON TETRACHLORIDE      | 4.409          | 117  | 109964     | 62.61   | UG/L  | 97       |
| 40) 1,1-DICHLOROPROPENE       | 4.418          | 75   | 105157     | 60.26   | UG/L  | 97       |
| 41) BENZENE                   | 4.622          | 78   | 286776     | 51.21   | UG/L  | 98       |
| 42) T-AMYL ALCOHOL            | 4.673          | 59   | 80624      | 528.07  | UG/L  | # 94     |
| 43) T-AMYLMETHYL ETHER        | 4.742          | 73   | 233791     | 60.73   | UG/L  | 99       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 146662     | 64.44   | UG/L  | 95       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 81990      | 54.07   | UG/L  | 92       |

Data Path : Y:\1\DATA\B041819\

Data File : VB108014.D

Acq On : 18 Apr 2019 2:11 pm

Operator :

Sample : 8260 STD 50 PPB 1901533

Inst : GCMSVOA2

Misc :

ALS Vial : 11 Sample Multiplier: 1

Quant Time: Apr 19 04:55:40 2019

Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Thu Apr 11 08:23:37 2019

Response via : Initial Calibration

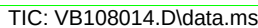
| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.424  | 83   | 116460   | 53.06  | UG/L # | 85       |
| 49) 1,2-DICHLOROPROPANE       | 5.486  | 63   | 91408    | 52.50  | UG/L # | 83       |
| 50) DIBROMOMETHANE            | 5.600  | 93   | 55826    | 58.77  | UG/L   | 93       |
| 51) 1,4-DIOXANE               | 5.631  | 88   | 6964m    | 384.50 | UG/L   |          |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 114980   | 60.76  | UG/L   | 100      |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.074  | 63   | 641371   | 555.47 | UG/L # | 76       |
| 54) MIBK                      | 6.364  | 43   | 1198641  | 671.07 | UG/L # | 91       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.197  | 75   | 136397   | 57.77  | UG/L # | 73       |
| 56) TOLUENE                   | 6.509  | 91   | 315911   | 50.93  | UG/L   | 99       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.745  | 75   | 131216   | 61.64  | UG/L # | 74       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D.   | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.921  | 97   | 74221    | 52.14  | UG/L   | 97       |
| 60) 2-HEXANONE                | 7.180  | 43   | 850798   | 682.32 | UG/L # | 89       |
| 61) TETRACHLOROETHENE         | 7.029  | 164  | 63433    | 51.29  | UG/L   | 99       |
| 62) 1,3-DICHLOROPROPANE       | 7.081  | 76   | 131394   | 52.81  | UG/L # | 75       |
| 63) DIBROMOCHLOROMETHANE      | 7.294  | 129  | 90989    | 54.53  | UG/L   | 97       |
| 64) 1,2-DIBROMOETHANE         | 7.396  | 107  | 85312    | 53.86  | UG/L # | 99       |
| 67) CHLOROBENZENE             | 7.871  | 112  | 213053   | 47.05  | UG/L   | 98       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.959  | 131  | 84454    | 50.18  | UG/L   | 98       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 364901   | 48.42  | UG/L   | 97       |
| 70) M/P-XYLENES               | 8.101  | 91   | 568047   | 96.90  | UG/L   | 96       |
| 71) O-XYLENE                  | 8.487  | 91   | 296349   | 48.72  | UG/L   | 94       |
| 72) STYRENE                   | 8.504  | 104  | 245712   | 48.82  | UG/L # | 86       |
| 73) BROMOFORM                 | 8.683  | 173  | 68082    | 51.55  | UG/L   | 99       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 339553   | 47.04  | UG/L   | 97       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.   | d      |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.169  | 83   | 102514   | 48.59  | UG/L   | 99       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.229  | 53   | 51283    | 71.53  | UG/L   | 97       |
| 78) BROMOBENZENE              | 9.138  | 77   | 141900   | 48.07  | UG/L   | 98       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.206  | 110  | 32115    | 47.93  | UG/L   | 86       |
| 80) N-PROPYLBENZENE           | 9.258  | 91   | 414260   | 49.20  | UG/L   | 95       |
| 81) 2-CHLOROTOLUENE           | 9.337  | 91   | 247458   | 47.73  | UG/L   | 96       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.437  | 105  | 289863   | 46.58  | UG/L   | 94       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 301576   | 49.38  | UG/L   | 93       |
| 85) TERT-BUTYLBENZENE         | 9.755  | 119  | 239708   | 47.59  | UG/L   | 85       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 303245   | 50.74  | UG/L   | 94       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 339178   | 51.21  | UG/L   | 99       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 178952   | 50.18  | UG/L   | 99       |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 297594   | 48.33  | UG/L # | 95       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 186732   | 49.73  | UG/L   | 99       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 265427   | 55.79  | UG/L   | 96       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 173003   | 49.34  | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.315 | 75   | 22139    | 58.59  | UG/L   | 84       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 117901   | 50.05  | UG/L   | 93       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 113172   | 50.55  | UG/L   | 94       |
| 96) HEXACHLOROBUTADIENE       | 12.298 | 225  | 40825    | 51.75  | UG/L   | 98       |
| 97) NAPHTHALENE               | 12.369 | 128  | 303913   | 51.01  | UG/L   | 100      |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180  | 102134   | 50.81  | UG/L   | 95       |

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



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Inst : GCMSVOA2

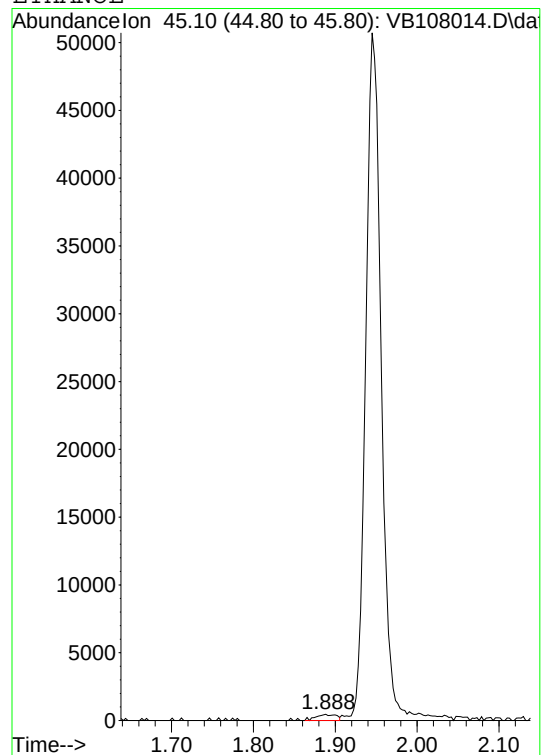


Data Path : Y:\1\DATA\B041819\  
Data File : VB108014.D  
Acq On : 18 Apr 2019 2:11 pm  
Operator :  
Sample : 8260 STD 50 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 04:55:40 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHANOL



## Original Int. Results

-----

RT : 1.89  
Area : 792  
Amount: 42.8777

## Manual Int. Results

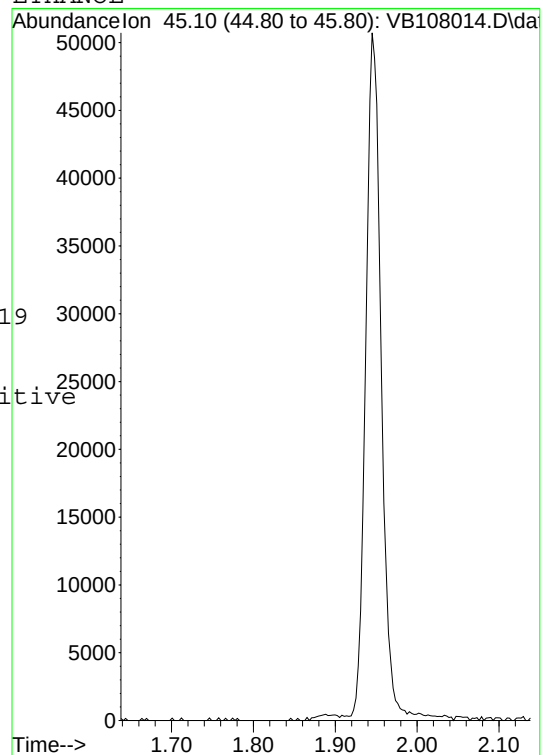
-----

Fri Apr 19 04:54:26 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

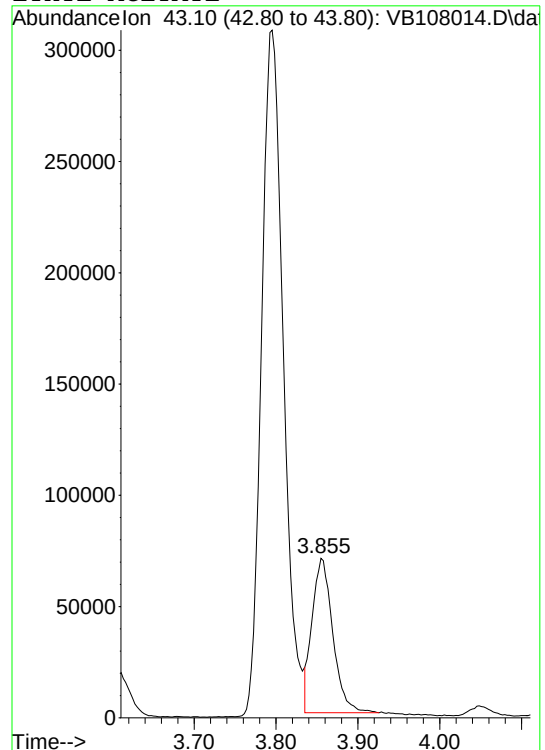
## Manual Integration

ETHANOL



## Original Integration

ETHYL ACETATE



## Original Int. Results

-----

RT : 3.85  
Area : 122031  
Amount: 65.4099

## Manual Int. Results

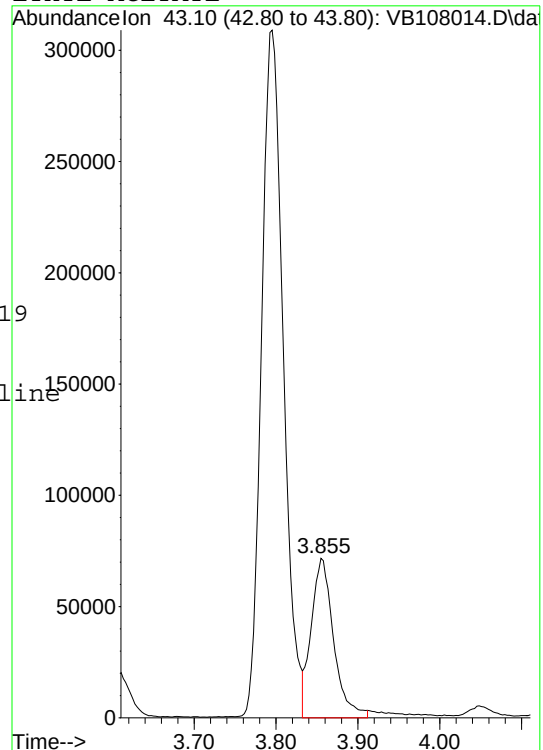
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Fri Apr 19 04:54:43 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.85  
Area : 136288  
Amount: 73.0518

## Manual Integration

ETHYL ACETATE



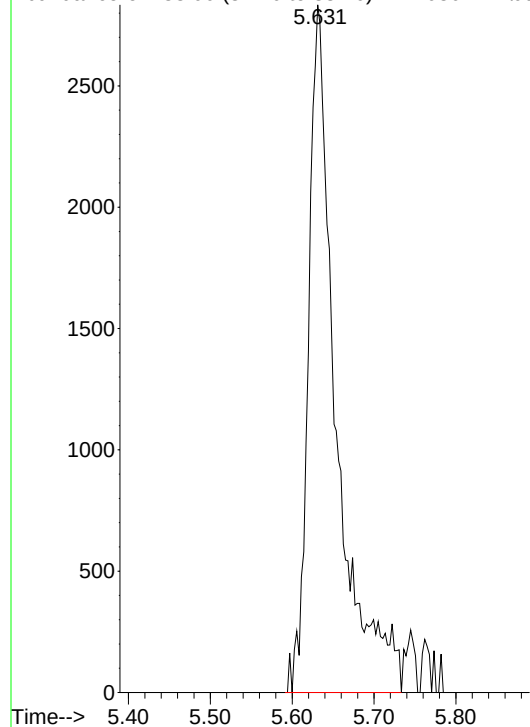
Data Path : Y:\1\DATA\B041819\  
Data File : VB108014.D  
Acq On : 18 Apr 2019 2:11 pm  
Operator :  
Sample : 8260 STD 50 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 04:55:40 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

1,4-DIOXANE

Abundance on 88.00 (87.70 to 88.70): VB108014.D\data



## Original Int. Results

-----

RT : 5.63  
Area : 6588  
Amount: 364.8

## Manual Int. Results

-----

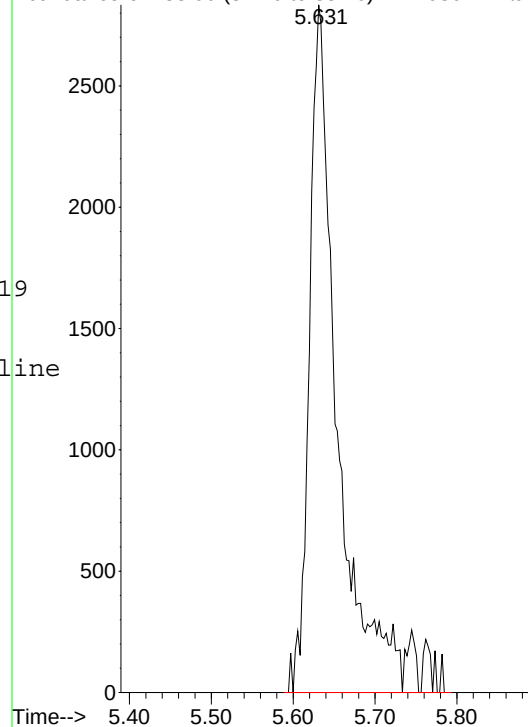
Fri Apr 19 04:55:04 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 5.63  
Area : 6964  
Amount: 384.503

## Manual Integration

1,4-DIOXANE

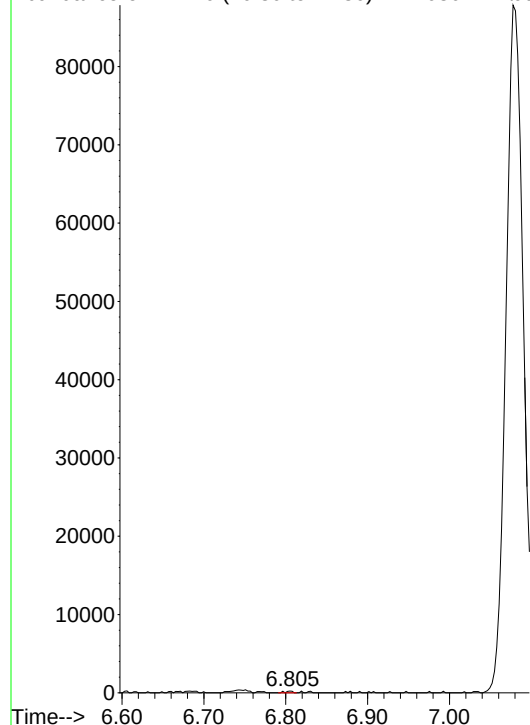
Abundance on 88.00 (87.70 to 88.70): VB108014.D\data



## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108014.D\data



## Original Int. Results

-----

RT : 6.80  
Area : 142  
Amount: 0

## Manual Int. Results

-----

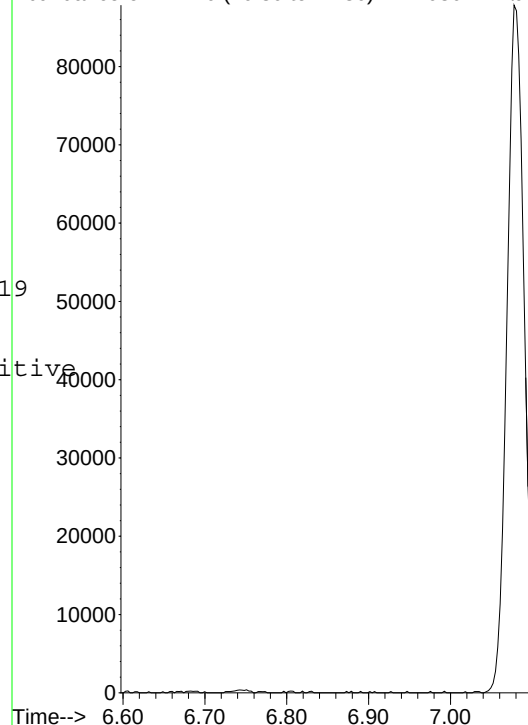
Fri Apr 19 04:55:14 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108014.D\data

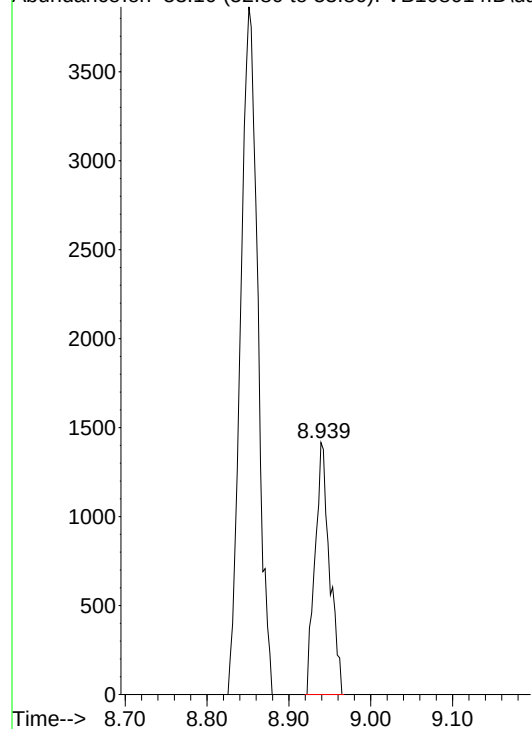


Data Path : Y:\1\DATA\B041819\  
Data File : VB108014.D  
Acq On : 18 Apr 2019 2:11 pm  
Operator :  
Sample : 8260 STD 50 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 04:55:40 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108014.D\data



Original Int. Results

-----

RT : 8.94  
Area : 1744  
Amount: 0

Manual Int. Results

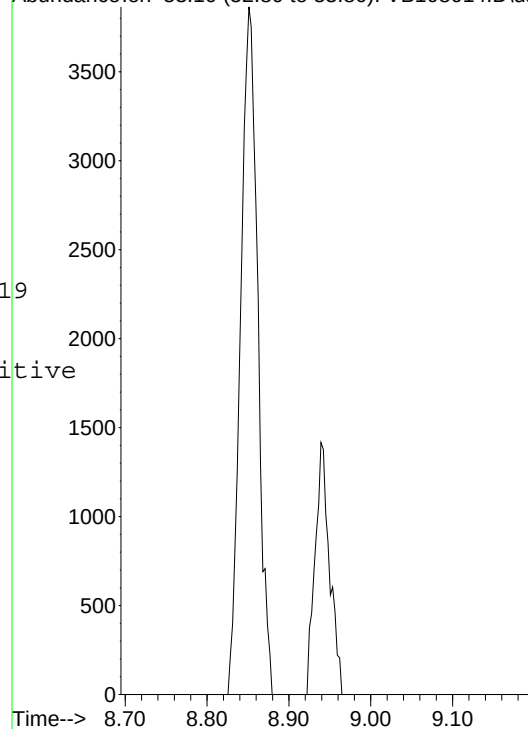
-----

Fri Apr 19 04:55:27 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108014.D\data



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108015.D  
 Acq On : 18 Apr 2019 2:42 pm  
 Operator :  
 Sample : 8260 STD 100 PPB 1901533  
 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 19 04:58:17 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response   | Conc    | Units | Dev(Min) |
|-------------------------------|----------------|------|------------|---------|-------|----------|
| Internal Standards            |                |      |            |         |       |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298          | 168  | 81427      | 30.00   | UG/L  | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 131194     | 30.00   | UG/L  | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845          | 82   | 69595      | 30.00   | UG/L  | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.141         | 152  | 70710      | 30.00   | UG/L  | # 0.00   |
| System Monitoring Compounds   |                |      |            |         |       |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.580          | 65   | 50493      | 32.88   | UG/L  | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 131.52% | #     |          |
| 45) TOLUENE-D8 SS             | 6.447          | 98   | 127319     | 24.66   | UG/L  | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 98.64%  |       |          |
| 66) 4-BROMOFLUOROBENZENE SS   | 9.005          | 95   | 50493      | 24.19   | UG/L  | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 96.76%  |       |          |
| Target Compounds              |                |      |            |         |       |          |
|                               |                |      |            |         |       | Qvalue   |
| 3) DICHLORODIFLOUROMETHANE    | 1.146          | 85   | 154243     | 95.38   | UG/L  | 99       |
| 4) DIFLUOROCHLOROMETHANE      | 1.169          | 51   | 273952     | 119.55  | UG/L  | 99       |
| 5) CHLOROMETHANE              | 1.289          | 50   | 273181     | 111.13  | UG/L  | 98       |
| 6) VINYL CHLORIDE             | 1.326          | 62   | 205962     | 109.04  | UG/L  | 99       |
| 7) BROMOMETHANE               | 1.527          | 94   | 112075     | 106.57  | UG/L  | 92       |
| 8) CHLOROETHANE               | 1.590          | 64   | 113571     | 112.83  | UG/L  | 99       |
| 9) FLUORODICHLOROMETHANE      | 1.715          | 67   | 292989     | 126.54  | UG/L  | 99       |
| 10) TRICHLOROFLUOROMETHANE    | 1.752          | 101  | 237629     | 123.98  | UG/L  | 99       |
| 11) ETHANOL                   | 0.000          |      | 0          | N.D.    | d     |          |
| 12) DI ETHYL ETHER            | 1.945          | 59   | 163614     | 129.31  | UG/L  | 87       |
| 13) ACROLEIN                  | 2.053          | 56   | 386673     | 1031.02 | UG/L  | # 99     |
| 14) ACETONE                   | 2.167          | 43   | 686840m    | 1407.83 | UG/L  |          |
| 15) 1,1-DICHLOROETHENE        | 2.113          | 61   | 259988     | 131.16  | UG/L  | 91       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.104          | 101  | 126028     | 117.00  | UG/L  | 94       |
| 17) IODOMETHANE               | 2.235          | 142  | 2129380    | 1076.90 | UG/L  | # 84     |
| 18) METHYL ACETATE            | 2.420          | 43   | 259665     | 89.20   | UG/L  | # 90     |
| 19) T-BUTYL ALCOHOL           | 2.619          | 59   | 215938     | 1152.72 | UG/L  | 96       |
| 20) ACRYLONITRILE             | 2.744          | 53   | 97843      | 126.99  | UG/L  | 95       |
| 21) METHYLENE CHLORIDE        | 2.505          | 49   | 306835     | 137.39  | UG/L  | # 83     |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 3713842    | 876.44  | UG/L  | 96       |
| 23) METHYL TERT-BUTYL ETHE... | 2.744          | 73   | 511114     | 125.04  | UG/L  | 99       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.741          | 61   | 265996     | 122.52  | UG/L  | 94       |
| 25) 1,1-DICHLOROETHANE        | 3.167          | 63   | 323997     | 116.26  | UG/L  | 99       |
| 26) VINYL ACETATE             | 3.235          | 43   | 4812015    | 1303.64 | UG/L  | 97       |
| 27) DI ISOPROPYL ETHER        | 3.235          | 45   | 778076     | 146.51  | UG/L  | 91       |
| 28) 2-BUTANONE                | 3.795          | 43   | 1146524    | 1346.21 | UG/L  | 95       |
| 29) T-BUTYL ETHYL ETHER       | 3.605          | 59   | 675288     | 131.39  | UG/L  | 98       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.758          | 61   | 319996     | 124.16  | UG/L  | 92       |
| 31) 2,2-DICHLOROPROPANE       | 3.753          | 77   | 221431     | 131.12  | UG/L  | 98       |
| 32) ETHYL ACETATE             | 3.855          | 43   | 281361m    | 146.92  | UG/L  |          |
| 33) BROMOCHLOROMETHANE        | 4.003          | 128  | 78253      | 103.25  | UG/L  | # 75     |
| 34) TETRAHYDROFURAN           | 4.048          | 42   | 76724      | 129.32  | UG/L  | 95       |
| 35) T-BUTYL FORMATE           | 4.139          | 59   | 190293     | 133.93  | UG/L  | # 93     |
| 36) CHLOROFORM                | 4.088          | 83   | 297160     | 118.22  | UG/L  | 97       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 265161     | 128.75  | UG/L  | 95       |
| 38) CYCLOHEXANE               | 4.290          | 56   | 336800     | 112.59  | UG/L  | # 84     |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 227719     | 126.32  | UG/L  | 95       |
| 40) 1,1-DICHLOROPROPENE       | 4.415          | 75   | 219074     | 122.31  | UG/L  | 97       |
| 41) BENZENE                   | 4.622          | 78   | 592508     | 103.08  | UG/L  | 98       |
| 42) T-AMYL ALCOHOL            | 4.676          | 59   | 170451     | 1087.59 | UG/L  | # 94     |
| 43) T-AMYLMETHYL ETHER        | 4.742          | 73   | 490567     | 124.13  | UG/L  | 98       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 304771     | 128.68  | UG/L  | 95       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 170015     | 107.73  | UG/L  | 92       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108015.D  
 Acq On : 18 Apr 2019 2:42 pm  
 Operator :  
 Sample : 8260 STD 100 PPB 1901533  
 Misc :  
 ALS Vial : 12 Sample Multiplier: 1

Inst : GCMSVOA2

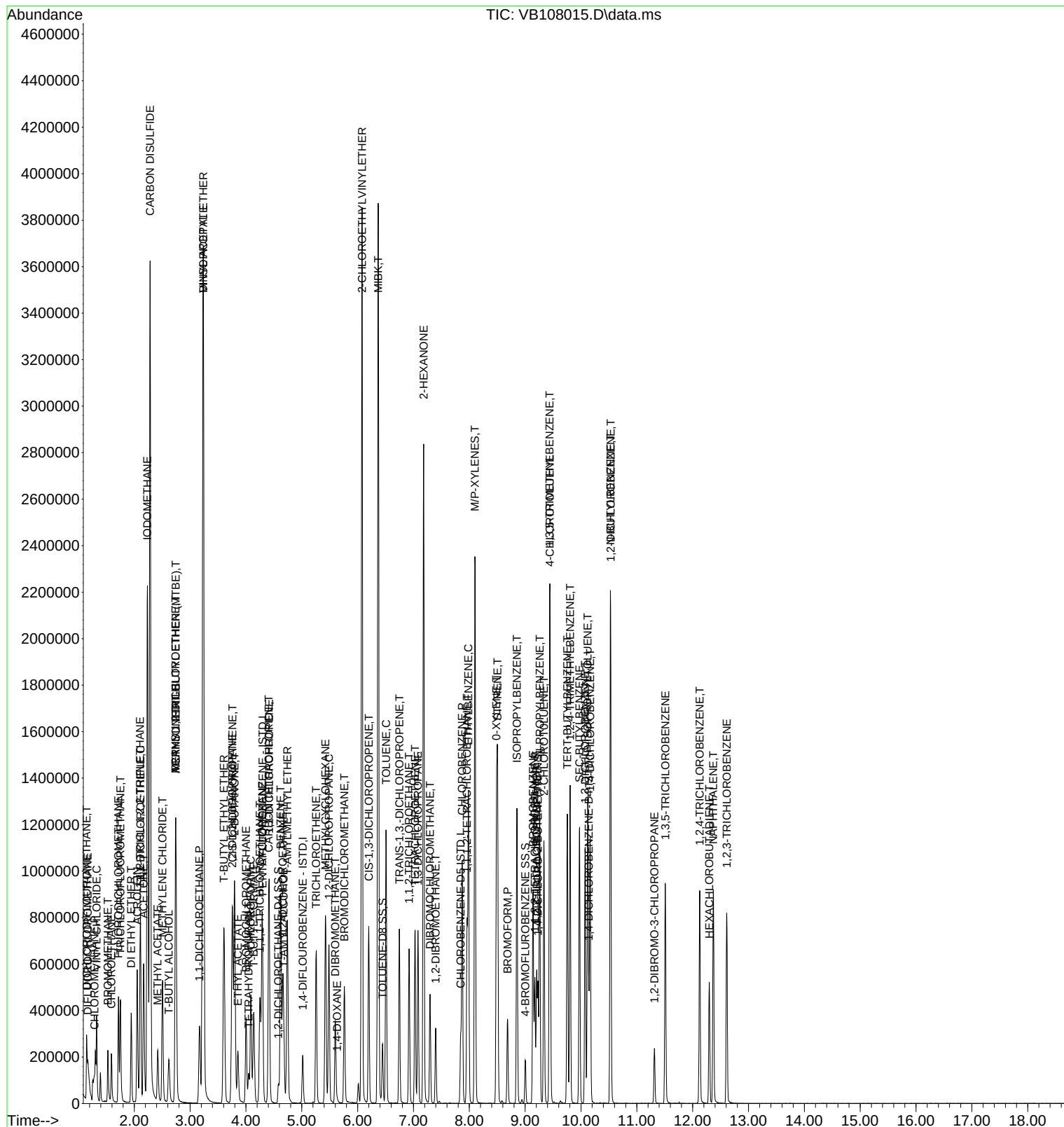
Quant Time: Apr 19 04:58:17 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc    | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|---------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.424  | 83   | 242138   | 106.00  | UG/L # | 86       |
| 49) 1,2-DICHLOROPROPANE       | 5.486  | 63   | 191532   | 105.71  | UG/L # | 84       |
| 50) DIBROMOMETHANE            | 5.600  | 93   | 114708   | 116.04  | UG/L   | 92       |
| 51) 1,4-DIOXANE               | 5.631  | 88   | 14832m   | 766.40  | UG/L   |          |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 240366   | 122.05  | UG/L   | 99       |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.080  | 63   | 1279814  | 1065.04 | UG/L # | 76       |
| 54) MIBK                      | 6.367  | 43   | 2334860  | 1256.06 | UG/L # | 94       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.200  | 75   | 283652   | 115.44  | UG/L # | 73       |
| 56) TOLUENE                   | 6.509  | 91   | 649203   | 100.56  | UG/L   | 99       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.748  | 75   | 275025   | 124.15  | UG/L # | 75       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D.    | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.921  | 97   | 156462   | 105.62  | UG/L   | 97       |
| 60) 2-HEXANONE                | 7.183  | 43   | 1665935  | 1283.77 | UG/L # | 90       |
| 61) TETRACHLOROETHENE         | 7.027  | 164  | 134727   | 104.67  | UG/L   | 97       |
| 62) 1,3-DICHLOROPROPANE       | 7.081  | 76   | 273221   | 105.51  | UG/L # | 76       |
| 63) DIBROMOCHLOROMETHANE      | 7.297  | 129  | 192742   | 111.00  | UG/L   | 100      |
| 64) 1,2-DIBROMOETHANE         | 7.396  | 107  | 175744   | 106.60  | UG/L # | 99       |
| 67) CHLOROBENZENE             | 7.871  | 112  | 431148   | 93.87   | UG/L   | 99       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.959  | 131  | 175230   | 102.64  | UG/L   | 98       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 739136   | 96.68   | UG/L   | 98       |
| 70) M/P-XYLENES               | 8.101  | 91   | 1133505  | 190.61  | UG/L   | 96       |
| 71) O-XYLENE                  | 8.487  | 91   | 601013   | 97.41   | UG/L   | 95       |
| 72) STYRENE                   | 8.507  | 104  | 496261   | 97.21   | UG/L # | 85       |
| 73) BROMOFORM                 | 8.683  | 173  | 144124   | 107.58  | UG/L   | 99       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 699397   | 95.51   | UG/L   | 97       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.    | d      |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.172  | 83   | 212075   | 99.08   | UG/L   | 99       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.229  | 53   | 106093   | 145.88  | UG/L   | 98       |
| 78) BROMOBENZENE              | 9.141  | 77   | 294751   | 98.44   | UG/L   | 98       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.206  | 110  | 67297    | 99.01   | UG/L   | 89       |
| 80) N-PROPYLBENZENE           | 9.260  | 91   | 846524   | 99.10   | UG/L   | 95       |
| 81) 2-CHLOROTOLUENE           | 9.337  | 91   | 505881   | 96.19   | UG/L   | 96       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.439  | 105  | 602620   | 95.47   | UG/L   | 94       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 618894   | 99.89   | UG/L   | 94       |
| 85) TERT-BUTYLBENZENE         | 9.755  | 119  | 496055   | 93.50   | UG/L   | 85       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.806  | 105  | 628435   | 99.85   | UG/L   | 95       |
| 87) SEC-BUTYLBENZENE          | 9.974  | 105  | 695599   | 99.71   | UG/L   | 100      |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 370033   | 98.52   | UG/L   | 99       |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 619305   | 95.51   | UG/L # | 94       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 388051   | 98.12   | UG/L   | 100      |
| 91) N-BUTYLBENZENE            | 10.528 | 91   | 550220   | 109.80  | UG/L   | 97       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 361082   | 97.77   | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.315 | 75   | 45954    | 115.48  | UG/L   | 86       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.511 | 180  | 248612   | 100.21  | UG/L   | 94       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 238288   | 101.06  | UG/L   | 95       |
| 96) HEXACHLOROBUTADIENE       | 12.298 | 225  | 88076    | 106.00  | UG/L   | 98       |
| 97) NAPHTHALENE               | 12.369 | 128  | 623123   | 99.30   | UG/L   | 99       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180  | 216559   | 102.29  | UG/L   | 96       |

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

227

Inst : GCMSVOA2



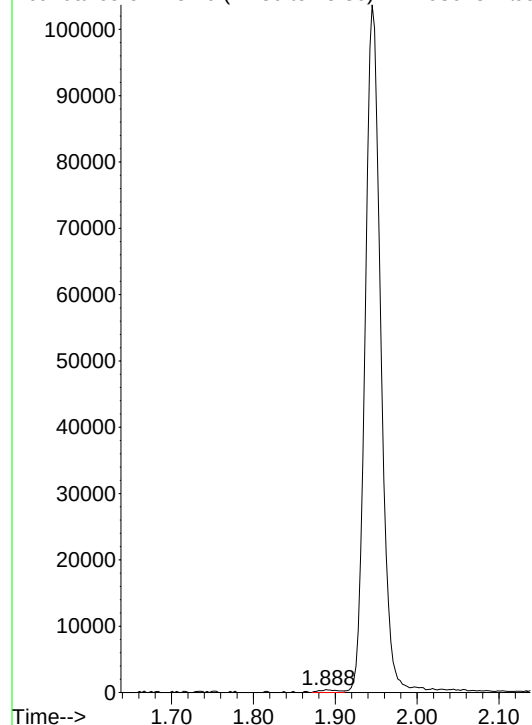
Data Path : Y:\1\DATA\B041819\  
Data File : VB108015.D  
Acq On : 18 Apr 2019 2:42 pm  
Operator :  
Sample : 8260 STD 100 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 04:58:17 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHANOL

Abundance 45.10 (44.80 to 45.80): VB108015.D\data



## Original Int. Results

-----

RT : 1.89  
Area : 682  
Amount: 35.9694

## Manual Int. Results

-----

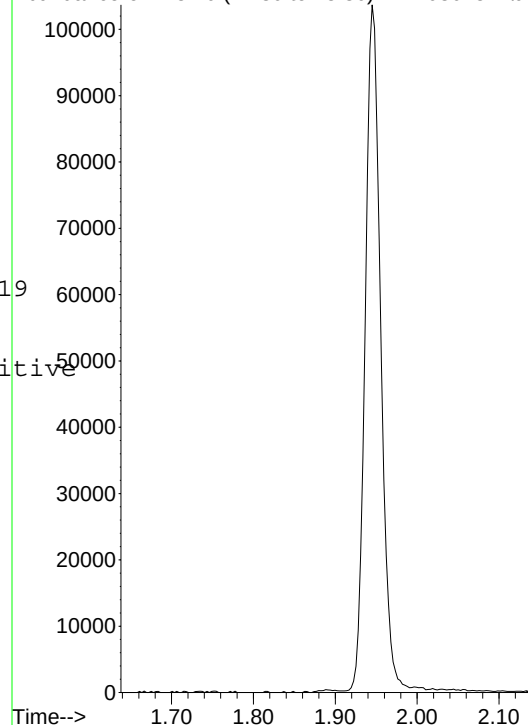
Fri Apr 19 04:57:05 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHANOL

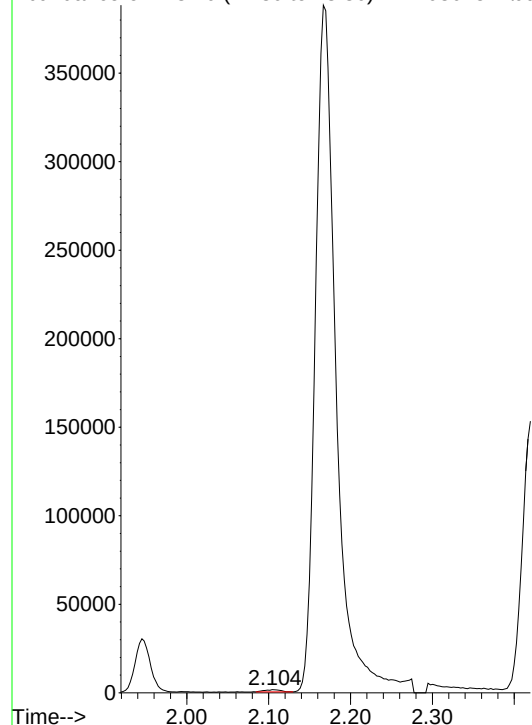
Abundance 45.10 (44.80 to 45.80): VB108015.D\data



## Original Integration

ACETONE

Abundance 43.10 (42.80 to 43.80): VB108015.D\data



## Original Int. Results

-----

RT : 2.10  
Area : 1809  
Amount: 3.70794

## Manual Int. Results

-----

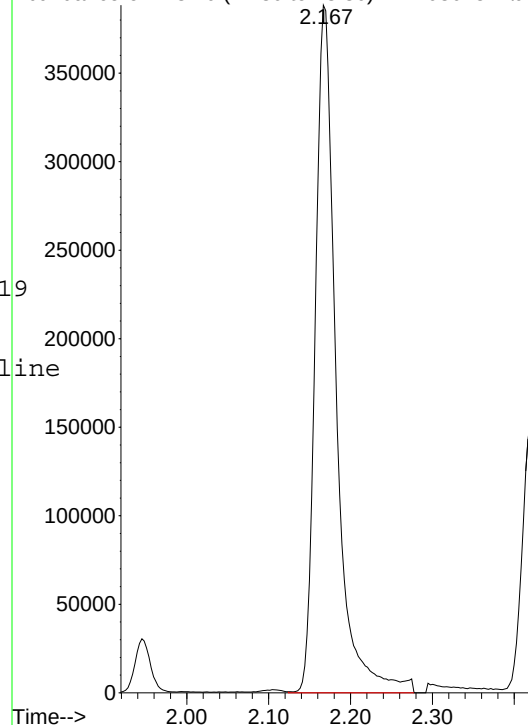
Fri Apr 19 04:57:13 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 2.17  
Area : 686840  
Amount: 1407.83

## Manual Integration

ACETONE

Abundance 43.10 (42.80 to 43.80): VB108015.D\data





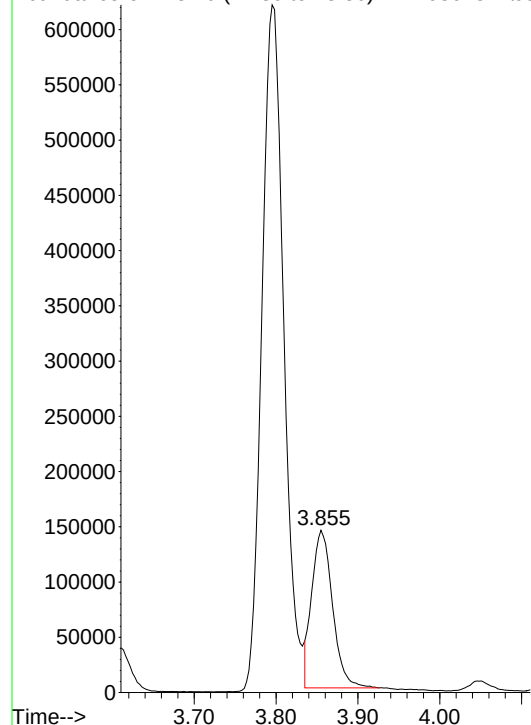
Data Path : Y:\1\DATA\B041819\  
Data File : VB108015.D  
Acq On : 18 Apr 2019 2:42 pm  
Operator :  
Sample : 8260 STD 100 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 04:58:17 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108015.D\data



## Original Int. Results

-----

RT : 3.85  
Area : 251059  
Amount: 131.096

## Manual Int. Results

-----

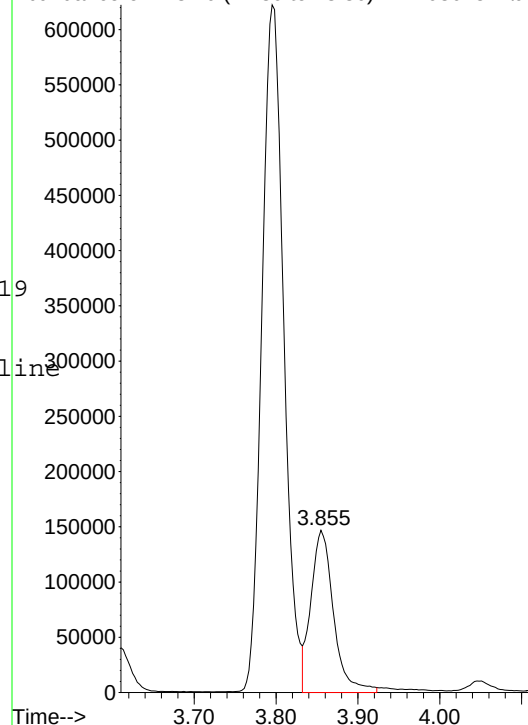
Fri Apr 19 04:57:32 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.85  
Area : 281361  
Amount: 146.919

## Manual Integration

ETHYL ACETATE

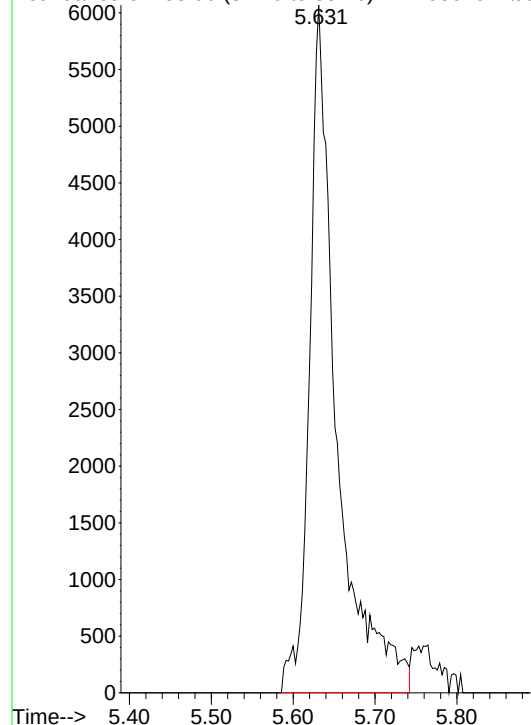
Abundance on 43.10 (42.80 to 43.80): VB108015.D\data



## Original Integration

1,4-DIOXANE

Abundance on 88.00 (87.70 to 88.70): VB108015.D\data



## Original Int. Results

-----

RT : 5.63  
Area : 13887  
Amount: 718.82

## Manual Int. Results

-----

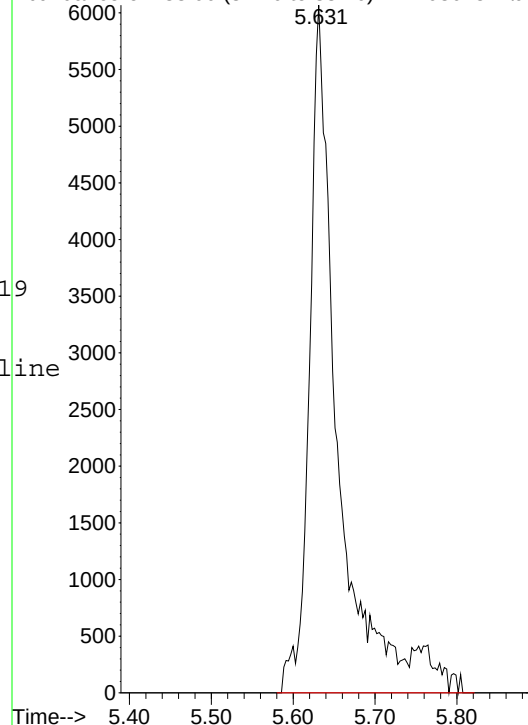
Fri Apr 19 04:57:46 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 5.63  
Area : 14832  
Amount: 766.403

## Manual Integration

1,4-DIOXANE

Abundance on 88.00 (87.70 to 88.70): VB108015.D\data



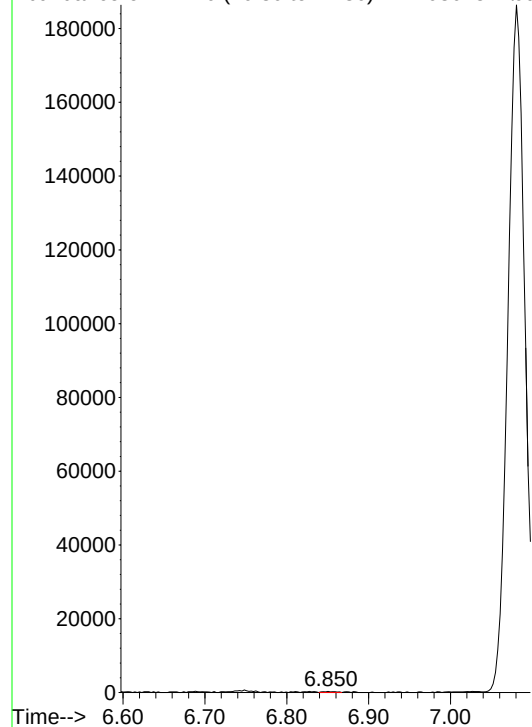
Data Path : Y:\1\DATA\B041819\  
Data File : VB108015.D  
Acq On : 18 Apr 2019 2:42 pm  
Operator :  
Sample : 8260 STD 100 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 04:58:17 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108015.D\data



## Original Int. Results

-----

RT : 6.85

Area : 316

Amount: 0

## Manual Int. Results

-----

Fri Apr 19 04:57:53 2019

MIuser: LBD

Reason: Qdel False Positive

RT : 0.00

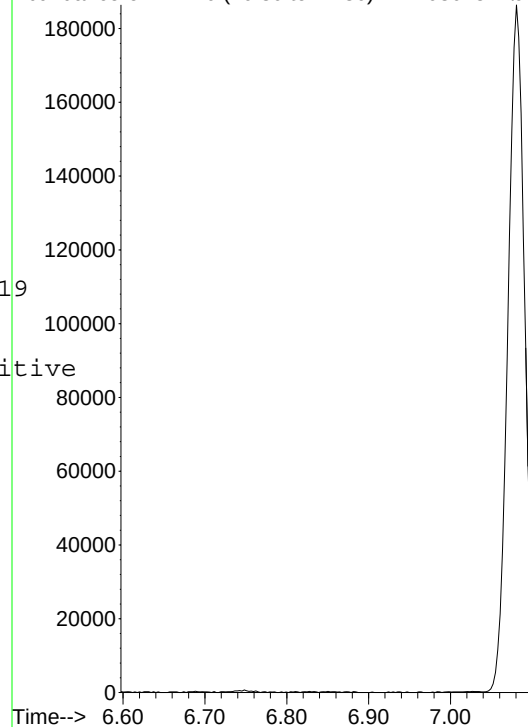
Area : 0

Amount: 0

## Manual Integration

ETHYL METHACRYLATE

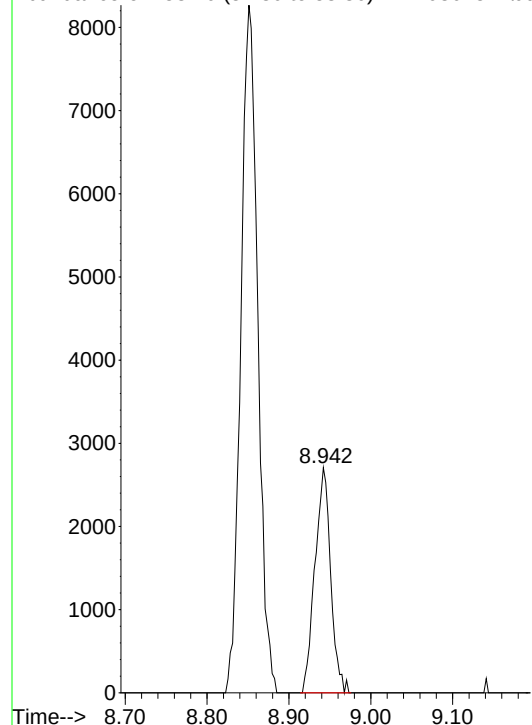
Abundance on 41.10 (40.80 to 41.80): VB108015.D\data



## Original Integration

CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108015.D\data



## Original Int. Results

-----

RT : 8.94

Area : 3608

Amount: 0

## Manual Int. Results

-----

Fri Apr 19 04:58:04 2019

MIuser: LBD

Reason: Qdel False Positive

RT : 0.00

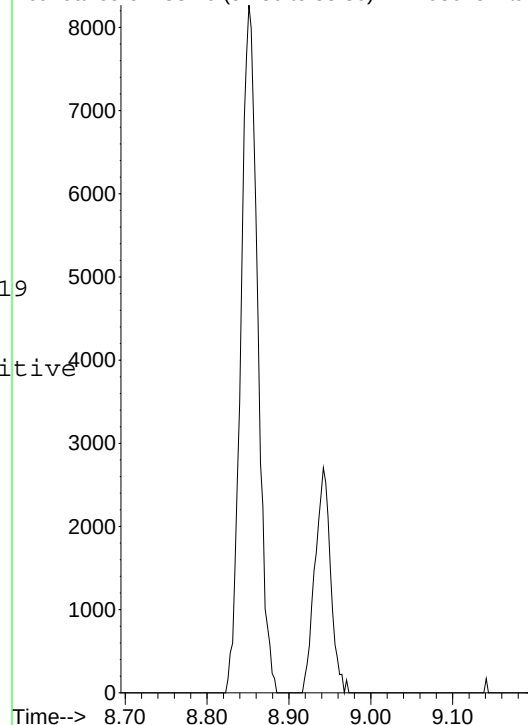
Area : 0

Amount: 0

## Manual Integration

CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108015.D\data



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108016.D  
 Acq On : 18 Apr 2019 3:13 pm  
 Operator :  
 Sample : 8260 STD 200 PPB 1901533  
 Misc :  
 ALS Vial : 13 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 19 05:04:06 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.     | QIon  | Response | Conc    | Units    | Dev (Min) |
|-------------------------------|----------|-------|----------|---------|----------|-----------|
| Internal Standards            |          |       |          |         |          |           |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298    | 168   | 85389    | 30.00   | UG/L     | 0.00      |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017    | 114   | 137333   | 30.00   | UG/L     | 0.00      |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845    | 82    | 74129    | 30.00   | UG/L     | 0.00      |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.141   | 152   | 73471    | 30.00   | UG/L     | # 0.00    |
| System Monitoring Compounds   |          |       |          |         |          |           |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582    | 65    | 53894    | 33.46   | UG/L     | 0.00      |
| Spiked Amount 25.000          | Range 70 | - 130 | Recovery | =       | 133.84%# |           |
| 45) TOLUENE-D8 SS             | 6.449    | 98    | 135183   | 25.01   | UG/L     | 0.00      |
| Spiked Amount 25.000          | Range 70 | - 130 | Recovery | =       | 100.04%  |           |
| 66) 4-BROMOFLUROBENZENE SS    | 9.004    | 95    | 52741    | 23.72   | UG/L     | 0.00      |
| Spiked Amount 25.000          | Range 70 | - 130 | Recovery | =       | 94.88%   |           |
| Target Compounds              |          |       |          |         |          |           |
|                               |          |       |          |         |          | Qvalue    |
| 3) DICHLORODIFLOUROMETHANE    | 1.146    | 85    | 296959   | 175.11  | UG/L     | 98        |
| 4) DIFLUOROCHLOROMETHANE      | 1.172    | 51    | 538649   | 224.15  | UG/L     | 98        |
| 5) CHLOROMETHANE              | 1.288    | 50    | 541895   | 210.21  | UG/L     | 98        |
| 6) VINYL CHLORIDE             | 1.323    | 62    | 411122   | 207.56  | UG/L     | 99        |
| 7) BROMOMETHANE               | 1.519    | 94    | 253489   | 229.86  | UG/L     | 93        |
| 8) CHLOROETHANE               | 1.587    | 64    | 229732   | 217.64  | UG/L     | 99        |
| 9) FLUORODICHLOROMETHANE      | 1.715    | 67    | 591319   | 243.54  | UG/L     | 100       |
| 10) TRICHLOROFLUOROMETHANE    | 1.749    | 101   | 491180   | 244.37  | UG/L     | 100       |
| 11) ETHANOL                   | 0.000    |       | 0        | N.D.    | d        |           |
| 12) DI ETHYL ETHER            | 1.945    | 59    | 336835   | 253.86  | UG/L     | 88        |
| 13) ACROLEIN                  | 2.050    | 56    | 814968   | 2072.19 | UG/L     | # 99      |
| 14) ACETONE                   | 2.169    | 43    | 1345188  | 2629.32 | UG/L     | 89        |
| 15) 1,1-DICHLOROETHENE        | 2.110    | 61    | 523251   | 251.71  | UG/L     | 92        |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.101    | 101   | 256129   | 226.76  | UG/L     | 93        |
| 17) IODOMETHANE               | 2.232    | 142   | 3921658  | 1891.29 | UG/L     | # 82      |
| 18) METHYL ACETATE            | 2.420    | 43    | 546420   | 178.99  | UG/L     | # 91      |
| 19) T-BUTYL ALCOHOL           | 2.624    | 59    | 457576   | 2329.30 | UG/L     | 96        |
| 20) ACRYLONITRILE             | 2.743    | 53    | 204755   | 253.41  | UG/L     | 97        |
| 21) METHYLENE CHLORIDE        | 2.502    | 49    | 616082   | 263.06  | UG/L     | # 85      |
| 22) CARBON DISULFIDE          | 2.280    | 76    | 6465038  | 1454.90 | UG/L     | # 92      |
| 23) METHYL TERT-BUTYL ETHE... | 2.743    | 73    | 1036238  | 241.75  | UG/L     | 97        |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.741    | 61    | 541010   | 237.62  | UG/L     | 94        |
| 25) 1,1-DICHLOROETHANE        | 3.170    | 63    | 666168   | 227.95  | UG/L     | 98        |
| 26) VINYL ACETATE             | 3.241    | 43    | 9054656  | 2339.22 | UG/L     | 99        |
| 27) DI ISOPROPYL ETHER        | 3.241    | 45    | 1557721  | 279.70  | UG/L     | 92        |
| 28) 2-BUTANONE                | 3.798    | 43    | 2309382  | 2585.79 | UG/L     | 96        |
| 29) T-BUTYL ETHYL ETHER       | 3.607    | 59    | 1394154  | 258.68  | UG/L     | 98        |
| 30) CIS-1,2-DICHLOROETHENE    | 3.758    | 61    | 659449   | 243.99  | UG/L     | 92        |
| 31) 2,2-DICHLOROPROPANE       | 3.750    | 77    | 449817   | 254.00  | UG/L     | 97        |
| 32) ETHYL ACETATE             | 3.858    | 43    | 597396m  | 297.47  | UG/L     |           |
| 33) BROMOCHLOROMETHANE        | 4.002    | 128   | 149414   | 188.00  | UG/L     | # 76      |
| 34) TETRAHYDROFURAN           | 4.048    | 42    | 162034   | 260.44  | UG/L     | 93        |
| 35) T-BUTYL FORMATE           | 4.142    | 59    | 372002   | 249.66  | UG/L     | # 94      |
| 36) CHLOROFORM                | 4.088    | 83    | 610804   | 231.73  | UG/L     | 97        |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250    | 97    | 544276   | 252.02  | UG/L     | 94        |
| 38) CYCLOHEXANE               | 4.290    | 56    | 679950   | 216.75  | UG/L     | # 84      |
| 39) CARBON TETRACHLORIDE      | 4.406    | 117   | 464912   | 245.93  | UG/L     | 95        |
| 40) 1,1-DICHLOROPROPENE       | 4.415    | 75    | 450698   | 239.94  | UG/L     | 97        |
| 41) BENZENE                   | 4.622    | 78    | 1196469  | 198.50  | UG/L     | 97        |
| 42) T-AMYL ALCOHOL            | 4.679    | 59    | 364380   | 2217.10 | UG/L     | # 93      |
| 43) T-AMYLMETHYL ETHER        | 4.741    | 73    | 995341   | 240.18  | UG/L     | 98        |
| 46) 1,2-DICHLOROETHANE        | 4.656    | 62    | 621607   | 250.72  | UG/L     | 96        |
| 47) TRICHLOROETHENE           | 5.259    | 95    | 349175   | 211.36  | UG/L     | 92        |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108016.D  
 Acq On : 18 Apr 2019 3:13 pm  
 Operator :  
 Sample : 8260 STD 200 PPB 1901533  
 Misc :  
 ALS Vial : 13 Sample Multiplier: 1

Inst : GCMSVOA2

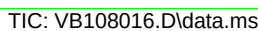
Quant Time: Apr 19 05:04:06 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc    | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|---------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.426  | 83   | 496214   | 207.51  | UG/L # | 86       |
| 49) 1,2-DICHLOROPROPANE       | 5.486  | 63   | 393393   | 207.42  | UG/L # | 85       |
| 50) DIBROMOMETHANE            | 5.600  | 93   | 237271   | 229.29  | UG/L   | 92       |
| 51) 1,4-DIOXANE               | 5.631  | 88   | 32134m   | 1565.28 | UG/L   |          |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 496838   | 241.01  | UG/L   | 99       |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.086  | 63   | 2449468  | 1947.29 | UG/L # | 77       |
| 54) MIBK                      | 6.376  | 43   | 4454710  | 2289.34 | UG/L   | 97       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.202  | 75   | 579512   | 225.31  | UG/L # | 74       |
| 56) TOLUENE                   | 6.512  | 91   | 1318871  | 195.16  | UG/L   | 99       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.748  | 75   | 564934   | 243.61  | UG/L # | 76       |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D.    | d      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 6.924  | 97   | 323092   | 208.35  | UG/L   | 97       |
| 60) 2-HEXANONE                | 7.186  | 43   | 3239108  | 2384.49 | UG/L   | 93       |
| 61) TETRACHLOROETHENE         | 7.029  | 164  | 278182   | 206.45  | UG/L   | 97       |
| 62) 1,3-DICHLOROPROPANE       | 7.080  | 76   | 562202   | 207.40  | UG/L # | 76       |
| 63) DIBROMOCHLOROMETHANE      | 7.299  | 129  | 399879   | 219.99  | UG/L   | 99       |
| 64) 1,2-DIBROMOETHANE         | 7.401  | 107  | 362823   | 210.25  | UG/L # | 99       |
| 67) CHLOROBENZENE             | 7.873  | 112  | 878360   | 179.54  | UG/L   | 98       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.961  | 131  | 362763   | 199.48  | UG/L   | 98       |
| 69) ETHYLBENZENE              | 7.987  | 91   | 1473127  | 180.90  | UG/L   | 99       |
| 70) M/P-XYLENES               | 8.103  | 91   | 2211963  | 349.21  | UG/L   | 97       |
| 71) O-XYLENE                  | 8.490  | 91   | 1208092  | 183.83  | UG/L   | 96       |
| 72) STYRENE                   | 8.507  | 104  | 1005539  | 184.92  | UG/L # | 84       |
| 73) BROMOFORM                 | 8.686  | 173  | 302441   | 211.95  | UG/L   | 98       |
| 74) ISOPROPYLBENZENE          | 8.854  | 105  | 1402807  | 179.85  | UG/L   | 98       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.    | d      |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.175  | 83   | 449760   | 197.27  | UG/L   | 99       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.232  | 53   | 222556   | 287.30  | UG/L   | 99       |
| 78) BROMOBENZENE              | 9.141  | 77   | 607666   | 190.52  | UG/L   | 98       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.209  | 110  | 141827   | 195.91  | UG/L   | 90       |
| 80) N-PROPYLBENZENE           | 9.263  | 91   | 1690966  | 185.84  | UG/L   | 96       |
| 81) 2-CHLOROTOLUENE           | 9.340  | 91   | 1026226  | 183.20  | UG/L   | 97       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.439  | 105  | 1224205  | 182.07  | UG/L   | 95       |
| 83) 4-CHLOROTOLUENE           | 9.448  | 91   | 1248250  | 189.14  | UG/L   | 94       |
| 85) TERT-BUTYLBENZENE         | 9.757  | 119  | 1003477  | 182.04  | UG/L # | 84       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.806  | 105  | 1287126  | 196.82  | UG/L   | 96       |
| 87) SEC-BUTYLBENZENE          | 9.973  | 105  | 1393008  | 192.18  | UG/L   | 100      |
| 88) 1,3-DICHLOROBENZENE       | 10.076 | 146  | 752876   | 192.91  | UG/L   | 98       |
| 89) P-ISOPROPYLTOLUENE        | 10.124 | 119  | 1238090  | 183.76  | UG/L # | 93       |
| 90) 1,4-DICHLOROBENZENE       | 10.167 | 146  | 782210   | 190.35  | UG/L   | 100      |
| 91) N-BUTYLBENZENE            | 10.528 | 91   | 1117335  | 214.60  | UG/L   | 98       |
| 92) 1,2-DICHLOROBENZENE       | 10.533 | 146  | 728422   | 189.83  | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.315 | 75   | 95533    | 231.05  | UG/L   | 86       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.511 | 180  | 503927   | 195.49  | UG/L   | 94       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.128 | 180  | 480508   | 196.13  | UG/L   | 94       |
| 96) HEXACHLOROBTADIENE        | 12.298 | 225  | 175935   | 203.79  | UG/L   | 99       |
| 97) NAPHTHALENE               | 12.372 | 128  | 1245723  | 191.05  | UG/L   | 98       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180  | 438262   | 199.23  | UG/L   | 96       |

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

233

Inst : GCMSVOA2



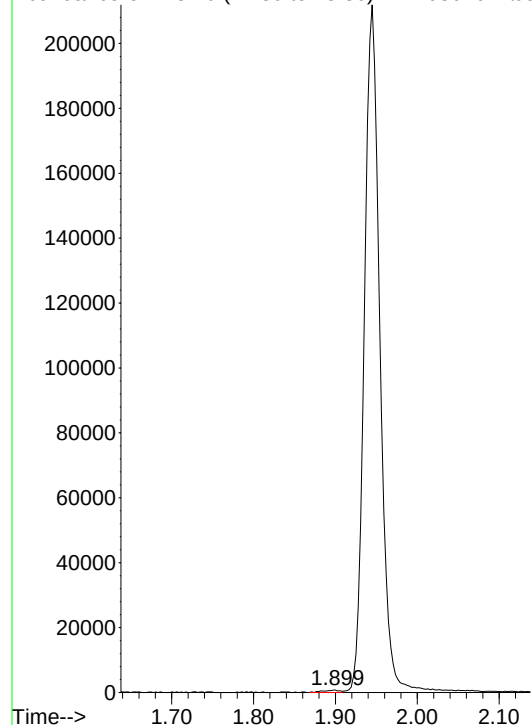
Data Path : Y:\1\DATA\B041819\  
Data File : VB108016.D  
Acq On : 18 Apr 2019 3:13 pm  
Operator :  
Sample : 8260 STD 200 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 05:04:06 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

ETHANOL

Abundance on 45.10 (44.80 to 45.80): VB108016.D\data



## Original Int. Results

-----

RT : 1.90  
Area : 1070  
Amount: 53.8144

## Manual Int. Results

-----

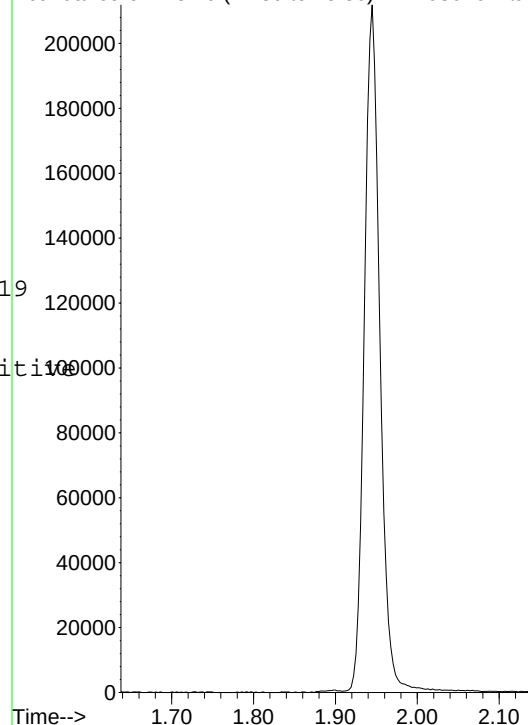
Fri Apr 19 05:02:49 2019

MIuser: LBD  
Reason: Qdel False Position  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHANOL

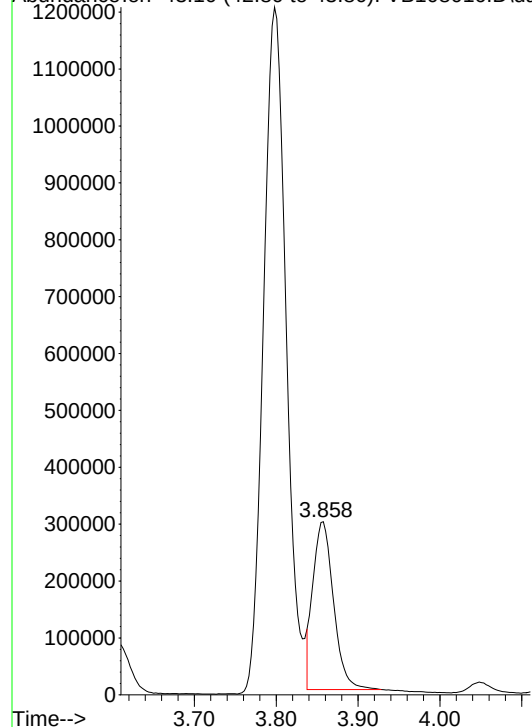
Abundance on 45.10 (44.80 to 45.80): VB108016.D\data



## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108016.D\data



## Original Int. Results

-----

RT : 3.86  
Area : 513720  
Amount: 255.804

## Manual Int. Results

-----

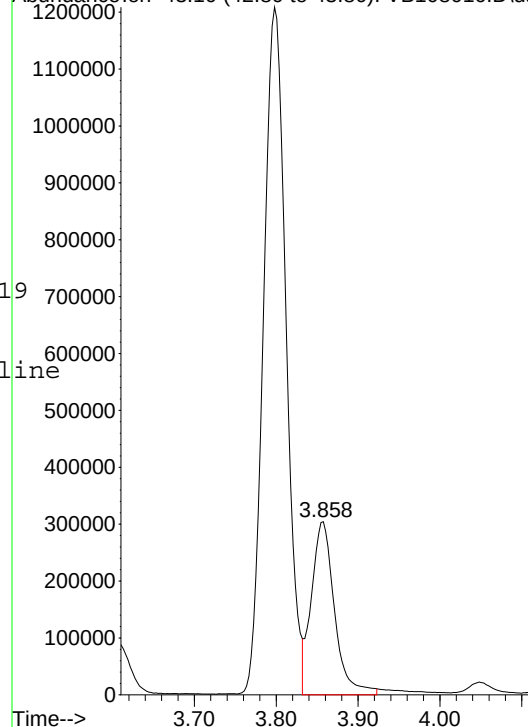
Fri Apr 19 05:03:06 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.86  
Area : 597396  
Amount: 297.47

## Manual Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108016.D\data

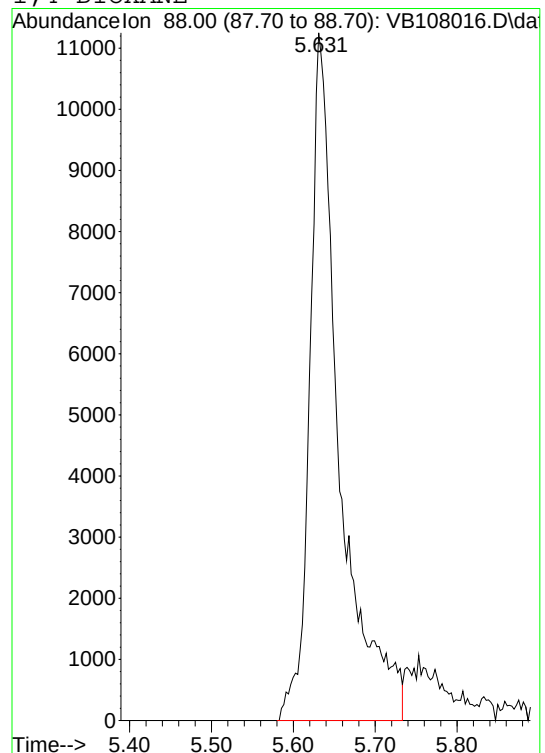


Data Path : Y:\1\DATA\B041819\  
Data File : VB108016.D  
Acq On : 18 Apr 2019 3:13 pm  
Operator :  
Sample : 8260 STD 200 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 05:04:06 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

## Original Integration

1,4-DIOXANE



## Original Int. Results

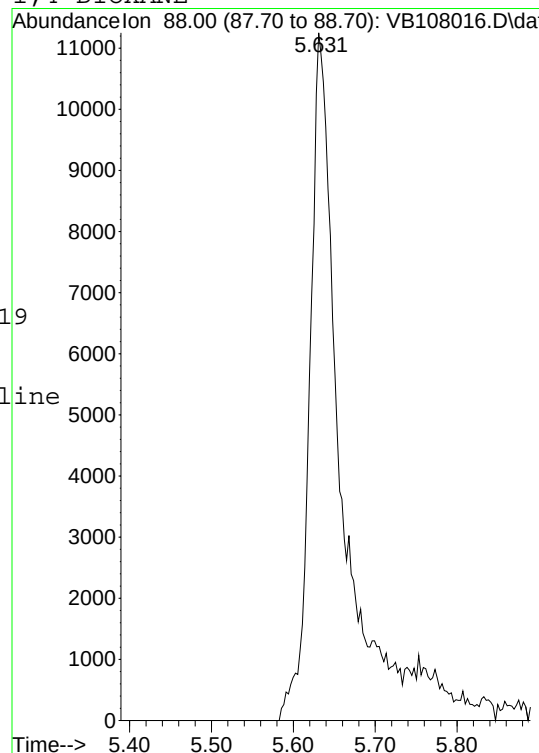
-----  
RT : 5.63  
Area : 28176  
Amount: 1374.89

## Manual Int. Results

-----  
Fri Apr 19 05:03:27 2019  
MIuser: LBD  
Reason: Incorrect Baseline  
RT : 5.63  
Area : 32134  
Amount: 1565.28

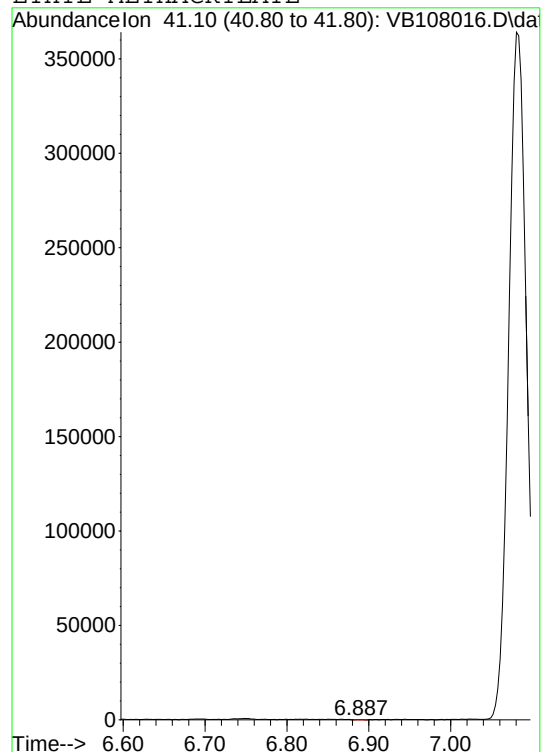
## Manual Integration

1,4-DIOXANE



## Original Integration

ETHYL METHACRYLATE



## Original Int. Results

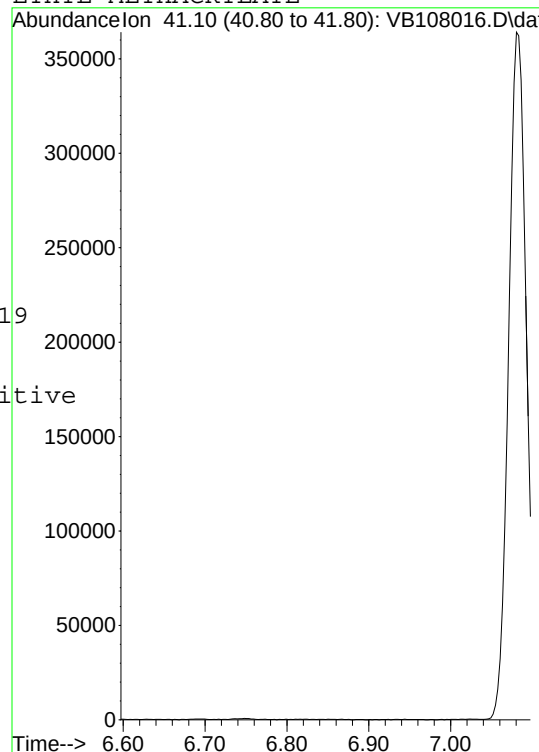
-----  
RT : 6.89  
Area : 110  
Amount: 0

## Manual Int. Results

-----  
Fri Apr 19 05:03:38 2019  
MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL METHACRYLATE

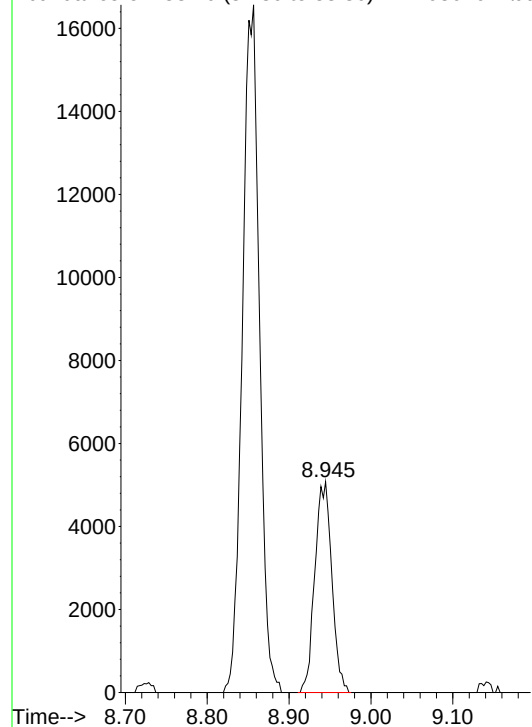


Data Path : Y:\1\DATA\B041819\  
Data File : VB108016.D  
Acq On : 18 Apr 2019 3:13 pm  
Operator :  
Sample : 8260 STD 200 PPB 1901533  
Misc :

Quant Time : Fri Apr 19 05:04:06 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
QLast Update : Thu Apr 11 08:23:37 2019

Original Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108016.D\data



Original Int. Results

-----  
RT : 8.94  
Area : 7298  
Amount: 0

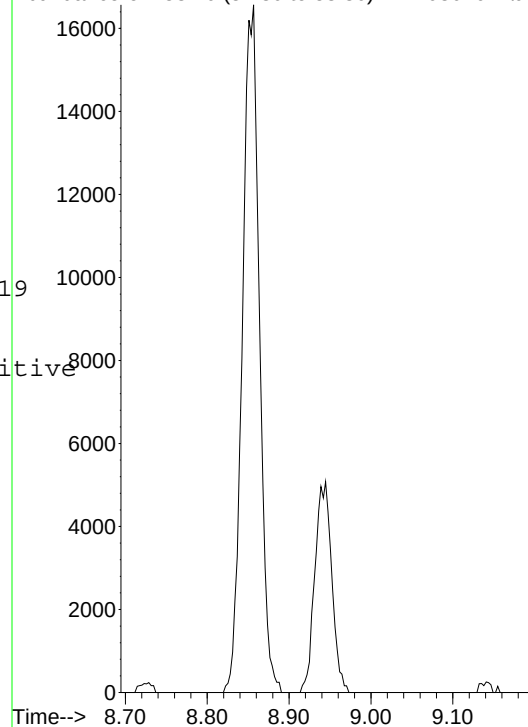
Manual Int. Results

-----  
Fri Apr 19 05:03:53 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108016.D\data





Data Path : Y:\1\DATA\B041819\  
 Data File : VB108017.D  
 Acq On : 18 Apr 2019 3:43 pm  
 Operator :  
 Sample : 8260 ETOH 500 PPB  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 16:02:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response            | Conc          | Units  | Dev(Min) |
|-------------------------------|----------------|------|---------------------|---------------|--------|----------|
| Internal Standards            |                |      |                     |               |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298          | 168  | 74725               | 30.00         | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 116347              | 30.00         | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842          | 82   | 63404               | 30.00         | UG/L   | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.139         | 152  | 64116               | 30.00         | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |                     |               |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 48749               | 34.59         | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 138.36%# |               |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 114070              | 24.91         | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 99.64%   |               |        |          |
| 66) 4-BROMOFLUOROBENZENE SS   | 9.002          | 95   | 47170               | 24.81         | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 99.24%   |               |        |          |
| Target Compounds              |                |      |                     |               |        |          |
|                               |                |      |                     |               | Qvalue |          |
| 3) DICHLORODIFLOUROMETHANE    | 0.000          |      | 0                   | N.D.          |        |          |
| 4) DIFLUOROCHLOROMETHANE      | 1.306          | 51   | 597                 | 0.28 UG/L #   |        | 66       |
| 5) CHLOROMETHANE              | 1.260          | 50   | 1217                | 0.54 UG/L #   |        | 43       |
| 6) VINYL CHLORIDE             | 0.000          |      | 0                   | N.D.          |        |          |
| 7) BROMOMETHANE               | 1.530          | 94   | 963                 | 1.00 UG/L     |        | 83       |
| 8) CHLOROETHANE               | 0.000          |      | 0                   | N.D.          |        |          |
| 9) FLUORODICHLOROMETHANE      | 1.721          | 67   | 234                 | 0.11 UG/L #   |        | 43       |
| 10) TRICHLOROFLUOROMETHANE    | 1.752          | 101  | 525                 | 0.30 UG/L #   |        | 18       |
| 11) ETHANOL                   | 1.885          | 45   | 9962                | 572.53 UG/L # |        | 89       |
| 12) DI ETHYL ETHER            | 0.000          |      | 0                   | N.D.          |        |          |
| 13) ACROLEIN                  | 2.050          | 56   | 1353                | 3.93 UG/L #   |        | 69       |
| 14) ACETONE                   | 2.170          | 43   | 1624                | 3.63 UG/L #   |        | 41       |
| 15) 1,1-DICHLOROETHENE        | 0.000          |      | 0                   | N.D.          |        |          |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 0.000          |      | 0                   | N.D.          |        |          |
| 17) IODOMETHANE               | 2.241          | 142  | 11455               | 6.31 UG/L #   |        | 84       |
| 18) METHYL ACETATE            | 2.425          | 43   | 666                 | 0.25 UG/L #   |        | 58       |
| 19) T-BUTYL ALCOHOL           | 2.624          | 59   | 4877                | 28.37 UG/L #  |        | 61       |
| 20) ACRYLONITRILE             | 0.000          |      | 0                   | N.D.          |        |          |
| 21) METHYLENE CHLORIDE        | 0.000          |      | 0                   | N.D.          |        |          |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 15960               | 4.10 UG/L     |        | 99       |
| 23) METHYL TERT-BUTYL ETHE... | 0.000          |      | 0                   | N.D.          |        |          |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.744          | 61   | 649                 | 0.33 UG/L #   |        | 27       |
| 25) 1,1-DICHLOROETHANE        | 0.000          |      | 0                   | N.D.          |        |          |
| 26) VINYL ACETATE             | 3.235          | 43   | 6536                | 1.93 UG/L #   |        | 78       |
| 27) DI ISOPROPYL ETHER        | 3.230          | 45   | 1356                | 0.28 UG/L #   |        | 52       |
| 28) 2-BUTANONE                | 3.804          | 43   | 2488                | 3.18 UG/L #   |        | 61       |
| 29) T-BUTYL ETHYL ETHER       | 3.605          | 59   | 798                 | 0.17 UG/L #   |        | 41       |
| 30) CIS-1,2-DICHLOROETHENE    | 0.000          |      | 0                   | N.D.          |        |          |
| 31) 2,2-DICHLOROPROPANE       | 0.000          |      | 0                   | N.D.          |        |          |
| 32) ETHYL ACETATE             | 0.000          |      | 0                   | N.D.          |        |          |
| 33) BROMOCHLOROMETHANE        | 0.000          |      | 0                   | N.D.          |        |          |
| 34) TETRAHYDROFURAN           | 0.000          |      | 0                   | N.D.          |        |          |
| 35) T-BUTYL FORMATE           | 0.000          |      | 0                   | N.D.          |        |          |
| 36) CHLOROFORM                | 0.000          |      | 0                   | N.D.          |        |          |
| 37) 1,1,1-TRICHLOROETHANE     | 0.000          |      | 0                   | N.D.          |        |          |
| 38) CYCLOHEXANE               | 4.293          | 56   | 3546                | 1.29 UG/L #   |        | 85       |
| 39) CARBON TETRACHLORIDE      | 0.000          |      | 0                   | N.D.          |        |          |
| 40) 1,1-DICHLOROPROPENE       | 4.415          | 75   | 617                 | 0.38 UG/L #   |        | 40       |
| 41) BENZENE                   | 4.625          | 78   | 1288                | 0.24 UG/L #   |        | 52       |
| 42) T-AMYL ALCOHOL            | 4.682          | 59   | 3281                | 22.81 UG/L #  |        | 90       |
| 43) T-AMYLMETHYL ETHER        | 4.750          | 73   | 1138                | 0.31 UG/L #   |        | 47       |
| 46) 1,2-DICHLOROETHANE        | 0.000          |      | 0                   | N.D.          |        |          |
| 47) TRICHLOROETHENE           | 5.262          | 95   | 521                 | 0.37 UG/L #   |        | 1        |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108017.D  
 Acq On : 18 Apr 2019 3:43 pm  
 Operator :  
 Sample : 8260 ETOH 500 PPB  
 Misc :  
 ALS Vial : 14 Sample Multiplier: 1

Inst : GCMSVOA2

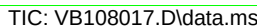
Quant Time: Apr 18 16:02:32 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc     | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|----------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.429  | 83   | 1697     | 0.84     | UG/L # | 74       |
| 49) 1,2-DICHLOROPROPANE       | 0.000  |      | 0        | N.D.     |        |          |
| 50) DIBROMOMETHANE            | 0.000  |      | 0        | N.D.     |        |          |
| 51) 1,4-DIOXANE               | 5.634  | 88   | 3466     | 216.36   | UG/L # | 76       |
| 52) BROMODICHLOROMETHANE      | 0.000  |      | 0        | N.D.     |        |          |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.072  | 63   | 3048     | 2.86     | UG/L # | 74       |
| 54) MIBK                      | 6.367  | 43   | 19431    | 11.79    | UG/L # | 90       |
| 55) CIS-1,3-DICHLOROPROPENE   | 0.000  |      | 0        | N.D.     |        |          |
| 56) TOLUENE                   | 6.509  | 91   | 5001     | 0.87     | UG/L   | 97       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.754  | 75   | 755      | 0.38     | UG/L # | 29       |
| 58) ETHYL METHACRYLATE        | 7.086  | 41   | 935      | No Calib | #      |          |
| 59) 1,1,2-TRICHLOROETHANE     | 0.000  |      | 0        | N.D.     |        |          |
| 60) 2-HEXANONE                | 7.180  | 43   | 21067    | 18.31    | UG/L # | 87       |
| 61) TETRACHLOROETHENE         | 7.027  | 164  | 1110     | 0.97     | UG/L   | 94       |
| 62) 1,3-DICHLOROPROPANE       | 7.081  | 76   | 662      | 0.29     | UG/L # | 23       |
| 63) DIBROMOCHLOROMETHANE      | 0.000  |      | 0        | N.D.     |        |          |
| 64) 1,2-DIBROMOETHANE         | 7.393  | 107  | 679      | 0.46     | UG/L # | 95       |
| 67) CHLOROBENZENE             | 7.865  | 112  | 4085     | 0.98     | UG/L # | 49       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.962  | 131  | 724      | 0.47     | UG/L # | 63       |
| 69) ETHYLBENZENE              | 7.981  | 91   | 7199     | 1.03     | UG/L   | 93       |
| 70) M/P-XYLENES               | 8.101  | 91   | 10285    | 1.90     | UG/L   | 96       |
| 71) O-XYLENE                  | 8.490  | 91   | 5299     | 0.94     | UG/L   | 91       |
| 72) STYRENE                   | 8.504  | 104  | 4205     | 0.90     | UG/L # | 88       |
| 73) BROMOFORM                 | 8.683  | 173  | 792      | 0.65     | UG/L # | 31       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 7324     | 1.10     | UG/L   | 99       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D.     |        |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.169  | 83   | 2853     | 1.46     | UG/L # | 94       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.232  | 53   | 915      | 1.38     | UG/L # | 36       |
| 78) BROMOBENZENE              | 9.144  | 77   | 3365     | 1.23     | UG/L   | 98       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.204  | 110  | 731      | 1.18     | UG/L   | 87       |
| 80) N-PROPYLBENZENE           | 9.258  | 91   | 10032    | 1.29     | UG/L   | 95       |
| 81) 2-CHLOROTOLUENE           | 9.337  | 91   | 6042     | 1.26     | UG/L   | 94       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.434  | 105  | 6770     | 1.18     | UG/L   | 91       |
| 83) 4-CHLOROTOLUENE           | 9.448  | 91   | 7309     | 1.29     | UG/L   | 93       |
| 85) TERT-BUTYLBENZENE         | 9.755  | 119  | 6229     | 1.29     | UG/L   | 85       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 7825     | 1.37     | UG/L   | 91       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 11570    | 1.83     | UG/L   | 93       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 5762     | 1.69     | UG/L   | 96       |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 10345    | 1.76     | UG/L # | 92       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 5934     | 1.65     | UG/L # | 92       |
| 91) N-BUTYLBENZENE            | 10.528 | 91   | 13037    | 2.87     | UG/L   | 97       |
| 92) 1,2-DICHLOROBENZENE       | 10.528 | 146  | 7124     | 2.13     | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.318 | 75   | 2599     | 7.20     | UG/L   | 85       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 9660     | 4.29     | UG/L   | 95       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 14802    | 6.92     | UG/L   | 96       |
| 96) HEXACHLOROBUTADIENE       | 12.296 | 225  | 7610     | 10.10    | UG/L   | 99       |
| 97) NAPHTHALENE               | 12.369 | 128  | 75836    | 13.33    | UG/L   | 100      |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180  | 21347    | 11.12    | UG/L   | 95       |

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

239

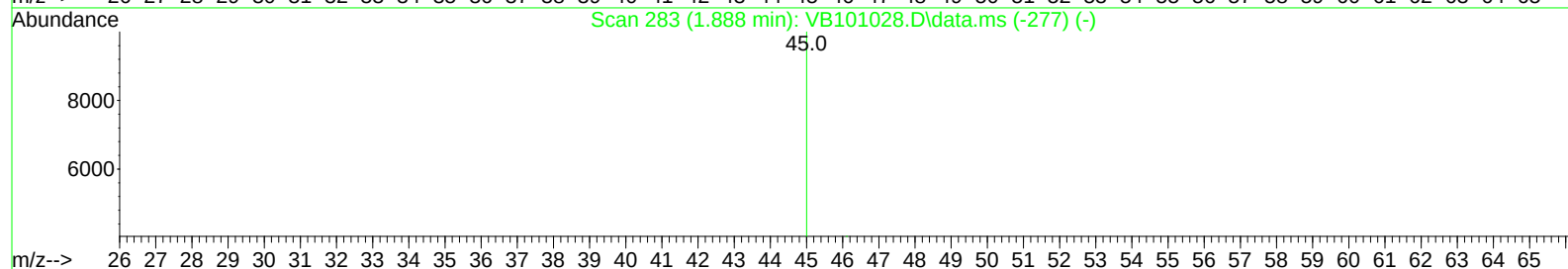
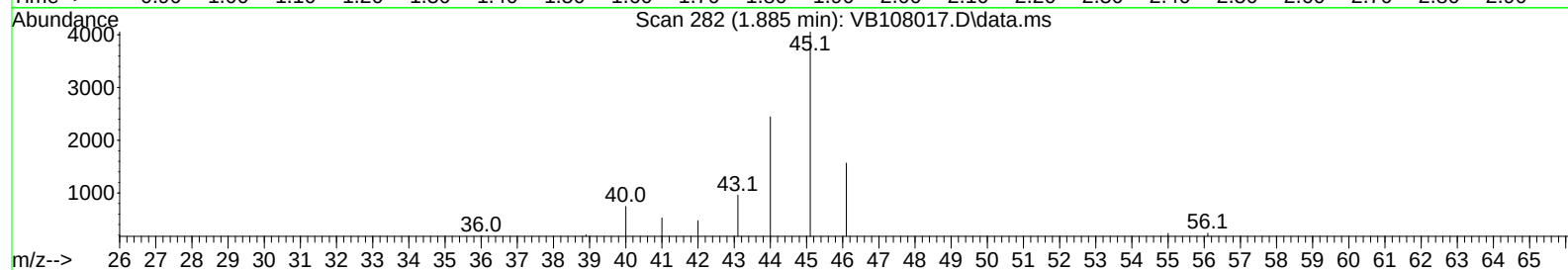
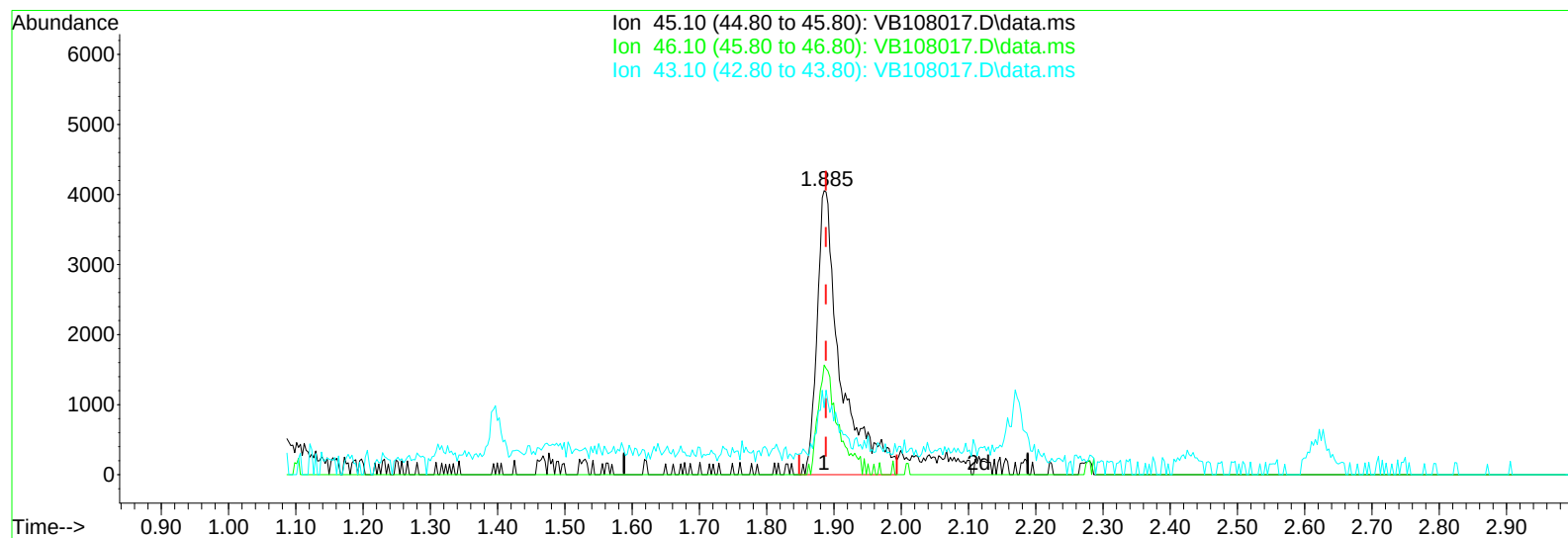
Inst : GCMSVOA2



Data Path : Y:\1\DATA\B041819\  
Data File : VB108017.D  
Acq On : 18 Apr 2019 3:43 pm  
Operator :  
Sample : 8260 ETOH 500 PPB  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 16:02:32 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973  
QLast Update : Thu Apr 11 08:23:37 2019  
Response via : Initial Calibration



TIC: VB108017.D\data.ms

(11) ETHANOL

1.885min (-0.003) 572.53 UG/L

response 9962

| Ion   | Exp%  | Act%   |
|-------|-------|--------|
| 45.10 | 100   | 100    |
| 46.10 | 30.10 | 32.34  |
| 43.10 | 27.80 | 17.92# |
| 0.00  | 0.00  | 0.00   |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108018.D  
 Acq On : 18 Apr 2019 4:14 pm  
 Operator :  
 Sample : 8260 ETOH 1000 PPB  
 Misc :  
 ALS Vial : 15 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 16:33:16 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon  | Response | Conc     | Units  | Dev     | (Min) |
|-------------------------------|--------|-------|----------|----------|--------|---------|-------|
| Internal Standards            |        |       |          |          |        |         |       |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298  | 168   | 71508    | 30.00    | UG/L   |         | 0.00  |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017  | 114   | 111677   | 30.00    | UG/L   |         | 0.00  |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845  | 82    | 60905    | 30.00    | UG/L   |         | 0.00  |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.141 | 152   | 62598    | 30.00    | UG/L   |         | 0.00  |
| System Monitoring Compounds   |        |       |          |          |        |         |       |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.583  | 65    | 47068    | 34.90    | UG/L   |         | 0.00  |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 139.60% | #     |
| 45) TOLUENE-D8 SS             | 6.444  | 98    | 110485   | 25.14    | UG/L   |         | 0.00  |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 100.56% |       |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002  | 95    | 45615    | 24.97    | UG/L   |         | 0.00  |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 99.88%  |       |
| Target Compounds              |        |       |          |          |        |         |       |
|                               |        |       |          |          |        | Qvalue  |       |
| 3) DICHLORODIFLOUROMETHANE    | 0.000  |       | 0        | N.D.     |        |         |       |
| 4) DIFLUOROCHLOROMETHANE      | 1.306  | 51    | 565      | 0.28     | UG/L # |         | 66    |
| 5) CHLOROMETHANE              | 1.306  | 50    | 869      | 0.40     | UG/L # |         | 43    |
| 6) VINYL CHLORIDE             | 0.000  |       | 0        | N.D.     |        |         |       |
| 7) BROMOMETHANE               | 1.536  | 94    | 574      | 0.62     | UG/L # |         | 6     |
| 8) CHLOROETHANE               | 0.000  |       | 0        | N.D.     |        |         |       |
| 9) FLUORODICHLOROMETHANE      | 0.000  |       | 0        | N.D.     |        |         |       |
| 10) TRICHLOROFLUOROMETHANE    | 0.000  |       | 0        | N.D.     |        |         |       |
| 11) ETHANOL                   | 1.883  | 45    | 18409    | 1105.59  | UG/L # |         | 90    |
| 12) DI ETHYL ETHER            | 0.000  |       | 0        | N.D.     |        |         |       |
| 13) ACROLEIN                  | 2.059  | 56    | 532      | 1.62     | UG/L # |         | 15    |
| 14) ACETONE                   | 0.000  |       | 0        | N.D.     |        |         |       |
| 15) 1,1-DICHLOROETHENE        | 0.000  |       | 0        | N.D.     |        |         |       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 0.000  |       | 0        | N.D.     |        |         |       |
| 17) IODOMETHANE               | 2.238  | 142   | 5271     | 3.04     | UG/L   |         | 96    |
| 18) METHYL ACETATE            | 2.374  | 43    | 117      | 0.05     | UG/L # |         | 58    |
| 19) T-BUTYL ALCOHOL           | 0.000  |       | 0        | N.D.     |        |         |       |
| 20) ACRYLONITRILE             | 0.000  |       | 0        | N.D.     |        |         |       |
| 21) METHYLENE CHLORIDE        | 0.000  |       | 0        | N.D.     |        |         |       |
| 22) CARBON DISULFIDE          | 2.286  | 76    | 7231     | 1.94     | UG/L   |         | 99    |
| 23) METHYL TERT-BUTYL ETHE... | 0.000  |       | 0        | N.D.     |        |         |       |
| 24) TRANS 1,2-DICHLOROETHENE  | 0.000  |       | 0        | N.D.     |        |         |       |
| 25) 1,1-DICHLOROETHANE        | 0.000  |       | 0        | N.D.     |        |         |       |
| 26) VINYL ACETATE             | 3.241  | 43    | 1367     | 0.42     | UG/L # |         | 78    |
| 27) DI ISOPROPYL ETHER        | 0.000  |       | 0        | N.D.     |        |         |       |
| 28) 2-BUTANONE                | 3.807  | 43    | 526      | 0.70     | UG/L # |         | 61    |
| 29) T-BUTYL ETHYL ETHER       | 0.000  |       | 0        | N.D.     |        |         |       |
| 30) CIS-1,2-DICHLOROETHENE    | 0.000  |       | 0        | N.D.     |        |         |       |
| 31) 2,2-DICHLOROPROPANE       | 0.000  |       | 0        | N.D.     |        |         |       |
| 32) ETHYL ACETATE             | 3.841  | 43    | 155      | 0.09     | UG/L # |         | 72    |
| 33) BROMOCHLOROMETHANE        | 0.000  |       | 0        | N.D.     |        |         |       |
| 34) TETRAHYDROFURAN           | 0.000  |       | 0        | N.D.     |        |         |       |
| 35) T-BUTYL FORMATE           | 0.000  |       | 0        | N.D.     |        |         |       |
| 36) CHLOROFORM                | 0.000  |       | 0        | N.D.     |        |         |       |
| 37) 1,1,1-TRICHLOROETHANE     | 0.000  |       | 0        | N.D.     |        |         |       |
| 38) CYCLOHEXANE               | 4.298  | 56    | 2507     | 0.95     | UG/L # |         | 76    |
| 39) CARBON TETRACHLORIDE      | 0.000  |       | 0        | N.D.     |        |         |       |
| 40) 1,1-DICHLOROPROPENE       | 0.000  |       | 0        | N.D.     |        |         |       |
| 41) BENZENE                   | 0.000  |       | 0        | N.D.     |        |         |       |
| 42) T-AMYL ALCOHOL            | 0.000  |       | 0        | N.D.     |        |         |       |
| 43) T-AMYLMETHYL ETHER        | 0.000  |       | 0        | N.D.     |        |         |       |
| 46) 1,2-DICHLOROETHANE        | 0.000  |       | 0        | N.D.     |        |         |       |
| 47) TRICHLOROETHENE           | 0.000  |       | 0        | N.D.     |        |         |       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108018.D  
 Acq On : 18 Apr 2019 4:14 pm  
 Operator :  
 Sample : 8260 ETOH 1000 PPB  
 Misc :  
 ALS Vial : 15 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 16:33:16 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

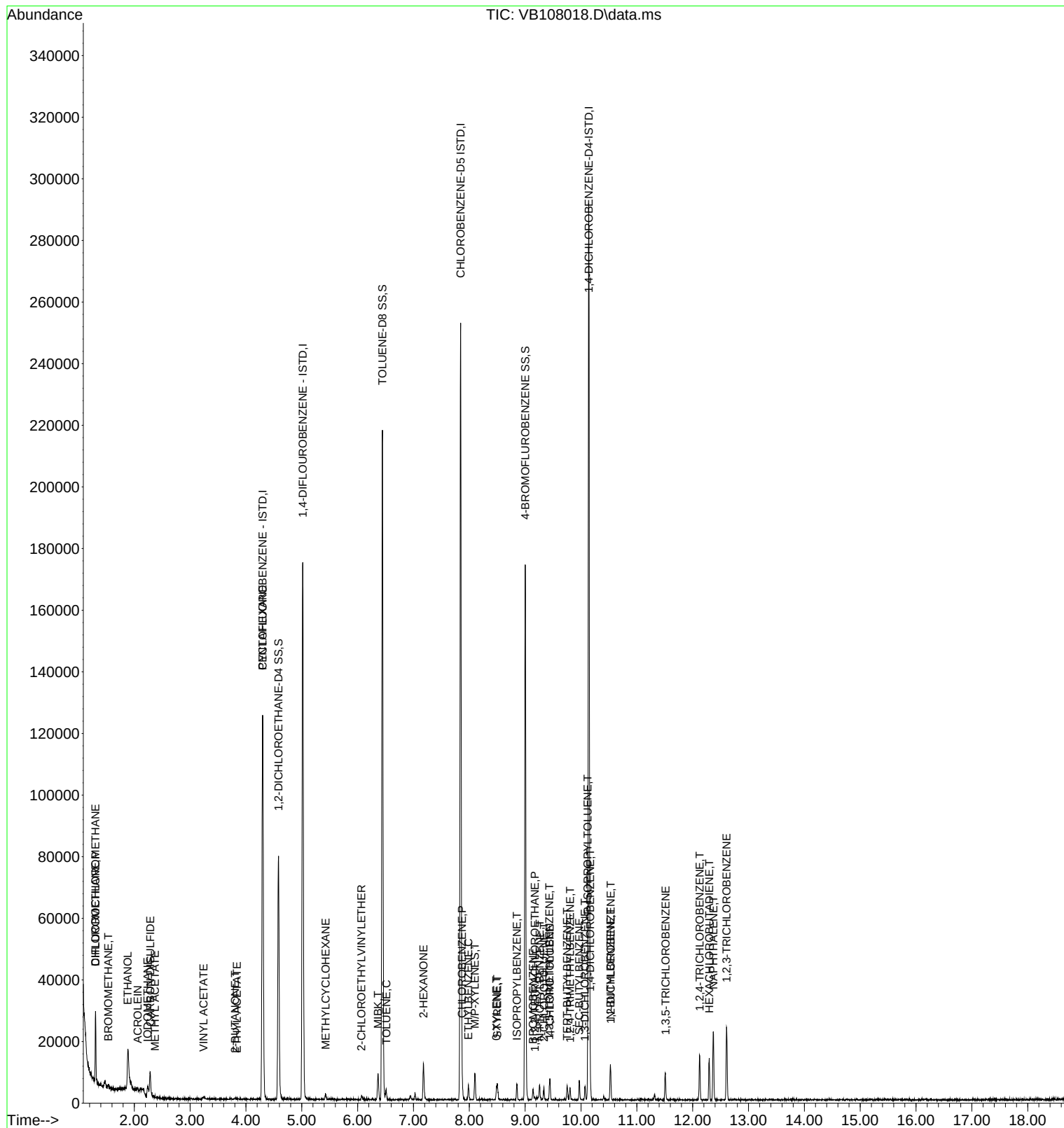
| Compound                      | R.T.   | QIon | Response | Conc | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.429  | 83   | 445      | 0.23 | UG/L # | 63       |
| 49) 1,2-DICHLOROPROPANE       | 0.000  |      | 0        | N.D. |        |          |
| 50) DIBROMOMETHANE            | 0.000  |      | 0        | N.D. |        |          |
| 51) 1,4-DIOXANE               | 0.000  |      | 0        | N.D. |        |          |
| 52) BROMODICHLOROMETHANE      | 0.000  |      | 0        | N.D. |        |          |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.069  | 63   | 510      | 0.50 | UG/L # | 16       |
| 54) MIBK                      | 6.364  | 43   | 5643     | 3.57 | UG/L # | 83       |
| 55) CIS-1,3-DICHLOROPROPENE   | 0.000  |      | 0        | N.D. |        |          |
| 56) TOLUENE                   | 6.512  | 91   | 2115     | 0.38 | UG/L   | 93       |
| 57) TRANS-1,3,-DICHLOROPRO... | 0.000  |      | 0        | N.D. |        |          |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D. |        |          |
| 59) 1,1,2-TRICHLOROETHANE     | 0.000  |      | 0        | N.D. |        |          |
| 60) 2-HEXANONE                | 7.177  | 43   | 7504     | 6.79 | UG/L # | 82       |
| 61) TETRACHLOROETHENE         | 0.000  |      | 0        | N.D. |        |          |
| 62) 1,3-DICHLOROPROPANE       | 0.000  |      | 0        | N.D. |        |          |
| 63) DIBROMOCHLOROMETHANE      | 0.000  |      | 0        | N.D. |        |          |
| 64) 1,2-DIBROMOETHANE         | 0.000  |      | 0        | N.D. |        |          |
| 67) CHLOROBENZENE             | 7.871  | 112  | 1586     | 0.39 | UG/L # | 29       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 0.000  |      | 0        | N.D. |        |          |
| 69) ETHYLBENZENE              | 7.984  | 91   | 3143     | 0.47 | UG/L   | 97       |
| 70) M/P-XYLENES               | 8.101  | 91   | 4541     | 0.87 | UG/L   | 94       |
| 71) O-XYLENE                  | 8.487  | 91   | 2250     | 0.42 | UG/L   | 89       |
| 72) STYRENE                   | 8.502  | 104  | 1690     | 0.38 | UG/L # | 87       |
| 73) BROMOFORM                 | 0.000  |      | 0        | N.D. |        |          |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 3067     | 0.48 | UG/L   | 92       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D. |        |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.175  | 83   | 668      | 0.36 | UG/L # | 26       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 0.000  |      | 0        | N.D. |        |          |
| 78) BROMOBENZENE              | 9.141  | 77   | 1368     | 0.52 | UG/L   | 89       |
| 79) 1,2,3-TRICHLOROPROPANE    | 0.000  |      | 0        | N.D. |        |          |
| 80) N-PROPYLBENZENE           | 9.260  | 91   | 3779     | 0.51 | UG/L # | 90       |
| 81) 2-CHLOROTOLUENE           | 9.337  | 91   | 2244     | 0.49 | UG/L   | 92       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.434  | 105  | 2298     | 0.42 | UG/L # | 84       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 2599     | 0.48 | UG/L # | 88       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 2133     | 0.45 | UG/L # | 79       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.806  | 105  | 2255     | 0.40 | UG/L   | 93       |
| 87) SEC-BUTYLBENZENE          | 9.968  | 105  | 3696     | 0.60 | UG/L   | 96       |
| 88) 1,3-DICHLOROBENZENE       | 10.070 | 146  | 1692     | 0.51 | UG/L   | 96       |
| 89) P-ISOPROPYLTOLUENE        | 10.122 | 119  | 3076     | 0.54 | UG/L # | 86       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 1805     | 0.52 | UG/L # | 73       |
| 91) N-BUTYLBENZENE            | 10.528 | 91   | 3586     | 0.81 | UG/L   | 96       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 2008     | 0.61 | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 0.000  |      | 0        | N.D. |        |          |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.514 | 180  | 2719     | 1.24 | UG/L   | 92       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 4167     | 2.00 | UG/L   | 93       |
| 96) HEXACHLOROBUTADIENE       | 12.296 | 225  | 2405     | 3.27 | UG/L   | 96       |
| 97) NAPHTHALENE               | 12.372 | 128  | 15439    | 2.78 | UG/L   | 98       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 6417     | 3.42 | UG/L   | 97       |

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

243

Quant Time: Apr 18 16:33:16 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973  
QLast Update : Thu Apr 11 08:23:37 2019  
Response via : Initial Calibration

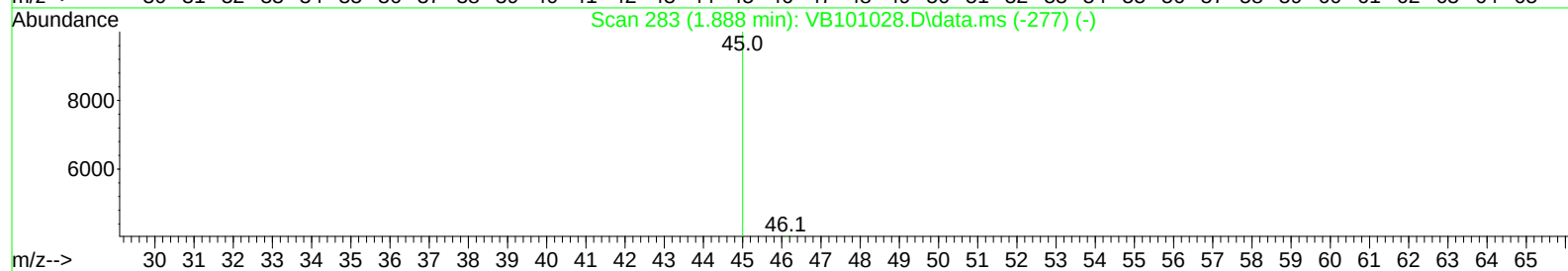
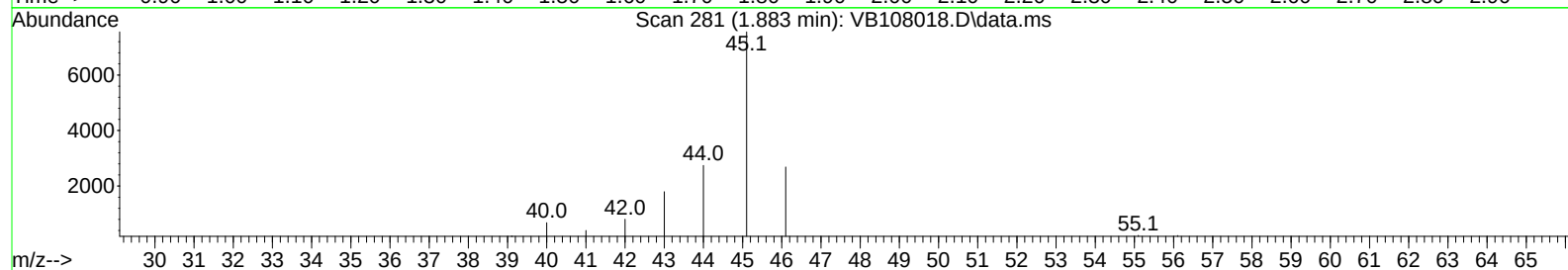
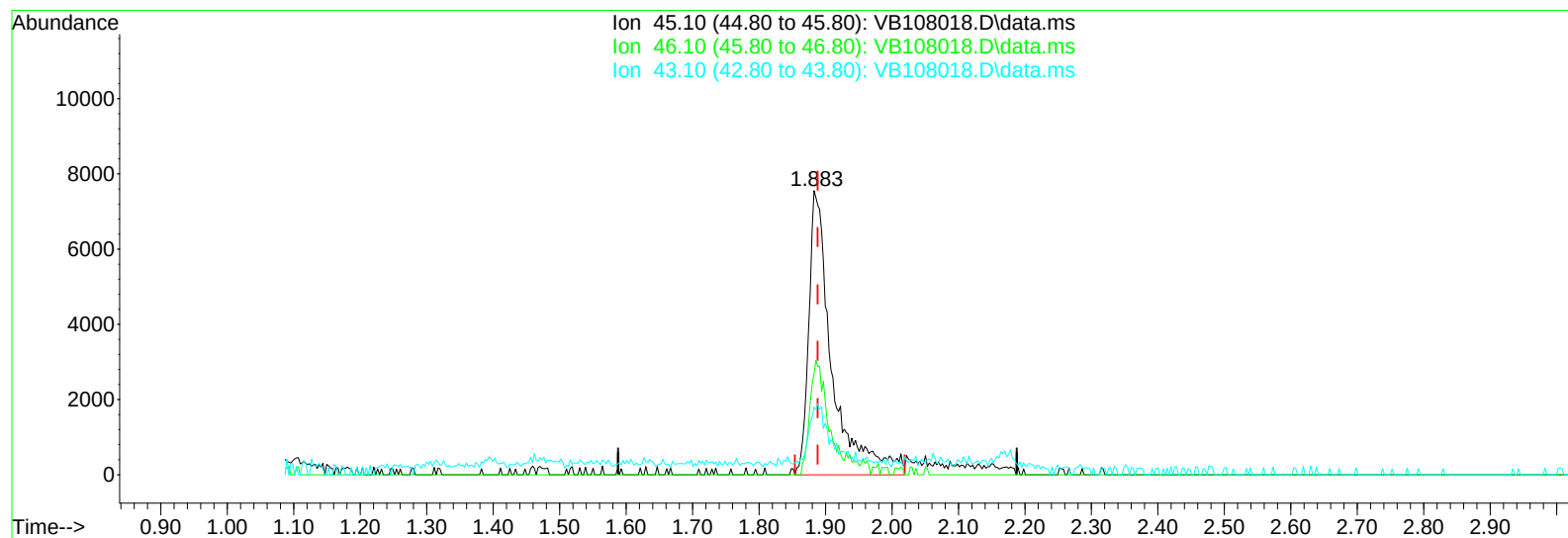
Inst : GCMSVOA2



Data Path : Y:\1\DATA\B041819\  
Data File : VB108018.D  
Acq On : 18 Apr 2019 4:14 pm  
Operator :  
Sample : 8260 ETOH 1000 PPB  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 16:33:16 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973  
QLast Update : Thu Apr 11 08:23:37 2019  
Response via : Initial Calibration



TIC: VB108018.D\data.ms

(11) ETHANOL

1.883min (-0.005) 1105.59 UG/L

response 18409

| Ion   | Exp%  | Act%   |
|-------|-------|--------|
| 45.10 | 100   | 100    |
| 46.10 | 30.10 | 31.01  |
| 43.10 | 27.80 | 17.87# |
| 0.00  | 0.00  | 0.00   |



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108019.D  
 Acq On : 18 Apr 2019 4:45 pm  
 Operator :  
 Sample : 8260 ETOH 2000 PPB  
 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 17:03:59 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon  | Response | Conc     | Units  | Dev      | (Min) |
|-------------------------------|--------|-------|----------|----------|--------|----------|-------|
| Internal Standards            |        |       |          |          |        |          |       |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301  | 168   | 70526    | 30.00    | UG/L   | 0.00     |       |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017  | 114   | 110531   | 30.00    | UG/L   | 0.00     |       |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842  | 82    | 61558    | 30.00    | UG/L   | 0.00     |       |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.138 | 152   | 62718    | 30.00    | UG/L   | 0.00     |       |
| System Monitoring Compounds   |        |       |          |          |        |          |       |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582  | 65    | 47056    | 35.37    | UG/L   | 0.00     |       |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 141.48%# |       |
| 45) TOLUENE-D8 SS             | 6.444  | 98    | 109396   | 25.15    | UG/L   | 0.00     |       |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 100.60%  |       |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002  | 95    | 45370    | 24.58    | UG/L   | 0.00     |       |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 98.32%   |       |
| Target Compounds              |        |       |          |          |        |          |       |
|                               |        |       |          |          |        | Qvalue   |       |
| 3) DICHLORODIFLOUROMETHANE    | 0.000  |       | 0        | N.D.     |        |          |       |
| 4) DIFLUOROCHLOROMETHANE      | 1.306  | 51    | 588      | 0.30     | UG/L # | 66       |       |
| 5) CHLOROMETHANE              | 1.306  | 50    | 777      | 0.36     | UG/L # | 43       |       |
| 6) VINYL CHLORIDE             | 0.000  |       | 0        | N.D.     |        |          |       |
| 7) BROMOMETHANE               | 1.524  | 94    | 787      | 0.86     | UG/L # | 6        |       |
| 8) CHLOROETHANE               | 0.000  |       | 0        | N.D.     |        |          |       |
| 9) FLUORODICHLOROMETHANE      | 0.000  |       | 0        | N.D.     |        |          |       |
| 10) TRICHLOROFLUOROMETHANE    | 0.000  |       | 0        | N.D.     |        |          |       |
| 11) ETHANOL                   | 1.888  | 45    | 39258    | 2390.54  | UG/L # | 85       |       |
| 12) DI ETHYL ETHER            | 0.000  |       | 0        | N.D.     |        |          |       |
| 13) ACROLEIN                  | 0.000  |       | 0        | N.D.     |        |          |       |
| 14) ACETONE                   | 0.000  |       | 0        | N.D.     |        |          |       |
| 15) 1,1-DICHLOROETHENE        | 0.000  |       | 0        | N.D.     |        |          |       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 0.000  |       | 0        | N.D.     |        |          |       |
| 17) IODOMETHANE               | 2.241  | 142   | 5985     | 3.49     | UG/L   | 94       |       |
| 18) METHYL ACETATE            | 2.425  | 43    | 236      | 0.09     | UG/L # | 58       |       |
| 19) T-BUTYL ALCOHOL           | 0.000  |       | 0        | N.D.     |        |          |       |
| 20) ACRYLONITRILE             | 0.000  |       | 0        | N.D.     |        |          |       |
| 21) METHYLENE CHLORIDE        | 0.000  |       | 0        | N.D.     |        |          |       |
| 22) CARBON DISULFIDE          | 2.283  | 76    | 4567     | 1.24     | UG/L # | 75       |       |
| 23) METHYL TERT-BUTYL ETHE... | 0.000  |       | 0        | N.D.     |        |          |       |
| 24) TRANS 1,2-DICHLOROETHENE  | 0.000  |       | 0        | N.D.     |        |          |       |
| 25) 1,1-DICHLOROETHANE        | 0.000  |       | 0        | N.D.     |        |          |       |
| 26) VINYL ACETATE             | 3.247  | 43    | 483      | 0.15     | UG/L # | 78       |       |
| 27) DI ISOPROPYL ETHER        | 0.000  |       | 0        | N.D.     |        |          |       |
| 28) 2-BUTANONE                | 0.000  |       | 0        | N.D.     |        |          |       |
| 29) T-BUTYL ETHYL ETHER       | 0.000  |       | 0        | N.D.     |        |          |       |
| 30) CIS-1,2-DICHLOROETHENE    | 0.000  |       | 0        | N.D.     |        |          |       |
| 31) 2,2-DICHLOROPROPANE       | 0.000  |       | 0        | N.D.     |        |          |       |
| 32) ETHYL ACETATE             | 3.818  | 43    | 130      | 0.08     | UG/L # | 72       |       |
| 33) BROMOCHLOROMETHANE        | 0.000  |       | 0        | N.D.     |        |          |       |
| 34) TETRAHYDROFURAN           | 0.000  |       | 0        | N.D.     |        |          |       |
| 35) T-BUTYL FORMATE           | 0.000  |       | 0        | N.D.     |        |          |       |
| 36) CHLOROFORM                | 0.000  |       | 0        | N.D.     |        |          |       |
| 37) 1,1,1-TRICHLOROETHANE     | 0.000  |       | 0        | N.D.     |        |          |       |
| 38) CYCLOHEXANE               | 4.304  | 56    | 2361     | 0.91     | UG/L # | 67       |       |
| 39) CARBON TETRACHLORIDE      | 0.000  |       | 0        | N.D.     |        |          |       |
| 40) 1,1-DICHLOROPROPENE       | 0.000  |       | 0        | N.D.     |        |          |       |
| 41) BENZENE                   | 0.000  |       | 0        | N.D.     |        |          |       |
| 42) T-AMYL ALCOHOL            | 0.000  |       | 0        | N.D.     |        |          |       |
| 43) T-AMYLMETHYL ETHER        | 0.000  |       | 0        | N.D.     |        |          |       |
| 46) 1,2-DICHLOROETHANE        | 0.000  |       | 0        | N.D.     |        |          |       |
| 47) TRICHLOROETHENE           | 0.000  |       | 0        | N.D.     |        |          |       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108019.D  
 Acq On : 18 Apr 2019 4:45 pm  
 Operator :  
 Sample : 8260 ETOH 2000 PPB  
 Misc :  
 ALS Vial : 16 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 18 17:03:59 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Thu Apr 11 08:23:37 2019  
 Response via : Initial Calibration

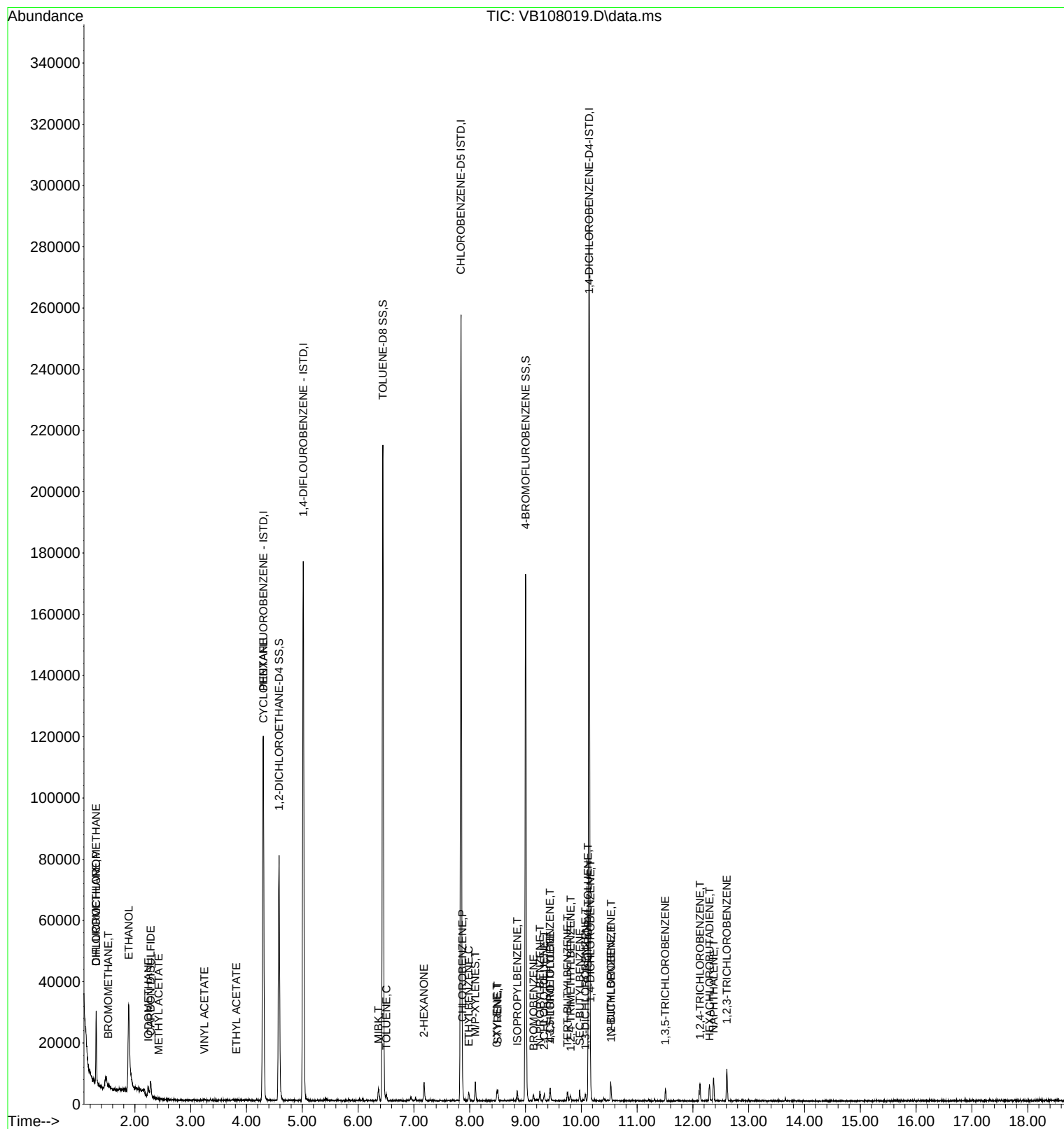
| Compound                      | R.T.   | QIon | Response | Conc | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 0.000  |      | 0        | N.D. |        |          |
| 49) 1,2-DICHLOROPROPANE       | 0.000  |      | 0        | N.D. |        |          |
| 50) DIBROMOMETHANE            | 0.000  |      | 0        | N.D. |        |          |
| 51) 1,4-DIOXANE               | 0.000  |      | 0        | N.D. |        |          |
| 52) BROMODICHLOROMETHANE      | 0.000  |      | 0        | N.D. |        |          |
| 53) 2-CHLOROETHYLVINYLEETHER  | 0.000  |      | 0        | N.D. |        |          |
| 54) MIBK                      | 6.364  | 43   | 2662     | 1.70 | UG/L # | 78       |
| 55) CIS-1,3-DICHLOROPROPENE   | 0.000  |      | 0        | N.D. |        |          |
| 56) TOLUENE                   | 6.506  | 91   | 1239     | 0.23 | UG/L # | 78       |
| 57) TRANS-1,3,-DICHLOROPRO... | 0.000  |      | 0        | N.D. |        |          |
| 58) ETHYL METHACRYLATE        | 0.000  |      | 0        | N.D. |        |          |
| 59) 1,1,2-TRICHLOROETHANE     | 0.000  |      | 0        | N.D. |        |          |
| 60) 2-HEXANONE                | 7.180  | 43   | 3963     | 3.62 | UG/L # | 82       |
| 61) TETRACHLOROETHENE         | 0.000  |      | 0        | N.D. |        |          |
| 62) 1,3-DICHLOROPROPANE       | 0.000  |      | 0        | N.D. |        |          |
| 63) DIBROMOCHLOROMETHANE      | 0.000  |      | 0        | N.D. |        |          |
| 64) 1,2-DIBROMOETHANE         | 0.000  |      | 0        | N.D. |        |          |
| 67) CHLOROBENZENE             | 7.871  | 112  | 974      | 0.24 | UG/L # | 29       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 0.000  |      | 0        | N.D. |        |          |
| 69) ETHYLBENZENE              | 7.981  | 91   | 2142     | 0.32 | UG/L # | 88       |
| 70) M/P-XYLENES               | 8.101  | 91   | 3196     | 0.61 | UG/L   | 91       |
| 71) O-XYLENE                  | 8.482  | 91   | 1441     | 0.26 | UG/L   | 94       |
| 72) STYRENE                   | 8.501  | 104  | 1133     | 0.25 | UG/L # | 87       |
| 73) BROMOFORM                 | 0.000  |      | 0        | N.D. |        |          |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 2051     | 0.32 | UG/L # | 47       |
| 75) CIS-1,4-DICHLORO-2-BUTENE | 0.000  |      | 0        | N.D. |        |          |
| 76) 1,1,2,2-TETRACHLOROETHANE | 0.000  |      | 0        | N.D. |        |          |
| 77) 1,4-DICHLORO-2-BUTENE(... | 0.000  |      | 0        | N.D. |        |          |
| 78) BROMOBENZENE              | 9.144  | 77   | 816      | 0.31 | UG/L # | 55       |
| 79) 1,2,3-TRICHLOROPROPANE    | 0.000  |      | 0        | N.D. |        |          |
| 80) N-PROPYLBENZENE           | 9.257  | 91   | 2225     | 0.29 | UG/L # | 50       |
| 81) 2-CHLOROTOLUENE           | 9.331  | 91   | 1450     | 0.31 | UG/L # | 39       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.439  | 105  | 1283     | 0.23 | UG/L # | 26       |
| 83) 4-CHLOROTOLUENE           | 9.442  | 91   | 1598     | 0.29 | UG/L # | 41       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 1417     | 0.30 | UG/L # | 80       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.809  | 105  | 1325     | 0.24 | UG/L # | 29       |
| 87) SEC-BUTYLBENZENE          | 9.974  | 105  | 2309     | 0.37 | UG/L # | 55       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 954      | 0.29 | UG/L # | 73       |
| 89) P-ISOPROPYLTOLUENE        | 10.119 | 119  | 1771     | 0.31 | UG/L # | 53       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 1065     | 0.30 | UG/L # | 54       |
| 91) N-BUTYLBENZENE            | 10.528 | 91   | 1912     | 0.43 | UG/L # | 79       |
| 92) 1,2-DICHLOROBENZENE       | 10.534 | 146  | 1077     | 0.33 | UG/L # | 68       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 0.000  |      | 0        | N.D. |        |          |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.505 | 180  | 1282     | 0.58 | UG/L   | 85       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.128 | 180  | 1955     | 0.93 | UG/L   | 97       |
| 96) HEXACHLOROBUTADIENE       | 12.298 | 225  | 1231     | 1.67 | UG/L # | 78       |
| 97) NAPHTHALENE               | 12.372 | 128  | 5626     | 1.01 | UG/L # | 85       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 3127     | 1.67 | UG/L   | 98       |

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

Data Path : Y:\1\DATA\B041819\  
Data File : VB108019.D  
Acq On : 18 Apr 2019 4:45 pm  
Operator :  
Sample : 8260 ETOH 2000 PPB  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Inst : GCMSVOA2

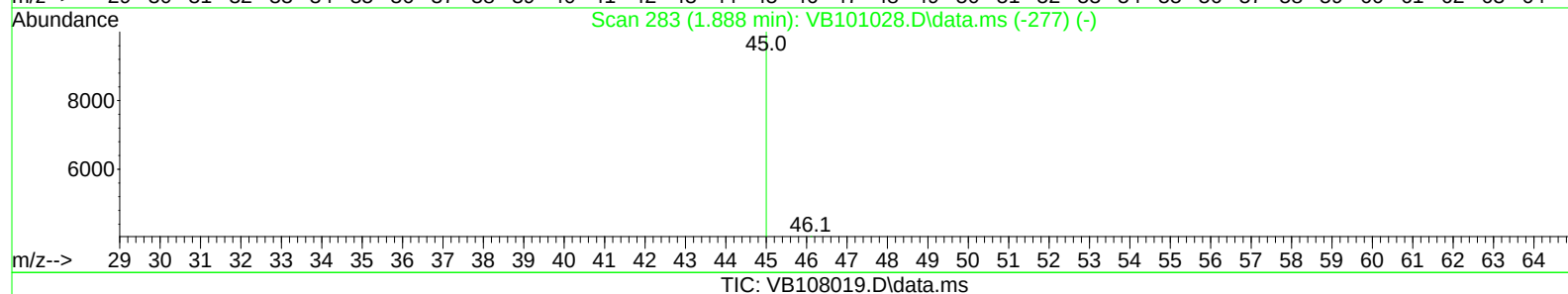
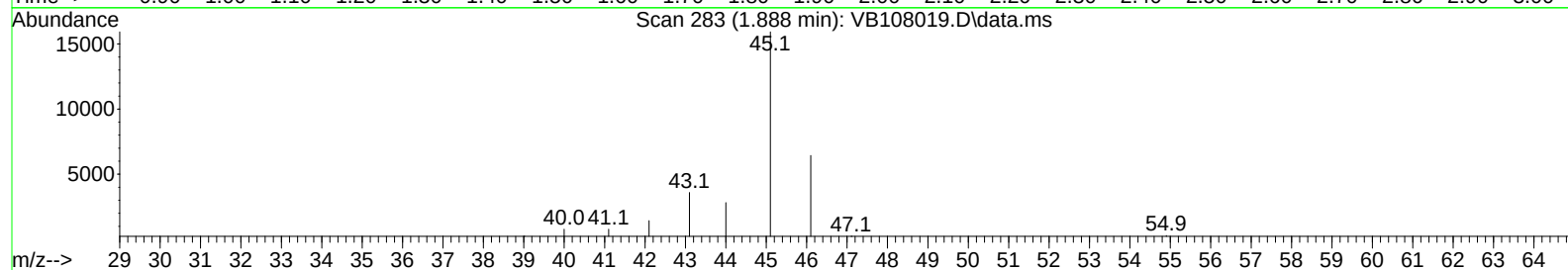
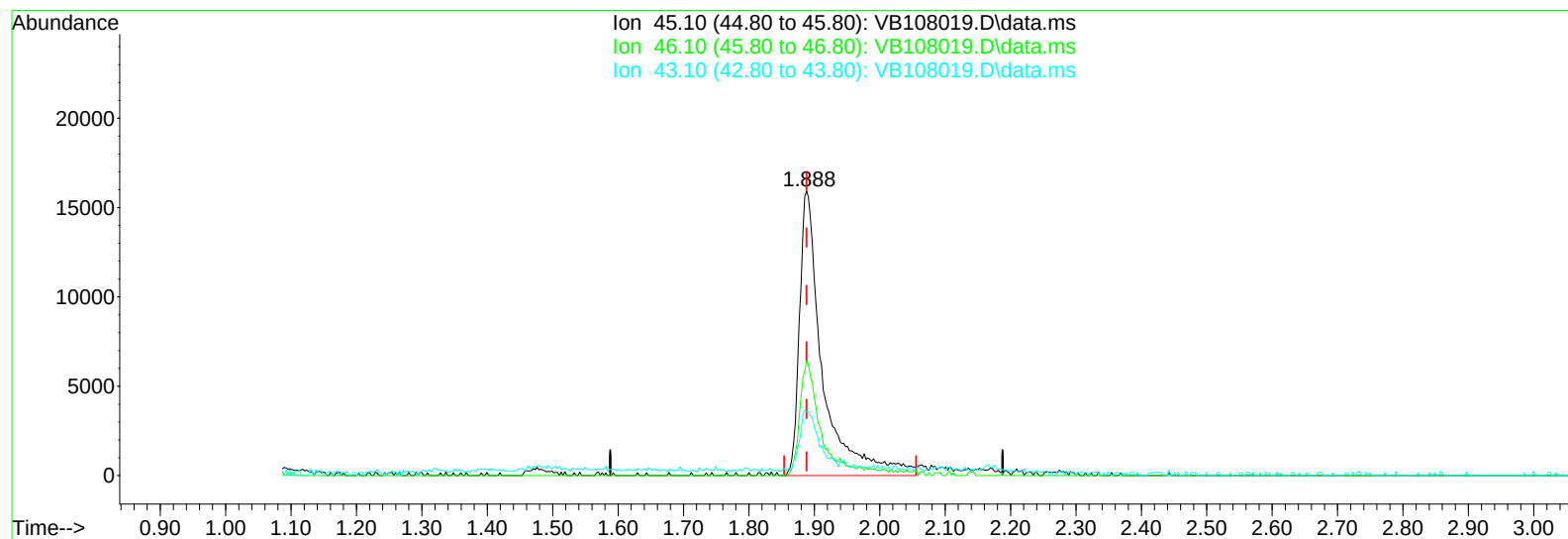
Quant Time: Apr 18 17:03:59 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B020119W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973  
QLast Update : Thu Apr 11 08:23:37 2019  
Response via : Initial Calibration



Data Path : Y:\1\DATA\B041819\  
Data File : VB108019.D  
Acq On : 18 Apr 2019 4:45 pm  
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Sample : 8260 ETOH 2000 PPB  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

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Quant Time: Apr 18 17:03:59 2019  
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Quant Title : 8260 CALIBRATION VOAMS 5973  
QLast Update : Thu Apr 11 08:23:37 2019  
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(11) ETHANOL

1.888min (+0.000) 2390.54 UG/L

response 39258

| Ion   | Exp%  | Act%   |
|-------|-------|--------|
| 45.10 | 100   | 100    |
| 46.10 | 30.10 | 34.78  |
| 43.10 | 27.80 | 16.66# |
| 0.00  | 0.00  | 0.00   |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108023.D  
 Acq On : 18 Apr 2019 6:48 pm  
 Operator :  
 Sample : ICV  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 19 06:22:01 2019  
 Quant Method : Y:\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response   | Conc    | Units  | Dev(Min) |
|-------------------------------|----------------|------|------------|---------|--------|----------|
| Internal Standards            |                |      |            |         |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.301          | 168  | 71465      | 30.00   | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 114365     | 30.00   | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845          | 82   | 61764      | 30.00   | UG/L   | 0.00     |
| 84) 1,4-DICHLOROENZENE-D4...  | 10.141         | 152  | 63247      | 30.00   | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |            |         |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.580          | 65   | 45867      | 24.91   | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 99.64%  |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 110898     | 24.78   | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 99.12%  |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.004          | 95   | 46123      | 25.38   | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 101.52% |        |          |
| Target Compounds              |                |      |            |         |        |          |
|                               |                |      |            |         |        | Qvalue   |
| 3) DICHLORODIFLOUROMETHANE    | 1.149          | 85   | 14899      | 9.44    | UG/L   | 99       |
| 4) DIFLUOROCHLOROMETHANE      | 1.172          | 51   | 25594      | 10.34   | UG/L   | 98       |
| 5) CHLOROMETHANE              | 1.280          | 50   | 30040      | 8.45    | UG/L # | 56       |
| 6) VINYL CHLORIDE             | 1.325          | 62   | 18662      | 9.65    | UG/L   | 99       |
| 7) BROMOMETHANE               | 1.533          | 94   | 6924       | 7.54    | UG/L   | 98       |
| 8) CHLOROETHANE               | 1.595          | 64   | 11013      | 10.45   | UG/L   | 97       |
| 9) FLUORODICHLOROMETHANE      | 1.720          | 67   | 28719      | 10.53   | UG/L   | 98       |
| 10) TRICHLOROFLUOROMETHANE    | 1.755          | 101  | 21140      | 9.81    | UG/L   | 99       |
| 11) ETHANOL                   | 1.882          | 45   | 1892       | 105.82  | UG/L # | 90       |
| 12) DI ETHYL ETHER            | 1.948          | 59   | 15629      | 11.37   | UG/L   | 98       |
| 13) ACROLEIN                  | 2.053          | 56   | 18253      | 45.63   | UG/L # | 96       |
| 14) ACETONE                   | 2.167          | 43   | 83800      | 127.01  | UG/L   | 100      |
| 15) 1,1-DICHLOROETHENE        | 2.113          | 61   | 25880      | 10.70   | UG/L   | 99       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.107          | 101  | 11742      | 11.65   | UG/L   | 95       |
| 17) IODOMETHANE               | 2.238          | 142  | 23450      | 13.59   | UG/L   | 94       |
| 18) METHYL ACETATE            | 2.422          | 43   | 18544      | 8.94    | UG/L   | 99       |
| 19) T-BUTYL ALCOHOL           | 2.619          | 59   | 16960      | 90.00   | UG/L   | 99       |
| 20) ACRYLONITRILE             | 2.746          | 53   | 8264       | 10.86   | UG/L   | 97       |
| 21) METHYLENE CHLORIDE        | 2.508          | 49   | 28613      | 10.10   | UG/L   | 99       |
| 22) CARBON DISULFIDE          | 2.286          | 76   | 54010      | 14.29   | UG/L   | 100      |
| 23) METHYL TERT-BUTYL ETHE... | 2.744          | 73   | 44630      | 10.92   | UG/L   | 99       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.746          | 61   | 25690      | 10.89   | UG/L   | 99       |
| 25) 1,1-DICHLOROETHANE        | 3.170          | 63   | 30880      | 10.63   | UG/L   | 99       |
| 26) VINYL ACETATE             | 3.232          | 43   | 313315     | 67.12   | UG/L   | 99       |
| 27) DI ISOPROPYL ETHER        | 3.235          | 45   | 67600      | 10.73   | UG/L   | 99       |
| 28) 2-BUTANONE                | 3.795          | 43   | 103710     | 103.94  | UG/L   | 98       |
| 29) T-BUTYL ETHYL ETHER       | 3.608          | 59   | 56788      | 10.44   | UG/L   | 99       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.761          | 61   | 29772      | 10.39   | UG/L   | 99       |
| 31) 2,2-DICHLOROPROPANE       | 3.752          | 77   | 18793      | 8.72    | UG/L   | 99       |
| 32) ETHYL ACETATE             | 3.858          | 43   | 24110m     | 9.52    | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.005          | 128  | 7785       | 10.83   | UG/L   | 98       |
| 34) TETRAHYDROFURAN           | 4.051          | 42   | 7054       | 10.52   | UG/L # | 55       |
| 36) CHLOROFORM                | 4.091          | 83   | 27616      | 10.39   | UG/L   | 100      |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 24550      | 10.61   | UG/L   | 97       |
| 38) CYCLOHEXANE               | 4.290          | 56   | 33529      | 11.12   | UG/L   | 99       |
| 39) CARBON TETRACHLORIDE      | 4.409          | 117  | 21238      | 10.78   | UG/L   | 100      |
| 40) 1,1-DICHLOROPROPENE       | 4.415          | 75   | 19214      | 10.27   | UG/L   | 98       |
| 41) BENZENE                   | 4.622          | 78   | 54540      | 10.35   | UG/L   | 99       |
| 43) T-AMYLMETHYL ETHER        | 4.741          | 73   | 42190      | 11.08   | UG/L   | 99       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 27901      | 10.28   | UG/L   | 98       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 15907      | 10.96   | UG/L   | 99       |
| 48) METHYLCYCLOHEXANE         | 5.426          | 83   | 21034      | 10.69   | UG/L   | 99       |
| 49) 1,2-DICHLOROPROPANE       | 5.483          | 63   | 17376      | 10.54   | UG/L   | 95       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108023.D  
 Acq On : 18 Apr 2019 6:48 pm  
 Operator :  
 Sample : ICV  
 Misc :  
 ALS Vial : 20 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 19 06:22:01 2019  
 Quant Method : Y:\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc  | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|-------|--------|----------|
| 50) DIBROMOMETHANE            | 5.600  | 93   | 10278    | 10.57 | UG/L   | 98       |
| 51) 1,4-DIOXANE               | 5.634  | 88   | 718      | 81.94 | UG/L # | 60       |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 22313    | 10.73 | UG/L   | 99       |
| 54) MIBK                      | 6.364  | 43   | 202687   | 98.54 | UG/L   | 100      |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.199  | 75   | 23806    | 9.98  | UG/L   | 99       |
| 56) TOLUENE                   | 6.509  | 91   | 60407    | 10.31 | UG/L   | 100      |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.745  | 75   | 22348    | 9.77  | UG/L   | 99       |
| 59) 1,1,2-TRICHLOROETHANE     | 6.924  | 97   | 13527    | 10.18 | UG/L   | 99       |
| 60) 2-HEXANONE                | 7.177  | 43   | 149807   | 98.95 | UG/L   | 99       |
| 61) TETRACHLOROETHENE         | 7.029  | 164  | 11669    | 10.32 | UG/L   | 96       |
| 62) 1,3-DICHLOROPROPANE       | 7.083  | 76   | 23527    | 10.07 | UG/L   | 98       |
| 63) DIBROMOCHLOROMETHANE      | 7.296  | 129  | 16944    | 11.02 | UG/L   | 99       |
| 64) 1,2-DIBROMOETHANE         | 7.393  | 107  | 15106    | 10.20 | UG/L # | 100      |
| 67) CHLOROBENZENE             | 7.870  | 112  | 41164    | 10.57 | UG/L   | 99       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.959  | 131  | 15359    | 10.82 | UG/L   | 99       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 69790    | 10.29 | UG/L   | 99       |
| 70) M/P-XYLENES               | 8.098  | 91   | 112165   | 20.79 | UG/L   | 99       |
| 71) O-XYLENE                  | 8.487  | 91   | 58679    | 10.54 | UG/L   | 98       |
| 72) STYRENE                   | 8.504  | 104  | 46443    | 10.46 | UG/L   | 99       |
| 73) BROMOFORM                 | 8.683  | 173  | 11843    | 10.32 | UG/L   | 99       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 67841    | 10.65 | UG/L   | 99       |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.169  | 83   | 18117    | 9.87  | UG/L   | 99       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.226  | 53   | 8607     | 9.88  | UG/L   | 98       |
| 78) BROMOBENZENE              | 9.141  | 77   | 28454    | 10.55 | UG/L   | 97       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.209  | 110  | 5750     | 9.94  | UG/L   | 95       |
| 80) N-PROPYLBENZENE           | 9.257  | 91   | 83114    | 10.59 | UG/L   | 100      |
| 81) 2-CHLOROTOLUENE           | 9.334  | 91   | 50946    | 10.57 | UG/L   | 99       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.436  | 105  | 55914    | 10.24 | UG/L   | 99       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 60525    | 10.46 | UG/L   | 99       |
| 85) TERT-BUTYLBENZENE         | 9.755  | 119  | 48148    | 10.37 | UG/L   | 99       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 57150    | 9.82  | UG/L   | 98       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 68674    | 10.51 | UG/L   | 99       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 36754    | 10.59 | UG/L   | 99       |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 59048    | 10.44 | UG/L   | 99       |
| 90) 1,4-DICHLOROBENZENE       | 10.161 | 146  | 37284    | 10.31 | UG/L   | 99       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 51926    | 10.25 | UG/L   | 99       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 34821    | 10.39 | UG/L   | 98       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.318 | 75   | 3859     | 9.96  | UG/L   | 94       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 22827    | 10.31 | UG/L   | 98       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 22293    | 10.24 | UG/L   | 100      |
| 96) HEXACHLOROBUTADIENE       | 12.295 | 225  | 8540     | 11.51 | UG/L   | 99       |
| 97) NAPHTHALENE               | 12.367 | 128  | 55127    | 9.64  | UG/L   | 99       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 19809    | 10.11 | UG/L   | 99       |

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

251

Inst : GCMSVOA2

[illegible]

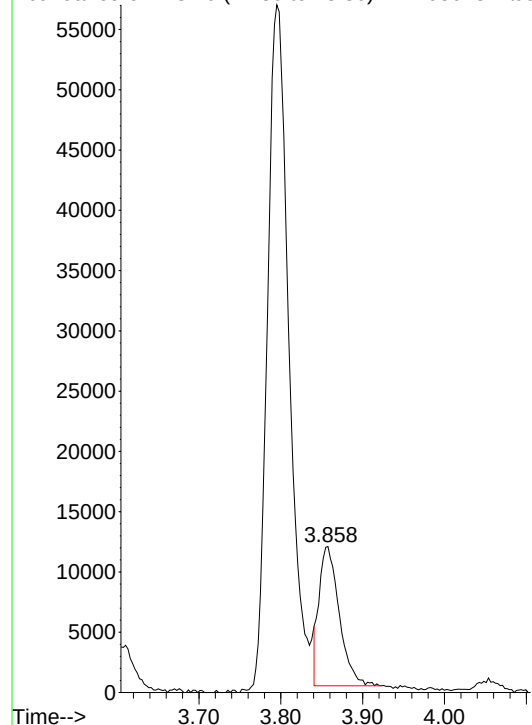
Data Path : Y:\1\DATA\B041819\  
Data File : VB108023.D  
Acq On : 18 Apr 2019 6:48 pm  
Operator :  
Sample : ICV  
Misc :

Quant Time : Fri Apr 19 06:22:01 2019  
Quant Method : Y:\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108023.D\data



## Original Int. Results

-----

RT : 3.86  
Area : 19757  
Amount: 7.80044

## Manual Int. Results

-----

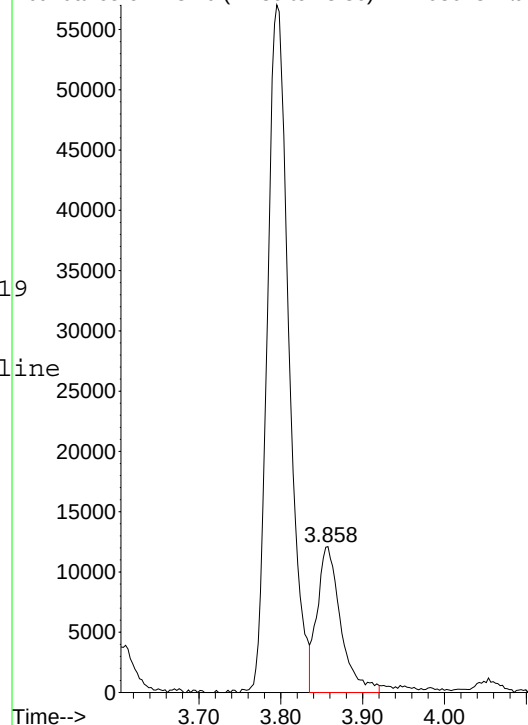
Fri Apr 19 06:20:49 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.86  
Area : 24110  
Amount: 9.51909

## Manual Integration

ETHYL ACETATE

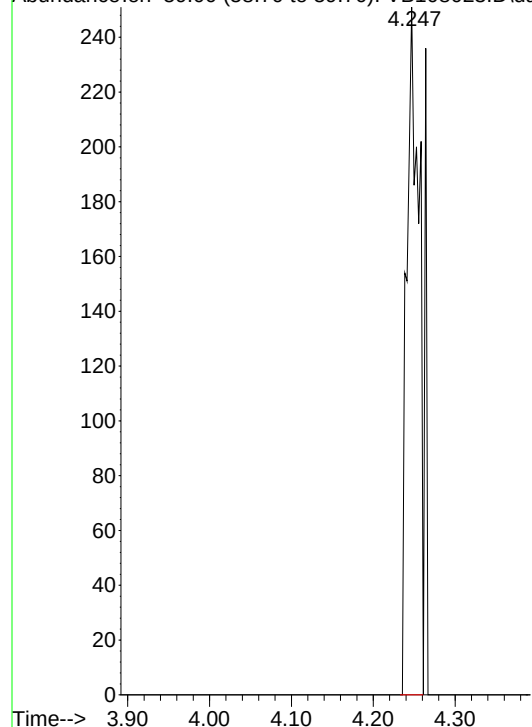
Abundance on 43.10 (42.80 to 43.80): VB108023.D\data



## Original Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): VB108023.D\data



## Original Int. Results

-----

RT : 4.25  
Area : 259  
Amount: 0.177274

## Manual Int. Results

-----

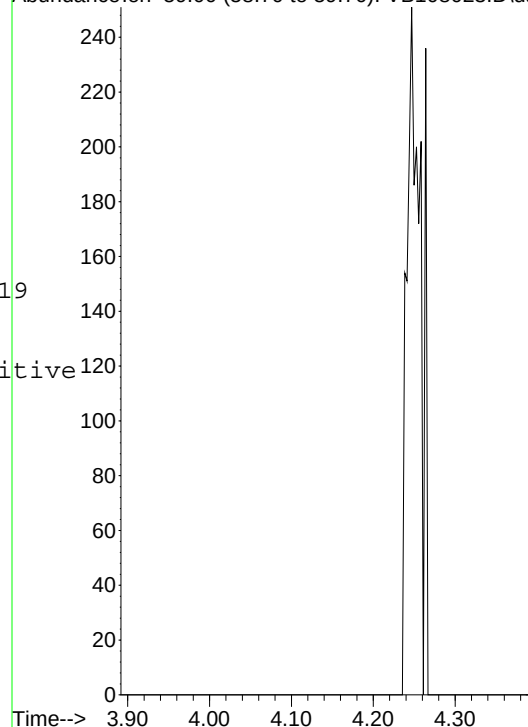
Fri Apr 19 06:21:00 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): VB108023.D\data





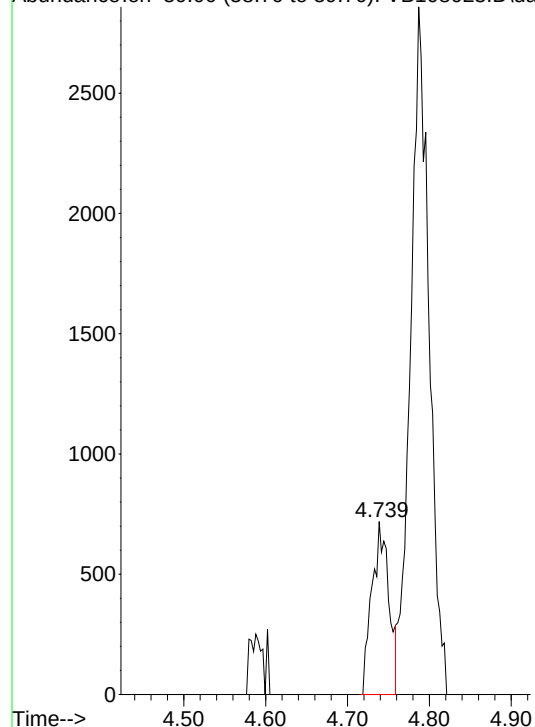
Data Path : Y:\1\DATA\B041819\  
Data File : VB108023.D  
Acq On : 18 Apr 2019 6:48 pm  
Operator :  
Sample : ICV  
Misc :

Quant Time : Fri Apr 19 06:22:01 2019  
Quant Method : Y:\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

T-AMYL ALCOHOL

Abundance on 59.00 (58.70 to 59.70): VB108023.D\data



## Original Int. Results

-----

RT : 4.74  
Area : 1039  
Amount: 7.71042

## Manual Int. Results

-----

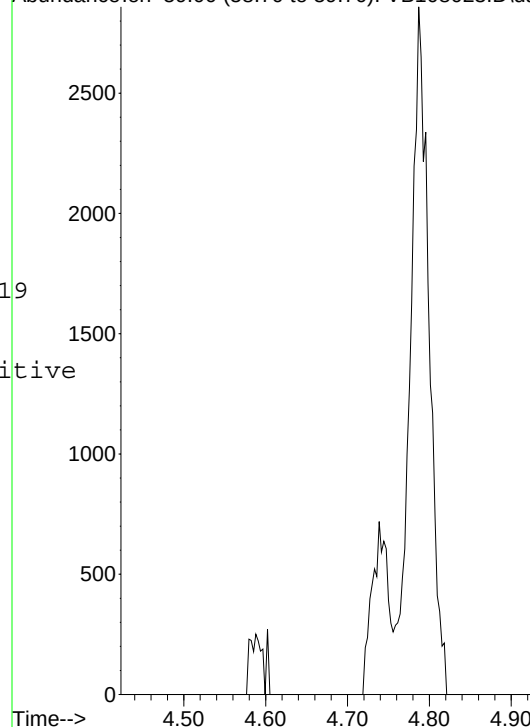
Fri Apr 19 06:21:08 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-AMYL ALCOHOL

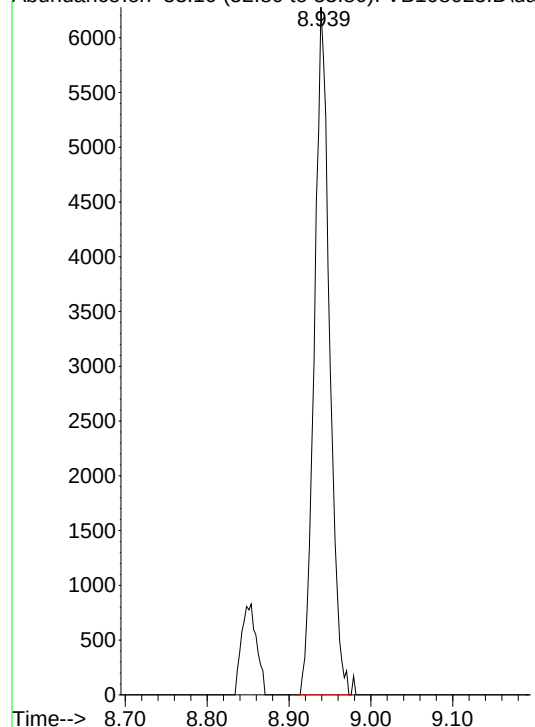
Abundance on 59.00 (58.70 to 59.70): VB108023.D\data



## Original Integration

CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108023.D\data



## Original Int. Results

-----

RT : 8.94  
Area : 8105  
Amount: 0

## Manual Int. Results

-----

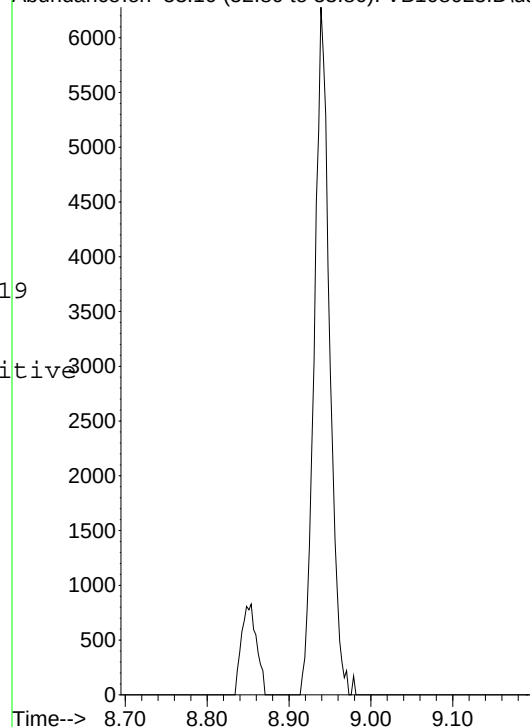
Fri Apr 19 06:21:54 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108023.D\data



Data Path : Y:\1\DATA\B041819\  
 Data File : VB108024.D  
 Acq On : 18 Apr 2019 7:18 pm  
 Operator :  
 Sample : ICVD  
 Misc :  
 ALS Vial : 21 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Apr 19 06:24:08 2019  
 Quant Method : Y:\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response   | Conc    | Units  | Dev(Min) |
|-------------------------------|----------------|------|------------|---------|--------|----------|
| Internal Standards            |                |      |            |         |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298          | 168  | 71158      | 30.00   | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 112816     | 30.00   | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845          | 82   | 62173      | 30.00   | UG/L   | 0.00     |
| 84) 1,4-DICHLOROENZENE-D4...  | 10.139         | 152  | 62463      | 30.00   | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |            |         |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 45990      | 25.08   | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 100.32% |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 111676     | 25.29   | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 101.16% |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 45386      | 24.81   | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = | 99.24%  |        |          |
| Target Compounds              |                |      |            |         |        |          |
|                               |                |      |            |         |        | Qvalue   |
| 3) DICHLORODIFLOUROMETHANE    | 1.149          | 85   | 13613      | 8.66    | UG/L   | 100      |
| 4) DIFLUOROCHLOROMETHANE      | 1.172          | 51   | 23043      | 9.35    | UG/L   | 99       |
| 5) CHLOROMETHANE              | 1.277          | 50   | 27202      | 7.69    | UG/L   | 99       |
| 6) VINYL CHLORIDE             | 1.326          | 62   | 17088      | 8.87    | UG/L   | 100      |
| 7) BROMOMETHANE               | 1.533          | 94   | 6800       | 7.43    | UG/L   | 98       |
| 8) CHLOROETHANE               | 1.593          | 64   | 10167      | 9.69    | UG/L   | 98       |
| 9) FLUORODICHLOROMETHANE      | 1.721          | 67   | 27047      | 9.96    | UG/L   | 99       |
| 10) TRICHLOROFLUOROMETHANE    | 1.755          | 101  | 19151      | 8.92    | UG/L   | 98       |
| 11) ETHANOL                   | 1.885          | 45   | 2114       | 118.74  | UG/L # | 84       |
| 12) DI ETHYL ETHER            | 1.948          | 59   | 15254      | 11.14   | UG/L   | 100      |
| 13) ACROLEIN                  | 2.053          | 56   | 18582      | 46.65   | UG/L # | 94       |
| 14) ACETONE                   | 2.170          | 43   | 77228      | 117.56  | UG/L   | 100      |
| 15) 1,1-DICHLOROETHENE        | 2.116          | 61   | 23938      | 9.94    | UG/L   | 100      |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.107          | 101  | 10498      | 10.46   | UG/L   | 92       |
| 17) IODOMETHANE               | 2.238          | 142  | 25502      | 14.84   | UG/L   | 95       |
| 18) METHYL ACETATE            | 2.423          | 43   | 19464      | 9.42    | UG/L   | 98       |
| 19) T-BUTYL ALCOHOL           | 2.619          | 59   | 17674      | 94.19   | UG/L   | 100      |
| 20) ACRYLONITRILE             | 2.747          | 53   | 8153       | 10.76   | UG/L   | 98       |
| 21) METHYLENE CHLORIDE        | 2.508          | 49   | 27416      | 9.72    | UG/L   | 99       |
| 22) CARBON DISULFIDE          | 2.286          | 76   | 49989      | 13.28   | UG/L   | 99       |
| 23) METHYL TERT-BUTYL ETHE... | 2.747          | 73   | 44433      | 10.92   | UG/L   | 99       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.744          | 61   | 23895      | 10.17   | UG/L   | 99       |
| 25) 1,1-DICHLOROETHANE        | 3.170          | 63   | 29260      | 10.12   | UG/L   | 100      |
| 26) VINYL ACETATE             | 3.233          | 43   | 334326     | 71.93   | UG/L   | 99       |
| 27) DI ISOPROPYL ETHER        | 3.235          | 45   | 65609      | 10.46   | UG/L   | 100      |
| 28) 2-BUTANONE                | 3.795          | 43   | 102418     | 103.09  | UG/L   | 99       |
| 29) T-BUTYL ETHYL ETHER       | 3.608          | 59   | 55967      | 10.33   | UG/L   | 100      |
| 30) CIS-1,2-DICHLOROETHENE    | 3.761          | 61   | 28248      | 9.90    | UG/L   | 99       |
| 31) 2,2-DICHLOROPROPANE       | 3.753          | 77   | 18045      | 8.41    | UG/L   | 99       |
| 32) ETHYL ACETATE             | 3.861          | 43   | 24869m     | 9.86    | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.003          | 128  | 7575       | 10.59   | UG/L   | 96       |
| 34) TETRAHYDROFURAN           | 4.051          | 42   | 7139       | 10.69   | UG/L # | 55       |
| 36) CHLOROFORM                | 4.091          | 83   | 26018      | 9.83    | UG/L   | 99       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.253          | 97   | 23354      | 10.14   | UG/L   | 98       |
| 38) CYCLOHEXANE               | 4.290          | 56   | 31235      | 10.41   | UG/L   | 99       |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 19648      | 10.01   | UG/L   | 98       |
| 40) 1,1-DICHLOROPROPENE       | 4.412          | 75   | 18209      | 9.77    | UG/L   | 99       |
| 41) BENZENE                   | 4.625          | 78   | 51503      | 9.81    | UG/L   | 100      |
| 43) T-AMYLMETHYL ETHER        | 4.739          | 73   | 41330      | 10.90   | UG/L   | 98       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 27586      | 10.30   | UG/L   | 98       |
| 47) TRICHLOROETHENE           | 5.259          | 95   | 14883      | 10.40   | UG/L   | 99       |
| 48) METHYLCYCLOHEXANE         | 5.424          | 83   | 19634      | 10.11   | UG/L   | 99       |
| 49) 1,2-DICHLOROPROPANE       | 5.486          | 63   | 16491      | 10.14   | UG/L   | 95       |

Data Path : Y:\1\DATA\B041819\  
 Data File : VB108024.D  
 Acq On : 18 Apr 2019 7:18 pm  
 Operator :  
 Sample : ICVD  
 Misc :  
 ALS Vial : 21 Sample Multiplier: 1

Inst : GCMSVOA2

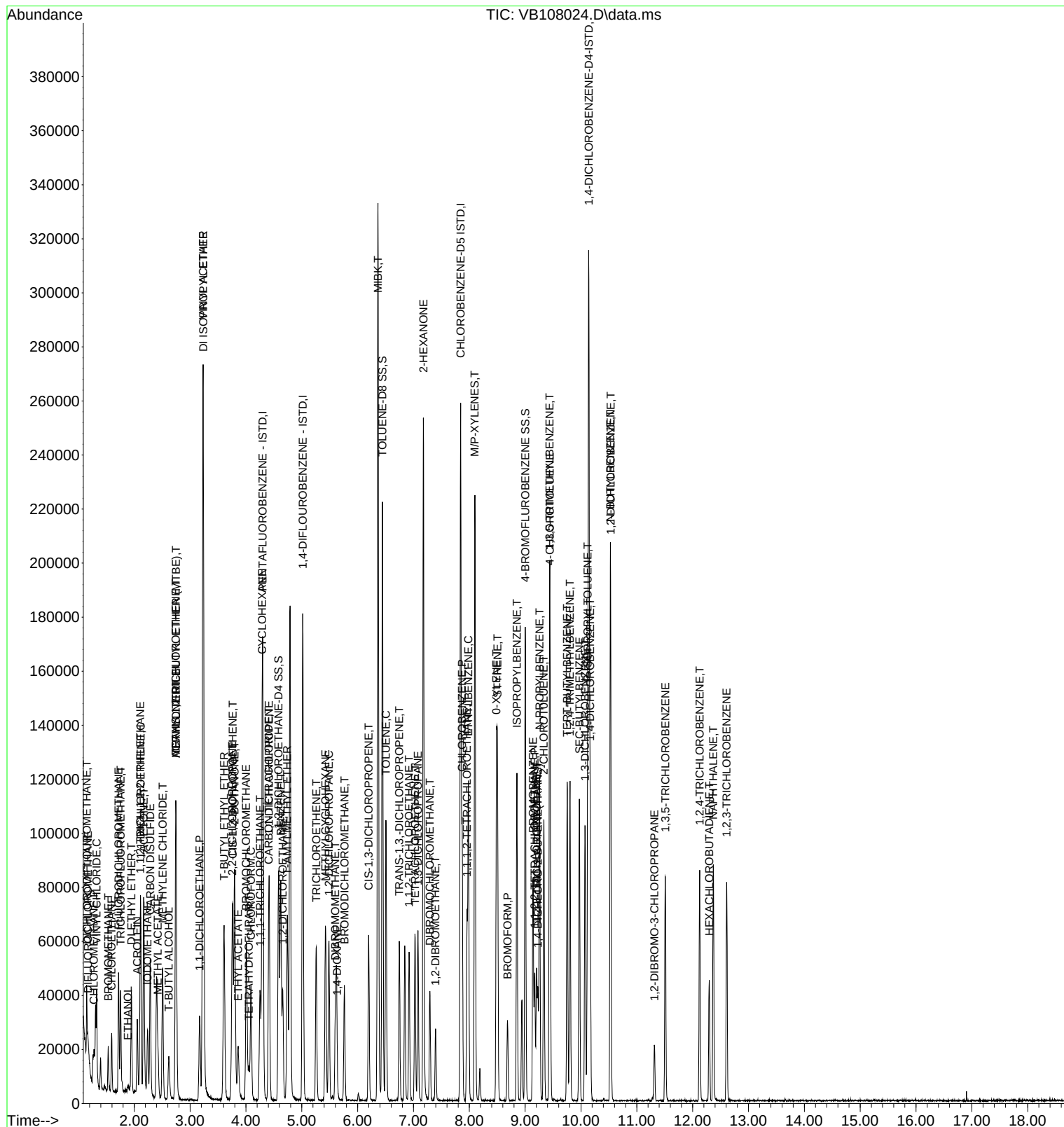
Quant Time: Apr 19 06:24:08 2019  
 Quant Method : Y:\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 50) DIBROMOMETHANE            | 5.600  | 93   | 10551    | 11.00  | UG/L   | 99       |
| 51) 1,4-DIOXANE               | 5.634  | 88   | 1163     | 116.29 | UG/L # | 95       |
| 52) BROMODICHLOROMETHANE      | 5.765  | 83   | 21544    | 10.50  | UG/L   | 99       |
| 54) MIBK                      | 6.362  | 43   | 205348   | 101.21 | UG/L   | 100      |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.197  | 75   | 23075    | 9.81   | UG/L   | 98       |
| 56) TOLUENE                   | 6.507  | 91   | 57346    | 9.92   | UG/L   | 100      |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.745  | 75   | 21671    | 9.60   | UG/L   | 98       |
| 59) 1,1,2-TRICHLOROETHANE     | 6.921  | 97   | 13780    | 10.51  | UG/L   | 98       |
| 60) 2-HEXANONE                | 7.177  | 43   | 150290   | 100.64 | UG/L   | 99       |
| 61) TETRACHLOROETHENE         | 7.032  | 164  | 11493    | 10.30  | UG/L   | 98       |
| 62) 1,3-DICHLOROPROPANE       | 7.081  | 76   | 23431    | 10.17  | UG/L   | 98       |
| 63) DIBROMOCHLOROMETHANE      | 7.294  | 129  | 17106    | 11.28  | UG/L   | 98       |
| 64) 1,2-DIBROMOETHANE         | 7.393  | 107  | 15038    | 10.29  | UG/L # | 99       |
| 67) CHLOROBENZENE             | 7.871  | 112  | 39419    | 10.05  | UG/L   | 99       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.959  | 131  | 15109    | 10.58  | UG/L   | 97       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 67208    | 9.84   | UG/L   | 99       |
| 70) M/P-XYLENES               | 8.098  | 91   | 107767   | 19.84  | UG/L   | 99       |
| 71) O-XYLENE                  | 8.485  | 91   | 56170    | 10.03  | UG/L   | 98       |
| 72) STYRENE                   | 8.504  | 104  | 44627    | 9.99   | UG/L   | 99       |
| 73) BROMOFORM                 | 8.686  | 173  | 11573    | 10.01  | UG/L   | 98       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 65080    | 10.15  | UG/L   | 100      |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.169  | 83   | 18717    | 10.13  | UG/L   | 98       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.229  | 53   | 8525     | 9.72   | UG/L   | 98       |
| 78) BROMOBENZENE              | 9.141  | 77   | 28245    | 10.40  | UG/L   | 96       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.206  | 110  | 5822     | 10.00  | UG/L   | 100      |
| 80) N-PROPYLBENZENE           | 9.258  | 91   | 79215    | 10.03  | UG/L   | 99       |
| 81) 2-CHLOROTOLUENE           | 9.334  | 91   | 49209    | 10.14  | UG/L   | 99       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.437  | 105  | 53621    | 9.76   | UG/L   | 99       |
| 83) 4-CHLOROTOLUENE           | 9.445  | 91   | 58120    | 9.98   | UG/L   | 98       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 45973    | 10.02  | UG/L   | 100      |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 54781    | 9.53   | UG/L   | 100      |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 64894    | 10.05  | UG/L   | 98       |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 35520    | 10.36  | UG/L   | 99       |
| 89) P-ISOPROPYLTOLUENE        | 10.119 | 119  | 56056    | 10.04  | UG/L   | 99       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 36172    | 10.12  | UG/L   | 99       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 49016    | 9.80   | UG/L   | 97       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 34408    | 10.39  | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.315 | 75   | 4199     | 10.98  | UG/L   | 97       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.511 | 180  | 23008    | 10.52  | UG/L   | 97       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 22007    | 10.24  | UG/L   | 99       |
| 96) HEXACHLOROBUTADIENE       | 12.298 | 225  | 8031     | 10.96  | UG/L   | 97       |
| 97) NAPHTHALENE               | 12.369 | 128  | 58538    | 10.36  | UG/L   | 100      |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 20182    | 10.43  | UG/L   | 99       |

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

256

Inst : GCMSVOA2



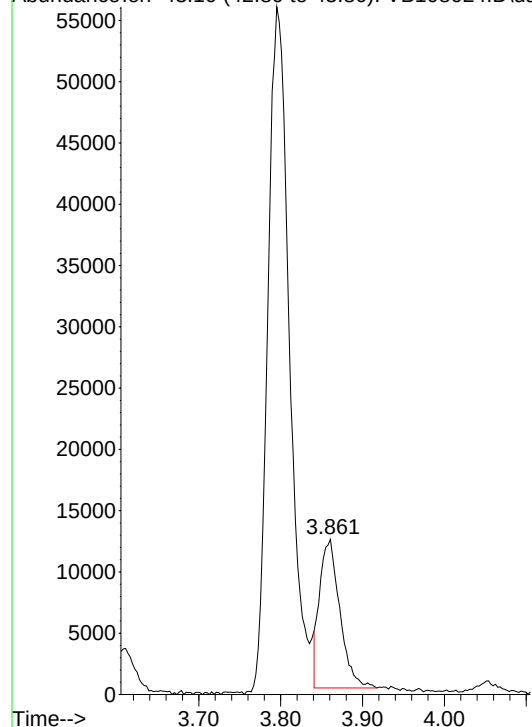
Data Path : Y:\1\DATA\B041819\  
Data File : VB108024.D  
Acq On : 18 Apr 2019 7:18 pm  
Operator :  
Sample : ICVD  
Misc :

Quant Time : Fri Apr 19 06:24:08 2019  
Quant Method : Y:\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): VB108024.D\data



## Original Int. Results

-----

RT : 3.86  
Area : 20754  
Amount: 8.22943

## Manual Int. Results

-----

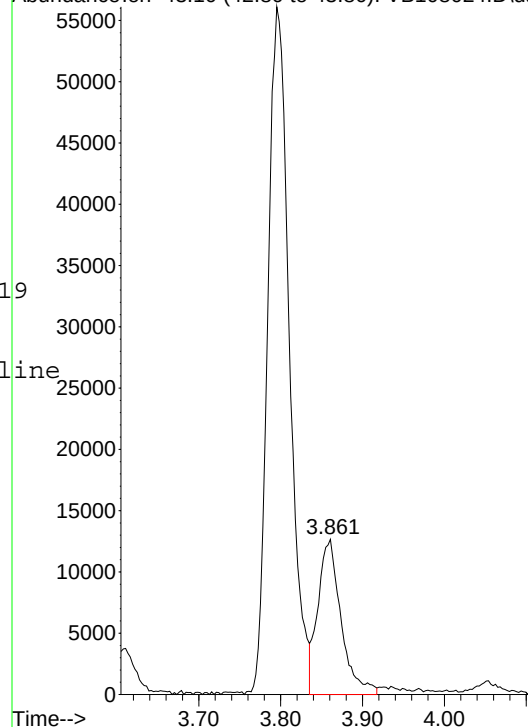
Fri Apr 19 06:23:10 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.86  
Area : 24869  
Amount: 9.86112

## Manual Integration

ETHYL ACETATE

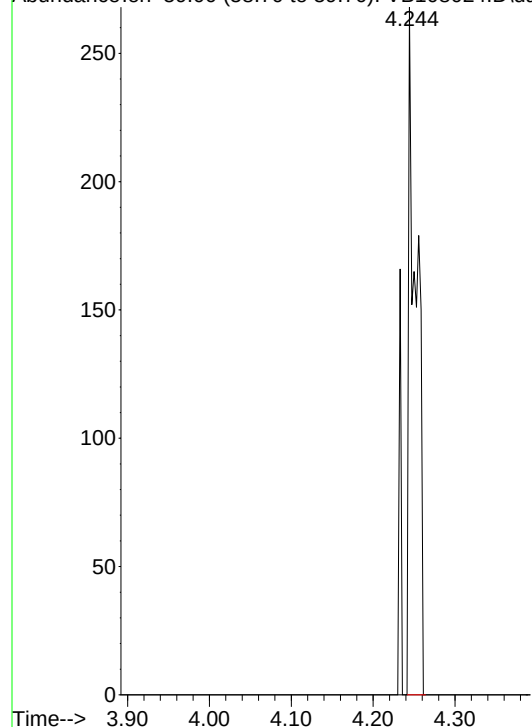
Abundance on 43.10 (42.80 to 43.80): VB108024.D\data



## Original Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): VB108024.D\data



## Original Int. Results

-----

RT : 4.24  
Area : 182  
Amount: 0.125108

## Manual Int. Results

-----

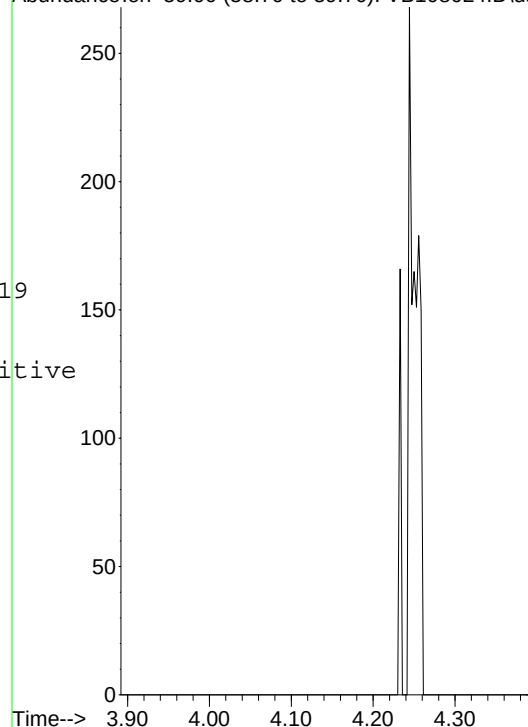
Fri Apr 19 06:23:20 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): VB108024.D\data



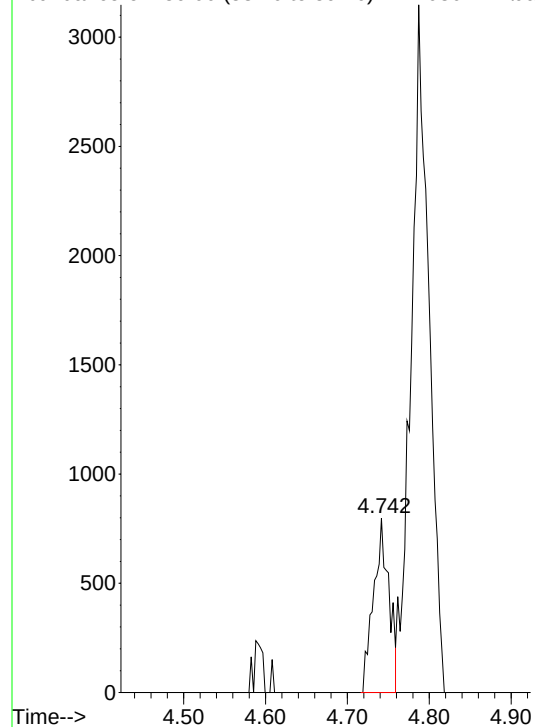
Data Path : Y:\1\DATA\B041819\  
Data File : VB108024.D  
Acq On : 18 Apr 2019 7:18 pm  
Operator :  
Sample : ICVD  
Misc :

Quant Time : Fri Apr 19 06:24:08 2019  
Quant Method : Y:\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

T-AMYL ALCOHOL

Abundance on 59.00 (58.70 to 59.70): VB108024.D\data



## Original Int. Results

-----

RT : 4.74  
Area : 1039  
Amount: 7.74369

## Manual Int. Results

-----

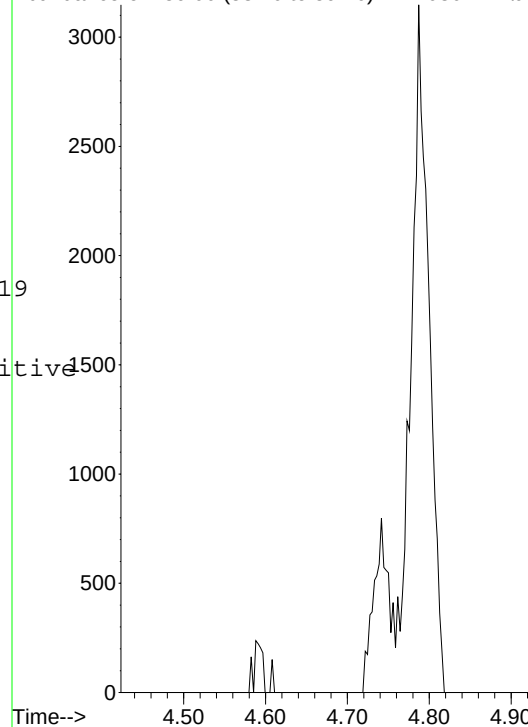
Fri Apr 19 06:23:27 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-AMYL ALCOHOL

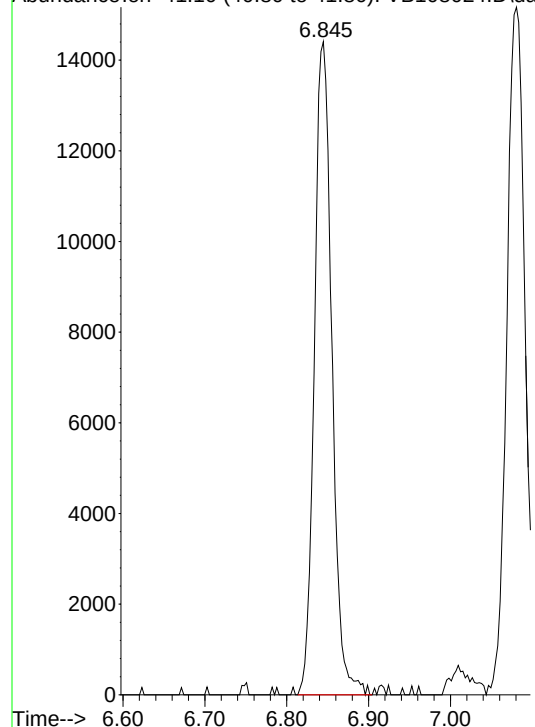
Abundance on 59.00 (58.70 to 59.70): VB108024.D\data



## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108024.D\data



## Original Int. Results

-----

RT : 6.84  
Area : 21333  
Amount: 0

## Manual Int. Results

-----

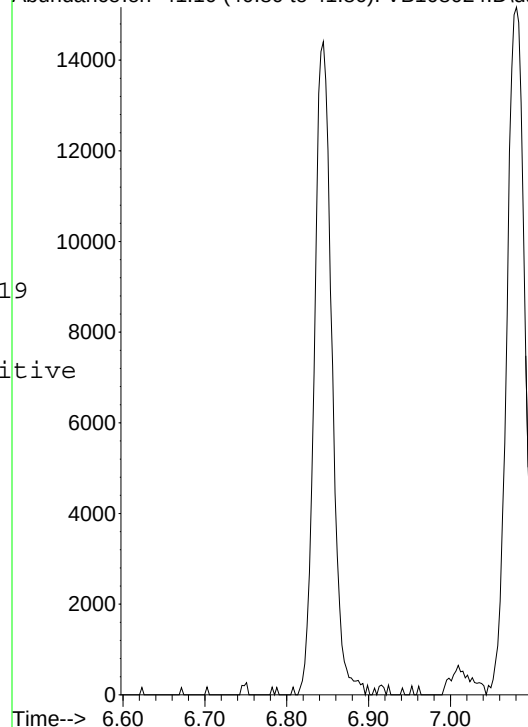
Fri Apr 19 06:23:49 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): VB108024.D\data

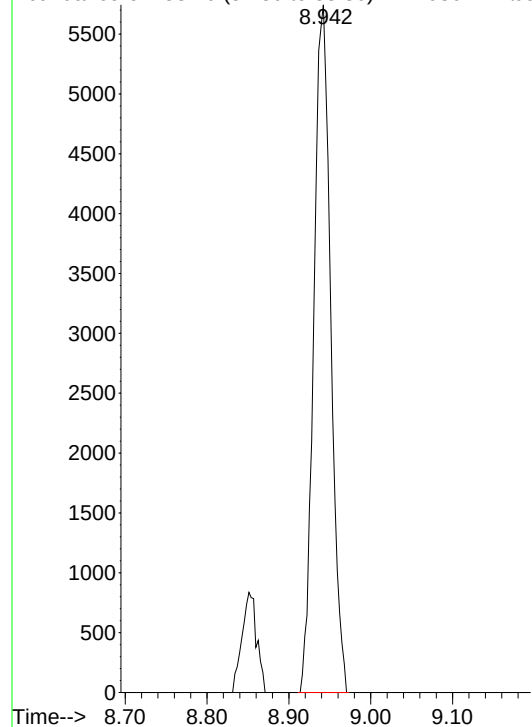


Data Path : Y:\1\DATA\B041819\  
Data File : VB108024.D  
Acq On : 18 Apr 2019 7:18 pm  
Operator :  
Sample : ICVD  
Misc :

Quant Time : Fri Apr 19 06:24:08 2019  
Quant Method : Y:\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108024.D\data



Original Int. Results

RT : 8.94  
Area : 8251  
Amount: 0

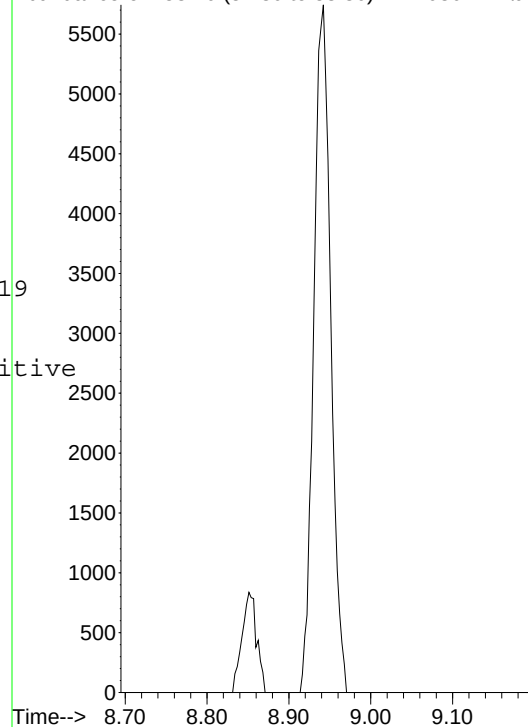
Manual Int. Results

Fri Apr 19 06:24:00 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

Manual Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): VB108024.D\data



## CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | GCMSVOA2                       | Calibration:      | 1900126               |
| Lab File ID:   | B1922525.D                     | Calibration Date: | 04/18/19 10:04        |
| Sequence:      | S039168                        | Injection Date:   | 08/13/19              |
| Lab Sample ID: | S039168-CCV1                   | Injection Time:   | 18:57                 |

| COMPOUND                           | TYPE | CONC. (µg/L) |      | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|------------------------------------|------|--------------|------|-----------------|-----------|---------|----------------|-----------|
|                                    |      | STD          | CCV  | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| Acetone                            | A    | 100          | 88.3 | 0.2769679       | 0.2446415 |         | -11.7          | 20        |
| Acrylonitrile                      | A    | 10.0         | 10.2 | 0.3194576       | 0.3241025 |         | 1.5            | 20        |
| tert-Amyl Methyl Ether (TAME)      | A    | 10.0         | 8.68 | 1.598391        | 1.387536  |         | -13.2          | 20        |
| Benzene                            | A    | 10.0         | 8.93 | 2.213117        | 1.976755  |         | -10.7          | 20        |
| Bromobenzene                       | A    | 10.0         | 9.87 | 1.310258        | 1.29362   |         | -1.3           | 20        |
| Bromochloromethane                 | A    | 10.0         | 10.6 | 0.3016768       | 0.3188076 |         | 5.7            | 20        |
| Bromodichloromethane               | A    | 10.0         | 10.5 | 0.5453889       | 0.5729208 |         | 5.0            | 20        |
| Bromoform                          | A    | 10.0         | 9.85 | 0.5576654       | 0.5492841 |         | -1.5           | 20        |
| Bromomethane                       | A    | 10.0         | 23.2 | 0.3856681       | 0.8932013 |         | 132            | 20 *      |
| 2-Butanone (MEK)                   | A    | 100          | 93.0 | 0.4188478       | 0.3893254 |         | -7.0           | 20        |
| tert-Butyl Alcohol (TBA)           | A    | 100          | 96.9 | 7.910615E-02    | 0.0766229 |         | -3.1           | 20        |
| n-Butylbenzene                     | A    | 10.0         | 7.98 | 2.403319        | 1.918458  |         | -20.2          | 20 *      |
| sec-Butylbenzene                   | A    | 10.0         | 8.40 | 3.100541        | 2.605299  |         | -16.0          | 20        |
| tert-Butylbenzene                  | A    | 10.0         | 9.26 | 2.202821        | 2.038873  |         | -7.4           | 20        |
| tert-Butyl Ethyl Ether (TBEE)      | A    | 10.0         | 9.76 | 2.283115        | 2.227258  |         | -2.4           | 20        |
| Carbon Disulfide                   | A    | 100          | 86.0 | 1.586558        | 1.365001  |         | -14.0          | 20        |
| Carbon Tetrachloride               | A    | 10.0         | 10.9 | 0.827279        | 0.9000318 |         | 8.8            | 20        |
| Chlorobenzene                      | A    | 10.0         | 9.81 | 1.892475        | 1.857392  |         | -1.9           | 20        |
| Chlorodibromomethane               | A    | 10.0         | 11.6 | 0.4034213       | 0.4674567 |         | 15.9           | 20        |
| Chloroethane                       | A    | 10.0         | 9.18 | 0.4423197       | 0.4062268 |         | -8.2           | 20        |
| Chloroform                         | A    | 10.0         | 9.59 | 1.115997        | 1.070475  |         | -4.1           | 20        |
| Chloromethane                      | A    | 10.0         | 6.91 | 1.492028        | 1.031187  |         | -30.9          | 20 *      |
| 2-Chlorotoluene                    | A    | 10.0         | 9.41 | 2.341569        | 2.204093  |         | -5.9           | 20        |
| 4-Chlorotoluene                    | A    | 10.0         | 9.42 | 2.810374        | 2.647491  |         | -5.8           | 20        |
| 1,2-Dibromo-3-chloropropane (DBCP) | A    | 10.0         | 9.40 | 0.1837314       | 0.1727929 |         | -6.0           | 20        |
| 1,2-Dibromoethane (EDB)            | A    | 10.0         | 10.2 | 0.3886294       | 0.3973274 |         | 2.2            | 20        |
| Dibromomethane                     | A    | 10.0         | 10.4 | 0.255048        | 0.2645247 |         | 3.7            | 20        |
| 1,2-Dichlorobenzene                | A    | 10.0         | 9.48 | 1.590349        | 1.50786   |         | -5.2           | 20        |
| 1,3-Dichlorobenzene                | A    | 10.0         | 9.29 | 1.646151        | 1.529748  |         | -7.1           | 20        |



## CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Instrument ID: GCMSVOA2

Calibration: 1900126

Lab File ID: B1922525.D

Calibration Date: 04/18/19 10:04

Sequence: S039168

Injection Date: 08/13/19

Lab Sample ID: S039168-CCV1

Injection Time: 18:57

| COMPOUND                              | TYPE | CONC. (µg/L) |      | RESPONSE FACTOR |             |         | % DIFF / DRIFT |           |
|---------------------------------------|------|--------------|------|-----------------|-------------|---------|----------------|-----------|
|                                       |      | STD          | CCV  | ICAL            | CCV         | MIN (#) | CCV            | LIMIT (#) |
| 1,4-Dichlorobenzene                   | A    | 10.0         | 9.36 | 1.715993        | 1.606446    |         | -6.4           | 20        |
| trans-1,4-Dichloro-2-butene           | A    | 10.0         | 9.70 | 0.4232914       | 0.4107823   |         | -3.0           | 20        |
| Dichlorodifluoromethane<br>(Freon 12) | A    | 10.0         | 11.5 | 0.662506        | 0.7622048   |         | 15.0           | 20        |
| 1,1-Dichloroethane                    | A    | 10.0         | 9.94 | 1.219397        | 1.212591    |         | -0.6           | 20        |
| 1,2-Dichloroethane                    | A    | 10.0         | 11.3 | 0.711952        | 0.8044159   |         | 13.0           | 20        |
| 1,1-Dichloroethylene                  | A    | 10.0         | 9.58 | 1.015305        | 0.9731018   |         | -4.2           | 20        |
| cis-1,2-Dichloroethylene              | A    | 10.0         | 9.82 | 1.202488        | 1.180663    |         | -1.8           | 20        |
| trans-1,2-Dichloroethylene            | A    | 10.0         | 9.90 | 0.9905665       | 0.9809912   |         | -1.0           | 20        |
| 1,2-Dichloropropane                   | A    | 10.0         | 9.92 | 0.4325733       | 0.4293124   |         | -0.8           | 20        |
| 1,3-Dichloropropane                   | A    | 10.0         | 9.61 | 0.612843        | 0.5887332   |         | -3.9           | 20        |
| 2,2-Dichloropropane                   | A    | 10.0         | 9.51 | 0.9042566       | 0.8595256   |         | -4.9           | 20        |
| 1,1-Dichloropropene                   | A    | 10.0         | 9.06 | 0.785502        | 0.711903    |         | -9.4           | 20        |
| cis-1,3-Dichloropropene               | A    | 10.0         | 9.61 | 0.6255614       | 0.6010157   |         | -3.9           | 20        |
| trans-1,3-Dichloropropene             | A    | 10.0         | 9.53 | 0.6001103       | 0.5717322   |         | -4.7           | 20        |
| Diethyl Ether                         | A    | 10.0         | 9.05 | 0.5772458       | 0.5226093   |         | -9.5           | 20        |
| Diisopropyl Ether (DIPE)              | A    | 10.0         | 9.06 | 2.645352        | 2.39569     |         | -9.4           | 20        |
| 1,4-Dioxane                           | A    | 100          | 107  | 2.877828E-03    | 2.76267E-03 |         | 6.9            | 20        |
| Ethylbenzene                          | A    | 10.0         | 9.54 | 3.294744        | 3.143608    |         | -4.6           | 20        |
| Hexachlorobutadiene                   | A    | 10.0         | 10.6 | 0.3520431       | 0.3716263   |         | 5.6            | 20        |
| 2-Hexanone (MBK)                      | A    | 100          | 106  | 0.397123        | 0.4191406   |         | 5.5            | 20        |
| Isopropylbenzene (Cumene)             | A    | 10.0         | 10.2 | 3.093509        | 3.152607    |         | 1.9            | 20        |
| p-Isopropyltoluene<br>(p-Cymene)      | A    | 10.0         | 9.26 | 2.682278        | 2.482689    |         | -7.4           | 20        |
| Methyl Acetate                        | A    | 10.0         | 9.04 | 0.8707559       | 0.7868792   |         | -9.6           | 20        |
| Methyl tert-Butyl Ether<br>(MTBE)     | A    | 10.0         | 9.43 | 1.715429        | 1.616912    |         | -5.7           | 20        |
| Methyl Cyclohexane                    | A    | 10.0         | 8.37 | 0.5163053       | 0.4321219   |         | -16.3          | 20        |
| Methylene Chloride                    | A    | 10.0         | 9.55 | 1.188752        | 1.13555     |         | -4.5           | 20        |
| 4-Methyl-2-pentanone (MIBK)           | A    | 100          | 105  | 0.5395485       | 0.5675792   |         | 5.2            | 20        |
| Naphthalene                           | A    | 10.0         | 9.04 | 2.713616        | 2.454276    |         | -9.6           | 20        |
| n-Propylbenzene                       | A    | 10.0         | 8.90 | 3.810382        | 3.389337    |         | -11.0          | 20        |

## CONTINUING CALIBRATION VERIFICATION

SW-846 8260C

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | GCMSVOA2                       | Calibration:      | 1900126               |
| Lab File ID:   | B1922525.D                     | Calibration Date: | 04/18/19 10:04        |
| Sequence:      | S039168                        | Injection Date:   | 08/13/19              |
| Lab Sample ID: | S039168-CCV1                   | Injection Time:   | 18:57                 |

| COMPOUND                                          | TYPE | CONC. (µg/L) |      | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|---------------------------------------------------|------|--------------|------|-----------------|-----------|---------|----------------|-----------|
|                                                   |      | STD          | CCV  | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| Styrene                                           | A    | 10.0         | 9.60 | 2.156272        | 2.069996  |         | -4.0           | 20        |
| 1,1,1,2-Tetrachloroethane                         | A    | 10.0         | 10.3 | 0.6893048       | 0.7112737 |         | 3.2            | 20        |
| 1,1,2,2-Tetrachloroethane                         | A    | 10.0         | 9.01 | 0.8916204       | 0.8030551 |         | -9.9           | 20        |
| Tetrachloroethylene                               | A    | 10.0         | 10.8 | 0.2967119       | 0.3219033 |         | 8.5            | 20        |
| Tetrahydrofuran                                   | A    | 10.0         | 8.56 | 0.2815737       | 0.2410251 |         | -14.4          | 20        |
| Toluene                                           | A    | 10.0         | 9.53 | 1.537402        | 1.465584  |         | -4.7           | 20        |
| 1,2,3-Trichlorobenzene                            | A    | 10.0         | 9.28 | 0.9295821       | 0.8625408 |         | -7.2           | 20        |
| 1,2,4-Trichlorobenzene                            | A    | 10.0         | 9.48 | 1.032392        | 0.9788038 |         | -5.2           | 20        |
| 1,3,5-Trichlorobenzene                            | A    | 10.0         | 9.37 | 1.050083        | 0.9838458 |         | -6.3           | 20        |
| 1,1,1-Trichloroethane                             | A    | 10.0         | 10.6 | 0.9712622       | 1.033093  |         | 6.4            | 20        |
| 1,1,2-Trichloroethane                             | A    | 10.0         | 9.60 | 0.3485793       | 0.3346901 |         | -4.0           | 20        |
| Trichloroethylene                                 | A    | 10.0         | 9.91 | 0.3805688       | 0.3770126 |         | -0.9           | 20        |
| Trichlorofluoromethane (Freon 11)                 | A    | 10.0         | 10.5 | 0.9050556       | 0.9489569 |         | 4.9            | 20        |
| 1,2,3-Trichloropropane                            | A    | 10.0         | 10.7 | 0.2808563       | 0.2994064 |         | 6.6            | 20        |
| 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | A    | 10.0         | 10.3 | 0.423244        | 0.435296  |         | 2.8            | 20        |
| 1,2,4-Trimethylbenzene                            | A    | 10.0         | 9.26 | 2.760115        | 2.556006  |         | -7.4           | 20        |
| 1,3,5-Trimethylbenzene                            | A    | 10.0         | 9.68 | 2.651928        | 2.5679    |         | -3.2           | 20        |
| Vinyl Chloride                                    | A    | 10.0         | 9.19 | 0.8120006       | 0.7458435 |         | -8.1           | 20        |
| m+p Xylene                                        | A    | 20.0         | 19.1 | 2.620803        | 2.503021  |         | -4.5           | 20        |
| o-Xylene                                          | A    | 10.0         | 9.46 | 2.703311        | 2.557241  |         | -5.4           | 20        |
| 1,2-Dichloroethane-d4                             | A    | 25.0         | 26.4 | 0.7730754       | 0.8164355 |         | 5.6            |           |
| Toluene-d8                                        | A    | 25.0         | 26.3 | 1.174095        | 1.23308   |         | 5.0            |           |
| 4-Bromofluorobenzene                              | A    | 25.0         | 27.2 | 0.8828428       | 0.961394  |         | 8.9            |           |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

\* Values outside of QC limits

Data Path : Y:\1\DATA\B081319\

Data File : B1922525.D

Acq On : 13 Aug 2019 6:57 pm

Operator :

Sample : BFB / 8260 STD 10PPB 1906029

Inst : GCMSVOA2

Misc :

ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 14 10:04:48 2019

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Fri Apr 19 05:25:51 2019

Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response           | Conc  | Units  | Dev(Min) |
|-------------------------------|----------------|------|--------------------|-------|--------|----------|
| -----                         |                |      |                    |       |        |          |
| Internal Standards            |                |      |                    |       |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298          | 168  | 56658              | 30.00 | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 83289              | 30.00 | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842          | 82   | 47003              | 30.00 | UG/L   | 0.00     |
| 84) 1,4-DICHLOROENZENE-D4...  | 10.138         | 152  | 50575              | 30.00 | UG/L   | 0.00     |
|                               |                |      |                    |       |        |          |
| System Monitoring Compounds   |                |      |                    |       |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 38548              | 26.40 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 105.60% |       |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 85585              | 26.26 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 105.04% |       |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 37657              | 27.22 | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 108.88% |       |        |          |
|                               |                |      |                    |       |        |          |
| Target Compounds              |                |      |                    |       |        | Qvalue   |
| 3) DICHLORODIFLOUROMETHANE    | 1.146          | 85   | 14395              | 11.50 | UG/L   | 98       |
| 4) DIFLUOROCHLOROMETHANE      | 1.166          | 51   | 20540              | 10.47 | UG/L   | 94       |
| 5) CHLOROMETHANE              | 1.286          | 50   | 19475m             | 6.91  | UG/L   |          |
| 6) VINYL CHLORIDE             | 1.326          | 62   | 14086              | 9.19  | UG/L   | 96       |
| 7) BROMOMETHANE               | 1.530          | 94   | 16869              | 23.16 | UG/L   | 99       |
| 8) CHLOROETHANE               | 1.593          | 64   | 7672               | 9.18  | UG/L   | 97       |
| 9) FLUORODICHLOROMETHANE      | 1.715          | 67   | 20875              | 9.66  | UG/L   | 96       |
| 10) TRICHLOROFLUOROMETHANE    | 1.752          | 101  | 17922              | 10.49 | UG/L   | 100      |
| 11) ETHANOL                   | 1.883          | 45   | 1208m              | 85.22 | UG/L   |          |
| 12) DI ETHYL ETHER            | 1.948          | 59   | 9870               | 9.05  | UG/L   | 95       |
| 13) ACROLEIN                  | 2.050          | 56   | 26408              | 83.27 | UG/L # | 96       |
| 14) ACETONE                   | 2.167          | 43   | 46203              | 88.33 | UG/L   | 98       |
| 15) 1,1-DICHLOROETHENE        | 2.113          | 61   | 18378              | 9.58  | UG/L   | 99       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.107          | 101  | 8221               | 10.28 | UG/L   | 93       |
| 17) IODOMETHANE               | 2.235          | 142  | 66787              | 48.81 | UG/L   | 94       |
| 18) METHYL ACETATE            | 2.423          | 43   | 14861              | 9.04  | UG/L   | 98       |
| 19) T-BUTYL ALCOHOL           | 2.619          | 59   | 14471              | 96.86 | UG/L   | 100      |
| 20) ACRYLONITRILE             | 2.744          | 53   | 6121               | 10.15 | UG/L   | 97       |
| 21) METHYLENE CHLORIDE        | 2.502          | 49   | 21446              | 9.55  | UG/L   | 94       |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 257794             | 86.04 | UG/L   | 98       |
| 23) METHYL TERT-BUTYL ETHE... | 2.744          | 73   | 30537              | 9.43  | UG/L   | 99       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.741          | 61   | 18527              | 9.90  | UG/L   | 94       |
| 25) 1,1-DICHLOROETHANE        | 3.173          | 63   | 22901              | 9.94  | UG/L   | 97       |
| 26) VINYL ACETATE             | 3.230          | 43   | 369969             | 99.98 | UG/L   | 100      |
| 27) DI ISOPROPYL ETHER        | 3.232          | 45   | 45245              | 9.06  | UG/L   | 99       |
| 28) 2-BUTANONE                | 3.795          | 43   | 73528              | 92.95 | UG/L   | 97       |
| 29) T-BUTYL ETHYL ETHER       | 3.605          | 59   | 42064              | 9.76  | UG/L   | 98       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.761          | 61   | 22298              | 9.82  | UG/L   | 95       |
| 31) 2,2-DICHLOROPROPANE       | 3.747          | 77   | 16233              | 9.51  | UG/L   | 96       |
| 32) ETHYL ACETATE             | 3.858          | 43   | 17720m             | 8.82  | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.000          | 128  | 6021               | 10.57 | UG/L   | 99       |
| 34) TETRAHYDROFURAN           | 4.048          | 42   | 4552               | 8.56  | UG/L   | 98       |
| 35) T-BUTYL FORMATE           | 4.136          | 59   | 8252               | 7.12  | UG/L   | 97       |
| 36) CHLOROFORM                | 4.085          | 83   | 20217              | 9.59  | UG/L   | 96       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.247          | 97   | 19511              | 10.64 | UG/L   | 97       |
| 38) CYCLOHEXANE               | 4.290          | 56   | 23710              | 9.92  | UG/L   | 91       |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 16998              | 10.88 | UG/L   | 100      |
| 40) 1,1-DICHLOROPROPENE       | 4.415          | 75   | 13445              | 9.06  | UG/L   | 95       |
| 41) BENZENE                   | 4.622          | 78   | 37333              | 8.93  | UG/L   | 98       |
| 42) T-AMYL ALCOHOL            | 4.671          | 59   | 9676               | 90.57 | UG/L   | 93       |
| 43) T-AMYLMETHYL ETHER        | 4.742          | 73   | 26205              | 8.68  | UG/L # | 91       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 22333              | 11.30 | UG/L   | 96       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 10467              | 9.91  | UG/L   | 94       |

Data Path : Y:\1\DATA\B081319\

Data File : B1922525.D

Acq On : 13 Aug 2019 6:57 pm

Operator :

Sample : BFB / 8260 STD 10PPB 1906029

Inst : GCMSVOA2

Misc :

ALS Vial : 25 Sample Multiplier: 1

Quant Time: Aug 14 10:04:48 2019

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Fri Apr 19 05:25:51 2019

Response via : Initial Calibration

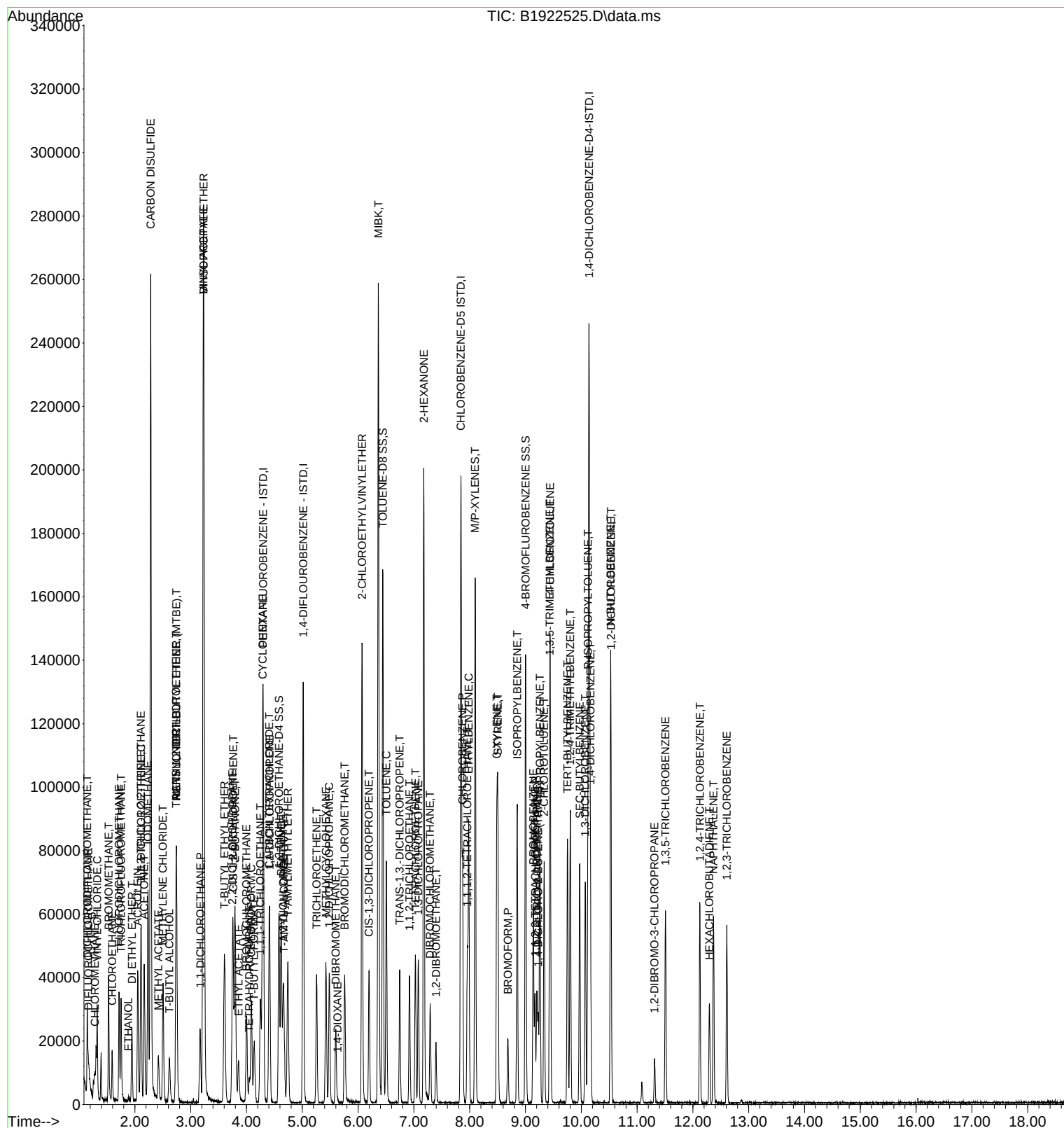
| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 48) METHYLCYCLOHEXANE         | 5.424  | 83   | 11997    | 8.37   | UG/L # | 88       |
| 49) 1,2-DICHLOROPROPANE       | 5.483  | 63   | 11919    | 9.92   | UG/L   | 98       |
| 50) DIBROMOMETHANE            | 5.600  | 93   | 7344     | 10.37  | UG/L   | 91       |
| 51) 1,4-DIOXANE               | 5.634  | 88   | 767      | 106.92 | UG/L # | 76       |
| 52) BROMODICHLOROMETHANE      | 5.759  | 83   | 15906    | 10.50  | UG/L   | 98       |
| 53) 2-CHLOROETHYLVINYLEETHER  | 6.072  | 63   | 48443    | 59.69  | UG/L   | 98       |
| 54) MIBK                      | 6.361  | 43   | 157577   | 105.20 | UG/L   | 96       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.191  | 75   | 16686    | 9.61   | UG/L   | 96       |
| 56) TOLUENE                   | 6.506  | 91   | 40689    | 9.53   | UG/L   | 99       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.745  | 75   | 15873    | 9.53   | UG/L   | 94       |
| 59) 1,1,2-TRICHLOROETHANE     | 6.919  | 97   | 9292     | 9.60   | UG/L   | 99       |
| 60) 2-HEXANONE                | 7.177  | 43   | 116366   | 105.54 | UG/L   | 96       |
| 61) TETRACHLOROETHENE         | 7.027  | 164  | 8937     | 10.85  | UG/L   | 100      |
| 62) 1,3-DICHLOROPROPANE       | 7.078  | 76   | 16345    | 9.61   | UG/L   | 93       |
| 63) DIBROMOCHLOROMETHANE      | 7.291  | 129  | 12978    | 11.59  | UG/L   | 99       |
| 64) 1,2-DIBROMOETHANE         | 7.396  | 107  | 11031    | 10.22  | UG/L # | 99       |
| 67) CHLOROBENZENE             | 7.871  | 112  | 29101    | 9.81   | UG/L   | 94       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.956  | 131  | 11144    | 10.32  | UG/L   | 95       |
| 69) ETHYLBENZENE              | 7.981  | 91   | 49253    | 9.54   | UG/L   | 99       |
| 70) M/P-XYLENES               | 8.098  | 91   | 78433    | 19.10  | UG/L   | 99       |
| 71) O-XYLENE                  | 8.484  | 91   | 40066    | 9.46   | UG/L   | 96       |
| 72) STYRENE                   | 8.504  | 104  | 32432    | 9.60   | UG/L   | 95       |
| 73) BROMOFORM                 | 8.686  | 173  | 8606     | 9.85   | UG/L   | 99       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 49394    | 10.19  | UG/L   | 99       |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.172  | 83   | 12582    | 9.01   | UG/L   | 94       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.229  | 53   | 6436     | 9.70   | UG/L   | 100      |
| 78) BROMOBENZENE              | 9.141  | 77   | 20268    | 9.87   | UG/L   | 96       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.203  | 110  | 4691     | 10.66  | UG/L   | 75       |
| 80) N-PROPYLBENZENE           | 9.257  | 91   | 53103    | 8.90   | UG/L   | 97       |
| 81) 2-CHLOROTOLUENE           | 9.334  | 91   | 34533    | 9.41   | UG/L   | 96       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.434  | 105  | 40233    | 9.68   | UG/L   | 97       |
| 83) 4-CHLOROTOLUENE           | 9.442  | 91   | 41480    | 9.42   | UG/L   | 98       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 34372    | 9.26   | UG/L   | 94       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.803  | 105  | 43090    | 9.26   | UG/L   | 100      |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 43921    | 8.40   | UG/L   | 99       |
| 88) 1,3-DICHLOROBENZENE       | 10.070 | 146  | 25789    | 9.29   | UG/L   | 100      |
| 89) P-ISOPROPYLTOLUENE        | 10.121 | 119  | 41854    | 9.26   | UG/L   | 98       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 27082    | 9.36   | UG/L   | 98       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 32342    | 7.98   | UG/L   | 97       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 25420    | 9.48   | UG/L   | 97       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.312 | 75   | 2913     | 9.40   | UG/L # | 85       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.508 | 180  | 16586    | 9.37   | UG/L   | 96       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 16501    | 9.48   | UG/L   | 99       |
| 96) HEXACHLOROBUTADIENE       | 12.293 | 225  | 6265     | 10.56  | UG/L   | 97       |
| 97) NAPHTHALENE               | 12.369 | 128  | 41375    | 9.04   | UG/L   | 99       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.608 | 180  | 14541    | 9.28   | UG/L   | 97       |

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

265

ALS Vial : 25 Sample Multiplier: 1

Response via : Initial Calibration



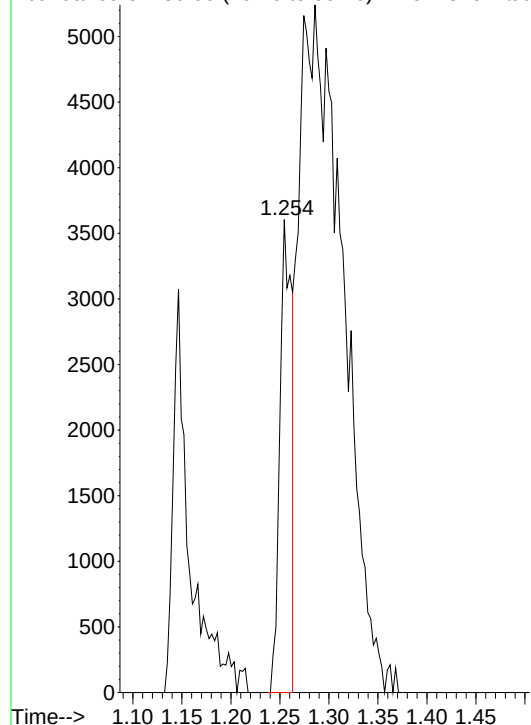
Data Path : Y:\1\DATA\B081319\  
Data File : B1922525.D  
Acq On : 13 Aug 2019 6:57 pm  
Operator :  
Sample : BFB / 8260 STD 10PPB 1906029  
Misc :

Quant Time : Wed Aug 14 10:04:48 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CHLOROMETHANE

Abundance Ion 50.00 (49.70 to 50.70): B1922525.D\data



## Original Int. Results

-----

RT : 1.25  
Area : 3074  
Amount: 1.0909

## Manual Int. Results

-----

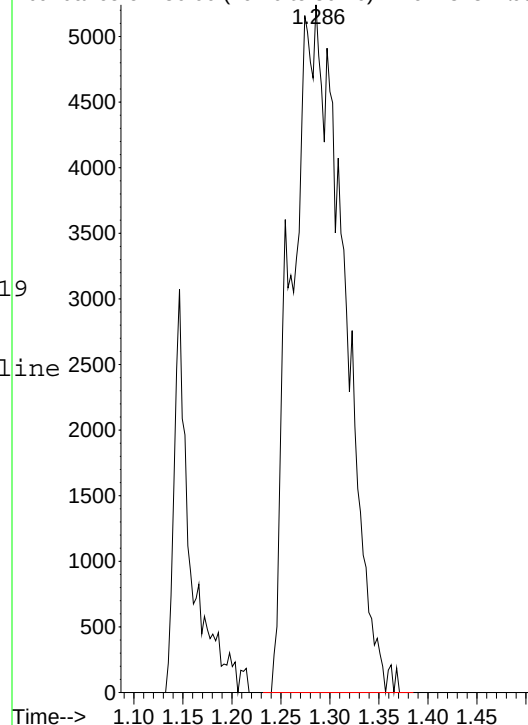
Wed Aug 14 10:04:10 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 1.29  
Area : 19475  
Amount: 6.91131

## Manual Integration

CHLOROMETHANE

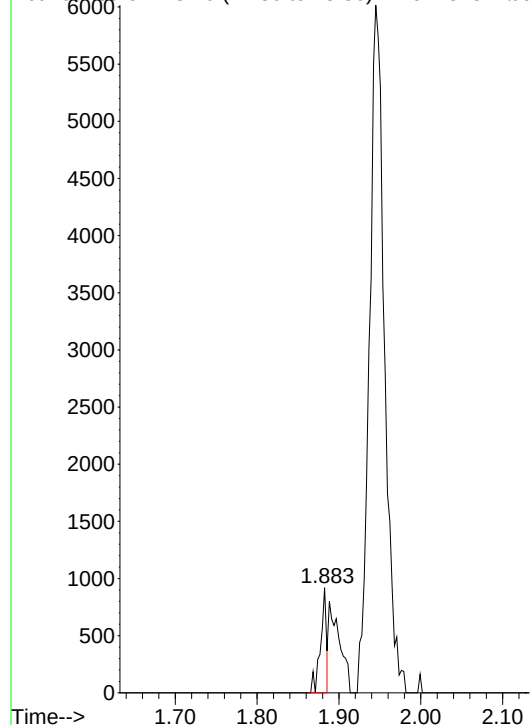
Abundance Ion 50.00 (49.70 to 50.70): B1922525.D\data



## Original Integration

ETHANOL

Abundance Ion 45.10 (44.80 to 45.80): B1922525.D\data



## Original Int. Results

-----

RT : 1.88  
Area : 455  
Amount: 32.0983

## Manual Int. Results

-----

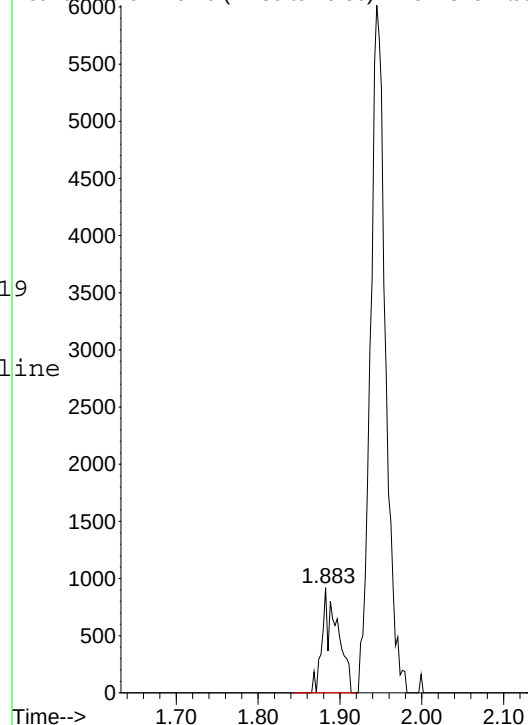
Wed Aug 14 10:04:16 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 1.88  
Area : 1208  
Amount: 85.2193

## Manual Integration

ETHANOL

Abundance Ion 45.10 (44.80 to 45.80): B1922525.D\data



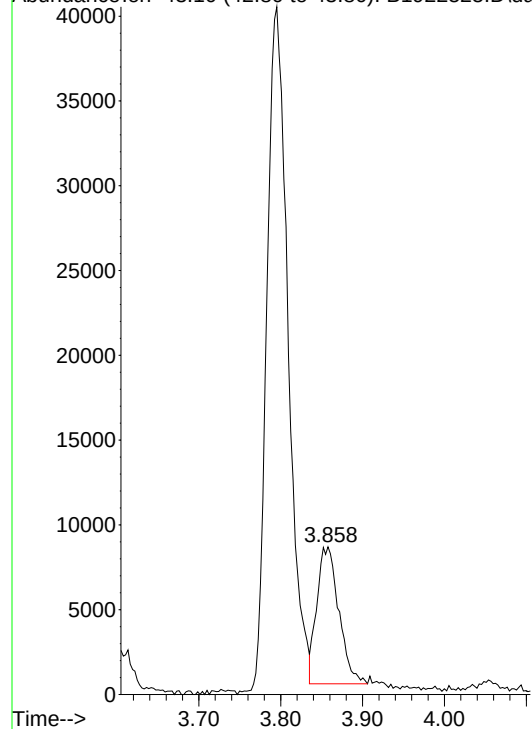
Data Path : Y:\1\DATA\B081319\  
Data File : B1922525.D  
Acq On : 13 Aug 2019 6:57 pm  
Operator :  
Sample : BFB / 8260 STD 10PPB 1906029  
Misc :

Quant Time : Wed Aug 14 10:04:48 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): B1922525.D\data



## Original Int. Results

-----

RT : 3.86  
Area : 15035  
Amount: 7.48745

## Manual Int. Results

-----

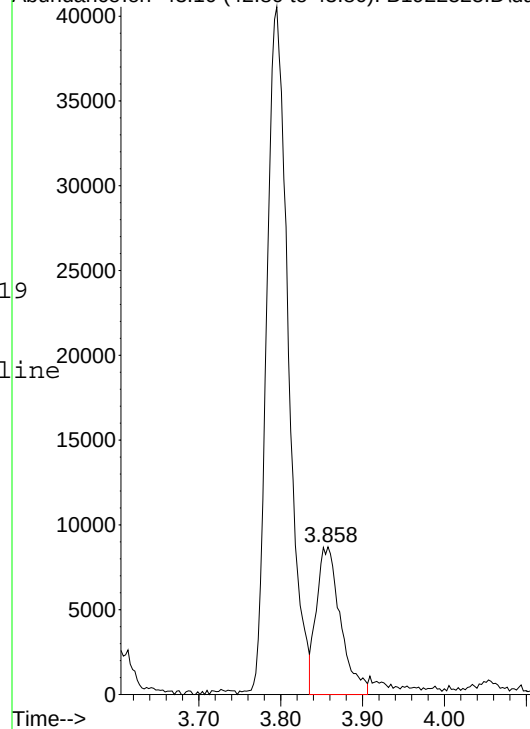
Wed Aug 14 10:04:30 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.86  
Area : 17720  
Amount: 8.82458

## Manual Integration

ETHYL ACETATE

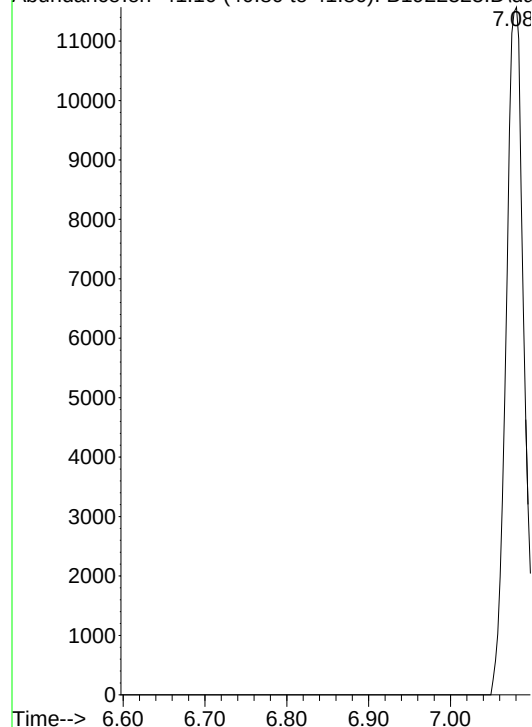
Abundance on 43.10 (42.80 to 43.80): B1922525.D\data



## Original Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): B1922525.D\data



## Original Int. Results

-----

RT : 7.08  
Area : 17489  
Amount: 0

## Manual Int. Results

-----

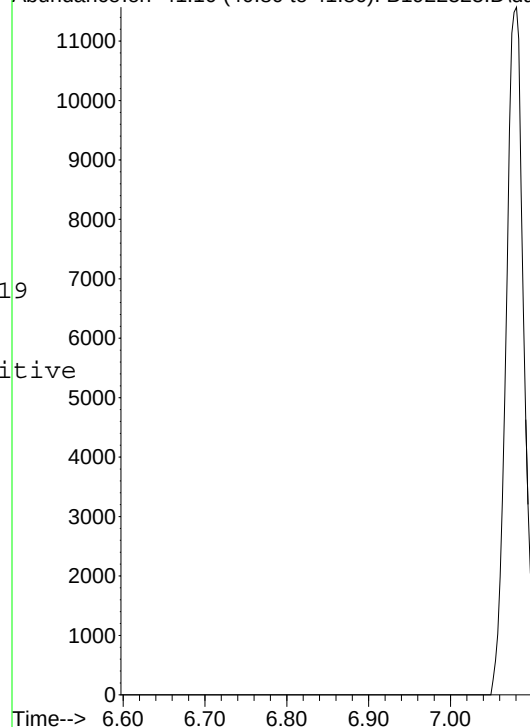
Wed Aug 14 10:04:45 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

ETHYL METHACRYLATE

Abundance on 41.10 (40.80 to 41.80): B1922525.D\data

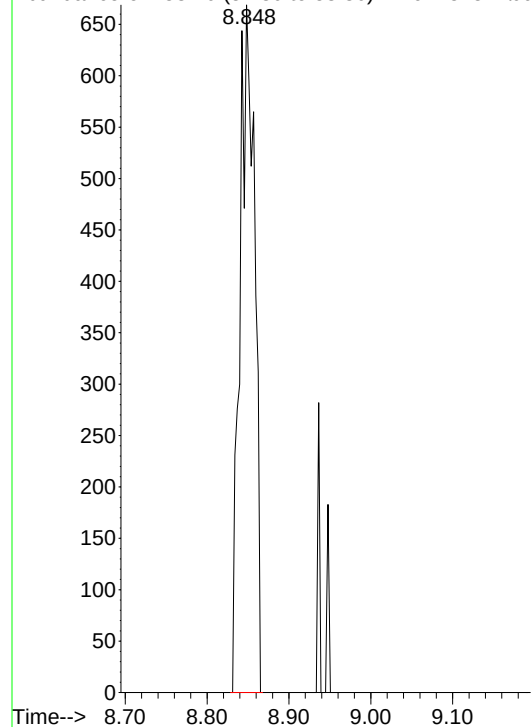


Data Path : Y:\1\DATA\B081319\  
Data File : B1922525.D  
Acq On : 13 Aug 2019 6:57 pm  
Operator :  
Sample : BFB / 8260 STD 10PPB 1906029  
Misc :

Quant Time : Wed Aug 14 10:04:48 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): B1922525.D\data



Original Int. Results

-----

RT : 8.85

Area : 846

Amount: 0

Manual Int. Results

-----

Wed Aug 14 10:04:55 2019

MIuser: LBD

Reason: Qdel False Positive

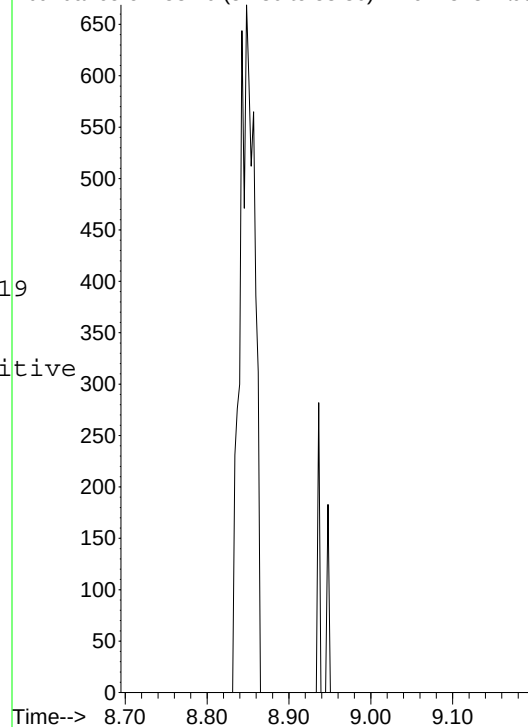
RT : 0.00

Area : 0

Amount: 0

Manual Integration  
CIS-1,4-DICHLORO-2-BUTENE

Abundance on 53.10 (52.80 to 53.80): B1922525.D\data





# 8 - FORM VIII

## INTERNAL STANDARD AREA AND RT SUMMARY

269

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Sequence: S039168

Instrument: GCMSVOA2

Calibration: 1900126

| Internal Standard                        | Response | RT     | Reference Response             | Reference RT | Area % | Area % Limits                   | RT Diff | RT Diff Limit | Q |
|------------------------------------------|----------|--------|--------------------------------|--------------|--------|---------------------------------|---------|---------------|---|
| <b>Calibration Check (S039168-CCV1 )</b> |          |        | <i>Lab File ID: B1922525.D</i> |              |        | <i>Analyzed: 08/13/19 18:57</i> |         |               |   |
| Pentafluorobenzene                       | 56658    | 4.298  | 72484                          | 4.301        | 78     | 50 - 200                        | -0.0030 | +/-0.50       |   |
| 1,4-Difluorobenzene                      | 83289    | 5.017  | 115420                         | 5.017        | 72     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| Chlorobenzene-d5                         | 47003    | 7.842  | 62266                          | 7.842        | 75     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4                   | 50575    | 10.138 | 64053                          | 10.139       | 79     | 50 - 200                        | -0.0010 | +/-0.50       |   |
| <b>LCS (B237875-BS1 )</b>                |          |        | <i>Lab File ID: B1922527.D</i> |              |        | <i>Analyzed: 08/13/19 19:59</i> |         |               |   |
| Pentafluorobenzene                       | 56922    | 4.298  | 56658                          | 4.298        | 100    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Difluorobenzene                      | 83504    | 5.017  | 83289                          | 5.017        | 100    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| Chlorobenzene-d5                         | 47516    | 7.842  | 47003                          | 7.842        | 101    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4                   | 50963    | 10.141 | 50575                          | 10.138       | 101    | 50 - 200                        | 0.0030  | +/-0.50       |   |
| <b>LCS Dup (B237875-BSD1 )</b>           |          |        | <i>Lab File ID: B1922528.D</i> |              |        | <i>Analyzed: 08/13/19 20:30</i> |         |               |   |
| Pentafluorobenzene                       | 56895    | 4.298  | 56658                          | 4.298        | 100    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Difluorobenzene                      | 82184    | 5.014  | 83289                          | 5.017        | 99     | 50 - 200                        | -0.0030 | +/-0.50       |   |
| Chlorobenzene-d5                         | 47614    | 7.845  | 47003                          | 7.842        | 101    | 50 - 200                        | 0.0030  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4                   | 51015    | 10.138 | 50575                          | 10.138       | 101    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| <b>Blank (B237875-BLK1 )</b>             |          |        | <i>Lab File ID: B1922531.D</i> |              |        | <i>Analyzed: 08/13/19 22:02</i> |         |               |   |
| Pentafluorobenzene                       | 53869    | 4.298  | 56658                          | 4.298        | 95     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Difluorobenzene                      | 75860    | 5.017  | 83289                          | 5.017        | 91     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| Chlorobenzene-d5                         | 46955    | 7.842  | 47003                          | 7.842        | 100    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4                   | 49345    | 10.141 | 50575                          | 10.138       | 98     | 50 - 200                        | 0.0030  | +/-0.50       |   |
| <b>Trip Blank-8/9/19 (19H0576-01 )</b>   |          |        | <i>Lab File ID: B1922532.D</i> |              |        | <i>Analyzed: 08/13/19 22:33</i> |         |               |   |
| Pentafluorobenzene                       | 55198    | 4.301  | 56658                          | 4.298        | 97     | 50 - 200                        | 0.0030  | +/-0.50       |   |
| 1,4-Difluorobenzene                      | 76202    | 5.014  | 83289                          | 5.017        | 91     | 50 - 200                        | -0.0030 | +/-0.50       |   |
| Chlorobenzene-d5                         | 47743    | 7.842  | 47003                          | 7.842        | 102    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4                   | 49244    | 10.138 | 50575                          | 10.138       | 97     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| <b>OC-19S (19H0576-04 )</b>              |          |        | <i>Lab File ID: B1922541.D</i> |              |        | <i>Analyzed: 08/14/19 03:10</i> |         |               |   |
| Pentafluorobenzene                       | 52900    | 4.298  | 56658                          | 4.298        | 93     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Difluorobenzene                      | 72461    | 5.014  | 83289                          | 5.017        | 87     | 50 - 200                        | -0.0030 | +/-0.50       |   |
| Chlorobenzene-d5                         | 46385    | 7.842  | 47003                          | 7.842        | 99     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4                   | 48283    | 10.138 | 50575                          | 10.138       | 95     | 50 - 200                        | 0.0000  | +/-0.50       |   |

# 8 - FORM VIII

## INTERNAL STANDARD AREA AND RT SUMMARY

270

SW-846 8260C

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Sequence: S039168

Instrument: GCMSVOA2

Calibration: 1900126

| Internal Standard                   | Response | RT     | Reference Response             | Reference RT | Area % | Area % Limits                   | RT Diff | RT Diff Limit | Q |
|-------------------------------------|----------|--------|--------------------------------|--------------|--------|---------------------------------|---------|---------------|---|
| <b>MW-21S (19H0576-05 )</b>         |          |        | <i>Lab File ID: B1922542.D</i> |              |        | <i>Analyzed: 08/14/19 03:41</i> |         |               |   |
| Pentafluorobenzene                  | 52947    | 4.298  | 56658                          | 4.298        | 93     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Difluorobenzene                 | 73497    | 5.017  | 83289                          | 5.017        | 88     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| Chlorobenzene-d5                    | 47486    | 7.845  | 47003                          | 7.842        | 101    | 50 - 200                        | 0.0030  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4              | 48364    | 10.138 | 50575                          | 10.138       | 96     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| <b>OC-19D (19H0576-02 )</b>         |          |        | <i>Lab File ID: B1922543.D</i> |              |        | <i>Analyzed: 08/14/19 04:11</i> |         |               |   |
| Pentafluorobenzene                  | 51337    | 4.298  | 56658                          | 4.298        | 91     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Difluorobenzene                 | 72519    | 5.014  | 83289                          | 5.017        | 87     | 50 - 200                        | -0.0030 | +/-0.50       |   |
| Chlorobenzene-d5                    | 46218    | 7.842  | 47003                          | 7.842        | 98     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4              | 48015    | 10.136 | 50575                          | 10.138       | 95     | 50 - 200                        | -0.0020 | +/-0.50       |   |
| <b>MW-21R (19H0576-03 )</b>         |          |        | <i>Lab File ID: B1922544.D</i> |              |        | <i>Analyzed: 08/14/19 04:42</i> |         |               |   |
| Pentafluorobenzene                  | 54320    | 4.298  | 56658                          | 4.298        | 96     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Difluorobenzene                 | 76694    | 5.017  | 83289                          | 5.017        | 92     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| Chlorobenzene-d5                    | 47381    | 7.842  | 47003                          | 7.842        | 101    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4              | 49034    | 10.141 | 50575                          | 10.138       | 97     | 50 - 200                        | 0.0030  | +/-0.50       |   |
| <b>Drum Composite (19H0576-06 )</b> |          |        | <i>Lab File ID: B1922545.D</i> |              |        | <i>Analyzed: 08/14/19 05:13</i> |         |               |   |
| Pentafluorobenzene                  | 54102    | 4.301  | 56658                          | 4.298        | 95     | 50 - 200                        | 0.0030  | +/-0.50       |   |
| 1,4-Difluorobenzene                 | 76265    | 5.017  | 83289                          | 5.017        | 92     | 50 - 200                        | 0.0000  | +/-0.50       |   |
| Chlorobenzene-d5                    | 47480    | 7.845  | 47003                          | 7.842        | 101    | 50 - 200                        | 0.0030  | +/-0.50       |   |
| 1,4-Dichlorobenzene-d4              | 50337    | 10.136 | 50575                          | 10.138       | 100    | 50 - 200                        | -0.0020 | +/-0.50       |   |

**QC DATA**

# 1 - FORM I

## ANALYSIS DATA SHEET

272

Blank

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BLK1          |
|             |                                | File ID:       | B1922531.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 22:02        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q    |
|----------|------------------------------------|--------------|------|------|------|
| 67-64-1  | Acetone                            |              | 3.8  | 50   |      |
| 107-13-1 | Acrylonitrile                      |              | 0.52 | 5.0  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      |              | 0.14 | 0.50 |      |
| 71-43-2  | Benzene                            |              | 0.18 | 1.0  |      |
| 108-86-1 | Bromobenzene                       |              | 0.15 | 1.0  |      |
| 74-97-5  | Bromochloromethane                 |              | 0.32 | 1.0  |      |
| 75-27-4  | Bromodichloromethane               |              | 0.16 | 0.50 |      |
| 75-25-2  | Bromoform                          |              | 0.46 | 1.0  |      |
| 74-83-9  | Bromomethane                       |              | 0.78 | 2.0  |      |
| 78-93-3  | 2-Butanone (MEK)                   |              | 1.9  | 20   |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           |              | 4.2  | 20   |      |
| 104-51-8 | n-Butylbenzene                     |              | 0.21 | 1.0  | V-05 |
| 135-98-8 | sec-Butylbenzene                   |              | 0.16 | 1.0  |      |
| 98-06-6  | tert-Butylbenzene                  |              | 0.17 | 1.0  |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      |              | 0.16 | 0.50 |      |
| 75-15-0  | Carbon Disulfide                   |              | 4.4  | 5.0  |      |
| 56-23-5  | Carbon Tetrachloride               |              | 0.11 | 5.0  |      |
| 108-90-7 | Chlorobenzene                      |              | 0.15 | 1.0  |      |
| 124-48-1 | Chlorodibromomethane               |              | 0.21 | 0.50 |      |
| 75-00-3  | Chloroethane                       |              | 0.35 | 2.0  |      |
| 67-66-3  | Chloroform                         |              | 0.17 | 2.0  |      |
| 74-87-3  | Chloromethane                      |              | 0.45 | 2.0  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    |              | 0.12 | 1.0  |      |
| 106-43-4 | 4-Chlorotoluene                    |              | 0.14 | 1.0  |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) |              | 0.53 | 5.0  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            |              | 0.19 | 0.50 |      |
| 74-95-3  | Dibromomethane                     |              | 0.37 | 1.0  |      |
| 95-50-1  | 1,2-Dichlorobenzene                |              | 0.16 | 1.0  |      |
| 541-73-1 | 1,3-Dichlorobenzene                |              | 0.12 | 1.0  |      |
| 106-46-7 | 1,4-Dichlorobenzene                |              | 0.13 | 1.0  |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

273

Blank

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BLK1          |
|             |                                | File ID:       | B1922531.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 22:02        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q |
|------------|------------------------------------|--------------|------|------|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        |              | 0.31 | 2.0  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) |              | 0.26 | 2.0  |   |
| 75-34-3    | 1,1-Dichloroethane                 |              | 0.16 | 1.0  |   |
| 107-06-2   | 1,2-Dichloroethane                 |              | 0.41 | 1.0  |   |
| 75-35-4    | 1,1-Dichloroethylene               |              | 0.32 | 1.0  |   |
| 156-59-2   | cis-1,2-Dichloroethylene           |              | 0.13 | 1.0  |   |
| 156-60-5   | trans-1,2-Dichloroethylene         |              | 0.31 | 1.0  |   |
| 78-87-5    | 1,2-Dichloropropane                |              | 0.20 | 1.0  |   |
| 142-28-9   | 1,3-Dichloropropane                |              | 0.11 | 0.50 |   |
| 594-20-7   | 2,2-Dichloropropane                |              | 0.20 | 1.0  |   |
| 563-58-6   | 1,1-Dichloropropene                |              | 0.16 | 2.0  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            |              | 0.13 | 0.50 |   |
| 10061-02-6 | trans-1,3-Dichloropropene          |              | 0.23 | 0.50 |   |
| 60-29-7    | Diethyl Ether                      |              | 0.34 | 2.0  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           |              | 0.17 | 0.50 |   |
| 123-91-1   | 1,4-Dioxane                        |              | 22   | 50   |   |
| 100-41-4   | Ethylbenzene                       |              | 0.13 | 1.0  |   |
| 87-68-3    | Hexachlorobutadiene                |              | 0.47 | 0.60 |   |
| 591-78-6   | 2-Hexanone (MBK)                   |              | 1.5  | 10   |   |
| 98-82-8    | Isopropylbenzene (Cumene)          |              | 0.17 | 1.0  |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      |              | 0.20 | 1.0  |   |
| 79-20-9    | Methyl Acetate                     |              | 0.42 | 1.0  |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     |              | 0.25 | 1.0  |   |
| 108-87-2   | Methyl Cyclohexane                 |              | 0.20 | 1.0  |   |
| 75-09-2    | Methylene Chloride                 |              | 0.34 | 5.0  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        |              | 1.7  | 10   |   |
| 91-20-3    | Naphthalene                        |              | 0.31 | 2.0  |   |
| 103-65-1   | n-Propylbenzene                    |              | 0.13 | 1.0  |   |
| 100-42-5   | Styrene                            |              | 0.11 | 1.0  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          |              | 0.27 | 1.0  |   |

# 1 - FORM I

## ANALYSIS DATA SHEET

274

Blank

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BLK1          |
|             |                                | File ID:       | B1922531.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 22:02        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.       | COMPOUND                                         | CONC. (µg/L) | MDL  | RL   | Q |
|---------------|--------------------------------------------------|--------------|------|------|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                        |              | 0.22 | 0.50 |   |
| 127-18-4      | Tetrachloroethylene                              |              | 0.18 | 1.0  |   |
| 109-99-9      | Tetrahydrofuran                                  |              | 0.51 | 10   |   |
| 108-88-3      | Toluene                                          |              | 0.14 | 1.0  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                           |              | 0.57 | 5.0  |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                           |              | 0.40 | 1.0  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                           |              | 0.30 | 1.0  |   |
| 71-55-6       | 1,1,1-Trichloroethane                            |              | 0.20 | 1.0  |   |
| 79-00-5       | 1,1,2-Trichloroethane                            |              | 0.16 | 1.0  |   |
| 79-01-6       | Trichloroethylene                                |              | 0.24 | 1.0  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                |              | 0.33 | 2.0  |   |
| 96-18-4       | 1,2,3-Trichloropropane                           |              | 0.25 | 2.0  |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 11) |              | 0.32 | 1.0  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                           |              | 0.18 | 1.0  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                           |              | 0.14 | 1.0  |   |
| 75-01-4       | Vinyl Chloride                                   |              | 0.45 | 2.0  |   |
| 108383/106423 | m+p Xylene                                       |              | 0.30 | 2.0  |   |
| 95-47-6       | o-Xylene                                         |              | 0.17 | 1.0  |   |
|               | No TICs Found                                    | 0.0          |      |      |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922531.D  
 Acq On : 13 Aug 2019 10:02 pm  
 Operator :  
 Sample : B0-BLK1 @ (TICs)  
 Misc :  
 ALS Vial : 31 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 10:55:31 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon  | Response | Conc     | Units  | Dev (Min) |
|-------------------------------|--------|-------|----------|----------|--------|-----------|
| Internal Standards            |        |       |          |          |        |           |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298  | 168   | 53869    | 30.00    | UG/L   | 0.00      |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017  | 114   | 75860    | 30.00    | UG/L   | 0.00      |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842  | 82    | 46955    | 30.00    | UG/L   | 0.00      |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.141 | 152   | 49345    | 30.00    | UG/L   | 0.00      |
| System Monitoring Compounds   |        |       |          |          |        |           |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582  | 65    | 38223    | 27.54    | UG/L   | 0.00      |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 110.16%   |
| 45) TOLUENE-D8 SS             | 6.441  | 98    | 82593    | 27.82    | UG/L   | 0.00      |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 111.28%   |
| 66) 4-BROMOFLUROBENZENE SS    | 8.999  | 95    | 33897    | 24.53    | UG/L   | 0.00      |
| Spiked Amount                 | 25.000 | Range | 70 - 130 | Recovery | =      | 98.12%    |
| Target Compounds              |        |       |          |          |        |           |
| 54) MIBK                      | 6.370  | 43    | 347m     | 0.25     | UG/L   |           |
| 60) 2-HEXANONE                | 7.183  | 43    | 262m     | 0.26     | UG/L   |           |
| 70) M/P-XYLENES               | 8.095  | 91    | 436m     | 0.11     | UG/L   |           |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.114 | 180   | 276m     | 0.16     | UG/L   |           |
| 97) NAPHTHALENE               | 12.375 | 128   | 1225     | 0.27     | UG/L # | 69        |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180   | 358      | 0.23     | UG/L # | 63        |

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

Data Path : Y:\1\DATA\B081319\

Data File : B1922531.D

Acq On : 13 Aug 2019 10:02 pm

Operator :

Sample : B0-BLK1 @ (TICs)

Inst : GCMSVOA2

Misc :

ALS Vial : 31 Sample Multiplier: 1

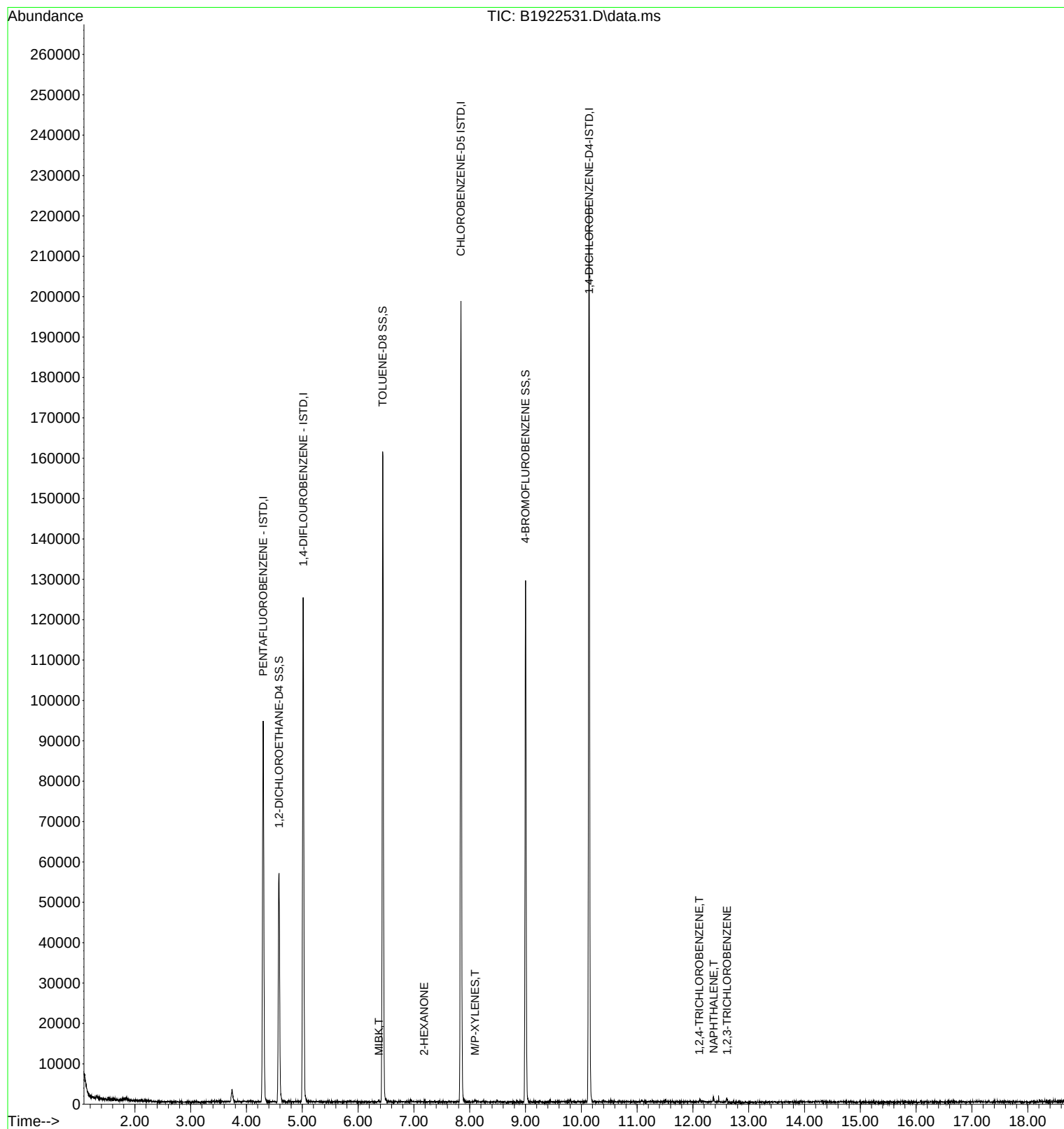
Quant Time: Aug 14 10:55:31 2019

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M

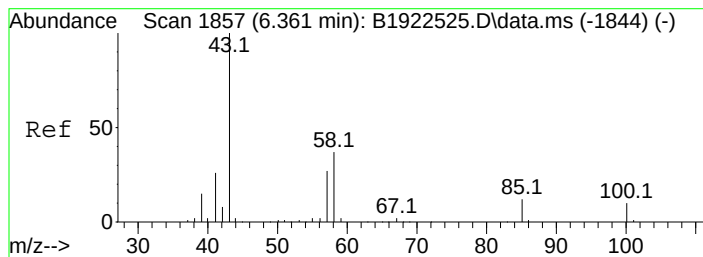
Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Fri Apr 19 05:25:51 2019

Response via : Initial Calibration

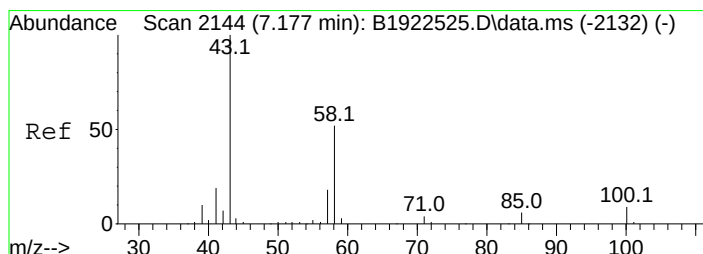
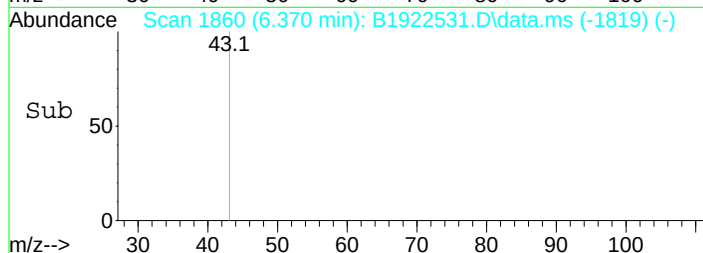
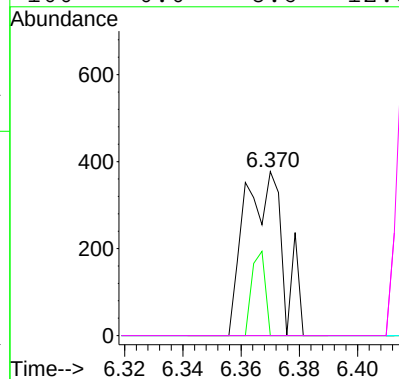
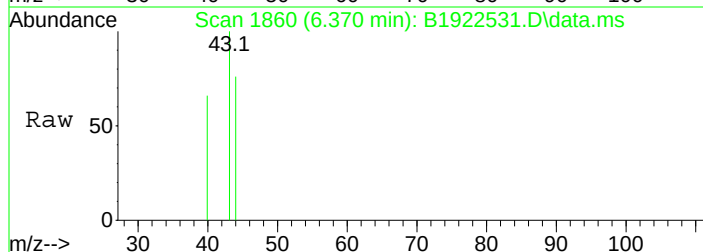






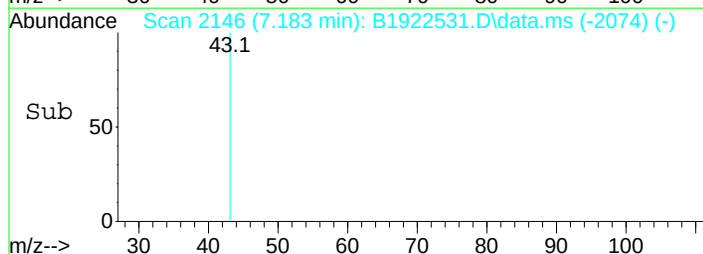
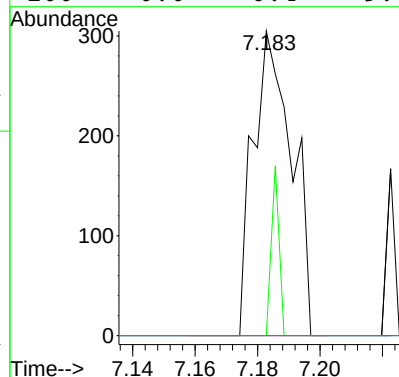
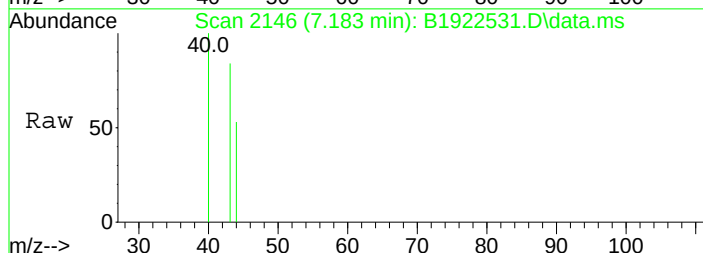
#54  
MIBK  
Concen: 0.25 UG/L m  
RT: 6.370 min Scan# 1860  
Delta R.T. 0.006 min  
Lab File: B1922531.D  
Acq: 13 Aug 2019 10:02 pm

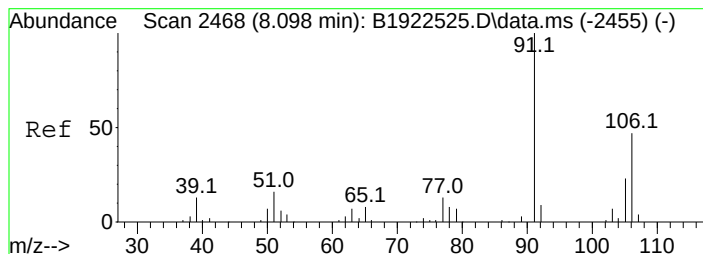
|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 43    | Resp: | 347   |
| Ion Ratio | Lower | Upper |       |
| 43        | 100   |       |       |
| 58        | 0.0   | 27.0  | 40.6# |
| 57        | 0.0   | 18.6  | 27.8# |
| 100       | 0.0   | 8.6   | 12.8# |



#60  
2-HEXANONE  
Concen: 0.26 UG/L m  
RT: 7.183 min Scan# 2146  
Delta R.T. 0.006 min  
Lab File: B1922531.D  
Acq: 13 Aug 2019 10:02 pm

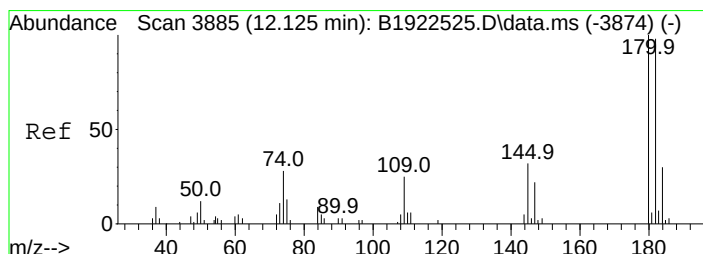
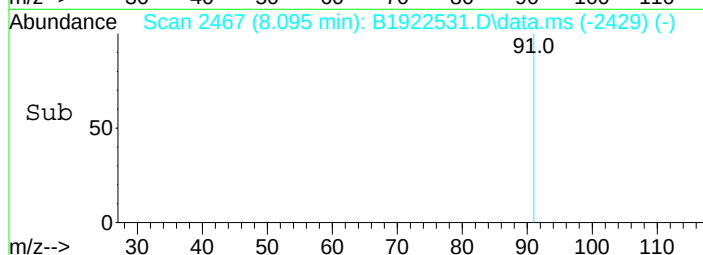
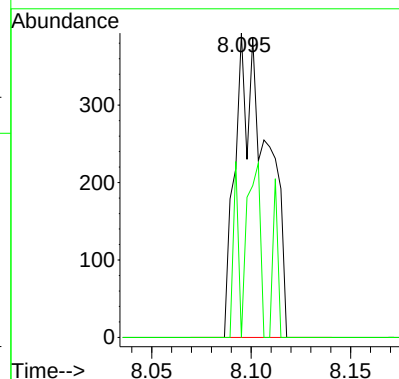
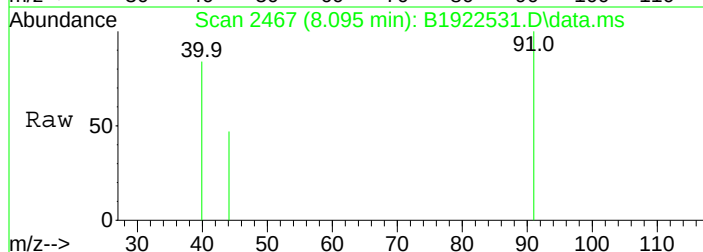
|           |       |       |       |
|-----------|-------|-------|-------|
| Tgt Ion:  | 43    | Resp: | 262   |
| Ion Ratio | Lower | Upper |       |
| 43        | 100   |       |       |
| 58        | 0.0   | 37.1  | 55.7# |
| 57        | 0.0   | 13.9  | 20.9# |
| 100       | 0.0   | 6.4   | 9.6#  |





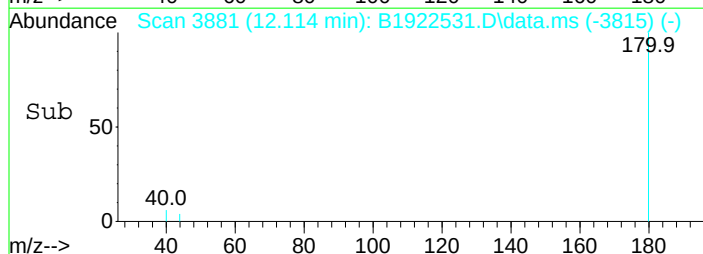
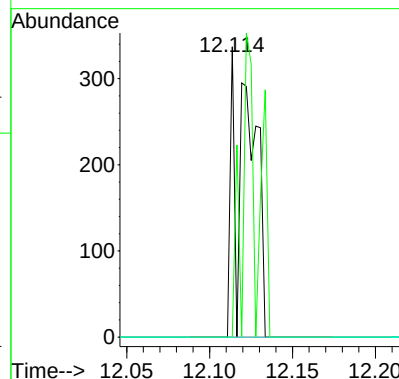
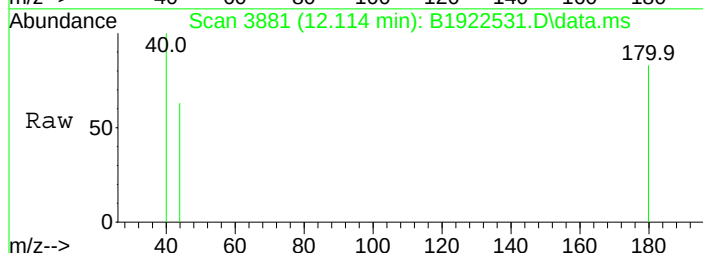
#70  
M/P-XYLENES  
Concen: 0.11 UG/L m  
RT: 8.095 min Scan# 2467  
Delta R.T. -0.003 min  
Lab File: B1922531.D  
Acq: 13 Aug 2019 10:02 pm

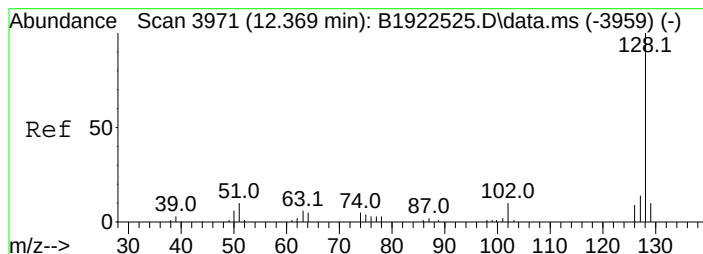
Tgt Ion: 91 Resp: 436  
Ion Ratio Lower Upper  
91 100  
106 0.0 38.5 57.7#



#95  
1,2,4-TRICHLOROBENZENE  
Concen: 0.16 UG/L m  
RT: 12.114 min Scan# 3881  
Delta R.T. -0.011 min  
Lab File: B1922531.D  
Acq: 13 Aug 2019 10:02 pm

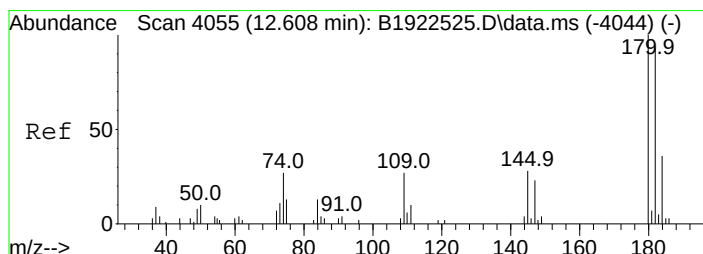
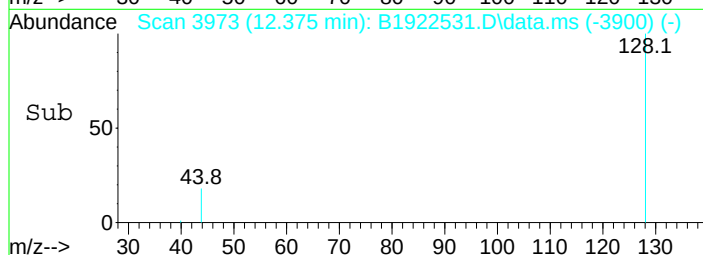
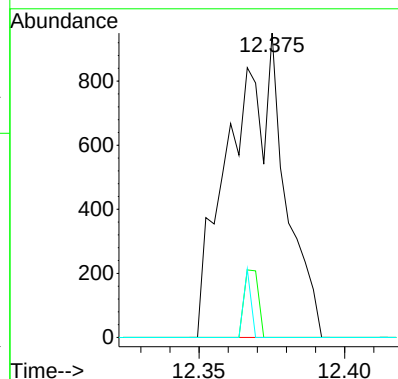
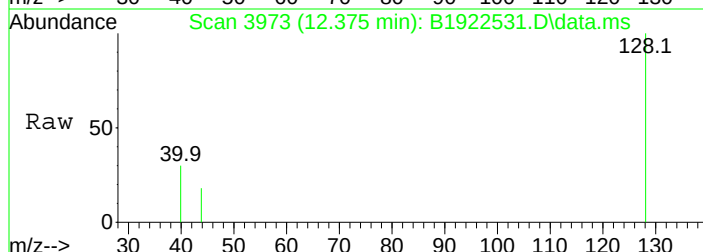
Tgt Ion: 180 Resp: 276  
Ion Ratio Lower Upper  
180 100  
182 0.0 80.1 120.1#  
145 0.0 25.1 37.7#





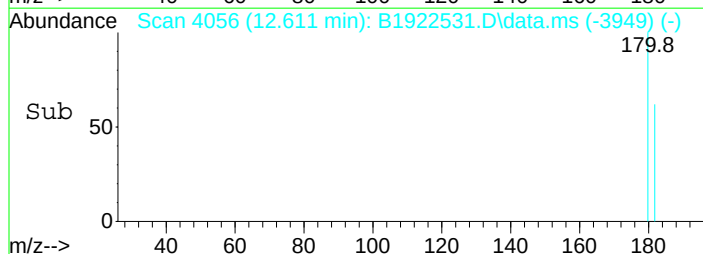
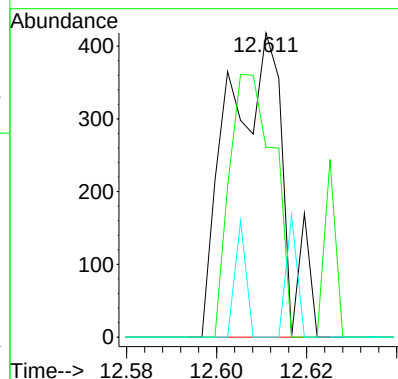
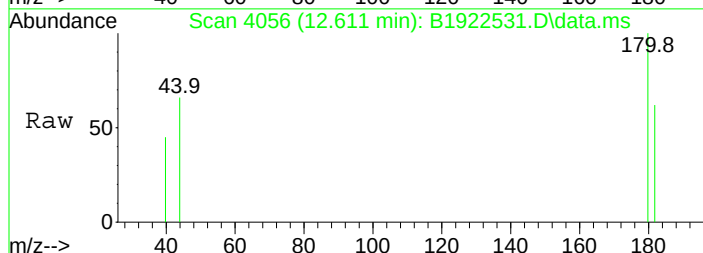
#97  
 NAPHTHALENE  
 Concen: 0.27 UG/L  
 RT: 12.375 min Scan# 3973  
 Delta R.T. 0.006 min  
 Lab File: B1922531.D  
 Acq: 13 Aug 2019 10:02 pm

| Tgt Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 128     | 100   | 1225 |       |       |
| 129     | 0.0   | 8.6  | 12.8# |       |
| 127     | 0.0   | 10.4 | 15.6# |       |



#98  
 1,2,3-TRICHLOROBENZENE  
 Concen: 0.23 UG/L  
 RT: 12.611 min Scan# 4056  
 Delta R.T. 0.003 min  
 Lab File: B1922531.D  
 Acq: 13 Aug 2019 10:02 pm

| Tgt Ion | Ratio | Resp | Lower | Upper |
|---------|-------|------|-------|-------|
| 180     | 100   | 358  |       |       |
| 182     | 69.0  | 49.6 | 149.0 |       |
| 145     | 0.0   | 16.1 | 48.3# |       |



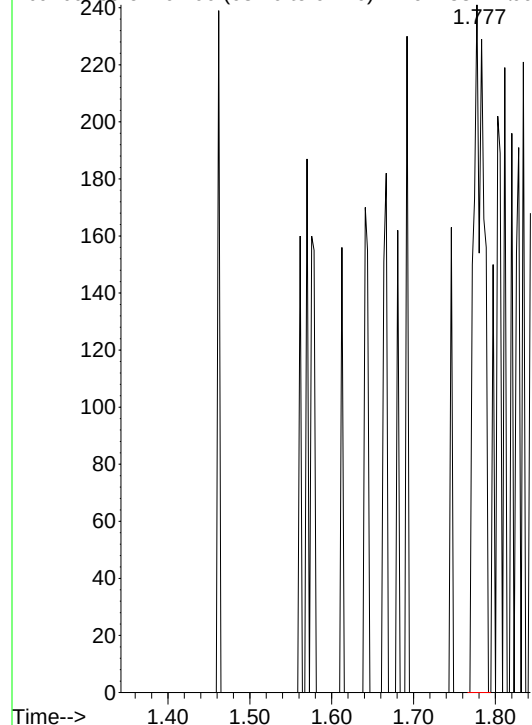
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Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 10:55:31 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CHLOROETHANE

Abundance on 64.00 (63.70 to 64.70): B1922531.D\data



## Original Int. Results

-----

RT : 1.78  
Area : 216  
Amount: 0.271957

## Manual Int. Results

-----

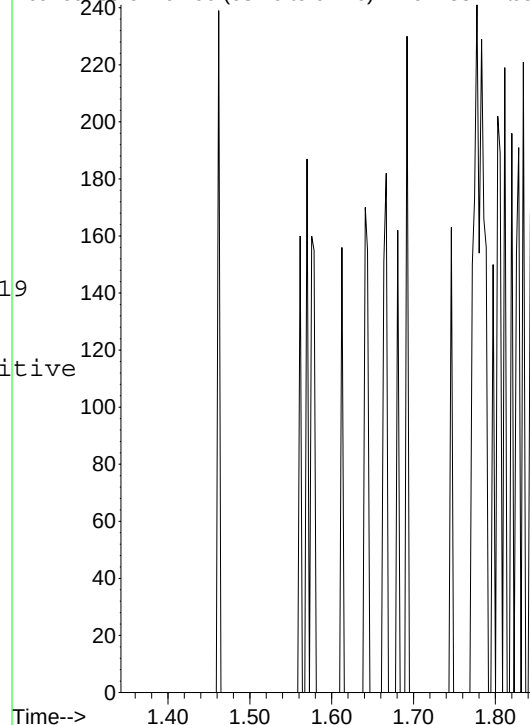
Wed Aug 14 10:54:24 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CHLOROETHANE

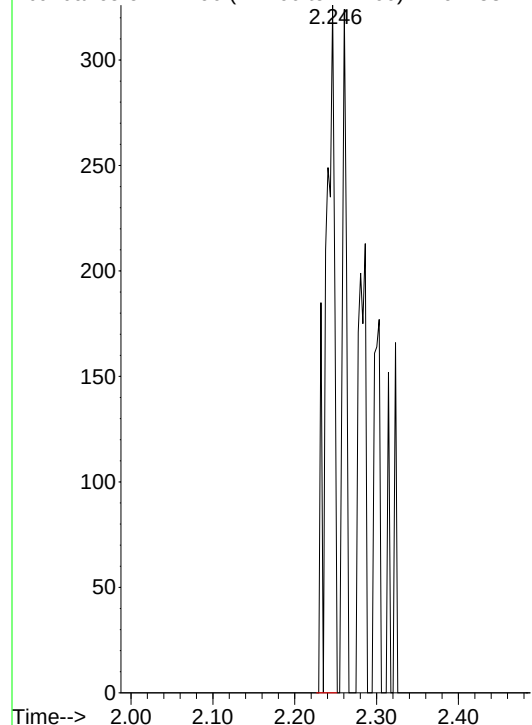
Abundance on 64.00 (63.70 to 64.70): B1922531.D\data



## Original Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922531.D\data



## Original Int. Results

-----

RT : 2.25  
Area : 236  
Amount: 0.181418

## Manual Int. Results

-----

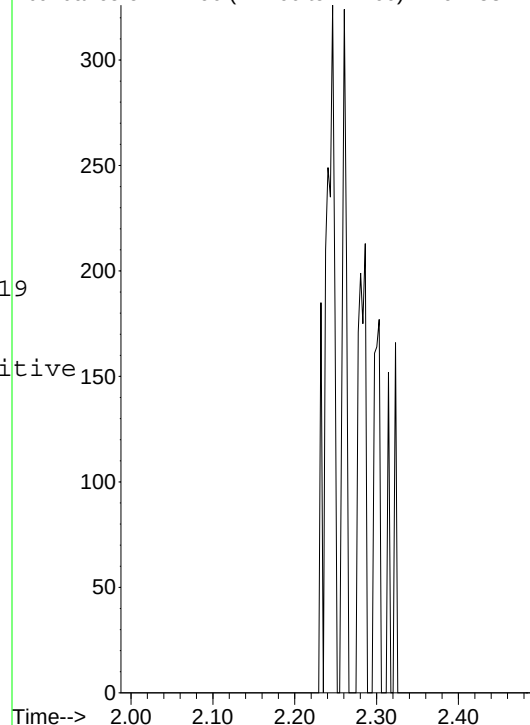
Wed Aug 14 10:54:32 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

IODOMETHANE

Abundance on 141.90 (141.60 to 142.60): B1922531.D\data



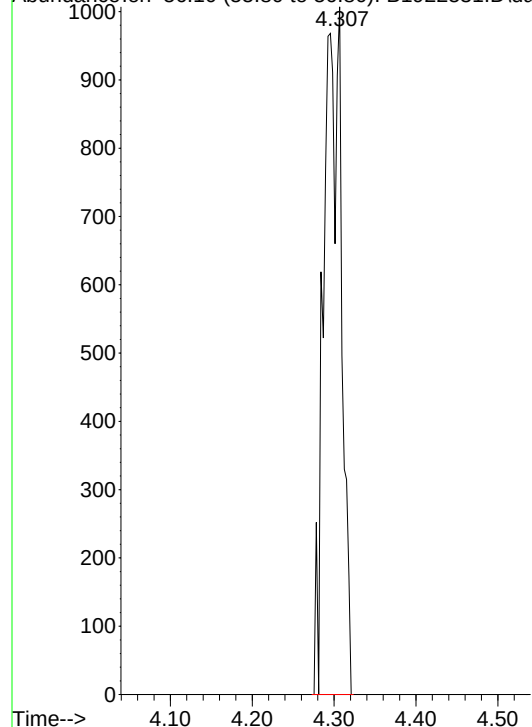
Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 10:55:31 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

CYCLOHEXANE

Abundance on 56.10 (55.80 to 56.80): B1922531.D\data



## Original Int. Results

-----

RT : 4.31  
Area : 1517  
Amount: 0.667546

## Manual Int. Results

-----

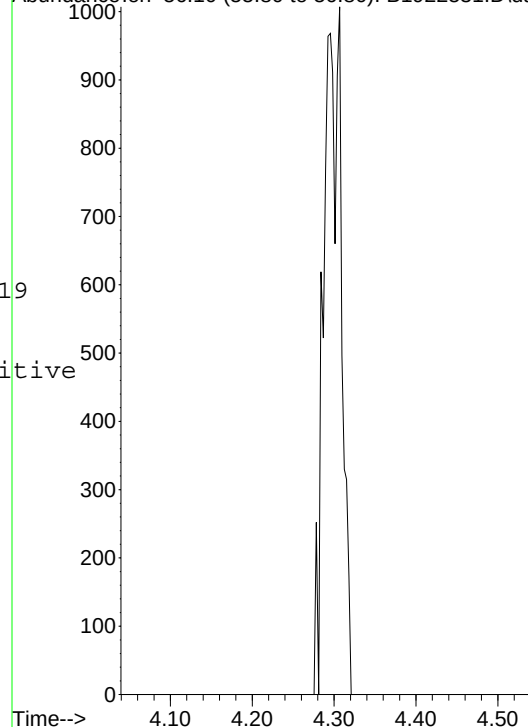
Wed Aug 14 10:54:42 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

CYCLOHEXANE

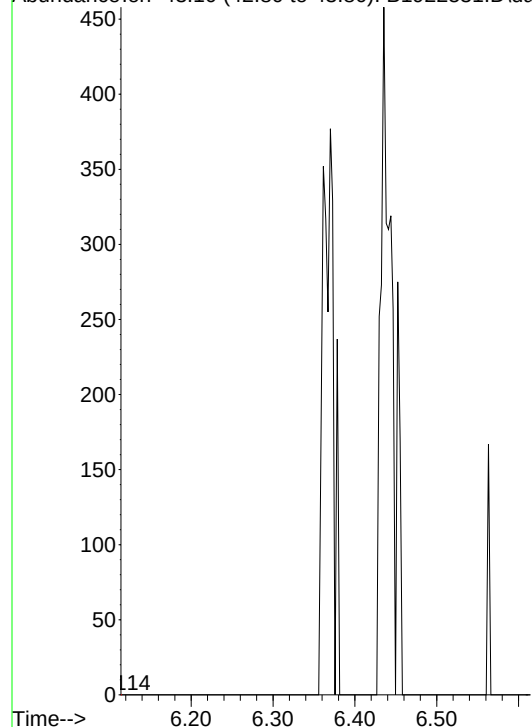
Abundance on 56.10 (55.80 to 56.80): B1922531.D\data



## Original Integration

MIBK

Abundance on 43.10 (42.80 to 43.80): B1922531.D\data



## Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

## Manual Int. Results

-----

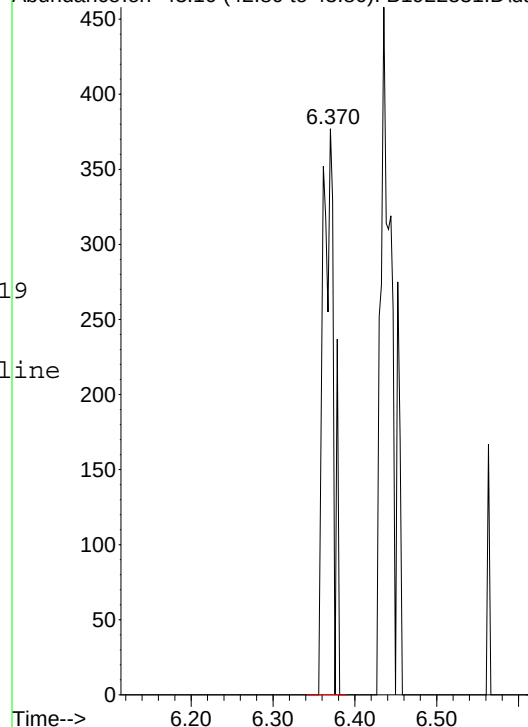
Wed Aug 14 10:54:52 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 6.37  
Area : 347  
Amount: 0.254336

## Manual Integration

MIBK

Abundance on 43.10 (42.80 to 43.80): B1922531.D\data



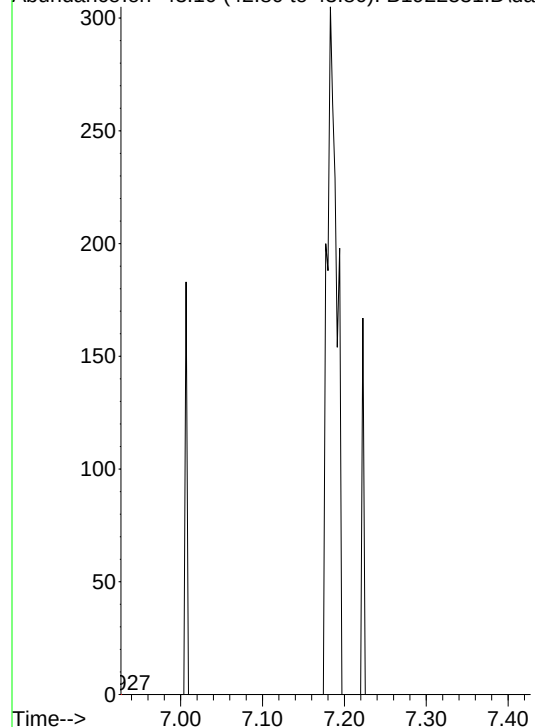
Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 10:55:31 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

2-HEXANONE

Abundance on 43.10 (42.80 to 43.80): B1922531.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Wed Aug 14 10:55:06 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 7.18

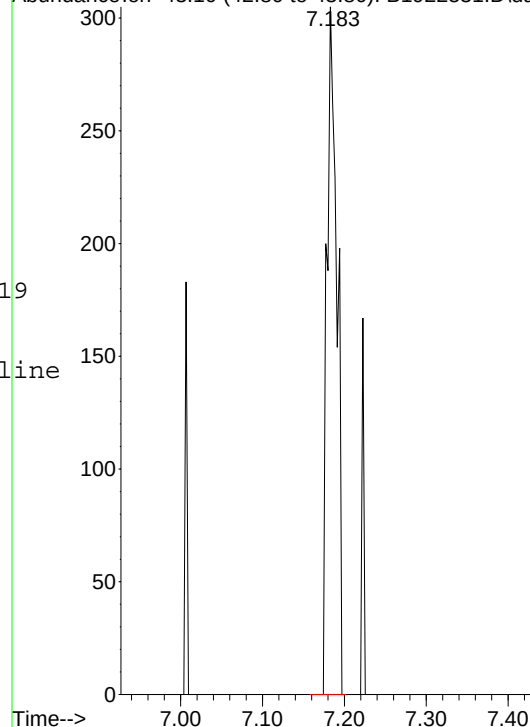
Area : 262

Amount: 0.260906

## Manual Integration

2-HEXANONE

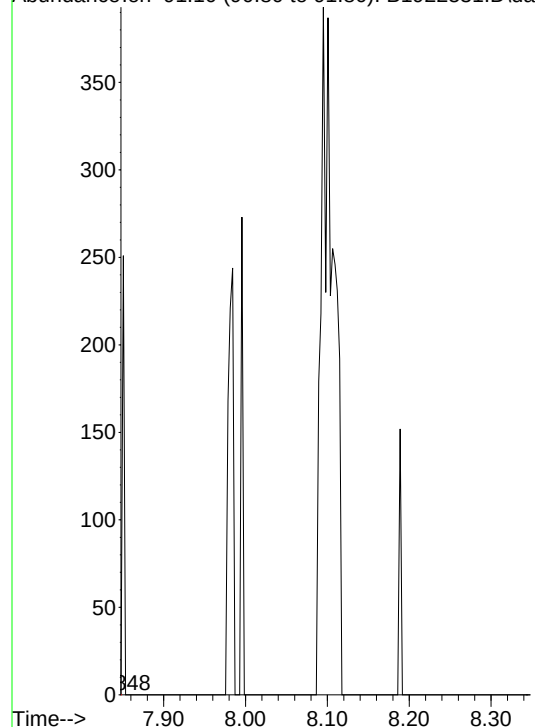
Abundance on 43.10 (42.80 to 43.80): B1922531.D\data



## Original Integration

M/P-XYLENES

Abundance on 91.10 (90.80 to 91.80): B1922531.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Wed Aug 14 10:55:13 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 8.10

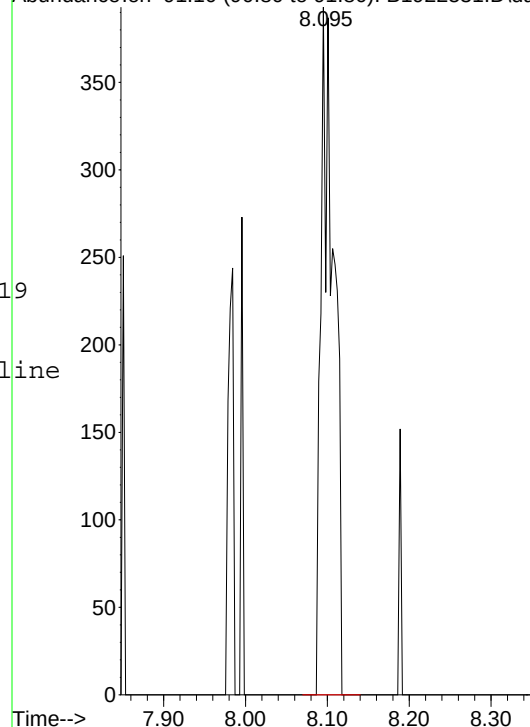
Area : 436

Amount: 0.10629

## Manual Integration

M/P-XYLENES

Abundance on 91.10 (90.80 to 91.80): B1922531.D\data



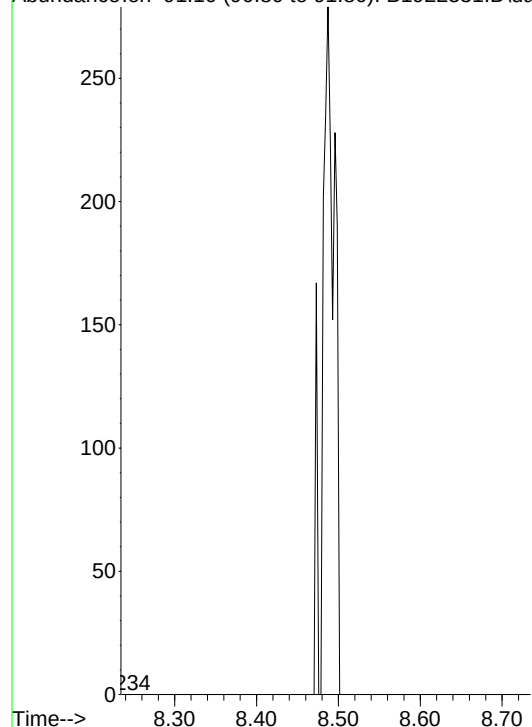
Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 10:55:31 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

0-XYLENE

Abundance on 91.10 (90.80 to 91.80): B1922531.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Wed Aug 14 10:55:17 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 8.49

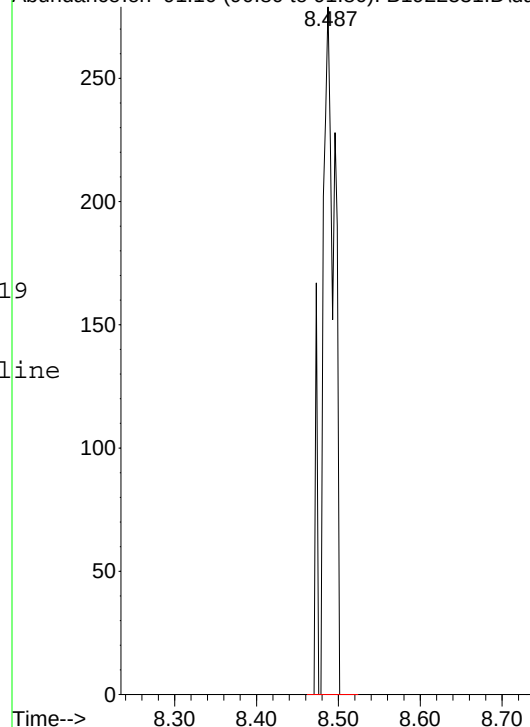
Area : 286

Amount: 0.0675942

## Manual Integration

0-XYLENE

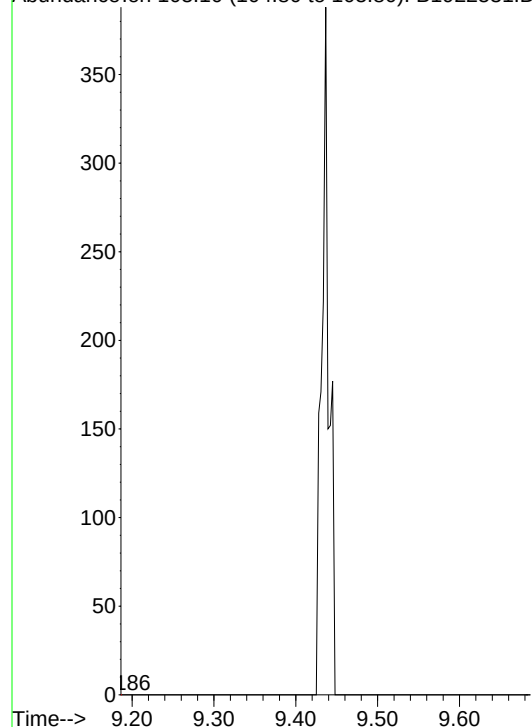
Abundance on 91.10 (90.80 to 91.80): B1922531.D\data



## Original Integration

1,3,5-TRIMETHYLBENZENE

Abundance on 105.10 (104.80 to 105.80): B1922531.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Wed Aug 14 10:55:24 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 9.44

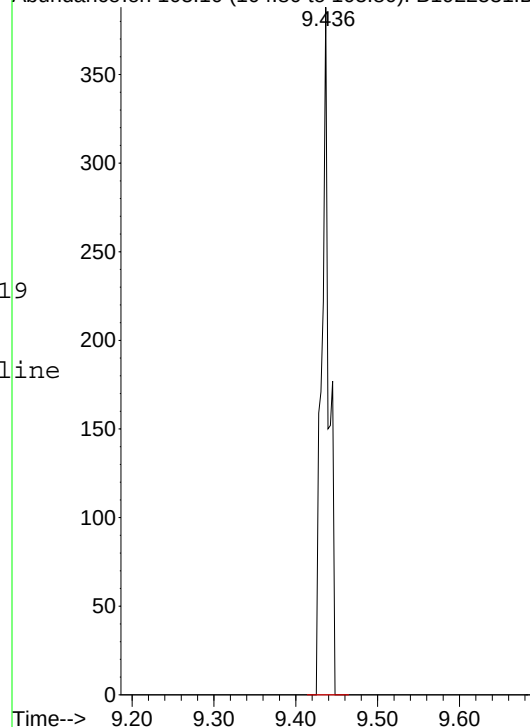
Area : 242

Amount: 0.0583033

## Manual Integration

1,3,5-TRIMETHYLBENZENE

Abundance on 105.10 (104.80 to 105.80): B1922531.D\data

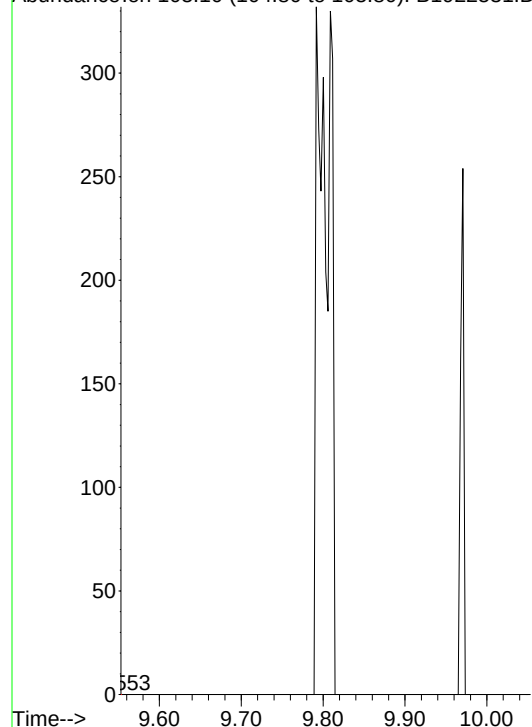


Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 10:55:31 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
1,2,4-TRIMETHYLBENZENE

Abundance on 105.10 (104.80 to 105.80): B1922531.D



Original Int. Results

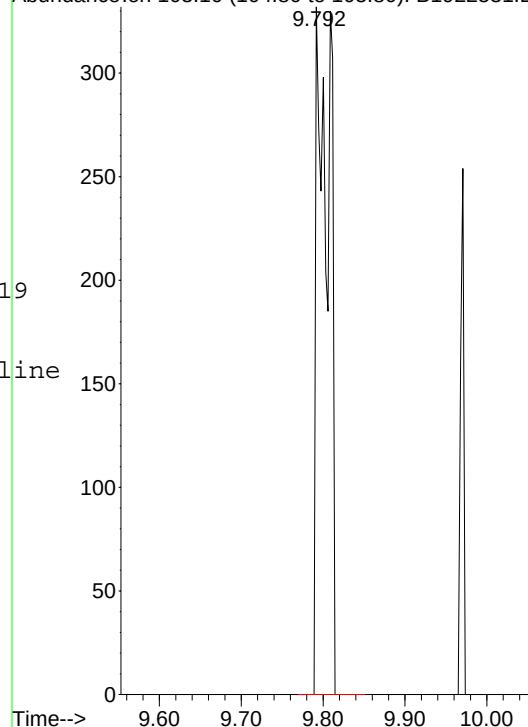
-----  
RT : 0.00  
Area : 0  
Amount: 0

Manual Int. Results

-----  
Wed Aug 14 10:55:29 2019  
MIuser: LBD  
Reason: Incorrect Baseline  
RT : 9.79  
Area : 370  
Amount: 0.0814991

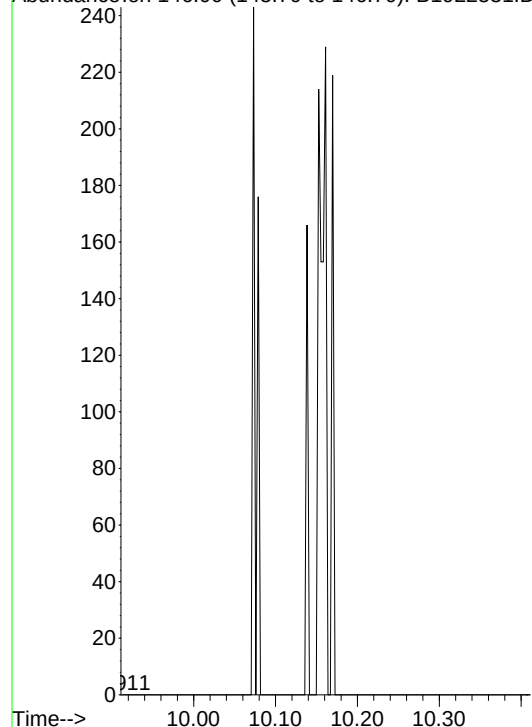
Manual Integration  
1,2,4-TRIMETHYLBENZENE

Abundance on 105.10 (104.80 to 105.80): B1922531.D



Original Integration  
1,4-DICHLOROBENZENE

Abundance on 146.00 (145.70 to 146.70): B1922531.D



Original Int. Results

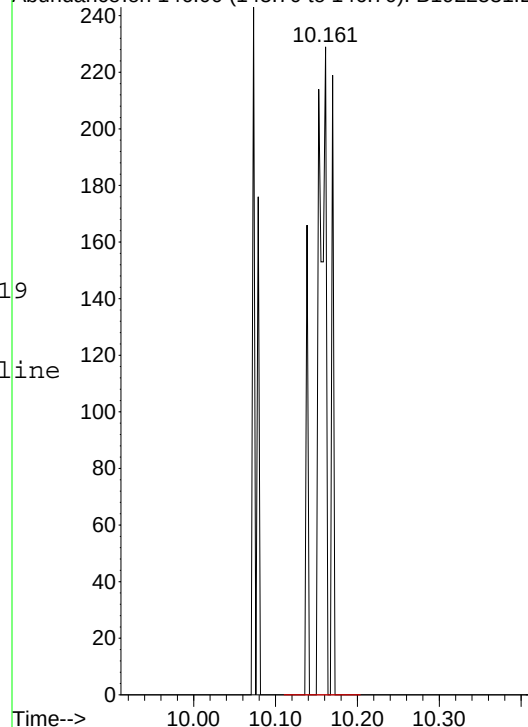
-----  
RT : 0.00  
Area : 0  
Amount: 0

Manual Int. Results

-----  
Wed Aug 14 10:55:34 2019  
MIuser: LBD  
Reason: Incorrect Baseline  
RT : 10.16  
Area : 193  
Amount: 0.0683786

Manual Integration  
1,4-DICHLOROBENZENE

Abundance on 146.00 (145.70 to 146.70): B1922531.D





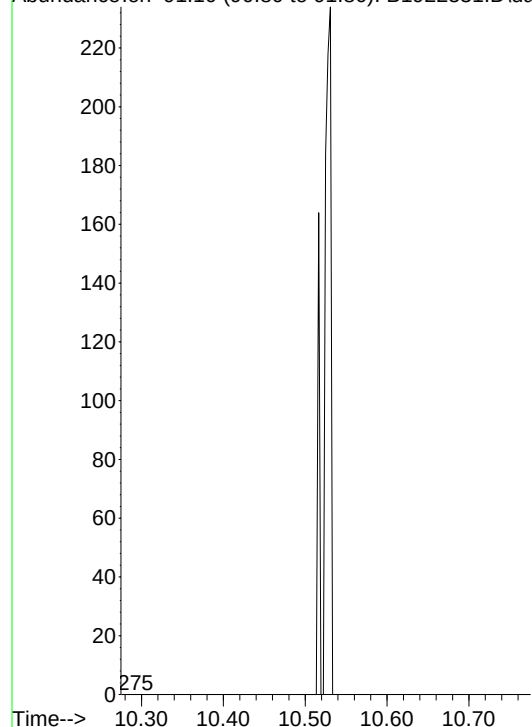
Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 10:55:31 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

## N-BUTYLBENZENE

Abundance on 91.10 (90.80 to 91.80): B1922531.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Wed Aug 14 10:55:37 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 10.53

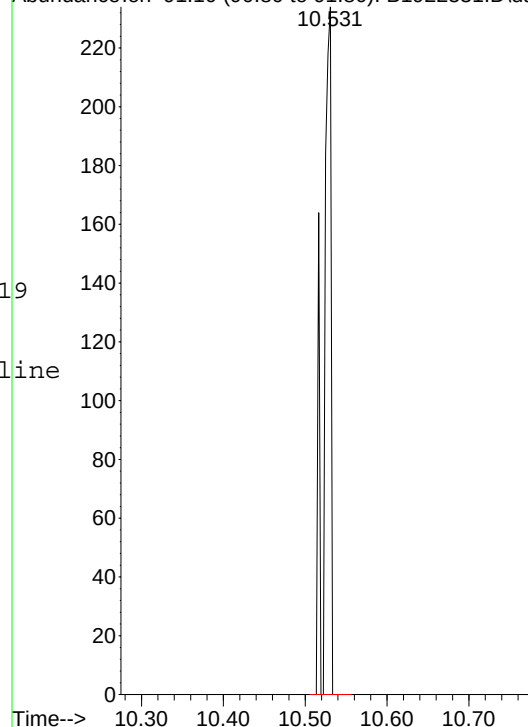
Area : 136

Amount: 0.0344037

## Manual Integration

## N-BUTYLBENZENE

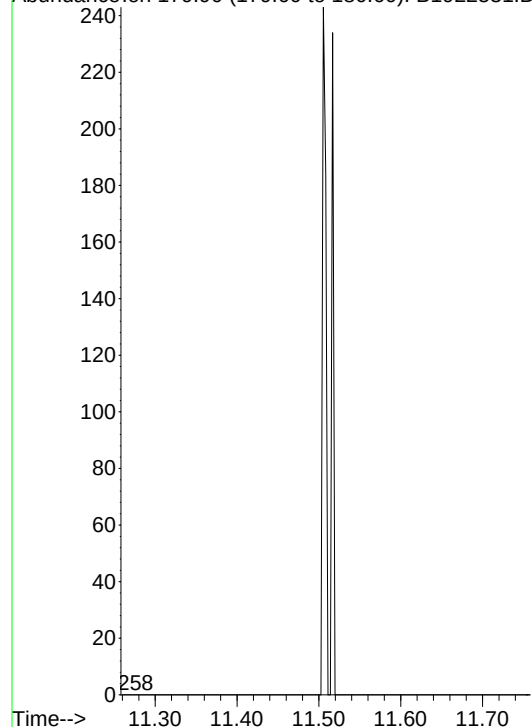
Abundance on 91.10 (90.80 to 91.80): B1922531.D\data



## Original Integration

## 1,3,5-TRICHLOROBENZENE

Abundance on 179.90 (179.60 to 180.60): B1922531.D\data



## Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

## Manual Int. Results

-----

Wed Aug 14 10:55:41 2019

MIuser: LBD

Reason: Incorrect Baseline

RT : 11.51

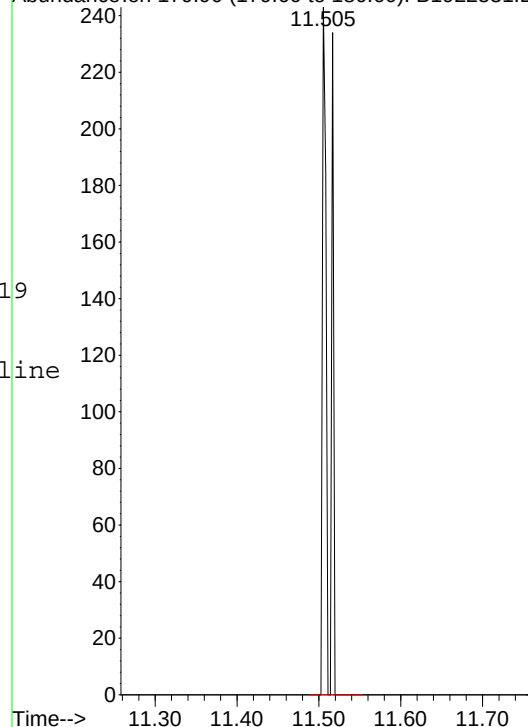
Area : 113

Amount: 0.0654234

## Manual Integration

## 1,3,5-TRICHLOROBENZENE

Abundance on 179.90 (179.60 to 180.60): B1922531.D\data

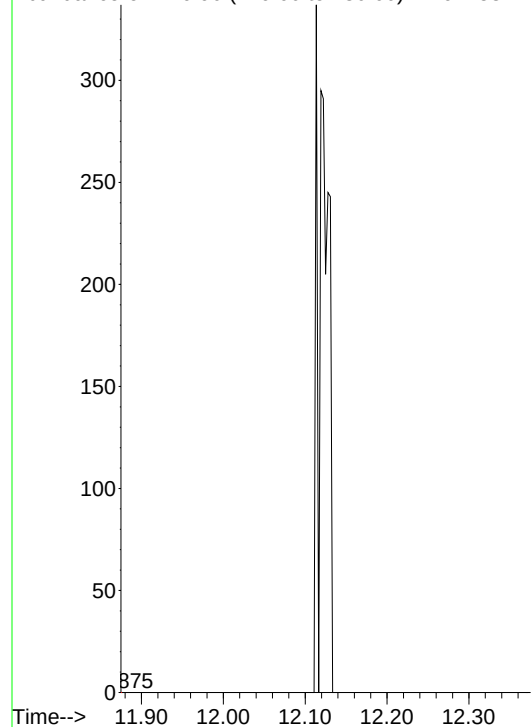


Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :

Quant Time : Wed Aug 14 10:55:31 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

Original Integration  
1,2,4-TRICHLOROBENZENE

Abundance on 179.90 (179.60 to 180.60): B1922531.D



Original Int. Results

-----

RT : 0.00

Area : 0

Amount: 0

Manual Int. Results

-----

Wed Aug 14 10:55:44 2019

MIuser: LBD

Reason: Incorrect Baseline

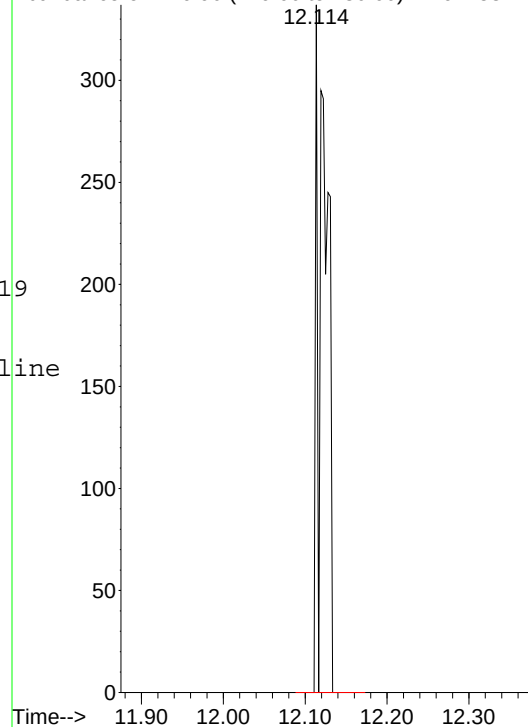
RT : 12.11

Area : 276

Amount: 0.162533

Manual Integration  
1,2,4-TRICHLOROBENZENE

Abundance on 179.90 (179.60 to 180.60): B1922531.D



Data Path : Y:\1\DATA\B081319\  
 Data File : B1922531.D  
 Acq On : 13 Aug 2019 10:02 pm  
 Operator :  
 Sample : B0-BLK1 @ (TICs)  
 Misc :  
 ALS Vial : 31 Sample Multiplier: 1

Integration Parameters: 8260LOW.P  
 Integrator: RTE  
 Smoothing : OFF  
 Sampling : 1  
 Start Thrs: 0.2  
 Stop Thrs : 0  
 Filtering: 5  
 Min Area: 1 % of largest Peak  
 Max Peaks: 100  
 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >  
 Peak separation: 5

Method : Y:\1\METHODS\B041819W.M  
 Title : 8260 CALIBRATION VOAMS 5973

Signal : TIC: B1922531.D\data.ms

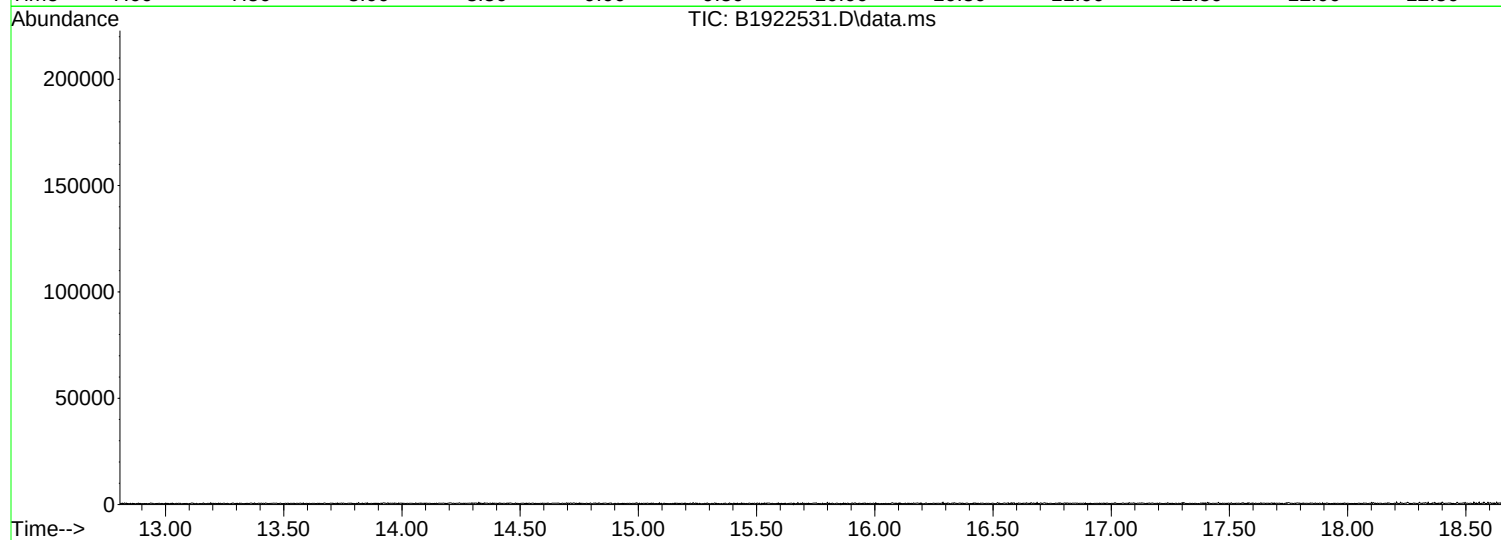
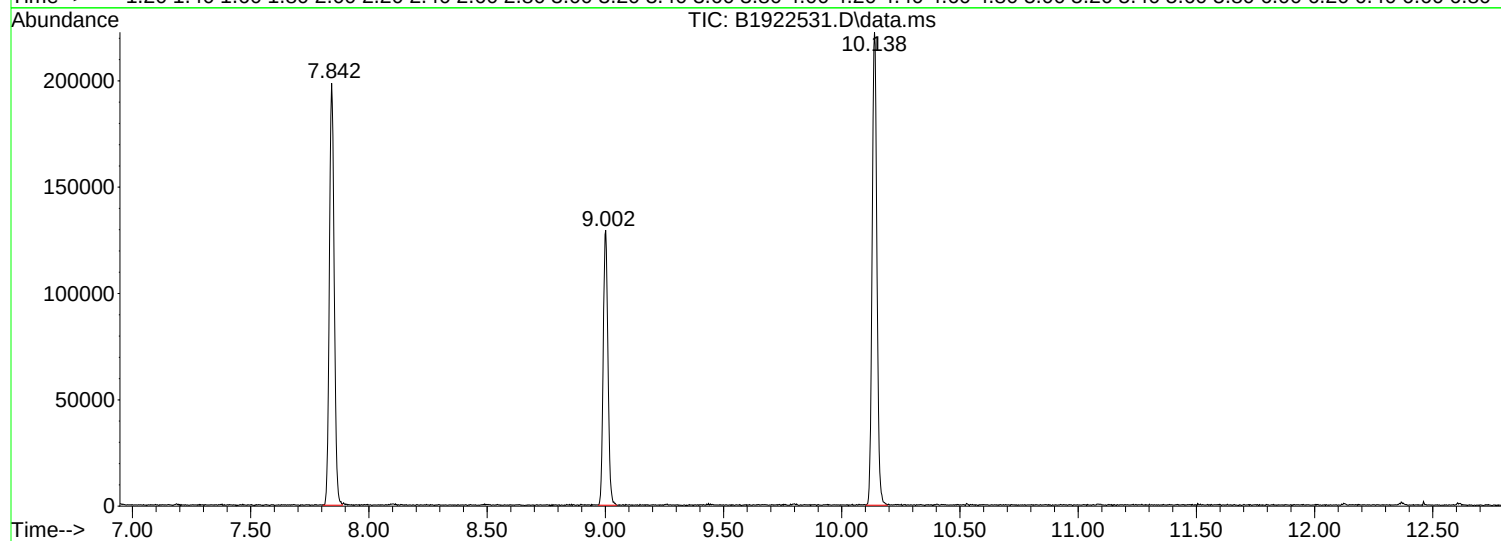
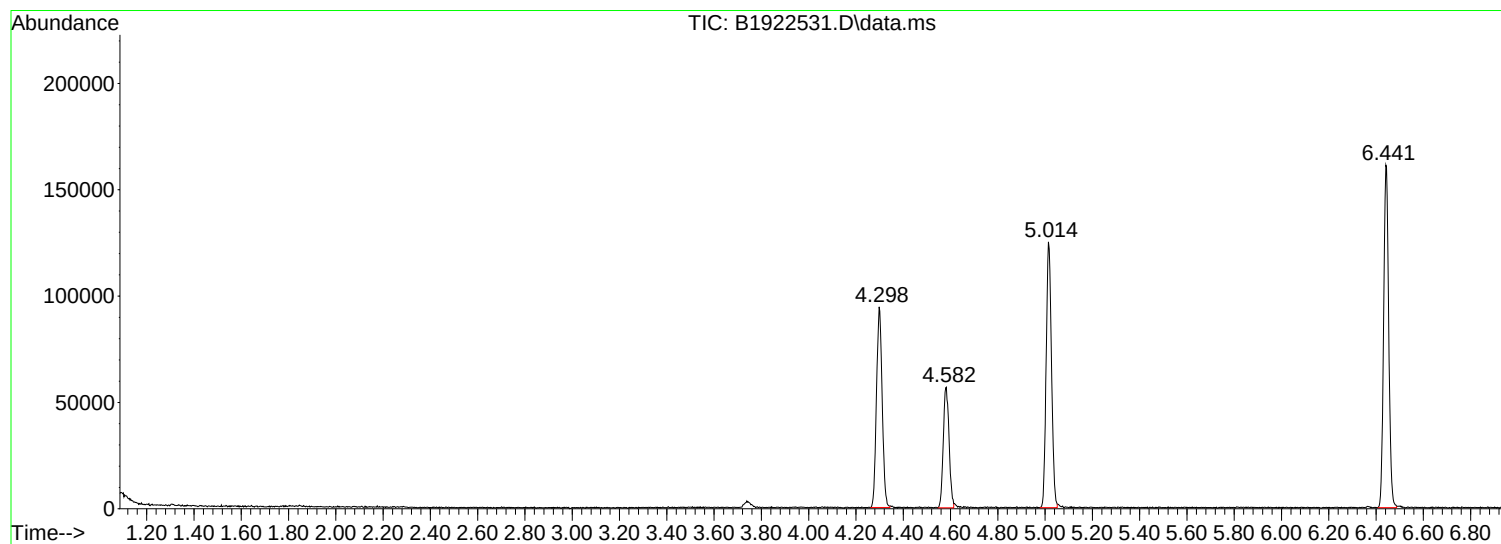
| peak<br># | R.T.<br>min | first<br>scan | max<br>scan | last<br>scan | PK<br>TY | peak<br>height | corr.<br>area | corr.<br>% max. | % of<br>total |
|-----------|-------------|---------------|-------------|--------------|----------|----------------|---------------|-----------------|---------------|
| 1         | 4.298       | 1118          | 1131        | 1147         | rBV      | 94336          | 156690        | 49.89%          | 10.697%       |
| 2         | 4.582       | 1218          | 1231        | 1242         | rBV3     | 56765          | 97023         | 30.89%          | 6.623%        |
| 3         | 5.014       | 1370          | 1383        | 1396         | rBV2     | 124974         | 194874        | 62.05%          | 13.304%       |
| 4         | 6.441       | 1873          | 1885        | 1901         | rBV      | 161122         | 240451        | 76.56%          | 16.415%       |
| 5         | 7.842       | 2365          | 2378        | 2394         | rBV2     | 198482         | 282895        | 90.07%          | 19.312%       |
| 6         | 9.002       | 2775          | 2786        | 2803         | rVB2     | 129263         | 178816        | 56.93%          | 12.207%       |
| 7         | 10.138      | 3173          | 3186        | 3205         | rBV2     | 222393         | 314081        | 100.00%         | 21.441%       |

Sum of corrected areas: 1464830

Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :  
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJ\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P



Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :  
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJD\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

No Library Search Compounds Detected

\*\*\*\*\*

Data Path : Y:\1\DATA\B081319\  
Data File : B1922531.D  
Acq On : 13 Aug 2019 10:02 pm  
Operator :  
Sample : B0-BLK1 @ (TICs)  
Misc :  
ALS Vial : 31 Sample Multiplier: 1

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
Quant Title : 8260 CALIBRATION VOAMS 5973

TIC Library : F:\CTAL-Laboratory\Management\DJJ\Database\NIST08.L  
TIC Integration Parameters: LSCINT.P

| TIC Top Hit name | RT | EstConc | Units | Response | --Internal Standard-- |    |      |      |
|------------------|----|---------|-------|----------|-----------------------|----|------|------|
|                  |    |         |       |          | #                     | RT | Resp | Conc |

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# 1 - FORM I

## ANALYSIS DATA SHEET

### LCS

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|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BS1           |
|             |                                | File ID:       | B1922527.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 19:59        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q    |
|----------|------------------------------------|--------------|------|------|------|
| 67-64-1  | Acetone                            | 97.2         | 3.8  | 50   |      |
| 107-13-1 | Acrylonitrile                      | 10.9         | 0.52 | 5.0  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      | 9.42         | 0.14 | 0.50 |      |
| 71-43-2  | Benzene                            | 9.65         | 0.18 | 1.0  |      |
| 108-86-1 | Bromobenzene                       | 11.0         | 0.15 | 1.0  |      |
| 74-97-5  | Bromochloromethane                 | 11.7         | 0.32 | 1.0  |      |
| 75-27-4  | Bromodichloromethane               | 10.9         | 0.16 | 0.50 |      |
| 75-25-2  | Bromoform                          | 10.6         | 0.46 | 1.0  |      |
| 74-83-9  | Bromomethane                       | 4.40         | 0.78 | 2.0  | V-20 |
| 78-93-3  | 2-Butanone (MEK)                   | 101          | 1.9  | 20   |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           | 112          | 4.2  | 20   |      |
| 104-51-8 | n-Butylbenzene                     | 8.39         | 0.21 | 1.0  | V-05 |
| 135-98-8 | sec-Butylbenzene                   | 9.13         | 0.16 | 1.0  |      |
| 98-06-6  | tert-Butylbenzene                  | 9.92         | 0.17 | 1.0  |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      | 10.1         | 0.16 | 0.50 |      |
| 75-15-0  | Carbon Disulfide                   | 10.2         | 4.4  | 5.0  | V-36 |
| 56-23-5  | Carbon Tetrachloride               | 11.5         | 0.11 | 5.0  |      |
| 108-90-7 | Chlorobenzene                      | 10.4         | 0.15 | 1.0  |      |
| 124-48-1 | Chlorodibromomethane               | 12.1         | 0.21 | 0.50 |      |
| 75-00-3  | Chloroethane                       | 10.0         | 0.35 | 2.0  |      |
| 67-66-3  | Chloroform                         | 10.2         | 0.17 | 2.0  |      |
| 74-87-3  | Chloromethane                      | 6.36         | 0.45 | 2.0  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    | 9.95         | 0.12 | 1.0  |      |
| 106-43-4 | 4-Chlorotoluene                    | 9.78         | 0.14 | 1.0  |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) | 11.6         | 0.53 | 5.0  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            | 10.7         | 0.19 | 0.50 |      |
| 74-95-3  | Dibromomethane                     | 11.6         | 0.37 | 1.0  |      |
| 95-50-1  | 1,2-Dichlorobenzene                | 10.5         | 0.16 | 1.0  |      |
| 541-73-1 | 1,3-Dichlorobenzene                | 10.4         | 0.12 | 1.0  |      |
| 106-46-7 | 1,4-Dichlorobenzene                | 10.0         | 0.13 | 1.0  |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

### LCS

292

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BS1           |
|             |                                | File ID:       | B1922527.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 19:59        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q |
|------------|------------------------------------|--------------|------|------|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        | 10.8         | 0.31 | 2.0  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) | 10.0         | 0.26 | 2.0  |   |
| 75-34-3    | 1,1-Dichloroethane                 | 10.6         | 0.16 | 1.0  |   |
| 107-06-2   | 1,2-Dichloroethane                 | 12.1         | 0.41 | 1.0  |   |
| 75-35-4    | 1,1-Dichloroethylene               | 10.2         | 0.32 | 1.0  |   |
| 156-59-2   | cis-1,2-Dichloroethylene           | 10.4         | 0.13 | 1.0  |   |
| 156-60-5   | trans-1,2-Dichloroethylene         | 11.0         | 0.31 | 1.0  |   |
| 78-87-5    | 1,2-Dichloropropane                | 10.6         | 0.20 | 1.0  |   |
| 142-28-9   | 1,3-Dichloropropane                | 10.3         | 0.11 | 0.50 |   |
| 594-20-7   | 2,2-Dichloropropane                | 10.1         | 0.20 | 1.0  |   |
| 563-58-6   | 1,1-Dichloropropene                | 9.64         | 0.16 | 2.0  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            | 9.93         | 0.13 | 0.50 |   |
| 10061-02-6 | trans-1,3-Dichloropropene          | 10.1         | 0.23 | 0.50 |   |
| 60-29-7    | Diethyl Ether                      | 9.39         | 0.34 | 2.0  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           | 9.84         | 0.17 | 0.50 |   |
| 123-91-1   | 1,4-Dioxane                        | 122          | 22   | 50   |   |
| 100-41-4   | Ethylbenzene                       | 10.1         | 0.13 | 1.0  |   |
| 87-68-3    | Hexachlorobutadiene                | 12.2         | 0.47 | 0.60 |   |
| 591-78-6   | 2-Hexanone (MBK)                   | 111          | 1.5  | 10   |   |
| 98-82-8    | Isopropylbenzene (Cumene)          | 10.8         | 0.17 | 1.0  |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      | 9.98         | 0.20 | 1.0  |   |
| 79-20-9    | Methyl Acetate                     | 9.47         | 0.42 | 1.0  |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     | 10.0         | 0.25 | 1.0  |   |
| 108-87-2   | Methyl Cyclohexane                 | 9.26         | 0.20 | 1.0  |   |
| 75-09-2    | Methylene Chloride                 | 10.1         | 0.34 | 5.0  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        | 111          | 1.7  | 10   |   |
| 91-20-3    | Naphthalene                        | 11.3         | 0.31 | 2.0  |   |
| 103-65-1   | n-Propylbenzene                    | 9.26         | 0.13 | 1.0  |   |
| 100-42-5   | Styrene                            | 10.2         | 0.11 | 1.0  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          | 11.4         | 0.27 | 1.0  |   |



# 1 - FORM I

## ANALYSIS DATA SHEET

### LCS

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|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BS1           |
|             |                                | File ID:       | B1922527.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 19:59        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.       | COMPOUND                                          | CONC. (µg/L) | MDL  | RL   | Q |
|---------------|---------------------------------------------------|--------------|------|------|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                         | 10.4         | 0.22 | 0.50 |   |
| 127-18-4      | Tetrachloroethylene                               | 12.0         | 0.18 | 1.0  |   |
| 109-99-9      | Tetrahydrofuran                                   | 9.65         | 0.51 | 10   | J |
| 108-88-3      | Toluene                                           | 10.1         | 0.14 | 1.0  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                            | 11.3         | 0.57 | 5.0  |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                            | 10.4         | 0.40 | 1.0  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                            | 10.3         | 0.30 | 1.0  |   |
| 71-55-6       | 1,1,1-Trichloroethane                             | 10.7         | 0.20 | 1.0  |   |
| 79-00-5       | 1,1,2-Trichloroethane                             | 10.5         | 0.16 | 1.0  |   |
| 79-01-6       | Trichloroethylene                                 | 10.9         | 0.24 | 1.0  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                 | 10.1         | 0.33 | 2.0  |   |
| 96-18-4       | 1,2,3-Trichloropropane                            | 10.9         | 0.25 | 2.0  |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.8         | 0.32 | 1.0  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                            | 9.39         | 0.18 | 1.0  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                            | 10.5         | 0.14 | 1.0  |   |
| 75-01-4       | Vinyl Chloride                                    | 9.02         | 0.45 | 2.0  |   |
| 108383/106423 | m+p Xylene                                        | 19.8         | 0.30 | 2.0  |   |
| 95-47-6       | o-Xylene                                          | 9.88         | 0.17 | 1.0  |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922527.D  
 Acq On : 13 Aug 2019 7:59 pm  
 Operator :  
 Sample : B0-BS1  
 Misc :  
 ALS Vial : 27 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 10:30:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response           | Conc   | Units  | Dev(Min) |
|-------------------------------|----------------|------|--------------------|--------|--------|----------|
| Internal Standards            |                |      |                    |        |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298          | 168  | 56922              | 30.00  | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.017          | 114  | 83504              | 30.00  | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.842          | 82   | 47516              | 30.00  | UG/L   | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.141         | 152  | 50963              | 30.00  | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |                    |        |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 38182              | 26.03  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 104.12% |        |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 86057              | 26.33  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 105.32% |        |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 37698              | 26.96  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 107.84% |        |        |          |
| Target Compounds              |                |      |                    |        |        |          |
|                               |                |      |                    |        | Qvalue |          |
| 3) DICHLORODIFLOUROMETHANE    | 1.146          | 85   | 12586              | 10.01  | UG/L   | 100      |
| 4) DIFLUOROCHLOROMETHANE      | 1.172          | 51   | 18428              | 9.35   | UG/L   | 100      |
| 5) CHLOROMETHANE              | 1.297          | 50   | 18014              | 6.36   | UG/L # | 74       |
| 6) VINYL CHLORIDE             | 1.325          | 62   | 13899              | 9.02   | UG/L   | 98       |
| 7) BROMOMETHANE               | 1.530          | 94   | 3220               | 4.40   | UG/L   | 99       |
| 8) CHLOROETHANE               | 1.593          | 64   | 8401               | 10.01  | UG/L   | 99       |
| 9) FLUORODICHLOROMETHANE      | 1.715          | 67   | 20707              | 9.53   | UG/L   | 95       |
| 10) TRICHLOROFLUOROMETHANE    | 1.755          | 101  | 17396              | 10.13  | UG/L   | 98       |
| 11) ETHANOL                   | 1.888          | 45   | 1388               | 97.46  | UG/L # | 89       |
| 12) DI ETHYL ETHER            | 1.945          | 59   | 10283              | 9.39   | UG/L   | 94       |
| 13) ACROLEIN                  | 2.050          | 56   | 13164              | 41.32  | UG/L # | 91       |
| 14) ACETONE                   | 2.167          | 43   | 51081              | 97.20  | UG/L   | 99       |
| 15) 1,1-DICHLOROETHENE        | 2.113          | 61   | 19606              | 10.18  | UG/L   | 99       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.104          | 101  | 8706               | 10.84  | UG/L # | 80       |
| 17) IODOMETHANE               | 2.238          | 142  | 9959               | 7.25   | UG/L   | 94       |
| 18) METHYL ACETATE            | 2.422          | 43   | 15640              | 9.47   | UG/L   | 98       |
| 19) T-BUTYL ALCOHOL           | 2.621          | 59   | 16751              | 111.60 | UG/L   | 97       |
| 20) ACRYLONITRILE             | 2.746          | 53   | 6621               | 10.92  | UG/L   | 99       |
| 21) METHYLENE CHLORIDE        | 2.505          | 49   | 22767              | 10.09  | UG/L   | 93       |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 30654              | 10.18  | UG/L   | 98       |
| 23) METHYL TERT-BUTYL ETHE... | 2.741          | 73   | 32717              | 10.05  | UG/L   | 98       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.744          | 61   | 20771              | 11.05  | UG/L   | 94       |
| 25) 1,1-DICHLOROETHANE        | 3.167          | 63   | 24617              | 10.64  | UG/L   | 99       |
| 26) VINYL ACETATE             | 3.230          | 43   | 370372             | 99.62  | UG/L   | 100      |
| 27) DI ISOPROPYL ETHER        | 3.232          | 45   | 49397              | 9.84   | UG/L   | 99       |
| 28) 2-BUTANONE                | 3.795          | 43   | 80409              | 101.18 | UG/L   | 96       |
| 29) T-BUTYL ETHYL ETHER       | 3.605          | 59   | 43753              | 10.10  | UG/L   | 98       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.758          | 61   | 23796              | 10.43  | UG/L   | 94       |
| 31) 2,2-DICHLOROPROPANE       | 3.750          | 77   | 17295              | 10.08  | UG/L   | 97       |
| 32) ETHYL ACETATE             | 3.858          | 43   | 19435m             | 9.63   | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.003          | 128  | 6696               | 11.70  | UG/L   | 94       |
| 34) TETRAHYDROFURAN           | 4.051          | 42   | 5156               | 9.65   | UG/L # | 54       |
| 36) CHLOROFORM                | 4.091          | 83   | 21564              | 10.18  | UG/L   | 97       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 19670              | 10.67  | UG/L   | 97       |
| 38) CYCLOHEXANE               | 4.287          | 56   | 25535              | 10.63  | UG/L   | 90       |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 18049              | 11.50  | UG/L   | 100      |
| 40) 1,1-DICHLOROPROPENE       | 4.412          | 75   | 14363              | 9.64   | UG/L   | 96       |
| 41) BENZENE                   | 4.622          | 78   | 40502              | 9.65   | UG/L   | 99       |
| 43) T-AMYLMETHYL ETHER        | 4.739          | 73   | 28573              | 9.42   | UG/L # | 91       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 24040              | 12.13  | UG/L   | 96       |
| 47) TRICHLOROETHENE           | 5.259          | 95   | 11504              | 10.86  | UG/L   | 97       |
| 48) METHYLCYCLOHEXANE         | 5.426          | 83   | 13314              | 9.26   | UG/L # | 88       |
| 49) 1,2-DICHLOROPROPANE       | 5.486          | 63   | 12790              | 10.62  | UG/L   | 97       |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922527.D  
 Acq On : 13 Aug 2019 7:59 pm  
 Operator :  
 Sample : B0-BS1  
 Misc :  
 ALS Vial : 27 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 10:30:45 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 50) DIBROMOMETHANE            | 5.600  | 93   | 8252     | 11.62  | UG/L   | 93       |
| 51) 1,4-DIOXANE               | 5.634  | 88   | 918      | 122.13 | UG/L # | 99       |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 16588    | 10.93  | UG/L   | 94       |
| 53) 2-CHLOROETHYL VINYLETHYR  | 6.077  | 63   | 360m     | 0.44   | UG/L   |          |
| 54) MIBK                      | 6.361  | 43   | 167322   | 111.41 | UG/L   | 96       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.197  | 75   | 17284    | 9.93   | UG/L   | 99       |
| 56) TOLUENE                   | 6.506  | 91   | 43373    | 10.14  | UG/L   | 100      |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.748  | 75   | 16877    | 10.10  | UG/L   | 95       |
| 59) 1,1,2-TRICHLOROETHANE     | 6.921  | 97   | 10224    | 10.54  | UG/L   | 97       |
| 60) 2-HEXANONE                | 7.177  | 43   | 123053   | 111.32 | UG/L   | 94       |
| 61) TETRACHLOROETHENE         | 7.024  | 164  | 9872     | 11.95  | UG/L   | 97       |
| 62) 1,3-DICHLOROPROPANE       | 7.080  | 76   | 17508    | 10.26  | UG/L   | 94       |
| 63) DIBROMOCHLOROMETHANE      | 7.291  | 129  | 13609    | 12.12  | UG/L   | 98       |
| 64) 1,2-DIBROMOETHANE         | 7.393  | 107  | 11594    | 10.72  | UG/L # | 95       |
| 67) CHLOROBENZENE             | 7.868  | 112  | 31329    | 10.45  | UG/L   | 98       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.959  | 131  | 12461    | 11.41  | UG/L   | 97       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 52666    | 10.09  | UG/L   | 99       |
| 70) M/P-XYLENES               | 8.098  | 91   | 82174    | 19.80  | UG/L   | 99       |
| 71) O-XYLENE                  | 8.487  | 91   | 42324    | 9.88   | UG/L   | 99       |
| 72) STYRENE                   | 8.501  | 104  | 34975    | 10.24  | UG/L   | 95       |
| 73) BROMOFORM                 | 8.686  | 173  | 9408     | 10.65  | UG/L   | 99       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 52955    | 10.81  | UG/L   | 100      |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.166  | 83   | 14620    | 10.35  | UG/L # | 94       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.226  | 53   | 7207     | 10.75  | UG/L   | 98       |
| 78) BROMOBENZENE              | 9.141  | 77   | 22855    | 11.01  | UG/L   | 99       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.201  | 110  | 4850     | 10.90  | UG/L   | 85       |
| 80) N-PROPYLBENZENE           | 9.257  | 91   | 55869    | 9.26   | UG/L   | 97       |
| 81) 2-CHLOROTOLUENE           | 9.334  | 91   | 36919    | 9.95   | UG/L   | 95       |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.436  | 105  | 44179    | 10.52  | UG/L   | 100      |
| 83) 4-CHLOROTOLUENE           | 9.442  | 91   | 43549    | 9.78   | UG/L   | 96       |
| 85) TERT-BUTYLBENZENE         | 9.755  | 119  | 37116    | 9.92   | UG/L   | 94       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.800  | 105  | 44012    | 9.39   | UG/L   | 97       |
| 87) SEC-BUTYLBENZENE          | 9.968  | 105  | 48092    | 9.13   | UG/L   | 98       |
| 88) 1,3-DICHLOROBENZENE       | 10.070 | 146  | 29086    | 10.40  | UG/L   | 100      |
| 89) P-ISOPROPYLTOLUENE        | 10.119 | 119  | 45453    | 9.98   | UG/L   | 98       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 29262    | 10.04  | UG/L   | 99       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 34263    | 8.39   | UG/L   | 94       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 28402    | 10.51  | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.309 | 75   | 3609     | 11.56  | UG/L   | 94       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.505 | 180  | 18295    | 10.26  | UG/L   | 100      |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.125 | 180  | 18320    | 10.45  | UG/L   | 98       |
| 96) HEXACHLOROBUTADIENE       | 12.293 | 225  | 7298     | 12.20  | UG/L   | 97       |
| 97) NAPHTHALENE               | 12.367 | 128  | 52187    | 11.32  | UG/L   | 99       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180  | 17793    | 11.27  | UG/L   | 98       |

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

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Inst : GCMSVOA2

[illegible]

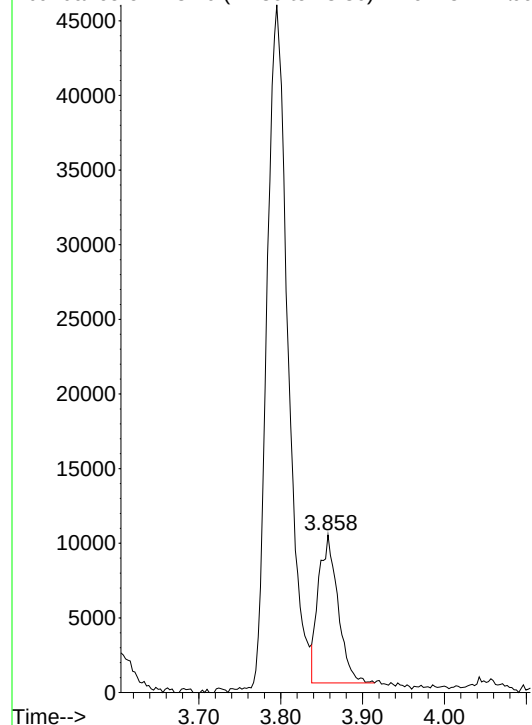
Data Path : Y:\1\DATA\B081319\  
Data File : B1922527.D  
Acq On : 13 Aug 2019 7:59 pm  
Operator :  
Sample : B0-BS1  
Misc :

Quant Time : Wed Aug 14 10:30:45 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): B1922527.D\data



## Original Int. Results

-----

RT : 3.86  
Area : 16299  
Amount: 8.07928

## Manual Int. Results

-----

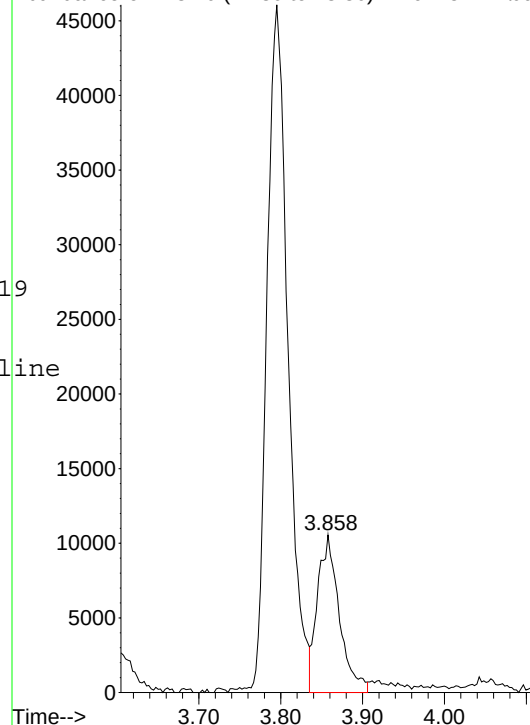
Wed Aug 14 10:30:34 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.86  
Area : 19435  
Amount: 9.63376

## Manual Integration

ETHYL ACETATE

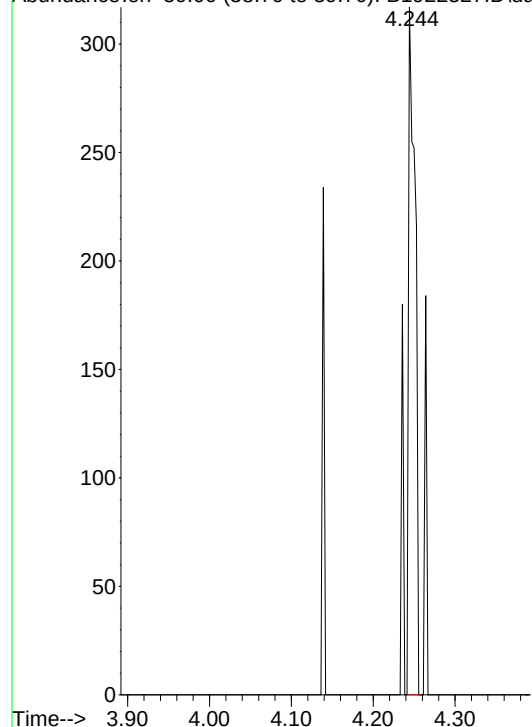
Abundance on 43.10 (42.80 to 43.80): B1922527.D\data



## Original Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922527.D\data



## Original Int. Results

-----

RT : 4.24  
Area : 177  
Amount: 0.152101

## Manual Int. Results

-----

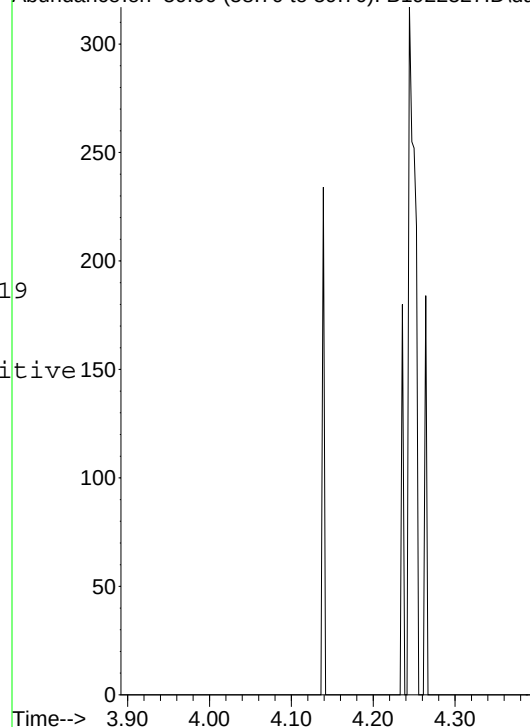
Wed Aug 14 10:30:40 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922527.D\data



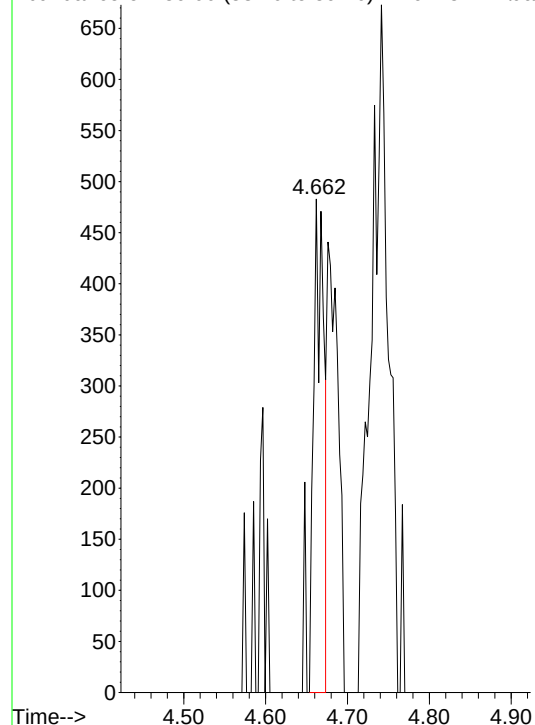
Data Path : Y:\1\DATA\B081319\  
Data File : B1922527.D  
Acq On : 13 Aug 2019 7:59 pm  
Operator :  
Sample : B0-BS1  
Misc :

Quant Time : Wed Aug 14 10:30:45 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

T-AMYL ALCOHOL

Abundance on 59.00 (58.70 to 59.70): B1922527.D\data



## Original Int. Results

-----

RT : 4.66  
Area : 414  
Amount: 3.85724

## Manual Int. Results

-----

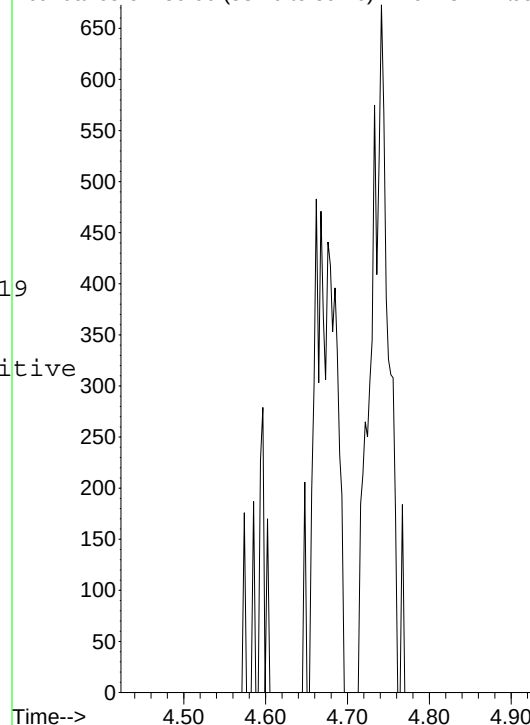
Wed Aug 14 10:30:47 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-AMYL ALCOHOL

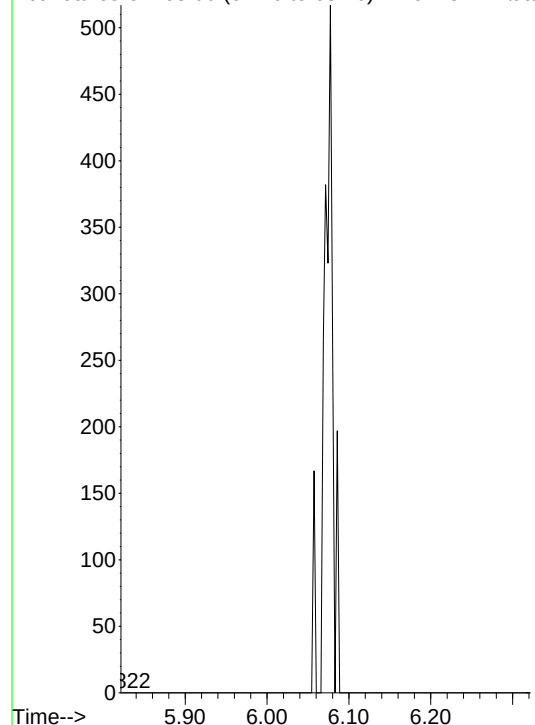
Abundance on 59.00 (58.70 to 59.70): B1922527.D\data



## Original Integration

2-CHLOROETHYL VINYLETHER

Abundance on 63.00 (62.70 to 63.70): B1922527.D\data



## Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

## Manual Int. Results

-----

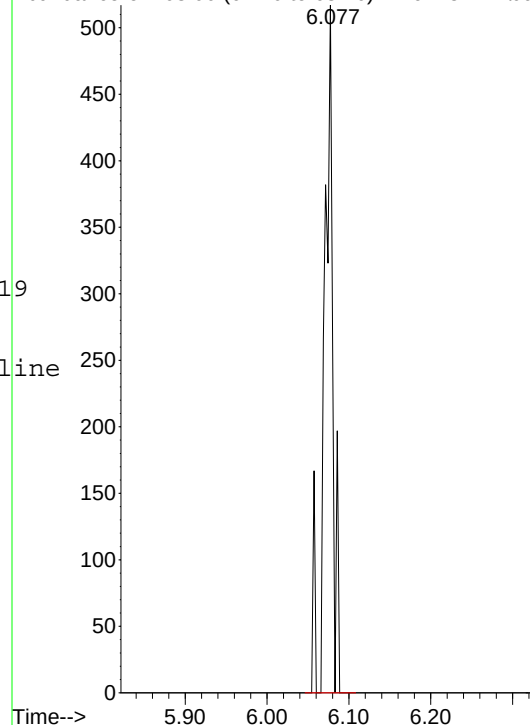
Wed Aug 14 10:30:56 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 6.08  
Area : 360  
Amount: 0.44244

## Manual Integration

2-CHLOROETHYL VINYLETHER

Abundance on 63.00 (62.70 to 63.70): B1922527.D\data



# 1 - FORM I

## ANALYSIS DATA SHEET

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LCS Dup

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BSD1          |
|             |                                | File ID:       | B1922528.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 20:30        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.  | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q    |
|----------|------------------------------------|--------------|------|------|------|
| 67-64-1  | Acetone                            | 93.9         | 3.8  | 50   |      |
| 107-13-1 | Acrylonitrile                      | 11.0         | 0.52 | 5.0  |      |
| 994-05-8 | tert-Amyl Methyl Ether (TAME)      | 9.02         | 0.14 | 0.50 |      |
| 71-43-2  | Benzene                            | 9.30         | 0.18 | 1.0  |      |
| 108-86-1 | Bromobenzene                       | 10.5         | 0.15 | 1.0  |      |
| 74-97-5  | Bromochloromethane                 | 11.0         | 0.32 | 1.0  |      |
| 75-27-4  | Bromodichloromethane               | 11.0         | 0.16 | 0.50 |      |
| 75-25-2  | Bromoform                          | 10.1         | 0.46 | 1.0  |      |
| 74-83-9  | Bromomethane                       | 4.71         | 0.78 | 2.0  | V-20 |
| 78-93-3  | 2-Butanone (MEK)                   | 98.8         | 1.9  | 20   |      |
| 75-65-0  | tert-Butyl Alcohol (TBA)           | 109          | 4.2  | 20   |      |
| 104-51-8 | n-Butylbenzene                     | 8.41         | 0.21 | 1.0  | V-05 |
| 135-98-8 | sec-Butylbenzene                   | 9.08         | 0.16 | 1.0  |      |
| 98-06-6  | tert-Butylbenzene                  | 9.79         | 0.17 | 1.0  |      |
| 637-92-3 | tert-Butyl Ethyl Ether (TBEE)      | 9.89         | 0.16 | 0.50 |      |
| 75-15-0  | Carbon Disulfide                   | 9.92         | 4.4  | 5.0  | V-36 |
| 56-23-5  | Carbon Tetrachloride               | 11.1         | 0.11 | 5.0  |      |
| 108-90-7 | Chlorobenzene                      | 10.4         | 0.15 | 1.0  |      |
| 124-48-1 | Chlorodibromomethane               | 12.3         | 0.21 | 0.50 |      |
| 75-00-3  | Chloroethane                       | 9.93         | 0.35 | 2.0  |      |
| 67-66-3  | Chloroform                         | 10.2         | 0.17 | 2.0  |      |
| 74-87-3  | Chloromethane                      | 6.25         | 0.45 | 2.0  | V-05 |
| 95-49-8  | 2-Chlorotoluene                    | 10.2         | 0.12 | 1.0  |      |
| 106-43-4 | 4-Chlorotoluene                    | 9.82         | 0.14 | 1.0  |      |
| 96-12-8  | 1,2-Dibromo-3-chloropropane (DBCP) | 11.7         | 0.53 | 5.0  |      |
| 106-93-4 | 1,2-Dibromoethane (EDB)            | 10.8         | 0.19 | 0.50 |      |
| 74-95-3  | Dibromomethane                     | 11.6         | 0.37 | 1.0  |      |
| 95-50-1  | 1,2-Dichlorobenzene                | 10.4         | 0.16 | 1.0  |      |
| 541-73-1 | 1,3-Dichlorobenzene                | 10.2         | 0.12 | 1.0  |      |
| 106-46-7 | 1,4-Dichlorobenzene                | 10.3         | 0.13 | 1.0  |      |

# 1 - FORM I

## ANALYSIS DATA SHEET

300

LCS Dup

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BSD1          |
|             |                                | File ID:       | B1922528.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 20:30        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.    | COMPOUND                           | CONC. (µg/L) | MDL  | RL   | Q |
|------------|------------------------------------|--------------|------|------|---|
| 110-57-6   | trans-1,4-Dichloro-2-butene        | 10.3         | 0.31 | 2.0  |   |
| 75-71-8    | Dichlorodifluoromethane (Freon 12) | 10.1         | 0.26 | 2.0  |   |
| 75-34-3    | 1,1-Dichloroethane                 | 10.7         | 0.16 | 1.0  |   |
| 107-06-2   | 1,2-Dichloroethane                 | 12.2         | 0.41 | 1.0  |   |
| 75-35-4    | 1,1-Dichloroethylene               | 9.97         | 0.32 | 1.0  |   |
| 156-59-2   | cis-1,2-Dichloroethylene           | 10.3         | 0.13 | 1.0  |   |
| 156-60-5   | trans-1,2-Dichloroethylene         | 11.0         | 0.31 | 1.0  |   |
| 78-87-5    | 1,2-Dichloropropane                | 10.9         | 0.20 | 1.0  |   |
| 142-28-9   | 1,3-Dichloropropane                | 10.3         | 0.11 | 0.50 |   |
| 594-20-7   | 2,2-Dichloropropane                | 9.72         | 0.20 | 1.0  |   |
| 563-58-6   | 1,1-Dichloropropene                | 9.92         | 0.16 | 2.0  |   |
| 10061-01-5 | cis-1,3-Dichloropropene            | 9.93         | 0.13 | 0.50 |   |
| 10061-02-6 | trans-1,3-Dichloropropene          | 10.3         | 0.23 | 0.50 |   |
| 60-29-7    | Diethyl Ether                      | 9.29         | 0.34 | 2.0  |   |
| 108-20-3   | Diisopropyl Ether (DIPE)           | 9.82         | 0.17 | 0.50 |   |
| 123-91-1   | 1,4-Dioxane                        | 127          | 22   | 50   |   |
| 100-41-4   | Ethylbenzene                       | 9.94         | 0.13 | 1.0  |   |
| 87-68-3    | Hexachlorobutadiene                | 11.6         | 0.47 | 0.60 |   |
| 591-78-6   | 2-Hexanone (MBK)                   | 112          | 1.5  | 10   |   |
| 98-82-8    | Isopropylbenzene (Cumene)          | 10.8         | 0.17 | 1.0  |   |
| 99-87-6    | p-Isopropyltoluene (p-Cymene)      | 9.88         | 0.20 | 1.0  |   |
| 79-20-9    | Methyl Acetate                     | 9.16         | 0.42 | 1.0  |   |
| 1634-04-4  | Methyl tert-Butyl Ether (MTBE)     | 9.98         | 0.25 | 1.0  |   |
| 108-87-2   | Methyl Cyclohexane                 | 9.20         | 0.20 | 1.0  |   |
| 75-09-2    | Methylene Chloride                 | 9.73         | 0.34 | 5.0  |   |
| 108-10-1   | 4-Methyl-2-pentanone (MIBK)        | 111          | 1.7  | 10   |   |
| 91-20-3    | Naphthalene                        | 11.2         | 0.31 | 2.0  |   |
| 103-65-1   | n-Propylbenzene                    | 9.27         | 0.13 | 1.0  |   |
| 100-42-5   | Styrene                            | 10.2         | 0.11 | 1.0  |   |
| 630-20-6   | 1,1,1,2-Tetrachloroethane          | 11.2         | 0.27 | 1.0  |   |



# 1 - FORM I

## ANALYSIS DATA SHEET

301

LCS Dup

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B237875-BSD1          |
|             |                                | File ID:       | B1922528.D            |
| Sampled:    |                                | Prepared:      | 08/13/19 07:22        |
|             |                                | Analyzed:      | 08/13/19 20:30        |
| Solids:     |                                | Preparation:   | SW-846 5030B          |
|             |                                | Dilution:      |                       |
| Batch:      | B237875                        | Sequence:      | S039168               |
|             |                                | Calibration:   | 1900126               |
|             |                                | Instrument:    | GCMSVOA2              |
| Column:     | 1                              |                |                       |

| CAS NO.       | COMPOUND                                          | CONC. (µg/L) | MDL  | RL   | Q |
|---------------|---------------------------------------------------|--------------|------|------|---|
| 79-34-5       | 1,1,2,2-Tetrachloroethane                         | 10.3         | 0.22 | 0.50 |   |
| 127-18-4      | Tetrachloroethylene                               | 11.5         | 0.18 | 1.0  |   |
| 109-99-9      | Tetrahydrofuran                                   | 9.42         | 0.51 | 10   | J |
| 108-88-3      | Toluene                                           | 10.1         | 0.14 | 1.0  |   |
| 87-61-6       | 1,2,3-Trichlorobenzene                            | 11.4         | 0.57 | 5.0  |   |
| 120-82-1      | 1,2,4-Trichlorobenzene                            | 10.5         | 0.40 | 1.0  |   |
| 108-70-3      | 1,3,5-Trichlorobenzene                            | 10.4         | 0.30 | 1.0  |   |
| 71-55-6       | 1,1,1-Trichloroethane                             | 10.8         | 0.20 | 1.0  |   |
| 79-00-5       | 1,1,2-Trichloroethane                             | 10.6         | 0.16 | 1.0  |   |
| 79-01-6       | Trichloroethylene                                 | 11.0         | 0.24 | 1.0  |   |
| 75-69-4       | Trichlorofluoromethane (Freon 11)                 | 9.73         | 0.33 | 2.0  |   |
| 96-18-4       | 1,2,3-Trichloropropane                            | 11.0         | 0.25 | 2.0  |   |
| 76-13-1       | 1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113) | 10.9         | 0.32 | 1.0  |   |
| 95-63-6       | 1,2,4-Trimethylbenzene                            | 9.59         | 0.18 | 1.0  |   |
| 108-67-8      | 1,3,5-Trimethylbenzene                            | 10.1         | 0.14 | 1.0  |   |
| 75-01-4       | Vinyl Chloride                                    | 8.74         | 0.45 | 2.0  |   |
| 108383/106423 | m+p Xylene                                        | 19.7         | 0.30 | 2.0  |   |
| 95-47-6       | o-Xylene                                          | 9.87         | 0.17 | 1.0  |   |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922528.D  
 Acq On : 13 Aug 2019 8:30 pm  
 Operator :  
 Sample : B0-BSD1  
 Misc :  
 ALS Vial : 28 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 10:32:54 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.           | QIon | Response           | Conc   | Units  | Dev(Min) |
|-------------------------------|----------------|------|--------------------|--------|--------|----------|
| Internal Standards            |                |      |                    |        |        |          |
| 1) PENTAFLUOROBENZENE - ISTD  | 4.298          | 168  | 56895              | 30.00  | UG/L   | 0.00     |
| 44) 1,4-DIFLOUROBENZENE - ... | 5.014          | 114  | 82184              | 30.00  | UG/L   | 0.00     |
| 65) CHLOROBENZENE-D5 ISTD     | 7.845          | 82   | 47614              | 30.00  | UG/L   | 0.00     |
| 84) 1,4-DICHLOROBENZENE-D4... | 10.138         | 152  | 51015              | 30.00  | UG/L   | 0.00     |
| System Monitoring Compounds   |                |      |                    |        |        |          |
| 2) 1,2-DICHLOROETHANE-D4 SS   | 4.582          | 65   | 38659              | 26.37  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 105.48% |        |        |          |
| 45) TOLUENE-D8 SS             | 6.444          | 98   | 86482              | 26.89  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 107.56% |        |        |          |
| 66) 4-BROMOFLUROBENZENE SS    | 9.002          | 95   | 37481              | 26.75  | UG/L   | 0.00     |
| Spiked Amount 25.000          | Range 70 - 130 |      | Recovery = 107.00% |        |        |          |
| Target Compounds              |                |      |                    |        |        |          |
|                               |                |      |                    |        | Qvalue |          |
| 3) DICHLORODIFLOUROMETHANE    | 1.146          | 85   | 12712              | 10.12  | UG/L   | 100      |
| 4) DIFLUOROCHLOROMETHANE      | 1.163          | 51   | 18396              | 9.34   | UG/L   | 95       |
| 5) CHLOROMETHANE              | 1.277          | 50   | 17685              | 6.25   | UG/L   | 99       |
| 6) VINYL CHLORIDE             | 1.325          | 62   | 13457              | 8.74   | UG/L   | 99       |
| 7) BROMOMETHANE               | 1.530          | 94   | 3448               | 4.71   | UG/L   | 88       |
| 8) CHLOROETHANE               | 1.593          | 64   | 8331               | 9.93   | UG/L   | 98       |
| 9) FLUORODICHLOROMETHANE      | 1.718          | 67   | 20802              | 9.58   | UG/L   | 97       |
| 10) TRICHLOROFLUOROMETHANE    | 1.755          | 101  | 16700              | 9.73   | UG/L   | 98       |
| 11) ETHANOL                   | 1.885          | 45   | 1230               | 86.41  | UG/L # | 78       |
| 12) DI ETHYL ETHER            | 1.945          | 59   | 10172              | 9.29   | UG/L   | 92       |
| 13) ACROLEIN                  | 2.053          | 56   | 13130              | 41.23  | UG/L # | 91       |
| 14) ACETONE                   | 2.167          | 43   | 49311              | 93.88  | UG/L   | 99       |
| 15) 1,1-DICHLOROETHENE        | 2.113          | 61   | 19198              | 9.97   | UG/L   | 99       |
| 16) 1,1,2-TRICL-1,2,2-TRIF... | 2.104          | 101  | 8716               | 10.86  | UG/L   | 84       |
| 17) IODOMETHANE               | 2.235          | 142  | 8220               | 5.98   | UG/L   | 92       |
| 18) METHYL ACETATE            | 2.420          | 43   | 15133              | 9.16   | UG/L   | 97       |
| 19) T-BUTYL ALCOHOL           | 2.619          | 59   | 16361              | 109.06 | UG/L   | 95       |
| 20) ACRYLONITRILE             | 2.741          | 53   | 6679               | 11.02  | UG/L   | 97       |
| 21) METHYLENE CHLORIDE        | 2.502          | 49   | 21934              | 9.73   | UG/L   | 97       |
| 22) CARBON DISULFIDE          | 2.283          | 76   | 29843              | 9.92   | UG/L   | 98       |
| 23) METHYL TERT-BUTYL ETHE... | 2.744          | 73   | 32458              | 9.98   | UG/L   | 96       |
| 24) TRANS 1,2-DICHLOROETHENE  | 2.741          | 61   | 20567              | 10.95  | UG/L   | 93       |
| 25) 1,1-DICHLOROETHANE        | 3.167          | 63   | 24674              | 10.67  | UG/L   | 97       |
| 26) VINYL ACETATE             | 3.230          | 43   | 362113             | 97.45  | UG/L   | 99       |
| 27) DI ISOPROPYL ETHER        | 3.235          | 45   | 49287              | 9.82   | UG/L   | 98       |
| 28) 2-BUTANONE                | 3.792          | 43   | 78497              | 98.82  | UG/L   | 96       |
| 29) T-BUTYL ETHYL ETHER       | 3.605          | 59   | 42832              | 9.89   | UG/L   | 97       |
| 30) CIS-1,2-DICHLOROETHENE    | 3.755          | 61   | 23575              | 10.34  | UG/L   | 95       |
| 31) 2,2-DICHLOROPROPANE       | 3.750          | 77   | 16662              | 9.72   | UG/L   | 98       |
| 32) ETHYL ACETATE             | 3.858          | 43   | 20704m             | 10.27  | UG/L   |          |
| 33) BROMOCHLOROMETHANE        | 4.000          | 128  | 6312               | 11.03  | UG/L   | 99       |
| 34) TETRAHYDROFURAN           | 4.054          | 42   | 5028               | 9.42   | UG/L # | 55       |
| 36) CHLOROFORM                | 4.088          | 83   | 21560              | 10.19  | UG/L   | 99       |
| 37) 1,1,1-TRICHLOROETHANE     | 4.250          | 97   | 19807              | 10.75  | UG/L   | 97       |
| 38) CYCLOHEXANE               | 4.287          | 56   | 25486              | 10.62  | UG/L   | 89       |
| 39) CARBON TETRACHLORIDE      | 4.406          | 117  | 17346              | 11.06  | UG/L   | 99       |
| 40) 1,1-DICHLOROPROPENE       | 4.412          | 75   | 14771              | 9.92   | UG/L   | 98       |
| 41) BENZENE                   | 4.619          | 78   | 39038              | 9.30   | UG/L   | 99       |
| 43) T-AMYLMETHYL ETHER        | 4.739          | 73   | 27347              | 9.02   | UG/L # | 88       |
| 46) 1,2-DICHLOROETHANE        | 4.656          | 62   | 23781              | 12.19  | UG/L   | 95       |
| 47) TRICHLOROETHENE           | 5.256          | 95   | 11489              | 11.02  | UG/L   | 98       |
| 48) METHYLCYCLOHEXANE         | 5.426          | 83   | 13009              | 9.20   | UG/L # | 87       |
| 49) 1,2-DICHLOROPROPANE       | 5.483          | 63   | 12938              | 10.92  | UG/L   | 97       |

Data Path : Y:\1\DATA\B081319\  
 Data File : B1922528.D  
 Acq On : 13 Aug 2019 8:30 pm  
 Operator :  
 Sample : B0-BSD1  
 Misc :  
 ALS Vial : 28 Sample Multiplier: 1

Inst : GCMSVOA2

Quant Time: Aug 14 10:32:54 2019  
 Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
 Quant Title : 8260 CALIBRATION VOAMS 5973  
 QLast Update : Fri Apr 19 05:25:51 2019  
 Response via : Initial Calibration

| Compound                      | R.T.   | QIon | Response | Conc   | Units  | Dev(Min) |
|-------------------------------|--------|------|----------|--------|--------|----------|
| 50) DIBROMOMETHANE            | 5.600  | 93   | 8120     | 11.62  | UG/L   | 90       |
| 51) 1,4-DIOXANE               | 5.637  | 88   | 946      | 126.54 | UG/L # | 82       |
| 52) BROMODICHLOROMETHANE      | 5.762  | 83   | 16374    | 10.96  | UG/L   | 97       |
| 53) 2-CHLOROETHYL VINYLETHER  | 6.072  | 63   | 211m     | 0.26   | UG/L   |          |
| 54) MIBK                      | 6.361  | 43   | 164328   | 111.18 | UG/L   | 96       |
| 55) CIS-1,3-DICHLOROPROPENE   | 6.197  | 75   | 17017    | 9.93   | UG/L   | 99       |
| 56) TOLUENE                   | 6.506  | 91   | 42722    | 10.14  | UG/L   | 99       |
| 57) TRANS-1,3,-DICHLOROPRO... | 6.745  | 75   | 16896    | 10.28  | UG/L   | 94       |
| 59) 1,1,2-TRICHLOROETHANE     | 6.921  | 97   | 10163    | 10.64  | UG/L   | 94       |
| 60) 2-HEXANONE                | 7.177  | 43   | 122168   | 112.30 | UG/L   | 95       |
| 61) TETRACHLOROETHENE         | 7.024  | 164  | 9379     | 11.54  | UG/L   | 97       |
| 62) 1,3-DICHLOROPROPANE       | 7.078  | 76   | 17361    | 10.34  | UG/L   | 94       |
| 63) DIBROMOCHLOROMETHANE      | 7.294  | 129  | 13561    | 12.27  | UG/L   | 98       |
| 64) 1,2-DIBROMOETHANE         | 7.396  | 107  | 11527    | 10.83  | UG/L # | 94       |
| 67) CHLOROBENZENE             | 7.870  | 112  | 31121    | 10.36  | UG/L   | 97       |
| 68) 1,1,1,2-TETRACHLOROETHANE | 7.956  | 131  | 12258    | 11.20  | UG/L   | 99       |
| 69) ETHYLBENZENE              | 7.984  | 91   | 51962    | 9.94   | UG/L   | 100      |
| 70) M/P-XYLENES               | 8.098  | 91   | 81981    | 19.71  | UG/L   | 99       |
| 71) O-XYLENE                  | 8.484  | 91   | 42330    | 9.87   | UG/L   | 98       |
| 72) STYRENE                   | 8.504  | 104  | 34941    | 10.21  | UG/L   | 97       |
| 73) BROMOFORM                 | 8.683  | 173  | 8969     | 10.13  | UG/L   | 99       |
| 74) ISOPROPYLBENZENE          | 8.851  | 105  | 52965    | 10.79  | UG/L   | 99       |
| 76) 1,1,2,2-TETRACHLOROETHANE | 9.169  | 83   | 14532    | 10.27  | UG/L   | 95       |
| 77) 1,4-DICHLORO-2-BUTENE(... | 9.223  | 53   | 6891     | 10.26  | UG/L   | 97       |
| 78) BROMOBENZENE              | 9.138  | 77   | 21762    | 10.46  | UG/L   | 97       |
| 79) 1,2,3-TRICHLOROPROPANE    | 9.206  | 110  | 4910     | 11.01  | UG/L   | 81       |
| 80) N-PROPYLBENZENE           | 9.257  | 91   | 56091    | 9.27   | UG/L   | 96       |
| 81) 2-CHLOROTOLUENE           | 9.334  | 91   | 37990    | 10.22  | UG/L   | 100      |
| 82) 1,3,5-TRIMETHYLBENZENE    | 9.436  | 105  | 42529    | 10.10  | UG/L   | 100      |
| 83) 4-CHLOROTOLUENE           | 9.442  | 91   | 43821    | 9.82   | UG/L   | 97       |
| 85) TERT-BUTYLBENZENE         | 9.752  | 119  | 36689    | 9.79   | UG/L   | 97       |
| 86) 1,2,4-TRIMETHYLBENZENE    | 9.800  | 105  | 44998    | 9.59   | UG/L   | 98       |
| 87) SEC-BUTYLBENZENE          | 9.971  | 105  | 47885    | 9.08   | UG/L   | 100      |
| 88) 1,3-DICHLOROBENZENE       | 10.073 | 146  | 28566    | 10.20  | UG/L   | 100      |
| 89) P-ISOPROPYLTOLUENE        | 10.118 | 119  | 45080    | 9.88   | UG/L   | 98       |
| 90) 1,4-DICHLOROBENZENE       | 10.164 | 146  | 30128    | 10.32  | UG/L   | 98       |
| 91) N-BUTYLBENZENE            | 10.525 | 91   | 34365    | 8.41   | UG/L   | 93       |
| 92) 1,2-DICHLOROBENZENE       | 10.531 | 146  | 27983    | 10.35  | UG/L   | 99       |
| 93) 1,2-DIBROMO-3-CHLOROPR... | 11.315 | 75   | 3664     | 11.73  | UG/L   | 95       |
| 94) 1,3,5-TRICHLOROBENZENE    | 11.505 | 180  | 18487    | 10.35  | UG/L   | 98       |
| 95) 1,2,4-TRICHLOROBENZENE    | 12.122 | 180  | 18384    | 10.47  | UG/L   | 98       |
| 96) HEXACHLOROBUTADIENE       | 12.295 | 225  | 6968     | 11.64  | UG/L   | 96       |
| 97) NAPHTHALENE               | 12.366 | 128  | 51789    | 11.22  | UG/L   | 99       |
| 98) 1,2,3-TRICHLOROBENZENE    | 12.611 | 180  | 18040    | 11.41  | UG/L   | 98       |

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

304

Inst : GCMSVOA2

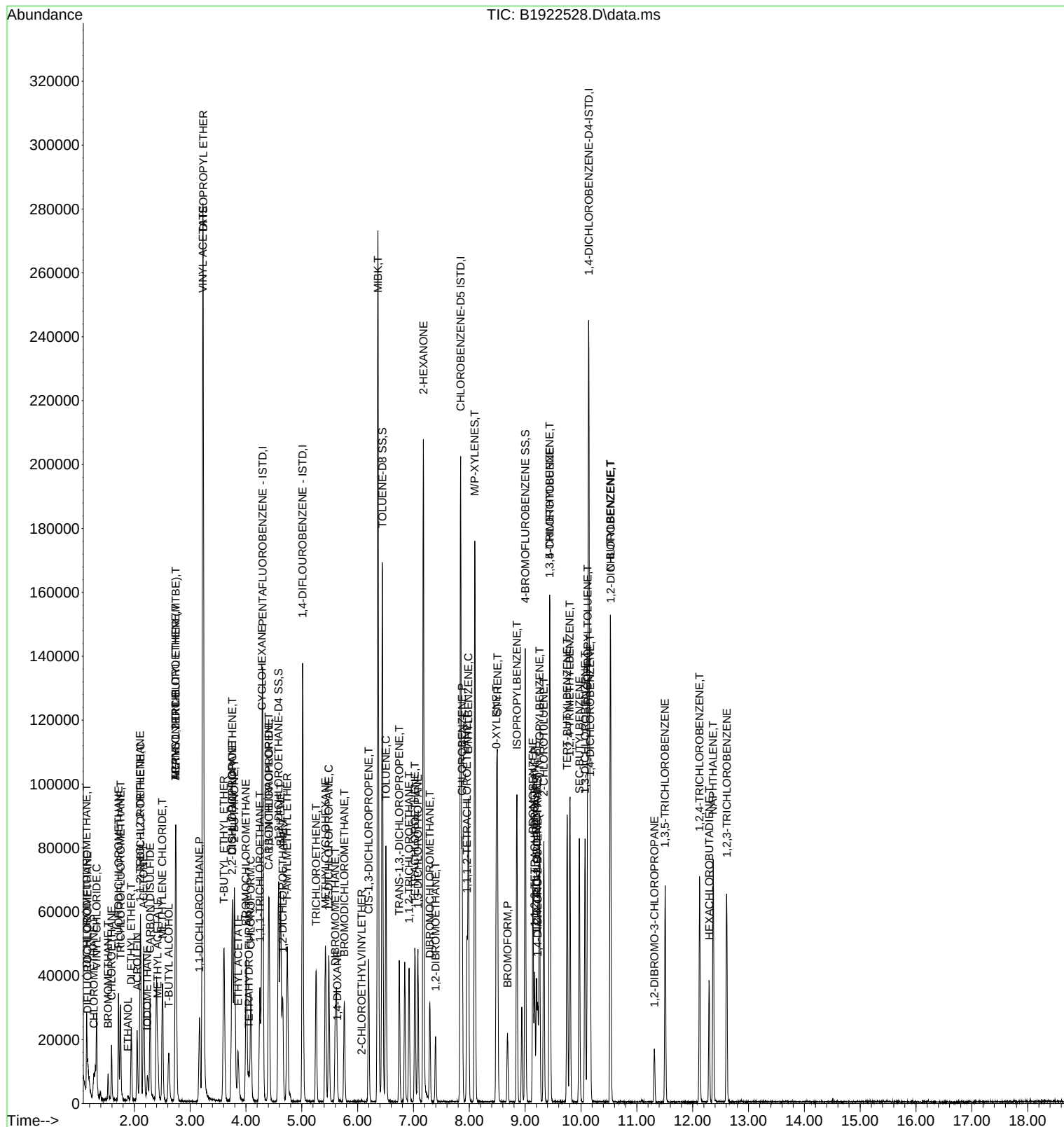
Quant Time: Aug 14 10:32:54 2019

Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M

Quant Title : 8260 CALIBRATION VOAMS 5973

QLast Update : Fri Apr 19 05:25:51 2019

Response via : Initial Calibration



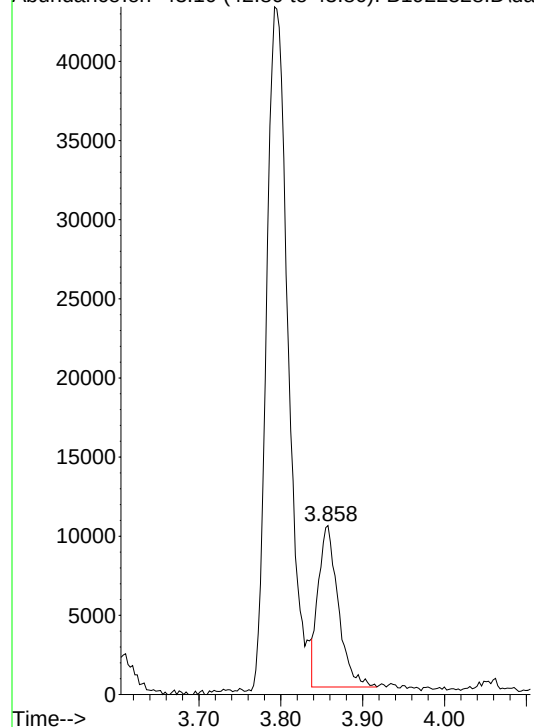
Data Path : Y:\1\DATA\B081319\  
Data File : B1922528.D  
Acq On : 13 Aug 2019 8:30 pm  
Operator :  
Sample : B0-BSD1  
Misc :

Quant Time : Wed Aug 14 10:32:54 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

ETHYL ACETATE

Abundance on 43.10 (42.80 to 43.80): B1922528.D\data



## Original Int. Results

-----

RT : 3.86  
Area : 17258  
Amount: 8.5587

## Manual Int. Results

-----

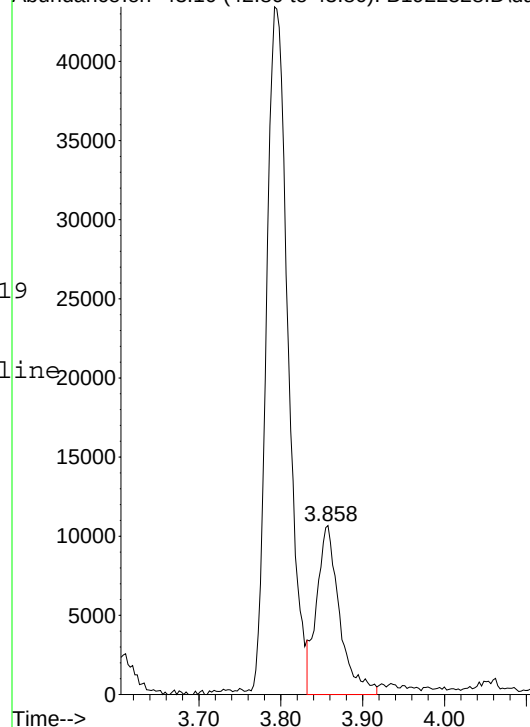
Wed Aug 14 10:31:48 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 3.86  
Area : 20704  
Amount: 10.2677

## Manual Integration

ETHYL ACETATE

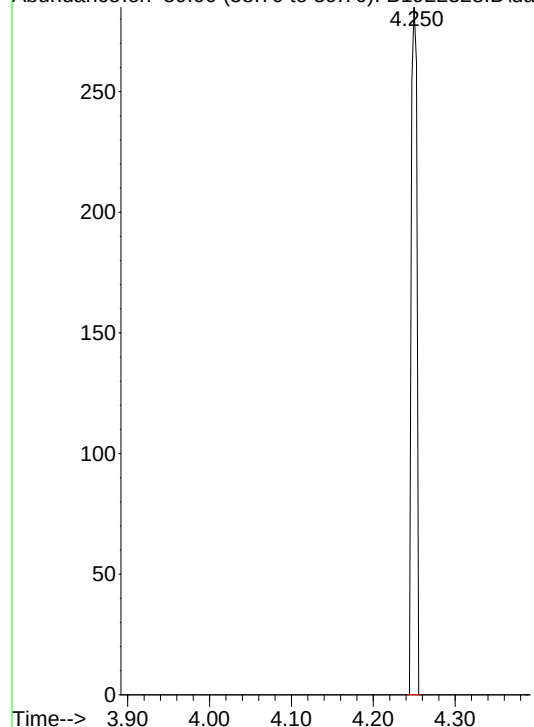
Abundance on 43.10 (42.80 to 43.80): B1922528.D\data



## Original Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922528.D\data



## Original Int. Results

-----

RT : 4.25  
Area : 137  
Amount: 0.117784

## Manual Int. Results

-----

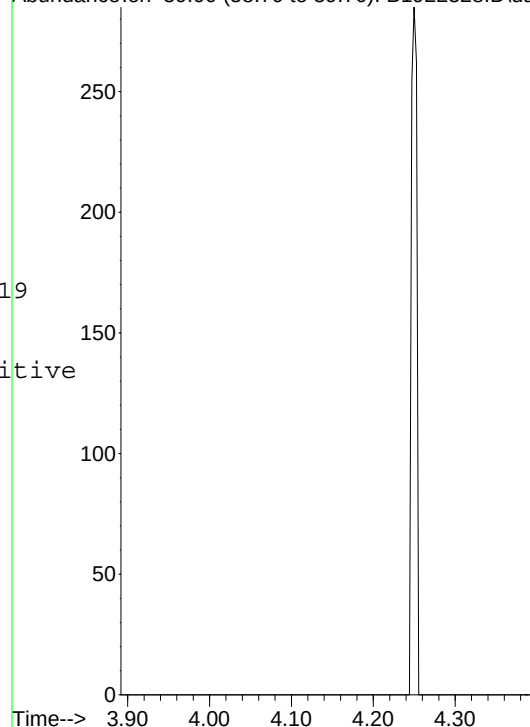
Wed Aug 14 10:31:53 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-BUTYL FORMATE

Abundance on 59.00 (58.70 to 59.70): B1922528.D\data



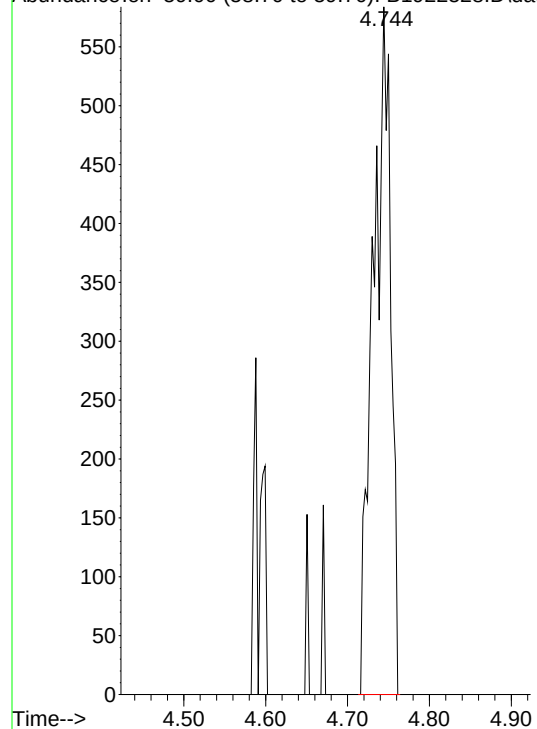
Data Path : Y:\1\DATA\B081319\  
Data File : B1922528.D  
Acq On : 13 Aug 2019 8:30 pm  
Operator :  
Sample : B0-BSD1  
Misc :

Quant Time : Wed Aug 14 10:32:54 2019  
Quant Method : C:\MSDCHEM\1\METHODS\B041819W.M  
QLast Update : Fri Apr 19 05:25:51 2019

## Original Integration

T-AMYL ALCOHOL

Abundance on 59.00 (58.70 to 59.70): B1922528.D\data



## Original Int. Results

-----

RT : 4.74  
Area : 872  
Amount: 8.12828

## Manual Int. Results

-----

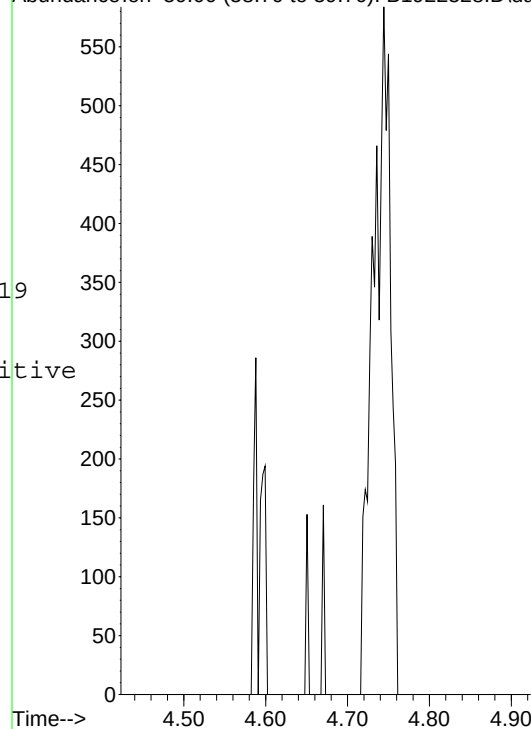
Wed Aug 14 10:32:57 2019

MIuser: LBD  
Reason: Qdel False Positive  
RT : 0.00  
Area : 0  
Amount: 0

## Manual Integration

T-AMYL ALCOHOL

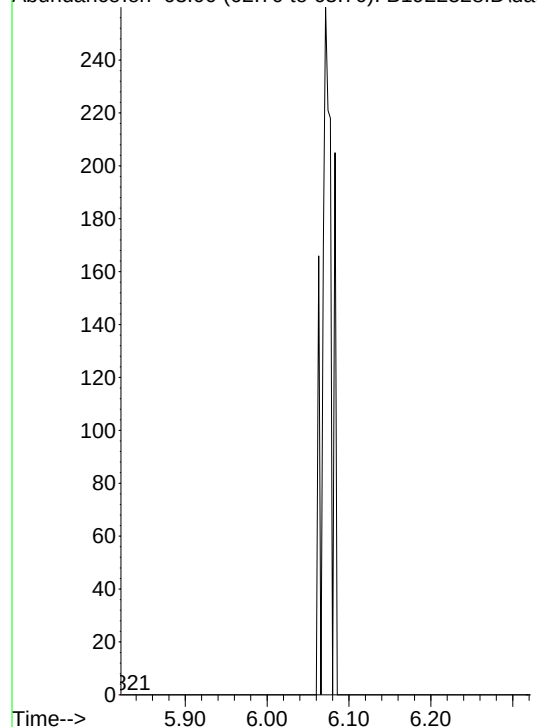
Abundance on 59.00 (58.70 to 59.70): B1922528.D\data



## Original Integration

2-CHLOROETHYL VINYLETHER

Abundance on 63.00 (62.70 to 63.70): B1922528.D\data



## Original Int. Results

-----

RT : 0.00  
Area : 0  
Amount: 0

## Manual Int. Results

-----

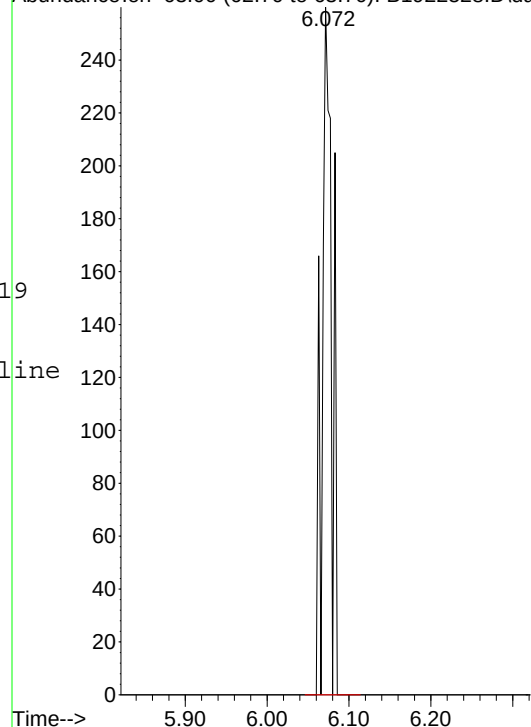
Wed Aug 14 10:33:05 2019

MIuser: LBD  
Reason: Incorrect Baseline  
RT : 6.07  
Area : 211  
Amount: 0.263484

## Manual Integration

2-CHLOROETHYL VINYLETHER

Abundance on 63.00 (62.70 to 63.70): B1922528.D\data



B237875

## CON-TEST ANALYTICAL LABORATORY

Printed: 8/14/2019 1:46:27PM

Matrix: Water

Prepared using: VOC - SW-846 5030B

Surrogate used: 1906187

| Lab Number   | Sample Name       | Analysis              | Due Date       | TAT | Initial<br>(mL) | Final<br>(mL) | Spike ID | uL<br>Spike |
|--------------|-------------------|-----------------------|----------------|-----|-----------------|---------------|----------|-------------|
| 19H0528-01   | Trip Blank-8/8/19 | 8260 Standard         | 08/23/19 13:30 | 10  | 5               | 5             |          |             |
| 19H0528-02   | OC-17D            | 8260 Standard         | 08/23/19 13:30 | 10  | 5               | 5             |          |             |
| 19H0528-03   | OC-17S            | 8260 Standard         | 08/23/19 13:30 | 10  | 5               | 5             |          |             |
| 19H0528-04   | MW-22R            | 8260 Tentatively Iden |                | 10  | 5               | 5             |          |             |
| 19H0528-04   | MW-22R            | 8260 Standard         | 08/23/19 13:30 | 10  | 5               | 5             |          |             |
| 19H0528-05   | MW-27             | 8260 Standard         | 08/23/19 13:30 | 10  | 5               | 5             |          |             |
| 19H0528-06   | MW-22S            | 8260 Standard         | 08/23/19 13:30 | 10  | 5               | 5             |          |             |
| 19H0528-07   | Blind Duplicate   | 8260 Standard         | 08/23/19 13:30 | 10  | 5               | 5             |          |             |
| 19H0576-01   | Trip Blank-8/9/19 | 8260 Standard         | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-01   | Trip Blank-8/9/19 | 8260 Tentatively Iden | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-02   | OC-19D            | 8260 Standard         | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-02   | OC-19D            | 8260 Tentatively Iden | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-03   | MW-21R            | 8260 Tentatively Iden | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-03   | MW-21R            | 8260 Standard         | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-04   | OC-19S            | 8260 Standard         | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-04   | OC-19S            | 8260 Tentatively Iden | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-05   | MW-21S            | 8260 Standard         | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-05   | MW-21S            | 8260 Tentatively Iden | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-06   | Drum Composite    | 8260 Standard         | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| 19H0576-06   | Drum Composite    | 8260 Tentatively Iden | 08/21/19 13:30 | 7   | 5               | 5             |          |             |
| B237875-BLK1 | Blank             | QC                    |                |     | 5               | 5             |          |             |
| B237875-BS1  | LCS               | QC                    |                |     | 5               | 5             | 1907058  | 2.5         |
| B237875-BSD1 | LCS Dup           | QC                    |                |     | 5               | 5             | 1907058  | 2.5         |

Spiking Witnessed By \_\_\_\_\_ Date \_\_\_\_\_

Preparation Reviewed By \_\_\_\_\_ Date \_\_\_\_\_

Extracts Received By \_\_\_\_\_ Date \_\_\_\_\_

B237875

## CON-TEST ANALYTICAL LABORATORY

Printed: 8/14/2019 1:46:27PM

Matrix: Water

Prepared using: VOC - SW-846 5030B

Surrogate used: 1906187

| Lab Number   | Sample Name      | Analysis | Due Date | TAT | Initial<br>(mL) | Final<br>(mL) | Spike ID | uL<br>Spike |  |
|--------------|------------------|----------|----------|-----|-----------------|---------------|----------|-------------|--|
| B237875-MS1  | Matrix Spike     | QC       |          |     | 5               | 5             | 1907058  | 125         |  |
| B237875-MSD1 | Matrix Spike Dup | QC       |          |     | 5               | 5             | 1907058  | 125         |  |

8/13/19#2 2ND

Spiking Witnessed By \_\_\_\_\_ Date \_\_\_\_\_

Preparation Reviewed By \_\_\_\_\_ Date \_\_\_\_\_

Extracts Received By \_\_\_\_\_ Date \_\_\_\_\_



Y:\1\DATA\B081319\

| Date        |          | Filename   | Lab ID                        | Sample Info |
|-------------|----------|------------|-------------------------------|-------------|
| 13 Aug 2019 | 6:38 am  | B1922501.D | CLEAN UP                      |             |
| 13 Aug 2019 | 7:09 am  | B1922502.D | BLK                           |             |
| 13 Aug 2019 | 7:40 am  | B1922503.D | LBD WATER                     |             |
| 13 Aug 2019 | 8:10 am  | B1922504.D | BFB / 8260 STD 10PPB 1906029  |             |
| 13 Aug 2019 | 8:41 am  | B1922505.D | B0-BS1 @ RCP                  |             |
| 13 Aug 2019 | 9:12 am  | B1922506.D | B0-BS1                        |             |
| 13 Aug 2019 | 9:43 am  | B1922507.D | B0-BSD1                       |             |
| 13 Aug 2019 | 10:14 am | B1922508.D | BLK                           |             |
| 13 Aug 2019 | 10:45 am | B1922509.D | BLK                           |             |
| 13 Aug 2019 | 11:16 am | B1922510.D | B0-BLK1                       |             |
| 13 Aug 2019 | 11:47 am | B1922511.D | 19G1292-45 @ 200X MEOH PT 200 |             |
| 13 Aug 2019 | 12:17 pm | B1922512.D | 19G1292-45 @ 100X MEOH PT 100 |             |
| 13 Aug 2019 | 12:48 pm | B1922513.D | BLK                           |             |
| 13 Aug 2019 | 1:19 pm  | B1922514.D | BLK                           |             |
| 13 Aug 2019 | 1:50 pm  | B1922515.D | 19G1292-20 @ 5X PT            | 5           |
| 13 Aug 2019 | 2:21 pm  | B1922516.D | 19G1292-20 @ PT               |             |
| 13 Aug 2019 | 2:52 pm  | B1922517.D | BLK                           |             |
| 13 Aug 2019 | 3:22 pm  | B1922518.D | 19D0954-05 @ QC               |             |
| 13 Aug 2019 | 3:53 pm  | B1922519.D | BLK                           |             |
| 13 Aug 2019 | 4:24 pm  | B1922520.D | BLK                           |             |
| 13 Aug 2019 | 4:55 pm  | B1922521.D | 19D1292-20 @ PT               |             |
| 13 Aug 2019 | 5:26 pm  | B1922522.D | BLK                           |             |
| 13 Aug 2019 | 5:56 pm  | B1922523.D | BLK                           |             |
| 13 Aug 2019 | 6:27 pm  | B1922524.D | BLK                           |             |
| 13 Aug 2019 | 6:57 pm  | B1922525.D | BFB / 8260 STD 10PPB 1906029  |             |
| 13 Aug 2019 | 7:28 pm  | B1922526.D | B0-BS1 @ (RCP)                |             |
| 13 Aug 2019 | 7:59 pm  | B1922527.D | B0-BS1                        |             |
| 13 Aug 2019 | 8:30 pm  | B1922528.D | B0-BSD1                       |             |
| 13 Aug 2019 | 9:00 pm  | B1922529.D | CLEAN UP                      |             |
| 13 Aug 2019 | 9:31 pm  | B1922530.D | CLEAN UP                      |             |
| 13 Aug 2019 | 10:02 pm | B1922531.D | B0-BLK1 @ (TICs)              |             |
| 13 Aug 2019 | 10:33 pm | B1922532.D | 19H0576-01 @ TB (TICs)        |             |
| 13 Aug 2019 | 11:04 pm | B1922533.D | 19H0528-01 @ TB               |             |
| 13 Aug 2019 | 11:34 pm | B1922534.D | 19H0528-03                    |             |
| 14 Aug 2019 | 12:05 am | B1922535.D | 19H0528-02 @ 20X              | 20          |
| 14 Aug 2019 | 12:36 am | B1922536.D | 19H0528-04 @ 50X              | 50          |
| 14 Aug 2019 | 1:07 am  | B1922537.D | 19H0528-05 @ 10X              | 10          |
| 14 Aug 2019 | 1:37 am  | B1922538.D | 19H0528-06 @ 20X              | 20          |
| 14 Aug 2019 | 2:08 am  | B1922539.D | 19H0528-07 @ 20X              | 20          |
| 14 Aug 2019 | 2:39 am  | B1922540.D | CLEAN UP                      |             |
| 14 Aug 2019 | 3:10 am  | B1922541.D | 19H0576-04 @ (TICs)           |             |
| 14 Aug 2019 | 3:41 am  | B1922542.D | 19H0576-05 @ (TICs)           |             |
| 14 Aug 2019 | 4:11 am  | B1922543.D | 19H0576-02 @ 10X (TICs)       | 10          |
| 14 Aug 2019 | 4:42 am  | B1922544.D | 19H0576-03 @ 1000X (TICs)     | 1000        |
| 14 Aug 2019 | 5:13 am  | B1922545.D | 19H0576-06 @ 50X (TICs)       | 50          |
| 14 Aug 2019 | 5:44 am  | B1922546.D | 19H0528-04MSD1 @ 50X          | 50          |
| 14 Aug 2019 | 6:14 am  | B1922547.D | 19H0528-04MSD1 @ 50X          | 50          |
| 14 Aug 2019 | 6:45 am  | B1922548.D | BLK                           |             |

pH&lt;2

**SVOA**

**SAMPLE DATA**

1 - FORM I  
ANALYSIS DATA SHEET

312

MW-21R

Laboratory: Con-Test Analytical Laboratory Work Order: 19H0576  
Client: Dvirka And Bartilucci Project: Farrand Controls Site  
Matrix: Ground Water Laboratory ID: 19H0576-03 File ID: F1922812.D  
Sampled: 08/09/19 12:20 Prepared: 08/13/19 04:55 Analyzed: 08/16/19 15:55  
Solids: Preparation: SW-846 3510C Dilution: 1  
Initial/Final: 1040 mL / 1 mL  
Batch: B237852 Sequence: S039298 Calibration: 1900232 Instrument: GCMSSV6

| CAS NO.  | COMPOUND    | CONC. (µg/L) | MDL   | RL   | Q |
|----------|-------------|--------------|-------|------|---|
| 123-91-1 | 1,4-Dioxane | 3.6          | 0.031 | 0.19 |   |

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922812.D  
Acq On : 16 Aug 2019 3:55 pm  
Operator : CLA  
Sample : 19H0576-03  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:57:52 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.123 | 150  | 953518   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.993  | 96   | 78171    | 10.000 | ug/mL | 0.00     |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.993  | 96   | 78171    | 2.497  | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 8.037  | 88   | 32255m   | 3.703  | ug/mL | Qvalue   |

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

CHECKED BY: AUG 19 2019  
Irina Raducan

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922812.D  
Acq On : 16 Aug 2019 3:55 pm  
Operator : CLA  
Sample : 19H0576-03  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:57:52 2019

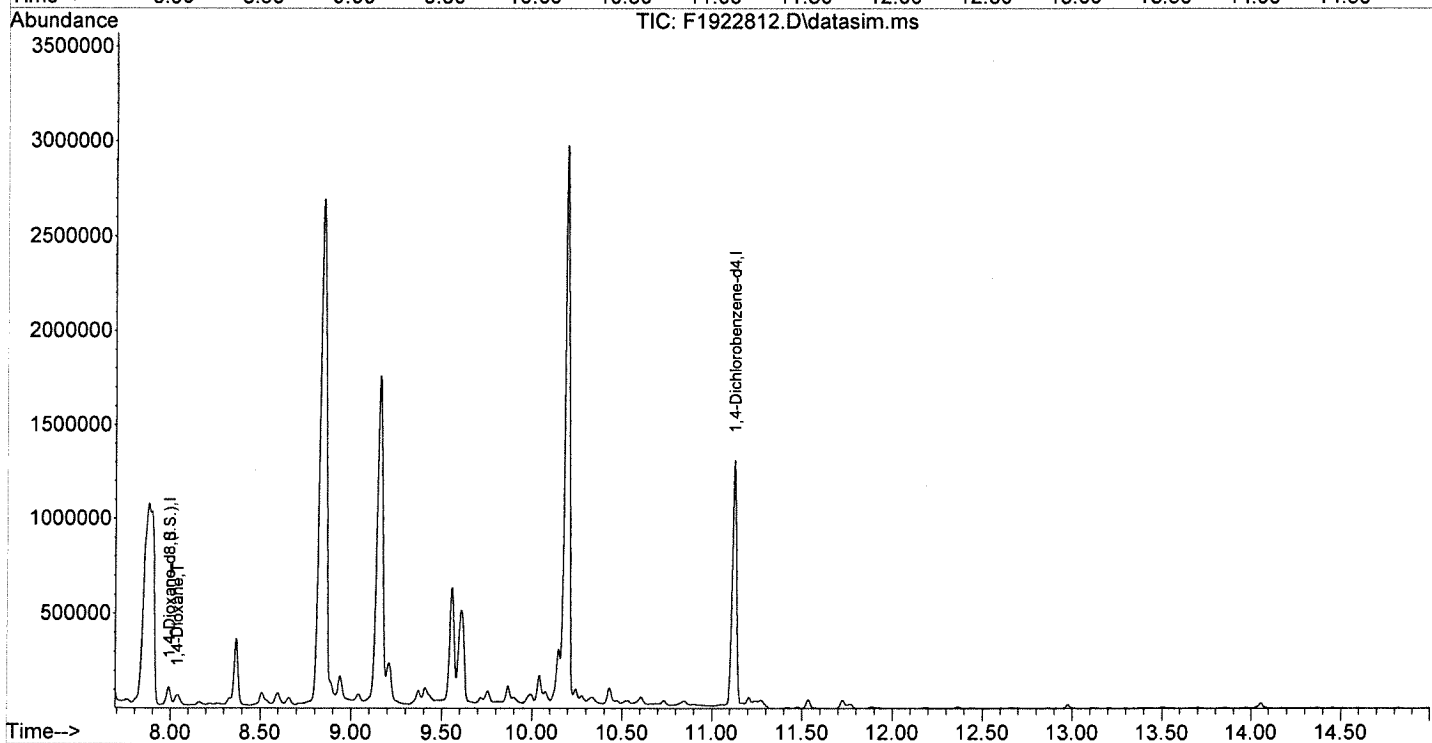
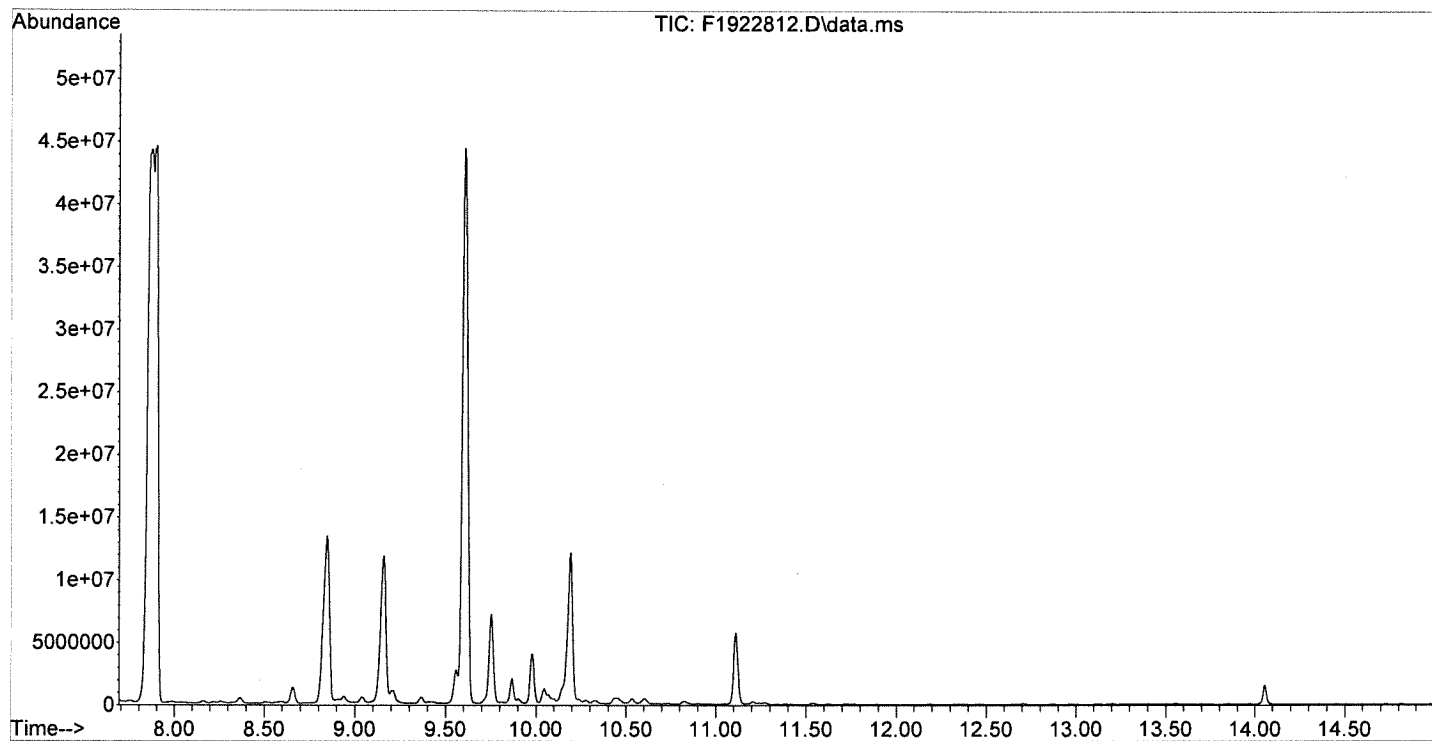
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922812.D  
Acq On : 16 Aug 2019 3:55 pm  
Operator : CLA  
Sample : 19H0576-03  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:41:17 2019

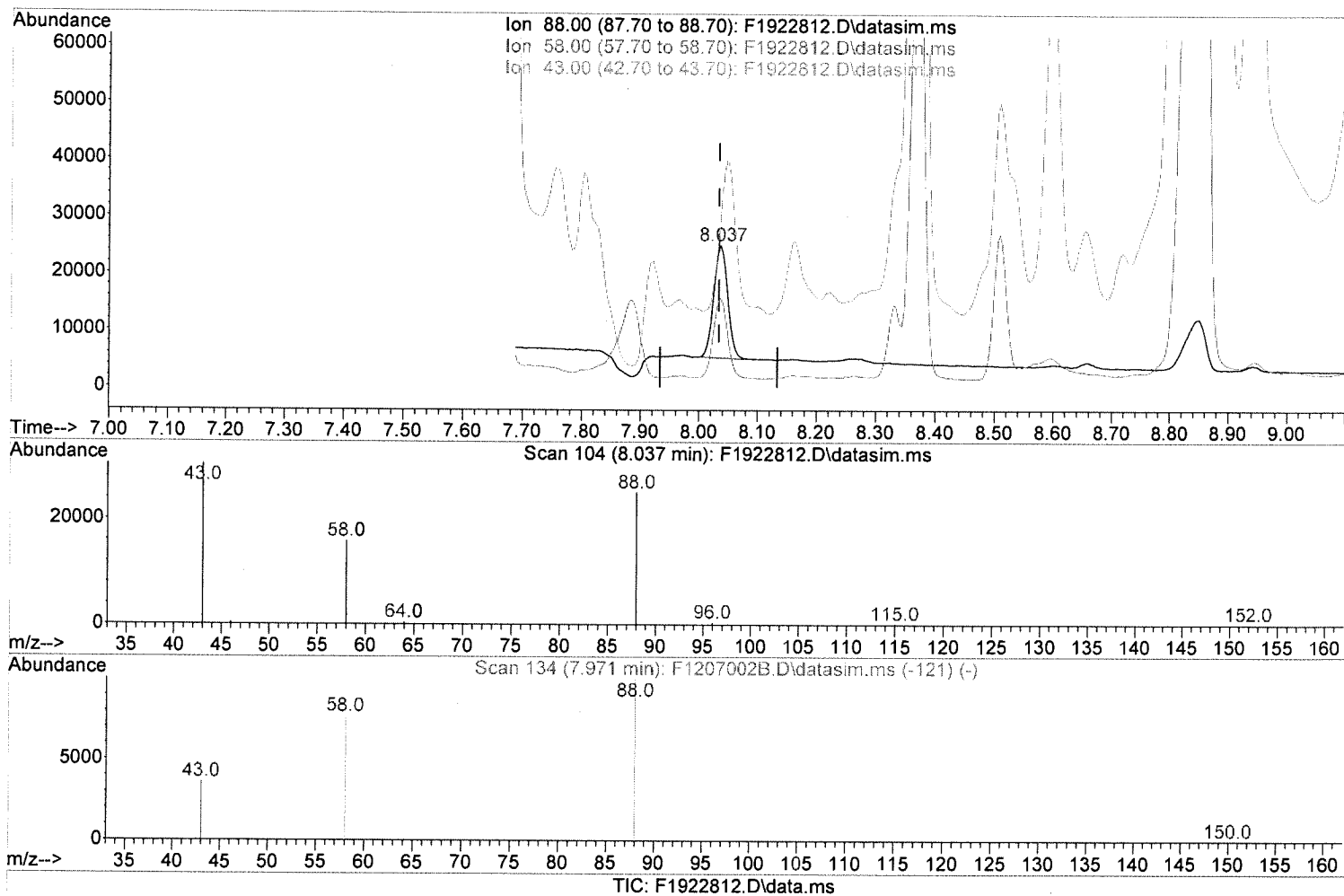
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration



(4) 1,4-Dioxane (T)

8.037min (+ 0.003) 3.740 ug/mL

response 32571

| Ion   | Exp%   | Act%    |
|-------|--------|---------|
| 88.00 | 100.00 | 100.00  |
| 58.00 | 70.60  | 71.32   |
| 43.00 | 31.70  | 143.26# |
| 0.00  | 0.00   | 0.00    |

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922812.D  
Acq On : 16 Aug 2019 3:55 pm  
Operator : CLA  
Sample : 19H0576-03  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:41:17 2019

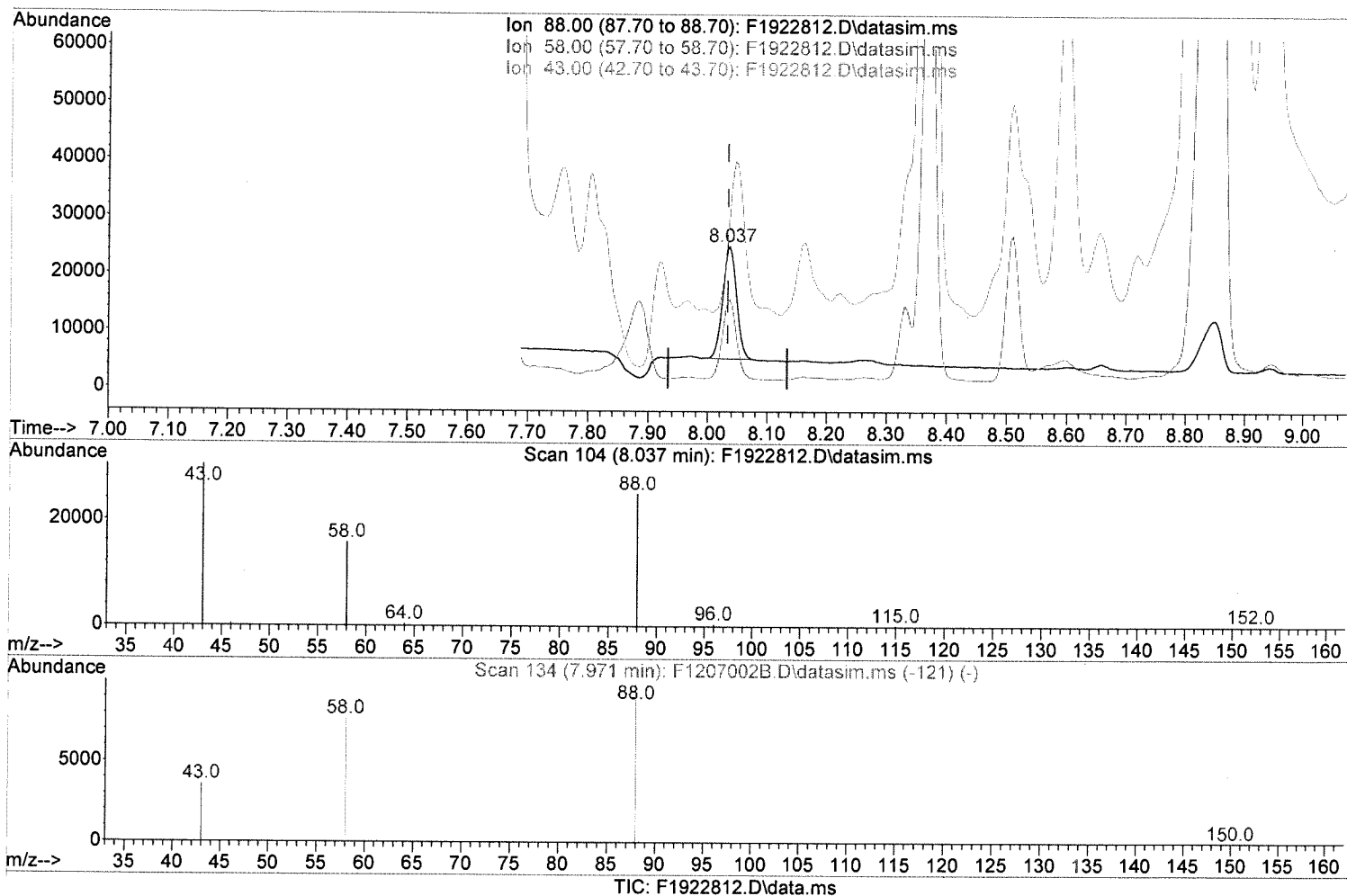
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration



## (4) 1,4-Dioxane (T)

8.037min (+ 0.003) 3.703 ug/mL m

response 32255

| Ion   | Exp%   | Act%    |
|-------|--------|---------|
| 88.00 | 100.00 | 100.00  |
| 58.00 | 70.60  | 72.02   |
| 43.00 | 31.70  | 144.67# |
| 0.00  | 0.00   | 0.00    |



1 - FORM I  
ANALYSIS DATA SHEET

317

MW-21S

Laboratory: Con-Test Analytical Laboratory Work Order: 19H0576  
Client: Dvirka And Bartilucci Project: Farrand Controls Site  
Matrix: Ground Water Laboratory ID: 19H0576-05 File ID: F1922813.D  
Sampled: 08/09/19 14:00 Prepared: 08/13/19 04:55 Analyzed: 08/16/19 16:15  
Solids: Preparation: SW-846 3510C Dilution: 1  
Initial/Final: 1020 mL / 1 mL  
Batch: B237852 Sequence: S039298 Calibration: 1900232 Instrument: GCMSSV6

| CAS NO.  | COMPOUND    | CONC. (µg/L) | MDL   | RL   | Q |
|----------|-------------|--------------|-------|------|---|
| 123-91-1 | 1,4-Dioxane |              | 0.032 | 0.20 |   |

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922813.D  
Acq On : 16 Aug 2019 4:15 pm  
Operator : CLA  
Sample : 19H0576-05  
Misc :  
ALS Vial : 13 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:58:10 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\VOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.120 | 150  | 978749   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.989  | 96   | 77721    | 10.000 | ug/mL | 0.00     |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.989  | 96   | 77721    | 2.419  | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |

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

CHECKED BY: AUG 19 2019  
Irina Radican

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922813.D  
Acq On : 16 Aug 2019 4:15 pm  
Operator : CLA  
Sample : 19H0576-05  
Misc :  
ALS Vial : 13 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:58:10 2019

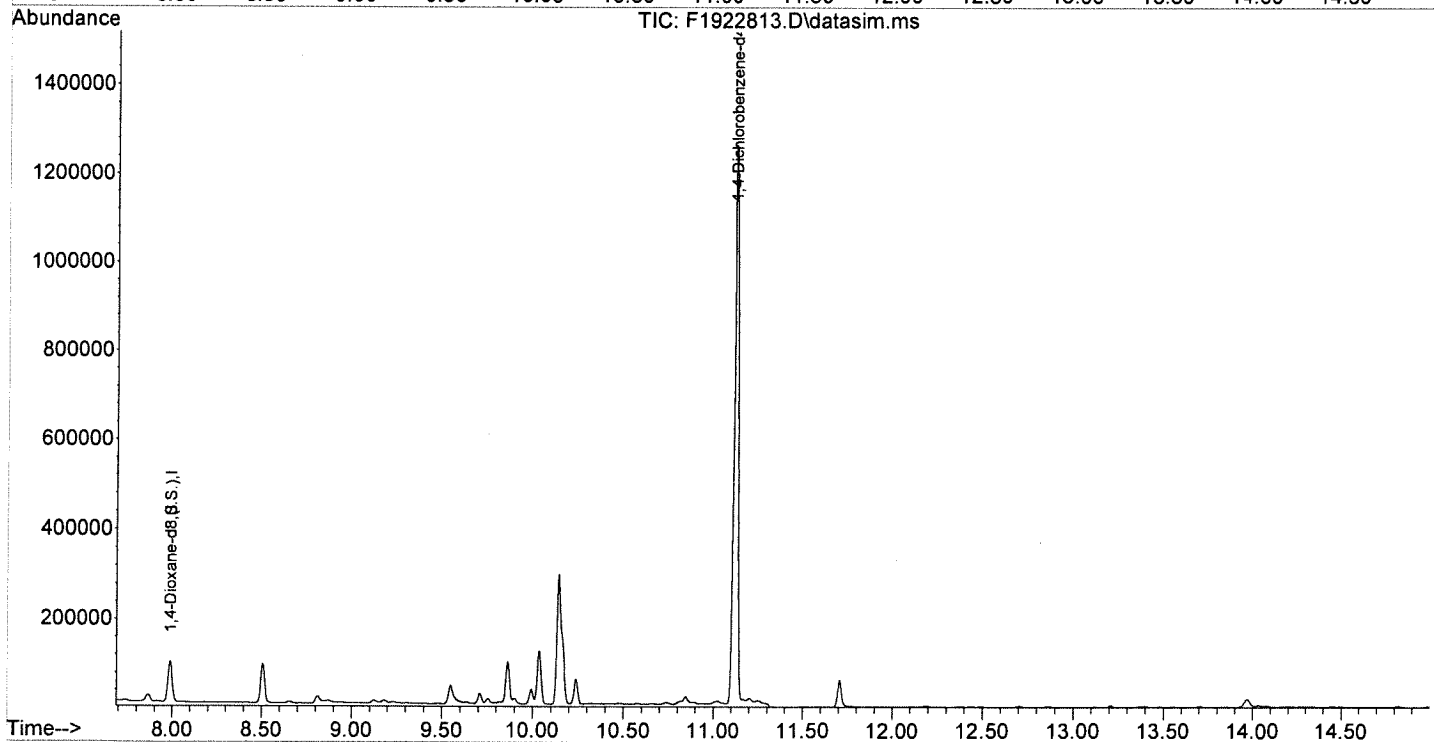
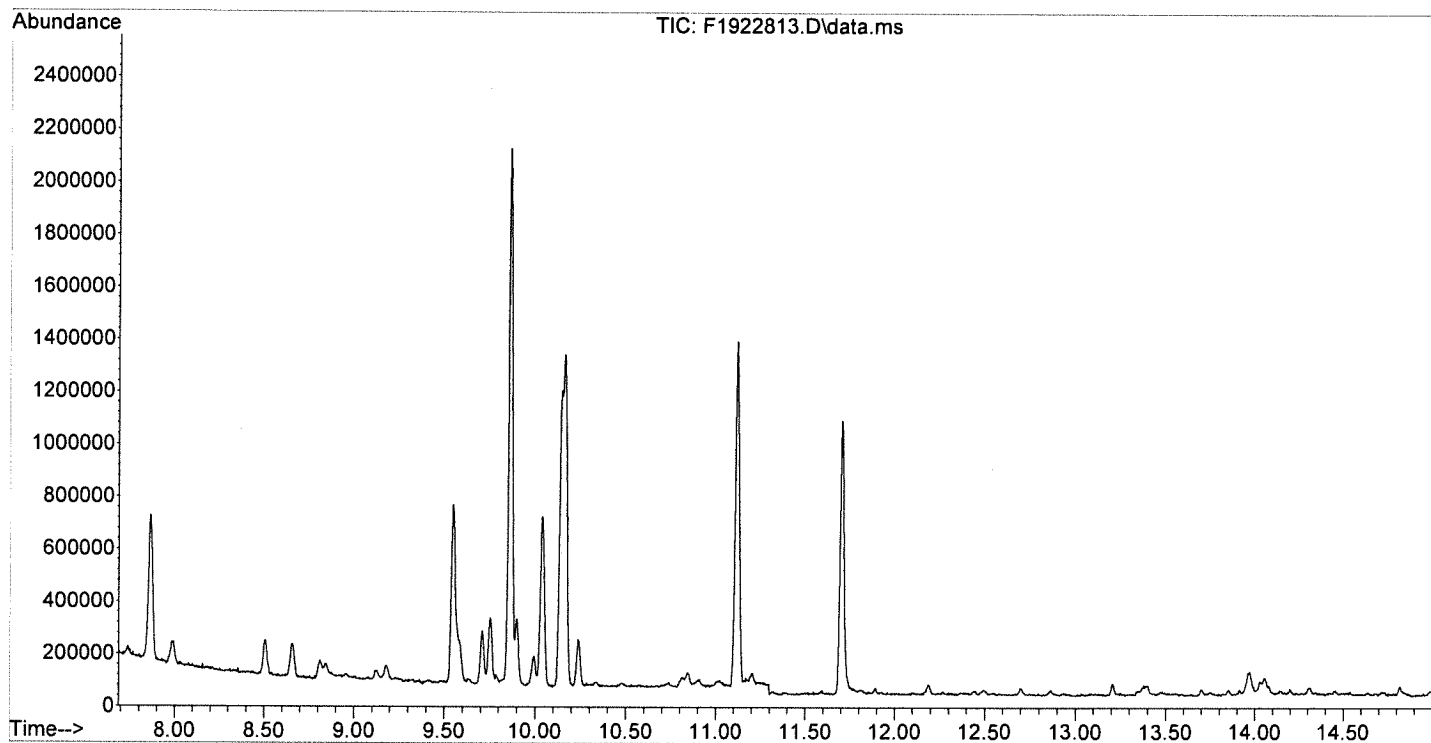
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration



**QC DATA**

**2 - FORM II**  
**SYSTEM MONITORING COMPOUND SUMMARY**  
**SW-846 8270D**

321

|             |                                |             |                       |
|-------------|--------------------------------|-------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | SDG:        | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:    | Farrand Controls Site |
| Matrix:     | Water                          | Instrument: | GCMSSV6               |

---

|              | 1,4-Dioxane-<br>d8 |
|--------------|--------------------|
| <hr/>        |                    |
| 19H0576-03   | 25.0               |
| 19H0576-05   | 24.2               |
| B237852-BLK1 | 24.5               |
| B237852-BS1  | 29.5               |
| B237852-BSD1 | 27.6               |

## LCS / LCS DUPLICATE RECOVERY

SW-846 8270D

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Matrix: Water

Preparation: SW-846 3510C

Batch: B237852

Laboratory ID: B237852-BS1

Column:

Initial/Final: 1000 mL / 1 mL

| ANALYTE     | SPIKE<br>ADDED<br>(µg/L) | LCS<br>CONCENTRATION<br>(µg/L) | LCS<br>%<br>REC. | QC<br>LIMITS<br>REC. |
|-------------|--------------------------|--------------------------------|------------------|----------------------|
| 1,4-Dioxane | 10.0                     | 9.75                           | 97.5             | 40 - 140             |

| ANALYTE     | SPIKE<br>ADDED<br>(µg/L) | LCSD<br>CONCENTRATION<br>(µg/L) | LCSD<br>%<br>REC. # | %<br>RPD # | QC LIMITS<br>RPD | REC.     |
|-------------|--------------------------|---------------------------------|---------------------|------------|------------------|----------|
| 1,4-Dioxane | 10.0                     | 10.2                            | 102                 | 4.16       | 30               | 40 - 140 |

**4 - FORM IV**  
**METHOD BLANK SUMMARY**

323

SW-846 8270D

|             |                                |             |                       |
|-------------|--------------------------------|-------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order: | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:    | Farrand Controls Site |
| Blank ID:   | B237852-BLK1                   | Batch:      | B237852               |
|             |                                | Prepared:   | 08/13/2019 04:55      |

| Client Sample ID | Laboratory Sample ID | Lab File ID | Time Analyzed |
|------------------|----------------------|-------------|---------------|
| LCS              | B237852-BS1          | F1922804.D  | 13:15         |
| LCS Dup          | B237852-BSD1         | F1922805.D  | 13:35         |
| MW-21R           | 19H0576-03           | F1922812.D  | 15:55         |
| MW-21S           | 19H0576-05           | F1922813.D  | 16:15         |

**5 - FORM V**  
**INSTRUMENT PERFORMANCE CHECK**

324

SW-846 8270D

|                |                                |                 |                       |
|----------------|--------------------------------|-----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:     | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:        | Farrand Controls Site |
| Lab File ID:   | F1922801B.D                    | Injection Date: | 08/16/19              |
| Instrument ID: | GCMSSV6                        | Injection Time: | 12:08                 |
| Sequence:      | S039298                        | Lab Sample ID:  | S039298-TUN1          |

| m/z | ION ABUNDANCE CRITERIA             | % RELATIVE ABUNDANCE | PASS/FAIL |
|-----|------------------------------------|----------------------|-----------|
| 51  | 10 - 80% of 198                    | 48.9                 | PASS      |
| 68  | Less than 2% of 69                 | 1.67                 | PASS      |
| 69  | Base peak, 100% relative abundance | 100                  | PASS      |
| 70  | Less than 2% of 69                 | 0.451                | PASS      |
| 127 | 10 - 80% of 198                    | 50.8                 | PASS      |
| 197 | Less than 2% of 198                | 0.564                | PASS      |
| 198 | Base peak, 100% relative abundance | 100                  | PASS      |
| 199 | 5 - 9% of 198                      | 6.75                 | PASS      |
| 275 | 10 - 60% of 198                    | 26.2                 | PASS      |
| 365 | 1 - 100% of 198                    | 3.48                 | PASS      |
| 441 | Less than 24% of 442               | 15.8                 | PASS      |
| 442 | 50 - 100% of 198                   | 94.8                 | PASS      |
| 443 | 15 - 24% of 442                    | 20                   | PASS      |

| Client ID         | Sample ID    | File ID     | Date Analyzed | Time Analyzed |
|-------------------|--------------|-------------|---------------|---------------|
| Calibration Check | S039298-CCV1 | F1922802B.D | 08/16/2019    | 12:35:00      |
| Calibration Check | S039298-CCV1 | F1922803.D  | 08/16/2019    | 12:35:00      |
| LCS               | B237852-BS1  | F1922804.D  | 08/16/2019    | 13:15:00      |
| LCS Dup           | B237852-BSD1 | F1922805.D  | 08/16/2019    | 13:35:00      |
| Blank             | B237852-BLK1 | F1922806.D  | 08/16/2019    | 13:55:00      |
| MW-21R            | 19H0576-03   | F1922812.D  | 08/16/2019    | 15:55:00      |
| MW-21S            | 19H0576-05   | F1922813.D  | 08/16/2019    | 16:15:00      |

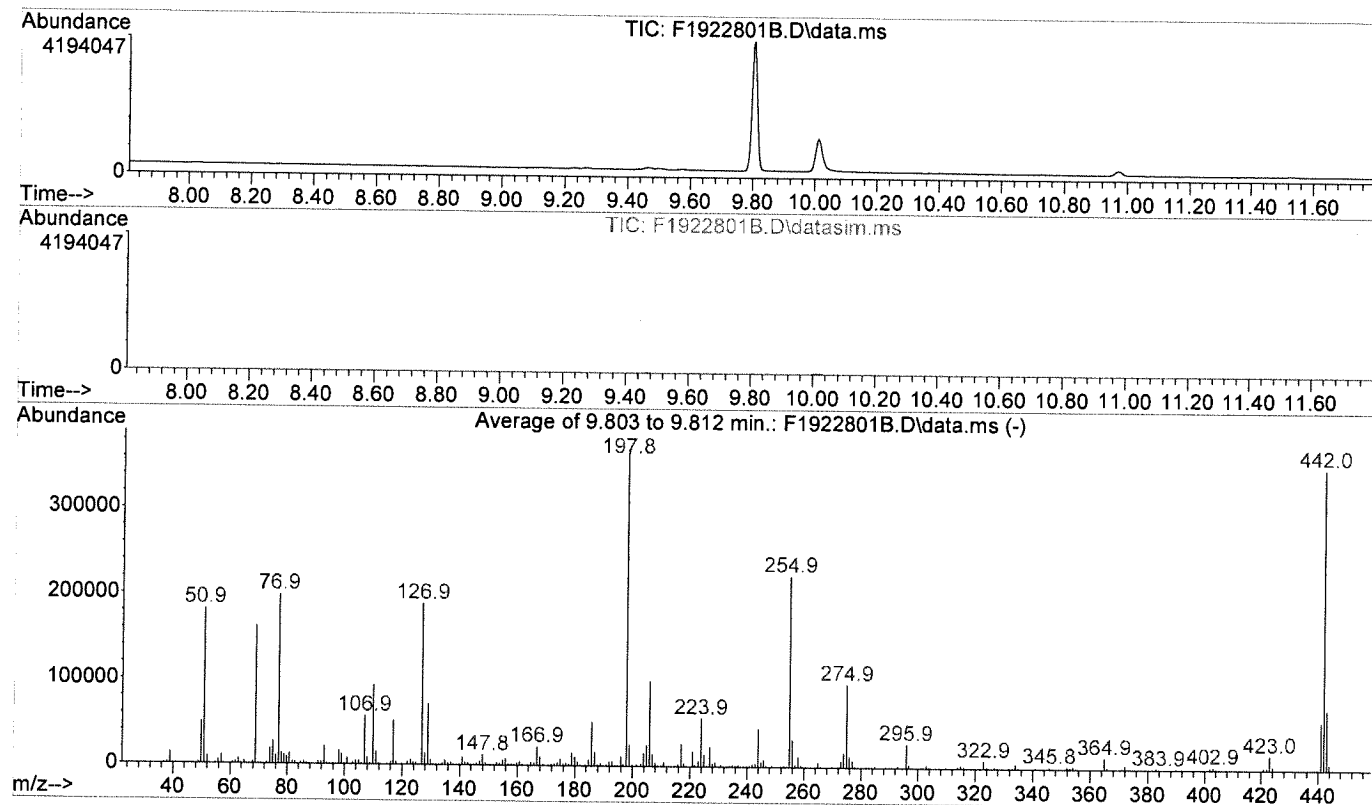


Data Path : C:\msdchem\1\data\F081619\  
 Data File : F1922801B.D  
 Acq On : 16 Aug 2019 12:08 pm  
 Operator : CLA  
 Sample : TUNE 25 ng  
 Misc : 1902259 EXP 093019  
 ALS Vial : 1 Sample Multiplier: 1

Inst : GCMSSV6

Integration File signal 1: rteint.p  
 Integration File signal 2: rteint2.p

Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant meth  
 ... ods\8270D.M  
 Title : 8270D DFTPP  
 Last Update : Sat May 12 12:37:13 2012



AutoFind: Scans 444, 445, 446; Background Corrected with Scan 436

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|-------------|--------------|--------------|--------------|-----------|---------|------------------|
| 51          | 198          | 10           | 80           | 48.9      | 181509  | PASS             |
| 68          | 69           | 0.00         | 2            | 1.7       | 2692    | PASS             |
| 69          | 69           | 100          | 100          | 100.0     | 161490  | PASS             |
| 70          | 69           | 0.00         | 2            | 0.5       | 729     | PASS             |
| 127         | 198          | 10           | 80           | 50.8      | 188523  | PASS             |
| 197         | 198          | 0.00         | 2            | 0.6       | 2094    | PASS             |
| 198         | 198          | 100          | 100          | 100.0     | 371243  | PASS             |
| 199         | 198          | 5            | 9            | 6.7       | 25048   | PASS             |
| 275         | 198          | 10           | 60           | 26.2      | 97224   | PASS             |
| 365         | 198          | 1            | 100          | 3.5       | 12928   | PASS             |
| 441         | 442          | 0.01         | 24           | 15.8      | 55715   | PASS             |
| 442         | 198          | 50           | 100          | 94.8      | 352085  | PASS             |
| 443         | 442          | 15           | 24           | 20.0      | 70421   | PASS             |

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922801B.D  
Acq On : 16 Aug 2019 12:08 pm  
Operator : CLA  
Sample : TUNE 25 ng  
Misc : 1902259 EXP 093019  
ALS Vial : 1 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:53:15 2019

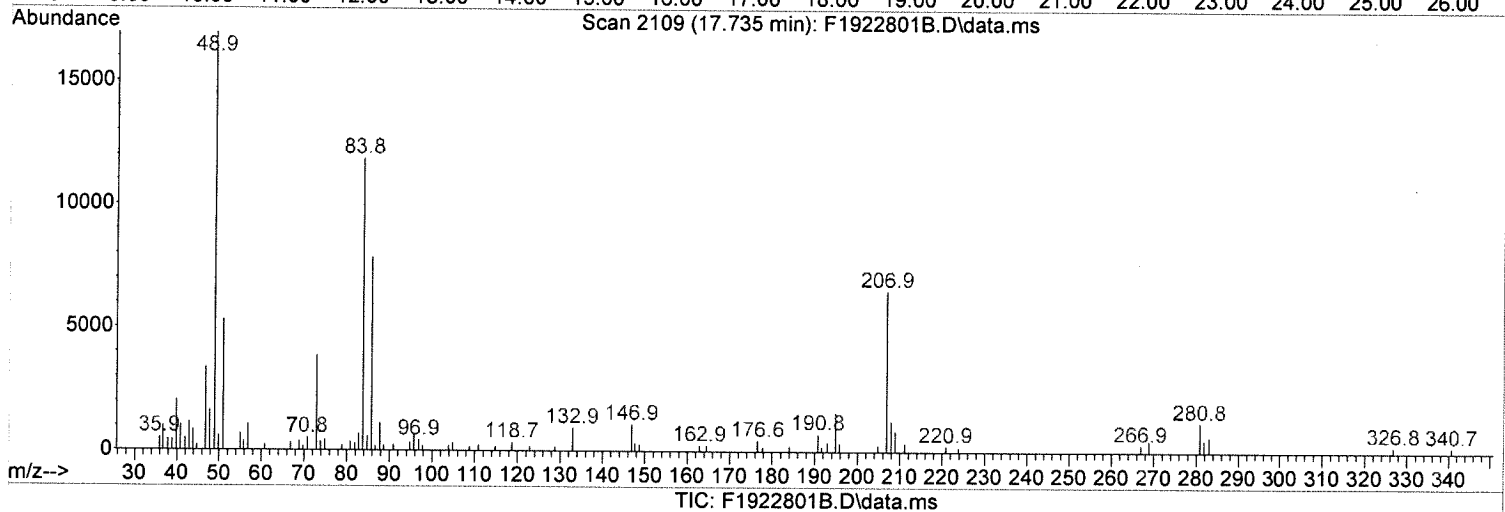
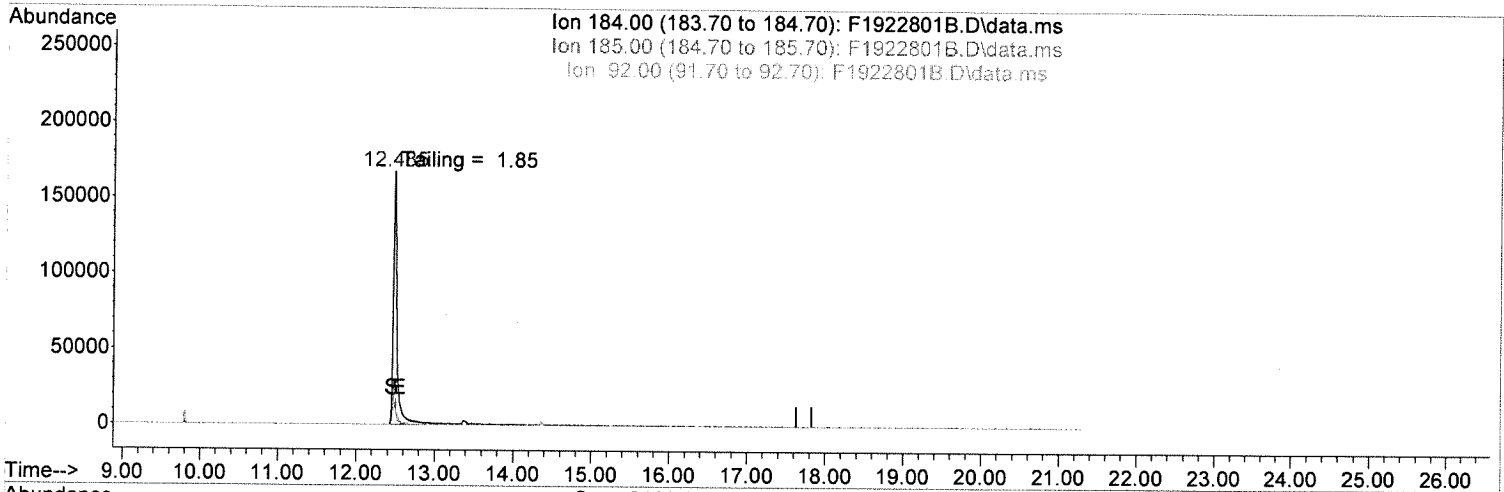
DataAcq Meth:DT122215.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
...ethods\8270D.M

Quant Title : 8270D DFTPP

QLast Update : Sat May 12 12:37:13 2012

Response via : Initial Calibration



(3) Benzidine

17.733min (-17.733) 0.000 ng/uL

response 0

| Ion    | Exp%   | Act%  |
|--------|--------|-------|
| 184.00 | 100.00 | 0.00  |
| 185.00 | 13.70  | 0.00# |
| 92.00  | 9.30   | 0.00# |
| 0.00   | 0.00   | 0.00  |

## CALIBRATION DATA

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET

328

SW-846 8270D

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900232

Instrument: GCMSSV6

Calibration Date: 7/19/2019 2:13:16PM

| Compound       | Level 01 |           | Level 02 |           | Level 03 |          | Level 04 |           | Level 05 |           | Level 06 |           |
|----------------|----------|-----------|----------|-----------|----------|----------|----------|-----------|----------|-----------|----------|-----------|
|                |          | RF        |          | RF        |          | RF       |          | RF        |          | RF        |          | RF        |
| 1,4-Dioxane    | 0.2      | 0.9197164 | 1        | 1.024818  | 2.5      | 1.113445 | 5        | 1.214251  | 10       | 1.273129  | 25       | 1.169152  |
| 1,4-Dioxane-d8 | 0.2      | 0.2970566 | 1        | 0.3211922 | 2.5      | 0.307653 | 5        | 0.3501261 | 10       | 0.2915975 | 25       | 0.3683082 |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8270D

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900232

Instrument: GCMSSV6

Calibration Date: 7/19/2019 2:13:16PM

| Compound       | Level 07 |           | Level 08 |          | Level 09 |    | Level 10 |    | Level 11 |    | Level 12 |    |
|----------------|----------|-----------|----------|----------|----------|----|----------|----|----------|----|----------|----|
|                |          | RF        |          | RF       |          | RF |          | RF |          | RF |          | RF |
| 1,4-Dioxane    | 50       | 1.099122  | 100      | 1.099937 |          |    |          |    |          |    |          |    |
| 1,4-Dioxane-d8 | 50       | 0.3399167 | 100      | 0.350495 |          |    |          |    |          |    |          |    |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

SW-846 8270D

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Calibration: 1900232

Instrument: GCMSSV6

Calibration Date: 7/19/2019 2:13:16PM

| COMPOUND       | Mean RF   | RF RSD | Linear r <sup>2</sup> | Quad COD | LIMIT | Q |
|----------------|-----------|--------|-----------------------|----------|-------|---|
| 1,4-Dioxane    | 1.114196  | 9.9    |                       |          | 20    |   |
| 1,4-Dioxane-d8 | 0.3282932 | 8.5    |                       |          | 20    |   |

# INITIAL CALIBRATION STANDARDS

329

SW-846 8270D

|              |                                |             |                       |
|--------------|--------------------------------|-------------|-----------------------|
| Laboratory:  | Con-Test Analytical Laboratory | Work Order: | 19H0576               |
| Client:      | Dvirka And Bartilucci          | Project:    | Farrand Controls Site |
| Sequence:    | S038265                        | Instrument: | GCMSSV6               |
| Calibration: | 1900232                        |             |                       |

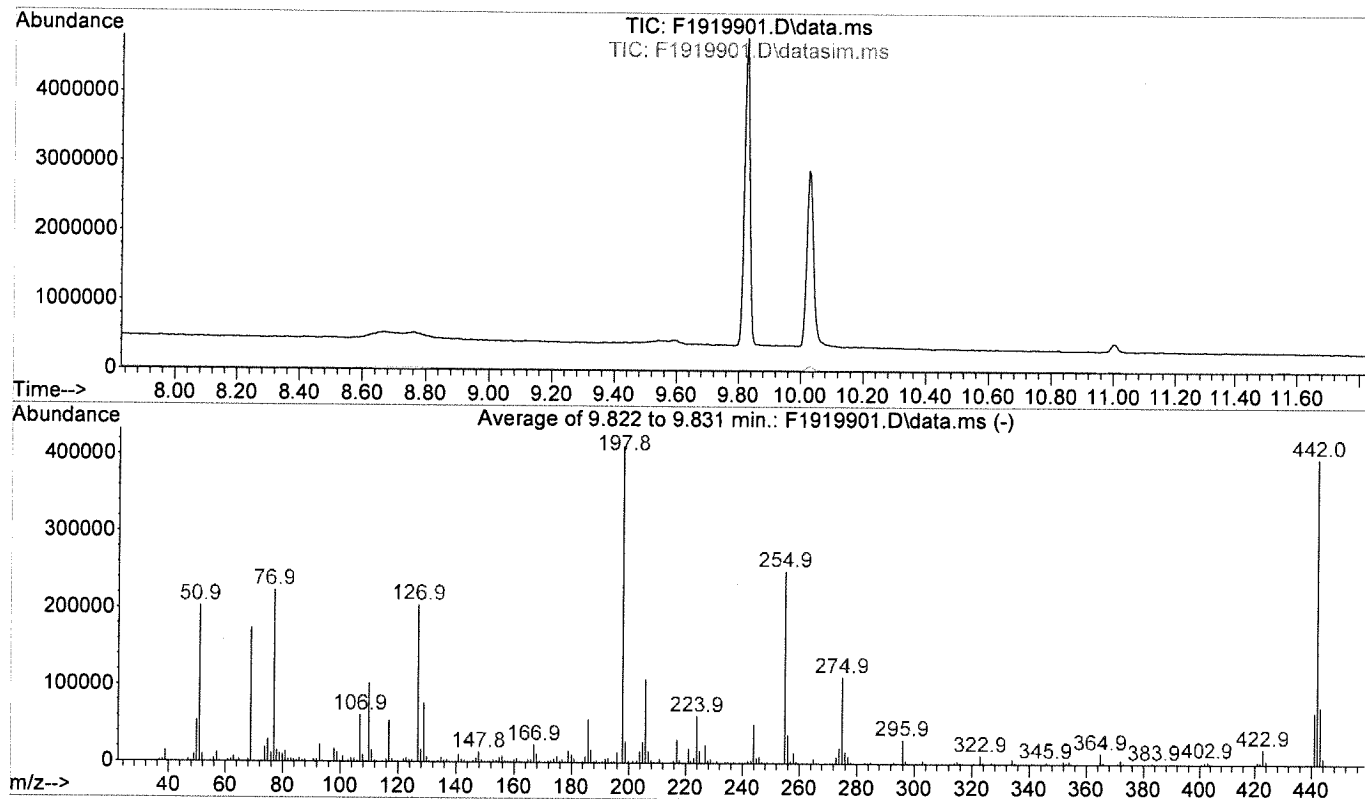
| Standard ID | Description                 | Lab Sample ID | Lab File ID | Analysis Date/Time |
|-------------|-----------------------------|---------------|-------------|--------------------|
| 1902259     | 1,4-Dioxane Tune - 25 ng/uL | S038265-TUN1  | F1919901.D  | 07/18/19 09:05     |
| 1810183     | Diox 0.2                    | S038265-CAL1  | F1919905.D  | 07/18/19 10:31     |
| 1810184     | Diox 1.0                    | S038265-CAL2  | F1919906.D  | 07/18/19 10:51     |
| 1810185     | Diox 2.5                    | S038265-CAL3  | F1919907.D  | 07/18/19 11:11     |
| 1810186     | Diox 5.0                    | S038265-CAL4  | F1919908.D  | 07/18/19 11:31     |
| 1810187     | Diox 10                     | S038265-CAL5  | F1919909.D  | 07/18/19 11:50     |
| 1810188     | Diox 25                     | S038265-CAL6  | F1919910.D  | 07/18/19 12:10     |
| 1810189     | Diox 50                     | S038265-CAL7  | F1919911.D  | 07/18/19 12:30     |
| 1810190     | Diox 100                    | S038265-CAL8  | F1919912.D  | 07/18/19 12:50     |
| 1810183     | Diox 0.2                    | S038265-CAL1  | F1919913.D  | 07/18/19 13:09     |
| 1810184     | Diox 1.0                    | S038265-CAL2  | F1919914.D  | 07/18/19 13:29     |
| 1810185     | Diox 2.5                    | S038265-CAL3  | F1919915.D  | 07/18/19 13:49     |
| 1810186     | Diox 5.0                    | S038265-CAL4  | F1919916.D  | 07/18/19 14:09     |
| 1810187     | Diox 10                     | S038265-CAL5  | F1919917.D  | 07/18/19 15:07     |
| 1810188     | Diox 25                     | S038265-CAL6  | F1919918.D  | 07/18/19 15:27     |
| 1810189     | Diox 50                     | S038265-CAL7  | F1919919.D  | 07/18/19 15:47     |
| 1810190     | Diox 100                    | S038265-CAL8  | F1919920.D  | 07/18/19 16:07     |

Data Path : C:\msdchem\1\data\F071819\  
 Data File : F1919901.D  
 Acq On : 18 Jul 2019 9:05 am  
 Operator : CLA  
 Sample : TUNE 25 ng  
 Misc : 1902259 EXP 093019  
 ALS Vial : 1 Sample Multiplier: 1

Inst : GCMSSV6

Integration File signal 1: rteint.p  
 Integration File signal 2: rteint2.p

Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant meth  
 ... ods\8270D.M  
 Title : 8270D DFTPP  
 Last Update : Sat May 12 12:37:13 2012



AutoFind: Scans 511, 512, 513; Background Corrected with Scan 502

| Target<br>Mass | Rel. to<br>Mass | Lower<br>Limit% | Upper<br>Limit% | Rel.<br>Abn% | Raw<br>Abn | Result<br>Pass/Fail |
|----------------|-----------------|-----------------|-----------------|--------------|------------|---------------------|
| 51             | 198             | 10              | 80              | 49.2         | 202659     | PASS                |
| 68             | 69              | 0.00            | 2               | 1.7          | 3015       | PASS                |
| 69             | 69              | 100             | 100             | 100.0        | 174126     | PASS                |
| 70             | 69              | 0.00            | 2               | 0.6          | 994        | PASS                |
| 127            | 198             | 10              | 80              | 49.6         | 204288     | PASS                |
| 197            | 198             | 0.00            | 2               | 0.0          | 0          | PASS                |
| 198            | 198             | 100             | 100             | 100.0        | 411947     | PASS                |
| 199            | 198             | 5               | 9               | 6.7          | 27629      | PASS                |
| 275            | 198             | 10              | 60              | 27.2         | 112093     | PASS                |
| 365            | 198             | 1               | 100             | 3.3          | 13637      | PASS                |
| 441            | 442             | 0.01            | 24              | 16.9         | 67173      | PASS                |
| 442            | 198             | 50              | 100             | 96.5         | 397675     | PASS                |
| 443            | 442             | 15              | 24              | 18.6         | 74115      | PASS                |

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919901.D  
Acq On : 18 Jul 2019 9:05 am  
Operator : CLA  
Sample : TUNE 25 ng  
Misc : 1902259 EXP 093019  
ALS Vial : 1 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 13:57:26 2019

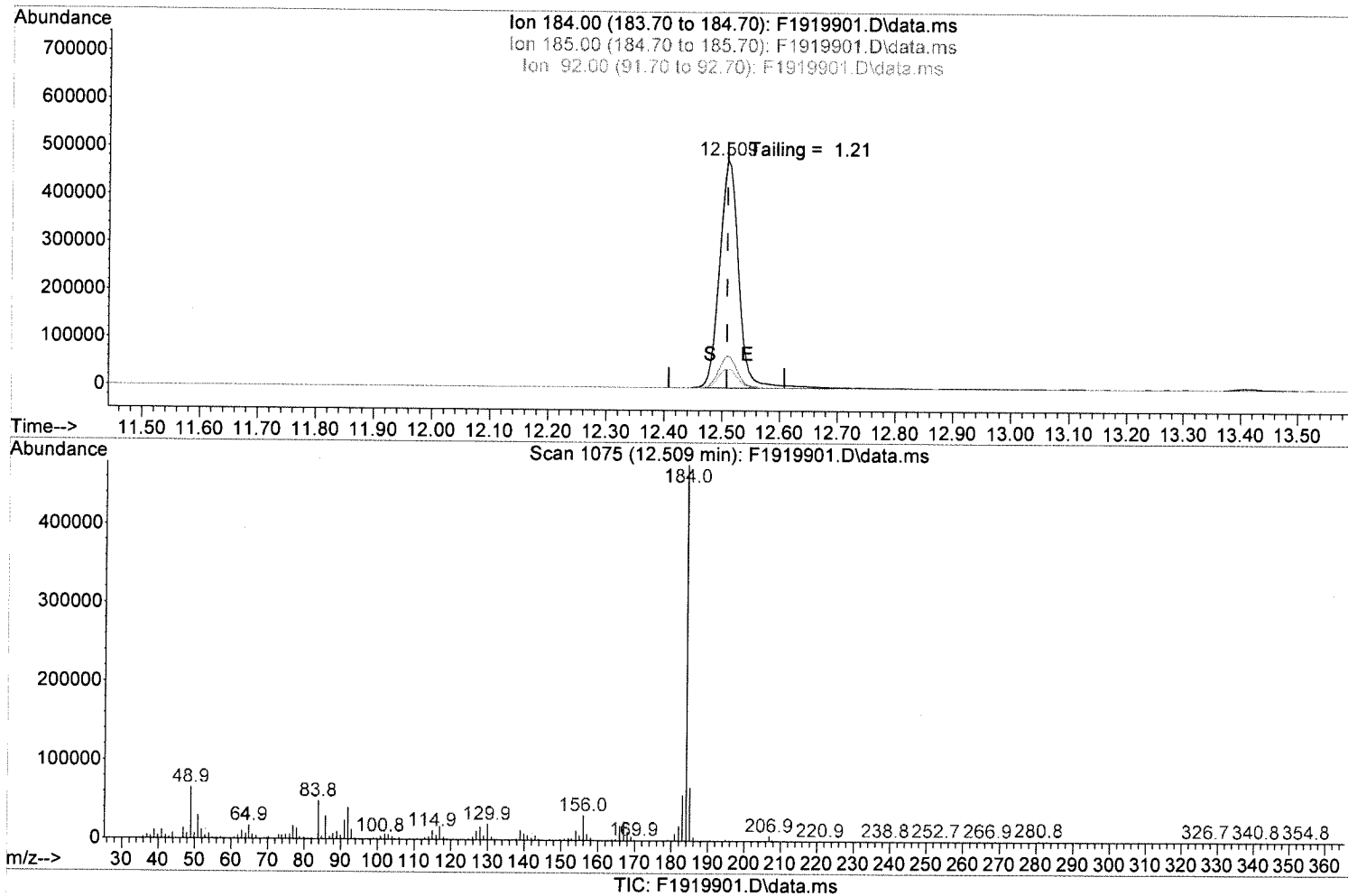
DataAcq Meth:DT122215.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
...ethods\8270D.M

Quant Title : 8270D DFTPP

QLast Update : Sat May 12 12:37:13 2012

Response via : Initial Calibration



(3) Benzidine

12.509min ( 0.000) 0.000 ng/uL

response 1075970

| Ion    | Exp%   | Act%   |
|--------|--------|--------|
| 184.00 | 100.00 | 100.00 |
| 185.00 | 14.10  | 13.88  |
| 92.00  | 8.30   | 8.53   |
| 0.00   | 0.00   | 0.00   |

Method Path : C:\msdchem\1\methods\  
Method File : DQ071819.M  
Title :  
Last Update : Thu Jul 18 16:35:04 2019  
Response Via : Initial Calibration

## Calibration Files

0.2 =F1919913.D 1.0 =F1919914.D 2.5 =F1919915.D 5.0 =F1919916.D 10 =F1919917.D 25 =F1919918.D 50 =F1919919.D  
100 =F1919920.D

| Compound |                       | 0.2            | 1.0   | 2.5   | 5.0   | 10    | 25    | 50    | 100   | Avg   | %RSD |
|----------|-----------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| -----    |                       |                |       |       |       |       |       |       |       |       |      |
| 1) I     | 1,4-Dichlorobenzen... | -----ISTD----- |       |       |       |       |       |       |       |       |      |
| 2) S     | 1,4-Dioxane-d8        | 0.297          | 0.321 | 0.308 | 0.350 | 0.292 | 0.368 | 0.340 | 0.350 | 0.328 | 8.54 |
| 3) I     | 1,4-Dioxane-d8 (I.S.) | -----ISTD----- |       |       |       |       |       |       |       |       |      |
| 4) T     | 1,4-Dioxane           | 0.920          | 1.025 | 1.113 | 1.214 | 1.273 | 1.169 | 1.099 | 1.100 | 1.114 | 9.86 |
| -----    |                       |                |       |       |       |       |       |       |       |       |      |

(#) = Out of Range



DATA ANALYSIS PARAMETERS  
-----

Method Name: C:\msdchem\1\methods\DQ071819.M

Percent Report Settings  
-----

Sort By: Signal

## Output Destination

Screen: No

Printer: No

File: No

Integration Events: Meth Default

Generate Report During Run Method: Yes

Signal Correlation Window: 0.020

Qualitative Report Settings  
-----

Peak Location of Unknown: Apex

Library to Search Minimum Quality

C:\Database\NIST08.L 0

Integration Events: Meth Default

Report Type: Summary

## Output Destination

Screen: No

Printer: No

File: No

Generate Report During Run Method: Yes

Quantitative Report Settings  
-----

Report Type: Summary

## Output Destination

Screen: No

Printer: No

File: No

Generate Report During Run Method: Yes

Calibration Last Updated: Thu Jul 18 16:35:04 2019

DQ071819.M Fri Jul 19 07:43:33 2019

Reference Window: 2.00 Minutes  
 Non-Reference Window: 1.00 Minutes  
 Correlation Window: 0.10 minutes  
 Default Multiplier: 1.00  
 Default Sample Concentration: 0.00

# Compound Information

1) 1,4-Dichlorobenzene-d4 (ISTD)

Ret. Time 11.128 min., Extract & Integrate from 11.028 to 11.228 min.

| Signal      | Rel Resp. | Pct. Unc.(rel) | Integration          |
|-------------|-----------|----------------|----------------------|
| Tgt -150.00 |           |                | *** METH DEFAULT *** |
| Q1 152.00   | 64.20     | 30.0           | *** METH DEFAULT *** |
| Q2 115.00   | 36.10     | 30.0           | *** METH DEFAULT *** |

| Lvl ID | Conc (ug/mL) | Response |
|--------|--------------|----------|
| 0.2    | 10.000       | 916492   |
| 1.0    | 10.000       | 864716   |
| 2.5    | 10.000       | 885504   |
| 5.0    | 10.000       | 790024   |
| 10     | 10.000       | 989590 ✓ |
| 25     | 10.000       | 847398   |
| 50     | 10.000       | 884049   |
| 100    | 10.000       | 840950   |

Qualifier Peak Analysis ON ISTD conc: 10.000 ug/mL  
 Curve Fit: Avg. RF

2) 1,4-Dioxane-d8 ( )

Ret. Time 7.990 min., Extract & Integrate from 7.890 to 8.090 min.

| Signal     | Rel Resp. | Pct. Unc.(rel) | Integration          |
|------------|-----------|----------------|----------------------|
| Tgt -96.00 |           |                | *** METH DEFAULT *** |
| Q1 64.00   | 70.80     | 30.0           | *** METH DEFAULT *** |
| Q2 46.00   | 24.00     | 30.0           | *** METH DEFAULT *** |

| Lvl ID | Conc (ug/mL) | Response |
|--------|--------------|----------|
| 0.2    | 0.200        | 5445     |
| 1.0    | 1.000        | 27774    |
| 2.5    | 2.500        | 68107    |
| 5.0    | 5.000        | 138304   |
| 10     | 10.000       | 288562 ✓ |
| 25     | 25.000       | 780259   |
| 50     | 50.000       | 1502515  |
| 100    | 100.000      | 2947488  |

Qualifier Peak Analysis ON  
 Curve Fit: Avg. RF

3) 1,4-Dioxane-d8 (I.S.) (ISTD)

Ret. Time 7.990 min., Extract & Integrate from 7.890 to 8.090 min.

| Signal     | Rel Resp. | Pct. Unc.(rel) | Integration          |
|------------|-----------|----------------|----------------------|
| Tgt -96.00 |           |                | *** METH DEFAULT *** |
| Q1 64.00   | 71.40     | 30.0           | *** METH DEFAULT *** |
| Q2 46.00   | 24.00     | 30.0           | *** METH DEFAULT *** |

| Lvl ID | Conc (ug/mL) | Response |
|--------|--------------|----------|
| 0.2    | 10.000       | 307921   |
| 1.0    | 10.000       | 299175   |

|     |        |        |
|-----|--------|--------|
| 2.5 | 10.000 | 286861 |
| 5.0 | 10.000 | 260073 |
| 10  | 10.000 | 251852 |
| 25  | 10.000 | 285307 |
| 50  | 10.000 | 292805 |
| 100 | 10.000 | 290373 |

Qualifier Peak Analysis ON      ISTD conc:      10.000 ug/mL  
Curve Fit: Avg. RF

---

4) 1,4-Dioxane ( )

Ret. Time 8.034 min., Extract & Integrate from 7.934 to 8.134 min.

| Signal     | Rel Resp. | Pct. Unc.(rel) | Integration          |
|------------|-----------|----------------|----------------------|
| Tgt -88.00 |           |                | *** METH DEFAULT *** |
| Q1 58.00   | 70.60     | 30.0           | *** METH DEFAULT *** |
| Q2 43.00   | 31.70     | 30.0           | *** METH DEFAULT *** |

| Lvl ID | Conc (ug/mL) | Response |
|--------|--------------|----------|
| 0.2    | 0.200        | 5664     |
| 1.0    | 1.000        | 30660    |
| 2.5    | 2.500        | 79851    |
| 5.0    | 5.000        | 157897   |
| 10     | 10.000       | 320640   |
| 25     | 25.000       | 833918   |
| 50     | 50.000       | 1609142  |
| 100    | 100.000      | 3193920  |

Qualifier Peak Analysis ON  
Curve Fit: Avg. RF

---

END OF DATA ANALYSIS PARAMETERS

---

Fri Jul 19 13:21:38 2019

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919905.D  
Acq On : 18 Jul 2019 10:31 am  
Operator : CLA  
Sample : DIOX 0.2 ug/ml  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 10:57:58 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

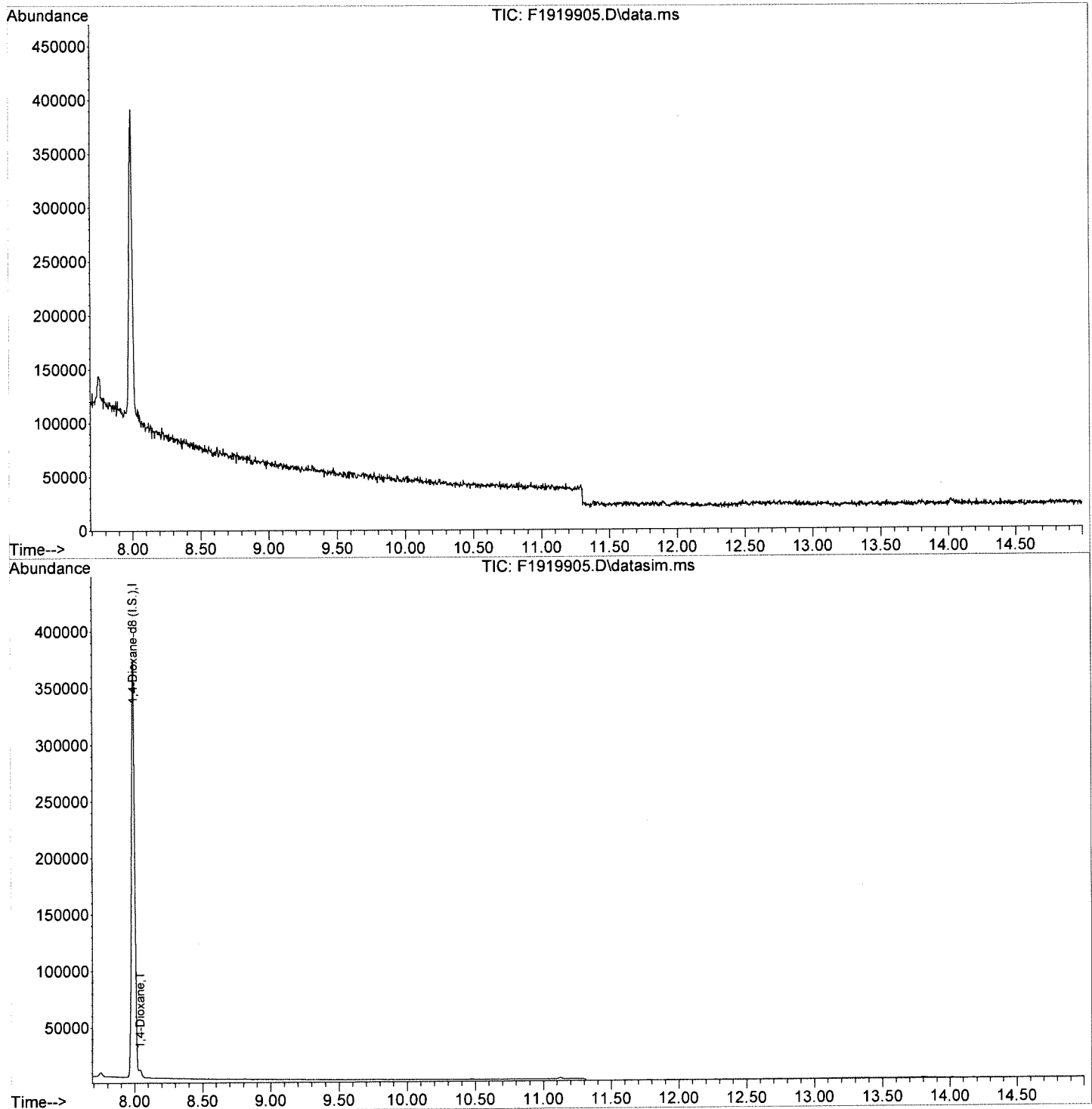
| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|-----------------------------|-------|------|----------|--------|-------|--------------|
| Internal Standards          |       |      |          |        |       |              |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13       |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.993 | 96   | 307921   | 10.000 | ug/mL | 0.00         |
| System Monitoring Compounds |       |      |          |        |       |              |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |              |
| Target Compounds            |       |      |          |        |       |              |
| 4) 1,4-Dioxane              | 8.040 | 88   | 5664     | 0.173  | ug/mL | Qvalue<br>92 |

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

```
Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919905.D  
Acq On : 18 Jul 2019 10:31 am  
Operator : CLA  
Sample : DIOX 0.2 ug/ml  
Misc :  
ALS Vial : 5 Sample Multiplier: 1
```

Inst : GCMSSV6

Quant Time: Jul 18 10:57:58 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919906.D  
Acq On : 18 Jul 2019 10:51 am  
Operator : CLA  
Sample : DIOX 1.0 ug/ml  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Inst : GCMSSV6

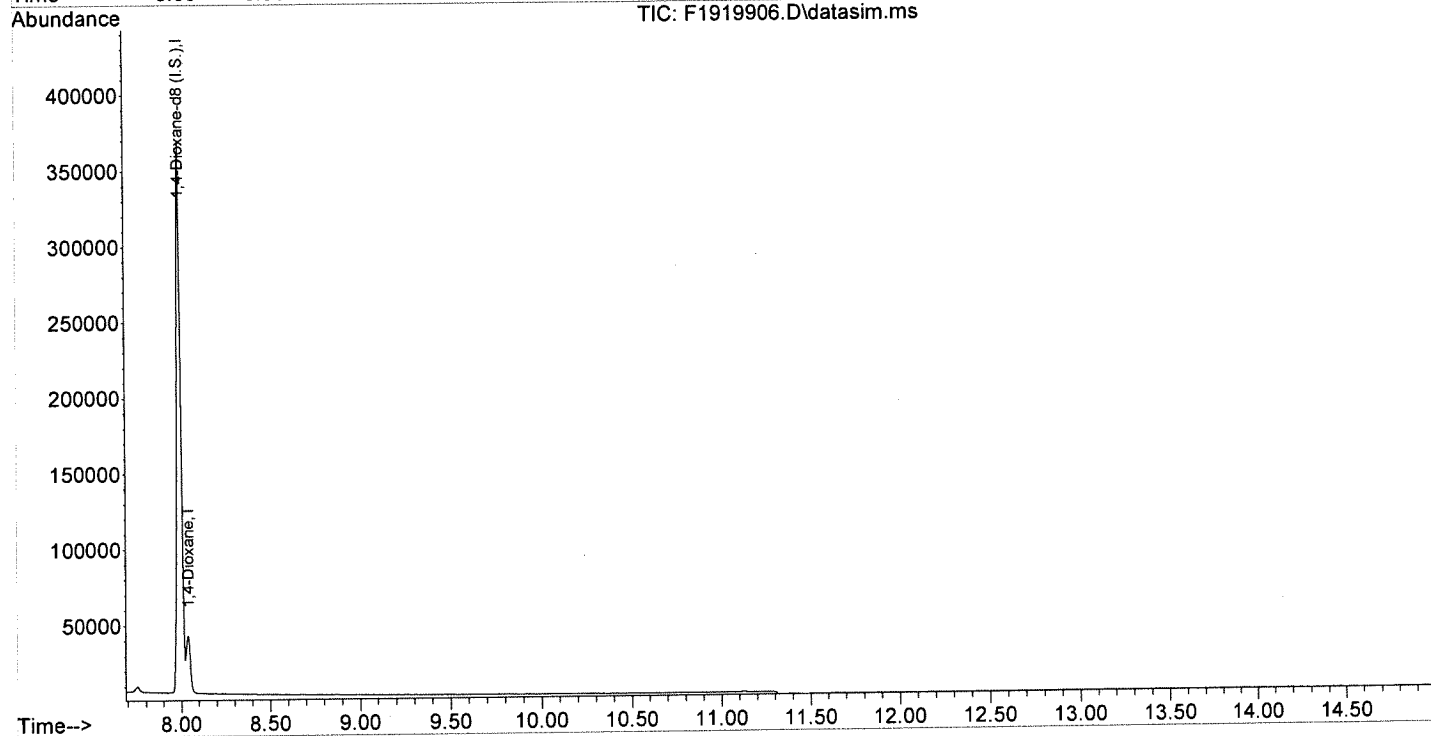
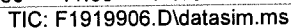
Quant Time: Jul 18 11:18:27 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)  |
|-----------------------------|-------|------|----------|--------|-------|-----------|
| -----                       |       |      |          |        |       |           |
| Internal Standards          |       |      |          |        |       |           |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13    |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.993 | 96   | 299175   | 10.000 | ug/mL | 0.00      |
| System Monitoring Compounds |       |      |          |        |       |           |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |           |
| Target Compounds            |       |      |          |        |       |           |
| 4] 1,4-Dioxane              | 8.040 | 88   | 30660    | 0.963  | ug/mL | Qvalue 98 |
| -----                       |       |      |          |        |       |           |

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

Inst : GCMSSV6

TIC: F1919906.D\data.ms



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919907.D  
Acq On : 18 Jul 2019 11:11 am  
Operator : CLA  
Sample : DIOX 2.5 ug/ml  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:03:09 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|-----------------------------|-------|------|----------|--------|-------|--------------|
| -----                       |       |      |          |        |       |              |
| Internal Standards          |       |      |          |        |       |              |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13       |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.989 | 96   | 286861   | 10.000 | ug/mL | 0.00         |
| System Monitoring Compounds |       |      |          |        |       |              |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |              |
| Target Compounds            |       |      |          |        |       |              |
| 4) 1,4-Dioxane              | 8.037 | 88   | 79851    | 2.615  | ug/mL | Qvalue<br>99 |
| -----                       |       |      |          |        |       |              |

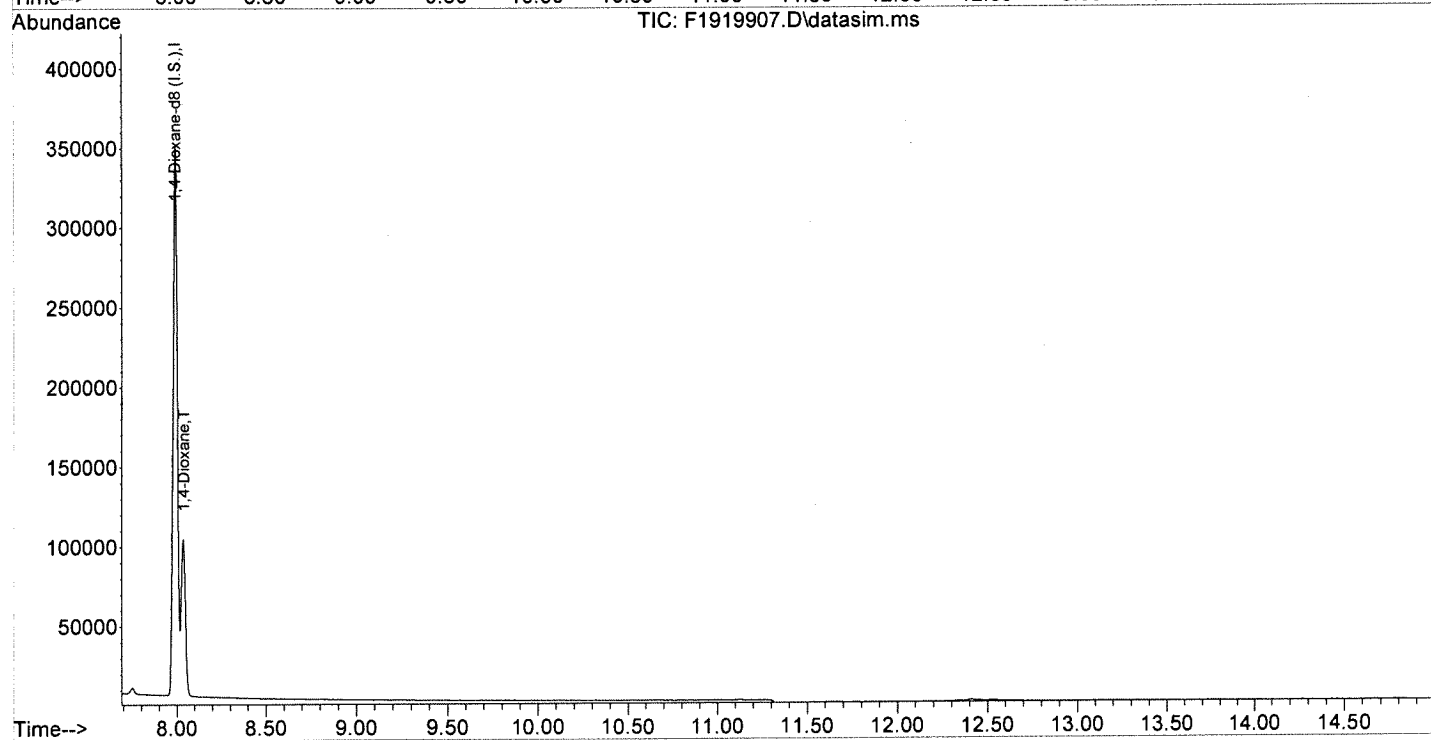
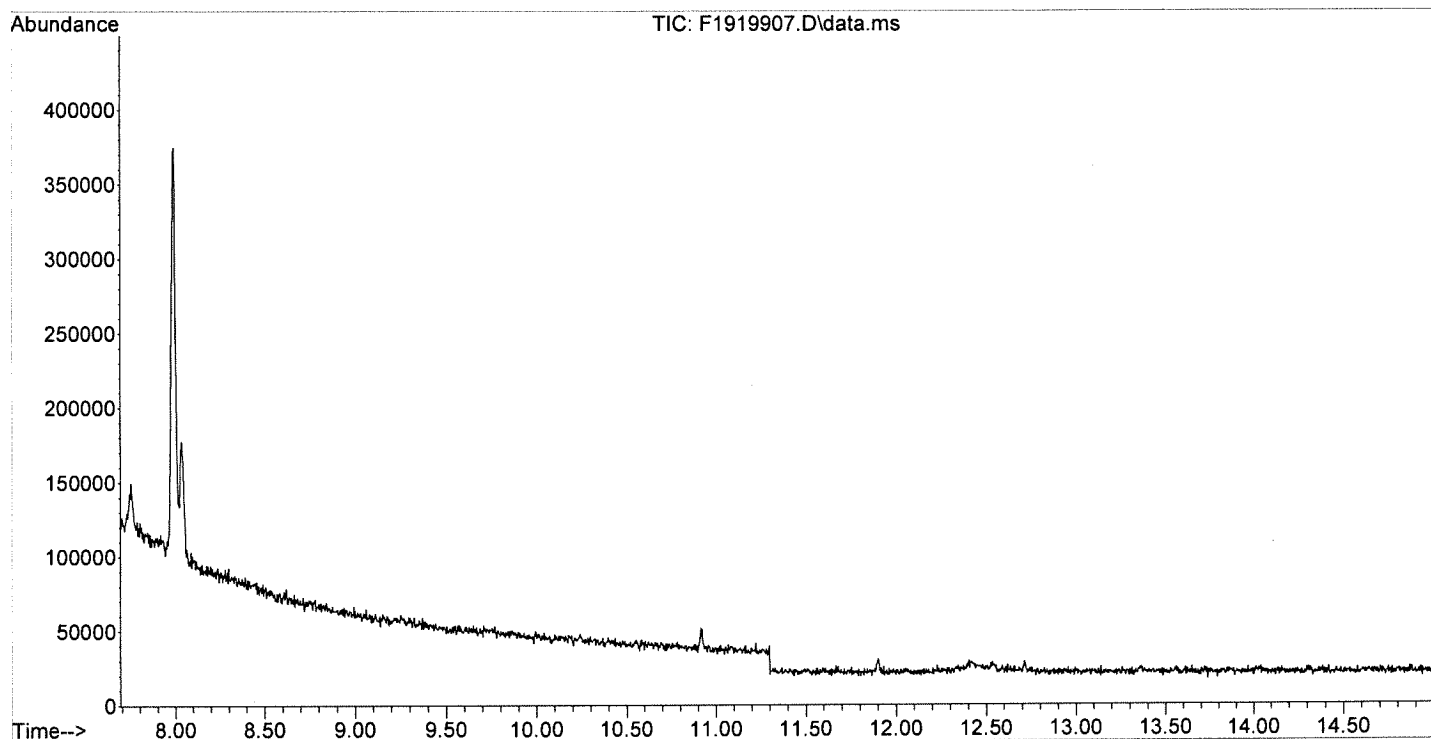
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919907.D  
Acq On : 18 Jul 2019 11:11 am  
Operator : CLA  
Sample : DIOX 2.5 ug/ml  
Misc :  
ALS Vial : 7 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:03:09 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919908.D  
Acq On : 18 Jul 2019 11:31 am  
Operator : CLA  
Sample : DIOX 5.0 ug/ml  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:03:39 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

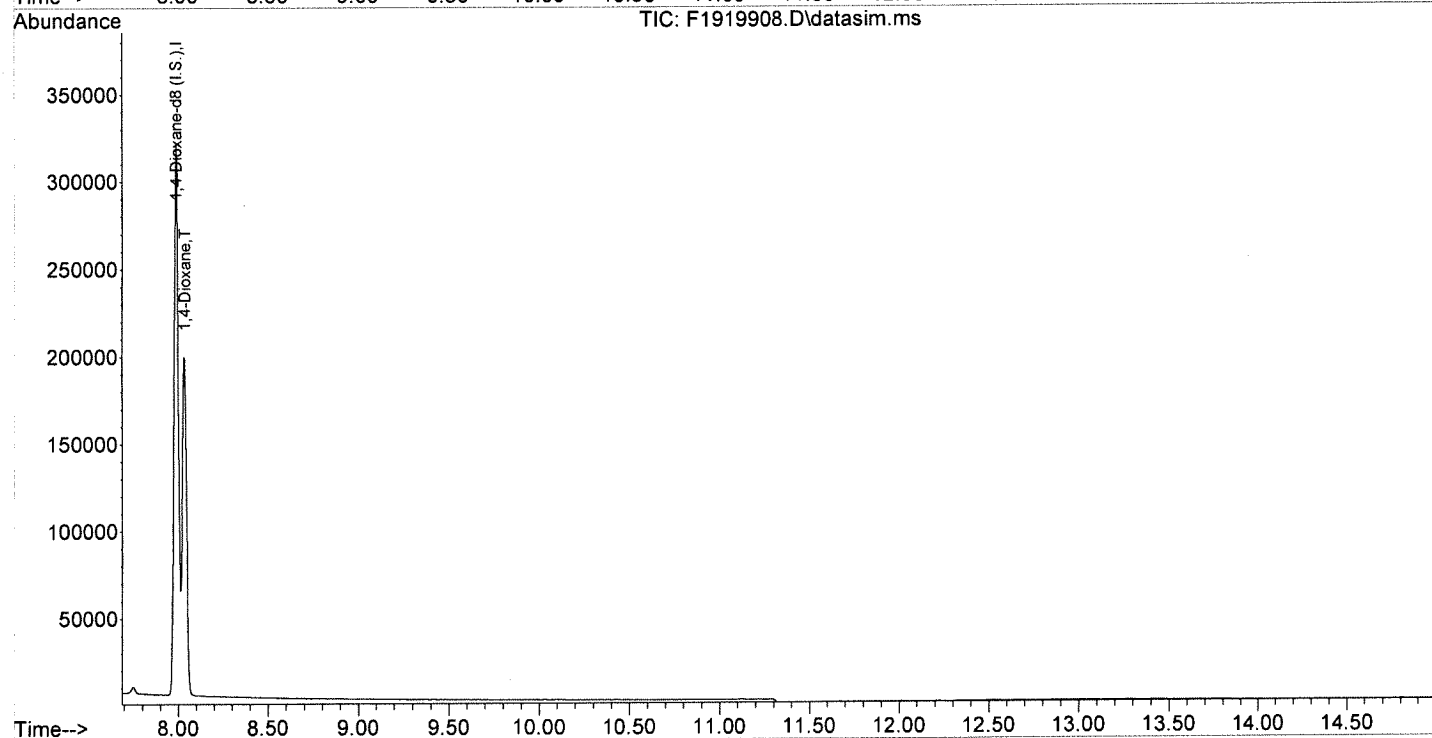
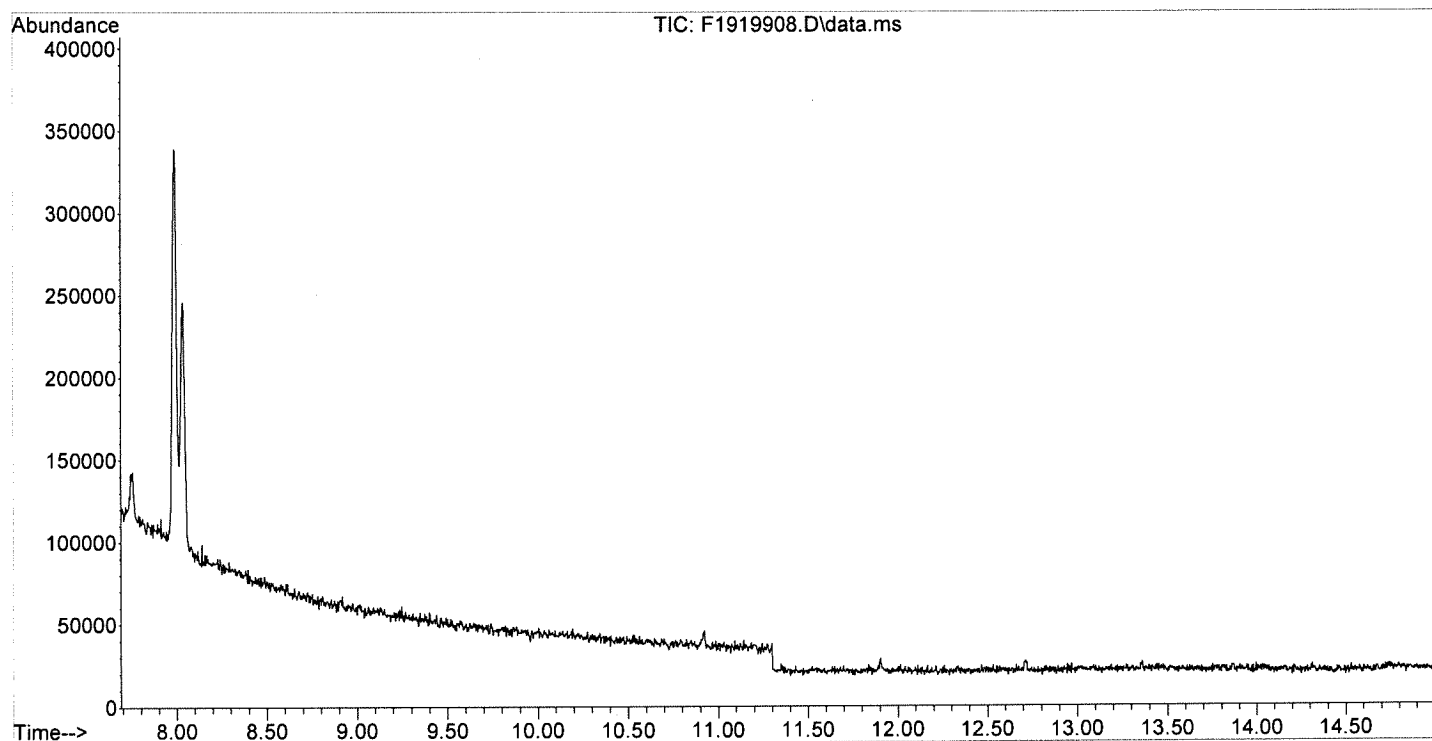
| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)  |
|-----------------------------|-------|------|----------|--------|-------|-----------|
| -----                       |       |      |          |        |       |           |
| Internal Standards          |       |      |          |        |       |           |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13    |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.989 | 96   | 260073   | 10.000 | ug/mL | 0.00      |
| System Monitoring Compounds |       |      |          |        |       |           |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |           |
| Target Compounds            |       |      |          |        |       |           |
| 4] 1,4-Dioxane              | 8.037 | 88   | 157897   | 5.704  | ug/mL | Qvalue 99 |
| -----                       |       |      |          |        |       |           |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919908.D  
Acq On : 18 Jul 2019 11:31 am  
Operator : CLA  
Sample : DIOX 5.0 ug/ml  
Misc :  
ALS Vial : 8 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:03:39 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919909.D  
Acq On : 18 Jul 2019 11:50 am  
Operator : CLA  
Sample : DIOX 10 ug/ml  
Misc :  
ALS Vial : 9 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:04:05 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

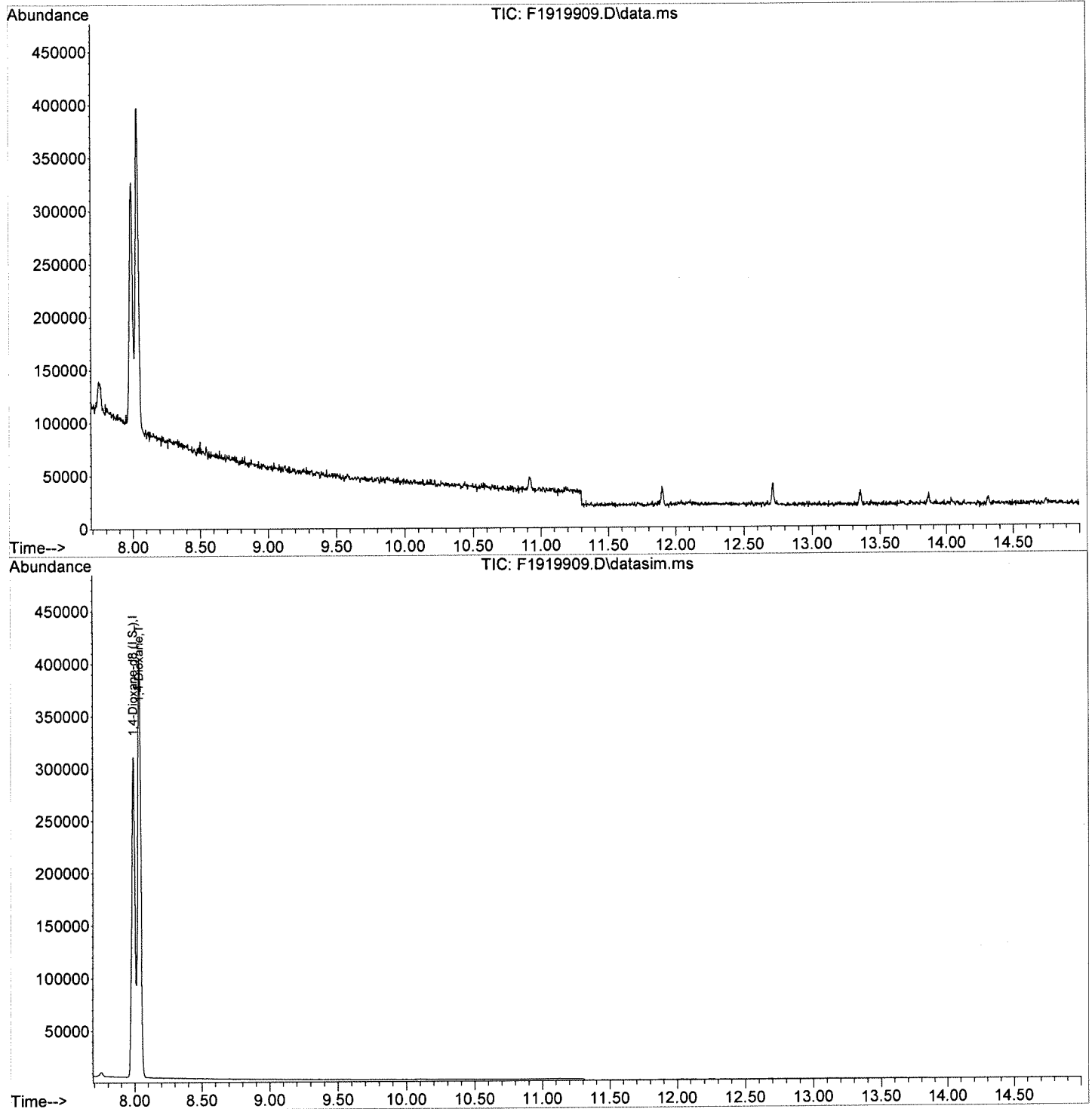
| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)      |
|-----------------------------|-------|------|----------|--------|-------|---------------|
| -----                       |       |      |          |        |       |               |
| Internal Standards          |       |      |          |        |       |               |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13        |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.989 | 96   | 251852   | 10.000 | ug/mL | 0.00          |
| System Monitoring Compounds |       |      |          |        |       |               |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |               |
| Target Compounds            |       |      |          |        |       |               |
| 4] 1,4-Dioxane              | 8.033 | 88   | 320640   | 11.960 | ug/mL | Qvalue<br>100 |
| -----                       |       |      |          |        |       |               |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919909.D  
Acq On : 18 Jul 2019 11:50 am  
Operator : CLA  
Sample : DIOX 10 ug/ml  
Misc :  
ALS Vial : 9 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:04:05 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919910.D  
Acq On : 18 Jul 2019 12:10 pm  
Operator : CLA  
Sample : DIOX 25 ug/ml  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:04:47 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

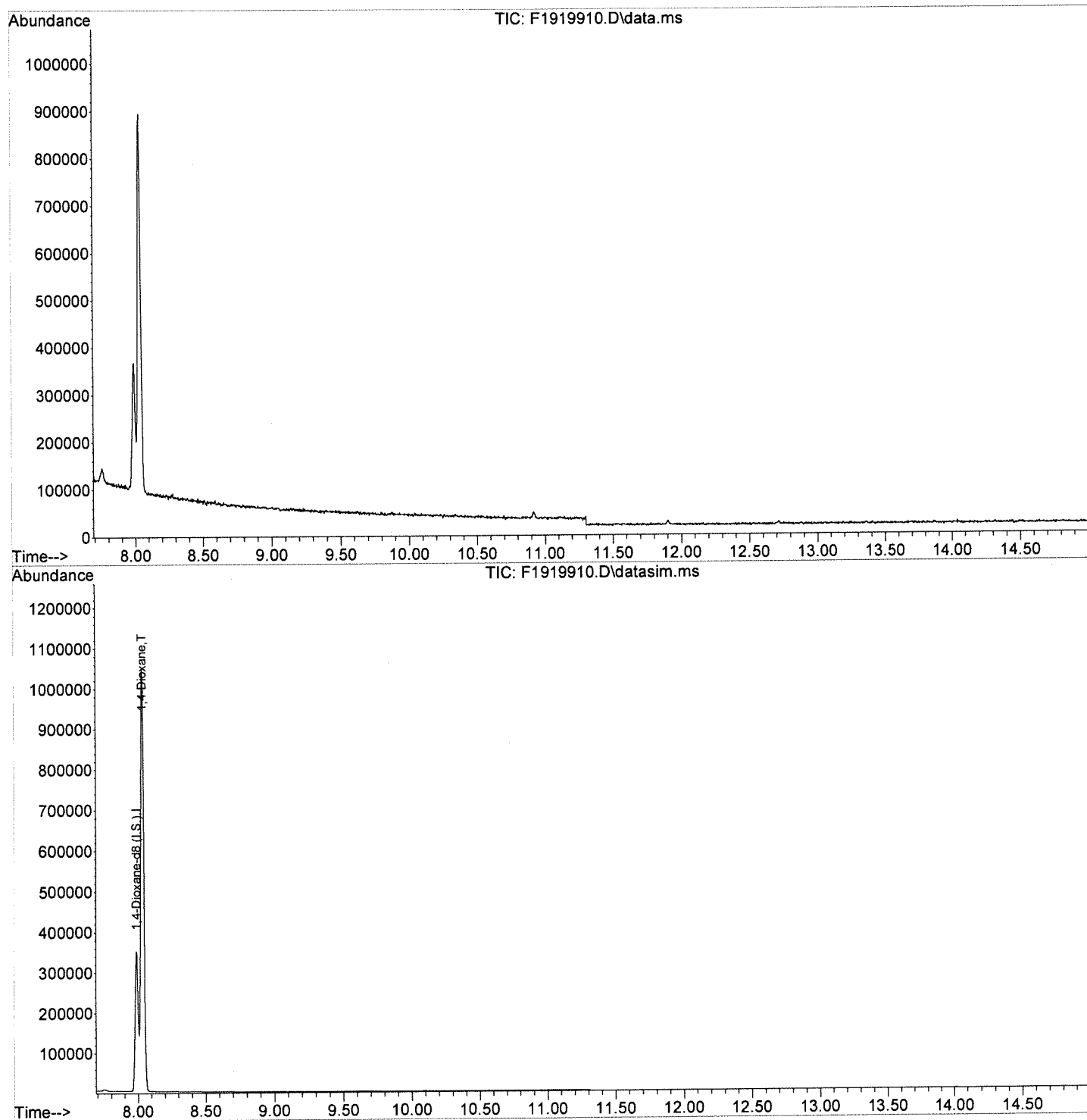
| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)      |
|-----------------------------|-------|------|----------|--------|-------|---------------|
| Internal Standards          |       |      |          |        |       |               |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13        |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.989 | 96   | 285307   | 10.000 | ug/mL | 0.00          |
| System Monitoring Compounds |       |      |          |        |       |               |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |               |
| Target Compounds            |       |      |          |        |       |               |
| 4] 1,4-Dioxane              | 8.033 | 88   | 833918   | 27.459 | ug/mL | Qvalue<br>100 |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919910.D  
Acq On : 18 Jul 2019 12:10 pm  
Operator : CLA  
Sample : DIOX 25 ug/ml  
Misc :  
ALS Vial : 10 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:04:47 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919911.D  
Acq On : 18 Jul 2019 12:30 pm  
Operator : CIA  
Sample : DIOX 50 ug/ml  
Misc :  
ALS Vial : 11 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:05:11 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)  |
|-----------------------------|-------|------|----------|--------|-------|-----------|
| Internal Standards          |       |      |          |        |       |           |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13    |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.993 | 96   | 292805   | 10.000 | ug/mL | 0.00      |
| System Monitoring Compounds |       |      |          |        |       |           |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |           |
| Target Compounds            |       |      |          |        |       |           |
| 4] 1,4-Dioxane              | 8.037 | 88   | 1609142  | 51.628 | ug/mL | Qvalue 99 |

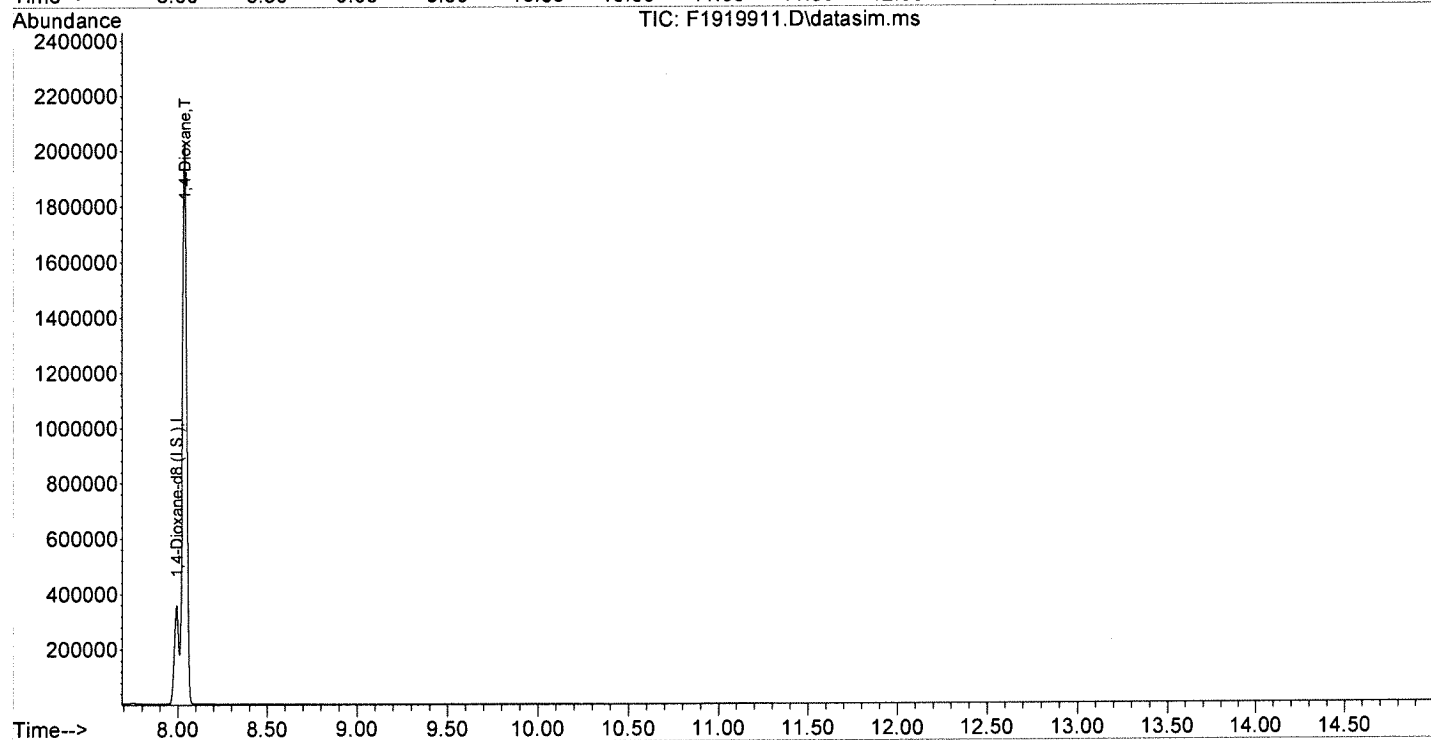
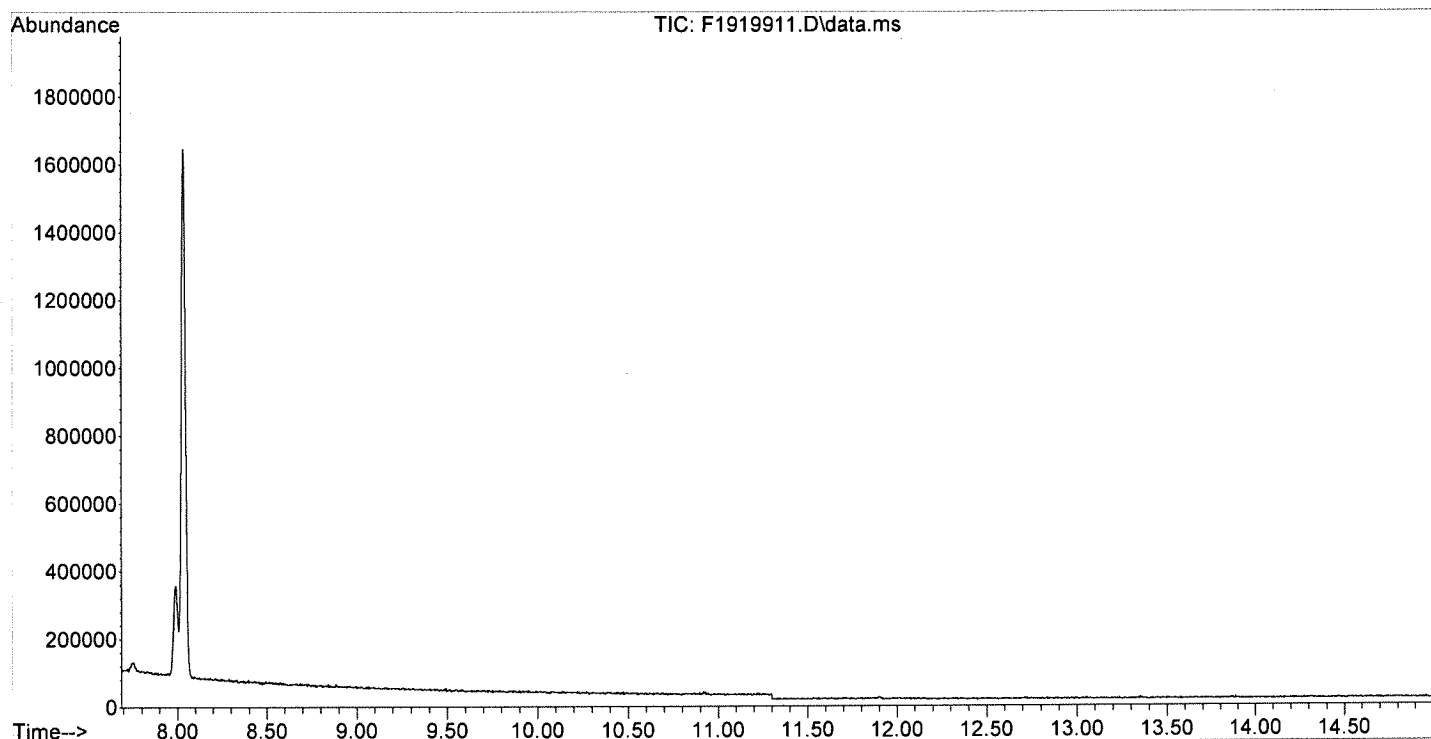
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919911.D  
Acq On : 18 Jul 2019 12:30 pm  
Operator : CLA  
Sample : DIOX 50 ug/ml  
Misc :  
ALS Vial : 11 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:05:11 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919912.D  
Acq On : 18 Jul 2019 12:50 pm  
Operator : CLA  
Sample : DIOX 100 ug/ml Inst : GCMSSV6  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 18 14:05:34 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

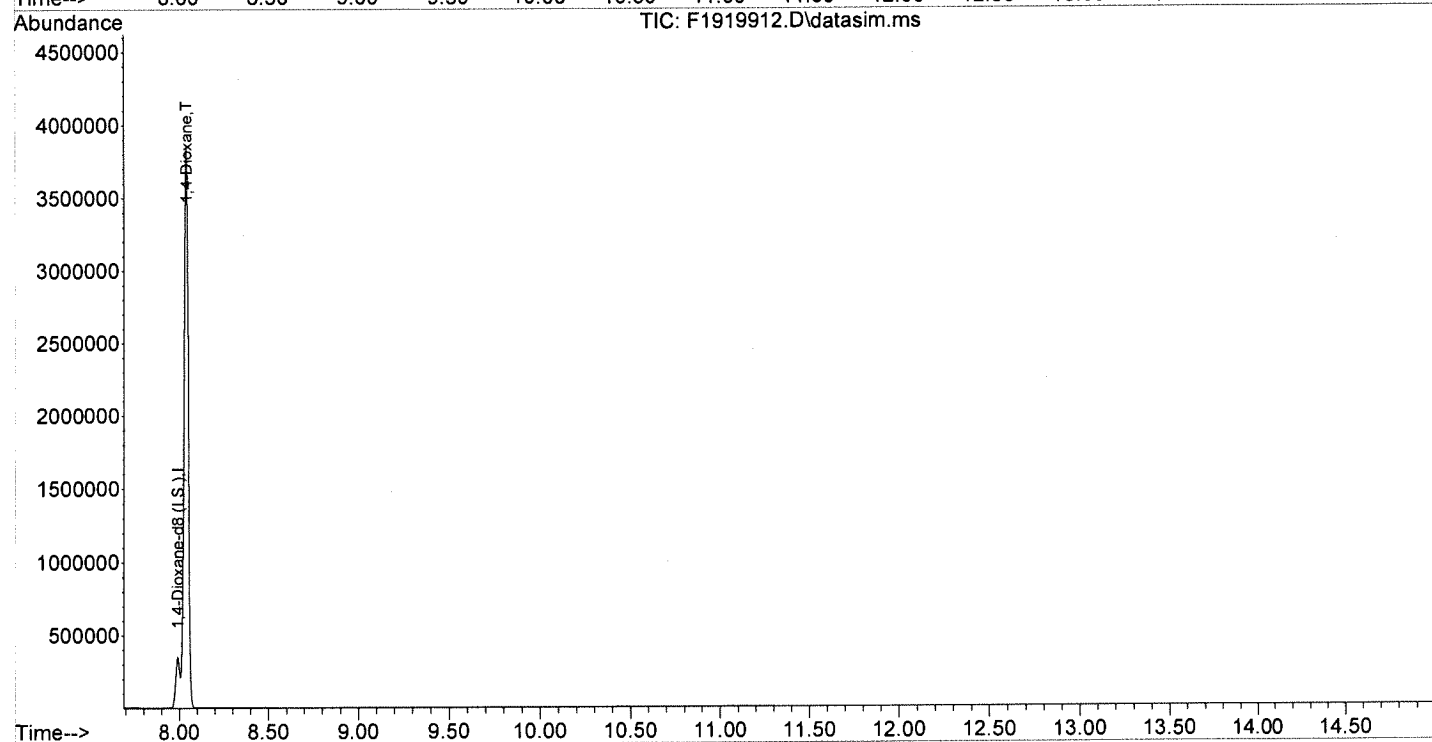
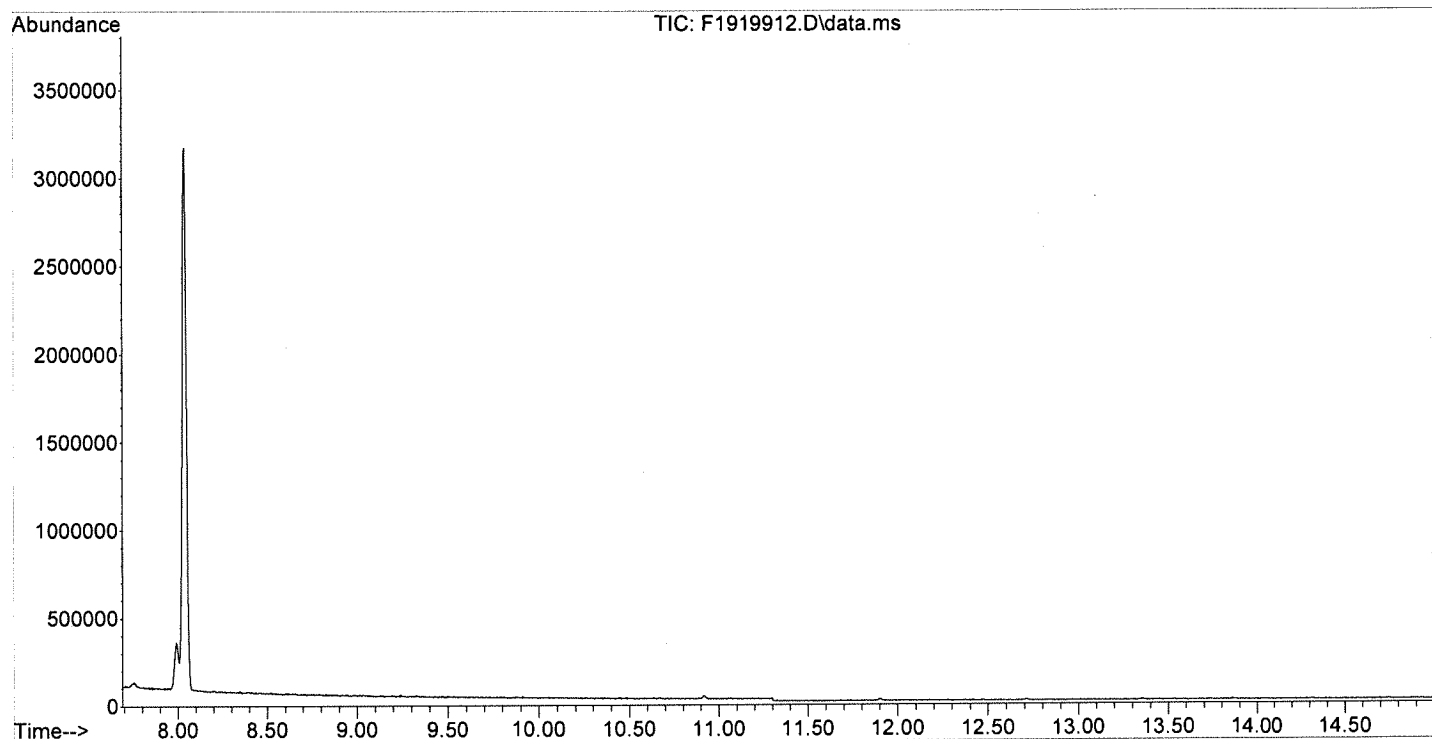
| Compound                    | R.T.  | QIon | Response | Conc    | Units | Dev(Min)  |
|-----------------------------|-------|------|----------|---------|-------|-----------|
| -----                       |       |      |          |         |       |           |
| Internal Standards          |       |      |          |         |       |           |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000  | ug/mL | -11.13    |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.993 | 96   | 290373   | 10.000  | ug/mL | 0.00      |
| System Monitoring Compounds |       |      |          |         |       |           |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000   | ug/mL |           |
| Target Compounds            |       |      |          |         |       |           |
| 4] 1,4-Dioxane              | 8.040 | 88   | 3193920  | 103.332 | ug/mL | Qvalue 99 |
| -----                       |       |      |          |         |       |           |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919912.D  
Acq On : 18 Jul 2019 12:50 pm  
Operator : CLA  
Sample : DIOX 100 ug/ml  
Misc :  
ALS Vial : 12 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:05:34 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919913.D  
Acq On : 18 Jul 2019 1:09 pm  
Operator : CLA  
Sample : DIOX-D8 0.2 ug/ml Inst : GCMSSV6  
Misc :  
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 18 14:06:25 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

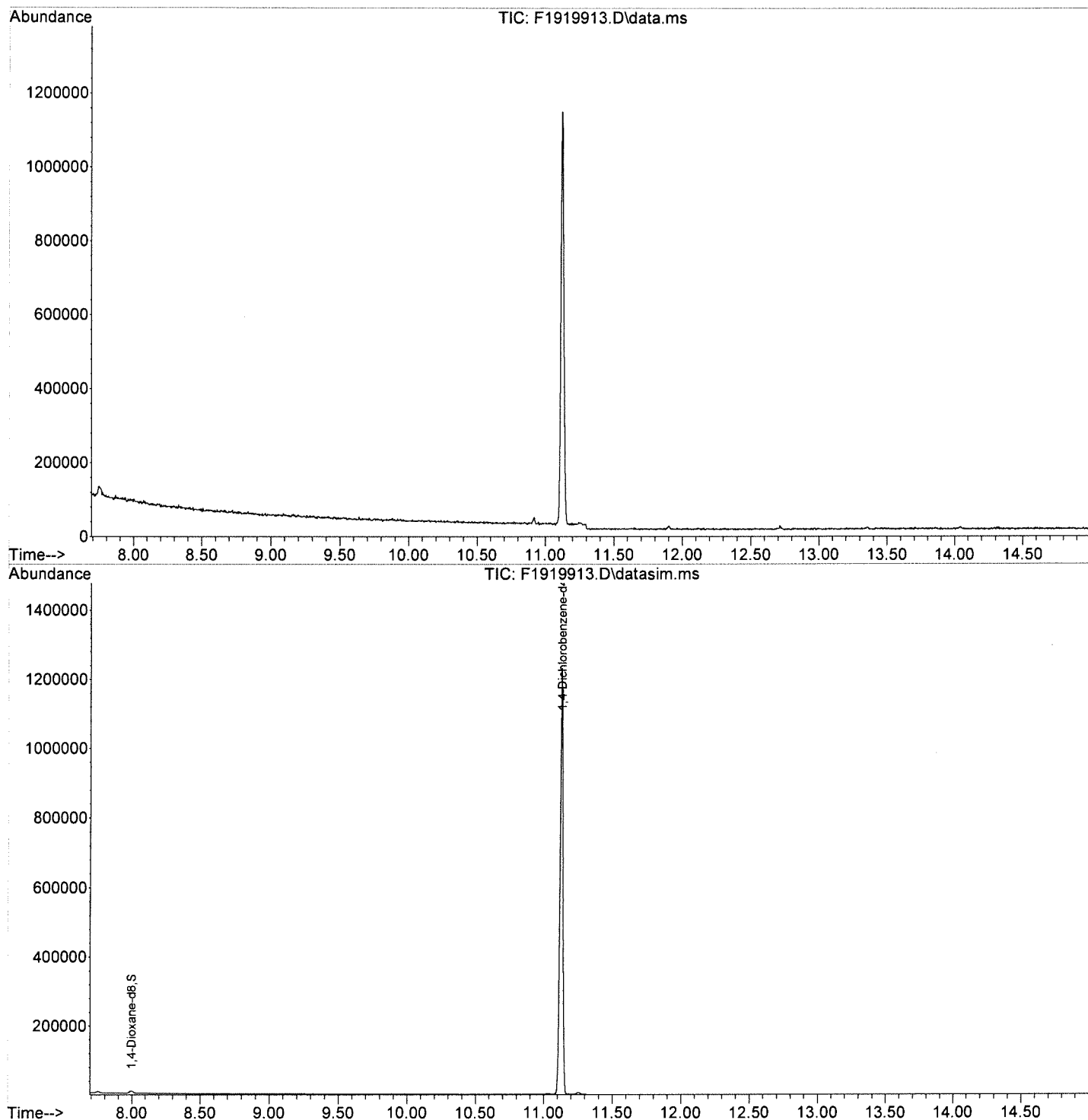
| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| -----                       |        |      |          |        |       |          |
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.127 | 150  | 916492   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.996  | 96   | 5445     | 0.192  | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |
| -----                       |        |      |          |        |       |          |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919913.D  
Acq On : 18 Jul 2019 1:09 pm  
Operator : CLA  
Sample : DIOX-D8 0.2 ug/ml  
Misc :  
ALS Vial : 13 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:06:25 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919914.D  
Acq On : 18 Jul 2019 1:29 pm  
Operator : CLA  
Sample : DIOX-D8 1.0 ug/ml Inst : GCMSSV6  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 18 14:07:19 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

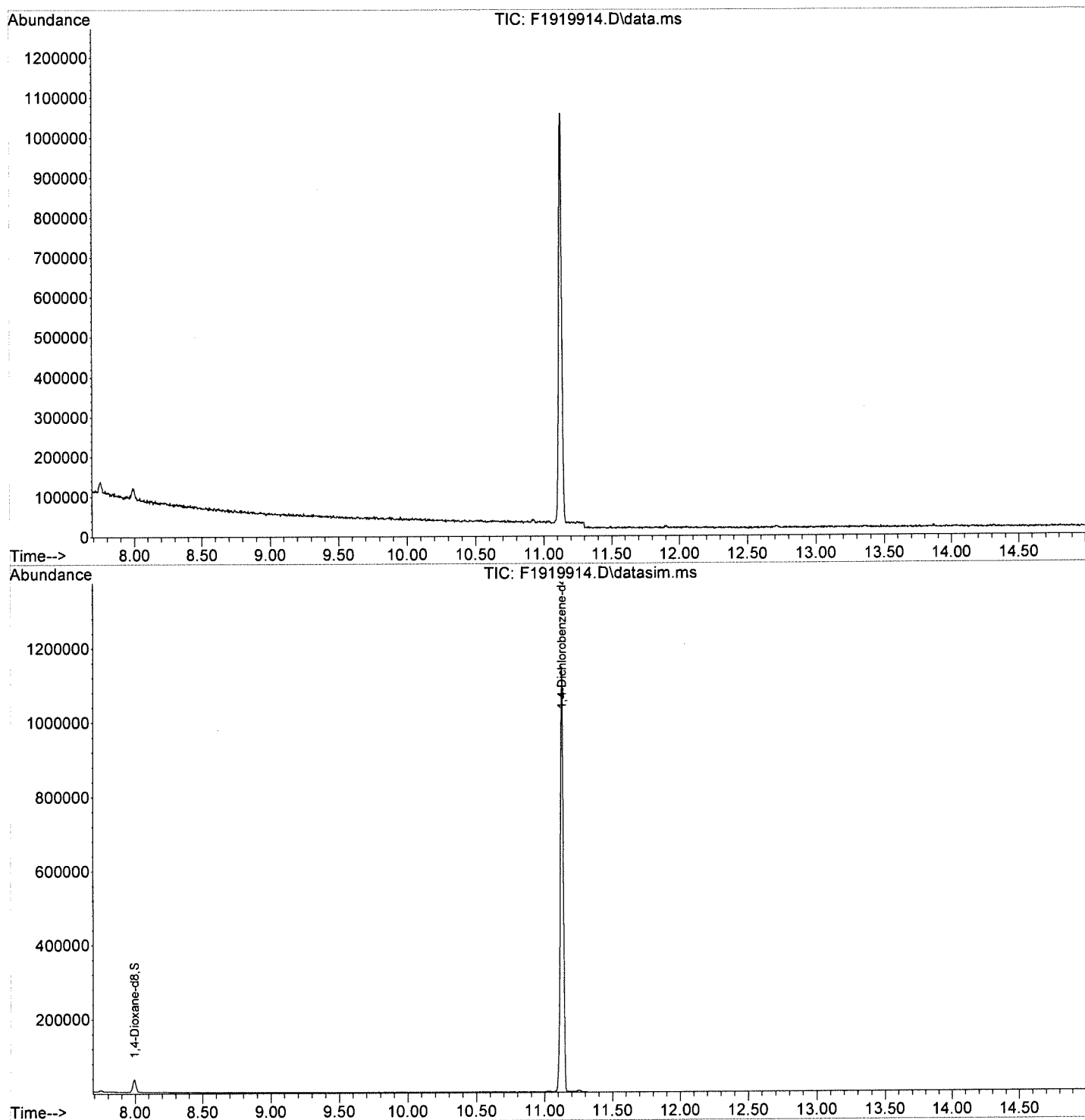
| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| -----                       |        |      |          |        |       |          |
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.127 | 150  | 864716   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.993  | 96   | 27774    | 1.040  | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |
| -----                       |        |      |          |        |       |          |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919914.D  
Acq On : 18 Jul 2019 1:29 pm  
Operator : CLA  
Sample : DIOX-D8 1.0 ug/ml  
Misc :  
ALS Vial : 14 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:07:19 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919915.D  
Acq On : 18 Jul 2019 1:49 pm  
Operator : CLA  
Sample : DIOX-D8 2.5 ug/ml Inst : GCMSSV6  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 18 14:07:45 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| -----                       |        |      |          |        |       |          |
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.127 | 150  | 885504   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.989  | 96   | 68107    | 2.491  | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |
| -----                       |        |      |          |        |       |          |

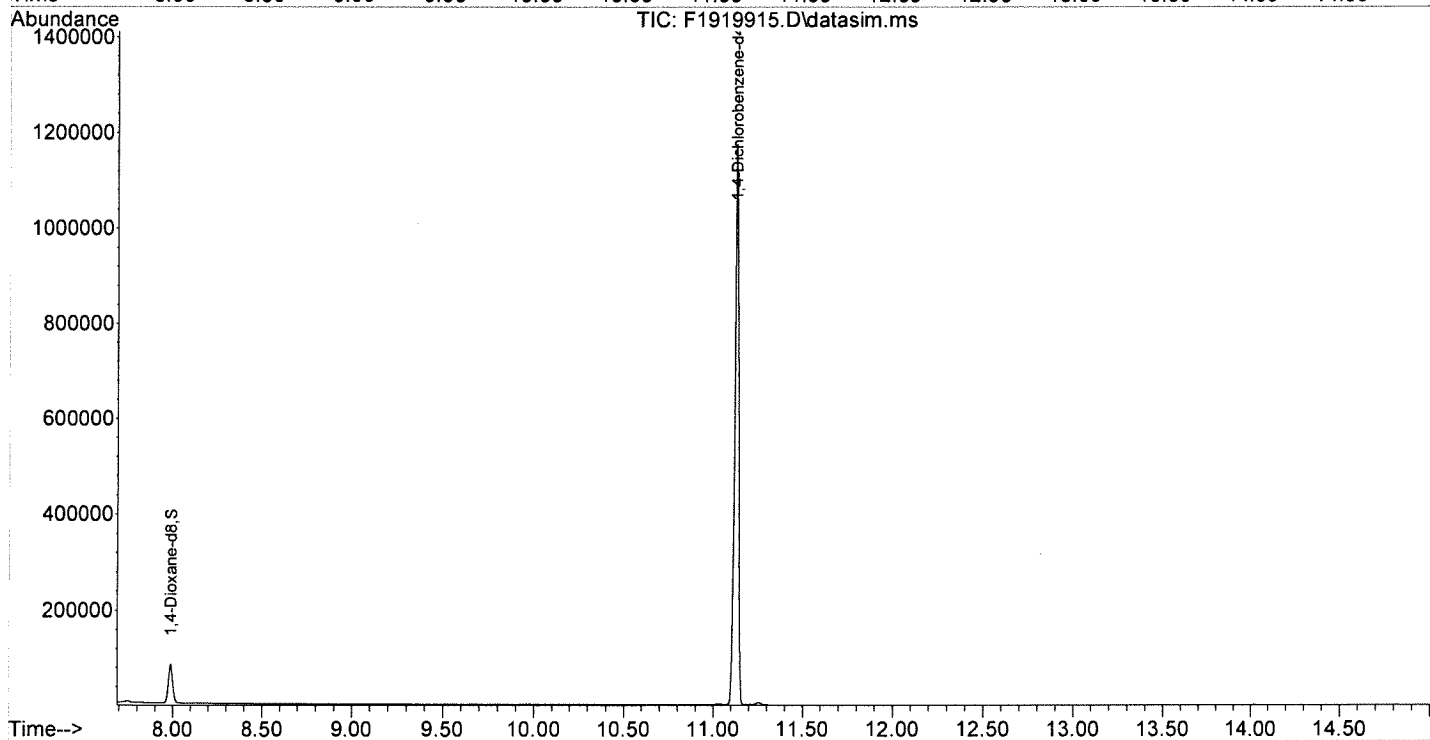
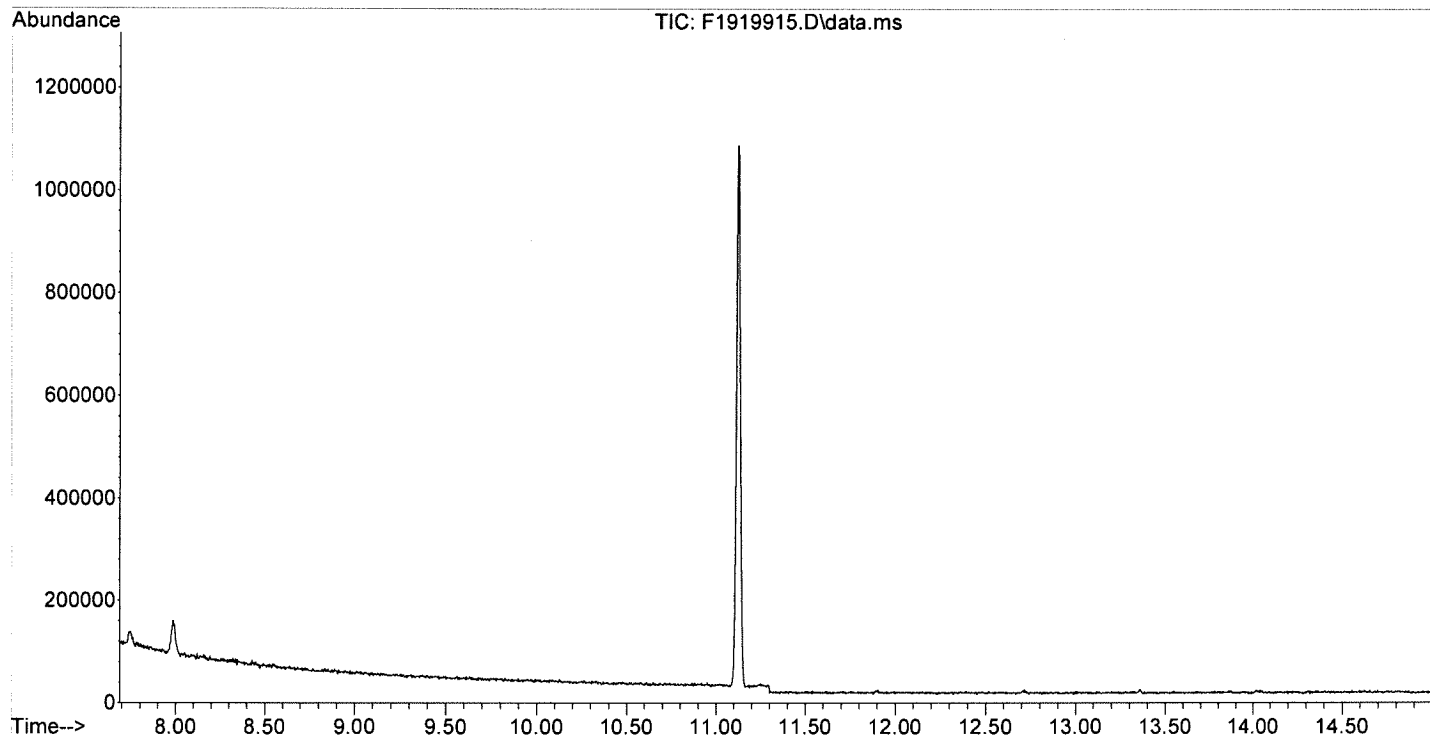
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919915.D  
Acq On : 18 Jul 2019 1:49 pm  
Operator : CLA  
Sample : DIOX-D8 2.5 ug/ml  
Misc :  
ALS Vial : 15 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:07:45 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919916.D  
Acq On : 18 Jul 2019 2:09 pm  
Operator : CLA  
Sample : DIOX-D8 5.0 ug/ml Inst : GCMSSV6  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 18 14:30:15 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

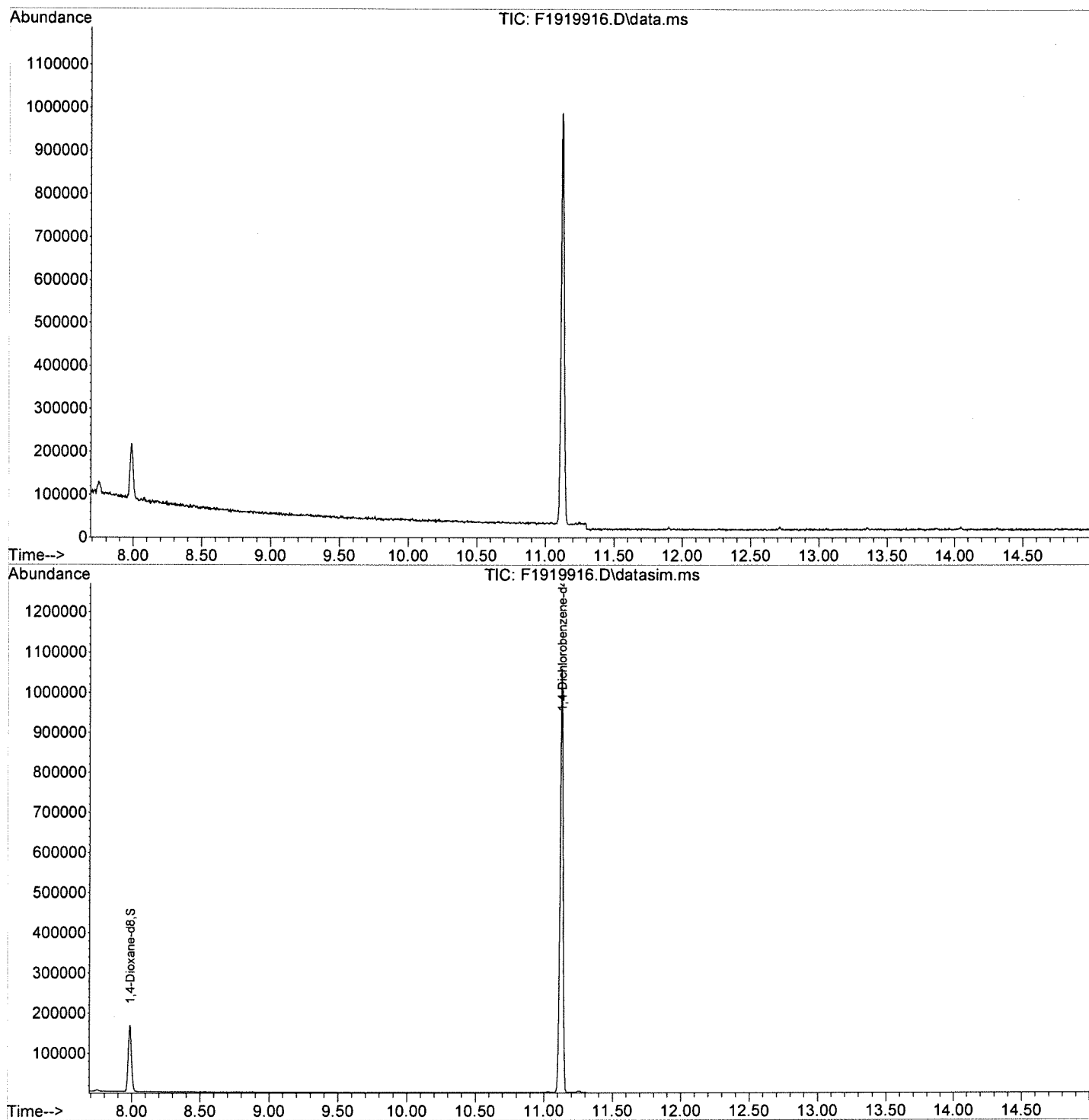
| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev (Min) |
|-----------------------------|--------|------|----------|--------|-------|-----------|
| Internal Standards          |        |      |          |        |       |           |
| 1) 1,4-Dichlorobenzene-d4   | 11.127 | 150  | 790024   | 10.000 | ug/mL | 0.00      |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99     |
| System Monitoring Compounds |        |      |          |        |       |           |
| 2) 1,4-Dioxane-d8           | 7.989  | 96   | 138304   | 5.669  | ug/mL | 0.00      |
| Target Compounds            |        |      |          |        |       |           |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   |       | Qvalue    |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919916.D  
Acq On : 18 Jul 2019 2:09 pm  
Operator : CLA  
Sample : DIOX-D8 5.0 ug/ml  
Misc :  
ALS Vial : 16 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 14:30:15 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919917.D  
Acq On : 18 Jul 2019 3:07 pm  
Operator : CLA  
Sample : DIOX-D8 10 ug/ml Inst : GCMSSV6  
Misc :  
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 18 15:47:31 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

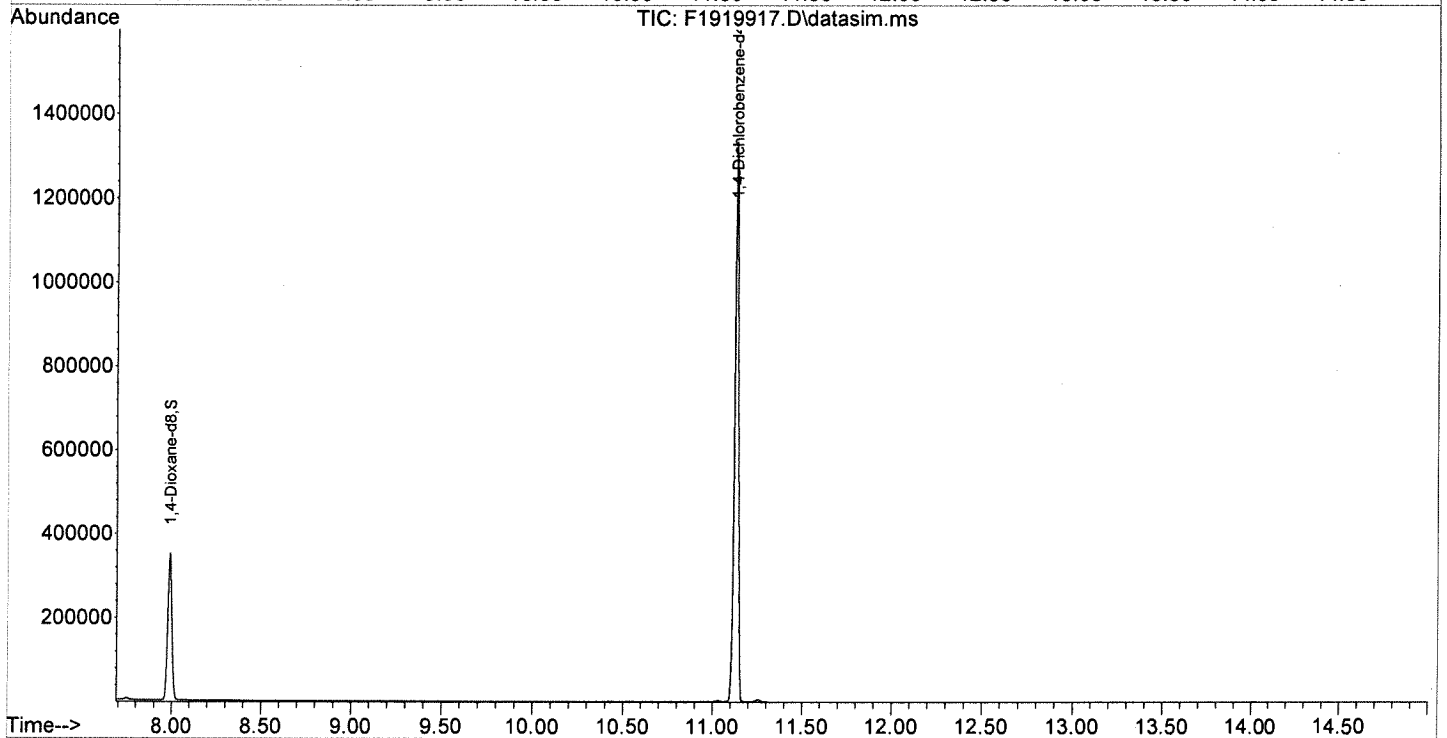
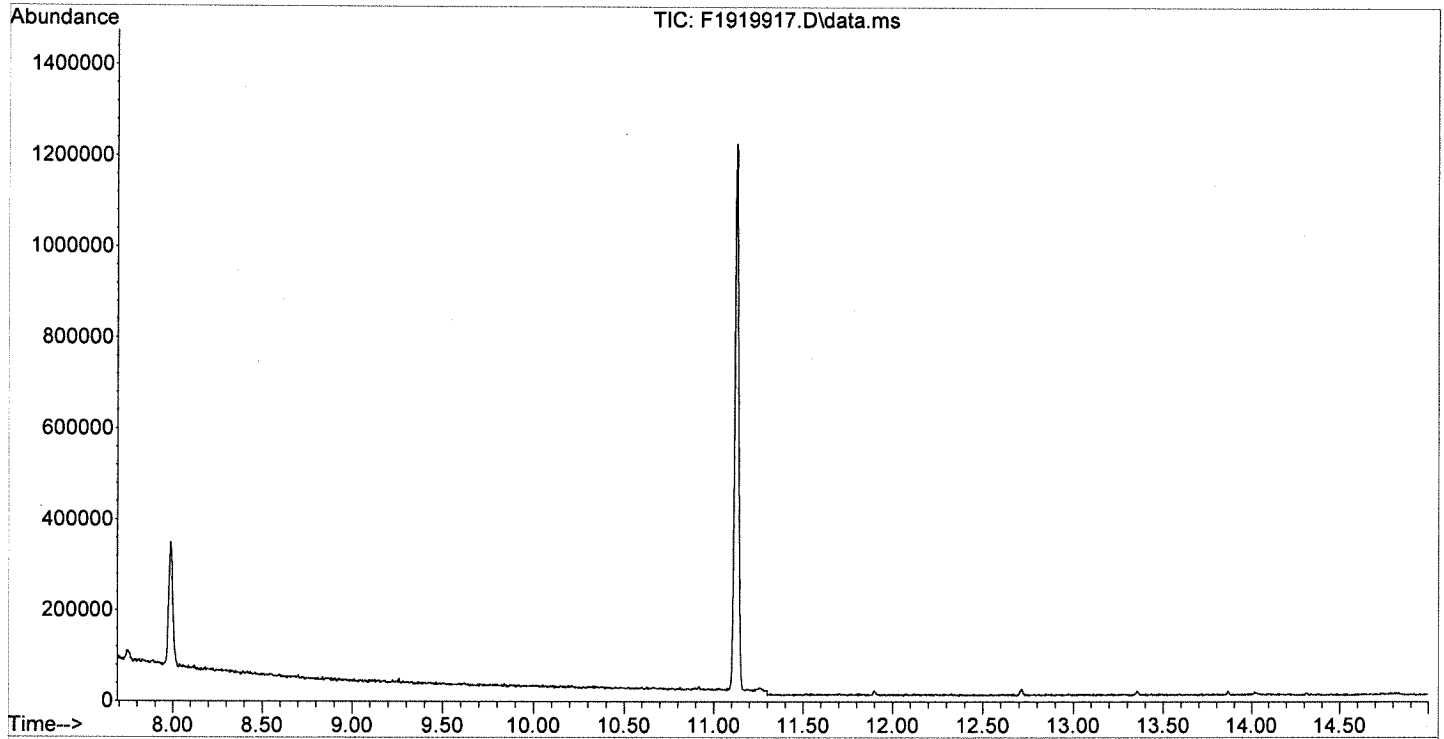
| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| -----                       |        |      |          |        |       |          |
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.127 | 150  | 989590   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.989  | 96   | 288562   | 9.443  | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |
| -----                       |        |      |          |        |       |          |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919917.D  
Acq On : 18 Jul 2019 3:07 pm  
Operator : CLA  
Sample : DIOX-D8 10 ug/ml  
Misc :  
ALS Vial : 17 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 15:47:31 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919918.D  
Acq On : 18 Jul 2019 3:27 pm  
Operator : CLA  
Sample : DIOX-D8 25 ug/ml  
Misc :  
ALS Vial : 18 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 15:47:56 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

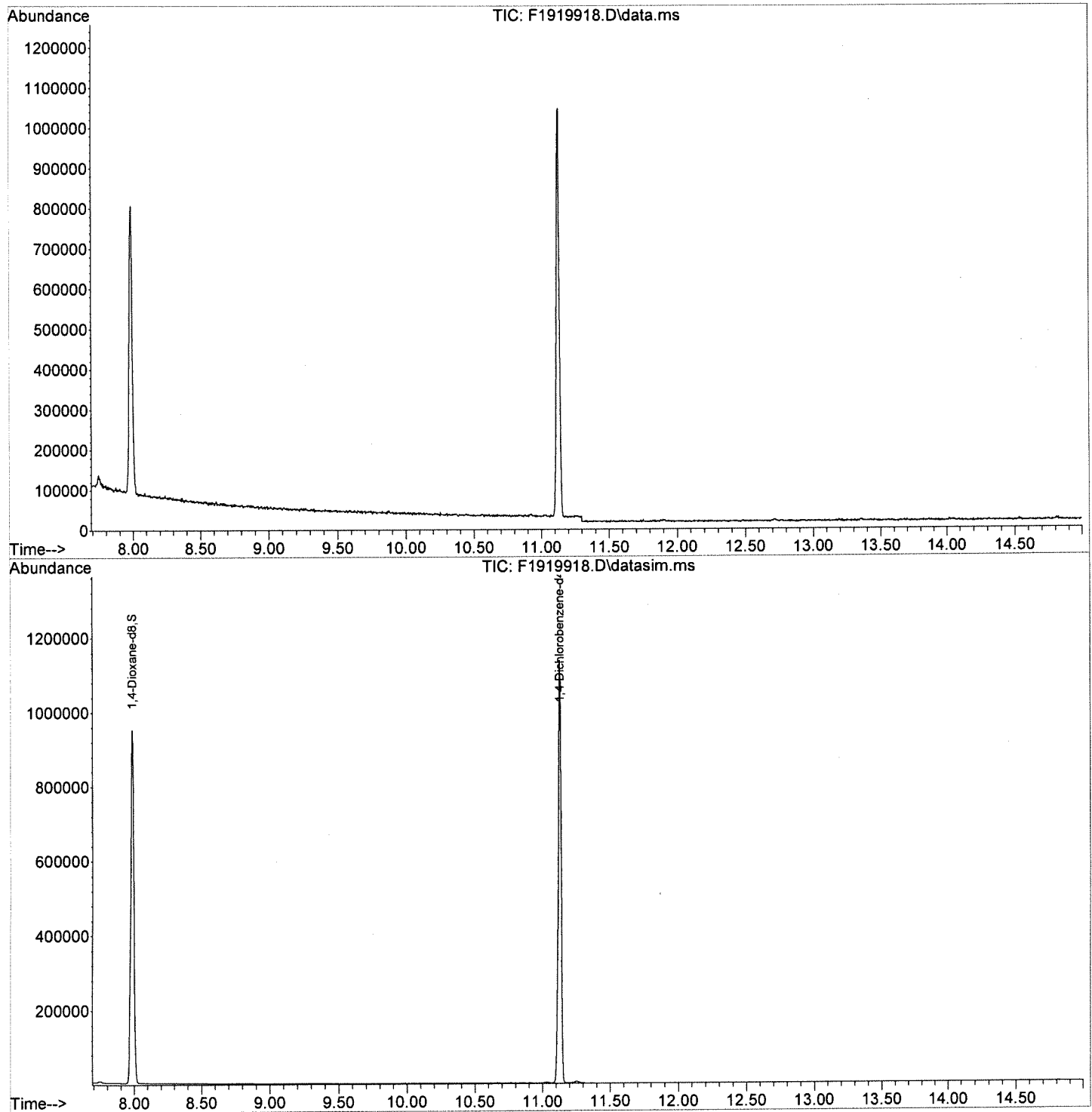
| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| -----                       |        |      |          |        |       |          |
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.127 | 150  | 847398   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.986  | 96   | 780259   | 29.818 | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |
| -----                       |        |      |          |        |       |          |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919918.D  
Acq On : 18 Jul 2019 3:27 pm  
Operator : CLA  
Sample : DIOX-D8 25 ug/ml  
Misc :  
ALS Vial : 18 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 15:47:56 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919919.D  
Acq On : 18 Jul 2019 3:47 pm  
Operator : CLA  
Sample : DIOX-D8 50 ug/ml  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 16:07:04 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| -----                       |        |      |          |        |       |          |
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.127 | 150  | 884049   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.986  | 96   | 1502515  | 55.039 | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |
| -----                       |        |      |          |        |       |          |

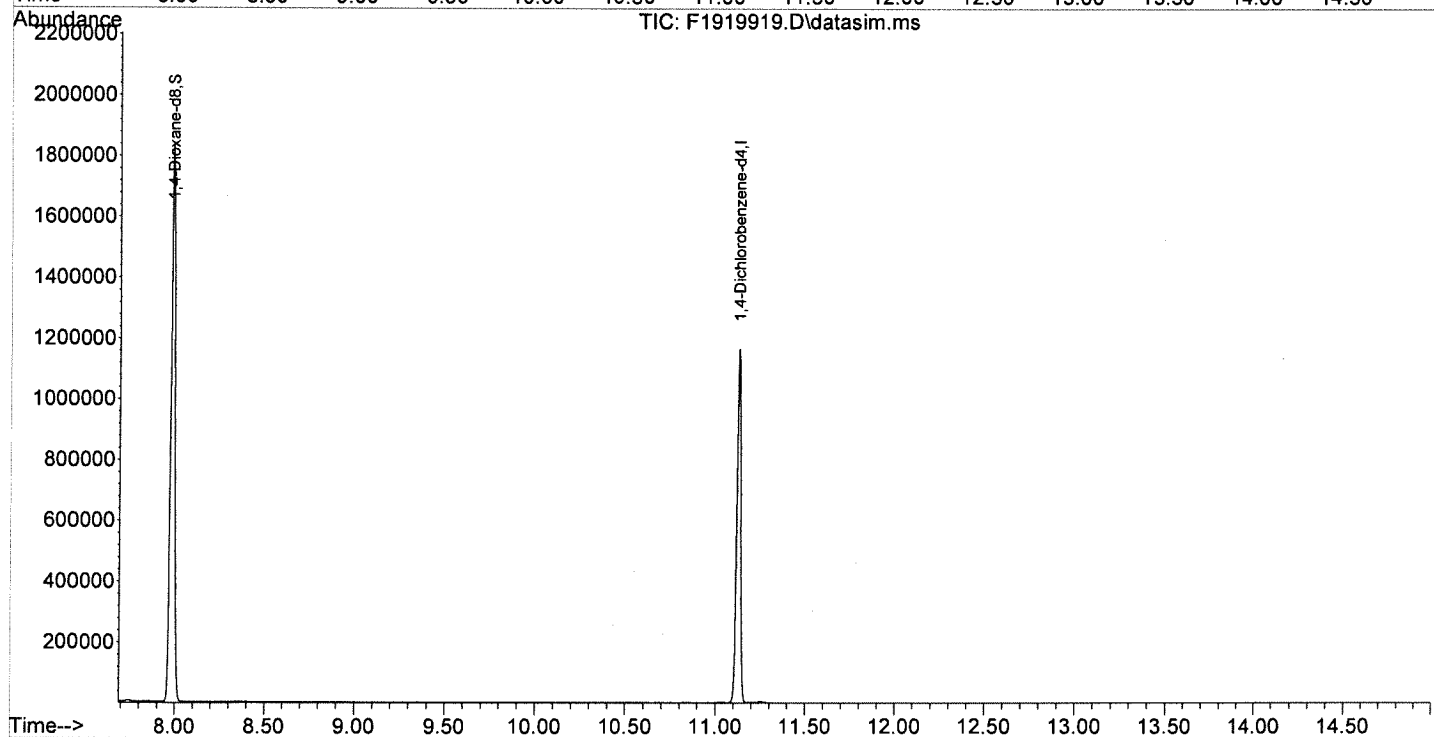
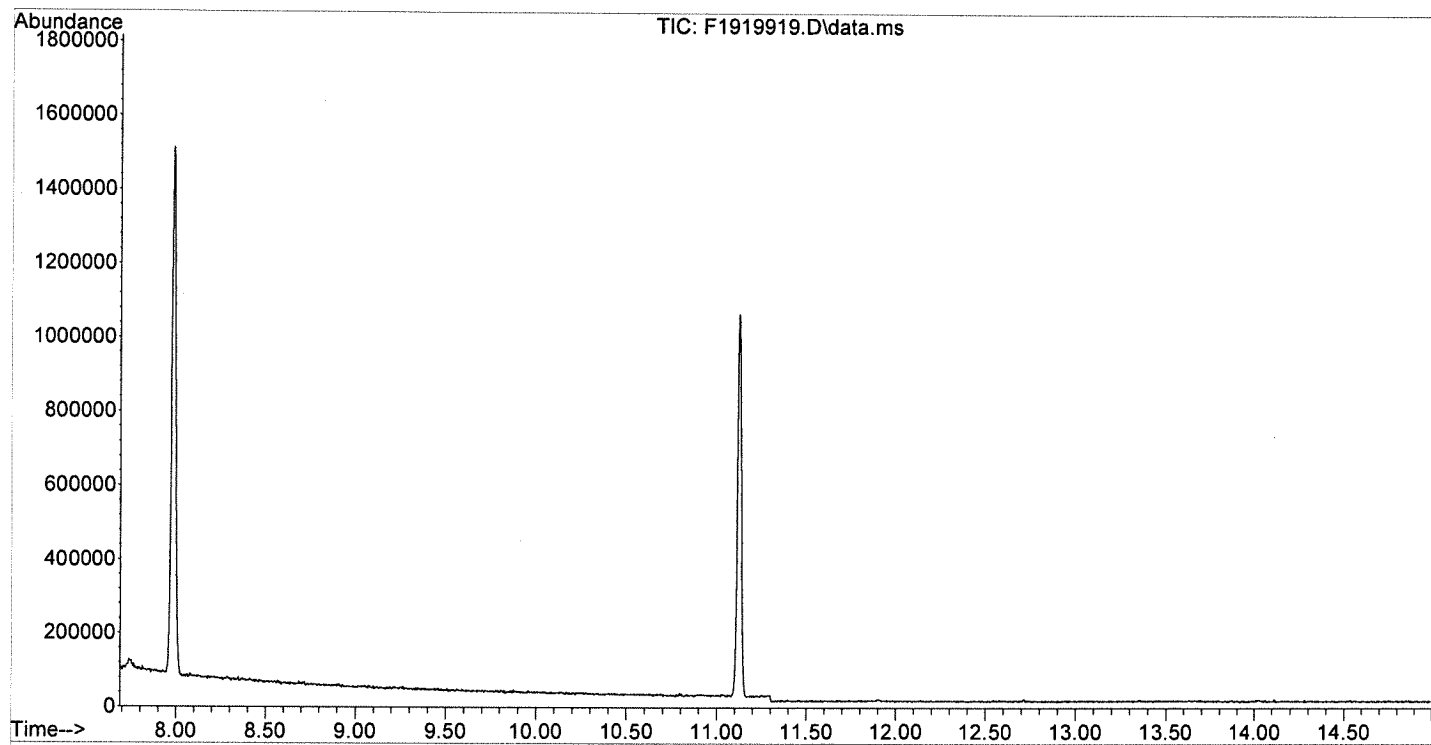
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919919.D  
Acq On : 18 Jul 2019 3:47 pm  
Operator : CLA  
Sample : DIOX-D8 50 ug/ml  
Misc :  
ALS Vial : 19 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 16:07:04 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919920.D  
Acq On : 18 Jul 2019 4:07 pm  
Operator : CLA  
Sample : DIOX-D8 100 ug/ml  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 16:24:11 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration

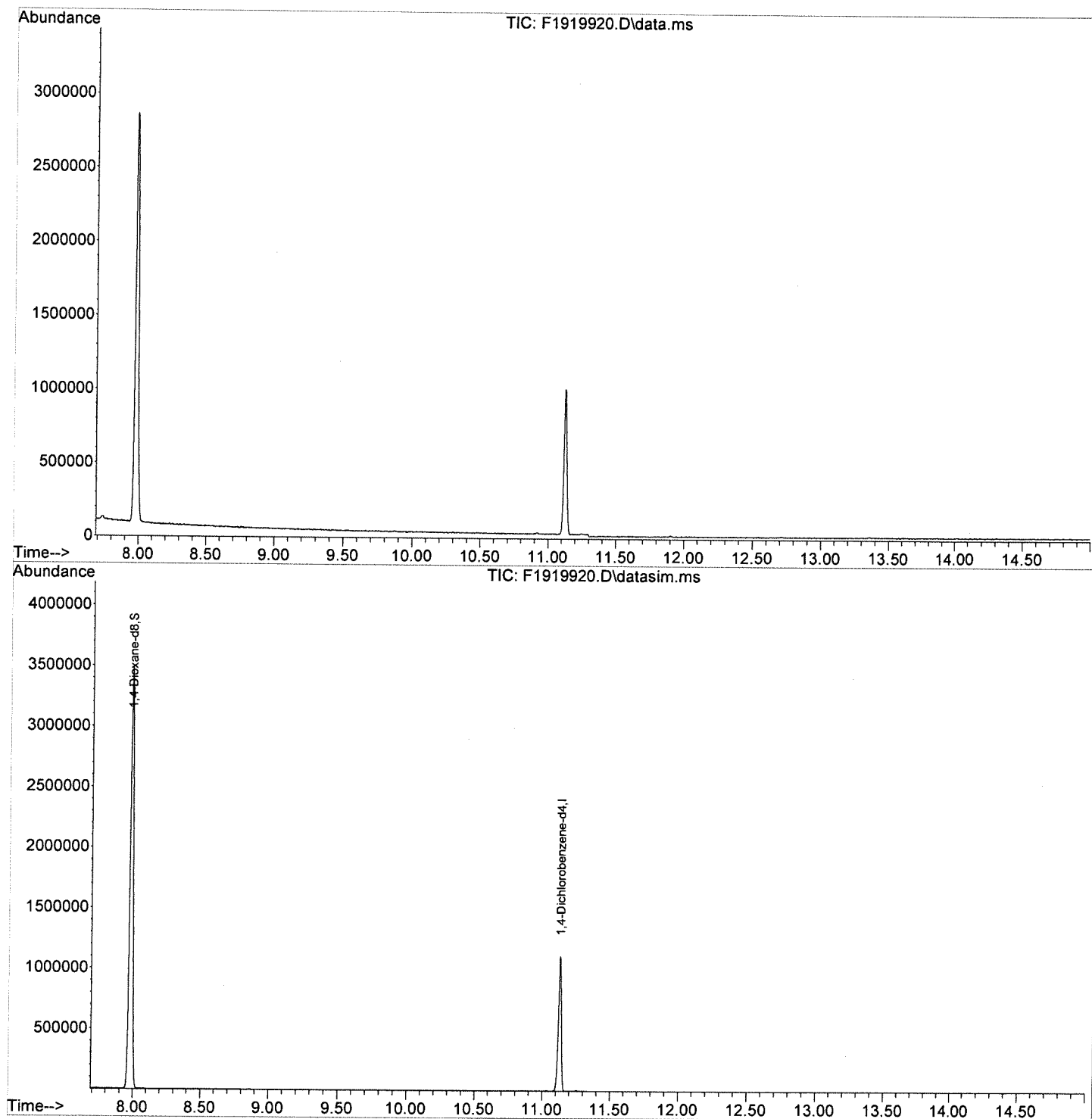
| Compound                    | R.T.   | QIon | Response | Conc    | Units | Dev(Min) |
|-----------------------------|--------|------|----------|---------|-------|----------|
| -----                       |        |      |          |         |       |          |
| Internal Standards          |        |      |          |         |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.127 | 150  | 840950   | 10.000  | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000  | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |         |       |          |
| 2) 1,4-Dioxane-d8           | 7.983  | 96   | 2947488  | 113.503 | ug/mL | 0.00     |
| Target Compounds            |        |      |          |         |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.    | d     | Qvalue   |
| -----                       |        |      |          |         |       |          |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919920.D  
Acq On : 18 Jul 2019 4:07 pm  
Operator : CLA  
Sample : DIOX-D8 100 ug/ml  
Misc :  
ALS Vial : 20 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 18 16:24:11 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ100818.M  
Quant Title :  
QLast Update : Mon Oct 08 17:21:05 2018  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919921.D  
Acq On : 18 Jul 2019 4:26 pm  
Operator : CLA  
Sample : DIOX-ICV 10 ug/ml Inst : GCMSSV6  
Misc :  
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jul 19 13:25:10 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ071819.M  
Quant Title :  
QLast Update : Thu Jul 18 16:35:04 2019  
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 20% Max. Rel. Area : 200%

|     | Compound               | Amount | Calc.  | %Dev   | Area% | Dev(min) |
|-----|------------------------|--------|--------|--------|-------|----------|
| 1 I | 1,4-Dichlorobenzene-d4 | 10.000 | 10.000 | 0.0    | 0     | -11.13#  |
| 2 S | 1,4-Dioxane-d8         | 10.000 | 0.000  | 100.0# | 0     | -7.99#   |
| 3 I | 1,4-Dioxane-d8 (I.S.)  | 10.000 | 10.000 | 0.0    | 109   | 0.02     |
| 4 T | 1,4-Dioxane            | 10.000 | 10.059 | -0.6   | 96    | 0.02     |

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919921.D  
Acq On : 18 Jul 2019 4:26 pm  
Operator : CLA  
Sample : DIOX-ICV 10 ug/ml  
Misc :  
ALS Vial : 21 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 19 13:25:10 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ071819.M  
Quant Title :  
QLast Update : Thu Jul 18 16:35:04 2019  
Response via : Initial Calibration

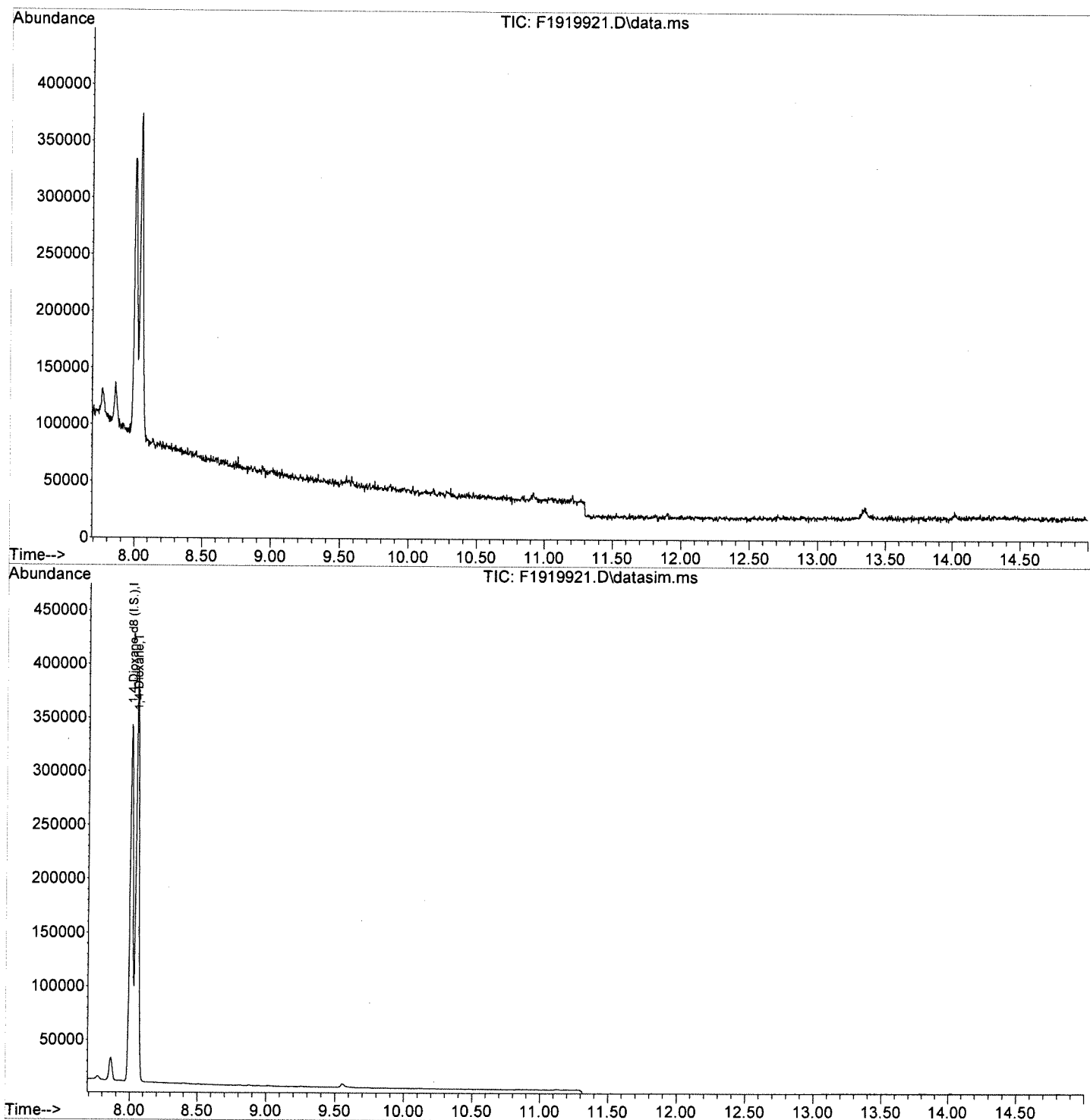
| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|-----------------------------|-------|------|----------|--------|-------|--------------|
| -----                       |       |      |          |        |       |              |
| Internal Standards          |       |      |          |        |       |              |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13       |
| 3) 1,4-Dioxane-d8 (I.S.)    | 8.006 | 96   | 275491   | 10.000 | ug/mL | 0.02         |
| System Monitoring Compounds |       |      |          |        |       |              |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |              |
| Target Compounds            |       |      |          |        |       |              |
| 4) 1,4-Dioxane              | 8.050 | 88   | 308750   | 10.059 | ug/mL | Qvalue 100 ✓ |
| -----                       |       |      |          |        |       |              |

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

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919921.D  
Acq On : 18 Jul 2019 4:26 pm  
Operator : CLA  
Sample : DIOX-ICV 10 ug/ml  
Misc :  
ALS Vial : 21 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 19 13:25:10 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ071819.M  
Quant Title :  
QLast Update : Thu Jul 18 16:35:04 2019  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919922.D  
Acq On : 18 Jul 2019 4:46 pm  
Operator : CLA  
Sample : DIOX-D8-ICV 10 ug/ml  
Misc :  
ALS Vial : 22 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 19 13:26:03 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ071819.M  
Quant Title :  
QLast Update : Thu Jul 18 16:35:04 2019  
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 20% Max. Rel. Area : 200%

|     | Compound               | AvgRF | CCRF  | %Dev   | Area% | Dev(min) |
|-----|------------------------|-------|-------|--------|-------|----------|
| 1 I | 1,4-Dichlorobenzene-d4 | 1.000 | 1.000 | 0.0    | 80    | 0.00     |
| 2 S | 1,4-Dioxane-d8         | 0.328 | 0.364 | -11.0  | 100   | 0.02     |
| 3 I | 1,4-Dioxane-d8 (I.S.)  | 1.000 | 1.000 | 0.0    | 0#    | -7.99#   |
| 4 T | 1,4-Dioxane            | 1.114 | 0.000 | 100.0# | 0#    | -8.03#   |

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919922.D  
Acq On : 18 Jul 2019 4:46 pm  
Operator : CLA  
Sample : DIOX-D8-ICV 10 ug/ml  
Misc :  
ALS Vial : 22 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 19 13:26:03 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ071819.M  
Quant Title :  
QLast Update : Thu Jul 18 16:35:04 2019  
Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| -----                       |        |      |          |        |       |          |
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.123 | 150  | 793751   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 8.006  | 96   | 288901   | 11.087 | ug/mL | 0.02     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |
| -----                       |        |      |          |        |       |          |

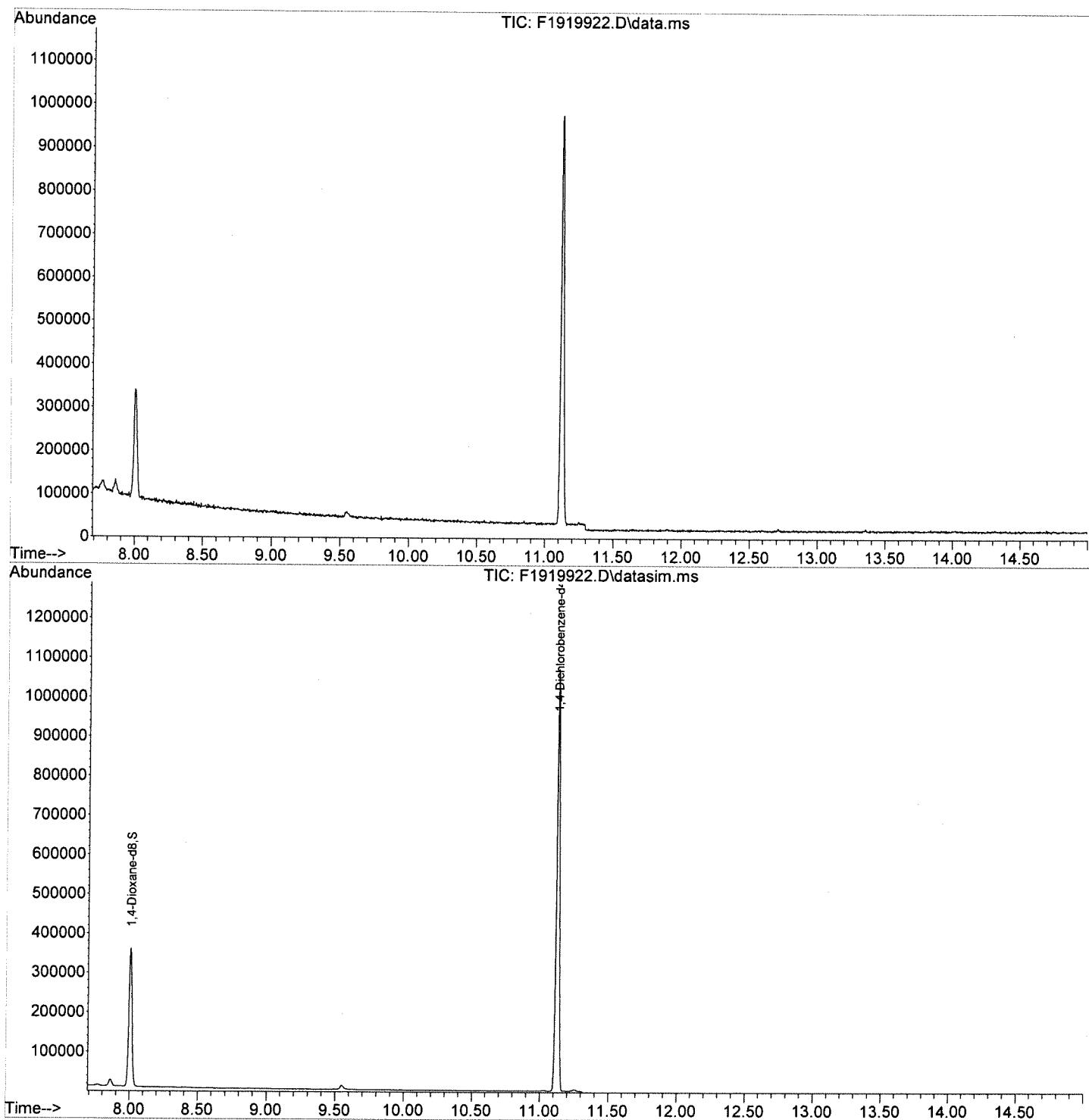
(#) = qualifier out of range (m) = manual integration (+) = signals summed



Data Path : C:\msdchem\1\data\F071819\  
Data File : F1919922.D  
Acq On : 18 Jul 2019 4:46 pm  
Operator : CLA  
Sample : DIOX-D8-ICV 10 ug/ml  
Misc :  
ALS Vial : 22 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Jul 19 13:26:03 2019  
DataAcq Meth:D051518.M  
Quant Method : C:\msdchem\1\methods\DQ071819.M  
Quant Title :  
QLast Update : Thu Jul 18 16:35:04 2019  
Response via : Initial Calibration



## CONTINUING CALIBRATION VERIFICATION

SW-846 8270D

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | GCMSSV6                        | Calibration:      | 1900232               |
| Lab File ID:   | F1922802B.D                    | Calibration Date: | 07/19/19 14:13        |
| Sequence:      | S039298                        | Injection Date:   | 08/16/19              |
| Lab Sample ID: | S039298-CCV1                   | Injection Time:   | 12:35                 |

| COMPOUND       | TYPE | CONC. (µg/mL) |      | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|----------------|------|---------------|------|-----------------|-----------|---------|----------------|-----------|
|                |      | STD           | CCV  | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| 1,4-Dioxane    | A    | 10.0          | 10.6 | 1.114196        | 1.185411  |         | 6.4            |           |
| 1,4-Dioxane-d8 | A    | 10.0          | 9.23 | 0.3282932       | 0.3028925 |         | -7.7           |           |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

\* Values outside of QC limits

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922802B.D  
Acq On : 16 Aug 2019 12:35 pm  
Operator : CLA  
Sample : DIOX 10 ug/mL  
Misc : 1902462 EXP 050719  
ALS Vial : 2 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:53:33 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 20% Max. Rel. Area : 200%

| Compound |                        | Amount | Calc.  | %Dev Area% |     | Dev(min) |
|----------|------------------------|--------|--------|------------|-----|----------|
| 1 I      | 1,4-Dichlorobenzene-d4 | 10.000 | 10.000 | 0.0        | 0   | -11.13#  |
| 2 S      | 1,4-Dioxane-d8         | 10.000 | 0.000  | 100.0#     | 0   | -7.99#   |
| 3 I      | 1,4-Dioxane-d8 (I.S.)  | 10.000 | 10.000 | 0.0        | 102 | 0.00     |
| 4 T      | 1,4-Dioxane            | 10.000 | 10.639 | -6.4       | 95  | 0.00     |

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

CHECKED BY: AUG 19 2019  
Irina Raducan

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922802B.D  
Acq On : 16 Aug 2019 12:35 pm  
Operator : CLA  
Sample : DIOX 10 ug/mL  
Misc : 1902462 EXP 050719  
ALS Vial : 2 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:53:33 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

| Compound                    | R.T.  | QIon | Response | Conc   | Units | Dev(Min)     |
|-----------------------------|-------|------|----------|--------|-------|--------------|
| -----                       |       |      |          |        |       |              |
| Internal Standards          |       |      |          |        |       |              |
| 1) 1,4-Dichlorobenzene-d4   | 0.000 | 150  | 0m       | 10.000 | ug/mL | -11.13       |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.986 | 96   | 256031   | 10.000 | ug/mL | 0.00         |
| System Monitoring Compounds |       |      |          |        |       |              |
| 2) 1,4-Dioxane-d8           | 0.000 | 96   | 0d       | 0.000  | ug/mL |              |
| Target Compounds            |       |      |          |        |       |              |
| 4) 1,4-Dioxane              | 8.030 | 88   | 303502   | 10.639 | ug/mL | Qvalue<br>99 |
| -----                       |       |      |          |        |       |              |

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

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922802B.D  
Acq On : 16 Aug 2019 12:35 pm  
Operator : CLA  
Sample : DIOX 10 ug/mL  
Misc : 1902462 EXP 050719  
ALS Vial : 2 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:53:33 2019

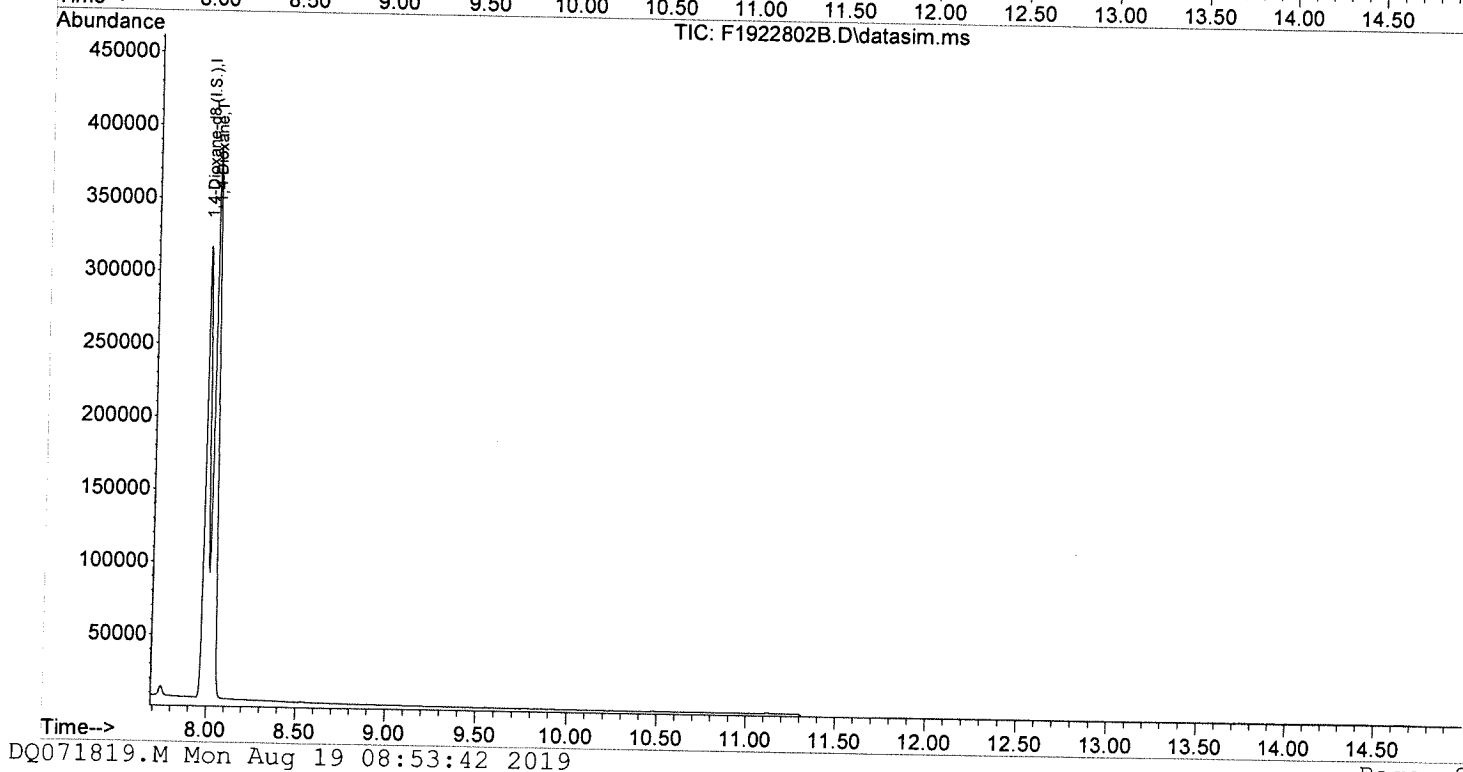
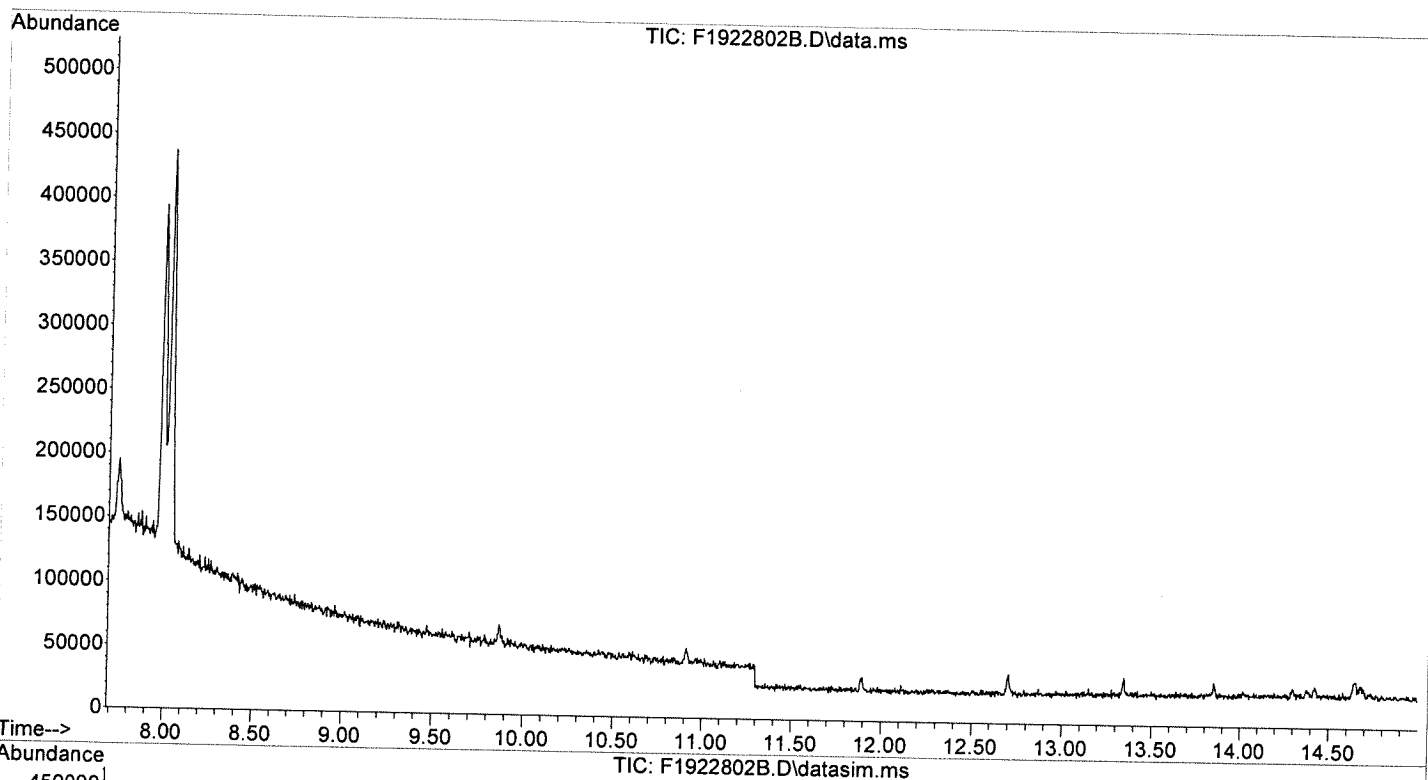
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration



Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922803.D  
Acq On : 16 Aug 2019 12:55 pm  
Operator : CLA  
Sample : DIOX-D8 10 ug/mL  
Misc : 1902463 EXP 090519  
ALS Vial : 3 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:53:47 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min  
Max. RRF Dev : 20% Max. Rel. Area : 200%

|     | Compound               | Amount | Calc.  | %Dev   | Area% | Dev(min) |
|-----|------------------------|--------|--------|--------|-------|----------|
| 1 I | 1,4-Dichlorobenzene-d4 | 10.000 | 10.000 | 0.0    | 90    | 0.00     |
| 2 S | 1,4-Dioxane-d8         | 10.000 | 9.226  | 7.7    | 94    | 0.00     |
| 3 I | 1,4-Dioxane-d8 (I.S.)  | 10.000 | 10.000 | 0.0    | 0     | -7.99#   |
| 4 T | 1,4-Dioxane            | 10.000 | 0.000  | 100.0# | 0     | -8.03#   |

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

CHECKED BY: AUG 19 2019  
Irina Raducan

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922803.D  
Acq On : 16 Aug 2019 12:55 pm  
Operator : CLA  
Sample : DIOX-D8 10 ug/mL  
Misc : 1902463 EXP 090519  
ALS Vial : 3 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:53:47 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| -----                       |        |      |          |        |       |          |
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.123 | 150  | 893723   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 0.000  | 96   | 0m       | 10.000 | ug/mL | -7.99    |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.983  | 96   | 270702   | 9.226  | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   | d     | Qvalue   |
| -----                       |        |      |          |        |       |          |

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

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922803.D  
Acq On : 16 Aug 2019 12:55 pm  
Operator : CLA  
Sample : DIOX-D8 10 ug/mL  
Misc : 1902463 EXP 090519  
ALS Vial : 3 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:53:47 2019

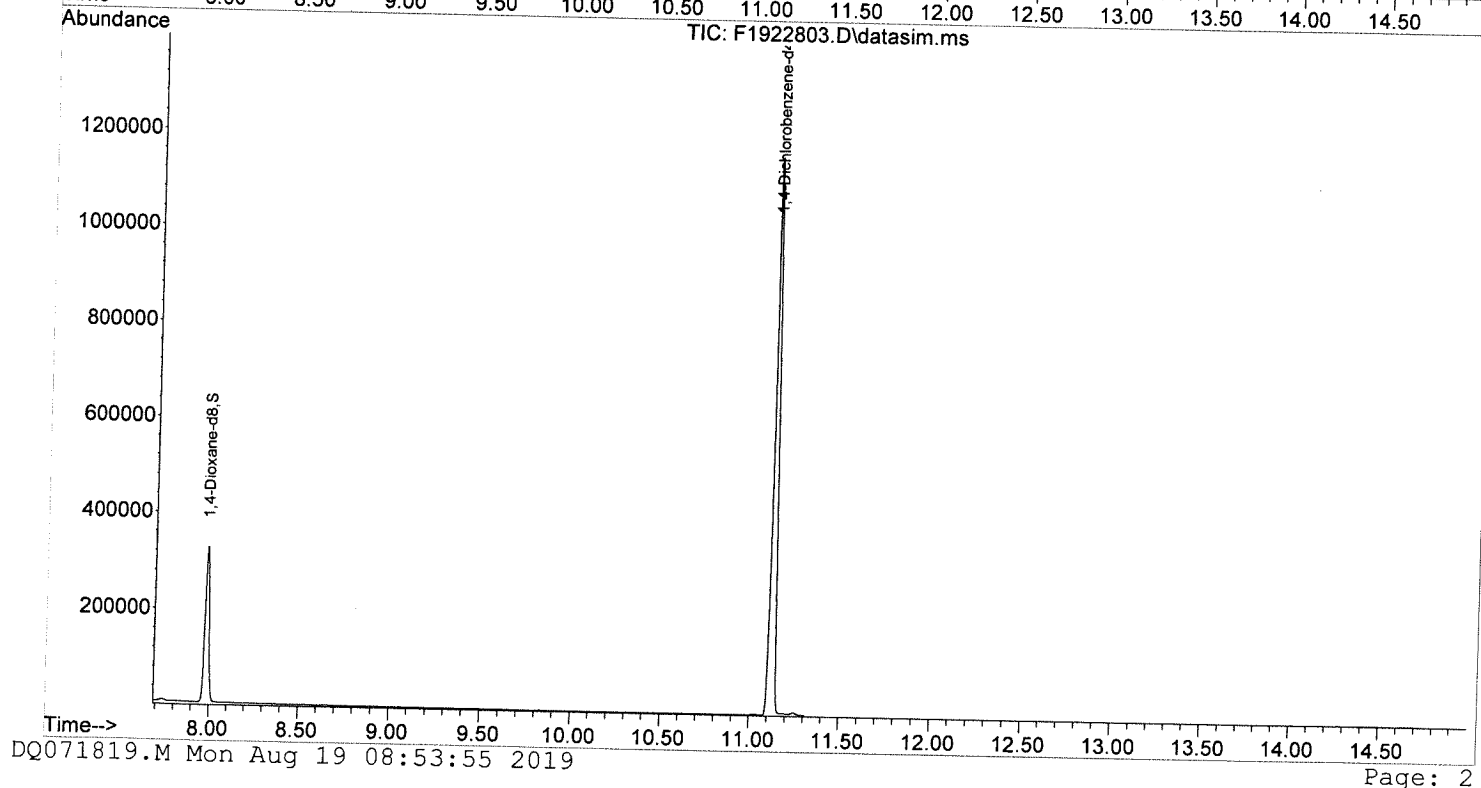
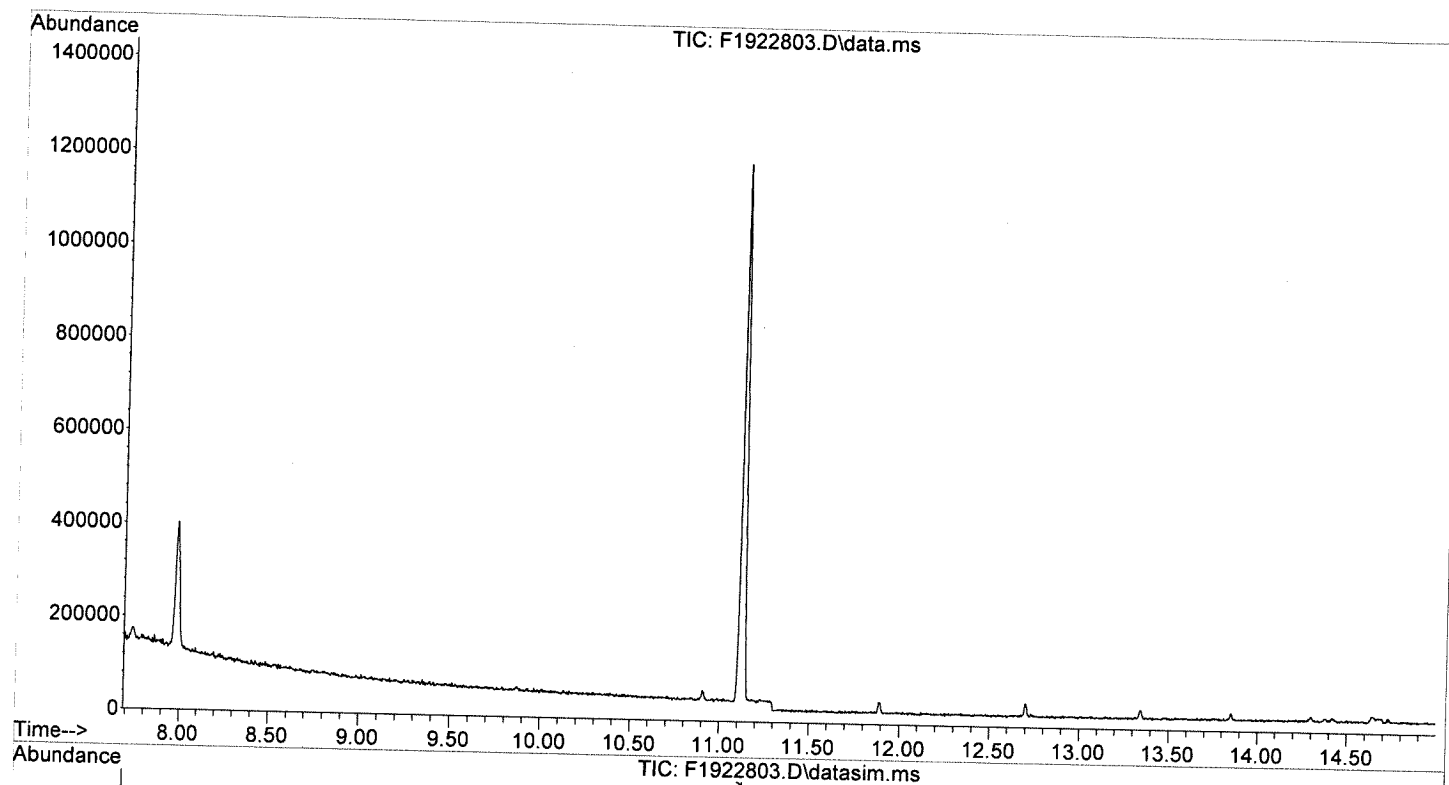
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
...ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration





# 8 - FORM VIII

## INTERNAL STANDARD AREA AND RT SUMMARY

381

SW-846 8270D

Laboratory: Con-Test Analytical Laboratory  
 Client: Dvirka And Bartilucci  
 Sequence: S039298

Work Order: 19H0576  
 Project: Farrand Controls Site  
 Instrument: GCMSSV6  
 Calibration: 1900232

| Internal Standard                        | Response | RT     | Reference Response             | Reference RT | Area % | Area % Limits                   | RT Diff | RT Diff Limit | Q |
|------------------------------------------|----------|--------|--------------------------------|--------------|--------|---------------------------------|---------|---------------|---|
| <b>Calibration Check (S039298-CCV1 )</b> |          |        | <i>Lab File ID: F1922803.D</i> |              |        | <i>Analyzed: 08/16/19 12:35</i> |         |               |   |
| 1,4-Dichlorobenzene-d4                   | 893723   | 11.123 | 989590                         | 11.127       | 90     | 50 - 200                        | -0.0040 | +/-0.50       |   |
| <b>LCS (B237852-BS1 )</b>                |          |        | <i>Lab File ID: F1922804.D</i> |              |        | <i>Analyzed: 08/16/19 13:15</i> |         |               |   |
| 1,4-Dichlorobenzene-d4                   | 875002   | 11.12  | 893723                         | 11.123       | 98     | 50 - 200                        | -0.0030 | +/-0.50       |   |
| <b>LCS Dup (B237852-BSD1 )</b>           |          |        | <i>Lab File ID: F1922805.D</i> |              |        | <i>Analyzed: 08/16/19 13:35</i> |         |               |   |
| 1,4-Dichlorobenzene-d4                   | 996141   | 11.12  | 893723                         | 11.123       | 111    | 50 - 200                        | -0.0030 | +/-0.50       |   |
| <b>Blank (B237852-BLK1 )</b>             |          |        | <i>Lab File ID: F1922806.D</i> |              |        | <i>Analyzed: 08/16/19 13:55</i> |         |               |   |
| 1,4-Dichlorobenzene-d4                   | 983171   | 11.12  | 893723                         | 11.123       | 110    | 50 - 200                        | -0.0030 | +/-0.50       |   |
| <b>MW-21R (19H0576-03 )</b>              |          |        | <i>Lab File ID: F1922812.D</i> |              |        | <i>Analyzed: 08/16/19 15:55</i> |         |               |   |
| 1,4-Dichlorobenzene-d4                   | 953518   | 11.123 | 893723                         | 11.123       | 107    | 50 - 200                        | 0.0000  | +/-0.50       |   |
| <b>MW-21S (19H0576-05 )</b>              |          |        | <i>Lab File ID: F1922813.D</i> |              |        | <i>Analyzed: 08/16/19 16:15</i> |         |               |   |
| 1,4-Dichlorobenzene-d4                   | 978749   | 11.12  | 893723                         | 11.123       | 110    | 50 - 200                        | -0.0030 | +/-0.50       |   |

**QC DATA**

1 - FORM I  
ANALYSIS DATA SHEET

383

Blank

Laboratory: Con-Test Analytical Laboratory Work Order: 19H0576  
Client: Dvirka And Bartilucci Project: Farrand Controls Site  
Matrix: Water Laboratory ID: B237852-BLK1 File ID: F1922806.D  
Sampled: Prepared: 08/13/19 04:55 Analyzed: 08/16/19 13:55  
Solids: Preparation: SW-846 3510C Dilution:  
Batch: B237852 Sequence: S039298 Calibration: 1900232 Instrument: GCMSSV6  
Column: 1

| CAS NO.  | COMPOUND    | CONC. (µg/L) | MDL   | RL   | Q |
|----------|-------------|--------------|-------|------|---|
| 123-91-1 | 1,4-Dioxane |              | 0.033 | 0.20 |   |

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922806.D  
Acq On : 16 Aug 2019 1:55 pm  
Operator : CLA  
Sample : B237852-BLK1  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:41:05 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
...ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min) |
|-----------------------------|--------|------|----------|--------|-------|----------|
| Internal Standards          |        |      |          |        |       |          |
| 1) 1,4-Dichlorobenzene-d4   | 11.120 | 150  | 983171   | 10.000 | ug/mL | 0.00     |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.989  | 96   | 79104    | 10.000 | ug/mL | 0.00     |
| System Monitoring Compounds |        |      |          |        |       |          |
| 2) 1,4-Dioxane-d8           | 7.989  | 96   | 79104    | 2.451  | ug/mL | 0.00     |
| Target Compounds            |        |      |          |        |       |          |
| 4) 1,4-Dioxane              | 0.000  |      | 0        | N.D.   |       | Qvalue   |

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

CHECKED BY: AUG 19 2019  
Irina Raducan

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922806.D  
Acq On : 16 Aug 2019 1:55 pm  
Operator : CLA  
Sample : B237852-BLK1  
Misc :  
ALS Vial : 6 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:41:05 2019

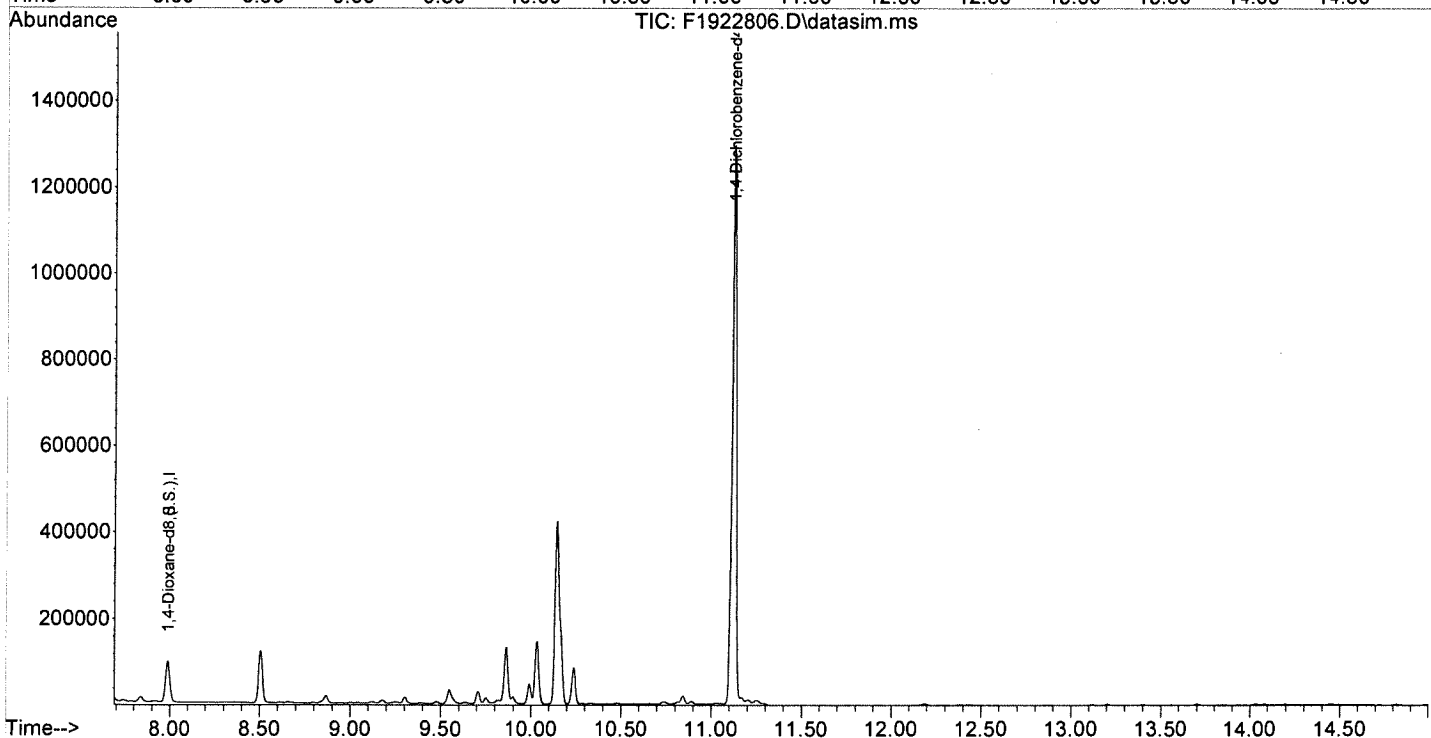
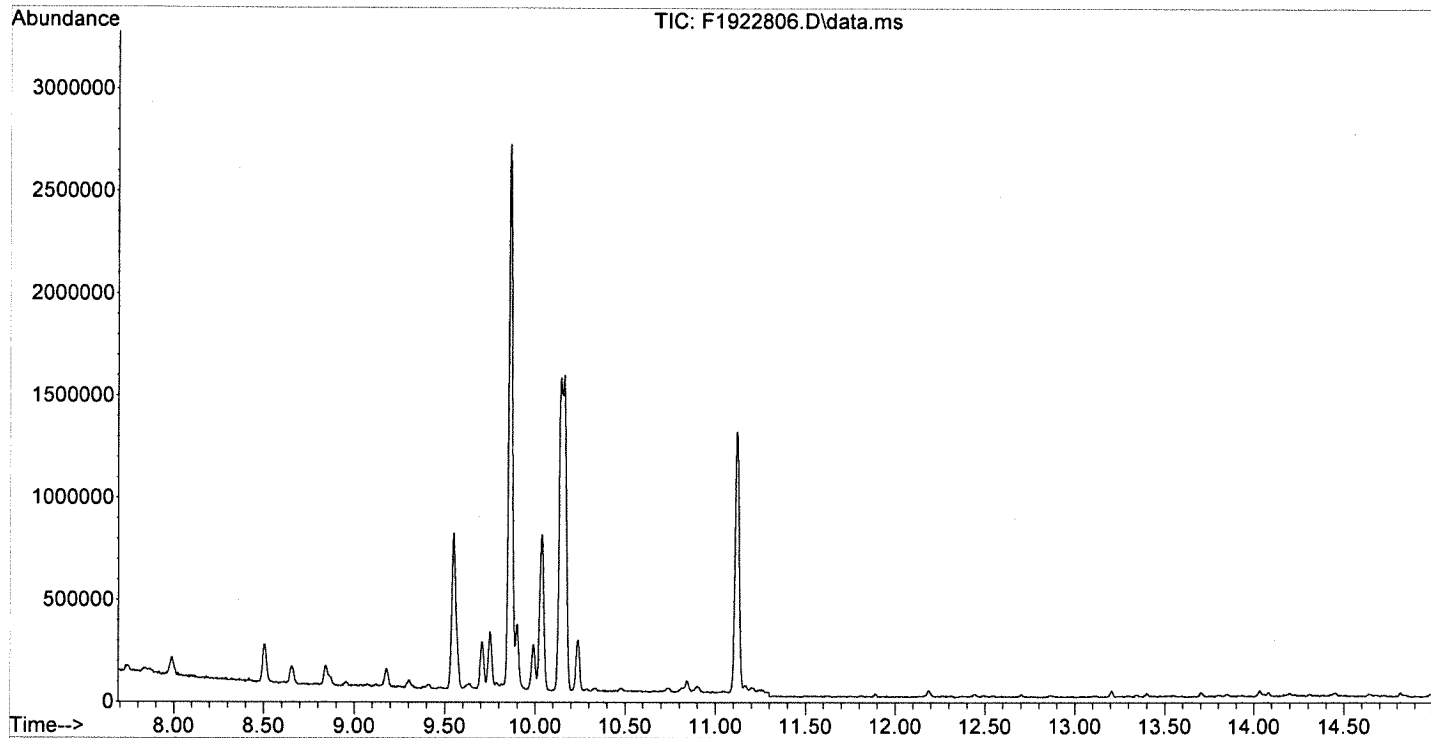
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration



**1 - FORM I**  
**ANALYSIS DATA SHEET**  
**LCS**

386

|             |                                |                |                |              |                       |                     |
|-------------|--------------------------------|----------------|----------------|--------------|-----------------------|---------------------|
| Laboratory: | Con-Test Analytical Laboratory |                |                | Work Order:  | 19H0576               |                     |
| Client:     | Dvirka And Bartilucci          |                |                | Project:     | Farrand Controls Site |                     |
| Matrix:     | Water                          | Laboratory ID: | B237852-BS1    | File ID:     | F1922804.D            |                     |
| Sampled:    |                                | Prepared:      | 08/13/19 04:55 | Analyzed:    | 08/16/19 13:15        |                     |
| Solids:     |                                | Preparation:   | SW-846 3510C   | Dilution:    |                       |                     |
| Batch:      | B237852                        | Sequence:      | S039298        | Calibration: | 1900232               | Instrument: GCMSSV6 |
| Column:     | 1                              |                |                |              |                       |                     |

| CAS NO.  | COMPOUND    | CONC. (µg/L) | MDL   | RL   | Q |
|----------|-------------|--------------|-------|------|---|
| 123-91-1 | 1,4-Dioxane | 9.75         | 0.033 | 0.20 |   |

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922804.D  
Acq On : 16 Aug 2019 1:15 pm  
Operator : CLA  
Sample : B237852-BS1  
Misc :  
ALS Vial : 4 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:41:01 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev (Min)    |
|-----------------------------|--------|------|----------|--------|-------|--------------|
| Internal Standards          |        |      |          |        |       |              |
| 1) 1,4-Dichlorobenzene-d4   | 11.120 | 150  | 875002   | 10.000 | ug/mL | 0.00         |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.993  | 96   | 84737    | 10.000 | ug/mL | 0.00         |
| System Monitoring Compounds |        |      |          |        |       |              |
| 2) 1,4-Dioxane-d8           | 7.993  | 96   | 84737    | 2.950  | ug/mL | 0.00         |
| Target Compounds            |        |      |          |        |       |              |
| 4] 1,4-Dioxane              | 8.037  | 88   | 92055    | 9.750  | ug/mL | Qvalue<br>99 |

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

CHECKED BY: AUG 19 2019  
Irina Raducan

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922804.D  
Acq On : 16 Aug 2019 1:15 pm  
Operator : CLA  
Sample : B237852-BS1  
Misc :  
ALS Vial : 4 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:41:01 2019

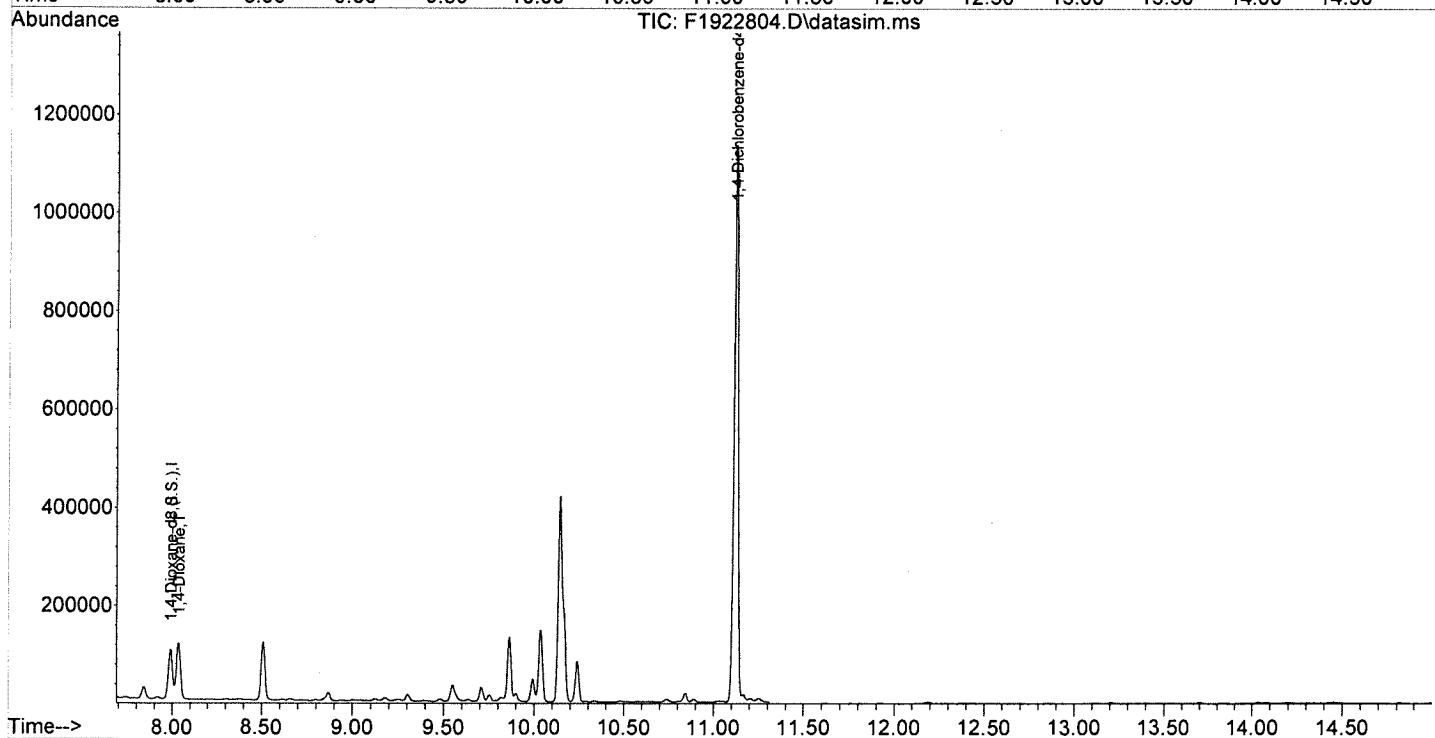
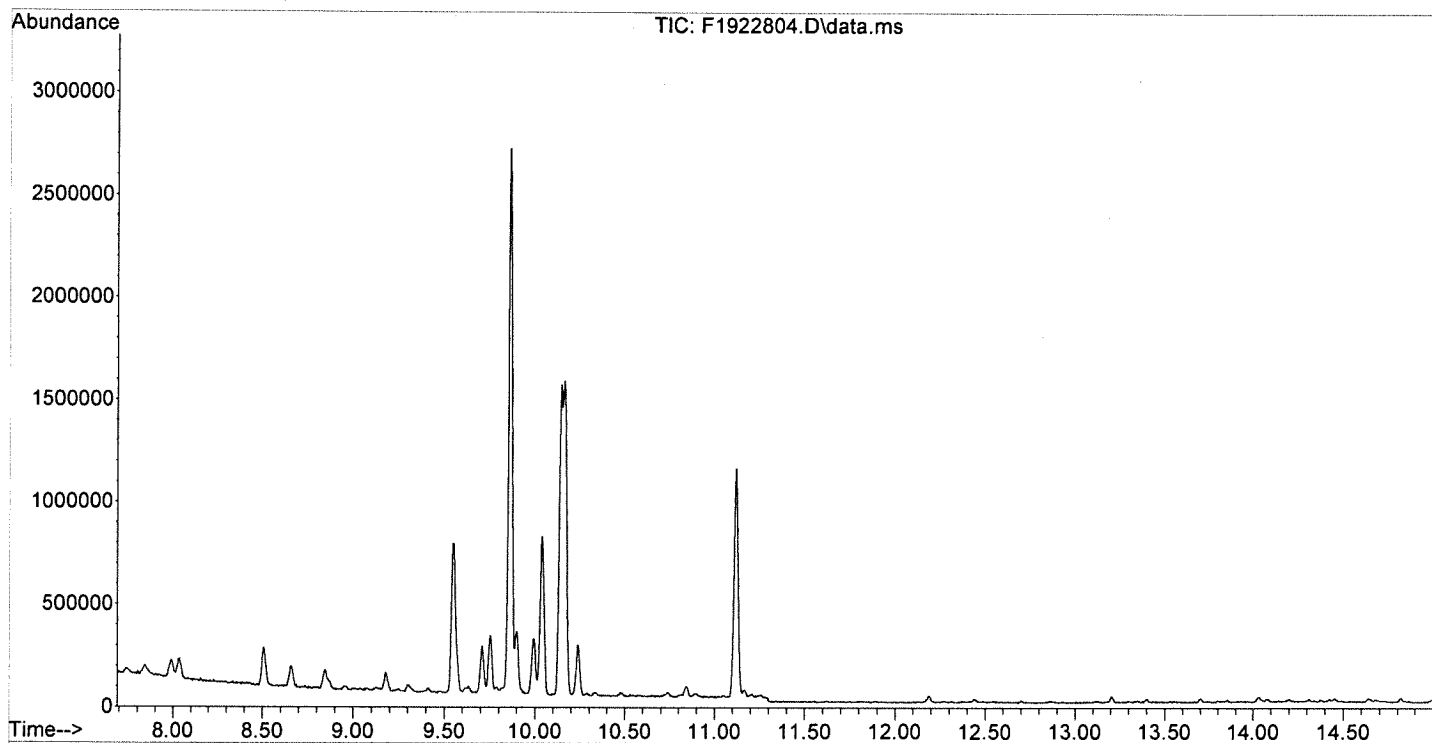
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
...ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration





1 - FORM I  
ANALYSIS DATA SHEET

389

LCS Dup

Laboratory: Con-Test Analytical Laboratory Work Order: 19H0576  
Client: Dvirka And Bartilucci Project: Farrand Controls Site  
Matrix: Water Laboratory ID: B237852-BSD1 File ID: F1922805.D  
Sampled: Prepared: 08/13/19 04:55 Analyzed: 08/16/19 13:35  
Solids: Preparation: SW-846 3510C Dilution:  
Batch: B237852 Sequence: S039298 Calibration: 1900232 Instrument: GCMSSV6  
Column: 1

| CAS NO.  | COMPOUND    | CONC. (µg/L) | MDL   | RL   | Q |
|----------|-------------|--------------|-------|------|---|
| 123-91-1 | 1,4-Dioxane | 10.2         | 0.033 | 0.20 |   |

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922805.D  
Acq On : 16 Aug 2019 1:35 pm  
Operator : CLA  
Sample : B237852-BSD1  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:41:03 2019

DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
... ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration

| Compound                    | R.T.   | QIon | Response | Conc   | Units | Dev(Min)     |
|-----------------------------|--------|------|----------|--------|-------|--------------|
| Internal Standards          |        |      |          |        |       |              |
| 1) 1,4-Dichlorobenzene-d4   | 11.120 | 150  | 996141   | 10.000 | ug/mL | 0.00         |
| 3) 1,4-Dioxane-d8 (I.S.)    | 7.996  | 96   | 90291    | 10.000 | ug/mL | 0.00         |
| System Monitoring Compounds |        |      |          |        |       |              |
| 2) 1,4-Dioxane-d8           | 7.996  | 96   | 90291    | 2.761  | ug/mL | 0.00         |
| Target Compounds            |        |      |          |        |       |              |
| 4] 1,4-Dioxane              | 8.040  | 88   | 102256   | 10.164 | ug/mL | Qvalue<br>98 |

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

CHECKED BY: AUG 19 2019  
Irina Raducan

Data Path : C:\msdchem\1\data\F081619\  
Data File : F1922805.D  
Acq On : 16 Aug 2019 1:35 pm  
Operator : CLA  
Sample : B237852-BSD1  
Misc :  
ALS Vial : 5 Sample Multiplier: 1

Inst : GCMSSV6

Quant Time: Aug 19 08:41:03 2019

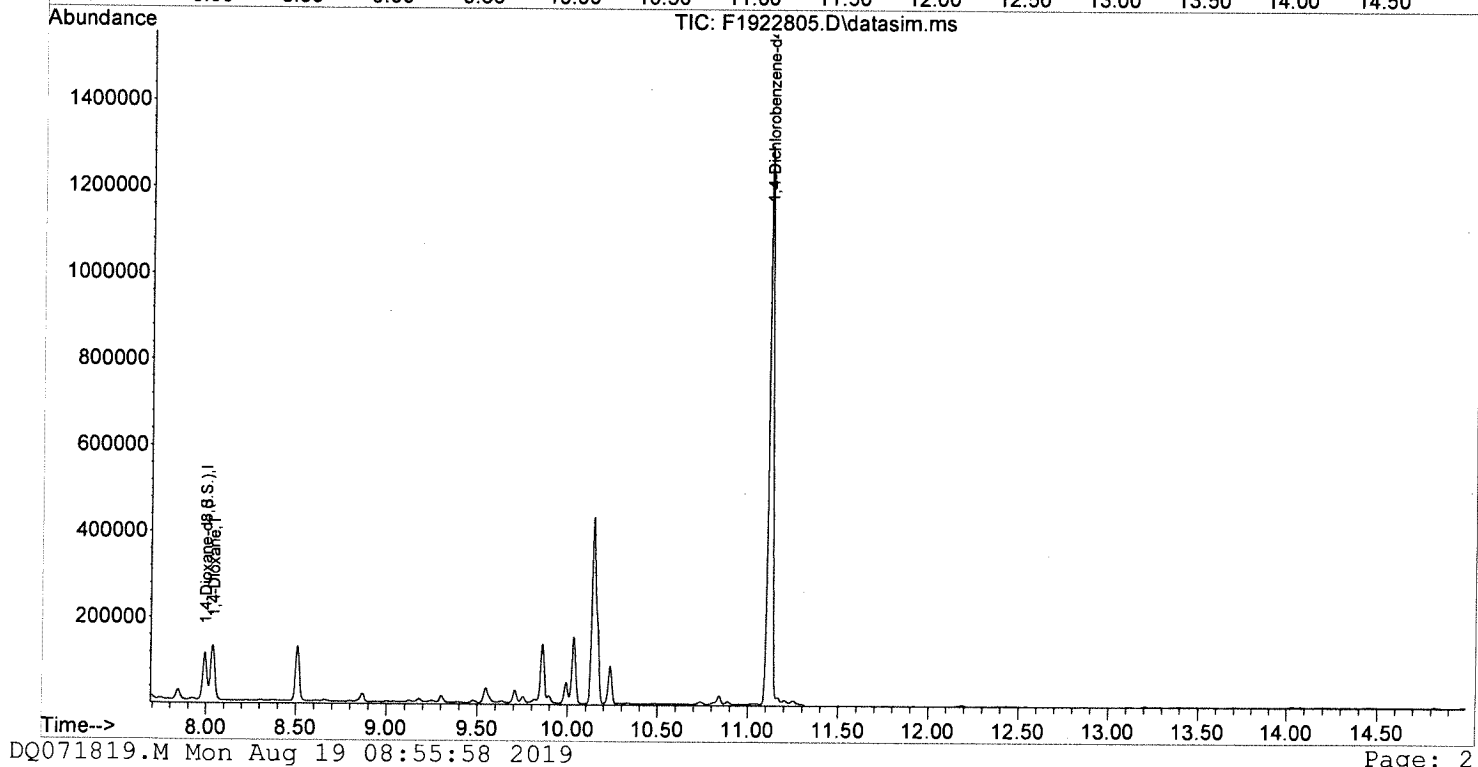
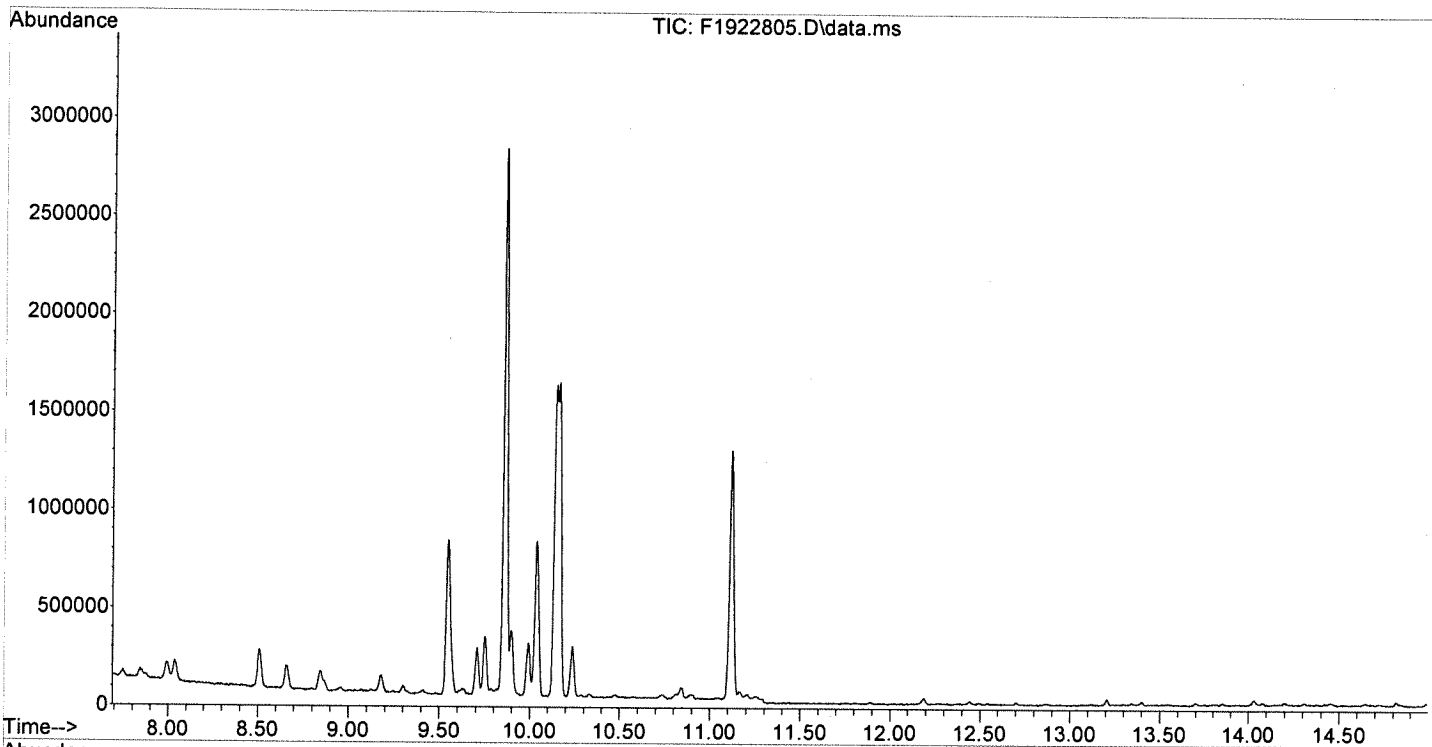
DataAcq Meth:D051518.M

Quant Method : F:\CTAL-Laboratory\Organics\SVOA\Staff\CLA\METHODS - BACKUP & COPIES\Quant m  
ethods\DQ071819.M

Quant Title :

QLast Update : Thu Jul 18 16:35:04 2019

Response via : Initial Calibration



# PREPARATION BENCH SHEET

392

Printed: 8/13/2019 6:58:44AM

Analysis  
1,4-Dioxane SIM

B237852

Con-Test Analytical Laboratory

Prepared using: SW-846 3510C

Matrix: Water

5

Surrogate Solution  
1907351 1,4-Dioxane Surrogate - 100 ug/mL

Spiking Solution  
1904541 1,4-Dioxane Spike - 100 ug/mL

| Lab Number   | Sample ID and Source Sample   | Due Date | Expires  | Concentrated | pH | Initial (mL) | Final (mL) | ul Spike | ul Surrogate | Extraction Comments | TAT |
|--------------|-------------------------------|----------|----------|--------------|----|--------------|------------|----------|--------------|---------------------|-----|
| B237852-BLK1 | Blank                         |          |          | MPH 8/16/19  | 7  | 1000         | 1.0        |          | 100          |                     |     |
| B237852-BS1  | LCS                           |          |          |              |    |              |            | 100      | 100          |                     |     |
| B237852-BSD1 | LCS Dup                       |          |          |              |    |              |            | 100      | 100          |                     |     |
| B237852-MS1  | Matrix Spike [19H0528-04]     |          |          |              |    |              |            | 100      | 100          |                     |     |
| B237852-MSD1 | Matrix Spike Dup [19H0528-04] |          |          |              |    |              |            | 100      | 100          |                     |     |
| 19H0483-01   | MW-301                        | 08/19/19 | 08/15/19 |              |    | 1050         |            |          | 100          |                     |     |
| 19H0484-01   | KLF-B19-1 OW                  | 08/19/19 | 08/15/19 |              |    | 1040         |            |          | 100          |                     | 7   |
| 19H0528-04   | MW-22R                        | 08/23/19 | 08/15/19 |              |    | 1030         |            |          | 100          |                     | 7   |
| 19H0528-06   | MW-22S WA                     | 08/23/19 | 08/15/19 |              |    | 1055         |            |          | 100          | MS/MSD              | 10  |
| 19H0528-07   | Blind Duplicate L             | 08/23/19 | 08/15/19 |              | 7  | 1040         |            |          | 100          |                     | 10  |
| 19H0576-03   | MW-21R LB                     | 08/21/19 | 08/16/19 |              |    |              |            |          | 100          |                     | 10  |
| 19H0576-05   | MW-21S L                      | 08/21/19 | 08/16/19 |              |    | 1020         |            |          | 100          |                     | 7   |

Start Date/Time \_\_\_\_\_

Stop Date/Time \_\_\_\_\_

| Standard ID# | Description                   | Manufacture Lot# |
|--------------|-------------------------------|------------------|
| 1904204      | Filter Paper (VWR 100) 12.5cm | 16887239         |
| 1906430      | Methylene Chloride, 4L Bottle | DV815-US         |
| 1907355      | Sodium Sulfate (Baked)        | Sodium Sulfate/1 |
| 1907493      | Acetone                       | DW590-US         |

SPK  
HR2

SPK  
SUC  
WIT  
MPH  
AVF

8/13/19  
Date

SUC + HR2  
Extracted By

8/13/19  
Date

## Injection Log

C:\msdchem\1\data\F081619\

| Date        |          | Filename    | Lab ID           | Sample Info        |
|-------------|----------|-------------|------------------|--------------------|
| 16 Aug 2019 | 11:21 am | F1922801.D  | TUNE 25 ng       | 1902259 EXP 093019 |
| 16 Aug 2019 | 11:48 am | F1922802.D  | DIOX 10 ug/mL    | 1902462 EXP 050719 |
| 16 Aug 2019 | 12:08 pm | F1922801B.D | TUNE 25 ng       | 1902259 EXP 093019 |
| 16 Aug 2019 | 12:35 pm | F1922802B.D | DIOX 10 ug/mL    | 1902462 EXP 050719 |
| 16 Aug 2019 | 12:55 pm | F1922803.D  | DIOX-D8 10 ug/mL | 1902463 EXP 090519 |
| 16 Aug 2019 | 1:15 pm  | F1922804.D  | B237852-BS1      |                    |
| 16 Aug 2019 | 1:35 pm  | F1922805.D  | B237852-BSD1     |                    |
| 16 Aug 2019 | 1:55 pm  | F1922806.D  | B237852-BLK1     |                    |
| 16 Aug 2019 | 2:15 pm  | F1922807.D  | 19H0483-01       |                    |
| 16 Aug 2019 | 2:35 pm  | F1922808.D  | 19H0484-01       |                    |
| 16 Aug 2019 | 2:55 pm  | F1922809.D  | 19H0528-04       |                    |
| 16 Aug 2019 | 3:15 pm  | F1922810.D  | 19H0528-06       |                    |
| 16 Aug 2019 | 3:35 pm  | F1922811.D  | 19H0528-07       |                    |
| 16 Aug 2019 | 3:55 pm  | F1922812.D  | 19H0576-03       |                    |
| 16 Aug 2019 | 4:15 pm  | F1922813.D  | 19H0576-05       |                    |
| 16 Aug 2019 | 4:35 pm  | F1922814.D  | B237852-MS1      |                    |
| 16 Aug 2019 | 4:55 pm  | F1922815.D  | B237852-MSD1     |                    |
| 16 Aug 2019 | 5:15 pm  | F1922816.D  | 1908252 MDL SPK  | 4X                 |
| 16 Aug 2019 | 5:33 pm  | F1922817.D  | B238267-SRM2     |                    |
| 16 Aug 2019 | 6:10 pm  | F1922818.D  | b238252-SRM1     |                    |
| 18 Aug 2019 | 8:22 am  | F1922819.D  | B238267-SRM1     | glassware          |

5039298

HPLC

**SAMPLE DATA**

# 1 - FORM I

## ANALYSIS DATA SHEET

396

MW-21R

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-03            |
|                |                                | File ID:       | 19H0576-03.d          |
| Sampled:       | 08/09/19 12:20                 | Prepared:      | 08/19/19 00:00        |
|                |                                | Analyzed:      | 08/21/19 13:23        |
| Solids:        |                                | Preparation:   | SOP 434-PFAAS         |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 250 mL / 1 mL                  |                |                       |
| Batch:         | B238243                        | Sequence:      | S039480               |
|                |                                | Calibration:   | 1900263               |
|                |                                | Instrument:    | HPLC1                 |

| CAS NO.    | COMPOUND                               | CONC. (ng/L) | MDL | RL  | Q |
|------------|----------------------------------------|--------------|-----|-----|---|
| 375-73-5   | Perfluorobutanesulfonic acid (PFBS)    | 2.2          | 2.0 | 2.0 |   |
| 307-24-4   | Perfluorohexanoic acid (PFHxA)         |              | 2.0 | 2.0 |   |
| 375-85-9   | Perfluoroheptanoic acid (PFHpA)        |              | 2.0 | 2.0 |   |
| 375-22-4   | Perfluorobutanoic acid (PFBA)          |              | 2.0 | 2.0 |   |
| 335-77-3   | Perfluorodecanesulfonic acid (PFDS)    |              | 2.0 | 2.0 |   |
| 375-92-8   | Perfluoroheptanesulfonic acid (PFHpS)  |              | 2.0 | 2.0 |   |
| 75491-6    | Perfluorooctanesulfonamide (FOSA)      |              | 2.0 | 2.0 |   |
| 2706-90-3  | Perfluoropentanoic acid (PFPeA)        |              | 2.0 | 2.0 |   |
|            | 6:2 Fluorotelomersulfonate (6:2 FTS A) | 3.2          | 2.0 | 2.0 |   |
|            | 8:2 Fluorotelomersulfonate (8:2 FTS A) |              | 2.0 | 2.0 |   |
| 355-46-4   | Perfluorohexanesulfonic acid (PFHxS)   |              | 2.0 | 2.0 |   |
| 335-67-1   | Perfluorooctanoic acid (PFOA)          | 2.4          | 2.0 | 2.0 |   |
| 1763-23-1  | Perfluorooctanesulfonic acid (PFOS)    |              | 2.0 | 2.0 |   |
| 375-95-1   | Perfluorononanoic acid (PFNA)          |              | 2.0 | 2.0 |   |
| 335-76-2   | Perfluorodecanoic acid (PFDA)          |              | 2.0 | 2.0 |   |
|            | N-MeFOSAA                              |              | 2.0 | 2.0 |   |
| 2058-94-8  | Perfluoroundecanoic acid (PFUnA)       |              | 2.0 | 2.0 |   |
|            | N-EtFOSAA                              |              | 2.0 | 2.0 |   |
| 307-55-1   | Perfluorododecanoic acid (PFDoA)       |              | 2.0 | 2.0 |   |
| 72629-94-8 | Perfluorotridecanoic acid (PFTTrDA)    |              | 2.0 | 2.0 |   |
| 376-06-7   | Perfluorotetradecanoic acid (PFTA)     |              | 2.0 | 2.0 |   |



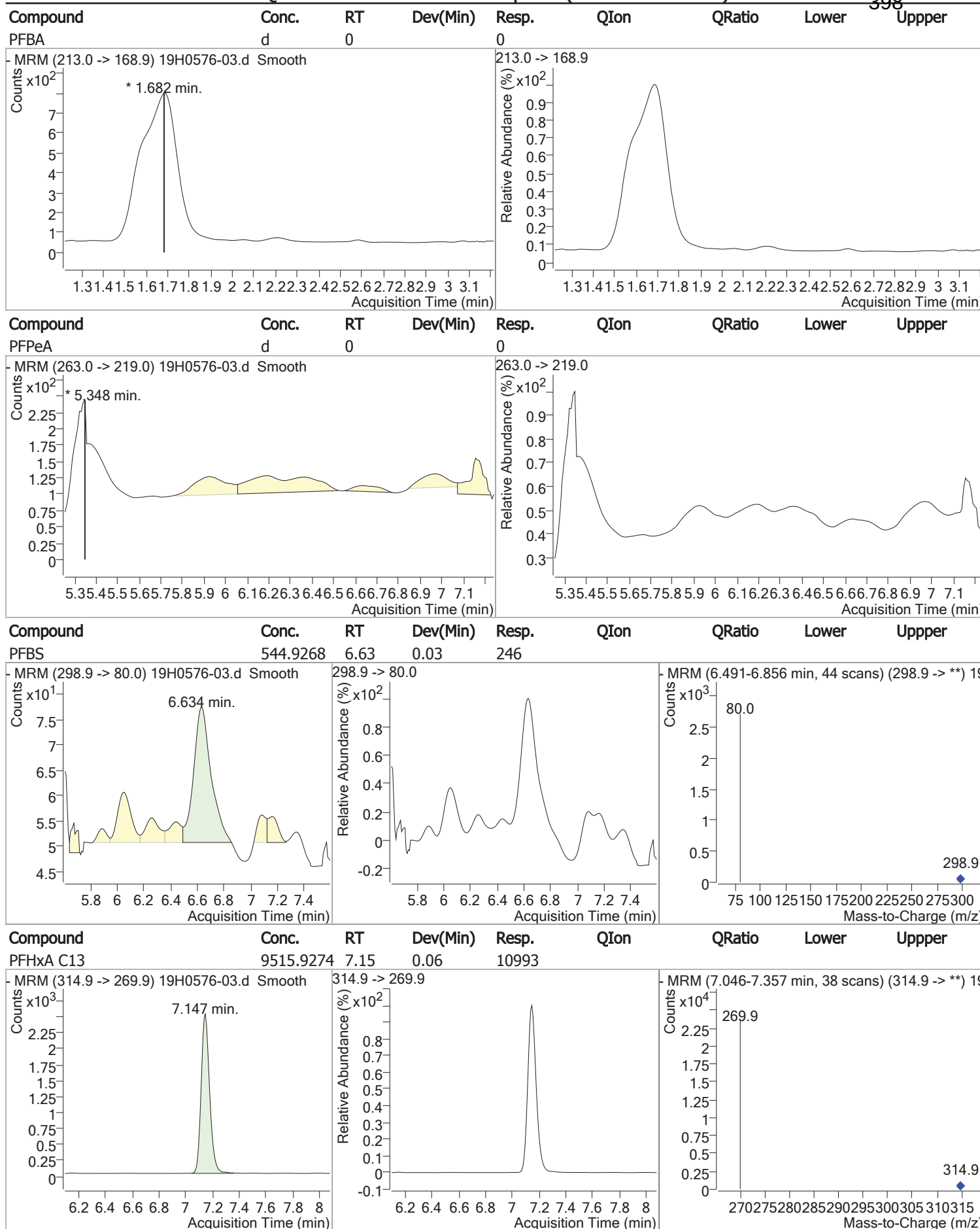
## Quantitation Results Report (Not Reviewed)

|                |                   |                   |                      |
|----------------|-------------------|-------------------|----------------------|
| Data File      | 19H0576-03.d      | Operator          |                      |
| Acq. Method    | 21List021219.m    | Acq. Date-Time    | 8/21/2019 1:23:25 PM |
| Sample Name    | 19H0576-03        | Instrument        | QQQ1                 |
| Vial           |                   | Multiplier        | 1.00                 |
| DA Method File | 081319.m          | Comment           |                      |
| Tune File      |                   | Tune Date         |                      |
| Batch Name     | B238243.batch.bin | Last Calib Update | 8/14/2019 2:32:09 PM |
| Ref Library    |                   |                   |                      |

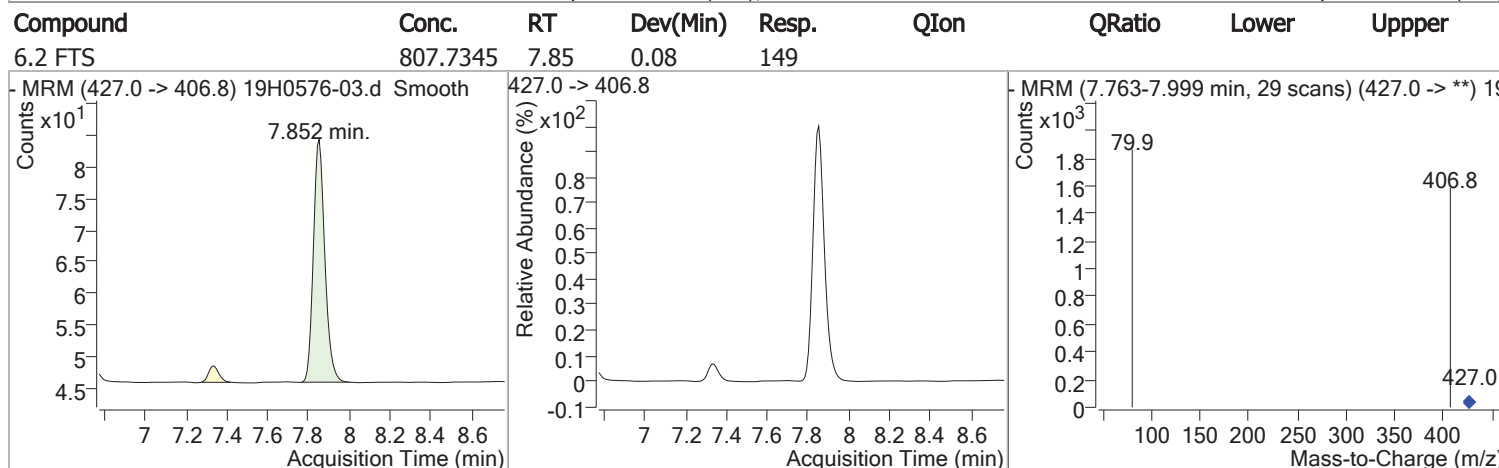
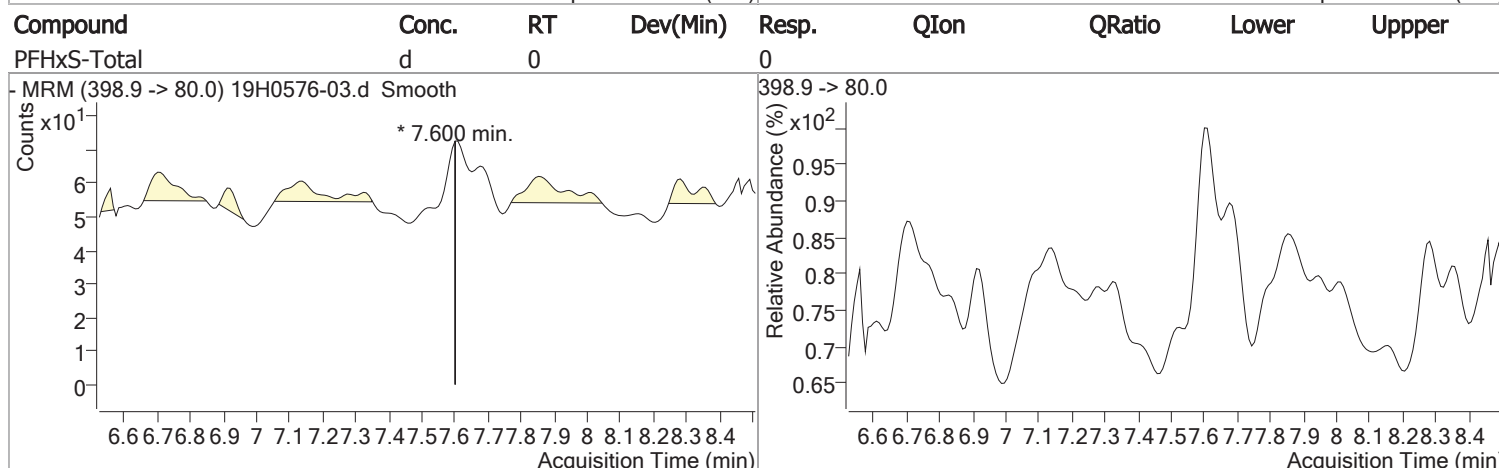
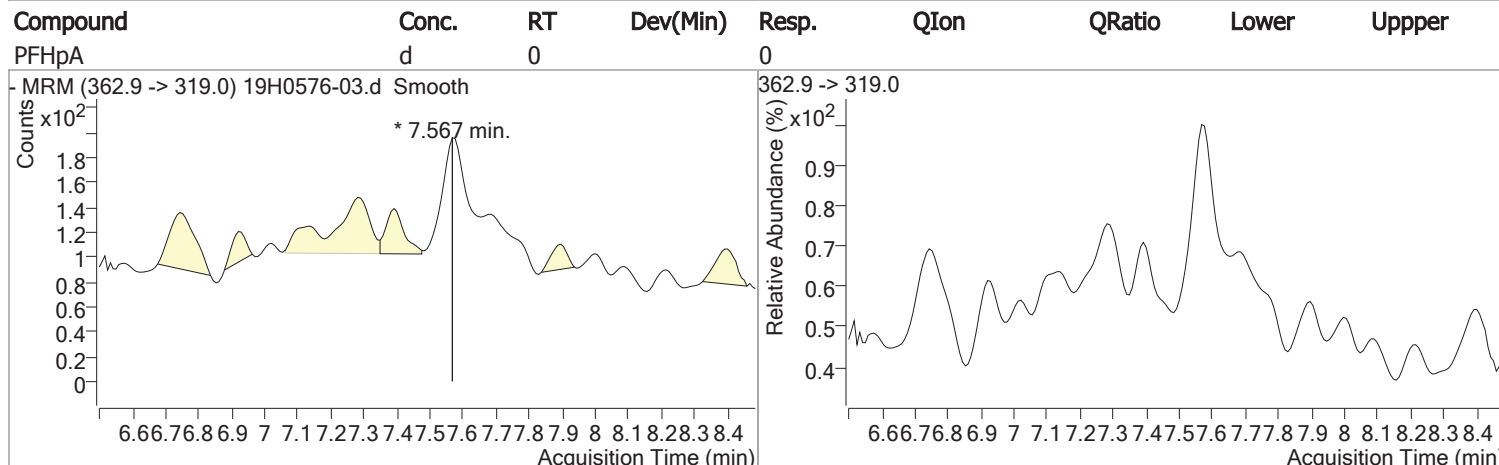
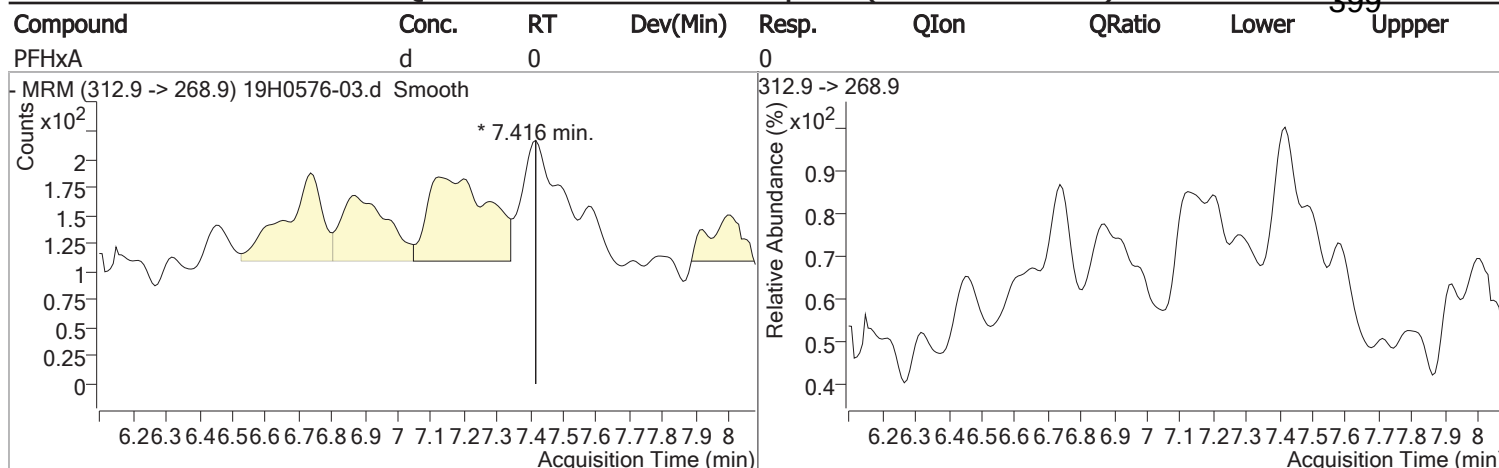
| Compound                    | RT                   | QIon           | Resp. | Conc.             | Units    | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|-------------------|----------|----------|
| Internal Standards          |                      |                |       |                   |          |          |
| M PFOA C13                  | 7.861                | 416.9 -> 371.9 | 16196 | 10000.0000        | pg/ml    | 0.084    |
| M PFOS C13                  | 8.085                | 502.9 -> 80.0  | 22286 | 28700.0000        | pg/ml    | 0.092    |
| M d3-N-MeFOSAA              | 8.344                | 573.2 -> 419.0 | 10632 | 40000.0000        | pg/ml    | 0.084    |
| System Monitoring Compounds |                      |                |       |                   |          |          |
| S PFHxA C13                 | 7.147                | 314.9 -> 269.9 | 10993 | 9515.9274         | pg/ml    | 0.059    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 95.16% |          |          |
| S PFDA C13                  | 8.261                | 514.9 -> 469.9 | 15766 | 9349.8128         | pg/ml    | 0.084    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 93.50% |          |          |
| S d5-N-MeFOSAA              | 8.428                | 589.2 -> 419.0 | 8141  | 32376.5384        | pg/ml    | 0.093    |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 80.94% |          |          |
| Target Compounds            |                      |                |       |                   |          | QValue   |
| T PFBA                      | 1.682                | 213.0 -> 168.9 | 0     | 0.0000            | pg/ml md | 1        |
| T PFPeA                     | 5.348                | 263.0 -> 219.0 | 0     | 0.0000            | pg/ml md | 1        |
| T PFBS                      | 6.634                | 298.9 -> 80.0  | 246   | 544.9268          | pg/ml    | 100      |
| T PFHxA                     | 7.416                | 312.9 -> 268.9 | 0     | 0.0000            | pg/ml md | 1        |
| T PFHpA                     | 7.567                | 362.9 -> 319.0 | 0     | 0.0000            | pg/ml md | 1        |
| T PFHxS-Total               | 7.600                | 398.9 -> 80.0  | 0     | 0.0000            | pg/ml md | 1        |
| T 6.2 FTS                   | 7.852                | 427.0 -> 406.8 | 149   | 807.7345          | pg/ml    | 100      |
| T PFOA-Total                | 7.861                | 412.9 -> 368.9 | 1278  | 601.1875          | pg/ml    | 100      |
| T PFHpS                     | 7.279                | 449.0 -> 79.7  | 0     | 0.0000            | pg/ml md | 1        |
| T PFOS-Total                | 8.086                | 498.9 -> 80.0  | 420   | 364.6408          | pg/ml    | 100      |
| T PFNA                      | 8.801                | 462.9 -> 418.9 | 0     | 0.0000            | pg/ml md | 1        |
| T 8.2 FTS                   | 8.143                | 527.0 -> 81.0  | 0     | 0.0000            | pg/ml md | 1        |
| T PFDA                      | 7.345                | 513.1 -> 469.0 | 0     | 0.0000            | pg/ml md | 1        |
| T N-MeFOSAA                 | 7.646                | 570.2 -> 419.1 | 0     | 0.0000            | pg/ml md | 1        |
| T FOSA                      | 8.725                | 497.9 -> 77.9  | 0     | 0.0000            | pg/ml md | 1        |
| T PFDS                      | 7.712                | 599.0 -> 80.0  | 0     | 0.0000            | pg/ml md | 1        |
| T PFUnA                     | 8.748                | 563.1 -> 519.0 | 0     | 0.0000            | pg/ml md | 1        |
| T N-EtFOSAA                 | 8.420                | 584.2 -> 419.0 | 125   | 478.9724          | pg/ml    | 100      |
| T PFDoA                     | 8.713                | 613.1 -> 569.0 | 0     | 0.0000            | pg/ml md | 1        |
| T PFTrDA                    | 8.099                | 663.1 -> 619.0 | 0     | 0.0000            | pg/ml md | 1        |
| T PFTA                      | 9.621                | 713.1 -> 669.1 | 0     | 0.0000            | pg/ml md | 1        |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

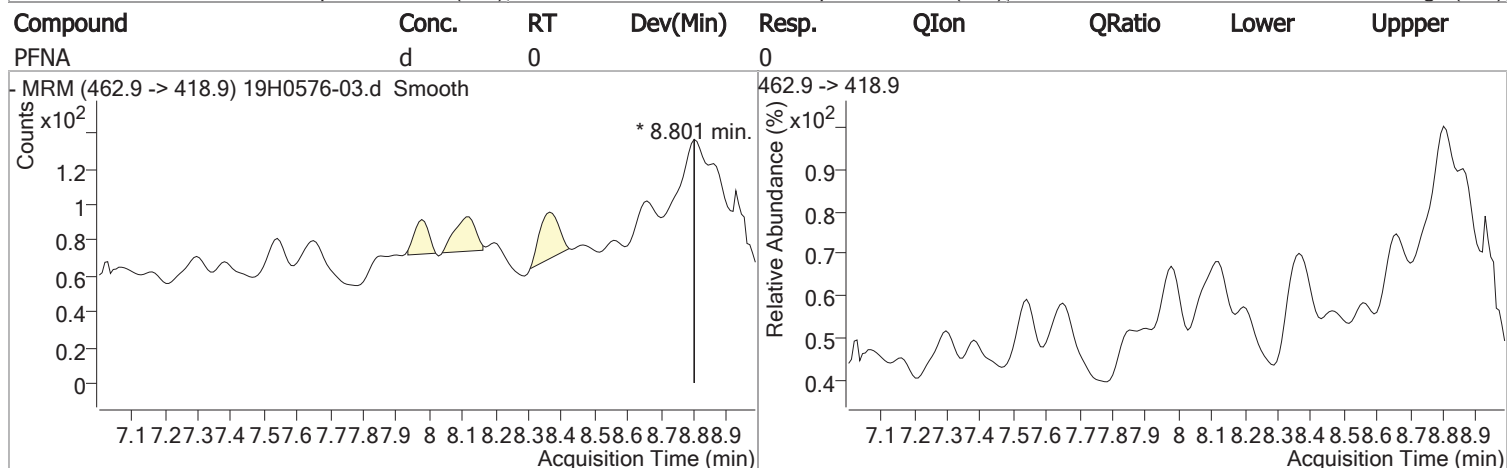
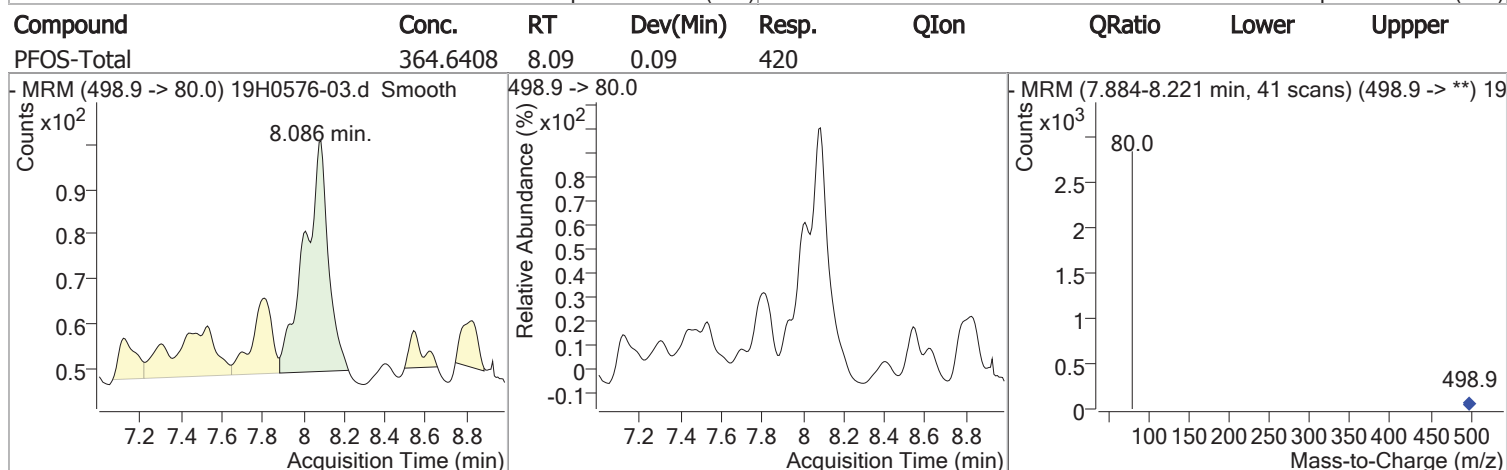
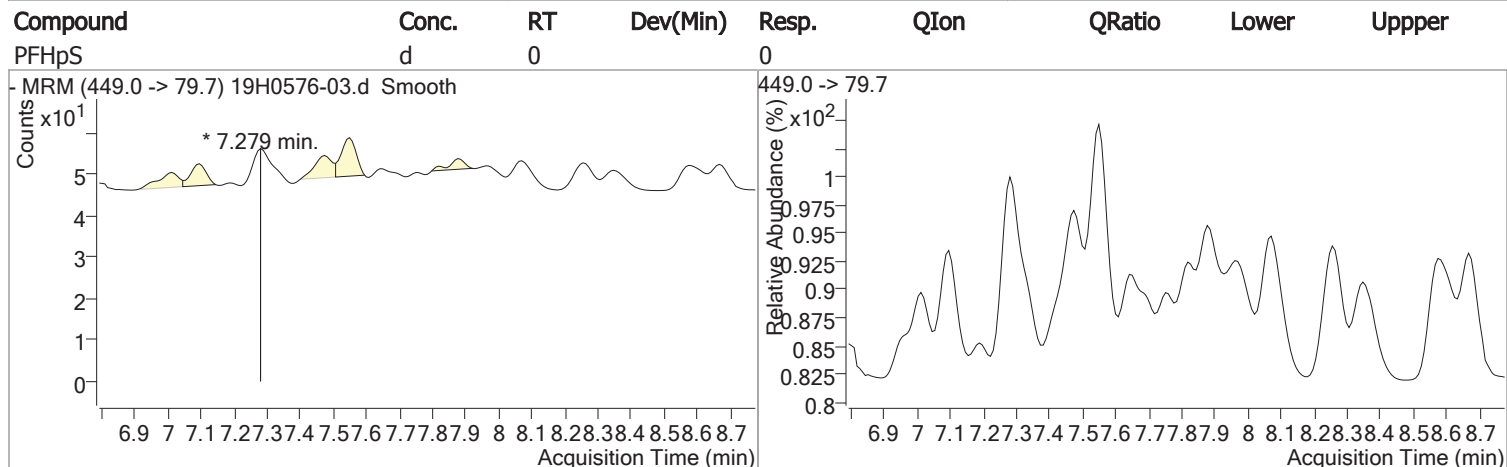
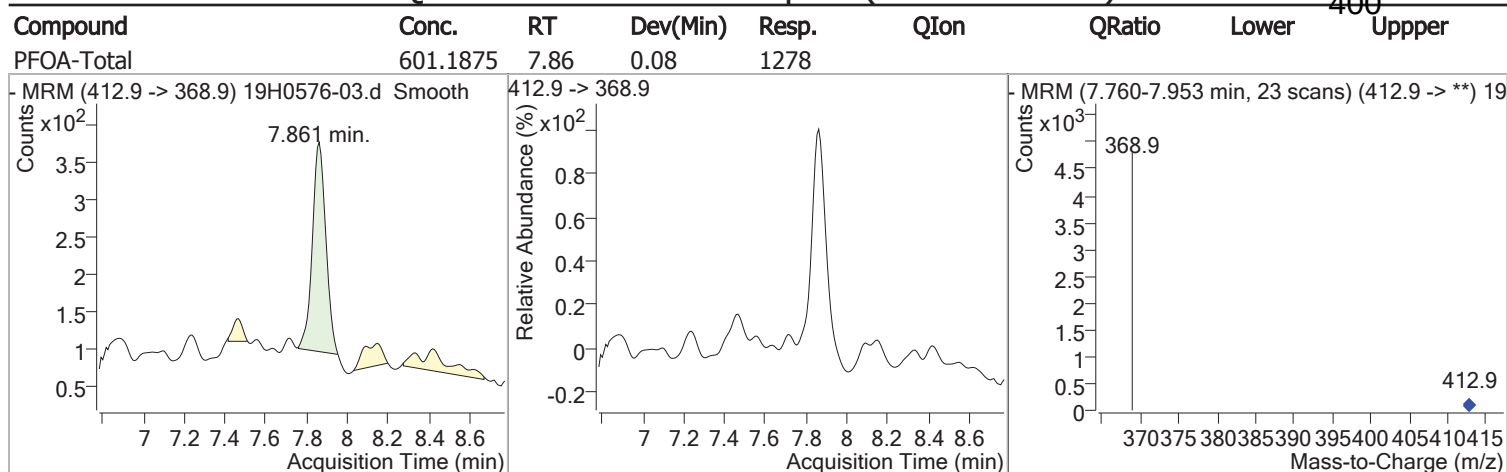
# Quantitation Results Report (Not Reviewed)



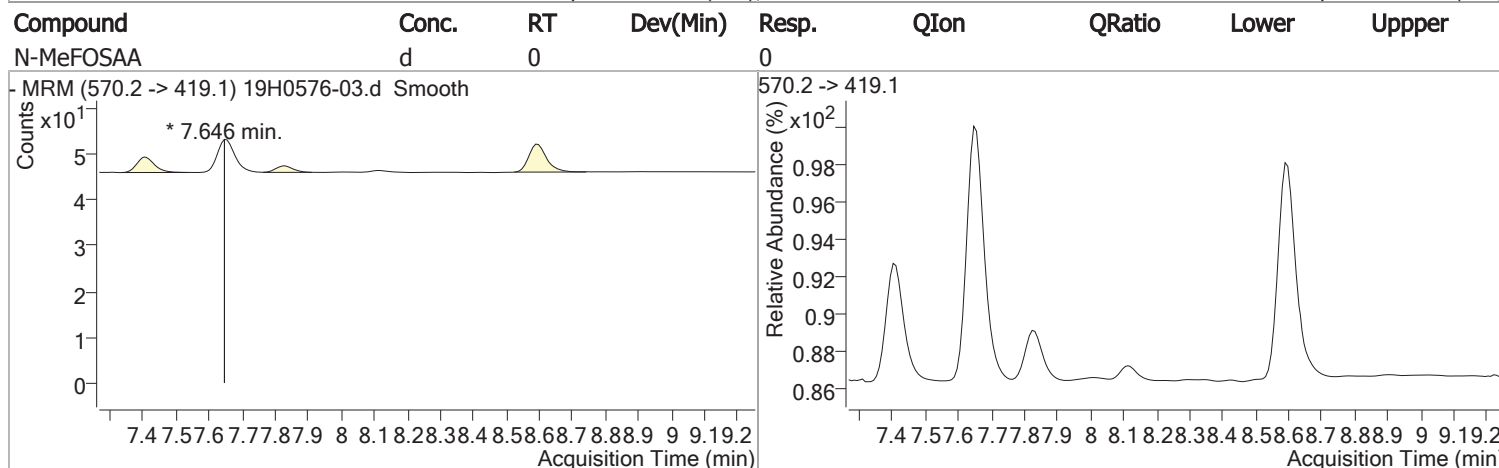
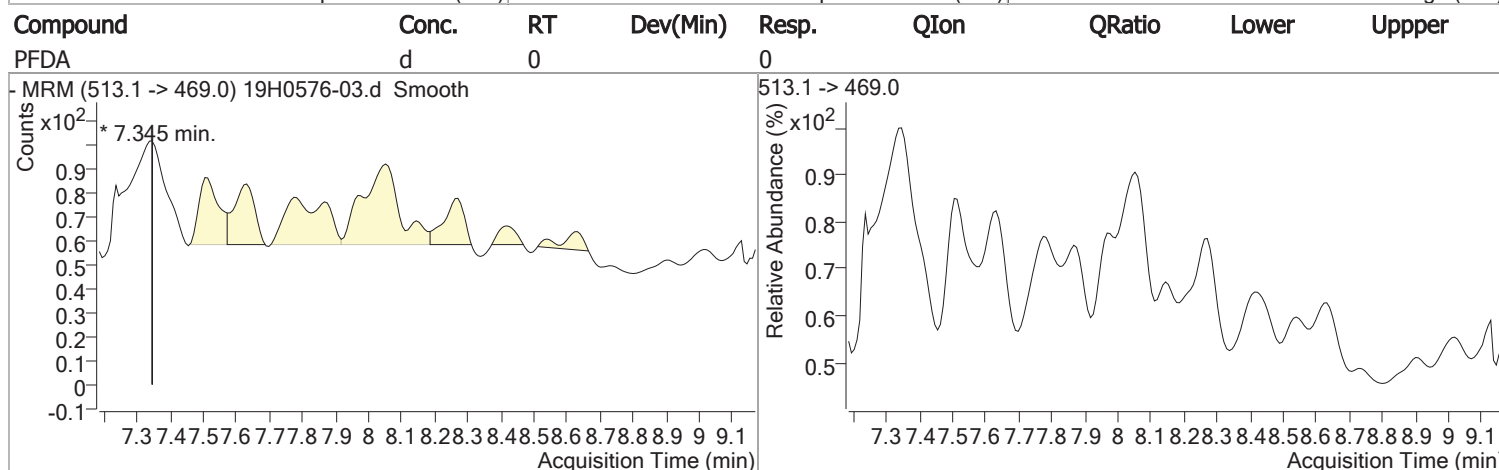
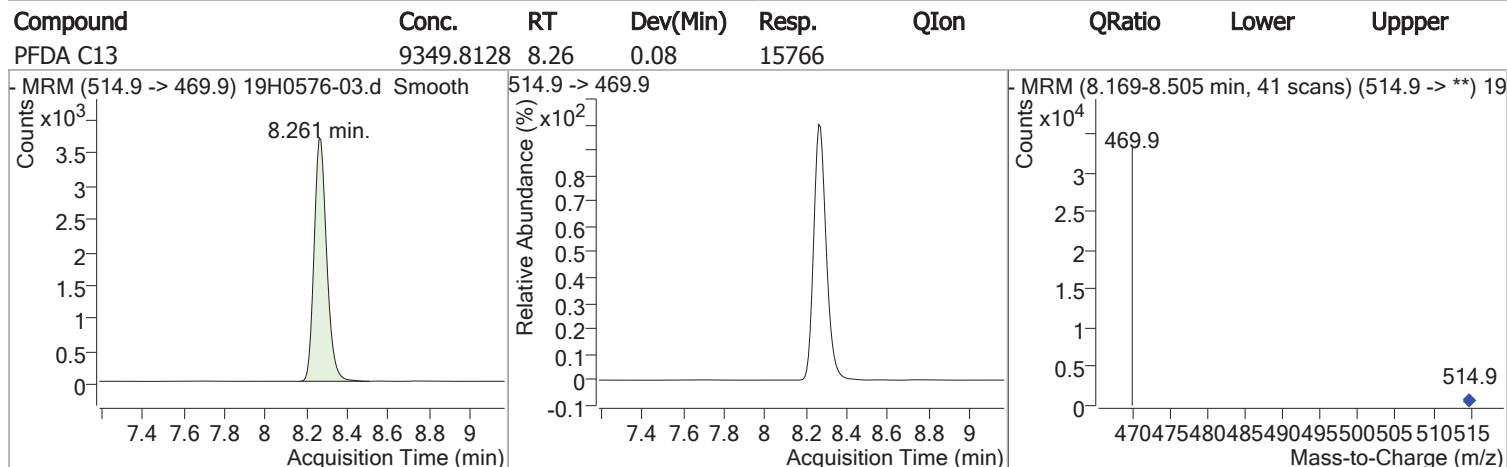
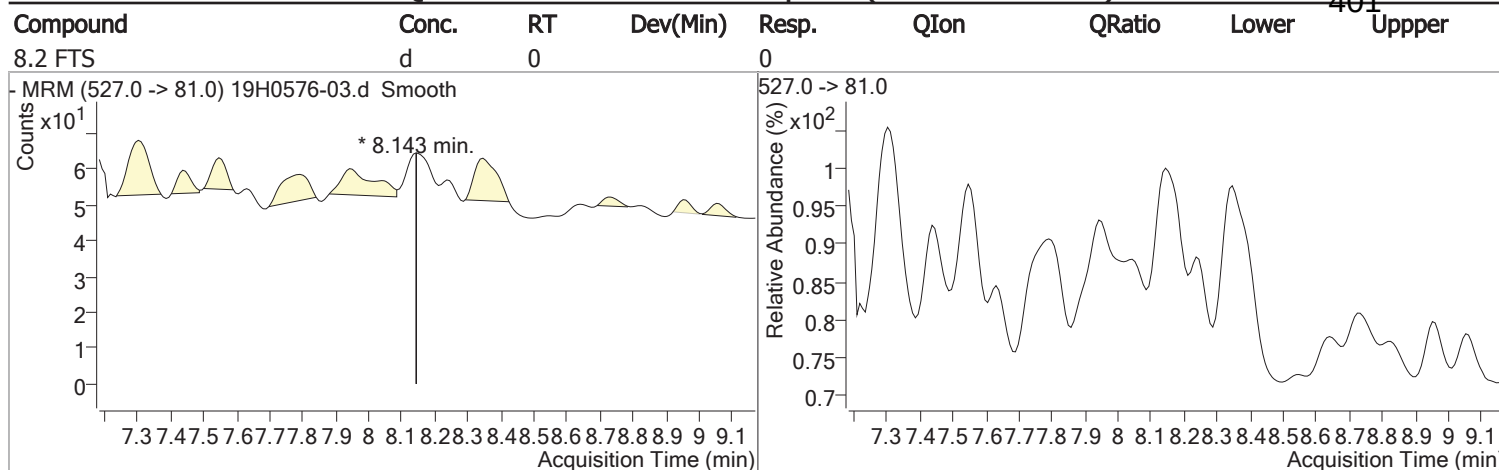
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)

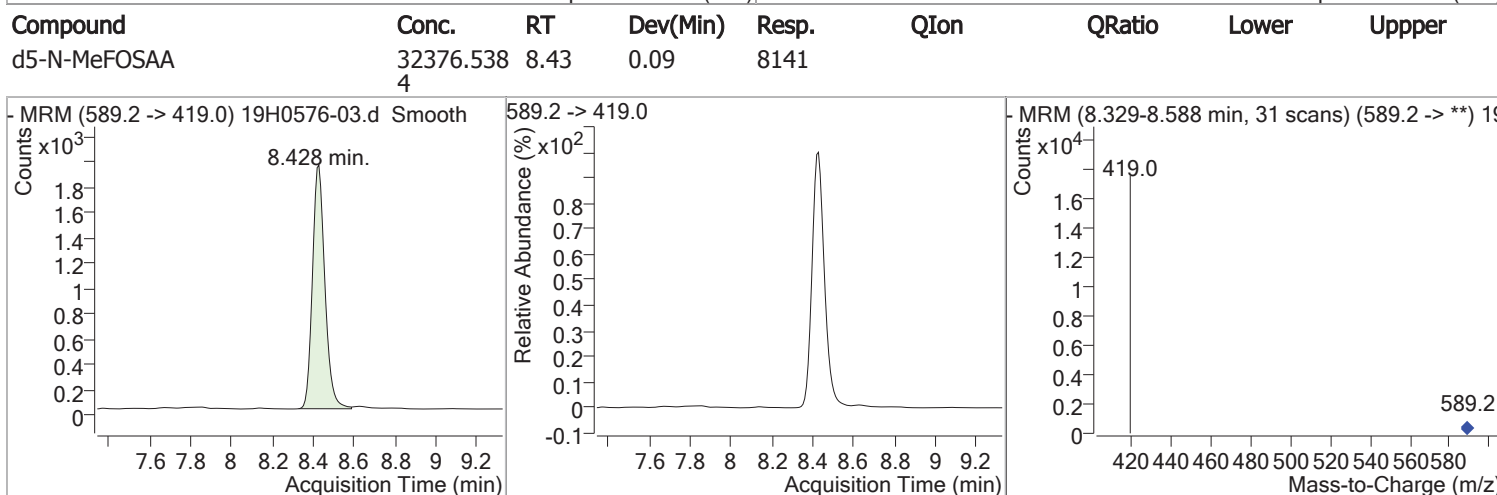
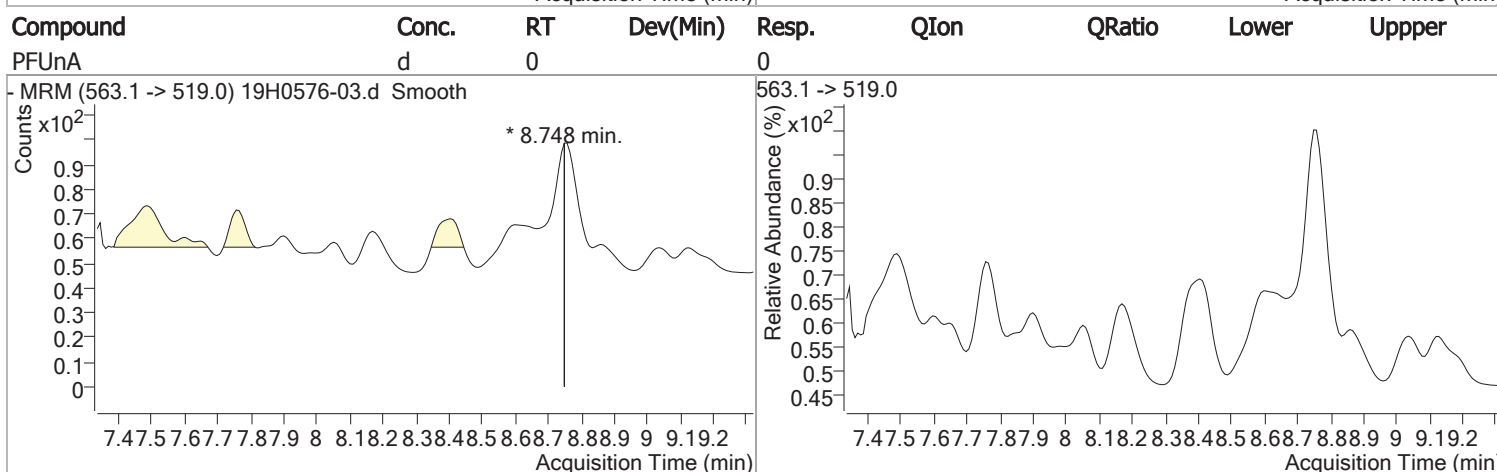
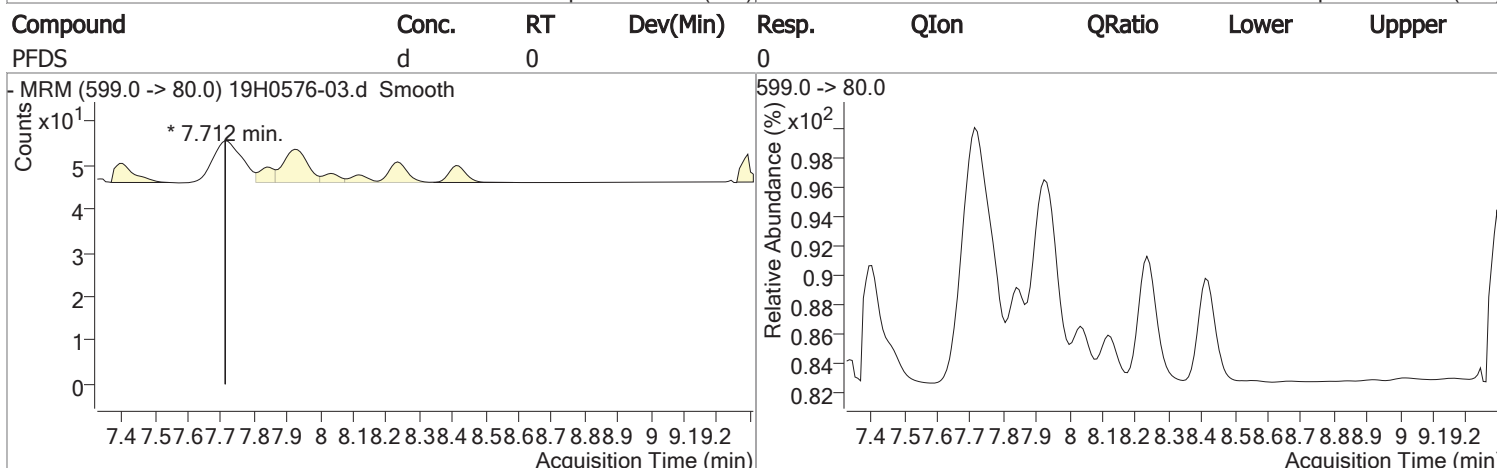
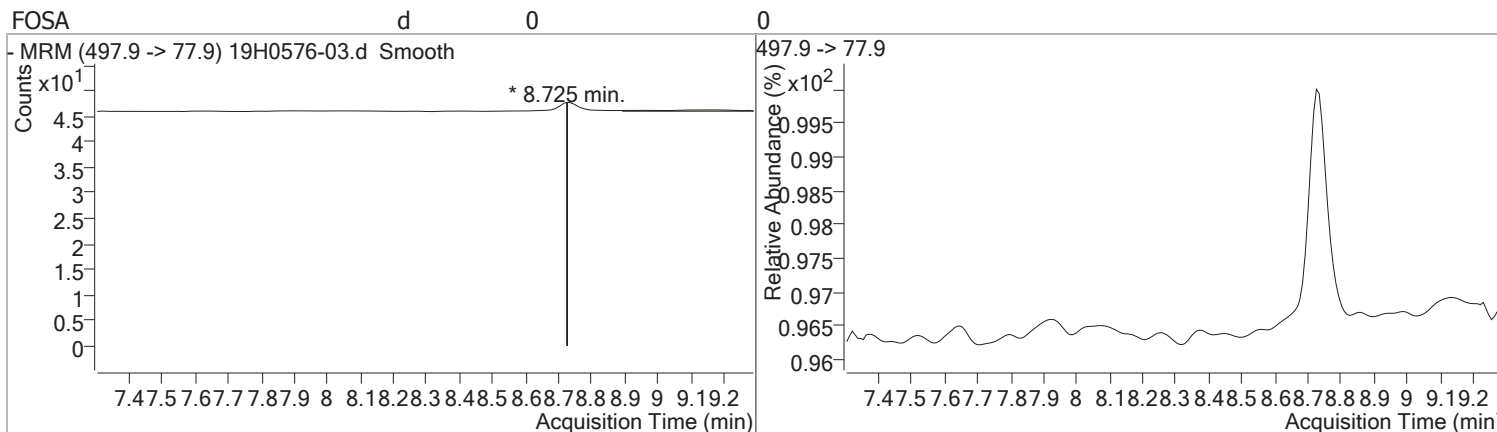


# Quantitation Results Report (Not Reviewed)

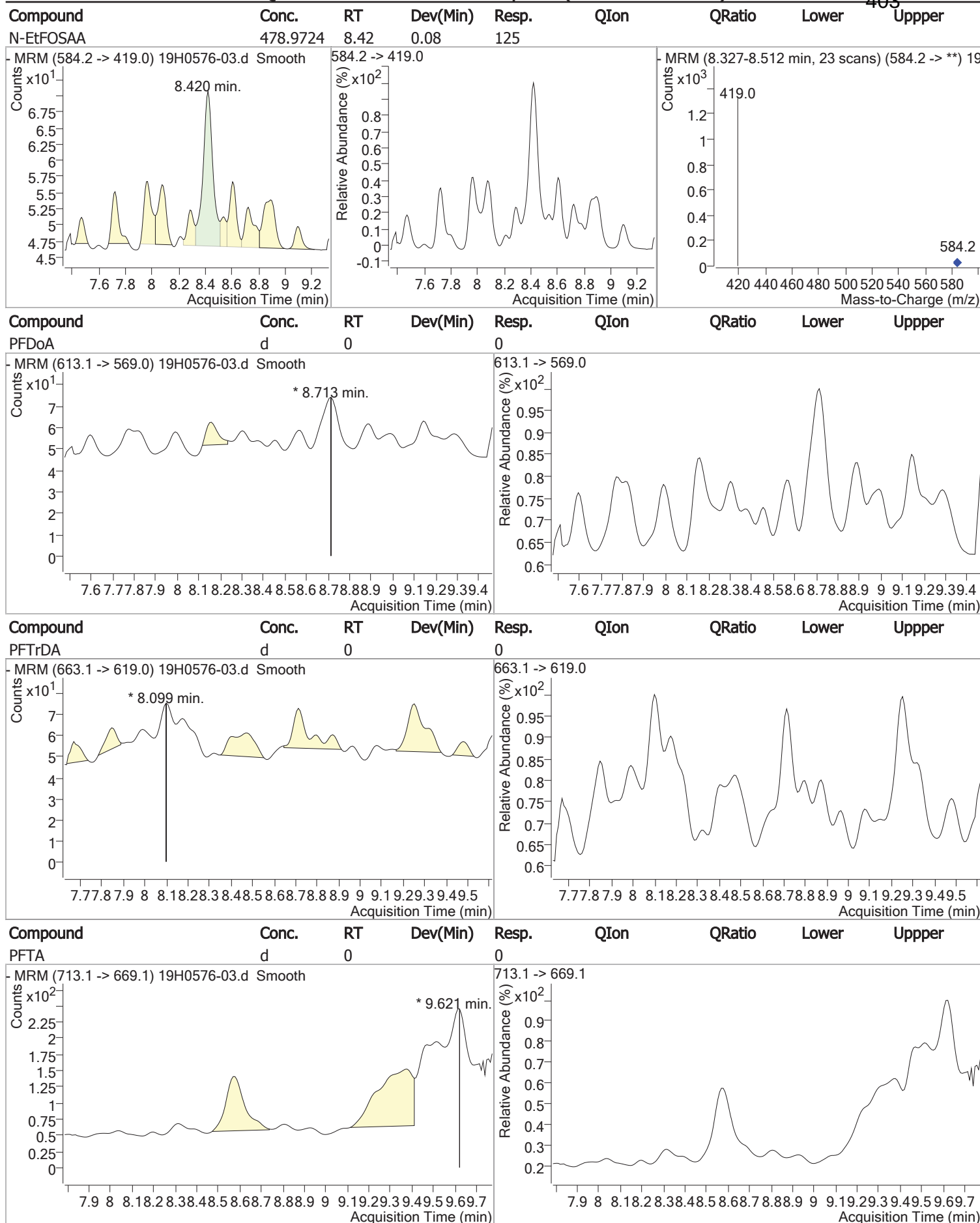


# Quantitation Results Report (Not Reviewed)

| Compound | Conc. | RT | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-------|----|----------|-------|------|--------|-------|-------|
|----------|-------|----|----------|-------|------|--------|-------|-------|



# Quantitation Results Report (Not Reviewed)



# 1 - FORM I

## ANALYSIS DATA SHEET

404

MW-21S

|                |                                |                |                       |
|----------------|--------------------------------|----------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:        | Ground Water                   | Laboratory ID: | 19H0576-05            |
|                |                                | File ID:       | 19H0576-05R.d         |
| Sampled:       | 08/09/19 14:00                 | Prepared:      | 08/19/19 00:00        |
|                |                                | Analyzed:      | 08/21/19 19:44        |
| Solids:        |                                | Preparation:   | SOP 434-PFAAS         |
|                |                                | Dilution:      | 1                     |
| Initial/Final: | 250 mL / 1 mL                  |                |                       |
| Batch:         | B238243                        | Sequence:      | S039480               |
|                |                                | Calibration:   | 1900263               |
|                |                                | Instrument:    | HPLC1                 |

| CAS NO.    | COMPOUND                               | CONC. (ng/L) | MDL | RL  | Q |
|------------|----------------------------------------|--------------|-----|-----|---|
| 375-73-5   | Perfluorobutanesulfonic acid (PFBS)    |              | 2.0 | 2.0 |   |
| 307-24-4   | Perfluorohexanoic acid (PFHxA)         |              | 2.0 | 2.0 |   |
| 375-85-9   | Perfluoroheptanoic acid (PFHpA)        |              | 2.0 | 2.0 |   |
| 375-22-4   | Perfluorobutanoic acid (PFBA)          | 2.5          | 2.0 | 2.0 |   |
| 335-77-3   | Perfluorodecanesulfonic acid (PFDS)    |              | 2.0 | 2.0 |   |
| 375-92-8   | Perfluoroheptanesulfonic acid (PFHpS)  |              | 2.0 | 2.0 |   |
| 75491-6    | Perfluorooctanesulfonamide (FOSA)      |              | 2.0 | 2.0 |   |
| 2706-90-3  | Perfluoropentanoic acid (PFPeA)        |              | 2.0 | 2.0 |   |
|            | 6:2 Fluorotelomersulfonate (6:2 FTS A) |              | 2.0 | 2.0 |   |
|            | 8:2 Fluorotelomersulfonate (8:2 FTS A) |              | 2.0 | 2.0 |   |
| 355-46-4   | Perfluorohexanesulfonic acid (PFHxS)   |              | 2.0 | 2.0 |   |
| 335-67-1   | Perfluorooctanoic acid (PFOA)          | 2.7          | 2.0 | 2.0 |   |
| 1763-23-1  | Perfluorooctanesulfonic acid (PFOS)    |              | 2.0 | 2.0 |   |
| 375-95-1   | Perfluorononanoic acid (PFNA)          |              | 2.0 | 2.0 |   |
| 335-76-2   | Perfluorodecanoic acid (PFDA)          |              | 2.0 | 2.0 |   |
|            | N-MeFOSAA                              |              | 2.0 | 2.0 |   |
| 2058-94-8  | Perfluoroundecanoic acid (PFUnA)       |              | 2.0 | 2.0 |   |
|            | N-EtFOSAA                              |              | 2.0 | 2.0 |   |
| 307-55-1   | Perfluorododecanoic acid (PFDoA)       |              | 2.0 | 2.0 |   |
| 72629-94-8 | Perfluorotridecanoic acid (PFTTrDA)    |              | 2.0 | 2.0 |   |
| 376-06-7   | Perfluorotetradecanoic acid (PFTA)     |              | 2.0 | 2.0 |   |



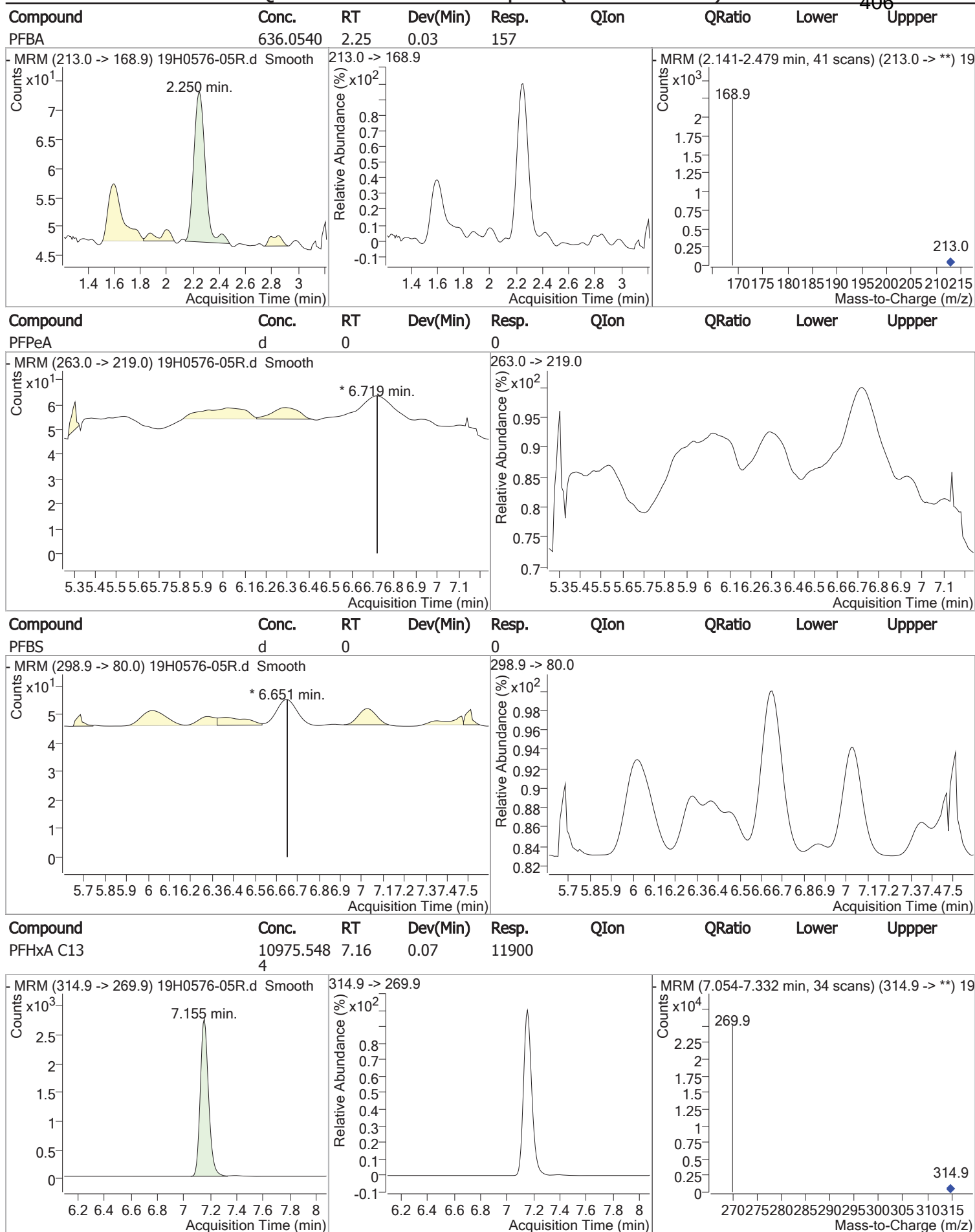
## Quantitation Results Report (Not Reviewed)

|                |                   |                   |                      |
|----------------|-------------------|-------------------|----------------------|
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| Acq. Method    | 21List021219.m    | Acq. Date-Time    | 8/21/2019 7:44:34 PM |
| Sample Name    | 19H0576-05        | Instrument        | QQQ1                 |
| Vial           |                   | Multiplier        | 1.00                 |
| DA Method File | 081319.m          | Comment           |                      |
| Tune File      |                   | Tune Date         |                      |
| Batch Name     | B238243.batch.bin | Last Calib Update | 8/14/2019 2:32:09 PM |
| Ref Library    |                   |                   |                      |

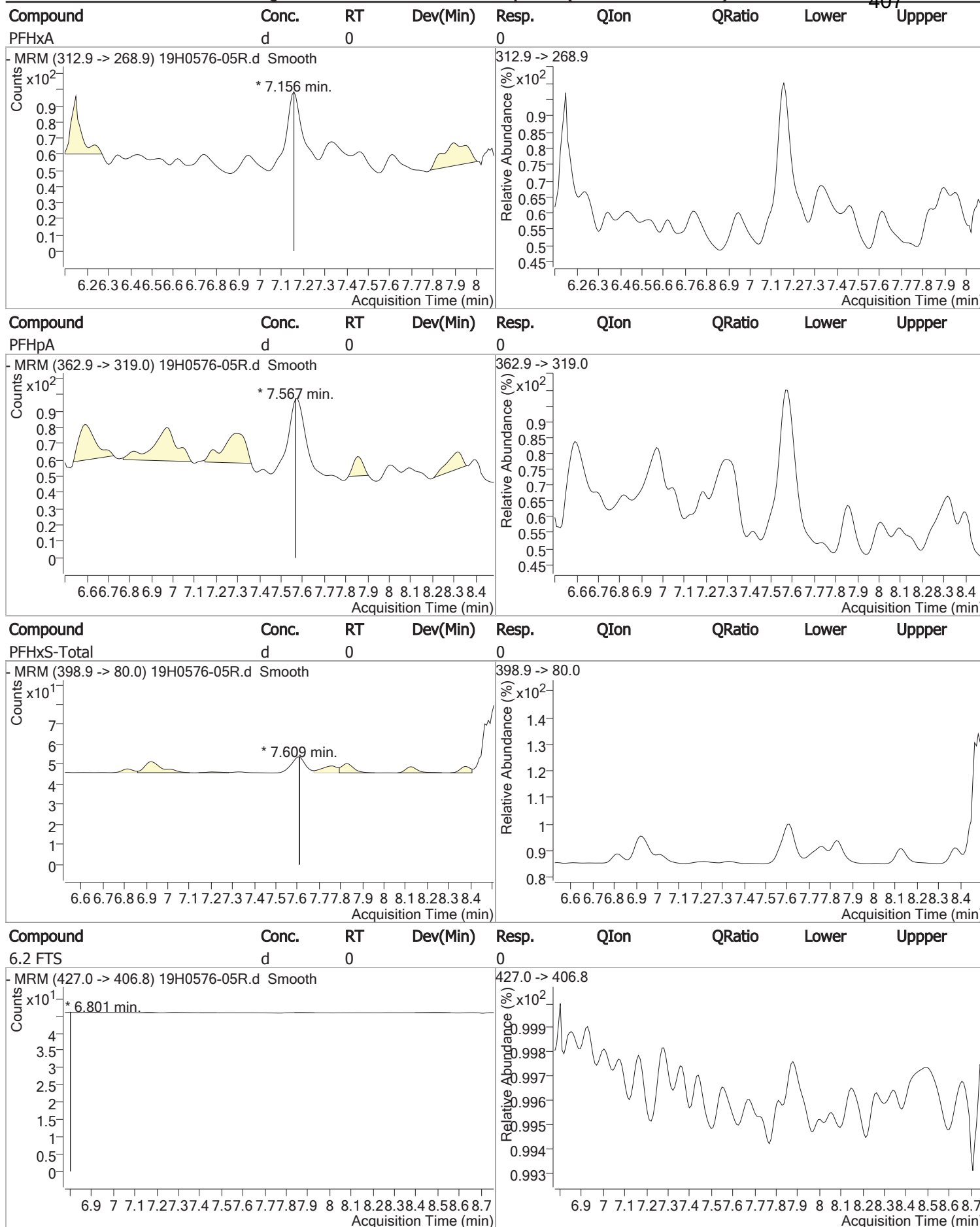
| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units    | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|--------------------|----------|----------|
| Internal Standards          |                      |                |       |                    |          |          |
| M PFOA C13                  | 7.852                | 416.9 -> 371.9 | 15200 | 10000.0000         | pg/ml    | 0.076    |
| M PFOS C13                  | 8.077                | 502.9 -> 80.0  | 19381 | 28700.0000         | pg/ml    | 0.084    |
| M d3-N-MeFOSAA              | 8.336                | 573.2 -> 419.0 | 9401  | 40000.0000         | pg/ml    | 0.076    |
| System Monitoring Compounds |                      |                |       |                    |          |          |
| S PFHxA C13                 | 7.155                | 314.9 -> 269.9 | 11900 | 10975.5484         | pg/ml    | 0.067    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 109.76% |          |          |
| S PFDA C13                  | 8.253                | 514.9 -> 469.9 | 15153 | 9575.3531          | pg/ml    | 0.076    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 95.75%  |          |          |
| S d5-N-MeFOSAA              | 8.411                | 589.2 -> 419.0 | 6788  | 30529.9114         | pg/ml    | 0.076    |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 76.32%  |          |          |
| Target Compounds            |                      |                |       |                    |          | QValue   |
| T PFBA                      | 2.250                | 213.0 -> 168.9 | 157   | 636.0540           | pg/ml    | 100      |
| T PFPeA                     | 6.719                | 263.0 -> 219.0 | 0     | 0.0000             | pg/ml md | 1        |
| T PFBS                      | 6.651                | 298.9 -> 80.0  | 0     | 0.0000             | pg/ml md | 1        |
| T PFHxA                     | 7.156                | 312.9 -> 268.9 | 0     | 0.0000             | pg/ml md | 1        |
| T PFHpA                     | 7.567                | 362.9 -> 319.0 | 0     | 0.0000             | pg/ml md | 1        |
| T PFHxS-Total               | 7.609                | 398.9 -> 80.0  | 0     | 0.0000             | pg/ml md | 1        |
| T 6.2 FTS                   | 6.801                | 427.0 -> 406.8 | 0     | 0.0000             | pg/ml md | 1        |
| T PFOA-Total                | 7.853                | 412.9 -> 368.9 | 1371  | 687.1275           | pg/ml    | 100      |
| T PFHpS                     | 8.457                | 449.0 -> 79.7  | 0     | 0.0000             | pg/ml md | 1        |
| T PFOS-Total                | 8.077                | 498.9 -> 80.0  | 363   | 361.5323           | pg/ml    | 100      |
| T PFNA                      | 8.734                | 462.9 -> 418.9 | 0     | 0.0000             | pg/ml md | 1        |
| T 8.2 FTS                   | 8.185                | 527.0 -> 81.0  | 0     | 0.0000             | pg/ml md | 1        |
| T PFDA                      | 8.253                | 513.1 -> 469.0 | 0     | 0.0000             | pg/ml md | 1        |
| T N-MeFOSAA                 | 8.992                | 570.2 -> 419.1 | 0     | 0.0000             | pg/ml md | 1        |
| T FOSA                      | 8.447                | 497.9 -> 77.9  | 0     | 0.0000             | pg/ml md | 1        |
| T PFDS                      | 8.646                | 599.0 -> 80.0  | 0     | 0.0000             | pg/ml md | 1        |
| T PFUnA                     | 8.706                | 563.1 -> 519.0 | 0     | 0.0000             | pg/ml md | 1        |
| T N-EtFOSAA                 | 8.546                | 584.2 -> 419.0 | 51    | 222.3478           | pg/ml    | 100      |
| T PFDoA                     | 8.696                | 613.1 -> 569.0 | 0     | 0.0000             | pg/ml md | 1        |
| T PFTrDA                    | 8.368                | 663.1 -> 619.0 | 0     | 0.0000             | pg/ml md | 1        |
| T PFTA                      | 9.444                | 713.1 -> 669.1 | 0     | 0.0000             | pg/ml md | 1        |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

# Quantitation Results Report (Not Reviewed)

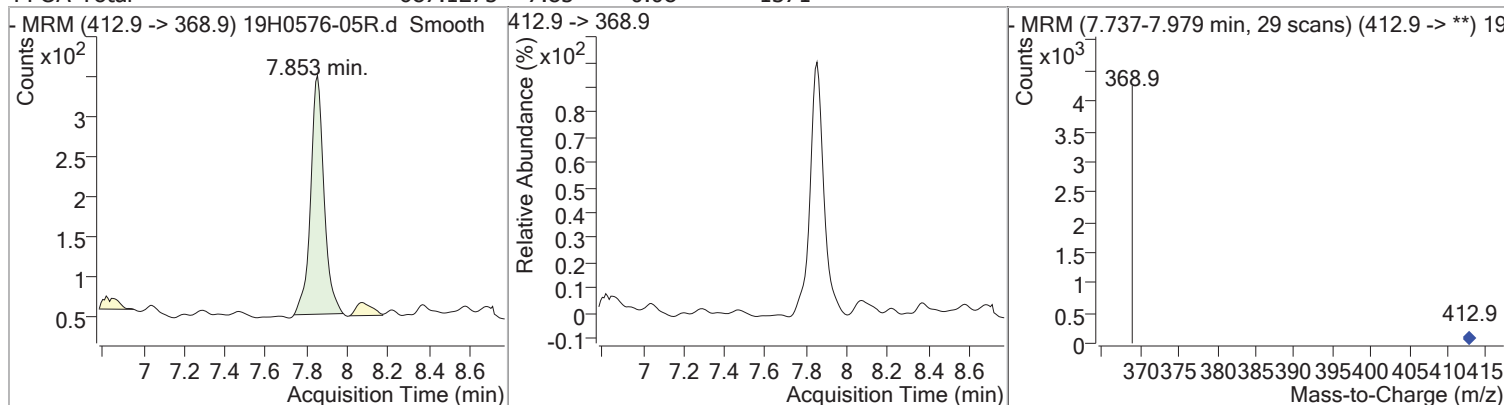


# Quantitation Results Report (Not Reviewed)

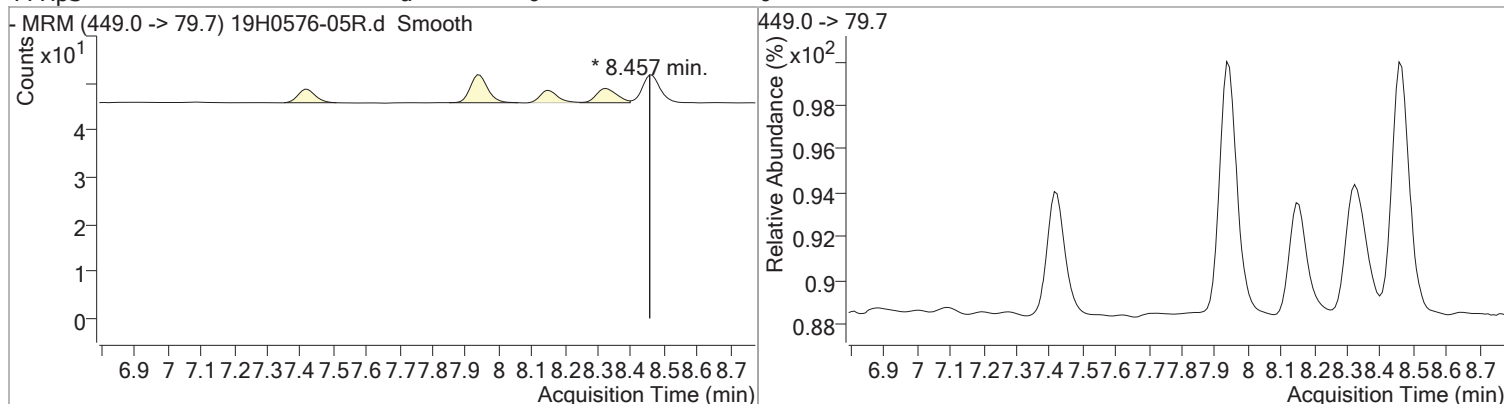


# Quantitation Results Report (Not Reviewed)

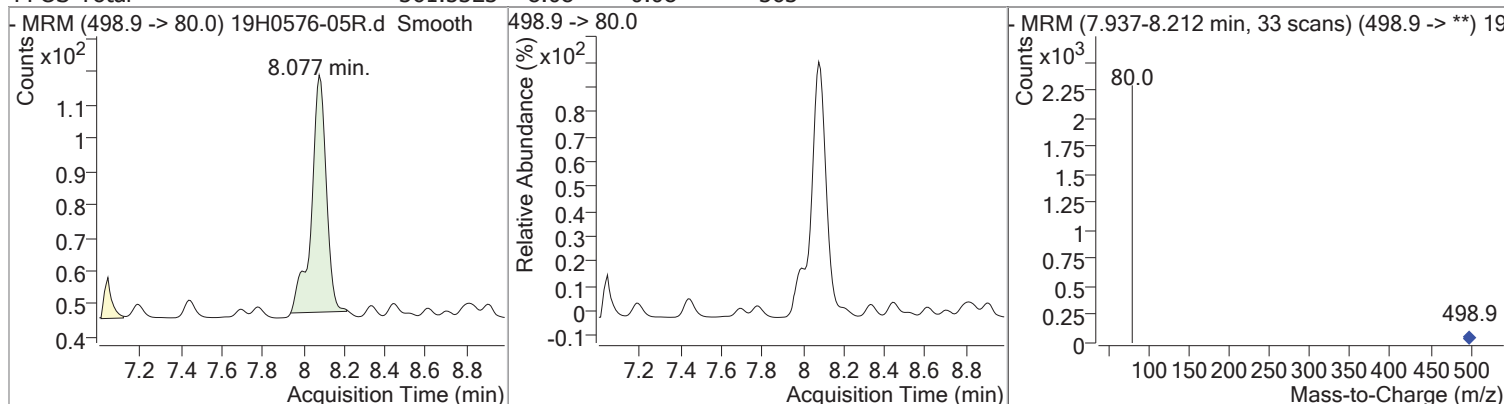
| Compound   | Conc.    | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|------------|----------|------|----------|-------|------|--------|-------|-------|
| PFOA-Total | 687.1275 | 7.85 | 0.08     | 1371  |      |        |       |       |



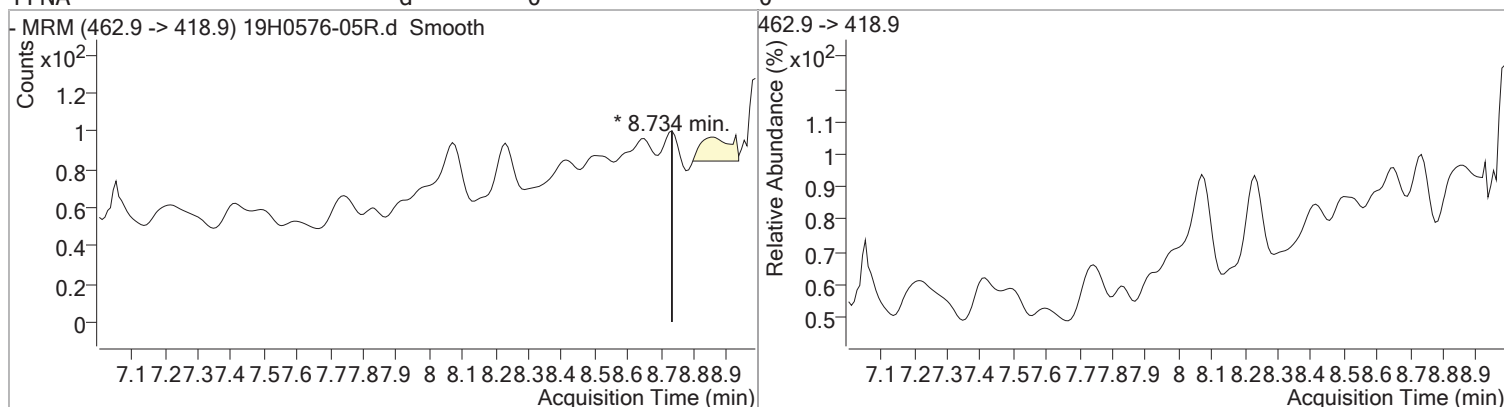
| Compound | Conc. | RT | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-------|----|----------|-------|------|--------|-------|-------|
| PFHpS    | d     | 0  |          | 0     |      |        |       |       |



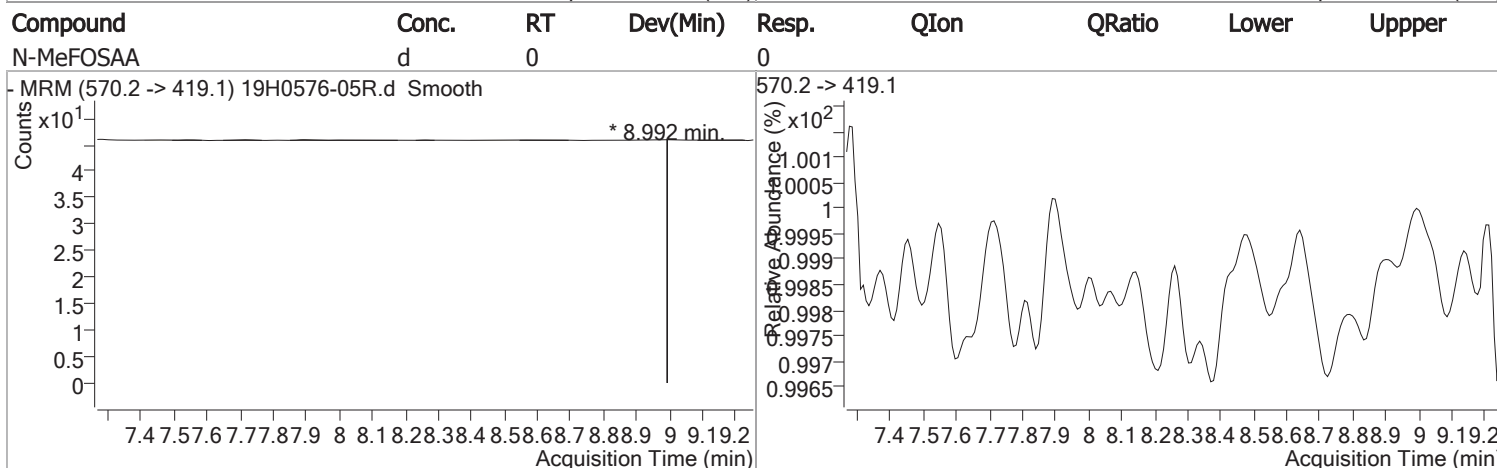
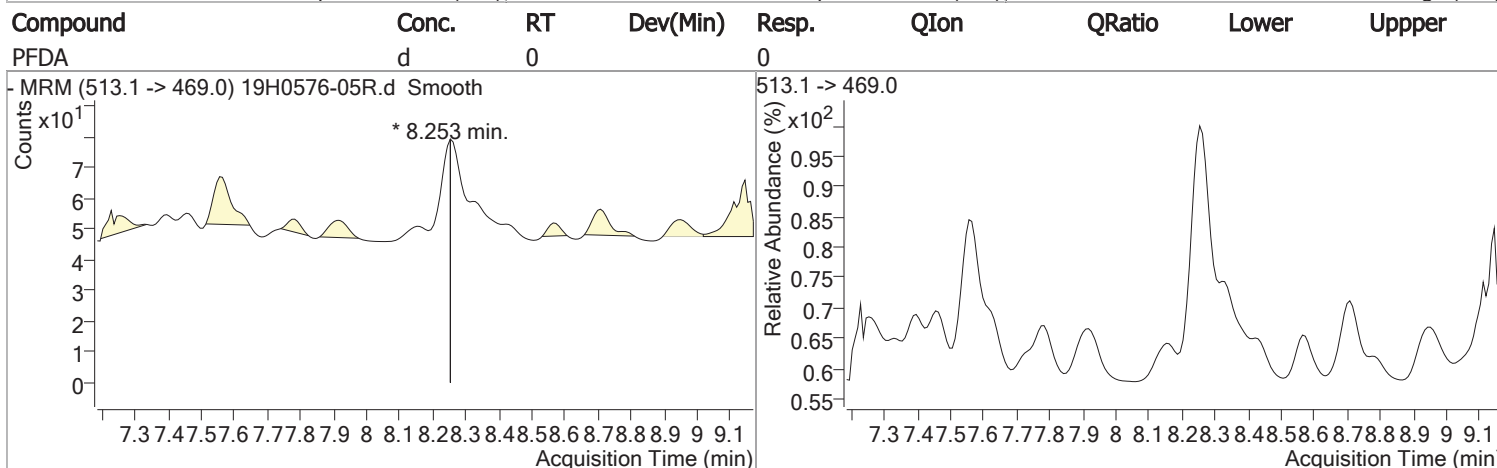
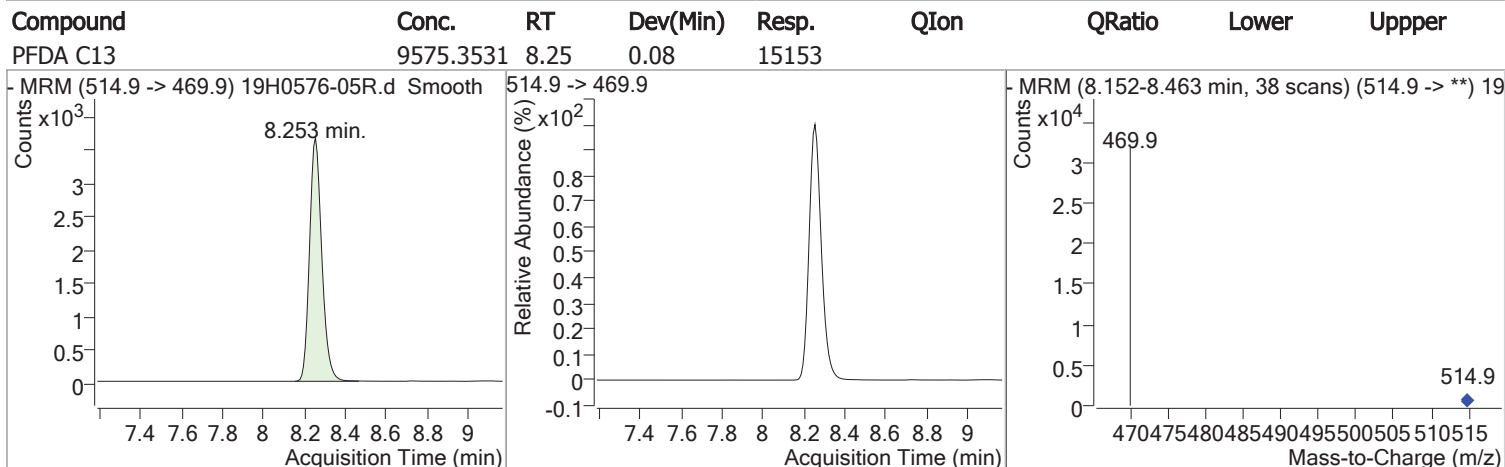
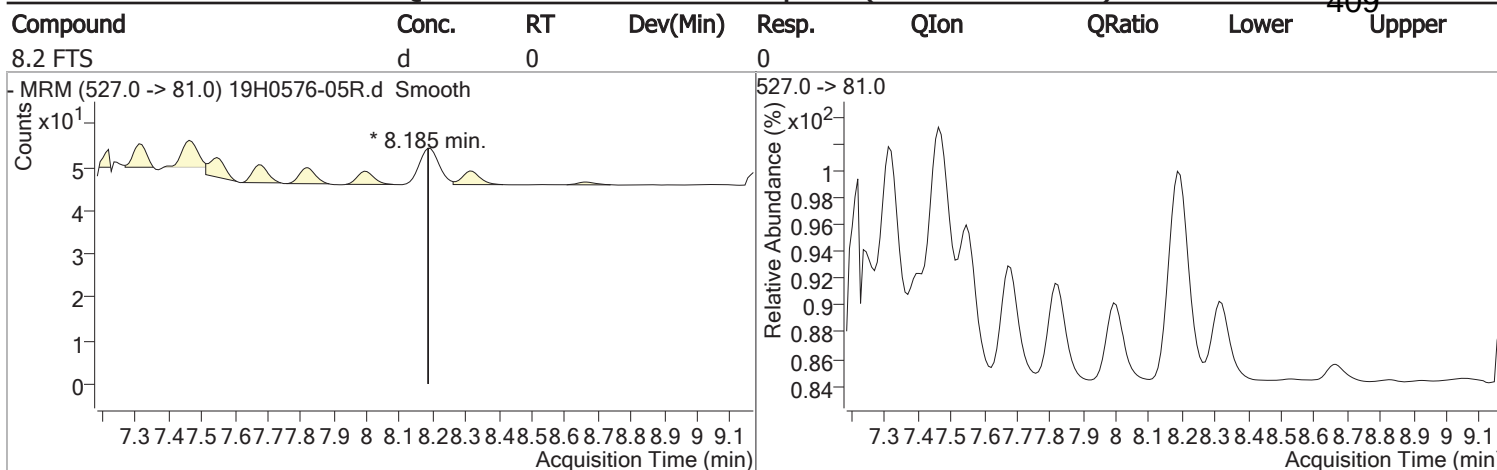
| Compound   | Conc.    | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|------------|----------|------|----------|-------|------|--------|-------|-------|
| PFOS-Total | 361.5323 | 8.08 | 0.08     | 363   |      |        |       |       |



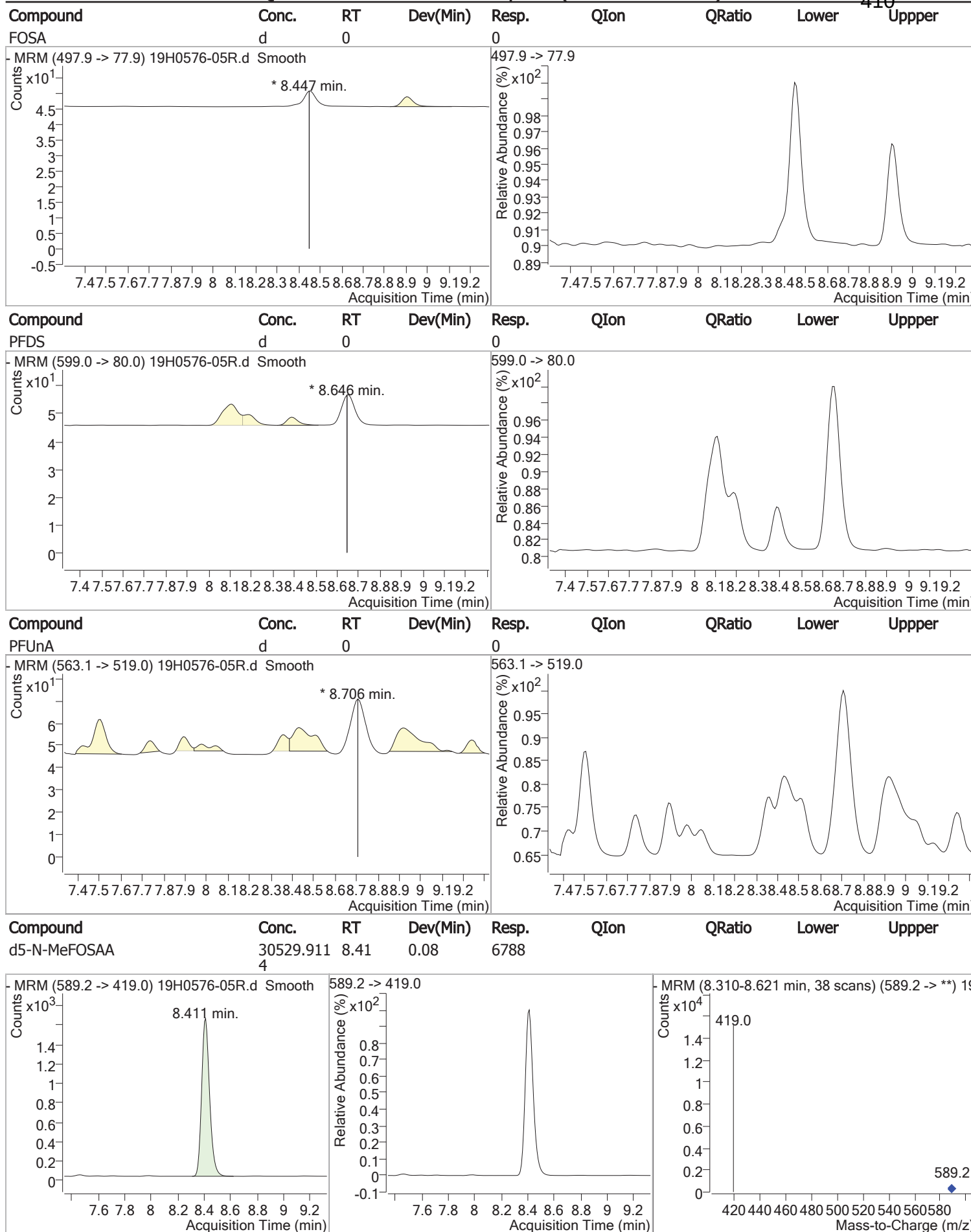
| Compound | Conc. | RT | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-------|----|----------|-------|------|--------|-------|-------|
| PFNA     | d     | 0  |          | 0     |      |        |       |       |



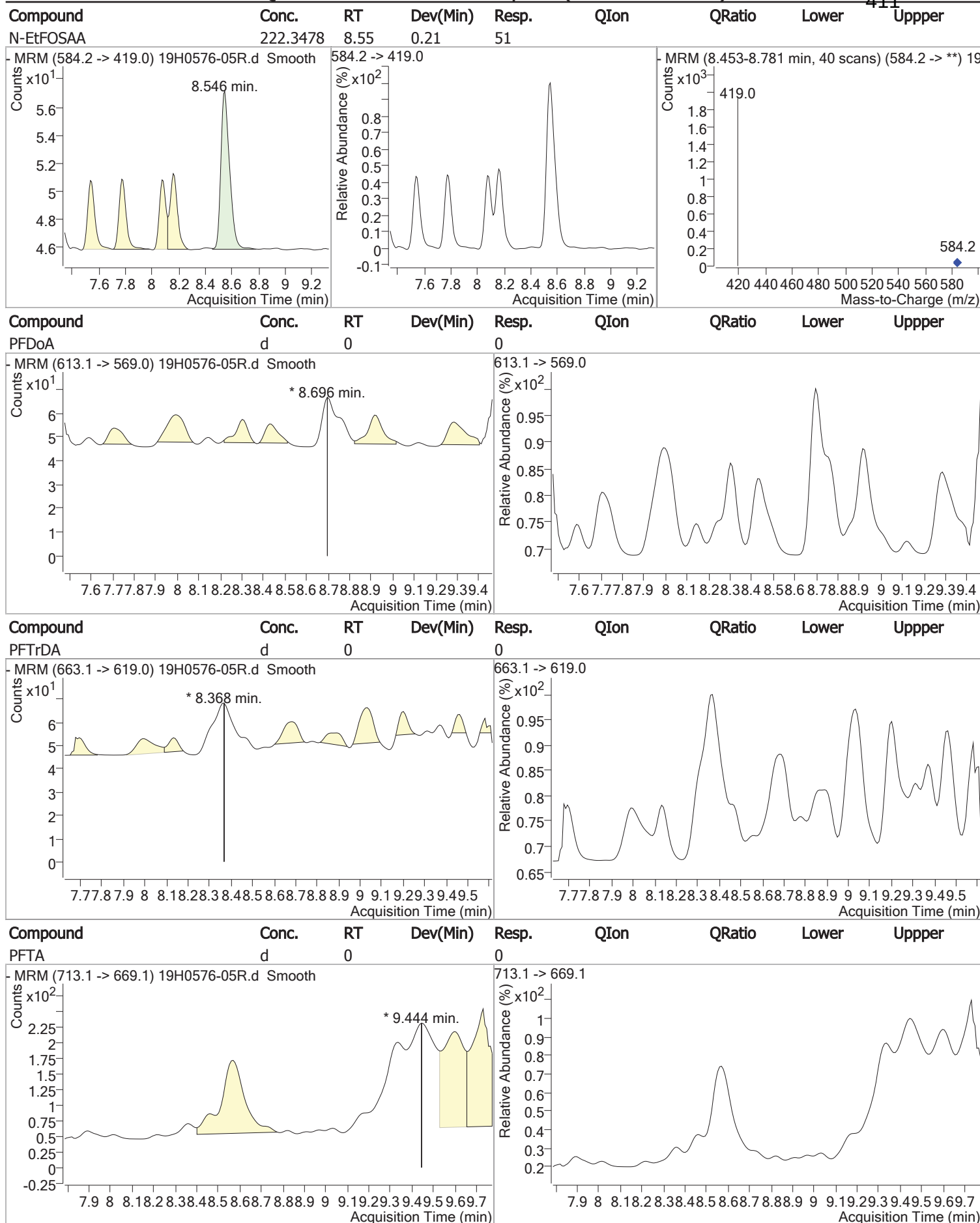
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



**QC DATA**



**2 - FORM II**  
**SYSTEM MONITORING COMPOUND SUMMARY**  
**SOP 434-PFAAS**

413

|             |                                |             |                       |
|-------------|--------------------------------|-------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | SDG:        | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:    | Farrand Controls Site |
| Matrix:     | Water                          | Instrument: | HPLC1                 |

|              | 13C-PFDA<br>(70% - 130%) | 13C-PFHxA<br>(70% - 130%) | d5-NEtFOSA<br>(70% - 130%) |
|--------------|--------------------------|---------------------------|----------------------------|
| 19H0576-03   | 93.5                     | 95.2                      | 80.9                       |
| 19H0576-05   | 95.8                     | 110                       | 76.3                       |
| B238243-BLK1 | 87.1                     | 106                       | 70.4                       |
| B238243-BS1  | 138*                     | 121                       | 112                        |

## LCS / LCS DUPLICATE RECOVERY

## SOP 434-PFAAS

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Matrix: Water

Preparation: SOP 434-PFAAS

Batch: B238243

Laboratory ID: B238243-BS1

Column: Initial/Final: 250 mL / 1 mL

| ANALYTE                                | SPIKE<br>ADDED<br>(ng/L) | LCS<br>CONCENTRATION<br>(ng/L) | LCS<br>%<br>REC. | QC<br>LIMITS<br>REC. |
|----------------------------------------|--------------------------|--------------------------------|------------------|----------------------|
| Perfluorobutanesulfonic acid (PFBS)    | 8.85                     | 7.86                           | 88.8             | 70 - 130             |
| Perfluorohexanoic acid (PFHxA)         | 10.0                     | 9.42                           | 94.2             | 70 - 130             |
| Perfluoroheptanoic acid (PFHpA)        | 10.0                     | 8.87                           | 88.7             | 70 - 130             |
| Perfluorobutanoic acid (PFBA)          | 10.0                     | 7.80                           | 78.0             | 30 - 110             |
| Perfluorodecanesulfonic acid (PFDS)    | 9.65                     | 8.07                           | 83.6             | 70 - 130             |
| Perfluoroheptanesulfonic acid (PFHpS)  | 9.50                     | 7.48                           | 78.7             | 70 - 130             |
| Perfluorooctanesulfonamide (FOSA)      | 10.0                     | 6.03                           | 60.3             | 30 - 110             |
| Perfluoropentanoic acid (PFPeA)        | 10.0                     | 11.2                           | 112              | 70 - 130             |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | 9.50                     | 11.6                           | 123              | 70 - 130             |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | 9.60                     | 10.3                           | 108              | 70 - 130             |
| Perfluorohexanesulfonic acid (PFHxS)   | 9.10                     | 6.61                           | 72.7             | 70 - 130             |
| Perfluorooctanoic acid (PFOA)          | 10.0                     | 10.4                           | 104              | 70 - 130             |
| Perfluorooctanesulfonic acid (PFOS)    | 9.25                     | 8.06                           | 87.2             | 70 - 130             |
| Perfluorononanoic acid (PFNA)          | 10.0                     | 9.57                           | 95.7             | 70 - 130             |
| Perfluorodecanoic acid (PFDA)          | 10.0                     | 10.8                           | 108              | 70 - 130             |
| N-MeFOSAA                              | 10.0                     | 10.5                           | 105              | 70 - 130             |
| Perfluoroundecanoic acid (PFUnA)       | 10.0                     | 11.2                           | 112              | 70 - 130             |
| N-EtFOSAA                              | 10.0                     | 7.99                           | 79.9             | 70 - 130             |
| Perfluorododecanoic acid (PFDoA)       | 10.0                     | 9.60                           | 96.0             | 70 - 130             |
| Perfluorotridecanoic acid (PFTrDA)     | 10.0                     | 10.8                           | 108              | 70 - 130             |
| Perfluorotetradecanoic acid (PFTA)     | 10.0                     | 10.1                           | 101              | 70 - 130             |

**4 - FORM IV**  
**METHOD BLANK SUMMARY**

415

**SOP 434-PFAAS**

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Blank ID: B238243-BLK1

Batch: B238243

Prepared: 08/19/2019 00:00

| Client Sample ID | Laboratory Sample ID | Lab File ID   | Time Analyzed |
|------------------|----------------------|---------------|---------------|
| MW-21R           | 19H0576-03           | 19H0576-03.d  | 13:23         |
| MW-21S           | 19H0576-05           | 19H0576-05R.d | 19:44         |
| LCS              | B238243-BS1          | B238243-BS1.d | 14:13         |

## CALIBRATION DATA

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET

417

*SOP 434-PFAAS*

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900263

Instrument: HPLC1

Calibration Date: 8/14/2019 2:37:35PM

| Compound                              | Level 01 |              | Level 02 |           | Level 03 |           | Level 04 |           | Level 05 |           | Level 06 |           |
|---------------------------------------|----------|--------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|
|                                       |          | RF           |          | RF        |          | RF        |          | RF        |          | RF        |          | RF        |
| Perfluorobutanesulfonic acid (PFBS)   | 221      | 0.439533E-02 | 442      | 0.4991385 | 885      | 0.5730152 | 2210     | 0.4226602 | 4420     | 0.6540457 | 8850     | 0.5312481 |
| Perfluorohexanoic acid (PFHxA)        | 250      | 0.7235054    | 500      | 0.520037  | 1000     | 0.7944675 | 2500     | 0.5848564 | 5000     | 0.7505984 | 10000    | 0.6092428 |
| Perfluoroheptanoic acid (PFHpA)       | 250      | 1.056019     | 500      | 1.272811  | 1000     | 1.125421  | 2500     | 0.9441065 | 5000     | 1.05081   | 10000    | 0.8977462 |
| Perfluorobutanoic acid (PFBA)         | 250      | 0.1467923    | 500      | 0.1340986 | 1000     | 0.1773303 | 2500     | 0.1534281 | 5000     | 0.1550704 | 10000    | 0.1425    |
| Perfluorodecanesulfonic acid (PFDS)   | 241      | 1.732655     | 482      | 1.088221  | 965      | 0.9232948 | 2410     | 0.7812951 | 4820     | 0.9710502 | 9650     | 0.7901414 |
| Perfluoroheptanesulfonic acid (PFHpS) | 238      | 0.6557665    | 475      | 0.5513387 | 950      | 0.5168276 | 2380     | 0.4452865 | 4750     | 0.5025686 | 9500     | 0.49212   |
| Perfluorooctanesulfonamide (PFOS)     | 250      | 6.385427     | 500      | 7.183201  | 1000     | 6.937475  | 2500     | 6.282061  | 5000     | 7.512707  | 10000    | 7.410237  |
| Perfluoropentanoic acid (PFPeA)       | 250      | 0.2700983    | 500      | 0.320225  | 1000     | 0.297416  | 2500     | 0.2647637 | 5000     | 0.3220564 | 10000    | 0.2807829 |
| 6:2 Fluorotelomersulfonate (6:2 FTS)  | 238      | 0.3636571    | 475      | 0.1207109 | 950      | 0.248925  | 2380     | 0.3043812 | 4750     | 0.229421  | 9500     | 0.2541806 |
| 8:2 Fluorotelomersulfonate (8:2 FTS)  | 240      | 0.5160146    | 480      | 0.2170268 | 960      | 0.5034566 | 2400     | 0.3894073 | 4800     | 0.3242357 | 9600     | 0.3906011 |
| Perfluorohexanesulfonic acid (PFHxS)  | 228      | 1.560163     | 455      | 0.877106  | 910      | 0.7600803 | 2280     | 0.7718038 | 4550     | 0.7683247 | 9100     | 0.7773168 |
| Perfluorooctanoic acid (PFOA)         | 250      | 1.349661     | 500      | 1.624887  | 1000     | 1.488339  | 2500     | 1.023899  | 5000     | 1.328938  | 10000    | 1.125052  |
| Perfluorooctanesulfonic acid (PFOS)   | 231      | 1.793609     | 462      | 1.814649  | 925      | 1.113003  | 2310     | 1.078466  | 4620     | 1.342785  | 9250     | 1.37972   |
| Perfluorononanoic acid (PFNA)         | 250      | 0.4686885    | 500      | 1.180274  | 1000     | 0.8848152 | 2500     | 0.6780141 | 5000     | 0.8885147 | 10000    | 0.6784017 |
| Perfluorodecanoic acid (PFDA)         | 250      | 1.474773     | 500      | 1.670343  | 1000     | 1.424684  | 2500     | 1.325957  | 5000     | 1.550024  | 10000    | 1.369813  |
| N-MeFOSAA                             | 250      | 0.8375252    | 500      | 1.264971  | 1000     | 1.454663  | 2500     | 0.9914274 | 5000     | 1.241824  | 10000    | 1.031828  |
| Perfluoroundecanoic acid (PFUdA)      | 250      | 1.847979     | 500      | 1.973647  | 1000     | 1.776792  | 2500     | 1.577122  | 5000     | 1.717666  | 10000    | 1.671343  |
| N-EtFOSAA                             | 250      | 0.371859     | 500      | 0.8707431 | 1000     | 1.172006  | 2500     | 0.8241852 | 5000     | 1.247234  | 10000    | 0.8645435 |
| Perfluorododecanoic acid (PFDDA)      | 250      | 2.059933     | 500      | 2.356638  | 1000     | 2.404284  | 2500     | 2.00084   | 5000     | 2.208807  | 10000    | 2.0774    |
| Perfluorotridecanoic acid (PFTriA)    | 250      | 2.558654     | 500      | 2.780253  | 1000     | 2.491909  | 2500     | 2.217594  | 5000     | 2.863112  | 10000    | 2.307985  |
| Perfluorotetradecanoic acid (PFTetA)  | 250      | 2.757721     | 500      | 2.722134  | 1000     | 1.989584  | 2500     | 2.09717   | 5000     | 2.035052  | 10000    | 1.923721  |
| 13C-PFHxA                             | 2000     | 0.4484715    | 4000     | 0.6234017 | 6000     | 0.7090772 | 8000     | 0.67324   | 10000    | 0.7126525 | 15000    | 0.6666028 |
| 13C-PFDA                              | 2000     | 0.6687796    | 4000     | 1.111567  | 6000     | 0.9778198 | 8000     | 1.120732  | 10000    | 1.034066  | 15000    | 1.081012  |
| d5-N-EtFOSAA                          | 8000     | 0.6195758    | 16000    | 0.843037  | 24000    | 0.8606734 | 32000    | 0.9248429 | 40000    | 0.9844204 | 60000    | 0.9616783 |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

418

*SOP 434-PFAAS*

Client: Dvirka And Bartilucci

SDG: 19H0576

Project: Farrand Controls Site

Calibration: 1900263

Instrument: HPLC1

Calibration Date: 8/14/2019 2:37:35PM

| Compound                              | Level 07 |           | Level 08 |           | Level 09 |    | Level 10 |    | Level 11 |    | Level 12 |    |
|---------------------------------------|----------|-----------|----------|-----------|----------|----|----------|----|----------|----|----------|----|
|                                       |          | RF        |          | RF        |          | RF |          | RF |          | RF |          | RF |
| Perfluorobutanesulfonic acid (PFBS)   | 22100    | 0.5897236 | 44200    | 0.5878146 |          |    |          |    |          |    |          |    |
| Perfluorohexanoic acid (PFHxA)        | 25000    | 0.664538  | 50000    | 0.7246015 |          |    |          |    |          |    |          |    |
| Perfluoroheptanoic acid (PFHpA)       | 25000    | 1.012852  | 50000    | 1.069559  |          |    |          |    |          |    |          |    |
| Perfluorobutanoic acid (PFBA)         | 25000    | 0.155852  | 50000    | 0.1700532 |          |    |          |    |          |    |          |    |
| Perfluorodecanesulfonic acid (PFDS)   | 24100    | 0.8870023 | 48200    | 0.9789127 |          |    |          |    |          |    |          |    |
| Perfluoroheptanesulfonic acid (PFHpS) | 23800    | 0.4483712 | 47500    | 0.4817227 |          |    |          |    |          |    |          |    |
| Perfluorooctanesulfonamide (PFOS)     | 25000    | 7.415508  | 50000    | 7.844119  |          |    |          |    |          |    |          |    |
| Perfluoropentanoic acid (PFPeA)       | 25000    | 0.3396383 | 50000    | 0.3375767 |          |    |          |    |          |    |          |    |
| 6:2 Fluorotelomersulfonate (6:2 FTS)  | 23800    | 0.2429459 | 47500    | 0.2354187 |          |    |          |    |          |    |          |    |
| 8:2 Fluorotelomersulfonate (8:2 FTS)  | 24000    | 0.3919645 | 48000    | 0.3942908 |          |    |          |    |          |    |          |    |
| Perfluorohexanesulfonic acid (PFHxS)  | 22800    | 0.932042  | 45500    | 0.9569146 |          |    |          |    |          |    |          |    |
| Perfluorooctanoic acid (PFOA)         | 25000    | 1.38283   | 50000    | 1.321524  |          |    |          |    |          |    |          |    |
| Perfluorooctanesulfonic acid (PFOS)   | 23100    | 1.385017  | 46200    | 1.59718   |          |    |          |    |          |    |          |    |
| Perfluorononanoic acid (PFNA)         | 25000    | 0.7559321 | 50000    | 0.8314502 |          |    |          |    |          |    |          |    |
| Perfluorodecanoic acid (PFDA)         | 25000    | 1.421676  | 50000    | 1.511158  |          |    |          |    |          |    |          |    |
| N-MeFOSAA                             | 25000    | 1.147788  | 50000    | 1.205478  |          |    |          |    |          |    |          |    |
| Perfluoroundecanoic acid (PFUdA)      | 25000    | 1.624082  | 50000    | 1.729151  |          |    |          |    |          |    |          |    |
| N-EtFOSAA                             | 25000    | 0.9650055 | 50000    | 0.99337   |          |    |          |    |          |    |          |    |
| Perfluorododecanoic acid (PFDD)       | 25000    | 2.250963  | 50000    | 2.524343  |          |    |          |    |          |    |          |    |
| Perfluorotridecanoic acid (PFTrA)     | 25000    | 2.556851  | 50000    | 2.868739  |          |    |          |    |          |    |          |    |
| Perfluorotetradecanoic acid (PFTeA)   | 25000    | 2.150999  | 50000    | 2.425367  |          |    |          |    |          |    |          |    |
| 13C-PFHxA                             | 20000    | 0.7178286 | 25000    | 0.7660379 |          |    |          |    |          |    |          |    |
| 13C-PFDA                              | 20000    | 1.065773  | 25000    | 1.00572   |          |    |          |    |          |    |          |    |
| d5-NEtFOSAA                           | 80000    | 0.8113444 | 100000   | 0.8019632 |          |    |          |    |          |    |          |    |

# 6 - FORM VI

## INITIAL CALIBRATION DATA SHEET (Continued)

419

### SOP 434-PFAAS

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Calibration: 1900263

Instrument: HPLC1

Calibration Date: 8/14/2019 2:37:35PM

| COMPOUND                               | Mean RF   | RF RSD | Linear r <sup>2</sup> | Quad COD | LIMIT | Q |
|----------------------------------------|-----------|--------|-----------------------|----------|-------|---|
| Perfluorobutanesulfonic acid (PFBS)    | 0.5510923 | 13.6   |                       |          |       |   |
| Perfluorohexanoic acid (PFHxA)         | 0.6714809 | 13.9   |                       |          |       |   |
| Perfluoroheptanoic acid (PFHpA)        | 1.053666  | 10.8   |                       |          |       |   |
| Perfluorobutanoic acid (PFBA)          | 0.1543906 | 9.1    |                       |          |       |   |
| Perfluorodecanesulfonic acid (PFDS)    | 0.9068341 | 12.8   |                       |          |       |   |
| Perfluoroheptanesulfonic acid (PFHpS)  | 0.5117502 | 13.2   |                       |          |       |   |
| Perfluorooctanesulfonamide (FOSA)      | 7.121342  | 7.7    |                       |          |       |   |
| Perfluoropentanoic acid (PFPeA)        | 0.3040697 | 9.8    |                       |          |       |   |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | 0.2337119 | 23.8   |                       |          |       |   |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | 0.3729975 | 23.2   |                       |          |       |   |
| Perfluorohexanesulfonic acid (PFHxS)   | 0.8347983 | 10.2   |                       |          |       |   |
| Perfluorooctanoic acid (PFOA)          | 1.330641  | 14.2   |                       |          |       |   |
| Perfluorooctanesulfonic acid (PFOS)    | 1.438054  | 19.4   |                       |          |       |   |
| Perfluorononanoic acid (PFNA)          | 0.842486  | 20.5   |                       |          |       |   |
| Perfluorodecanoic acid (PFDA)          | 1.468554  | 7.4    |                       |          |       |   |
| N-MeFOSAA                              | 1.146938  | 16.6   |                       |          |       |   |
| Perfluoroundecanoic acid (PFUnA)       | 1.739723  | 7.3    |                       |          |       |   |
| N-EtFOSAA                              | 0.9910125 | 16.3   |                       |          |       |   |
| Perfluorododecanoic acid (PFDoA)       | 2.235401  | 8.3    |                       |          |       |   |
| Perfluorotridecanoic acid (PFTrDA)     | 2.580637  | 9.5    |                       |          |       |   |
| Perfluorotetradecanoic acid (PFTA)     | 2.262719  | 14.6   |                       |          |       |   |
| 13C-PFHxA                              | 0.6955487 | 6.6    |                       |          |       |   |
| 13C-PFDA                               | 1.05667   | 5.1    |                       |          |       |   |
| d5-NEtFOSAA                            | 0.8657046 | 15.3   |                       |          |       |   |

# INITIAL CALIBRATION STANDARDS

420

## SOP 434-PFAAS

|              |                                |             |                       |
|--------------|--------------------------------|-------------|-----------------------|
| Laboratory:  | Con-Test Analytical Laboratory | Work Order: | 19H0576               |
| Client:      | Dvirka And Bartilucci          | Project:    | Farrand Controls Site |
| Sequence:    | S039175                        | Instrument: | HPLC1                 |
| Calibration: | 1900263                        |             |                       |

| Standard ID | Description         | Lab Sample ID | Lab File ID | Analysis Date/Time |
|-------------|---------------------|---------------|-------------|--------------------|
| 1908223     | 0.25 ppb PFAS 537.1 | S039175-CAL1  | CAL1.d      | 08/13/19 18:20     |
| 1908224     | 0.5 ppb PFAS 537.1  | S039175-CAL2  | CAL2.d      | 08/13/19 18:33     |
| 1908225     | 1.0 ppb PFAS 537.1  | S039175-CAL3  | CAL3.d      | 08/13/19 18:45     |
| 1908226     | 2.5 ppb PFAS 537.1  | S039175-CAL4  | CAL4.d      | 08/13/19 18:58     |
| 1908227     | 5.0 ppb PFAS 537.1  | S039175-CAL5  | CAL5.d      | 08/13/19 19:10     |
| 1908229     | 10.0 ppb PFAS 537.1 | S039175-CAL6  | CAL6.d      | 08/13/19 19:23     |
| 1908230     | 25.0 ppb PFAS 537.1 | S039175-CAL7  | CAL7.d      | 08/13/19 19:36     |
| 1908231     | 50.0 ppb PFAS 537.1 | S039175-CAL8  | CAL8.d      | 08/13/19 19:48     |



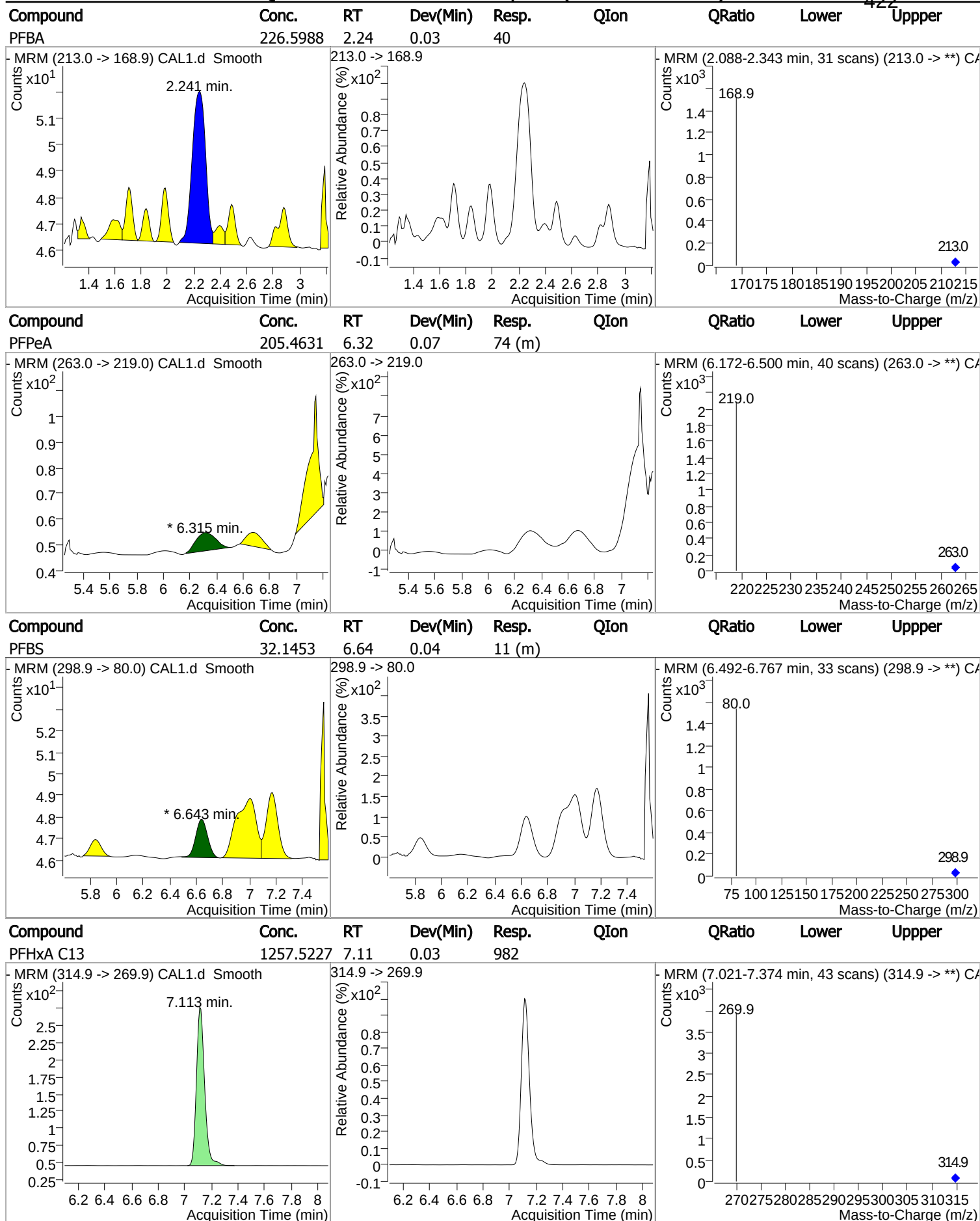
## Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | CAL1.d         | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 6:20:28 PM |
| Sample Name    | CAL1           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | CAL.batch.bin  | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

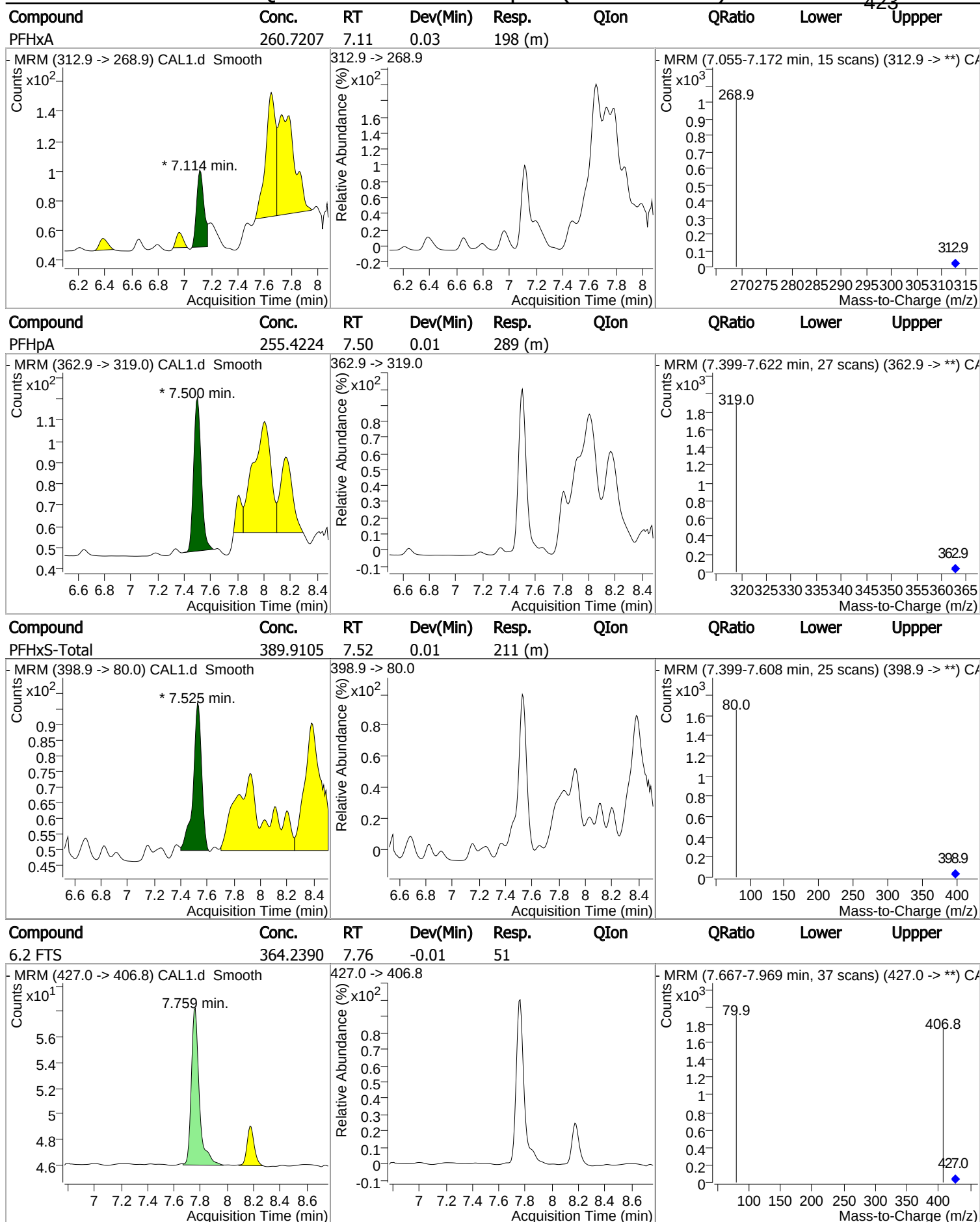
| Compound                    | RT                   | QIon           | Resp. | Conc.             | Units |   | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|-------------------|-------|---|----------|
| Internal Standards          |                      |                |       |                   |       |   |          |
| M PFOA C13                  | 7.768                | 416.9 -> 371.9 | 10951 | 10000.0000        | pg/ml | m | -0.008   |
| M PFOS C13                  | 7.976                | 502.9 -> 80.0  | 17044 | 28700.0000        | pg/ml |   | -0.017   |
| M d3-N-MeFOSAA              | 8.218                | 573.2 -> 419.0 | 9609  | 40000.0000        | pg/ml |   | -0.042   |
| System Monitoring Compounds |                      |                |       |                   |       |   |          |
| S PFHxA C13                 | 7.113                | 314.9 -> 269.9 | 982   | 1257.5227         | pg/ml |   | 0.025    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 12.58% |       | * |          |
| S PFDA C13                  | 8.144                | 514.9 -> 469.9 | 1465  | 1284.7731         | pg/ml |   | -0.034   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 12.85% |       | * |          |
| S d5-N-MeFOSAA              | 8.293                | 589.2 -> 419.0 | 1191  | 5239.6557         | pg/ml |   | -0.042   |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 13.10% |       | * |          |
| Target Compounds            |                      |                |       |                   |       |   | QValue   |
| T PFBA                      | 2.241                | 213.0 -> 168.9 | 40    | 226.5988          | pg/ml |   | 100      |
| T PFPeA                     | 6.315                | 263.0 -> 219.0 | 74    | 205.4631          | pg/ml | m | 100      |
| T PFBS                      | 6.643                | 298.9 -> 80.0  | 11    | 32.1453           | pg/ml | m | 100      |
| T PFHxA                     | 7.114                | 312.9 -> 268.9 | 198   | 260.7207          | pg/ml | m | 100      |
| T PFHpA                     | 7.500                | 362.9 -> 319.0 | 289   | 255.4224          | pg/ml | m | 100      |
| T PFHxS-Total               | 7.525                | 398.9 -> 80.0  | 211   | 389.9105          | pg/ml | m | 100      |
| T 6.2 FTS                   | 7.759                | 427.0 -> 406.8 | 51    | 364.2390          | pg/ml |   | 100      |
| T PFOA-Total                | 7.760                | 412.9 -> 368.9 | 370   | 257.0015          | pg/ml | m | 100      |
| T PFHpS                     | 7.784                | 449.0 -> 79.7  | 93    | 328.1585          | pg/ml | m | 100      |
| T PFOS-Total                | 7.976                | 498.9 -> 80.0  | 246   | 279.0296          | pg/ml | m | 100      |
| T PFNA                      | 7.969                | 462.9 -> 418.9 | 128   | 147.1159          | pg/ml | m | 100      |
| T 8.2 FTS                   | 8.126                | 527.0 -> 81.0  | 74    | 314.9601          | pg/ml |   | 100      |
| T PFDA                      | 8.152                | 513.1 -> 469.0 | 404   | 250.9132          | pg/ml |   | 100      |
| T N-MeFOSAA                 | 8.235                | 570.2 -> 419.1 | 50    | 176.0956          | pg/ml |   | 100      |
| T FOSA                      | 8.288                | 497.9 -> 77.9  | 383   | 209.8155          | pg/ml |   | 100      |
| T PFDS                      | 8.284                | 599.0 -> 80.0  | 248   | 450.0468          | pg/ml |   | 100      |
| T PFUnA                     | 8.294                | 563.1 -> 519.0 | 506   | 272.9460          | pg/ml |   | 100      |
| T N-EtFOSAA                 | 8.285                | 584.2 -> 419.0 | 22    | 94.6328           | pg/ml |   | 100      |
| T PFDoA                     | 8.435                | 613.1 -> 569.0 | 564   | 217.2571          | pg/ml |   | 100      |
| T PFTTrDA                   | 8.587                | 663.1 -> 619.0 | 701   | 236.5924          | pg/ml |   | 100      |
| T PFTA                      | 8.754                | 713.1 -> 669.1 | 755   | 304.0104          | pg/ml |   | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

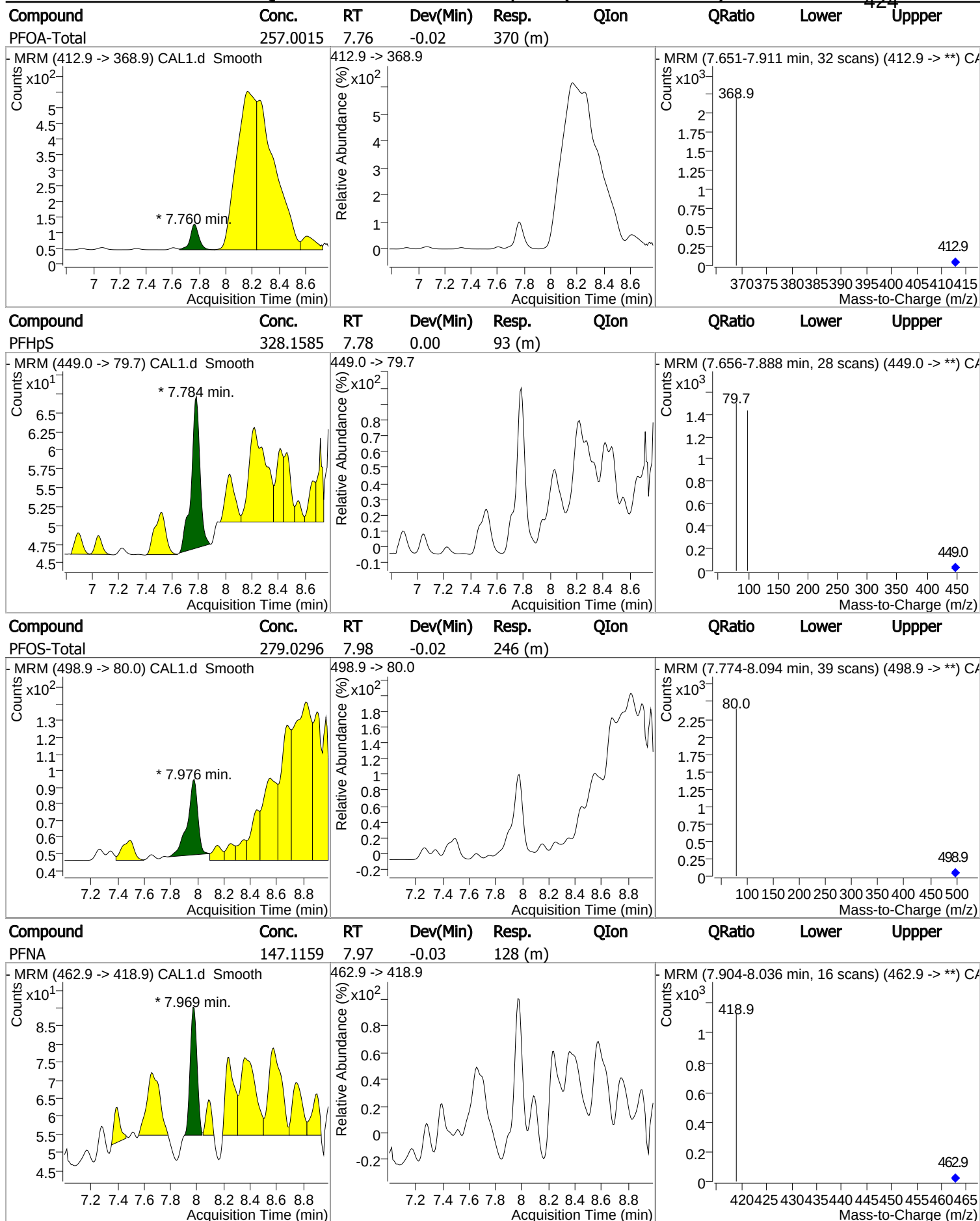
## Quantitation Results Report (Not Reviewed)



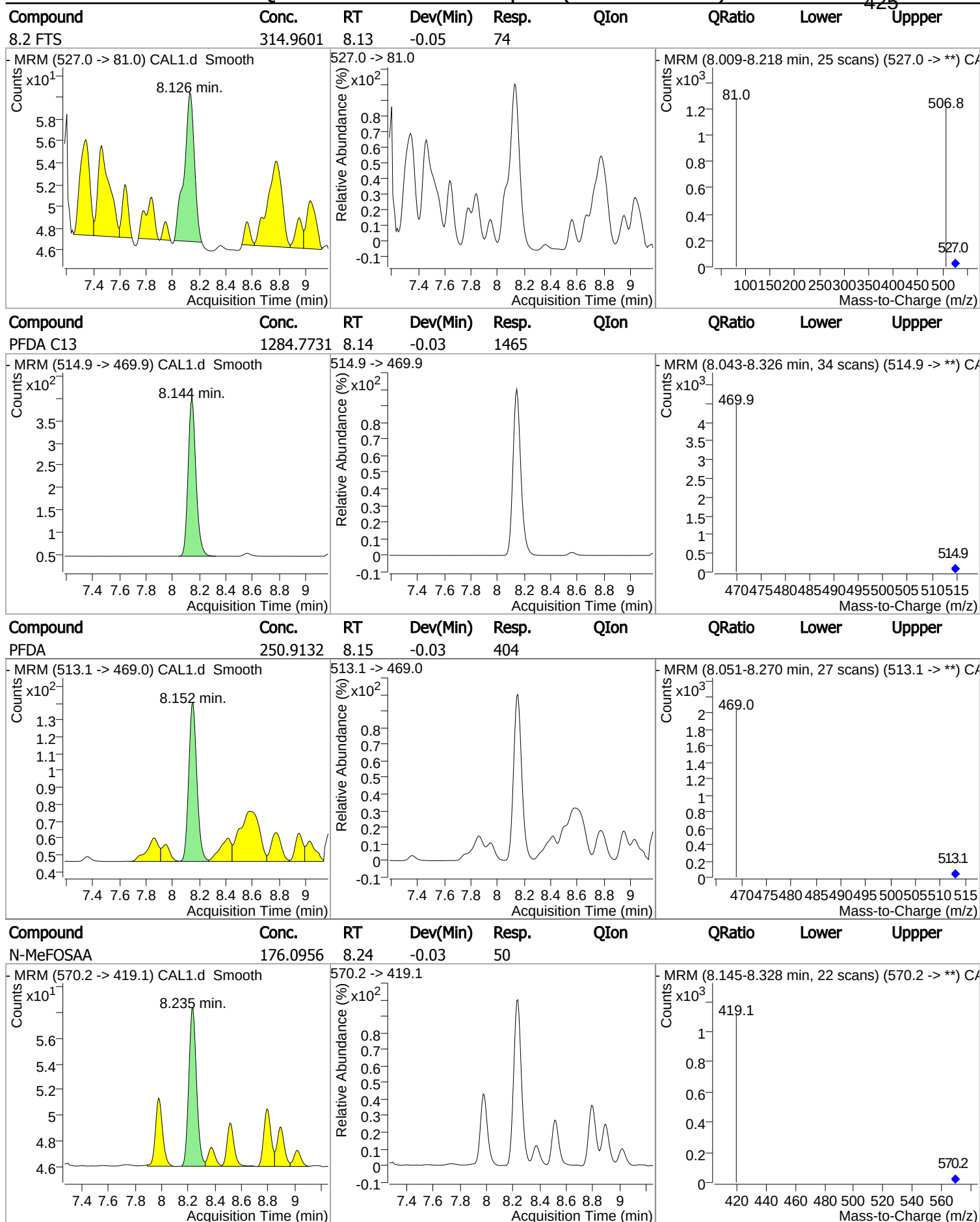
# Quantitation Results Report (Not Reviewed)



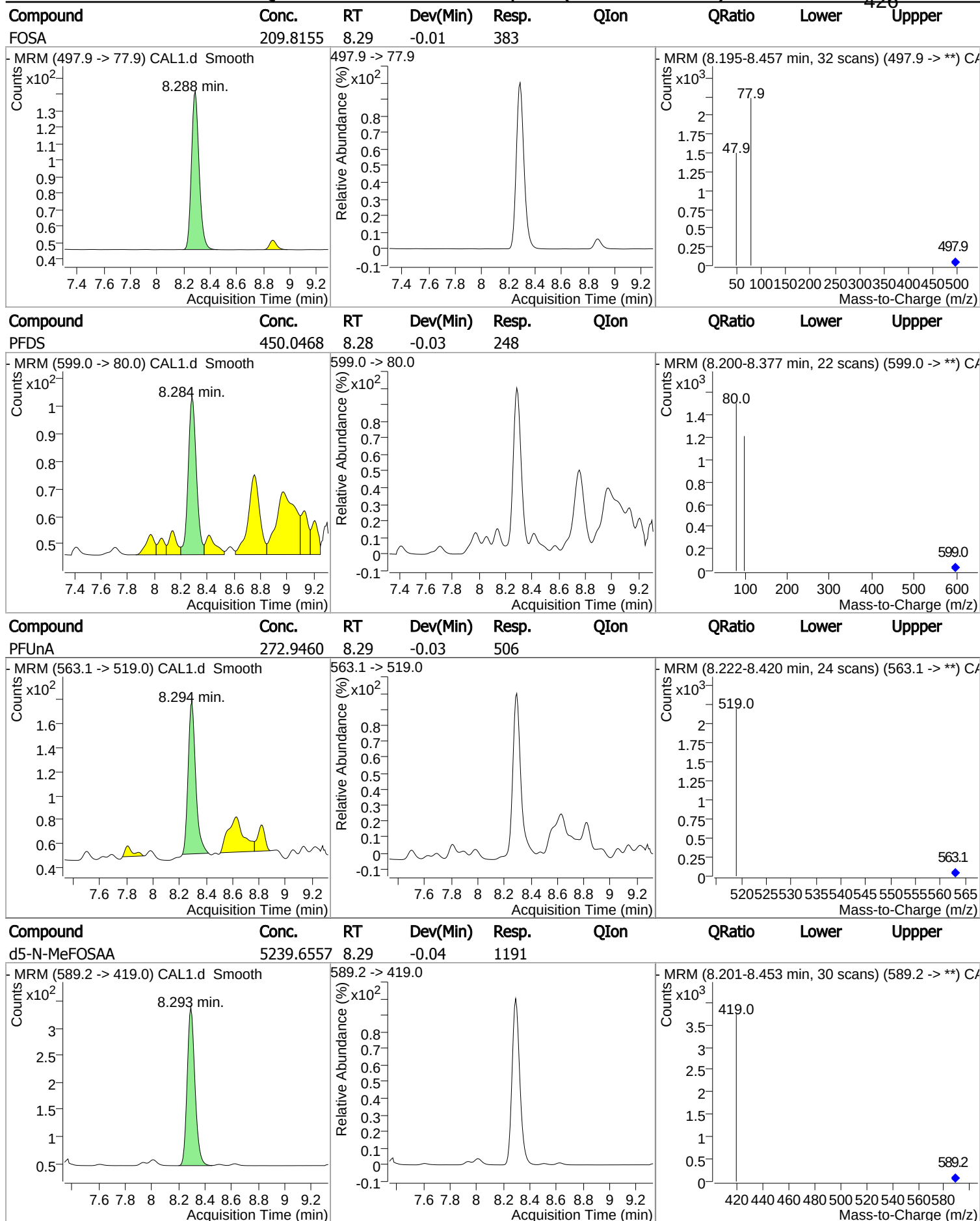
# Quantitation Results Report (Not Reviewed)



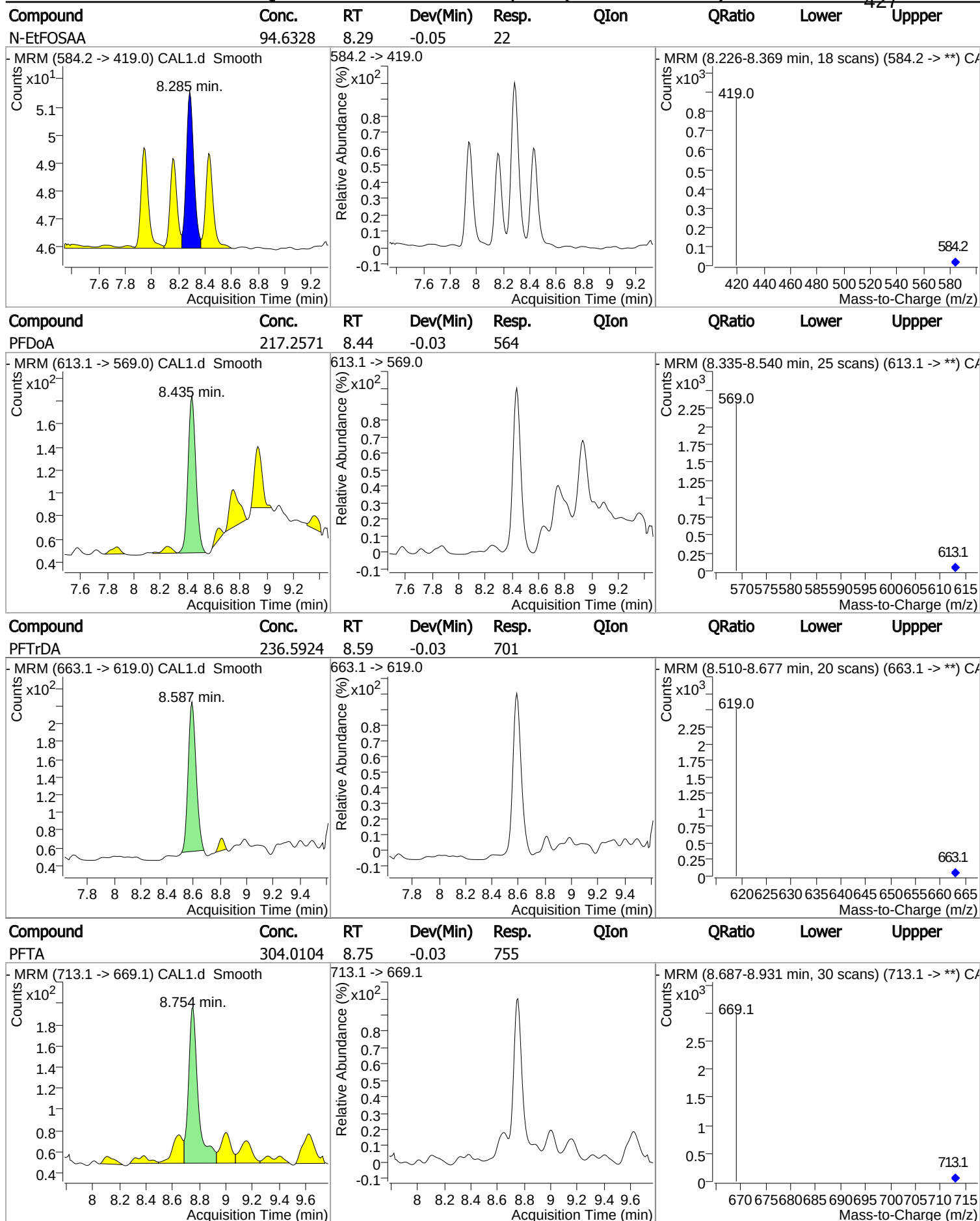
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)





# Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | CAL2.d         | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 6:33:07 PM |
| Sample Name    | CAL2           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | CAL.batch.bin  | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

| Compound                    | RT                   | QIon           | Resp. | Conc.             | Units |   | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|-------------------|-------|---|----------|
| Internal Standards          |                      |                |       |                   |       |   |          |
| M PFOA C13                  | 7.701                | 416.9 -> 371.9 | 14023 | 10000.0000        | pg/ml | m | -0.076   |
| M PFOS C13                  | 7.934                | 502.9 -> 80.0  | 18678 | 28700.0000        | pg/ml | m | -0.059   |
| M d3-N-MeFOSAA              | 8.201                | 573.2 -> 419.0 | 11637 | 40000.0000        | pg/ml | m | -0.059   |
| System Monitoring Compounds |                      |                |       |                   |       |   |          |
| S PFHxA C13                 | 6.987                | 314.9 -> 269.9 | 3497  | 3496.0592         | pg/ml | m | -0.101   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 34.96% |       | * |          |
| S PFDA C13                  | 8.118                | 514.9 -> 469.9 | 6235  | 4270.7978         | pg/ml |   | -0.059   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 42.71% |       | * |          |
| S d5-N-MeFOSAA              | 8.276                | 589.2 -> 419.0 | 3924  | 14258.8670        | pg/ml | m | -0.059   |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 35.65% |       | * |          |
| Target Compounds            |                      |                |       |                   |       |   | QValue   |
| T PFBA                      | 2.149                | 213.0 -> 168.9 | 94    | 414.0077          | pg/ml | m | 100      |
| T PFPeA                     | 6.139                | 263.0 -> 219.0 | 225   | 487.1886          | pg/ml |   | 100      |
| T PFBS                      | 6.491                | 298.9 -> 80.0  | 144   | 380.2333          | pg/ml |   | 100      |
| T PFHxA                     | 6.987                | 312.9 -> 268.9 | 365   | 374.7985          | pg/ml |   | 100      |
| T PFHpA                     | 7.407                | 362.9 -> 319.0 | 892   | 615.7173          | pg/ml | m | 100      |
| T PFHxS-Total               | 7.441                | 398.9 -> 80.0  | 260   | 437.4448          | pg/ml | m | 100      |
| T 6.2 FTS                   | 7.692                | 427.0 -> 406.8 | 37    | 241.3002          | pg/ml | m | 100      |
| T PFOA-Total                | 7.701                | 412.9 -> 368.9 | 1139  | 618.8194          | pg/ml |   | 100      |
| T PFHpS                     | 7.717                | 449.0 -> 79.7  | 170   | 550.6419          | pg/ml | m | 100      |
| T PFOS-Total                | 7.926                | 498.9 -> 80.0  | 546   | 564.6053          | pg/ml |   | 100      |
| T PFNA                      | 7.927                | 462.9 -> 418.9 | 828   | 740.9481          | pg/ml |   | 100      |
| T 8.2 FTS                   | 8.118                | 527.0 -> 81.0  | 68    | 264.9334          | pg/ml |   | 100      |
| T PFDA                      | 8.119                | 513.1 -> 469.0 | 1171  | 568.3735          | pg/ml |   | 100      |
| T N-MeFOSAA                 | 8.202                | 570.2 -> 419.1 | 184   | 531.9382          | pg/ml |   | 100      |
| T FOSA                      | 8.271                | 497.9 -> 77.9  | 1045  | 472.0585          | pg/ml |   | 100      |
| T PFDS                      | 8.267                | 599.0 -> 80.0  | 341   | 565.3174          | pg/ml |   | 100      |
| T PFUnA                     | 8.277                | 563.1 -> 519.0 | 1384  | 583.0140          | pg/ml |   | 100      |
| T N-EtFOSAA                 | 8.285                | 584.2 -> 419.0 | 127   | 443.1835          | pg/ml |   | 100      |
| T PFDoA                     | 8.419                | 613.1 -> 569.0 | 1652  | 497.0999          | pg/ml |   | 100      |
| T PFTTrDA                   | 8.578                | 663.1 -> 619.0 | 1949  | 514.1660          | pg/ml |   | 100      |
| T PFTA                      | 8.754                | 713.1 -> 669.1 | 1909  | 600.1744          | pg/ml |   | 100      |

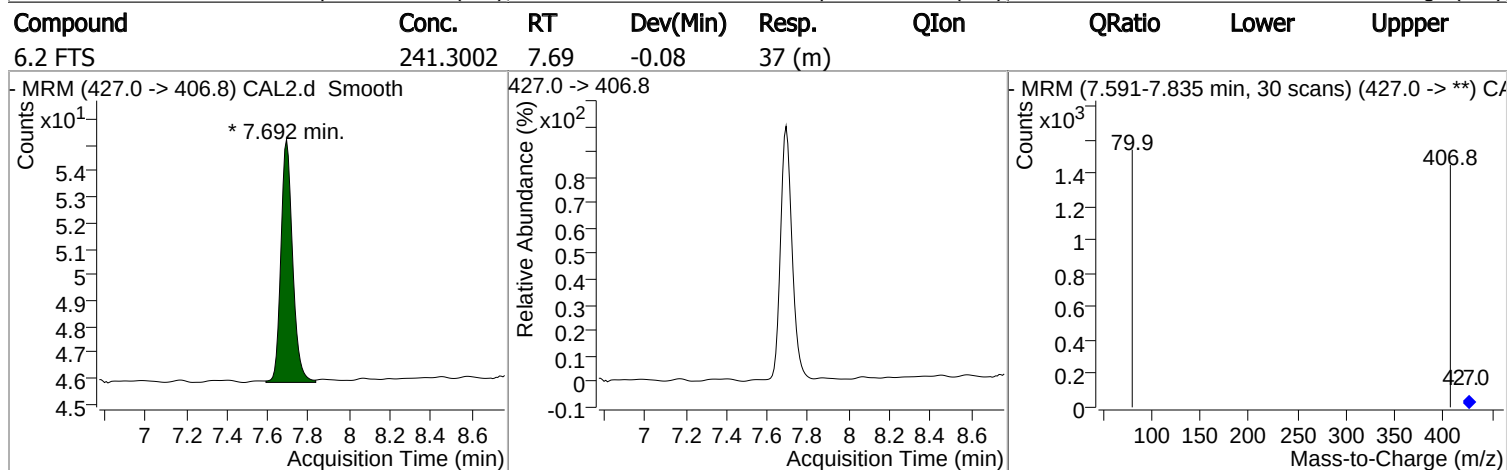
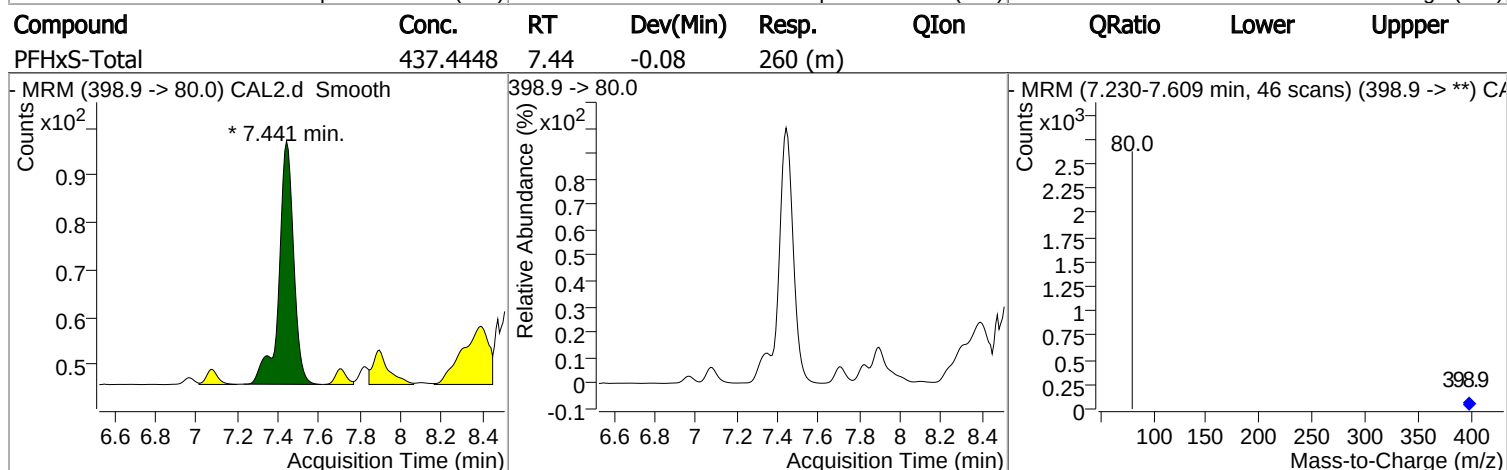
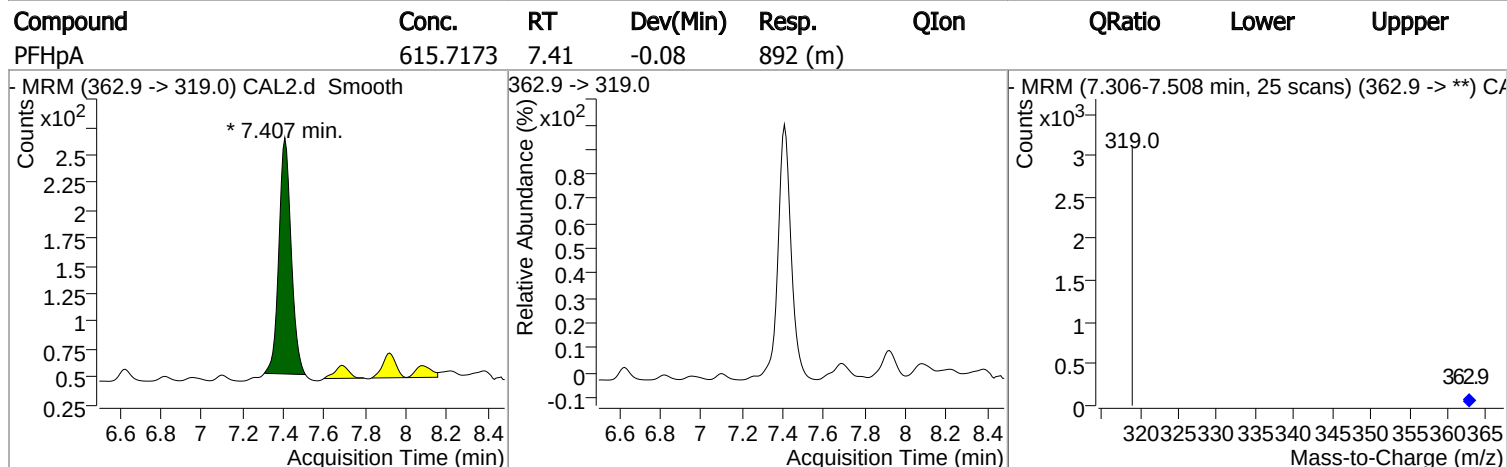
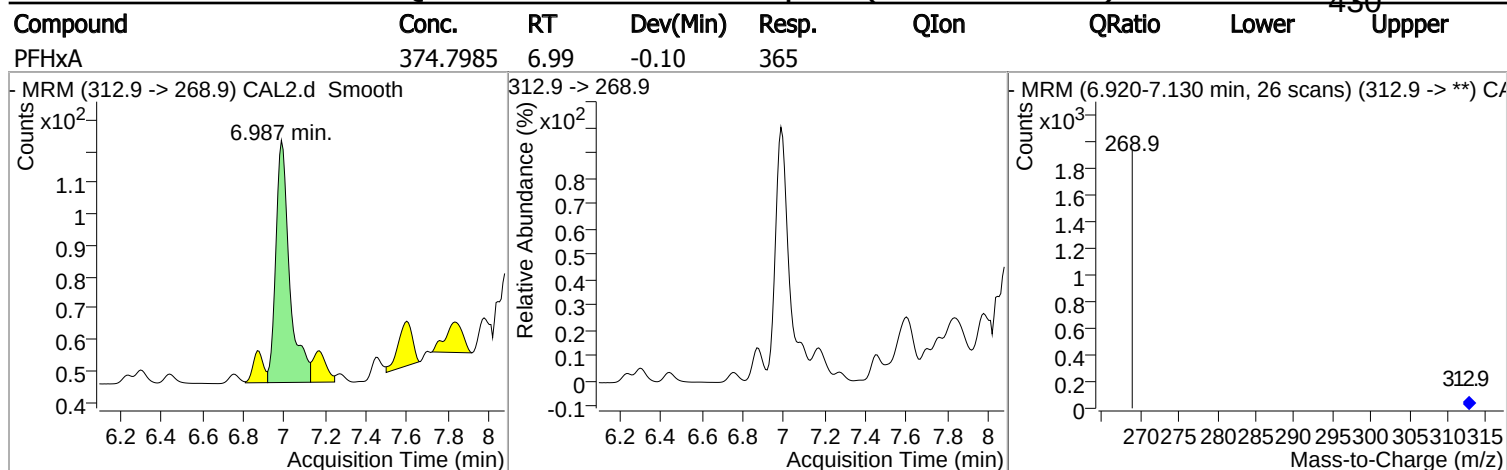
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak



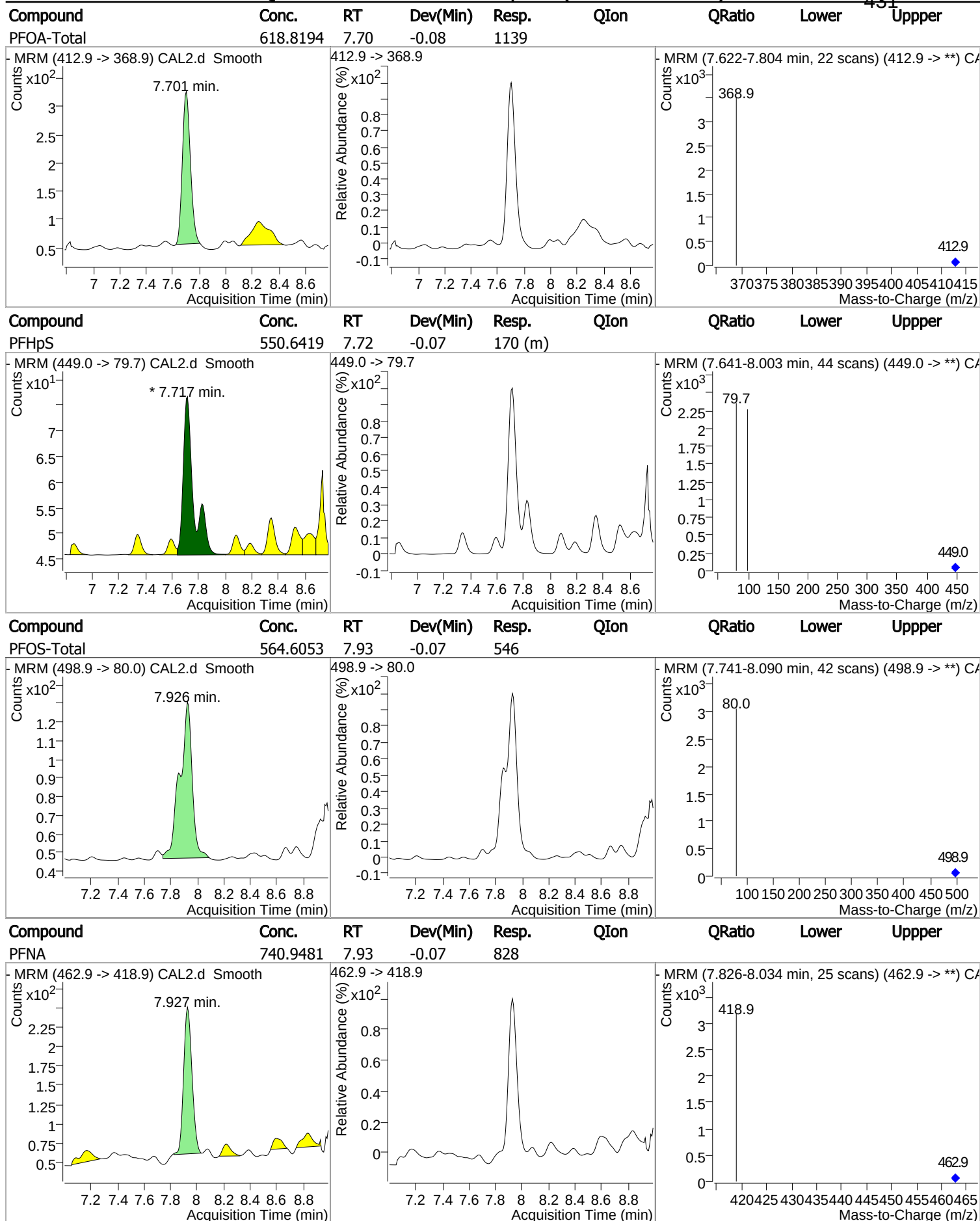
# Quantitation Results Report (Not Reviewed)

| Compound                                                                                                                                                                       | Conc.     | RT   | Dev(Min) | Resp.    | QIon | QRatio | Lower | Upper |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|----------|----------|------|--------|-------|-------|
| PFBA                                                                                                                                                                           | 414.0077  | 2.15 | -0.07    | 94 (m)   |      |        |       |       |
| <div> <div> MRM (213.0 -&gt; 168.9) CAL2.d Smooth<br/> </div> <div> 213.0 -&gt; 168.9<br/> </div> <div> MRM (1.941-2.376 min, 52 scans) (213.0 -&gt; **) CA<br/> </div> </div> |           |      |          |          |      |        |       |       |
| Compound                                                                                                                                                                       | Conc.     | RT   | Dev(Min) | Resp.    | QIon | QRatio | Lower | Upper |
| PFPeA                                                                                                                                                                          | 487.1886  | 6.14 | -0.11    | 225      |      |        |       |       |
| <div> <div> MRM (263.0 -&gt; 219.0) CAL2.d Smooth<br/> </div> <div> 263.0 -&gt; 219.0<br/> </div> <div> MRM (5.945-6.366 min, 51 scans) (263.0 -&gt; **) CA<br/> </div> </div> |           |      |          |          |      |        |       |       |
| Compound                                                                                                                                                                       | Conc.     | RT   | Dev(Min) | Resp.    | QIon | QRatio | Lower | Upper |
| PFBS                                                                                                                                                                           | 380.2333  | 6.49 | -0.11    | 144      |      |        |       |       |
| <div> <div> MRM (298.9 -&gt; 80.0) CAL2.d Smooth<br/> </div> <div> 298.9 -&gt; 80.0<br/> </div> <div> MRM (6.340-6.719 min, 46 scans) (298.9 -&gt; **) CA<br/> </div> </div>   |           |      |          |          |      |        |       |       |
| Compound                                                                                                                                                                       | Conc.     | RT   | Dev(Min) | Resp.    | QIon | QRatio | Lower | Upper |
| PFHxA C13                                                                                                                                                                      | 3496.0592 | 6.99 | -0.10    | 3497 (m) |      |        |       |       |
| <div> <div> MRM (314.9 -&gt; 269.9) CAL2.d Smooth<br/> </div> <div> 314.9 -&gt; 269.9<br/> </div> <div> MRM (6.886-7.223 min, 41 scans) (314.9 -&gt; **) CA<br/> </div> </div> |           |      |          |          |      |        |       |       |

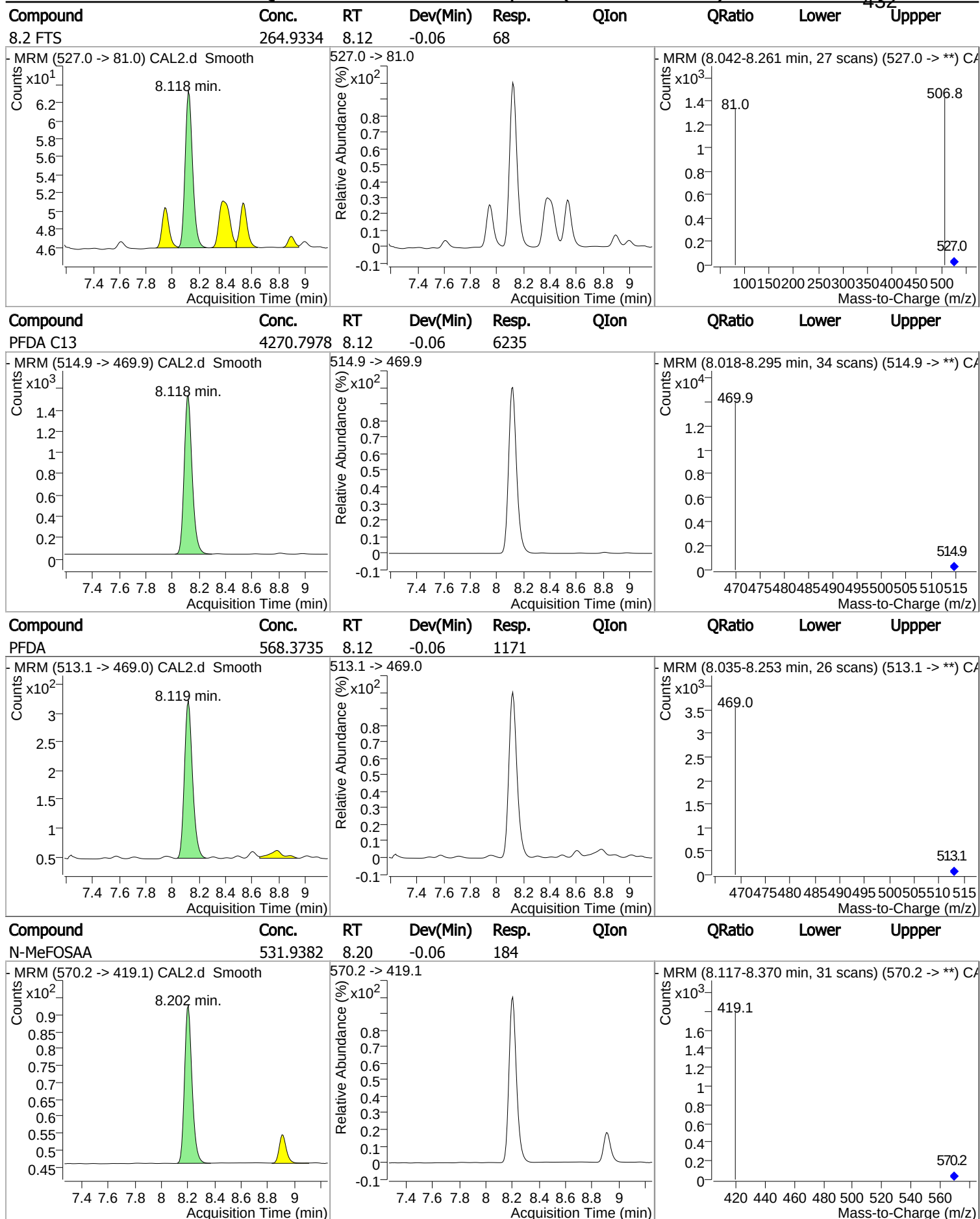
# Quantitation Results Report (Not Reviewed)



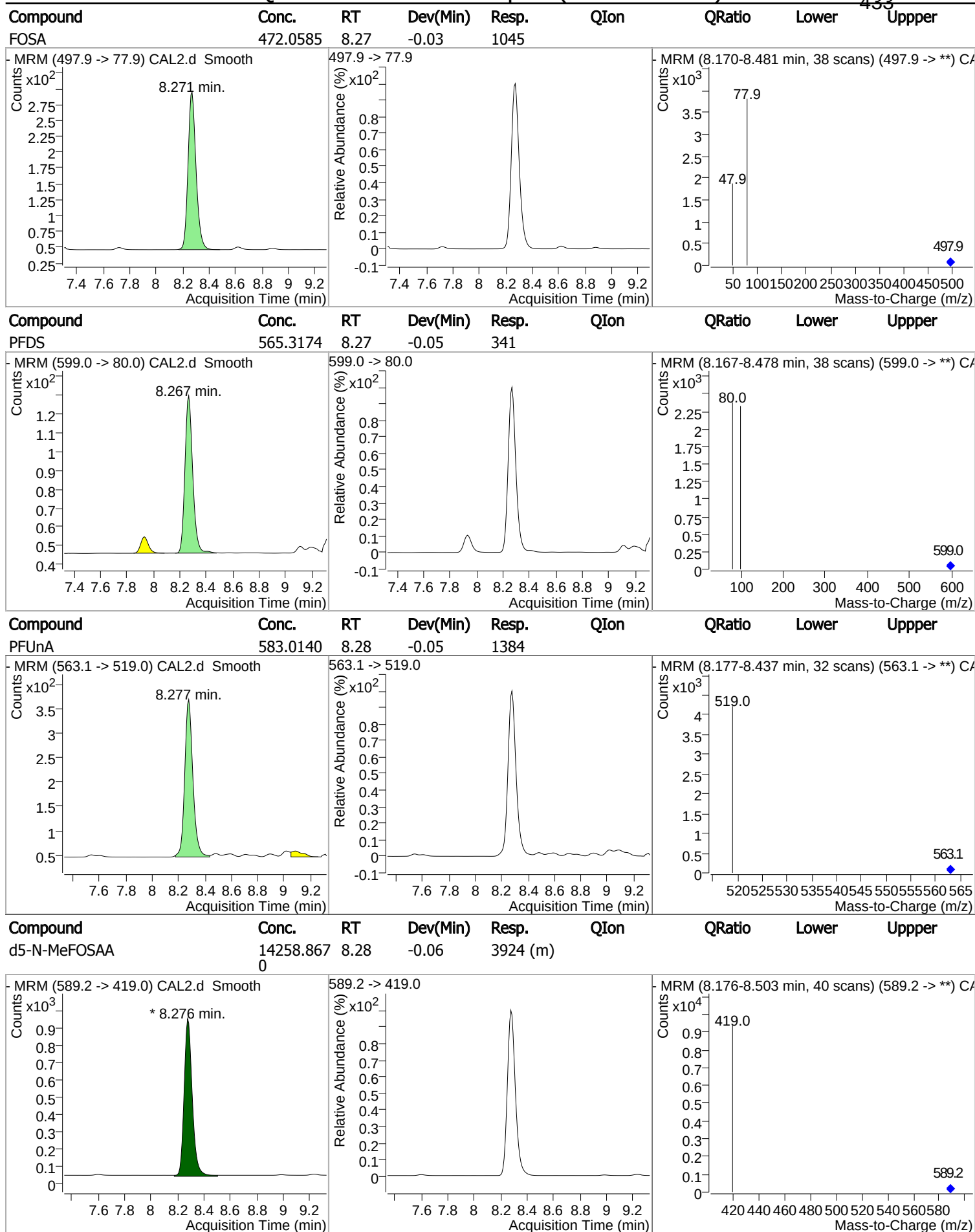
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)

| Compound                                                                                                                                                                       | Conc.    | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------|----------|-------|------|--------|-------|-------|
| N-EtFOSAA                                                                                                                                                                      | 443.1835 | 8.29 | -0.05    | 127   |      |        |       |       |
| <div> <div> MRM (584.2 -&gt; 419.0) CAL2.d Smooth<br/> </div> <div> 584.2 -&gt; 419.0<br/> </div> <div> MRM (8.218-8.352 min, 17 scans) (584.2 -&gt; **) CA<br/> </div> </div> |          |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                       | Conc.    | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFDaA                                                                                                                                                                          | 497.0999 | 8.42 | -0.05    | 1652  |      |        |       |       |
| <div> <div> MRM (613.1 -&gt; 569.0) CAL2.d Smooth<br/> </div> <div> 613.1 -&gt; 569.0<br/> </div> <div> MRM (8.348-8.571 min, 27 scans) (613.1 -&gt; **) CA<br/> </div> </div> |          |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                       | Conc.    | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFTTrDA                                                                                                                                                                        | 514.1660 | 8.58 | -0.04    | 1949  |      |        |       |       |
| <div> <div> MRM (663.1 -&gt; 619.0) CAL2.d Smooth<br/> </div> <div> 663.1 -&gt; 619.0<br/> </div> <div> MRM (8.486-8.721 min, 29 scans) (663.1 -&gt; **) CA<br/> </div> </div> |          |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                       | Conc.    | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFTA                                                                                                                                                                           | 600.1744 | 8.75 | -0.03    | 1909  |      |        |       |       |
| <div> <div> MRM (713.1 -&gt; 669.1) CAL2.d Smooth<br/> </div> <div> 713.1 -&gt; 669.1<br/> </div> <div> MRM (8.654-8.906 min, 31 scans) (713.1 -&gt; **) CA<br/> </div> </div> |          |      |          |       |      |        |       |       |

# Quantitation Results Report (Not Reviewed)

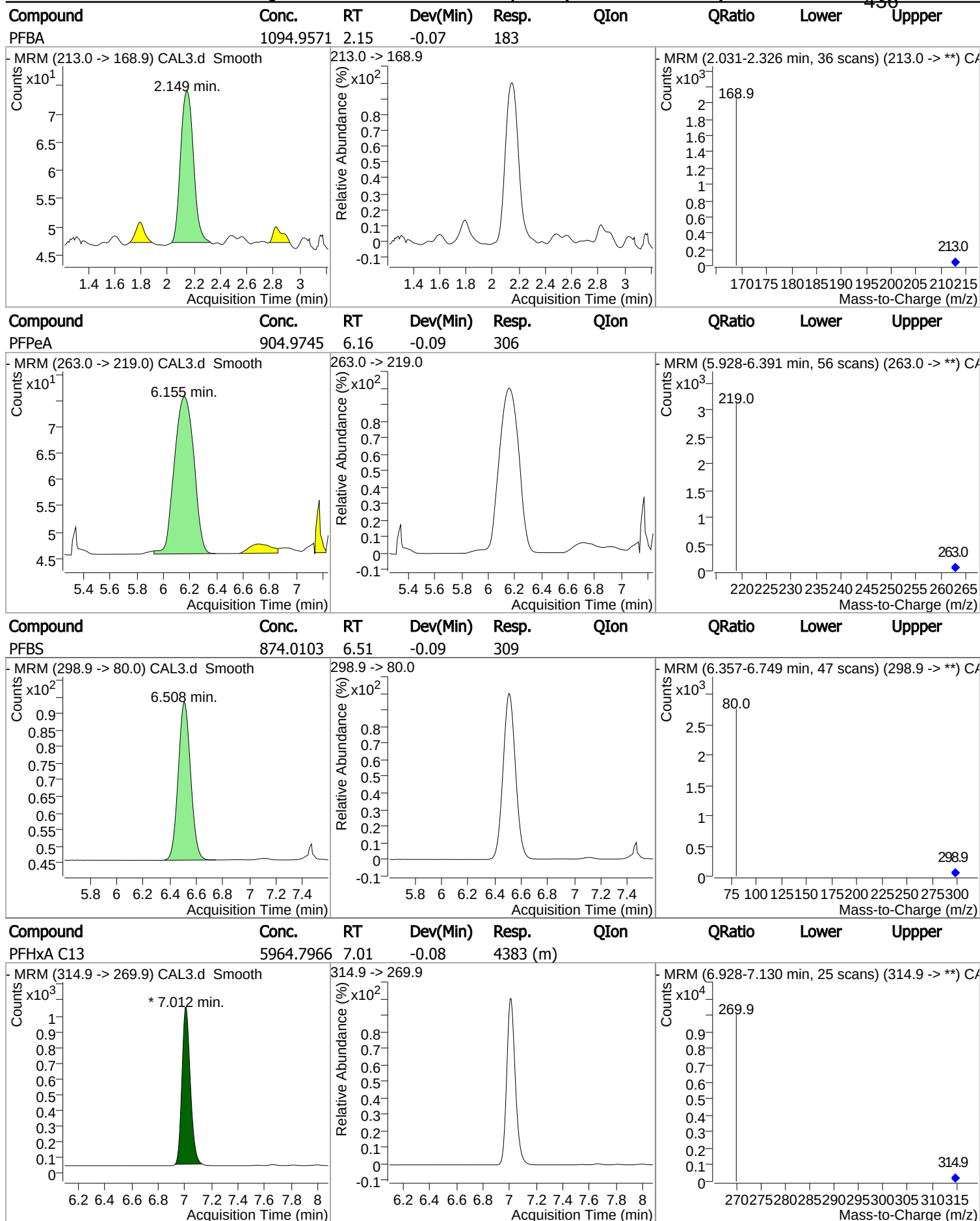
|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | CAL3.d         | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 6:45:45 PM |
| Sample Name    | CAL3           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | CAL.batch.bin  | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

| Compound                    | RT                   | QIon           | Resp. | Conc.             | Units |   | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|-------------------|-------|---|----------|
| Internal Standards          |                      |                |       |                   |       |   |          |
| M PFOA C13                  | 7.726                | 416.9 -> 371.9 | 10303 | 10000.0000        | pg/ml |   | -0.050   |
| M PFOS C13                  | 7.951                | 502.9 -> 80.0  | 17510 | 28700.0000        | pg/ml | m | -0.042   |
| M d3-N-MeFOSAA              | 8.226                | 573.2 -> 419.0 | 6682  | 40000.0000        | pg/ml | m | -0.034   |
| System Monitoring Compounds |                      |                |       |                   |       |   |          |
| S PFHxA C13                 | 7.012                | 314.9 -> 269.9 | 4383  | 5964.7966         | pg/ml | m | -0.076   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 59.65% |       | * |          |
| S PFDA C13                  | 8.144                | 514.9 -> 469.9 | 6045  | 5635.3842         | pg/ml |   | -0.034   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 56.35% |       | * |          |
| S d5-N-MeFOSAA              | 8.302                | 589.2 -> 419.0 | 3451  | 21835.7431        | pg/ml |   | -0.034   |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 54.59% |       | * |          |
| Target Compounds            |                      |                |       |                   |       |   | QValue   |
| T PFBA                      | 2.149                | 213.0 -> 168.9 | 183   | 1094.9571         | pg/ml |   | 100      |
| T PFPeA                     | 6.155                | 263.0 -> 219.0 | 306   | 904.9745          | pg/ml |   | 100      |
| T PFBS                      | 6.508                | 298.9 -> 80.0  | 309   | 874.0103          | pg/ml |   | 100      |
| T PFHxA                     | 7.004                | 312.9 -> 268.9 | 819   | 1145.1693         | pg/ml |   | 100      |
| T PFHpA                     | 7.433                | 362.9 -> 319.0 | 1159  | 1088.8357         | pg/ml |   | 100      |
| T PFHxS-Total               | 7.458                | 398.9 -> 80.0  | 422   | 758.1599          | pg/ml |   | 100      |
| T 6.2 FTS                   | 7.717                | 427.0 -> 406.8 | 144   | 995.1980          | pg/ml |   | 100      |
| T PFOA-Total                | 7.718                | 412.9 -> 368.9 | 1533  | 1133.6340         | pg/ml |   | 100      |
| T PFHpS                     | 7.733                | 449.0 -> 79.7  | 300   | 1032.3494         | pg/ml |   | 100      |
| T PFOS-Total                | 7.951                | 498.9 -> 80.0  | 628   | 693.3437          | pg/ml |   | 100      |
| T PFNA                      | 7.952                | 462.9 -> 418.9 | 912   | 1110.9327         | pg/ml |   | 100      |
| T 8.2 FTS                   | 8.143                | 527.0 -> 81.0  | 295   | 1229.1800         | pg/ml | m | 100      |
| T PFDA                      | 8.144                | 513.1 -> 469.0 | 1468  | 969.5649          | pg/ml |   | 100      |
| T N-MeFOSAA                 | 8.235                | 570.2 -> 419.1 | 243   | 1223.4124         | pg/ml |   | 100      |
| T FOSA                      | 8.262                | 497.9 -> 77.9  | 1159  | 911.8199          | pg/ml |   | 100      |
| T PFDS                      | 8.293                | 599.0 -> 80.0  | 544   | 960.2763          | pg/ml |   | 100      |
| T PFUnA                     | 8.303                | 563.1 -> 519.0 | 1831  | 1049.7271         | pg/ml |   | 100      |
| T N-EtFOSAA                 | 8.310                | 584.2 -> 419.0 | 196   | 1193.0356         | pg/ml |   | 100      |
| T PFDoA                     | 8.452                | 613.1 -> 569.0 | 2477  | 1014.3004         | pg/ml |   | 100      |
| T PFTTrDA                   | 8.612                | 663.1 -> 619.0 | 2567  | 921.6824          | pg/ml |   | 100      |
| T PFTA                      | 8.797                | 713.1 -> 669.1 | 2050  | 877.3246          | pg/ml |   | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

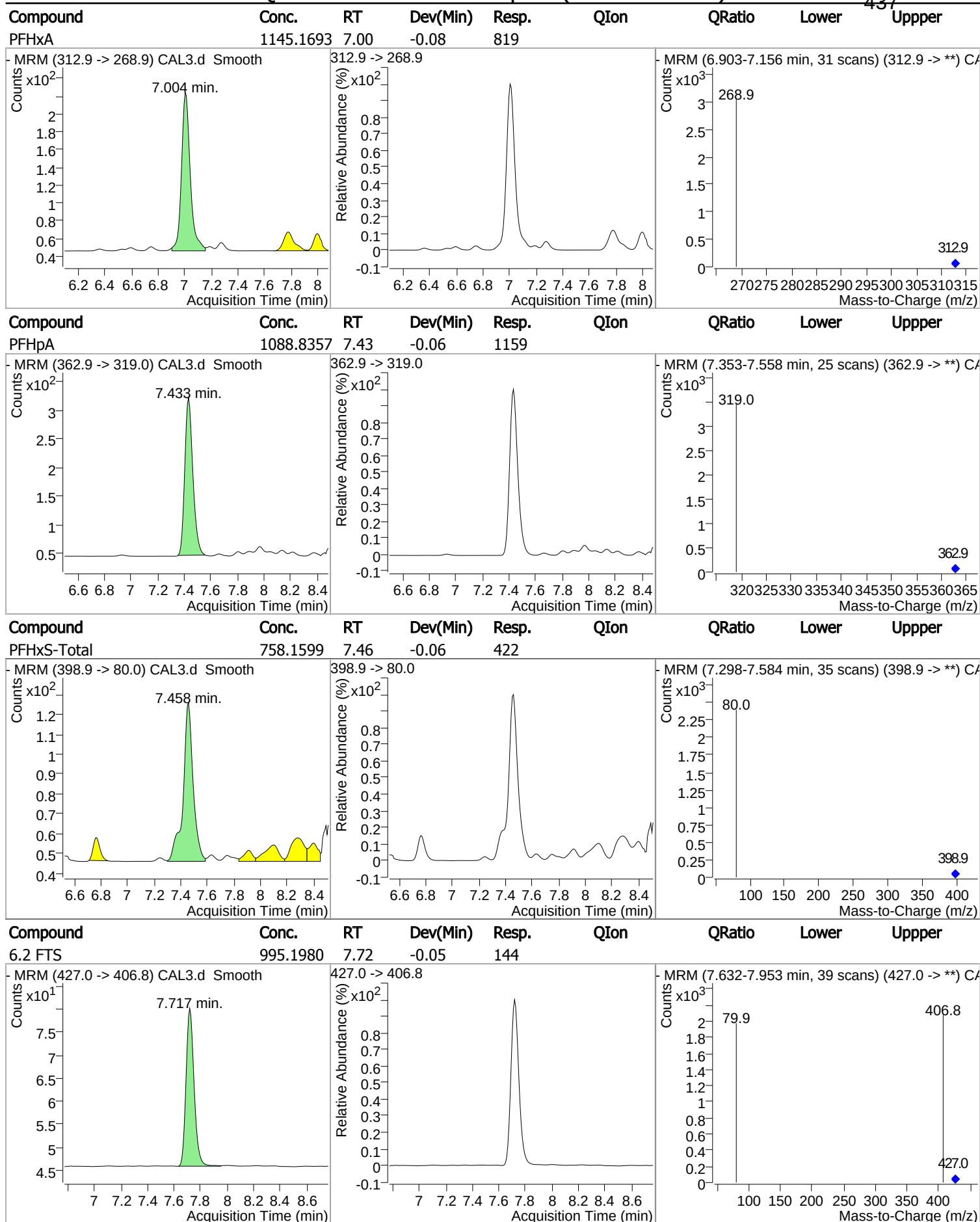


# Quantitation Results Report (Not Reviewed)

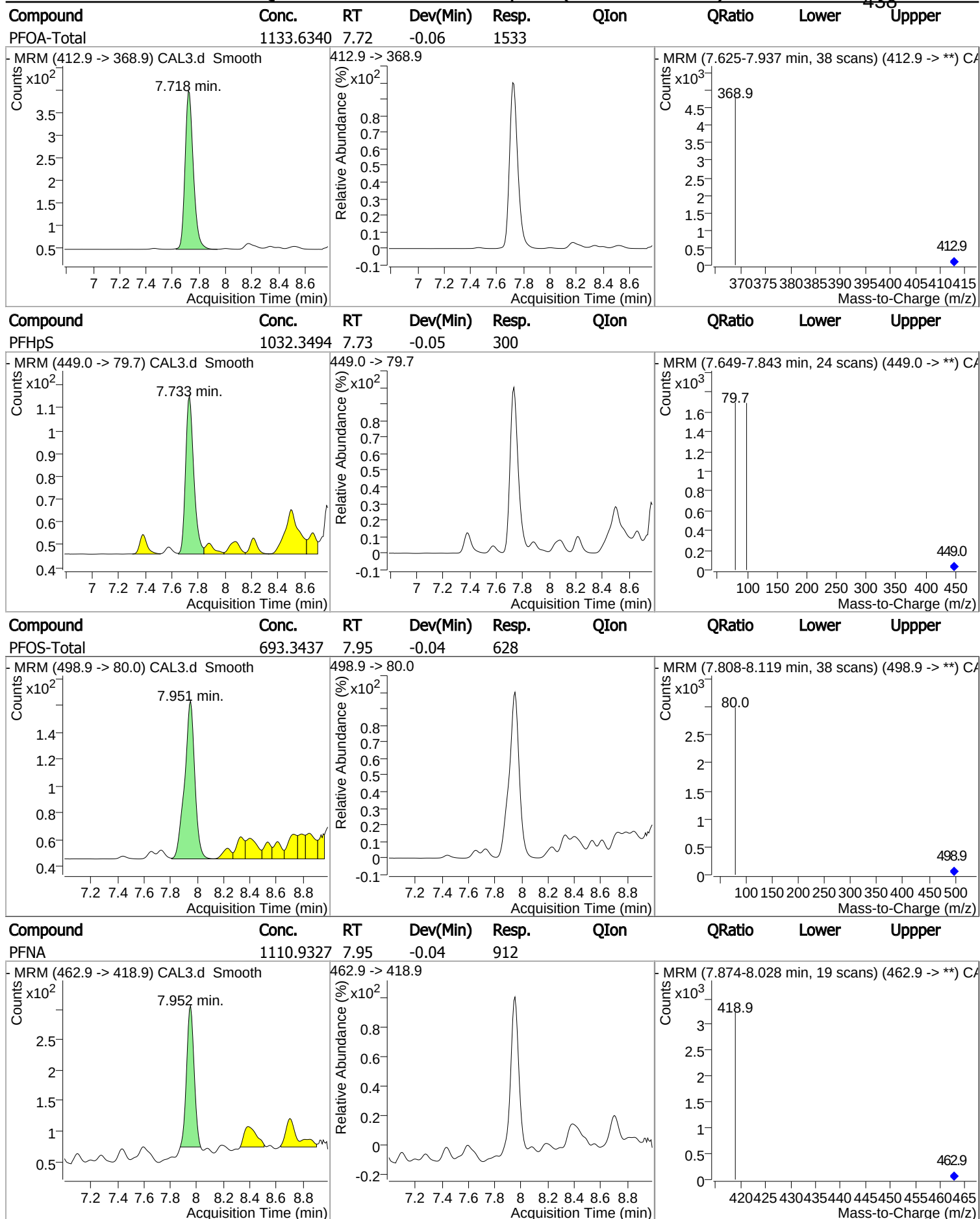




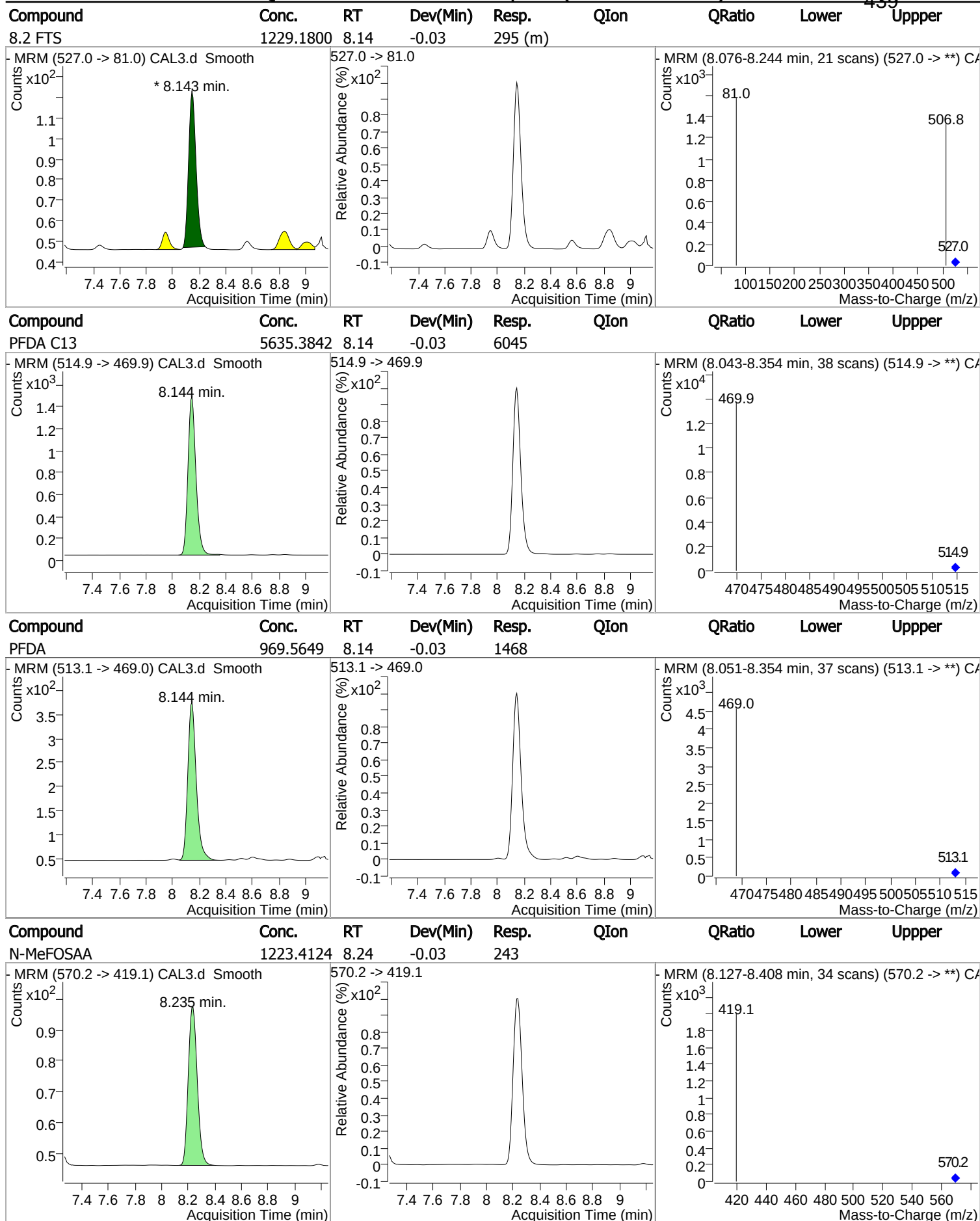
# Quantitation Results Report (Not Reviewed)



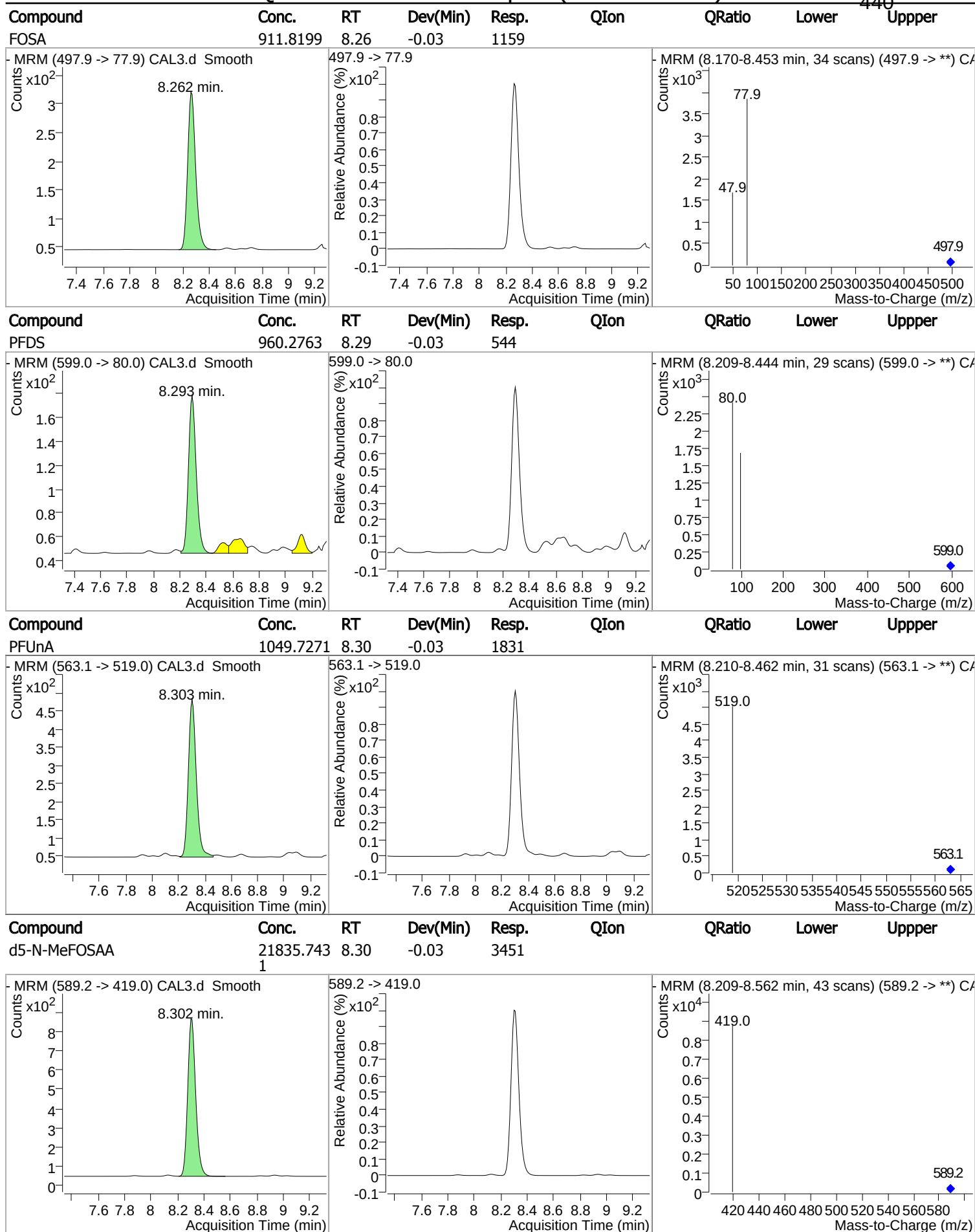
# Quantitation Results Report (Not Reviewed)



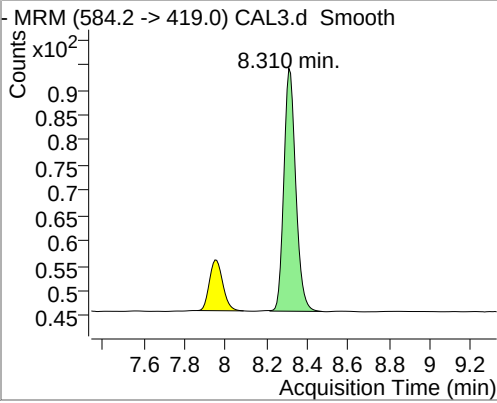
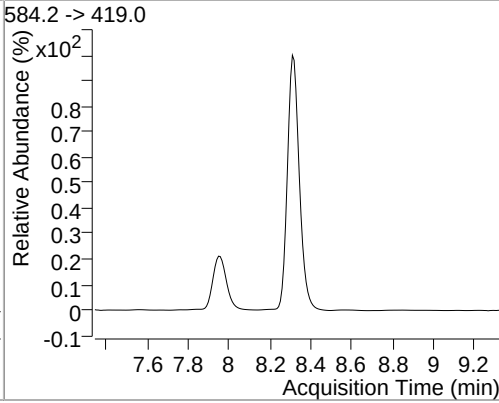
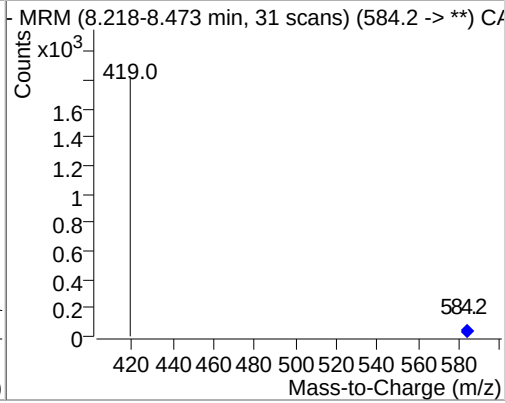
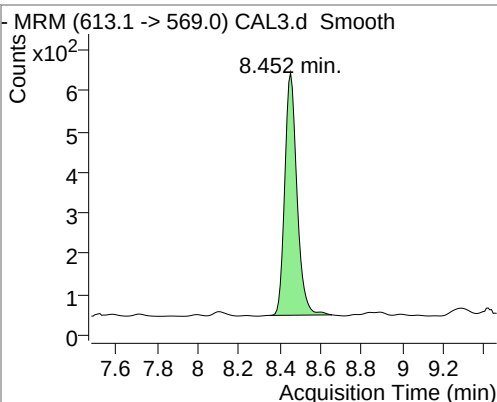
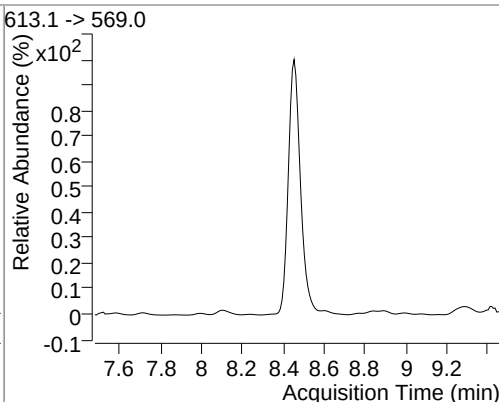
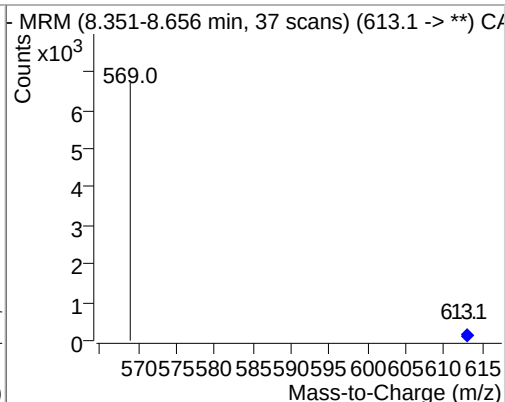
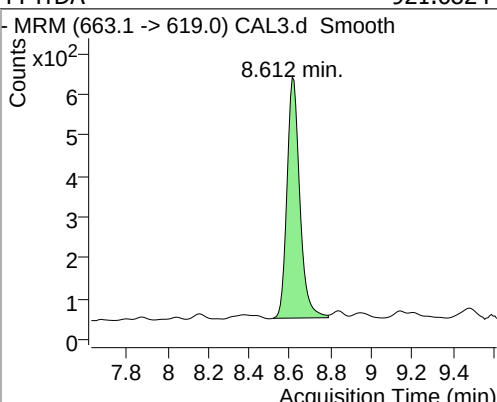
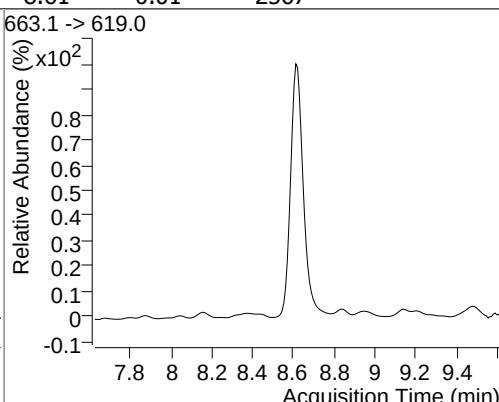
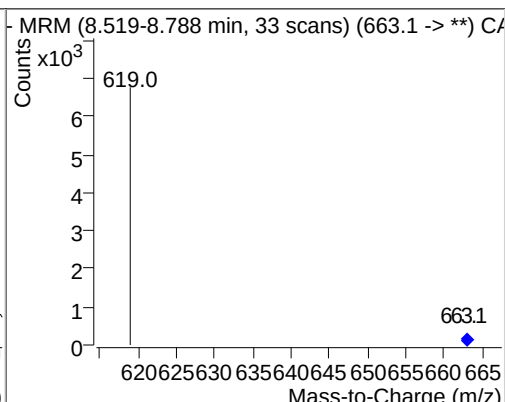
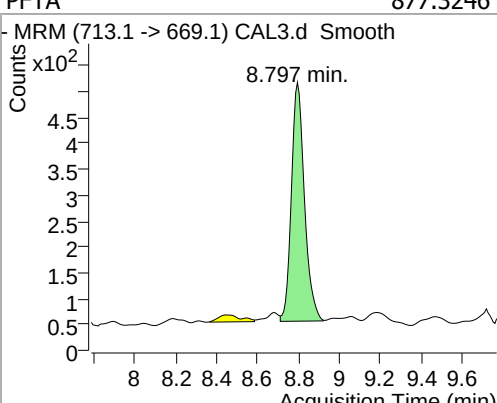
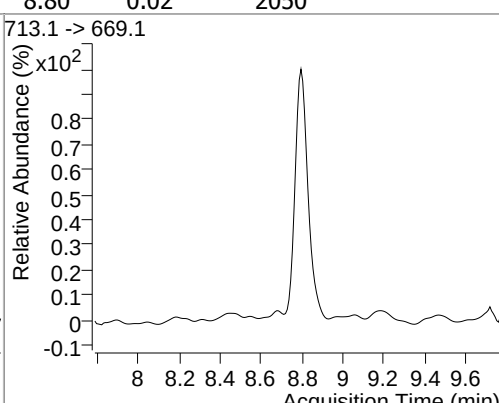
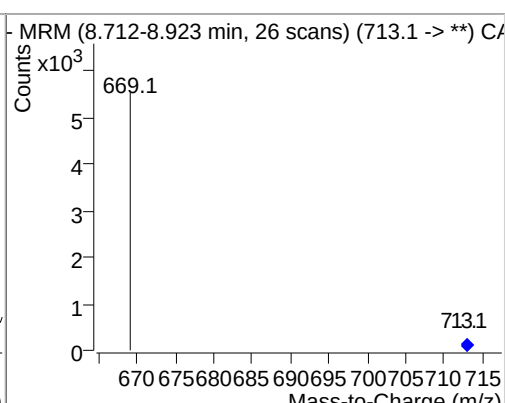
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)

| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|----------|-------|------|--------|-------|-------|
| N-EtFOSAA                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1193.0356 | 8.31 | -0.03    | 196   |      |        |       |       |
| <div> <div> MRM (584.2 -&gt; 419.0) CAL3.d Smooth<br/>  </div> <div> MRM (584.2 -&gt; 419.0)<br/>  </div> <div> MRM (8.218-8.473 min, 31 scans) (584.2 -&gt; **) CA<br/>  </div> </div>       |           |      |          |       |      |        |       |       |
| PFDaA                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1014.3004 | 8.45 | -0.02    | 2477  |      |        |       |       |
| <div> <div> MRM (613.1 -&gt; 569.0) CAL3.d Smooth<br/>  </div> <div> MRM (613.1 -&gt; 569.0)<br/>  </div> <div> MRM (8.351-8.656 min, 37 scans) (613.1 -&gt; **) CA<br/>  </div> </div>    |           |      |          |       |      |        |       |       |
| PFTTrDA                                                                                                                                                                                                                                                                                                                                                                                                                                            | 921.6824  | 8.61 | -0.01    | 2567  |      |        |       |       |
| <div> <div> MRM (663.1 -&gt; 619.0) CAL3.d Smooth<br/>  </div> <div> MRM (663.1 -&gt; 619.0)<br/>  </div> <div> MRM (8.519-8.788 min, 33 scans) (663.1 -&gt; **) CA<br/>  </div> </div> |           |      |          |       |      |        |       |       |
| PFTA                                                                                                                                                                                                                                                                                                                                                                                                                                               | 877.3246  | 8.80 | 0.02     | 2050  |      |        |       |       |
| <div> <div> MRM (713.1 -&gt; 669.1) CAL3.d Smooth<br/>  </div> <div> MRM (713.1 -&gt; 669.1)<br/>  </div> <div> MRM (8.712-8.923 min, 26 scans) (713.1 -&gt; **) CA<br/>  </div> </div> |           |      |          |       |      |        |       |       |

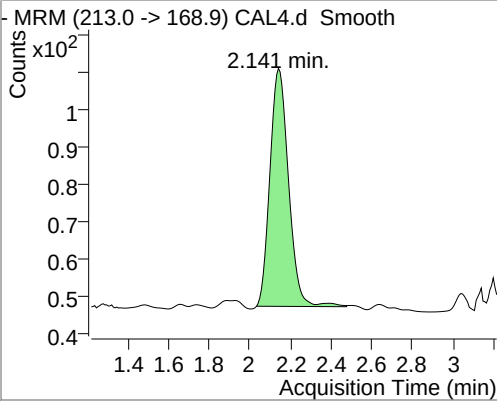
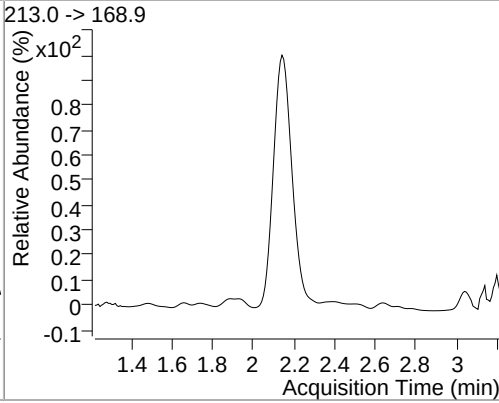
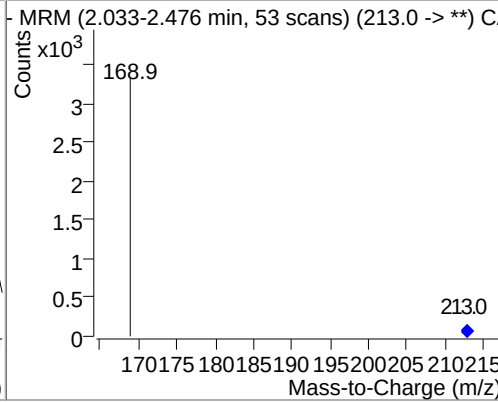
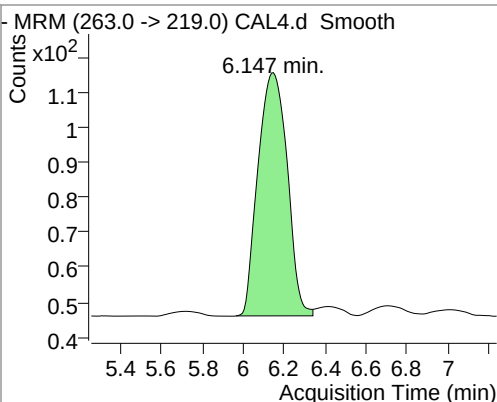
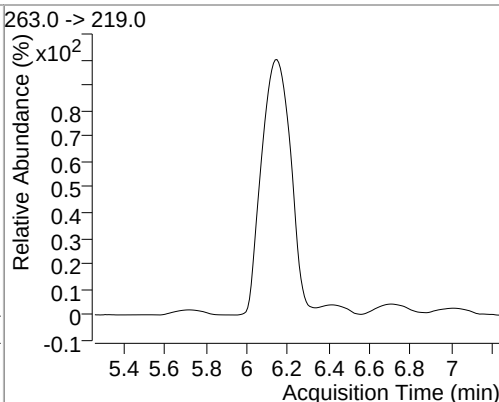
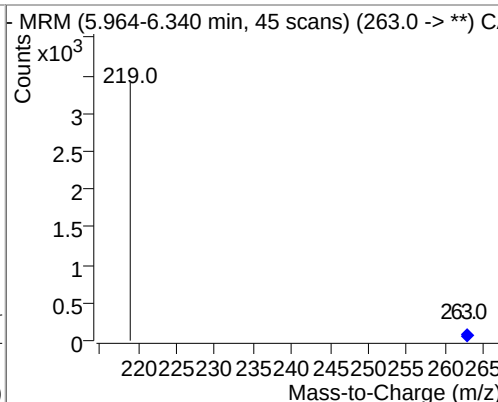
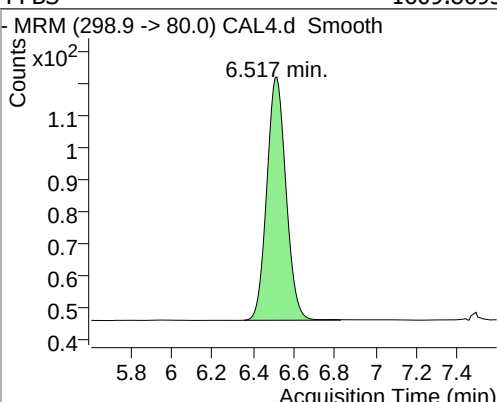
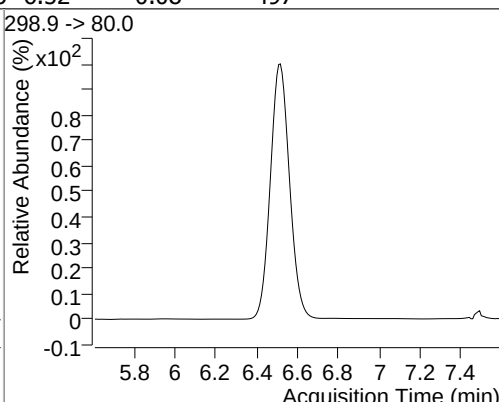
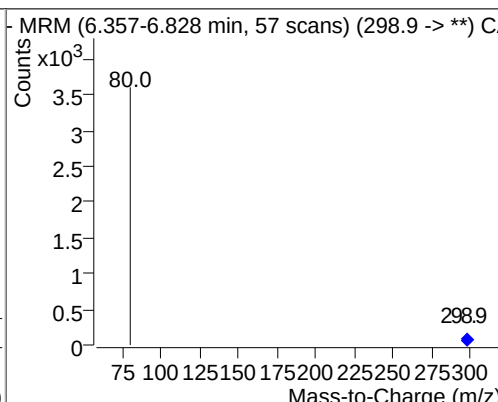
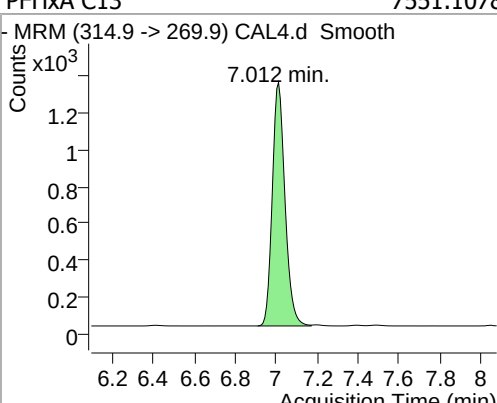
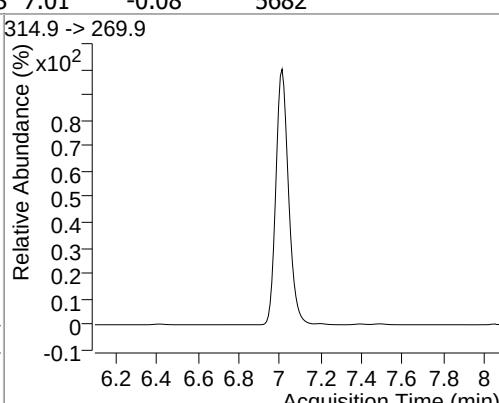
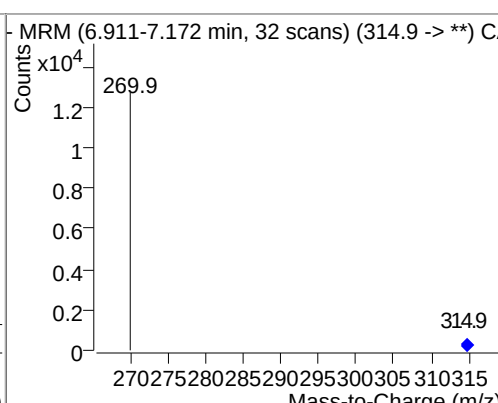
# Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | CAL4.d         | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 6:58:21 PM |
| Sample Name    | CAL4           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | CAL.batch.bin  | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

| Compound                    | RT                   | QIon           | Resp. | Conc.             | Units |   | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|-------------------|-------|---|----------|
| Internal Standards          |                      |                |       |                   |       |   |          |
| M PFOA C13                  | 7.726                | 416.9 -> 371.9 | 10550 | 10000.0000        | pg/ml | m | -0.050   |
| M PFOS C13                  | 7.959                | 502.9 -> 80.0  | 15283 | 28700.0000        | pg/ml |   | -0.034   |
| M d3-N-MeFOSAA              | 8.227                | 573.2 -> 419.0 | 6671  | 40000.0000        | pg/ml | m | -0.034   |
| System Monitoring Compounds |                      |                |       |                   |       |   |          |
| S PFHxA C13                 | 7.012                | 314.9 -> 269.9 | 5682  | 7551.1078         | pg/ml |   | -0.076   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 75.51% |       |   |          |
| S PFDA C13                  | 8.144                | 514.9 -> 469.9 | 9459  | 8612.0218         | pg/ml |   | -0.034   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 86.12% |       |   |          |
| S d5-N-MeFOSAA              | 8.310                | 589.2 -> 419.0 | 4936  | 31285.0196        | pg/ml |   | -0.025   |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 78.21% |       |   |          |
| Target Compounds            |                      |                |       |                   |       |   | QValue   |
| T PFBA                      | 2.141                | 213.0 -> 168.9 | 405   | 2368.4214         | pg/ml |   | 100      |
| T PFPeA                     | 6.147                | 263.0 -> 219.0 | 698   | 2014.0503         | pg/ml |   | 100      |
| T PFBS                      | 6.517                | 298.9 -> 80.0  | 497   | 1609.8693         | pg/ml |   | 100      |
| T PFHxA                     | 7.013                | 312.9 -> 268.9 | 1543  | 2107.5738         | pg/ml |   | 100      |
| T PFHpA                     | 7.433                | 362.9 -> 319.0 | 2490  | 2283.5378         | pg/ml |   | 100      |
| T PFHxS-Total               | 7.458                | 398.9 -> 80.0  | 937   | 1928.8643         | pg/ml | m | 100      |
| T 6.2 FTS                   | 7.717                | 427.0 -> 406.8 | 386   | 3048.6821         | pg/ml |   | 100      |
| T PFOA-Total                | 7.726                | 412.9 -> 368.9 | 2700  | 1949.7015         | pg/ml |   | 100      |
| T PFHpS                     | 7.733                | 449.0 -> 79.7  | 564   | 2228.3007         | pg/ml |   | 100      |
| T PFOS-Total                | 7.960                | 498.9 -> 80.0  | 1327  | 1677.7547         | pg/ml | m | 100      |
| T PFNA                      | 7.952                | 462.9 -> 418.9 | 1788  | 2128.2068         | pg/ml |   | 100      |
| T 8.2 FTS                   | 8.143                | 527.0 -> 81.0  | 498   | 2376.8267         | pg/ml |   | 100      |
| T PFDA                      | 8.144                | 513.1 -> 469.0 | 3497  | 2255.9412         | pg/ml |   | 100      |
| T N-MeFOSAA                 | 8.235                | 570.2 -> 419.1 | 413   | 2084.5466         | pg/ml |   | 100      |
| T FOSA                      | 8.271                | 497.9 -> 77.9  | 2619  | 2064.1900         | pg/ml |   | 100      |
| T PFDS                      | 8.293                | 599.0 -> 80.0  | 1003  | 2029.3657         | pg/ml |   | 100      |
| T PFUnA                     | 8.303                | 563.1 -> 519.0 | 4160  | 2329.4036         | pg/ml |   | 100      |
| T N-EtFOSAA                 | 8.310                | 584.2 -> 419.0 | 344   | 2097.4341         | pg/ml |   | 100      |
| T PFDoA                     | 8.452                | 613.1 -> 569.0 | 5277  | 2110.2464         | pg/ml |   | 100      |
| T PFTrDA                    | 8.620                | 663.1 -> 619.0 | 5849  | 2050.5537         | pg/ml |   | 100      |
| T PFTA                      | 8.797                | 713.1 -> 669.1 | 5531  | 2311.9135         | pg/ml |   | 100      |

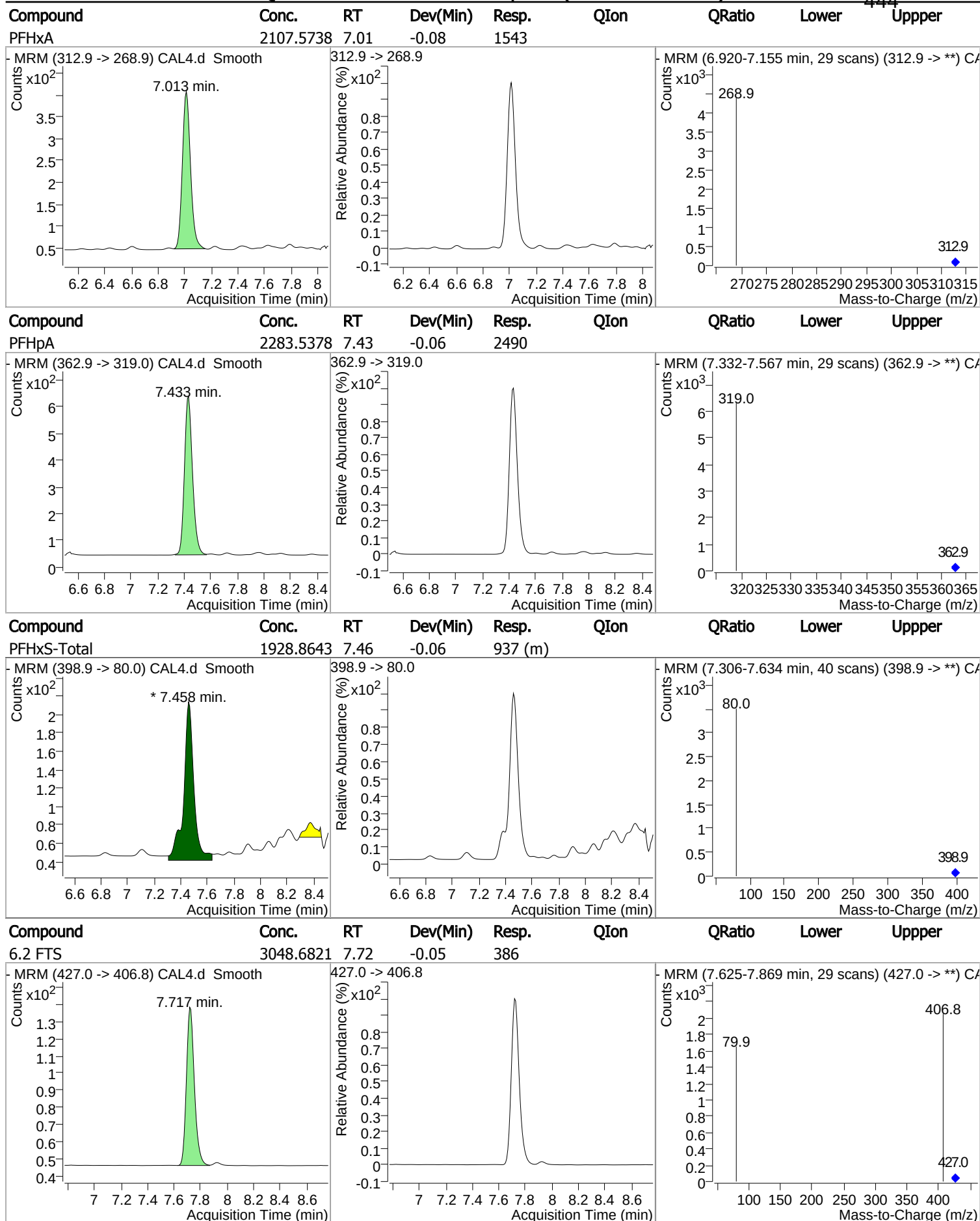
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

# Quantitation Results Report (Not Reviewed)

| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|----------|-------|------|--------|-------|-------|
| PFBA                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2368.4214 | 2.14 | -0.08    | 405   |      |        |       |       |
| <div> <div> MRM (213.0 -&gt; 168.9) CAL4.d Smooth<br/>  </div> <div> MRM (213.0 -&gt; 168.9)<br/>  </div> <div> MRM (2.033-2.476 min, 53 scans) (213.0 -&gt; **) CA<br/>  </div> </div>       |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFPeA                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2014.0503 | 6.15 | -0.10    | 698   |      |        |       |       |
| <div> <div> MRM (263.0 -&gt; 219.0) CAL4.d Smooth<br/>  </div> <div> MRM (263.0 -&gt; 219.0)<br/>  </div> <div> MRM (5.964-6.340 min, 45 scans) (263.0 -&gt; **) CA<br/>  </div> </div>    |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFBS                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1609.8693 | 6.52 | -0.08    | 497   |      |        |       |       |
| <div> <div> MRM (298.9 -&gt; 80.0) CAL4.d Smooth<br/>  </div> <div> MRM (298.9 -&gt; 80.0)<br/>  </div> <div> MRM (6.357-6.828 min, 57 scans) (298.9 -&gt; **) CA<br/>  </div> </div>   |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFHxA C13                                                                                                                                                                                                                                                                                                                                                                                                                                          | 7551.1078 | 7.01 | -0.08    | 5682  |      |        |       |       |
| <div> <div> MRM (314.9 -&gt; 269.9) CAL4.d Smooth<br/>  </div> <div> MRM (314.9 -&gt; 269.9)<br/>  </div> <div> MRM (6.911-7.172 min, 32 scans) (314.9 -&gt; **) CA<br/>  </div> </div> |           |      |          |       |      |        |       |       |

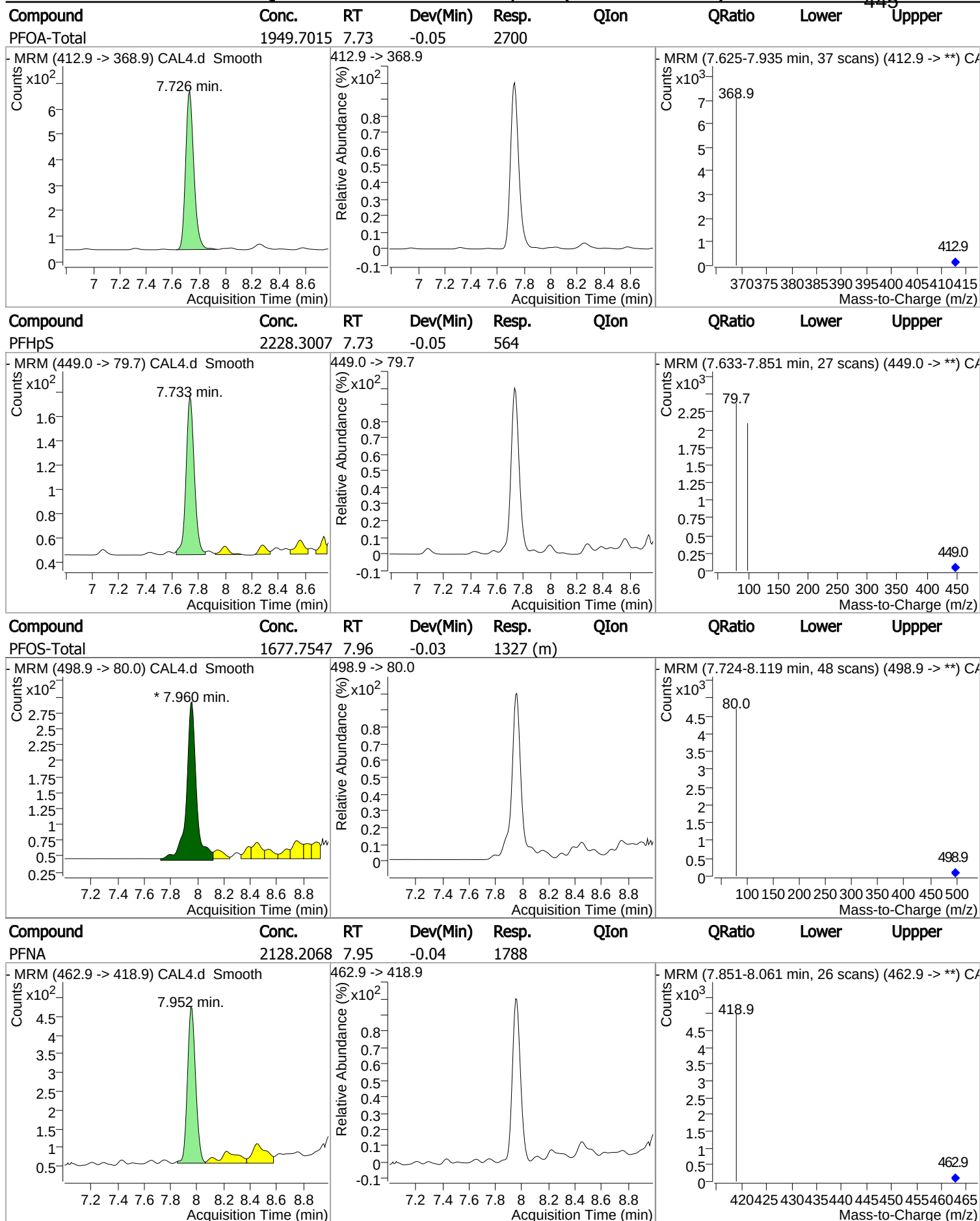


# Quantitation Results Report (Not Reviewed)

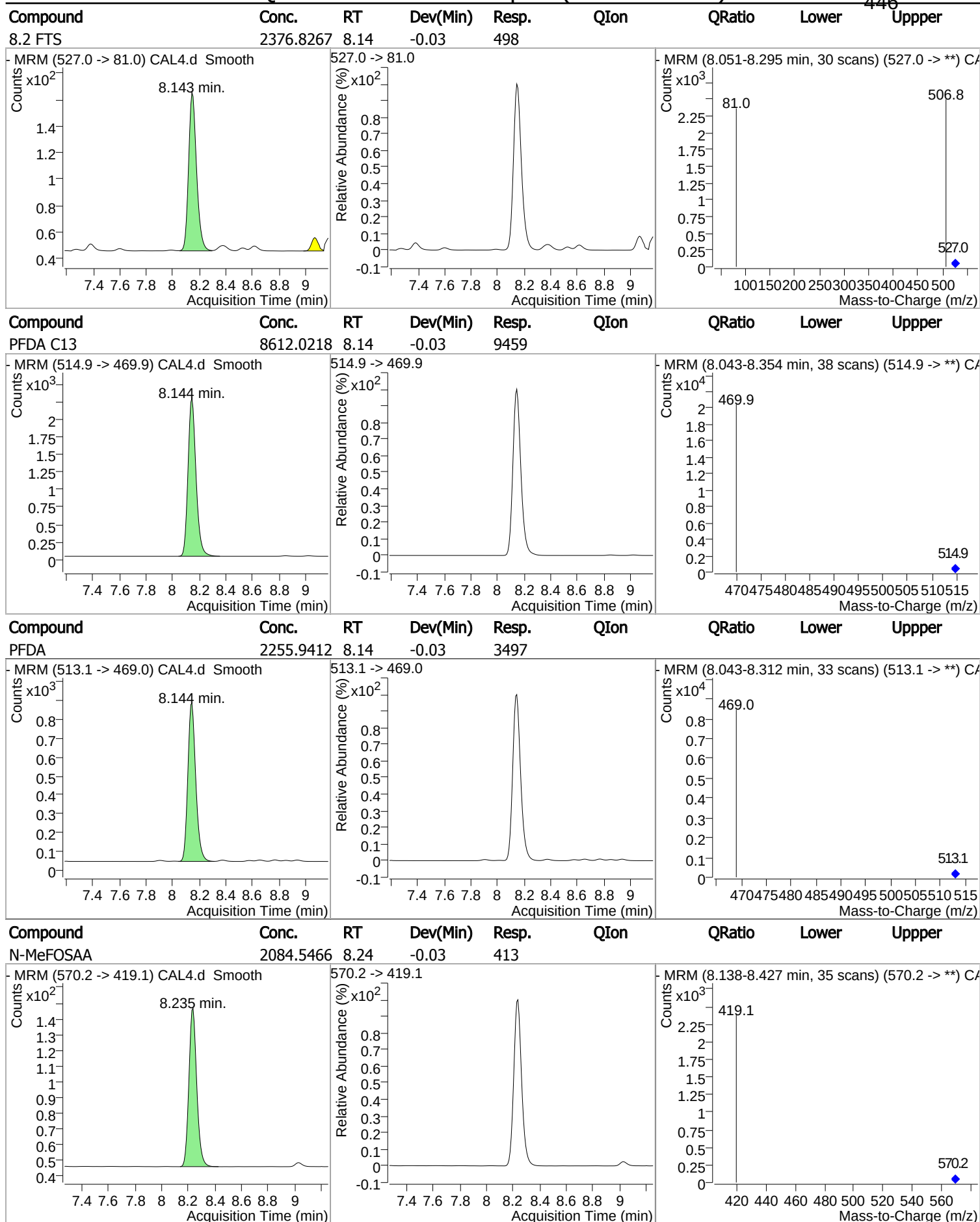




# Quantitation Results Report (Not Reviewed)

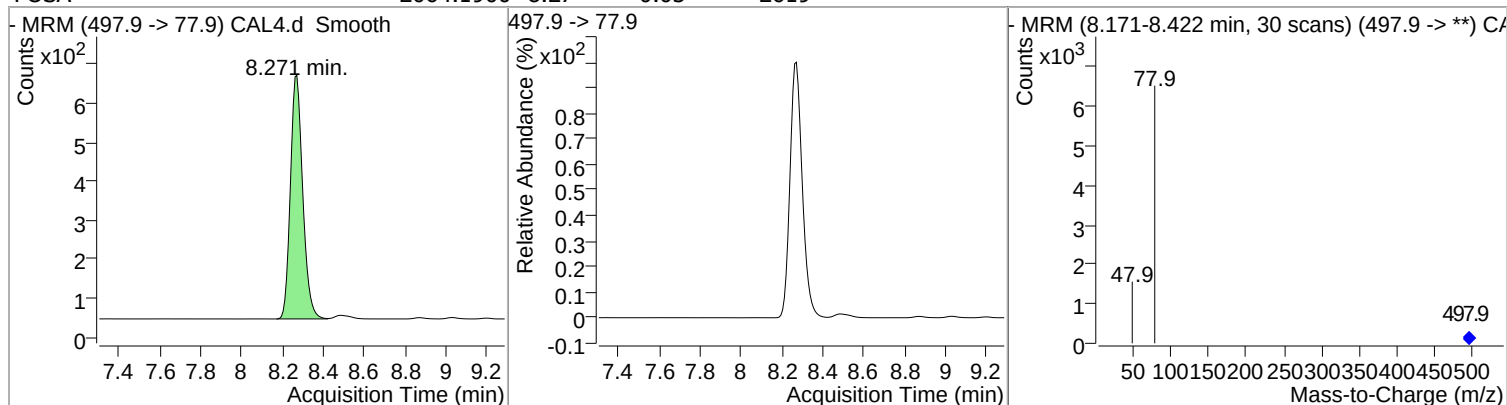


# Quantitation Results Report (Not Reviewed)

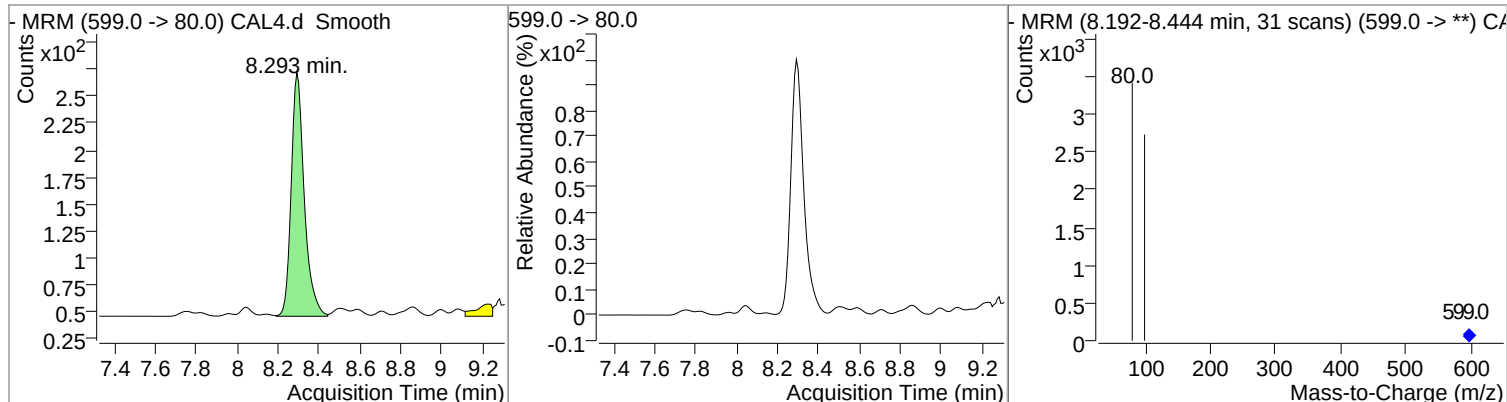


# Quantitation Results Report (Not Reviewed)

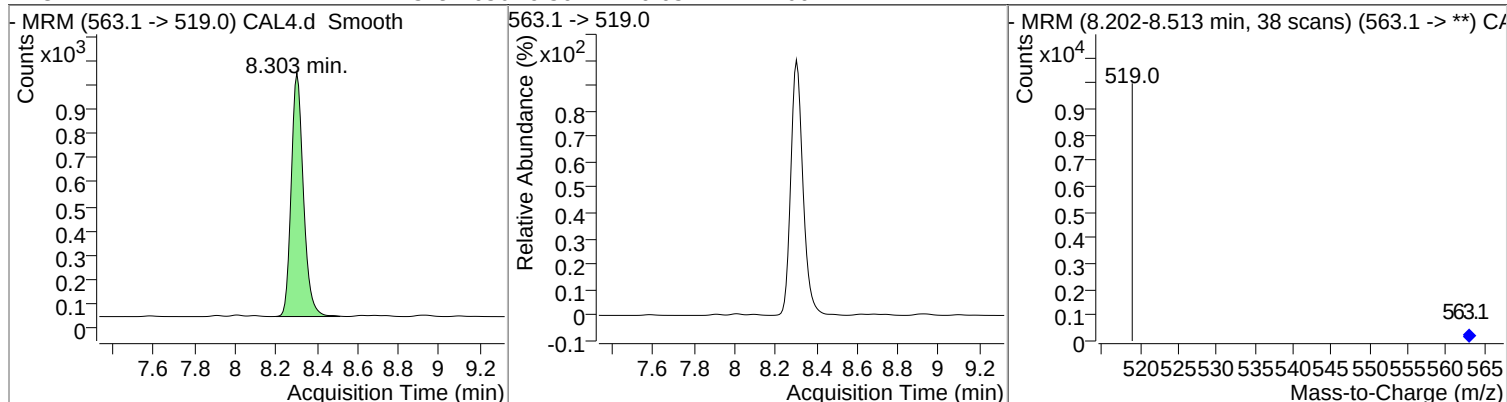
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| FOSA     | 2064.1900 | 8.27 | -0.03    | 2619  |      |        |       |       |



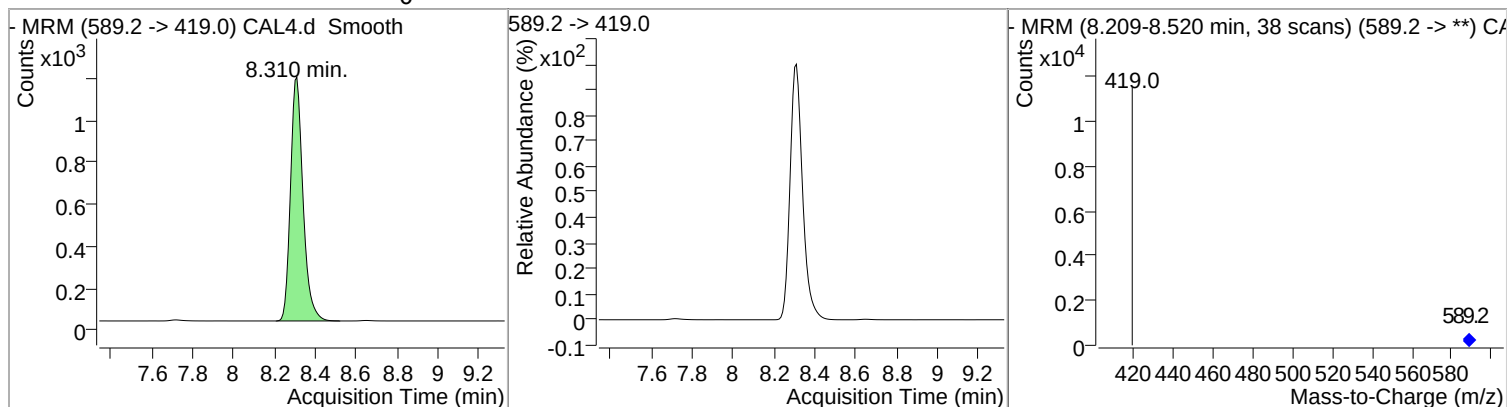
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFDS     | 2029.3657 | 8.29 | -0.03    | 1003  |      |        |       |       |



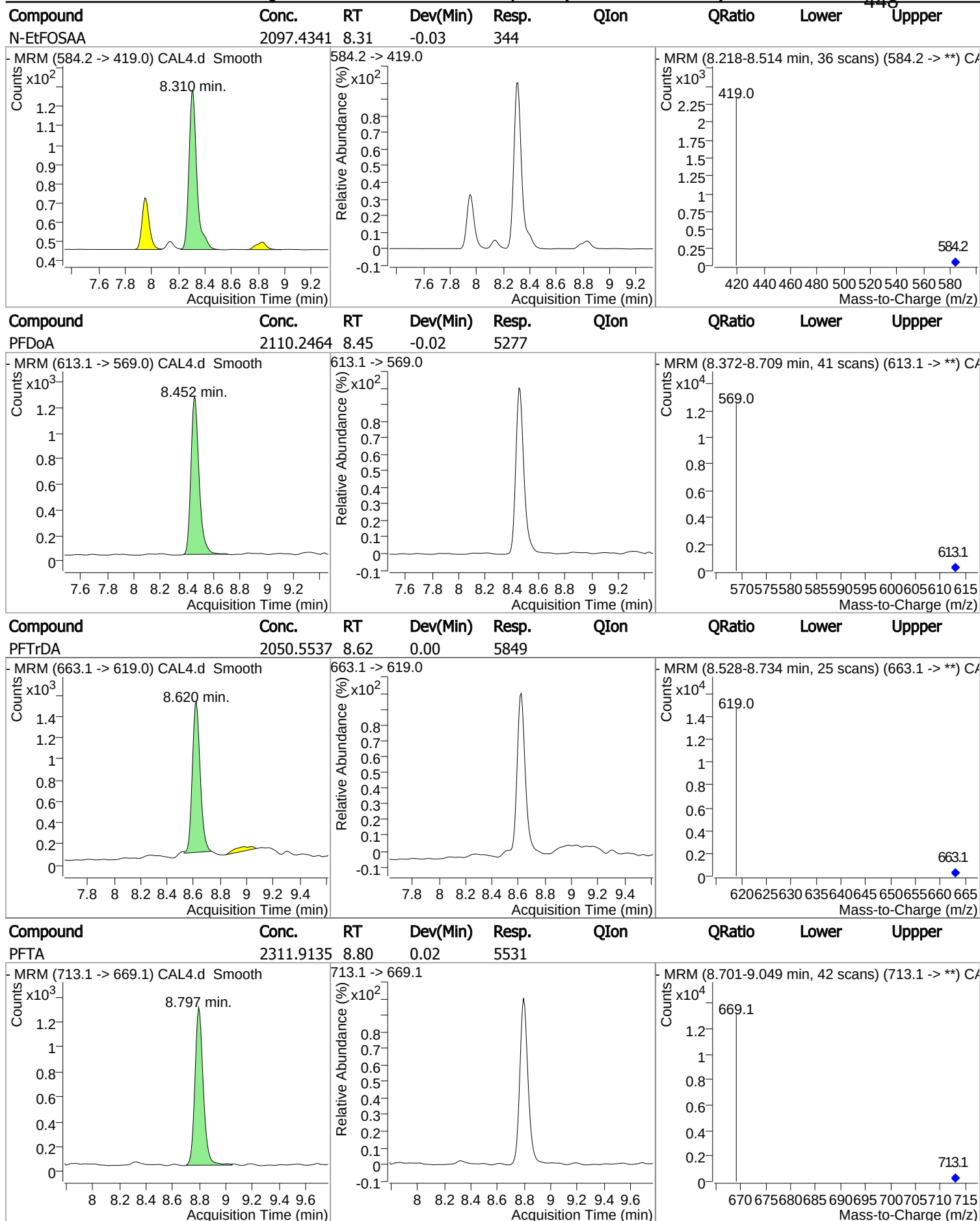
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFUnA    | 2329.4036 | 8.30 | -0.03    | 4160  |      |        |       |       |



| Compound     | Conc.      | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|--------------|------------|------|----------|-------|------|--------|-------|-------|
| d5-N-MeFOSAA | 31285.0196 | 8.31 | -0.03    | 4936  |      |        |       |       |



# Quantitation Results Report (Not Reviewed)



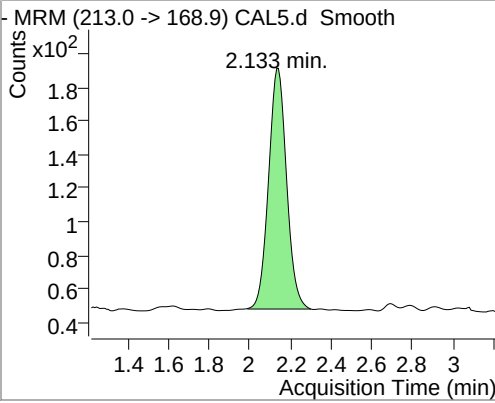
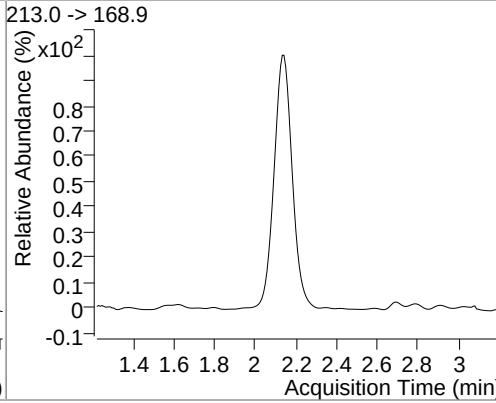
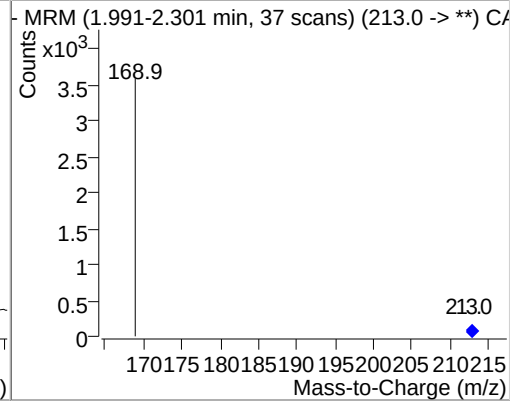
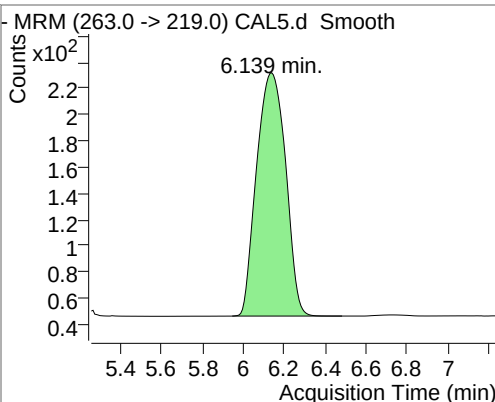
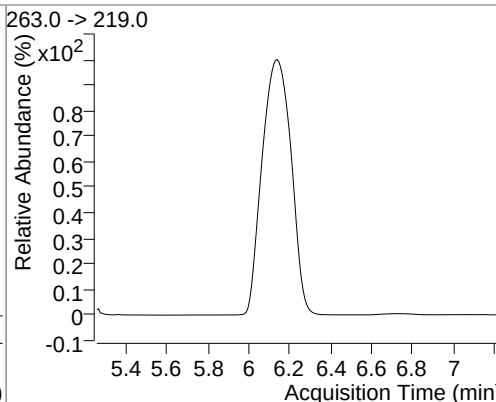
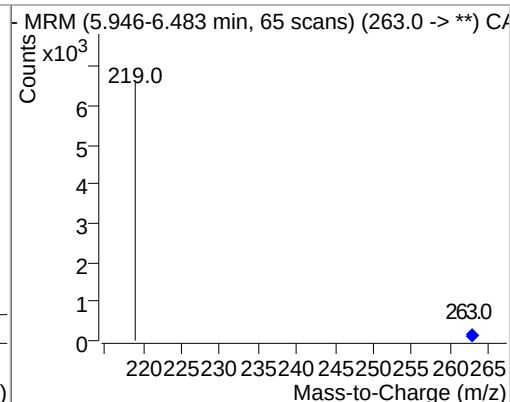
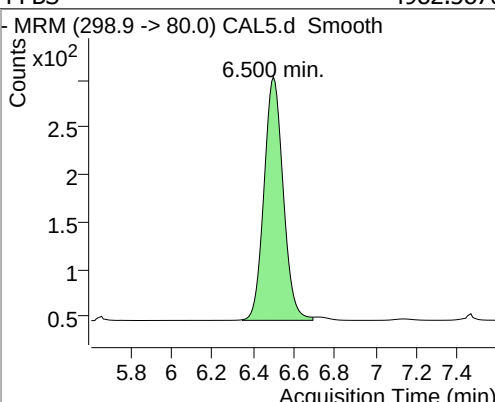
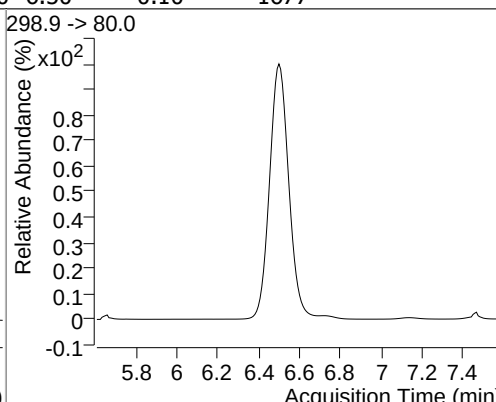
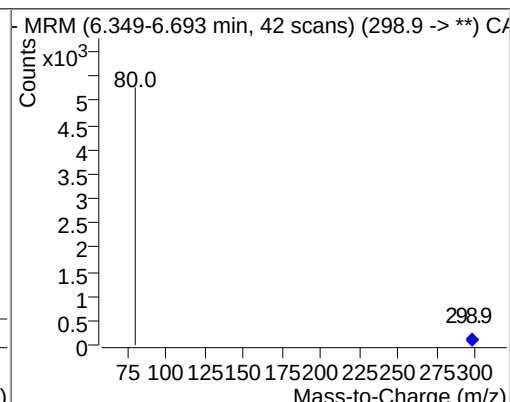
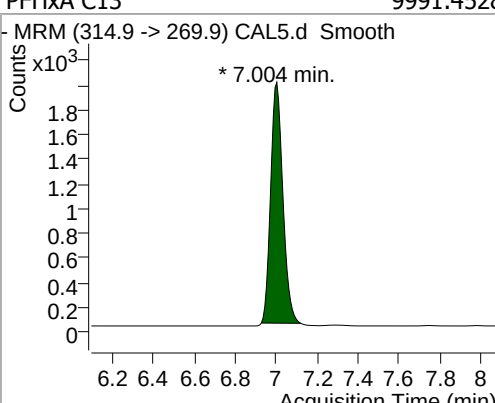
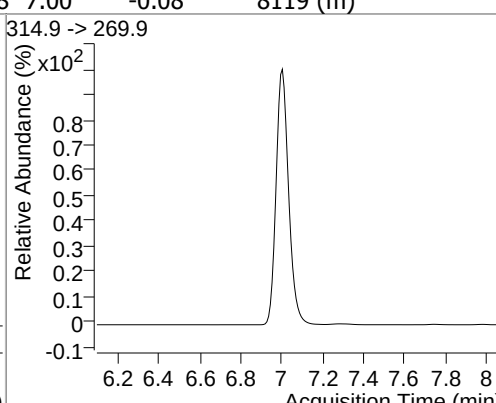
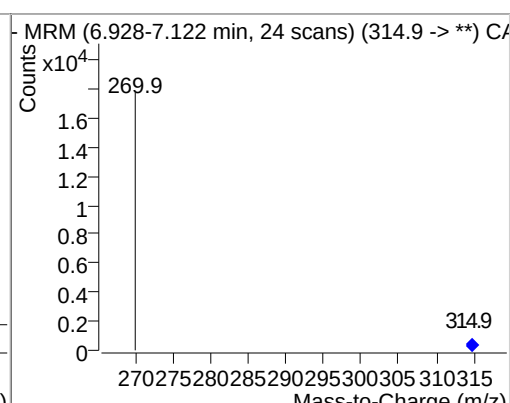
# Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | CAL5.d         | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 7:10:56 PM |
| Sample Name    | CAL5           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | CAL.batch.bin  | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

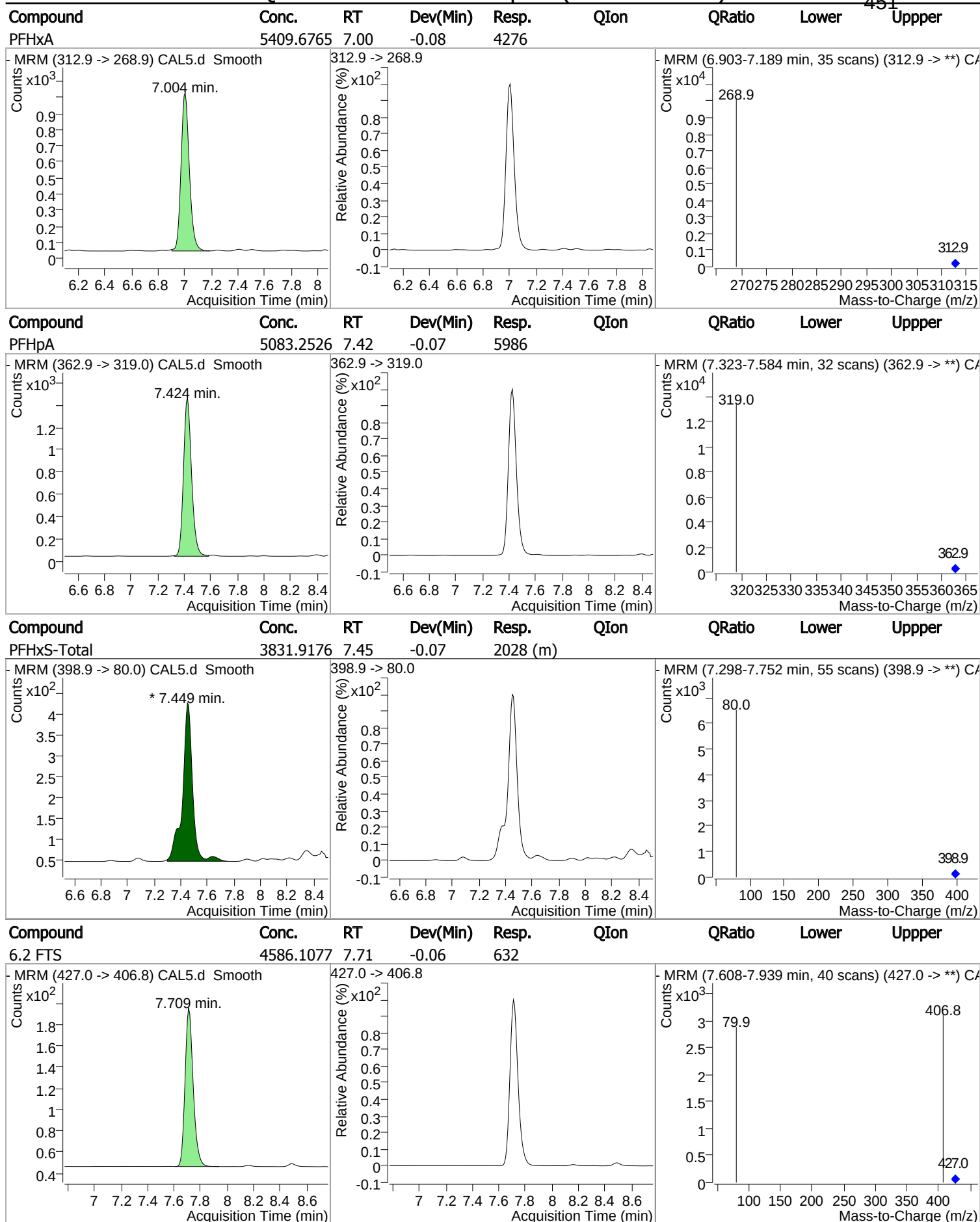
| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units |   | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|---|----------|
| Internal Standards          |                      |                |       |                    |       |   |          |
| M PFOA C13                  | 7.718                | 416.9 -> 371.9 | 11392 | 10000.0000         | pg/ml |   | -0.059   |
| M PFOS C13                  | 7.951                | 502.9 -> 80.0  | 16652 | 28700.0000         | pg/ml |   | -0.042   |
| M d3-N-MeFOSAA              | 8.218                | 573.2 -> 419.0 | 6949  | 40000.0000         | pg/ml | m | -0.042   |
| System Monitoring Compounds |                      |                |       |                    |       |   |          |
| S PFHxA C13                 | 7.004                | 314.9 -> 269.9 | 8119  | 9991.4528          | pg/ml | m | -0.084   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 99.91%  |       |   |          |
| S PFDA C13                  | 8.135                | 514.9 -> 469.9 | 11780 | 9932.5717          | pg/ml |   | -0.042   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 99.33%  |       |   |          |
| S d5-N-MeFOSAA              | 8.302                | 589.2 -> 419.0 | 6841  | 41625.4543         | pg/ml |   | -0.034   |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 104.06% |       |   |          |
| Target Compounds            |                      |                |       |                    |       |   |          |
| T PFBA                      | 2.133                | 213.0 -> 168.9 | 883   | 4787.5494          | pg/ml |   | 100      |
| T PFPeA                     | 6.139                | 263.0 -> 219.0 | 1834  | 4899.7507          | pg/ml |   | 100      |
| T PFBS                      | 6.500                | 298.9 -> 80.0  | 1677  | 4982.3870          | pg/ml |   | 100      |
| T PFHxA                     | 7.004                | 312.9 -> 268.9 | 4276  | 5409.6765          | pg/ml |   | 100      |
| T PFHpA                     | 7.424                | 362.9 -> 319.0 | 5986  | 5083.2526          | pg/ml |   | 100      |
| T PFHxS-Total               | 7.449                | 398.9 -> 80.0  | 2028  | 3831.9176          | pg/ml | m | 100      |
| T 6.2 FTS                   | 7.709                | 427.0 -> 406.8 | 632   | 4586.1077          | pg/ml |   | 100      |
| T PFOA-Total                | 7.718                | 412.9 -> 368.9 | 7570  | 5061.1097          | pg/ml |   | 100      |
| T PFHpS                     | 7.725                | 449.0 -> 79.7  | 1385  | 5019.3370          | pg/ml |   | 100      |
| T PFOS-Total                | 7.951                | 498.9 -> 80.0  | 3599  | 4177.9081          | pg/ml |   | 100      |
| T PFNA                      | 7.943                | 462.9 -> 418.9 | 5061  | 5577.8884          | pg/ml |   | 100      |
| T 8.2 FTS                   | 8.143                | 527.0 -> 81.0  | 903   | 3958.0770          | pg/ml |   | 100      |
| T PFDA                      | 8.136                | 513.1 -> 469.0 | 8829  | 5274.3237          | pg/ml |   | 100      |
| T N-MeFOSAA                 | 8.218                | 570.2 -> 419.1 | 1079  | 5222.0477          | pg/ml |   | 100      |
| T FOSA                      | 8.262                | 497.9 -> 77.9  | 6526  | 4937.1235          | pg/ml |   | 100      |
| T PFDS                      | 8.293                | 599.0 -> 80.0  | 2716  | 5044.4891          | pg/ml |   | 100      |
| T PFUnA                     | 8.294                | 563.1 -> 519.0 | 9784  | 5073.9773          | pg/ml |   | 100      |
| T N-EtFOSAA                 | 8.302                | 584.2 -> 419.0 | 1083  | 6348.0652          | pg/ml |   | 100      |
| T PFDoA                     | 8.452                | 613.1 -> 569.0 | 12582 | 4659.1727          | pg/ml |   | 100      |
| T PFTrDA                    | 8.612                | 663.1 -> 619.0 | 16309 | 5294.8979          | pg/ml |   | 100      |
| T PFTA                      | 8.797                | 713.1 -> 669.1 | 11592 | 4486.8694          | pg/ml |   | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

## Quantitation Results Report (Not Reviewed)

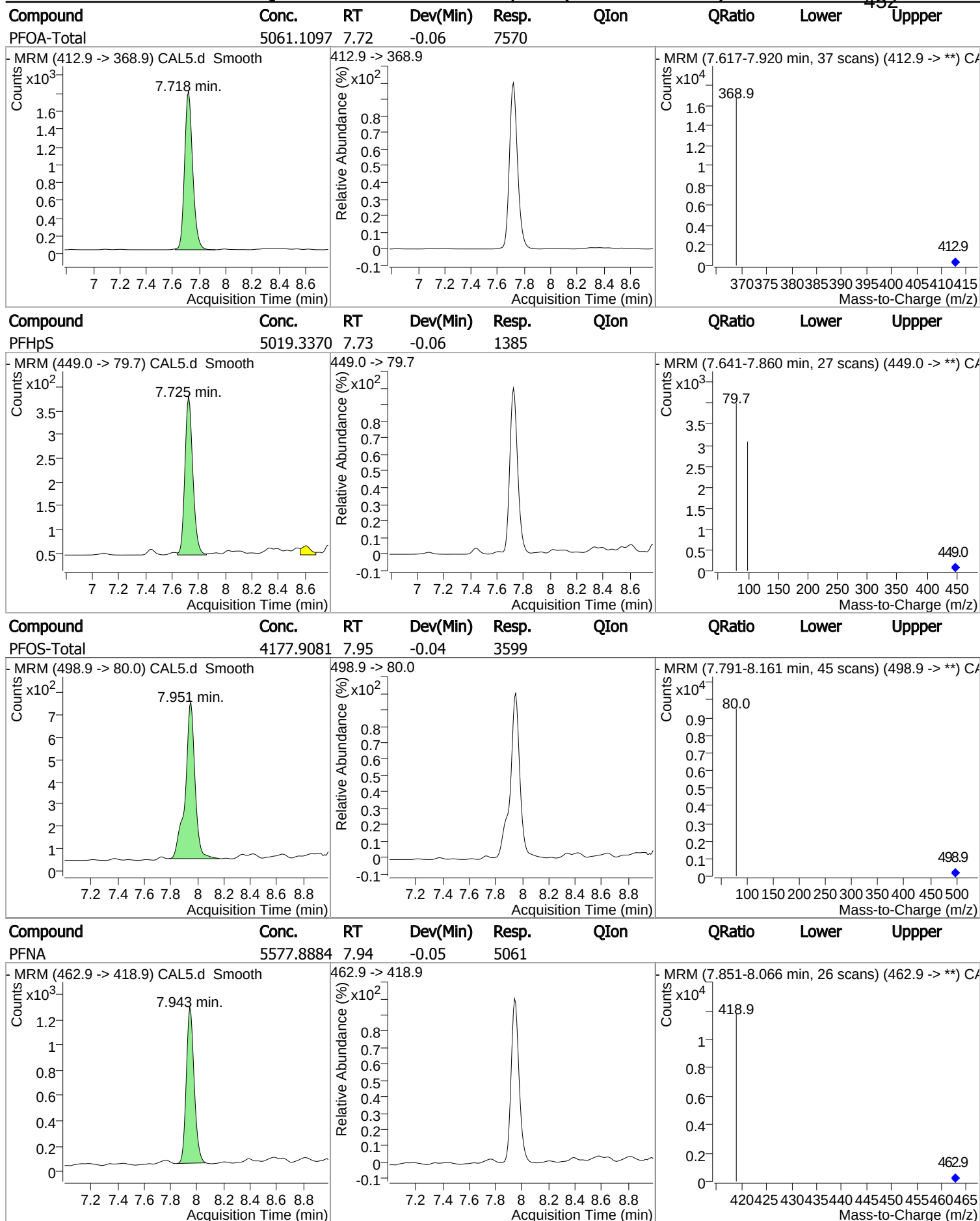
| Compound                                                                                                                                                                                                                                                      | Conc.     | RT   | Dev(Min) | Resp.    | QIon | QRatio | Lower | Upper |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|----------|----------|------|--------|-------|-------|
| PFBA                                                                                                                                                                                                                                                          | 4787.5494 | 2.13 | -0.08    | 883      |      |        |       |       |
| <div><div>MRM (213.0 -&gt; 168.9) CAL5.d Smooth</div><div>213.0 -&gt; 168.9</div><div>MRM (1.991-2.301 min, 37 scans) (213.0 -&gt; **) CA</div></div>                                                                                                         |           |      |          |          |      |        |       |       |
|          |           |      |          |          |      |        |       |       |
| Compound                                                                                                                                                                                                                                                      | Conc.     | RT   | Dev(Min) | Resp.    | QIon | QRatio | Lower | Upper |
| PFPeA                                                                                                                                                                                                                                                         | 4899.7507 | 6.14 | -0.11    | 1834     |      |        |       |       |
| <div><div>MRM (263.0 -&gt; 219.0) CAL5.d Smooth</div><div>263.0 -&gt; 219.0</div><div>MRM (5.946-6.483 min, 65 scans) (263.0 -&gt; **) CA</div></div>                                                                                                         |           |      |          |          |      |        |       |       |
|       |           |      |          |          |      |        |       |       |
| Compound                                                                                                                                                                                                                                                      | Conc.     | RT   | Dev(Min) | Resp.    | QIon | QRatio | Lower | Upper |
| PFBS                                                                                                                                                                                                                                                          | 4982.3870 | 6.50 | -0.10    | 1677     |      |        |       |       |
| <div><div>MRM (298.9 -&gt; 80.0) CAL5.d Smooth</div><div>298.9 -&gt; 80.0</div><div>MRM (6.349-6.693 min, 42 scans) (298.9 -&gt; **) CA</div></div>                                                                                                           |           |      |          |          |      |        |       |       |
|    |           |      |          |          |      |        |       |       |
| Compound                                                                                                                                                                                                                                                      | Conc.     | RT   | Dev(Min) | Resp.    | QIon | QRatio | Lower | Upper |
| PFHxA C13                                                                                                                                                                                                                                                     | 9991.4528 | 7.00 | -0.08    | 8119 (m) |      |        |       |       |
| <div><div>MRM (314.9 -&gt; 269.9) CAL5.d Smooth</div><div>314.9 -&gt; 269.9</div><div>MRM (6.928-7.122 min, 24 scans) (314.9 -&gt; **) CA</div></div>                                                                                                         |           |      |          |          |      |        |       |       |
|    |           |      |          |          |      |        |       |       |

# Quantitation Results Report (Not Reviewed)



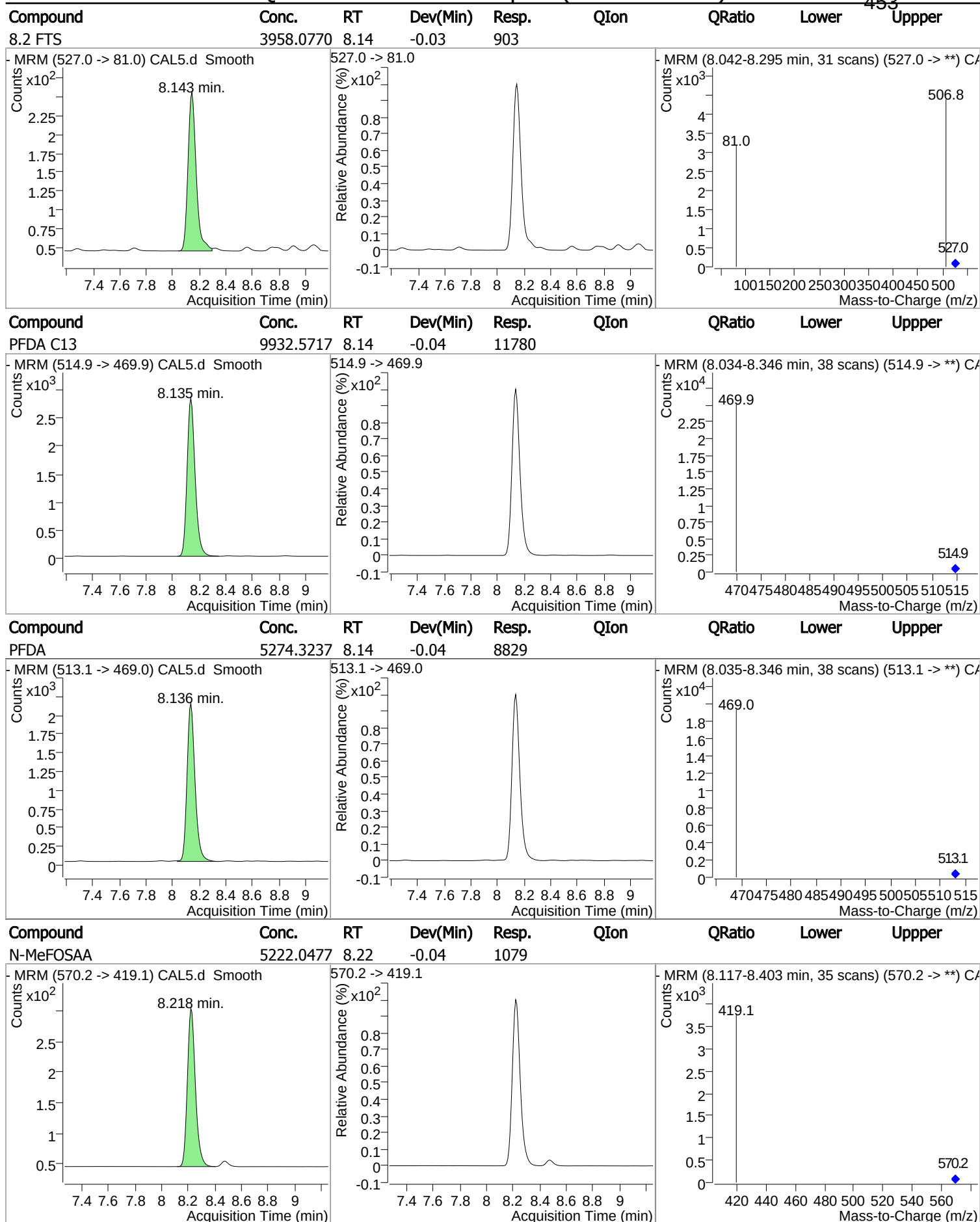


# Quantitation Results Report (Not Reviewed)

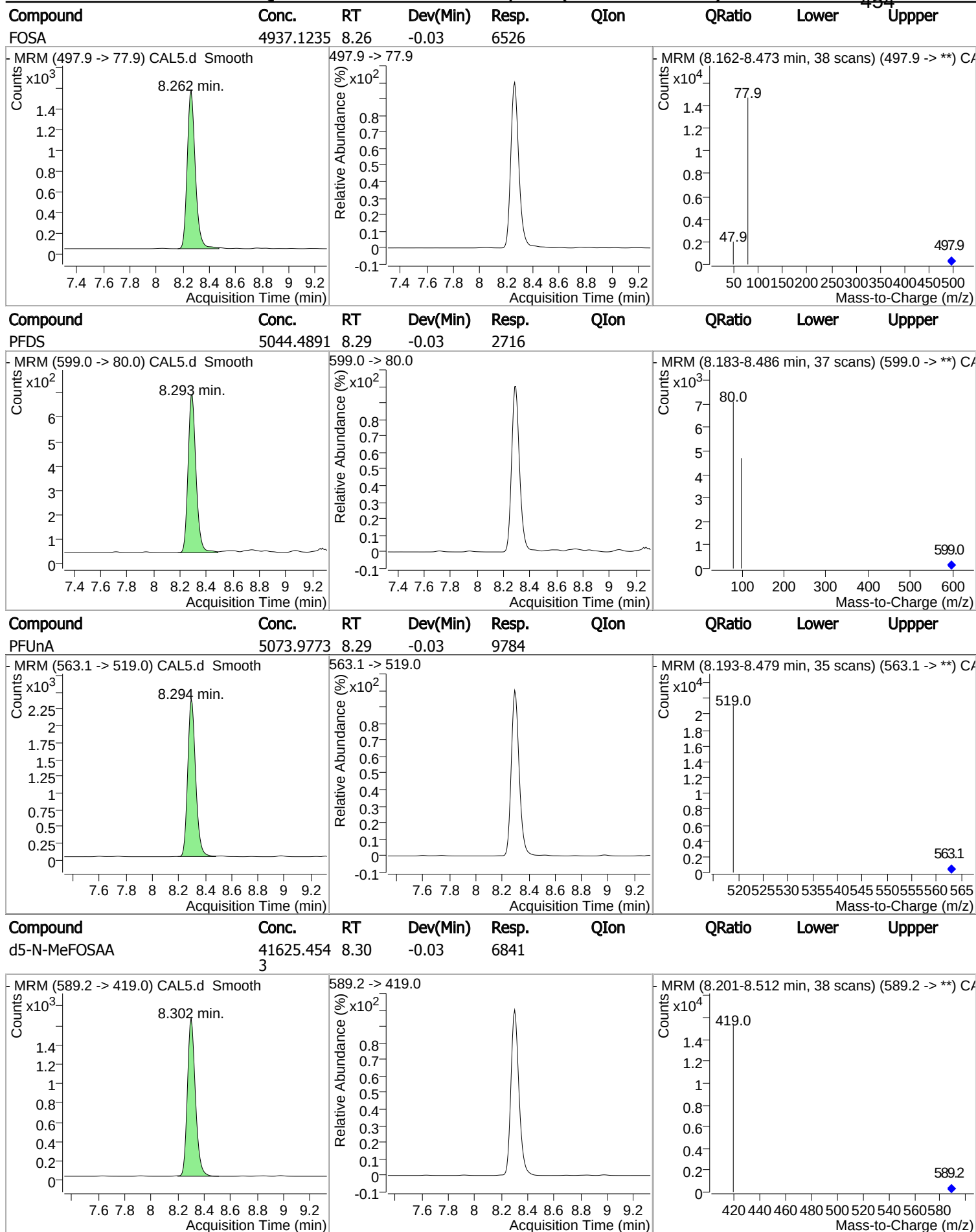




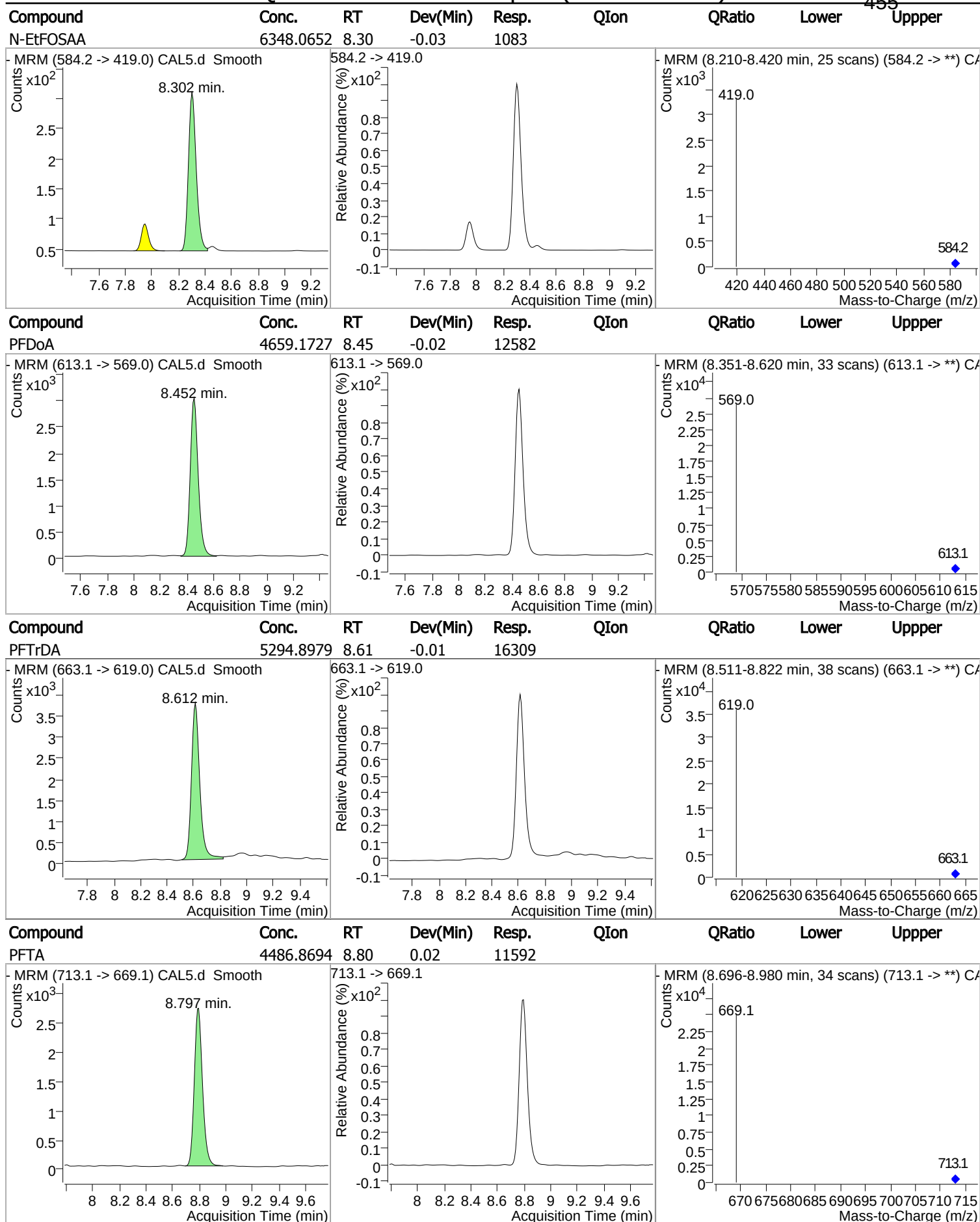
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



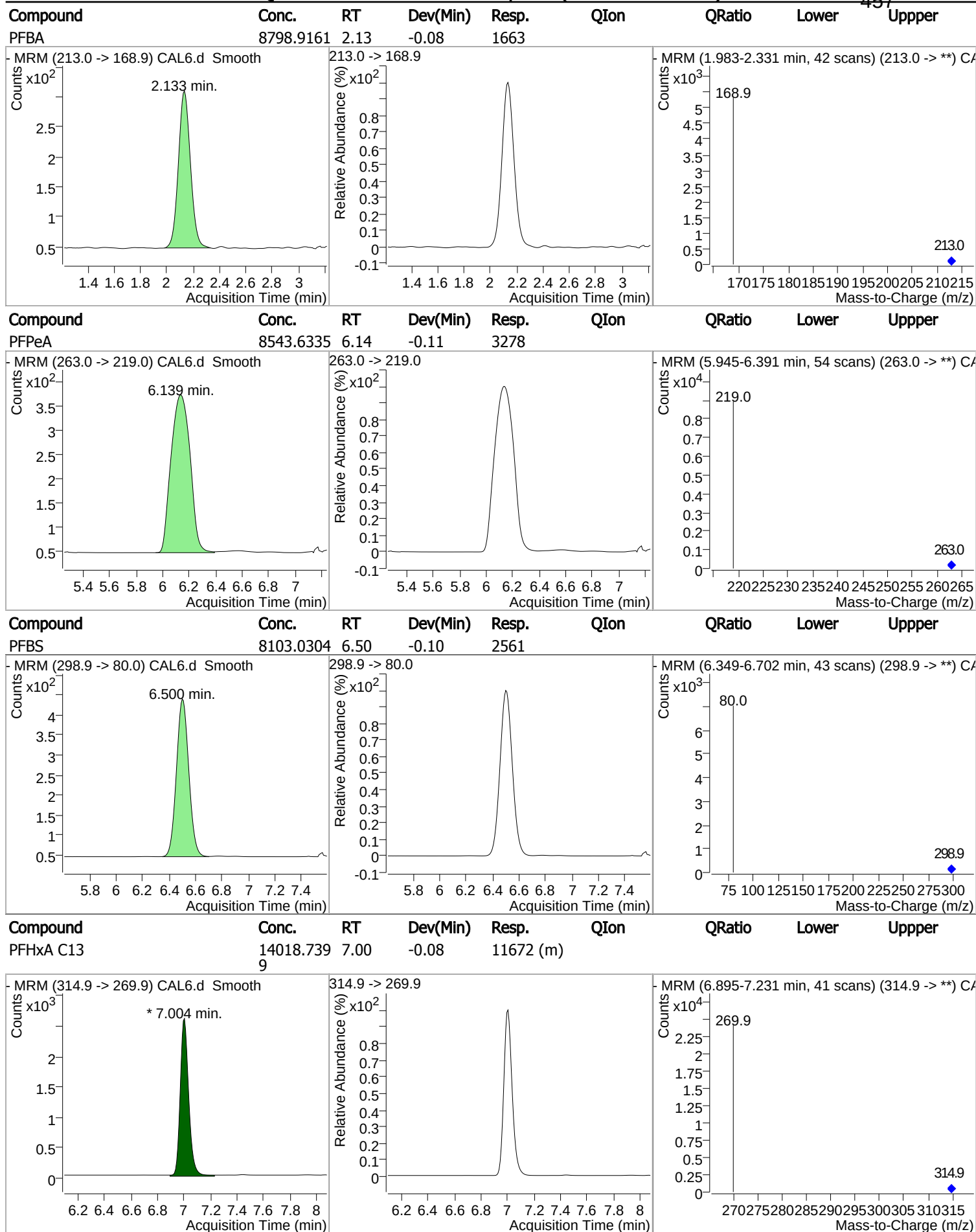
## Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | CAL6.d         | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 7:23:32 PM |
| Sample Name    | CAL6           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | CAL.batch.bin  | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

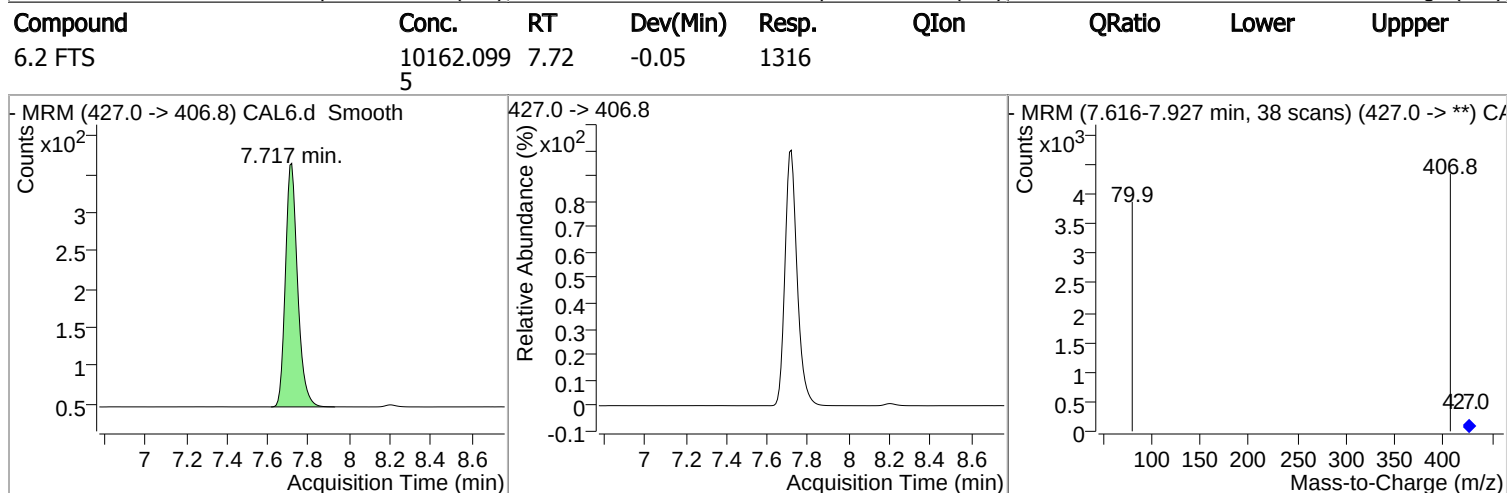
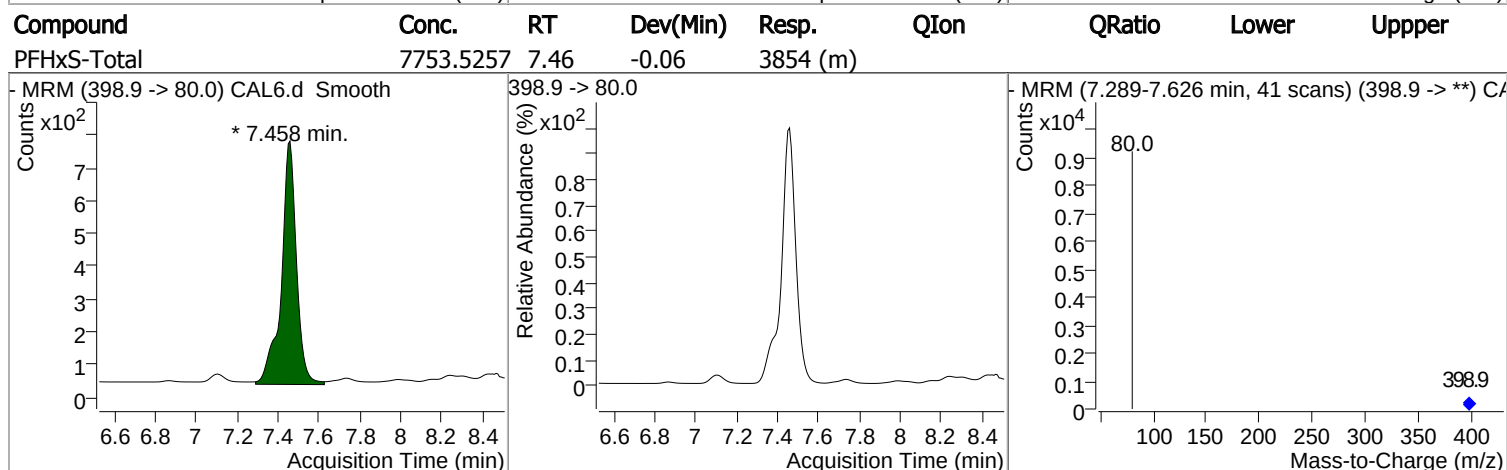
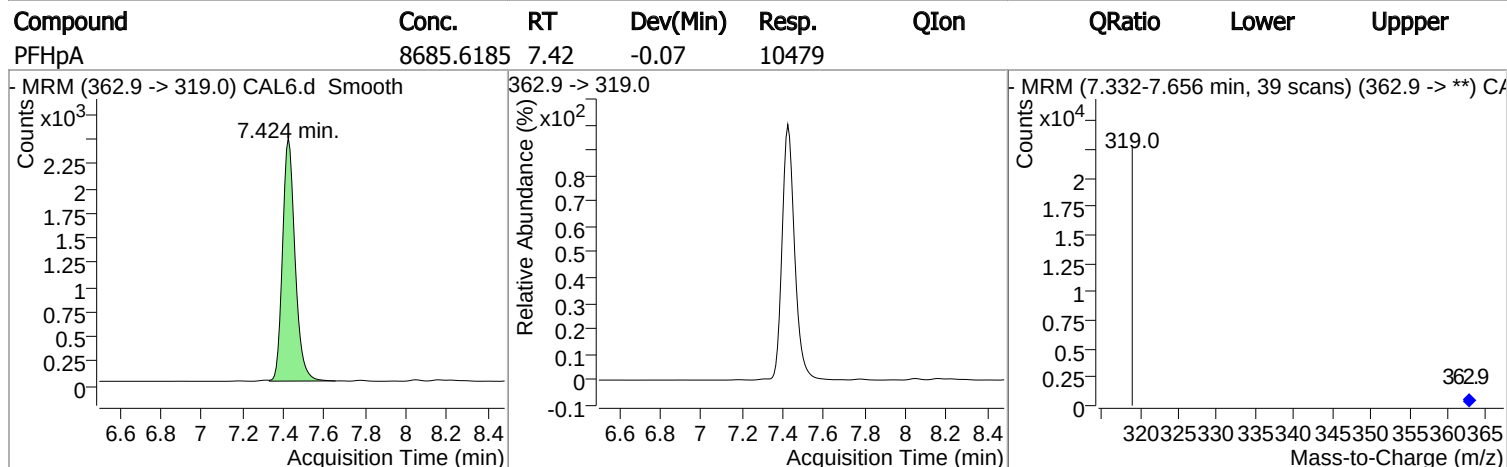
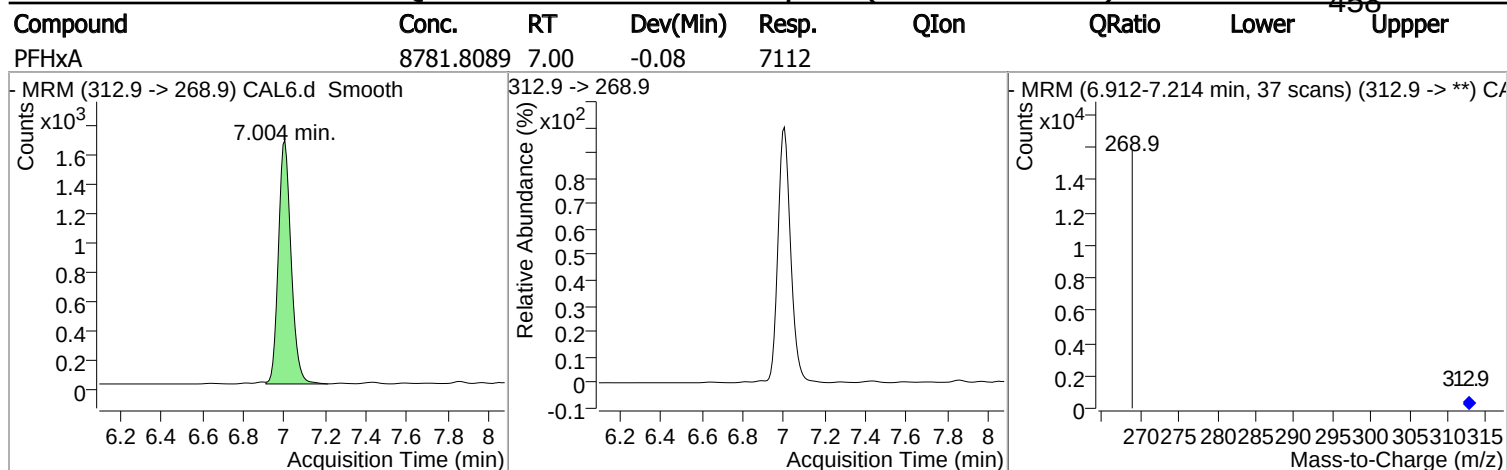
| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units |   | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|---|----------|
| Internal Standards          |                      |                |       |                    |       |   |          |
| M PFOA C13                  | 7.718                | 416.9 -> 371.9 | 11673 | 10000.0000         | pg/ml | m | -0.059   |
| M PFOS C13                  | 7.951                | 502.9 -> 80.0  | 15636 | 28700.0000         | pg/ml |   | -0.042   |
| M d3-N-MeFOSAA              | 8.218                | 573.2 -> 419.0 | 6739  | 40000.0000         | pg/ml |   | -0.042   |
| System Monitoring Compounds |                      |                |       |                    |       |   |          |
| S PFHxA C13                 | 7.004                | 314.9 -> 269.9 | 11672 | 14018.7399         | pg/ml | m | -0.084   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 140.19% |       | * |          |
| S PFDA C13                  | 8.135                | 514.9 -> 469.9 | 18928 | 15575.2584         | pg/ml |   | -0.042   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 155.75% |       | * |          |
| S d5-N-MeFOSAA              | 8.302                | 589.2 -> 419.0 | 9721  | 60995.7375         | pg/ml |   | -0.034   |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 152.49% |       | * |          |
| Target Compounds            |                      |                |       |                    |       |   | QValue   |
| T PFBA                      | 2.133                | 213.0 -> 168.9 | 1663  | 8798.9161          | pg/ml |   | 100      |
| T PFPeA                     | 6.139                | 263.0 -> 219.0 | 3278  | 8543.6335          | pg/ml |   | 100      |
| T PFBS                      | 6.500                | 298.9 -> 80.0  | 2561  | 8103.0304          | pg/ml |   | 100      |
| T PFHxA                     | 7.004                | 312.9 -> 268.9 | 7112  | 8781.8089          | pg/ml |   | 100      |
| T PFHpA                     | 7.424                | 362.9 -> 319.0 | 10479 | 8685.6185          | pg/ml |   | 100      |
| T PFHxS-Total               | 7.458                | 398.9 -> 80.0  | 3854  | 7753.5257          | pg/ml | m | 100      |
| T 6.2 FTS                   | 7.717                | 427.0 -> 406.8 | 1316  | 10162.0995         | pg/ml |   | 100      |
| T PFOA-Total                | 7.718                | 412.9 -> 368.9 | 13133 | 8569.2657          | pg/ml |   | 100      |
| T PFHpS                     | 7.725                | 449.0 -> 79.7  | 2547  | 9829.9625          | pg/ml |   | 100      |
| T PFOS-Total                | 7.951                | 498.9 -> 80.0  | 6953  | 8594.9414          | pg/ml |   | 100      |
| T PFNA                      | 7.952                | 462.9 -> 418.9 | 7919  | 8517.6962          | pg/ml |   | 100      |
| T 8.2 FTS                   | 8.143                | 527.0 -> 81.0  | 2043  | 9536.4514          | pg/ml |   | 100      |
| T PFDA                      | 8.136                | 513.1 -> 469.0 | 15990 | 9322.2232          | pg/ml |   | 100      |
| T N-MeFOSAA                 | 8.227                | 570.2 -> 419.1 | 1738  | 8677.9697          | pg/ml |   | 100      |
| T FOSA                      | 8.262                | 497.9 -> 77.9  | 12484 | 9739.5686          | pg/ml |   | 100      |
| T PFDS                      | 8.293                | 599.0 -> 80.0  | 4154  | 8217.8896          | pg/ml |   | 100      |
| T PFUnA                     | 8.303                | 563.1 -> 519.0 | 19510 | 9874.2718          | pg/ml |   | 100      |
| T N-EtFOSAA                 | 8.302                | 584.2 -> 419.0 | 1457  | 8800.5610          | pg/ml |   | 100      |
| T PFDoA                     | 8.452                | 613.1 -> 569.0 | 24250 | 8763.9734          | pg/ml |   | 100      |
| T PFTTrDA                   | 8.612                | 663.1 -> 619.0 | 26941 | 8536.5446          | pg/ml |   | 100      |
| T PFTA                      | 8.797                | 713.1 -> 669.1 | 22456 | 8482.8190          | pg/ml |   | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

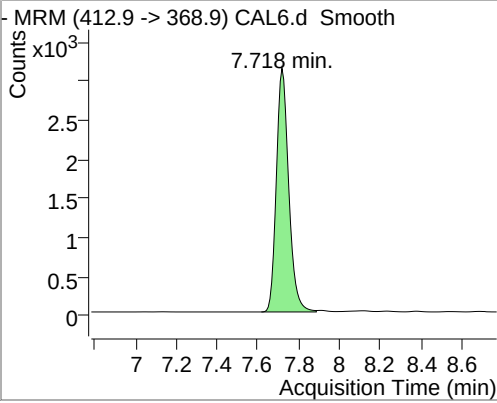
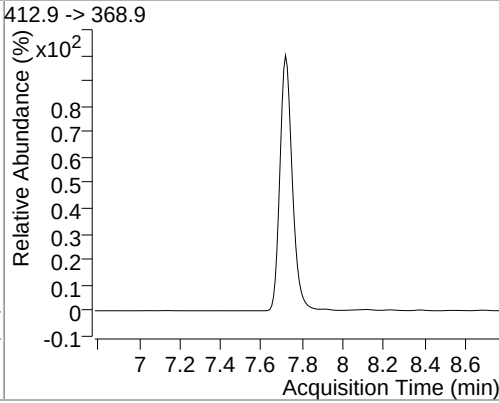
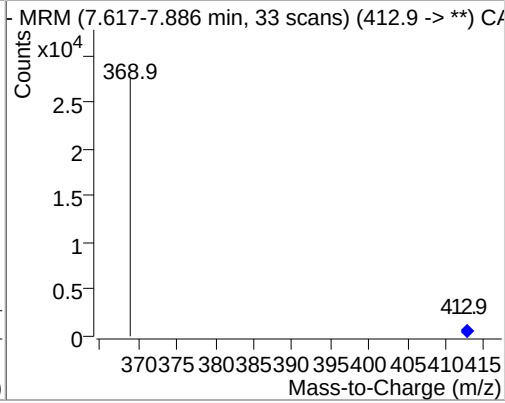
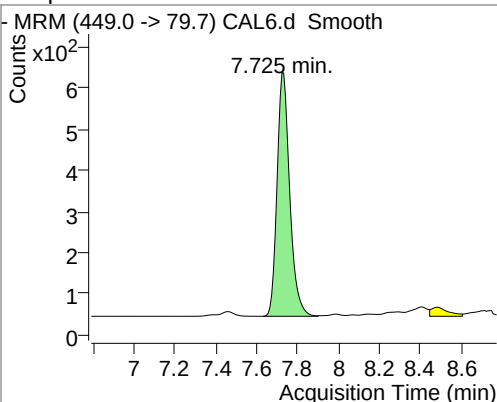
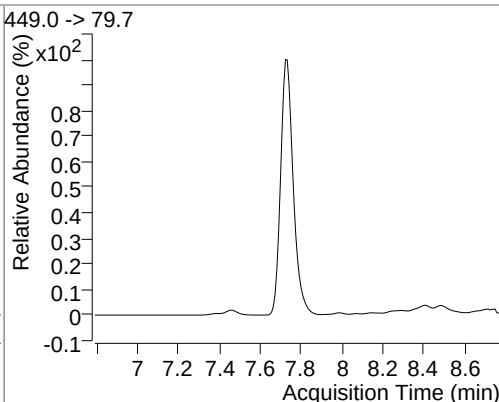
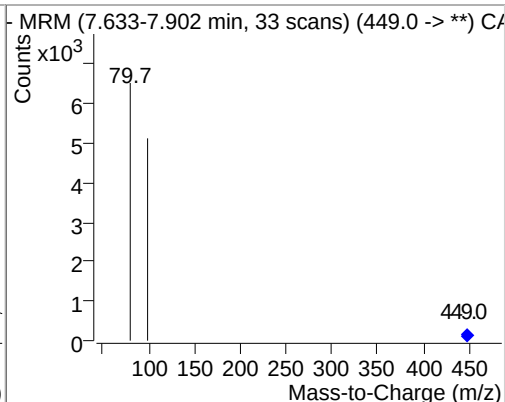
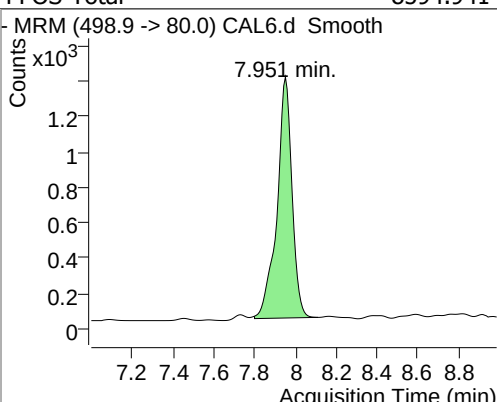
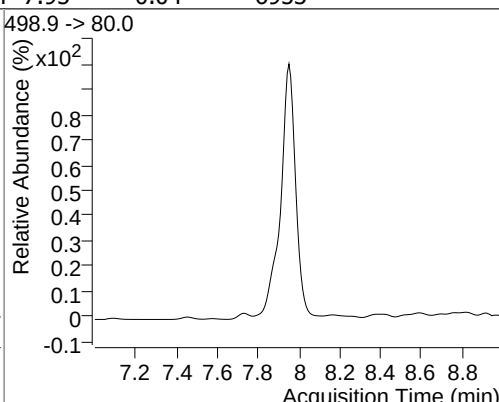
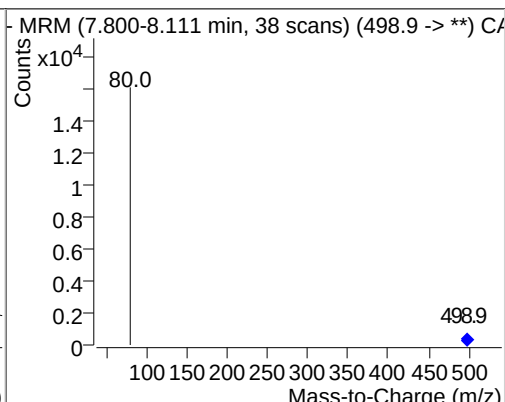
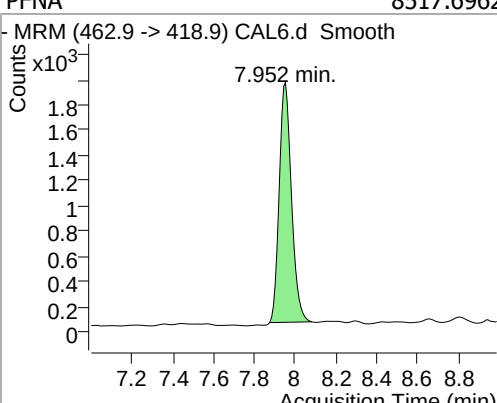
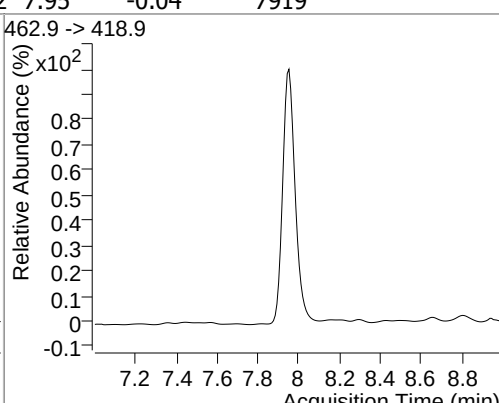
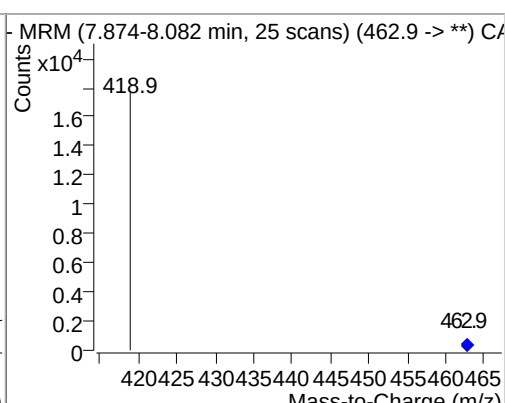
## Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



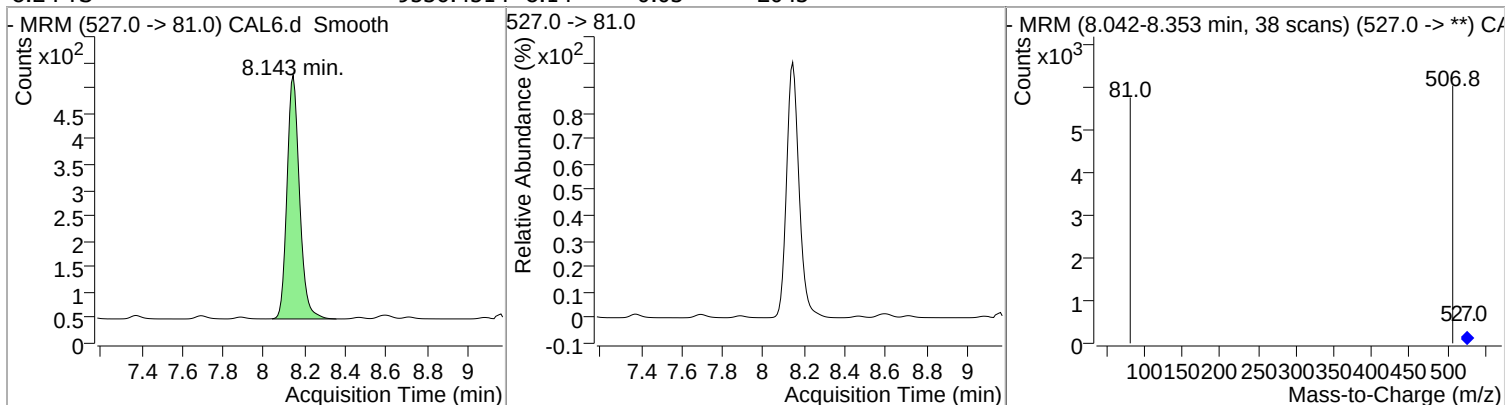
# Quantitation Results Report (Not Reviewed)

| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|----------|-------|------|--------|-------|-------|
| PFOA-Total                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8569.2657 | 7.72 | -0.06    | 13133 |      |        |       |       |
| <div> <div> MRM (412.9 -&gt; 368.9) CAL6.d Smooth<br/>  </div> <div> MRM (412.9 -&gt; 368.9)<br/>  </div> <div> MRM (7.617-7.886 min, 33 scans) (412.9 -&gt; **) CA<br/>  </div> </div>       |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFHpS                                                                                                                                                                                                                                                                                                                                                                                                                                              | 9829.9625 | 7.73 | -0.06    | 2547  |      |        |       |       |
| <div> <div> MRM (449.0 -&gt; 79.7) CAL6.d Smooth<br/>  </div> <div> MRM (449.0 -&gt; 79.7)<br/>  </div> <div> MRM (7.633-7.902 min, 33 scans) (449.0 -&gt; **) CA<br/>  </div> </div>      |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFOS-Total                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8594.9414 | 7.95 | -0.04    | 6953  |      |        |       |       |
| <div> <div> MRM (498.9 -&gt; 80.0) CAL6.d Smooth<br/>  </div> <div> MRM (498.9 -&gt; 80.0)<br/>  </div> <div> MRM (7.800-8.111 min, 38 scans) (498.9 -&gt; **) CA<br/>  </div> </div>   |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFNA                                                                                                                                                                                                                                                                                                                                                                                                                                               | 8517.6962 | 7.95 | -0.04    | 7919  |      |        |       |       |
| <div> <div> MRM (462.9 -&gt; 418.9) CAL6.d Smooth<br/>  </div> <div> MRM (462.9 -&gt; 418.9)<br/>  </div> <div> MRM (7.874-8.082 min, 25 scans) (462.9 -&gt; **) CA<br/>  </div> </div> |           |      |          |       |      |        |       |       |

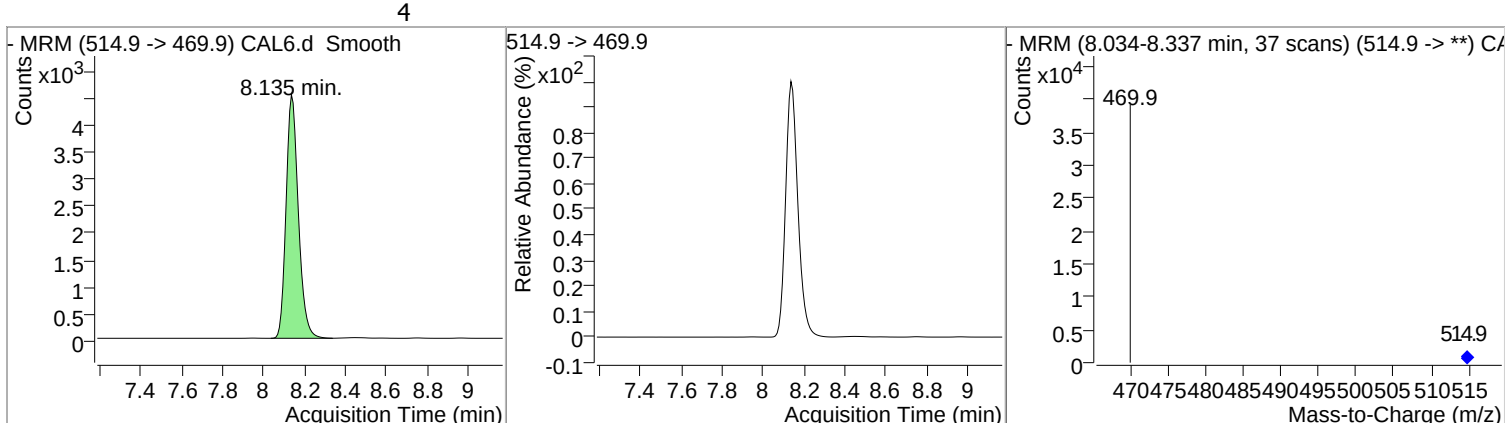


# Quantitation Results Report (Not Reviewed)

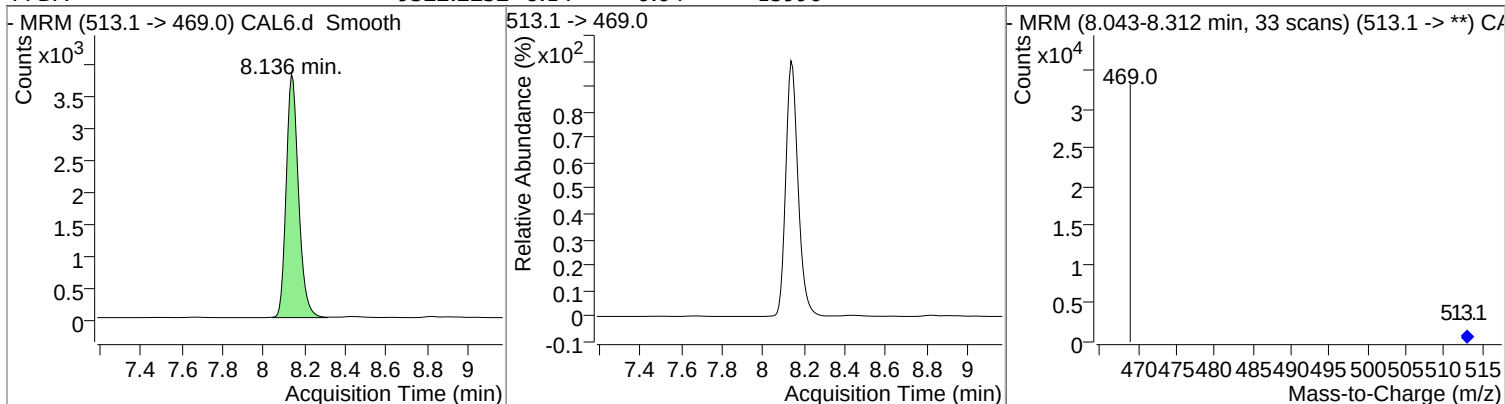
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| 8.2 FTS  | 9536.4514 | 8.14 | -0.03    | 2043  |      |        |       |       |



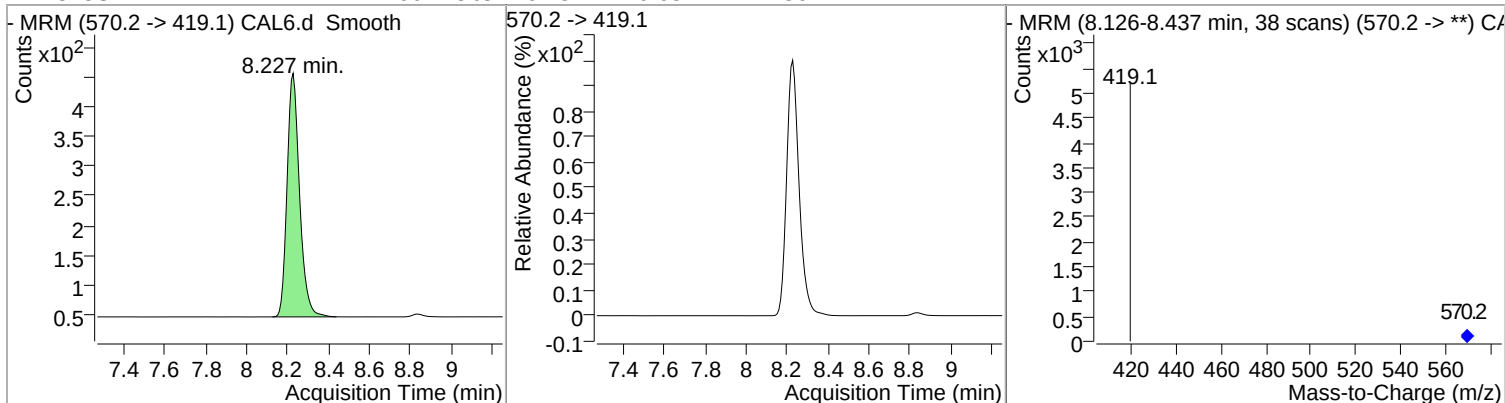
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFDA C13 | 15575.258 | 8.14 | -0.04    | 18928 |      |        |       |       |



| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFDA     | 9322.2232 | 8.14 | -0.04    | 15990 |      |        |       |       |

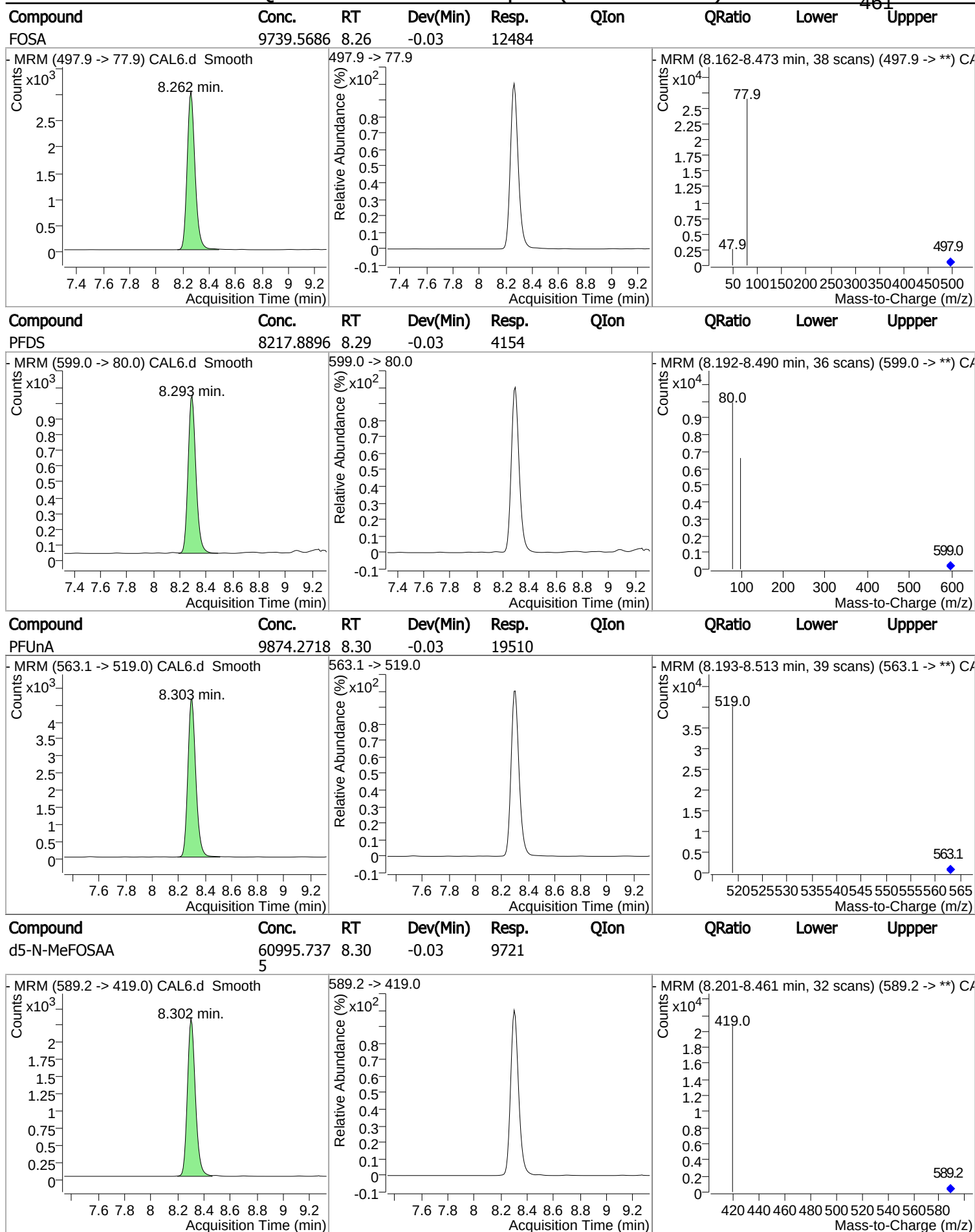


| Compound  | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|-----------|-----------|------|----------|-------|------|--------|-------|-------|
| N-MeFOSAA | 8677.9697 | 8.23 | -0.03    | 1738  |      |        |       |       |

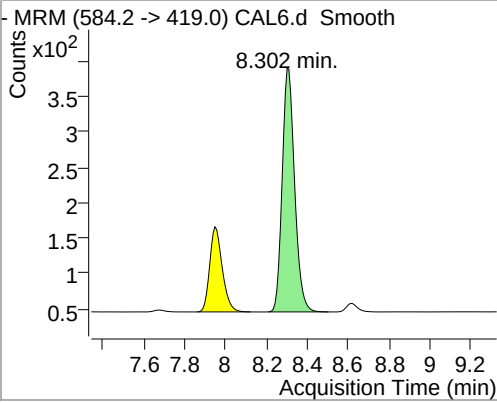
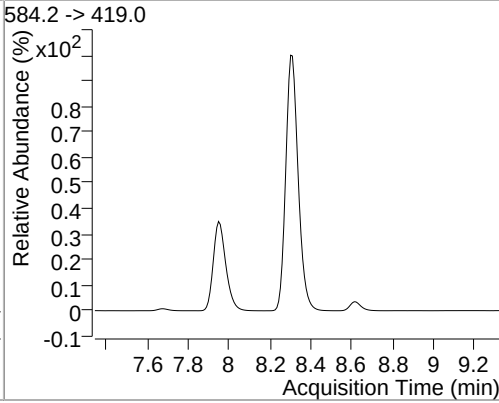
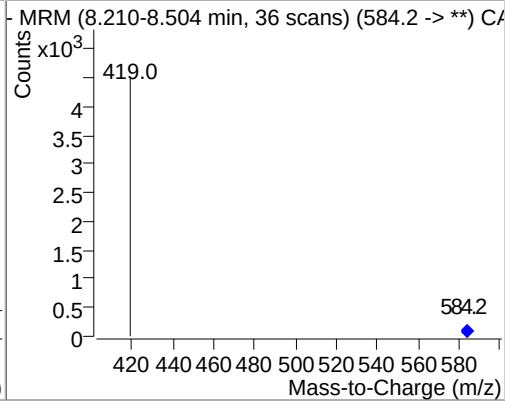
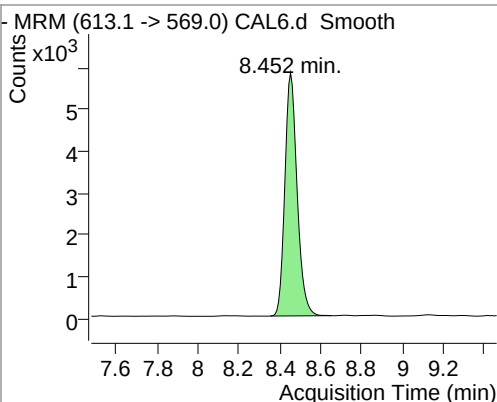
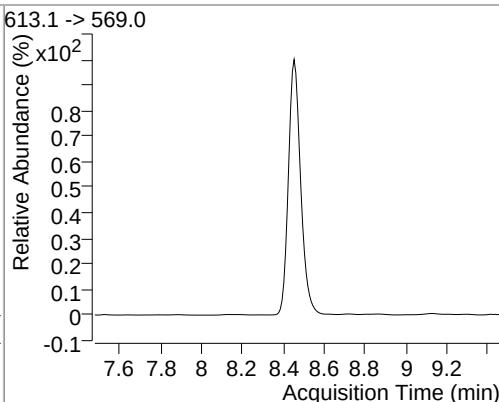
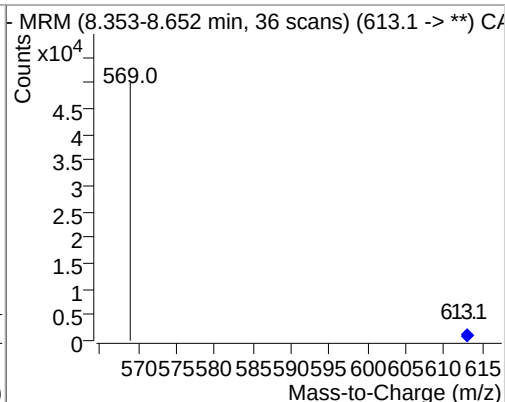
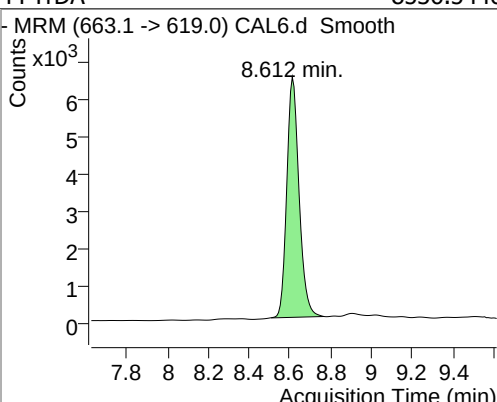
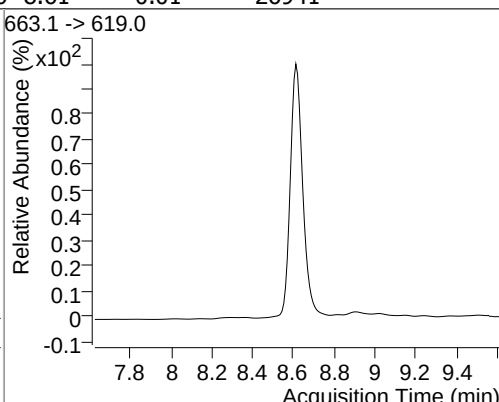
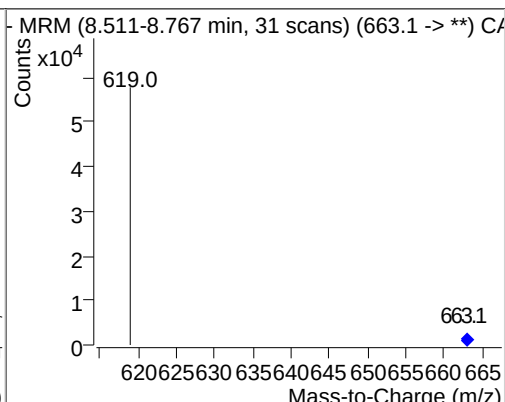
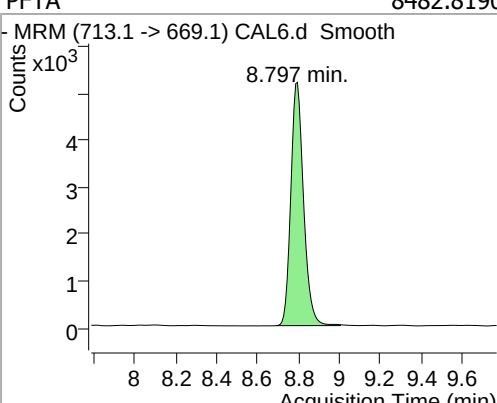
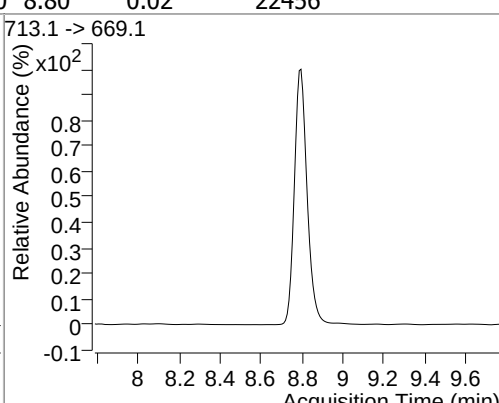
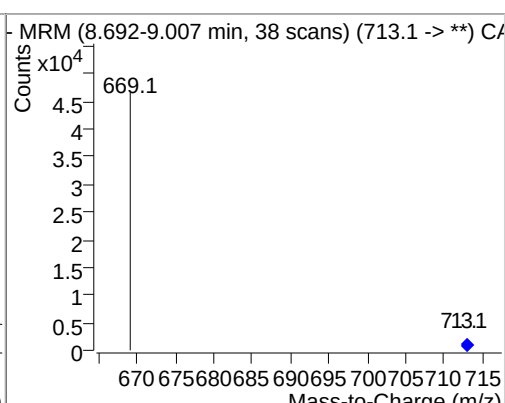




# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)

| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                     | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|----------|-------|------|--------|-------|-------|
| N-EtFOSAA                                                                                                                                                                                                                                                                                                                                                                                                                                    | 8800.5610 | 8.30 | -0.03    | 1457  |      |        |       |       |
| <div> <div> MRM (584.2 -&gt; 419.0) CAL6.d Smooth<br/>  </div> <div> 584.2 -&gt; 419.0<br/>  </div> <div> MRM (8.210-8.504 min, 36 scans) (584.2 -&gt; **) CA<br/>  </div> </div>       |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                     | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFDaA                                                                                                                                                                                                                                                                                                                                                                                                                                        | 8763.9734 | 8.45 | -0.02    | 24250 |      |        |       |       |
| <div> <div> MRM (613.1 -&gt; 569.0) CAL6.d Smooth<br/>  </div> <div> 613.1 -&gt; 569.0<br/>  </div> <div> MRM (8.353-8.652 min, 36 scans) (613.1 -&gt; **) CA<br/>  </div> </div>    |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                     | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFTTrDA                                                                                                                                                                                                                                                                                                                                                                                                                                      | 8536.5446 | 8.61 | -0.01    | 26941 |      |        |       |       |
| <div> <div> MRM (663.1 -&gt; 619.0) CAL6.d Smooth<br/>  </div> <div> 663.1 -&gt; 619.0<br/>  </div> <div> MRM (8.511-8.767 min, 31 scans) (663.1 -&gt; **) CA<br/>  </div> </div> |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                     | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFTA                                                                                                                                                                                                                                                                                                                                                                                                                                         | 8482.8190 | 8.80 | 0.02     | 22456 |      |        |       |       |
| <div> <div> MRM (713.1 -&gt; 669.1) CAL6.d Smooth<br/>  </div> <div> 713.1 -&gt; 669.1<br/>  </div> <div> MRM (8.692-9.007 min, 38 scans) (713.1 -&gt; **) CA<br/>  </div> </div> |           |      |          |       |      |        |       |       |

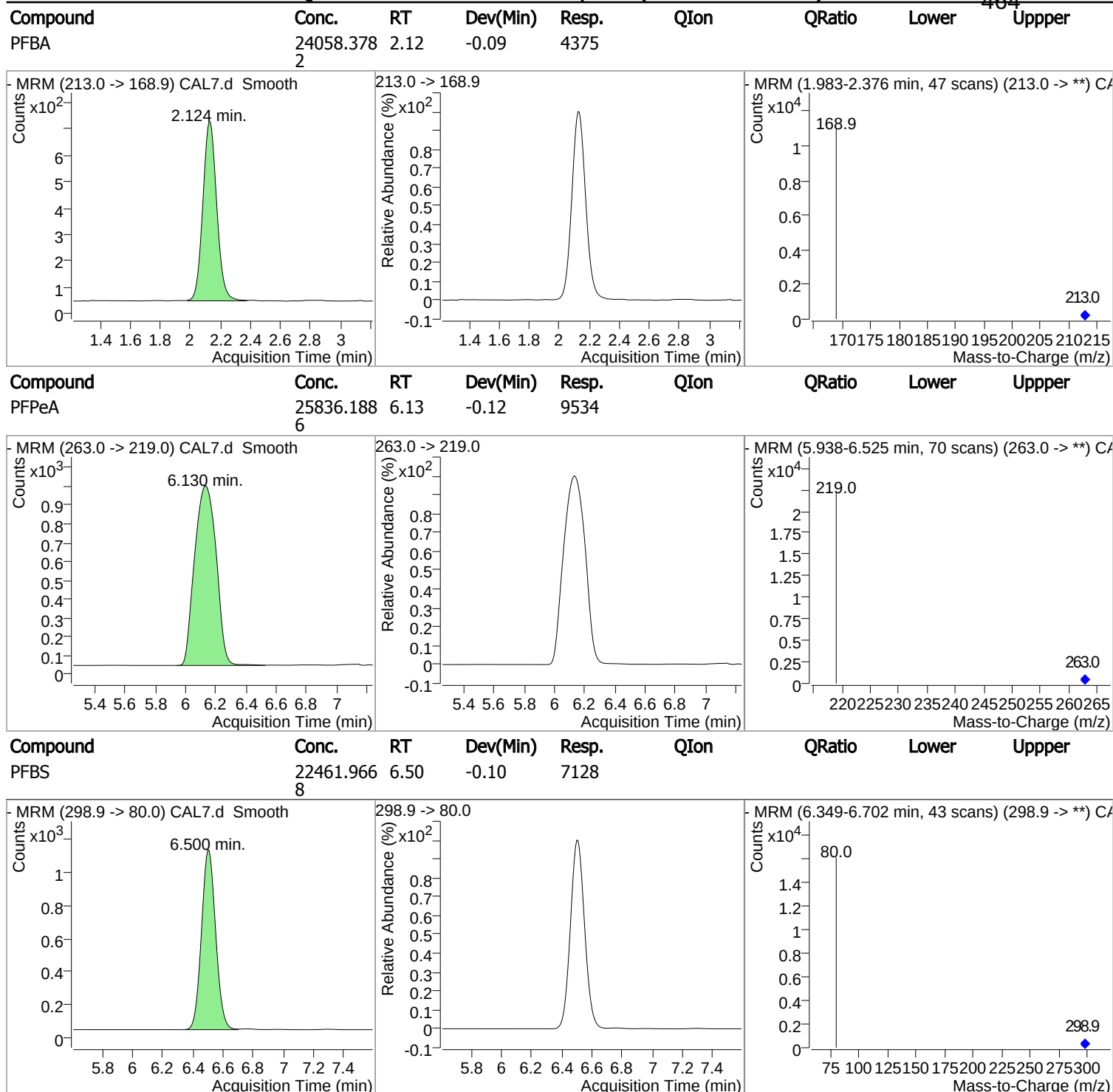
## Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | CAL7.d         | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 7:36:07 PM |
| Sample Name    | CAL7           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | CAL.batch.bin  | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

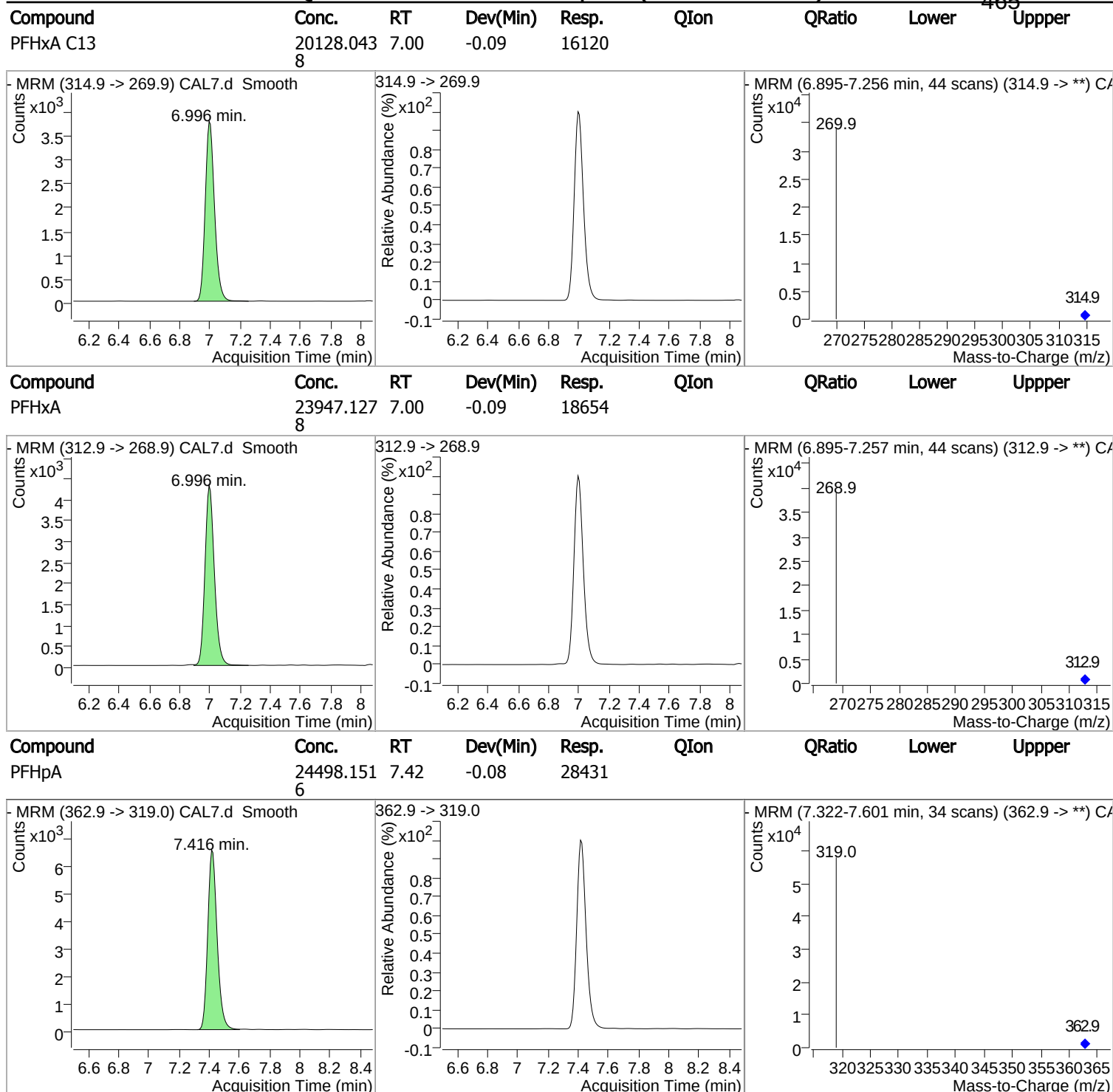
| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|----------|
| Internal Standards          |                      |                |       |                    |       |          |
| M PFOA C13                  | 7.709                | 416.9 -> 371.9 | 11228 | 10000.0000         | pg/ml | -0.067   |
| M PFOS C13                  | 7.942                | 502.9 -> 80.0  | 15697 | 28700.0000         | pg/ml | -0.050   |
| M d3-N-MeFOSAA              | 8.218                | 573.2 -> 419.0 | 6927  | 40000.0000         | pg/ml | -0.042   |
| System Monitoring Compounds |                      |                |       |                    |       |          |
| S PFHxA C13                 | 6.996                | 314.9 -> 269.9 | 16120 | 20128.0438         | pg/ml | -0.092   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 201.28% | *     |          |
| S PFDA C13                  | 8.135                | 514.9 -> 469.9 | 23933 | 20474.2471         | pg/ml | -0.042   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 204.74% | *     |          |
| S d5-N-MeFOSAA              | 8.302                | 589.2 -> 419.0 | 11240 | 68614.1688         | pg/ml | -0.034   |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 171.54% | *     |          |
| Target Compounds            |                      |                |       |                    |       | QValue   |
| T PFBA                      | 2.124                | 213.0 -> 168.9 | 4375  | 24058.3782         | pg/ml | 100      |
| T PFPeA                     | 6.130                | 263.0 -> 219.0 | 9534  | 25836.1886         | pg/ml | 100      |
| T PFBS                      | 6.500                | 298.9 -> 80.0  | 7128  | 22461.9668         | pg/ml | 100      |
| T PFHxA                     | 6.996                | 312.9 -> 268.9 | 18654 | 23947.1278         | pg/ml | 100      |
| T PFHpA                     | 7.416                | 362.9 -> 319.0 | 28431 | 24498.1516         | pg/ml | 100      |
| T PFHxS-Total               | 7.449                | 398.9 -> 80.0  | 11623 | 23293.2581         | pg/ml | 100      |
| T 6.2 FTS                   | 7.709                | 427.0 -> 406.8 | 3162  | 24333.4618         | pg/ml | 100      |
| T PFOA-Total                | 7.710                | 412.9 -> 368.9 | 38817 | 26331.7480         | pg/ml | 100      |
| T PFHpS                     | 7.725                | 449.0 -> 79.7  | 5836  | 22437.3734         | pg/ml | 100      |
| T PFOS-Total                | 7.943                | 498.9 -> 80.0  | 17498 | 21546.5362         | pg/ml | 100      |
| T PFNA                      | 7.943                | 462.9 -> 418.9 | 21219 | 23727.8194         | pg/ml | 100      |
| T 8.2 FTS                   | 8.135                | 527.0 -> 81.0  | 5145  | 23924.3536         | pg/ml | 100      |
| T PFDA                      | 8.136                | 513.1 -> 469.0 | 39907 | 24187.9385         | pg/ml | 100      |
| T N-MeFOSAA                 | 8.218                | 570.2 -> 419.1 | 4969  | 24133.0444         | pg/ml | 100      |
| T FOSA                      | 8.254                | 497.9 -> 77.9  | 32104 | 24366.2351         | pg/ml | 100      |
| T PFDS                      | 8.284                | 599.0 -> 80.0  | 11692 | 23039.3492         | pg/ml | 100      |
| T PFUnA                     | 8.294                | 563.1 -> 519.0 | 45589 | 23987.6423         | pg/ml | 100      |
| T N-EtFOSAA                 | 8.302                | 584.2 -> 419.0 | 4178  | 24558.0159         | pg/ml | 100      |
| T PFDoA                     | 8.452                | 613.1 -> 569.0 | 63186 | 23740.4645         | pg/ml | 100      |
| T PFTTrDA                   | 8.612                | 663.1 -> 619.0 | 71772 | 23642.5552         | pg/ml | 100      |
| T PFTA                      | 8.797                | 713.1 -> 669.1 | 60380 | 23712.5379         | pg/ml | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

# Quantitation Results Report (Not Reviewed)

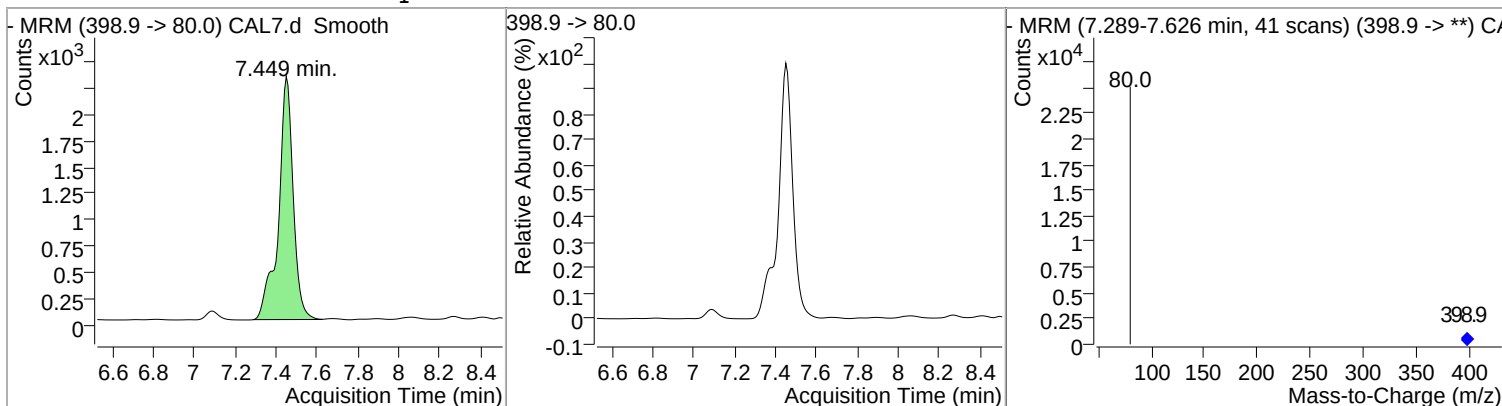


# Quantitation Results Report (Not Reviewed)

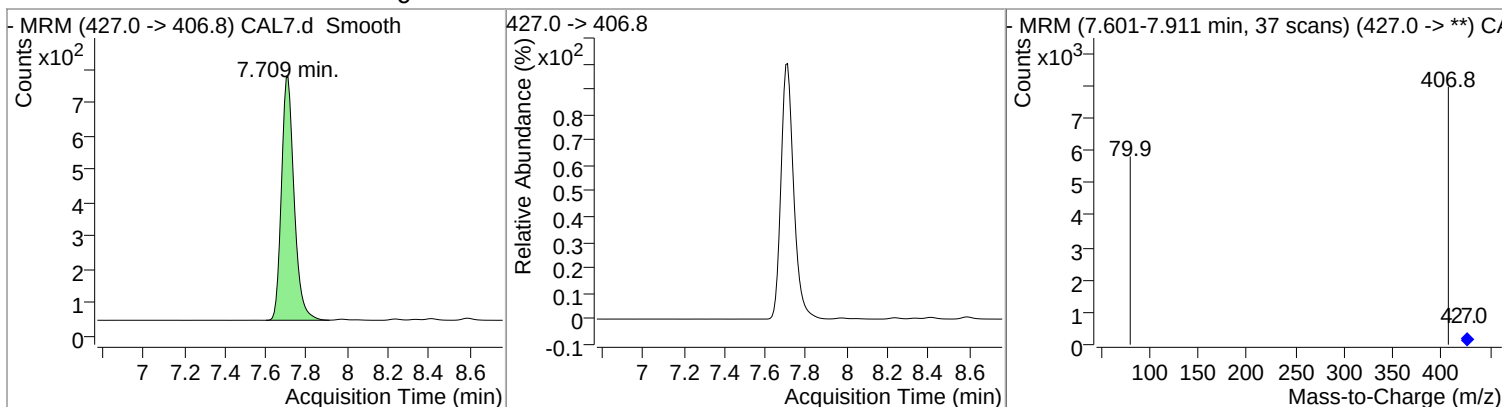


# Quantitation Results Report (Not Reviewed)

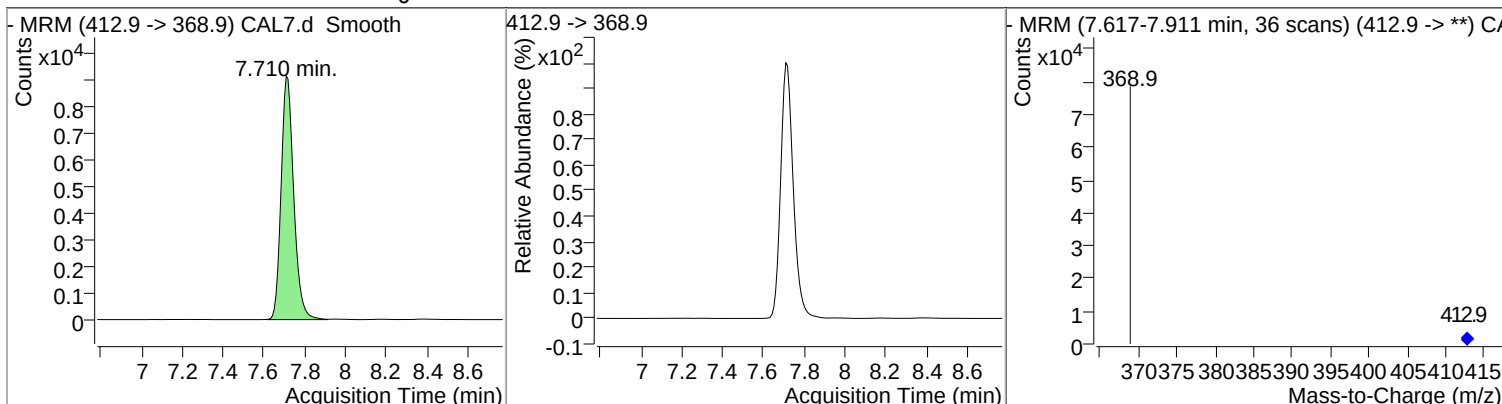
| Compound    | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|-------------|-----------|------|----------|-------|------|--------|-------|-------|
| PFHxS-Total | 23293.258 | 7.45 | -0.07    | 11623 |      |        |       |       |
|             | 1         |      |          |       |      |        |       |       |



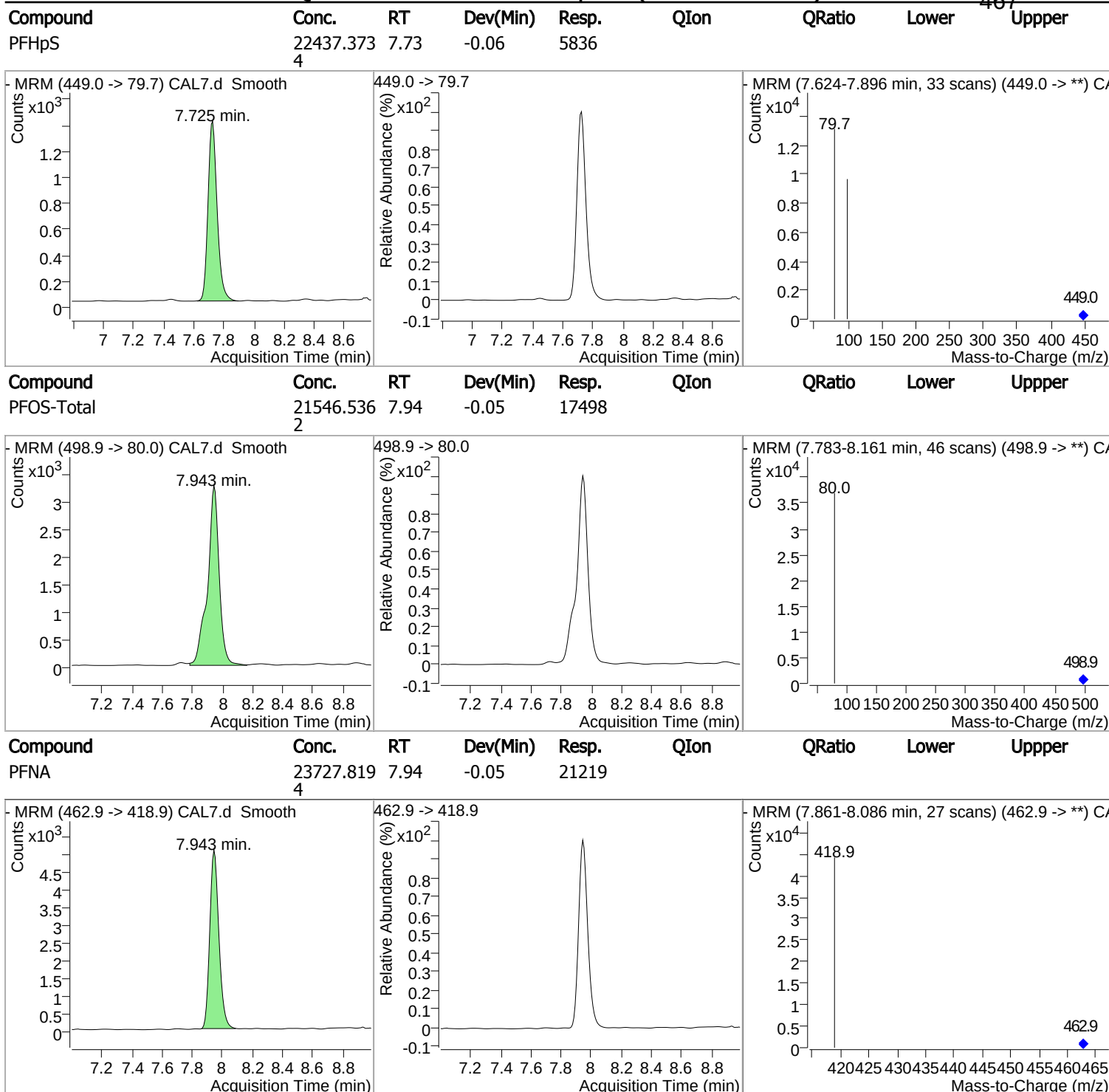
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| 6.2 FTS  | 24333.461 | 7.71 | -0.06    | 3162  |      |        |       |       |
|          | 8         |      |          |       |      |        |       |       |



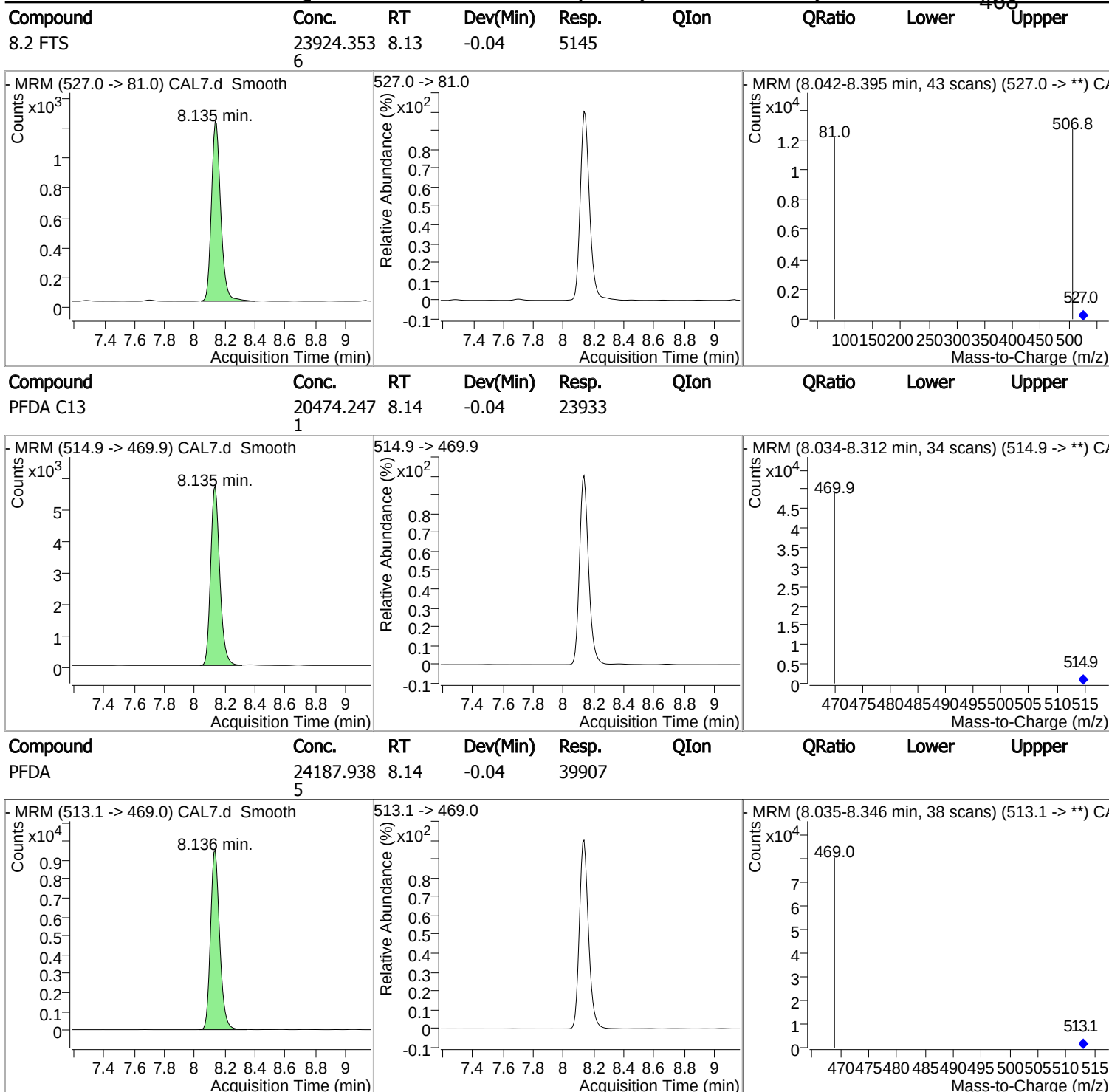
| Compound   | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|------------|-----------|------|----------|-------|------|--------|-------|-------|
| PFOA-Total | 26331.748 | 7.71 | -0.07    | 38817 |      |        |       |       |
|            | 0         |      |          |       |      |        |       |       |



# Quantitation Results Report (Not Reviewed)



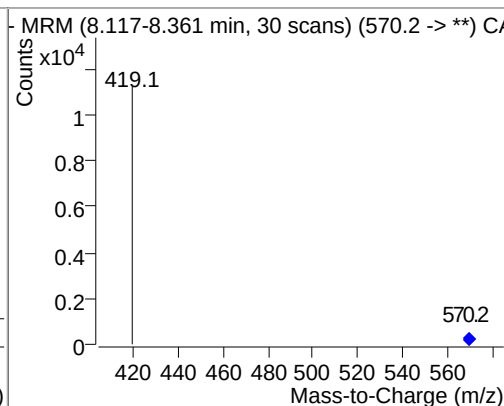
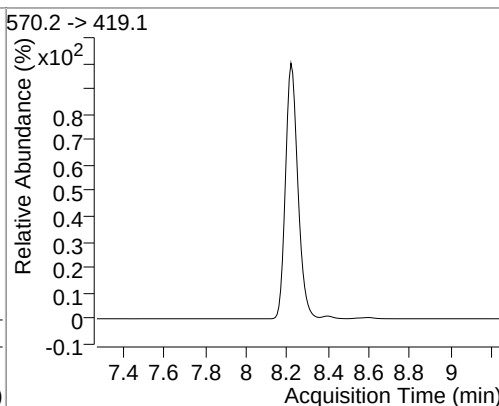
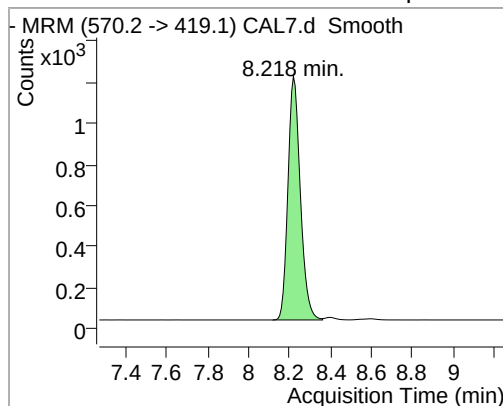
# Quantitation Results Report (Not Reviewed)



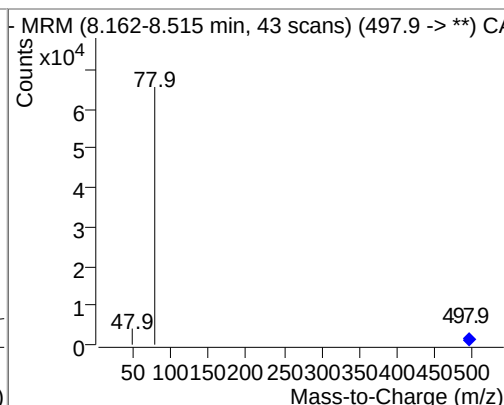
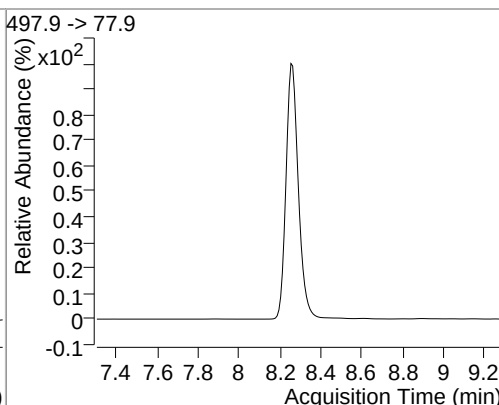
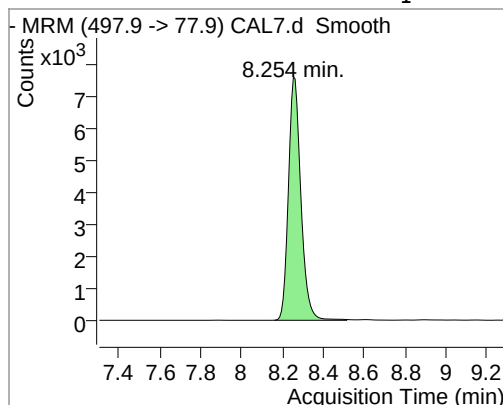


# Quantitation Results Report (Not Reviewed)

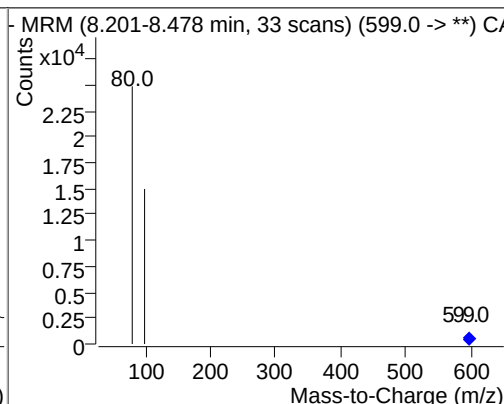
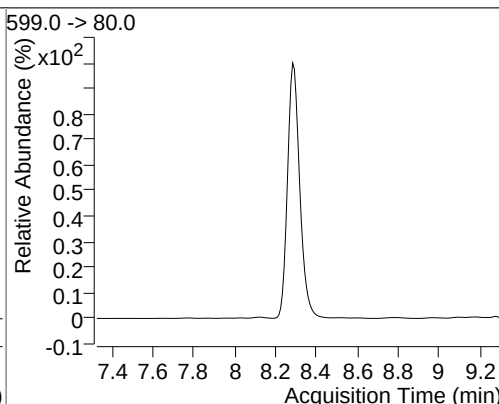
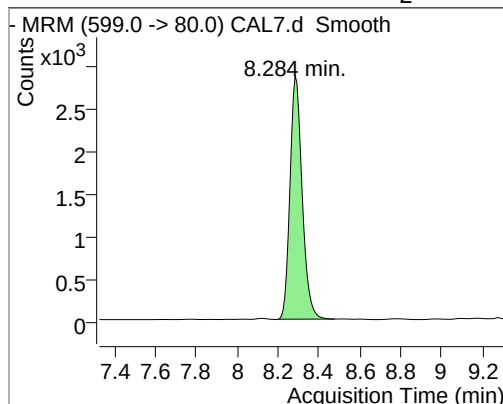
| Compound  | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|-----------|-----------|------|----------|-------|------|--------|-------|-------|
| N-MeFOSAA | 24133.044 | 8.22 | -0.04    | 4969  |      |        |       |       |
|           | 4         |      |          |       |      |        |       |       |



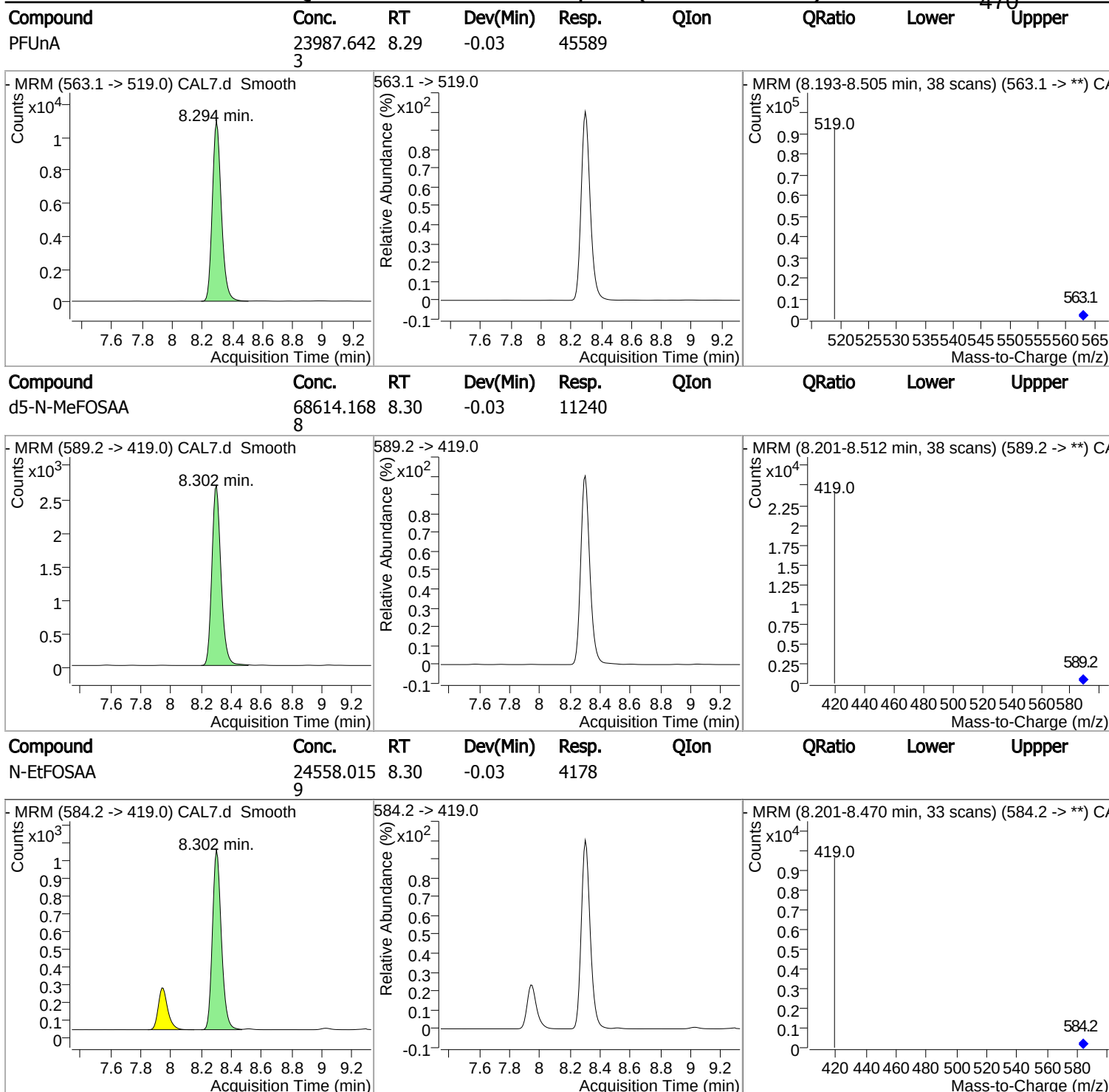
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| FOSA     | 24366.235 | 8.25 | -0.04    | 32104 |      |        |       |       |
|          | 1         |      |          |       |      |        |       |       |



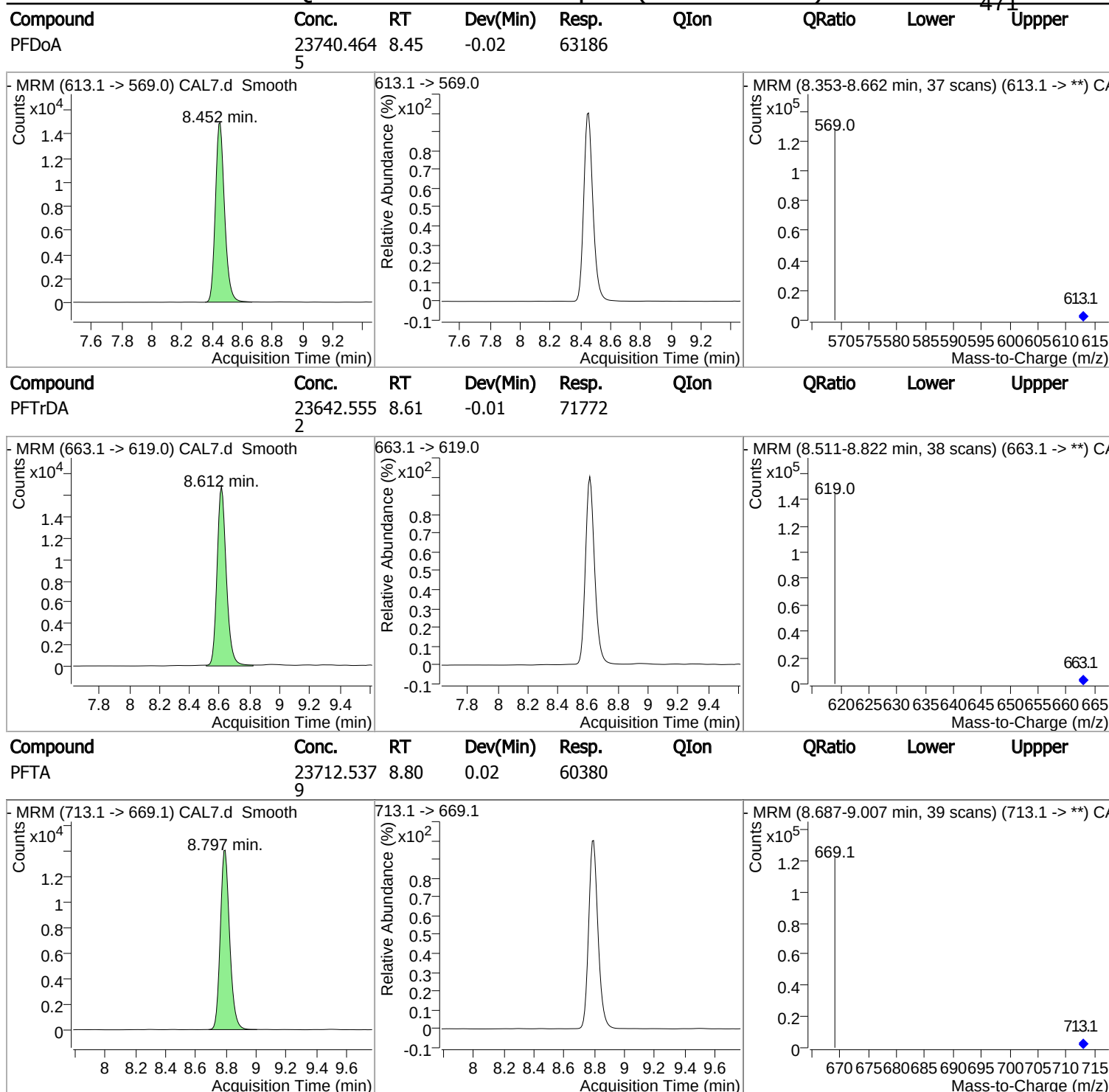
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFDS     | 23039.349 | 8.28 | -0.03    | 11692 |      |        |       |       |
|          | 2         |      |          |       |      |        |       |       |



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



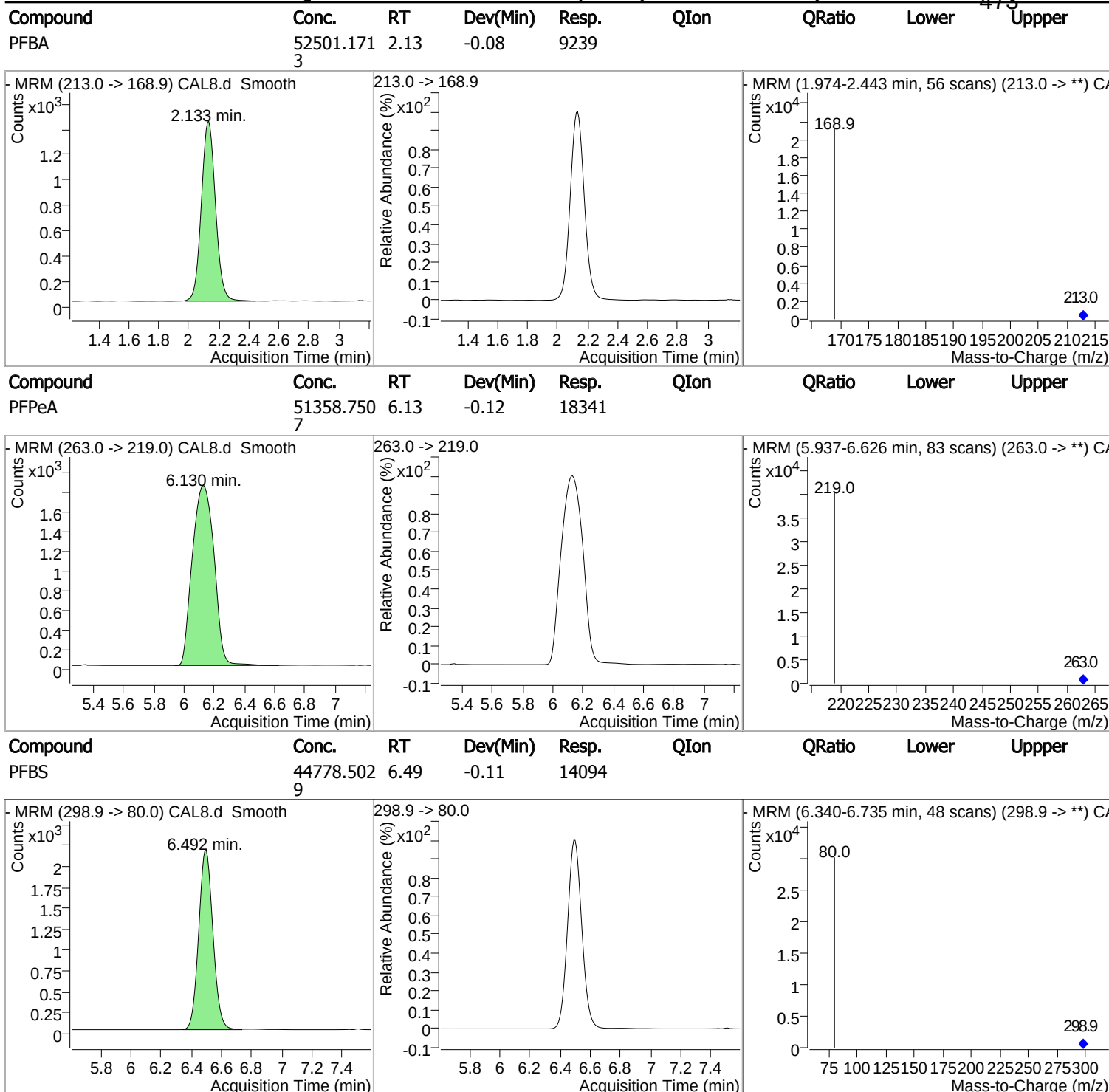
## Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
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| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 7:48:42 PM |
| Sample Name    | CAL8           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | CAL.batch.bin  | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

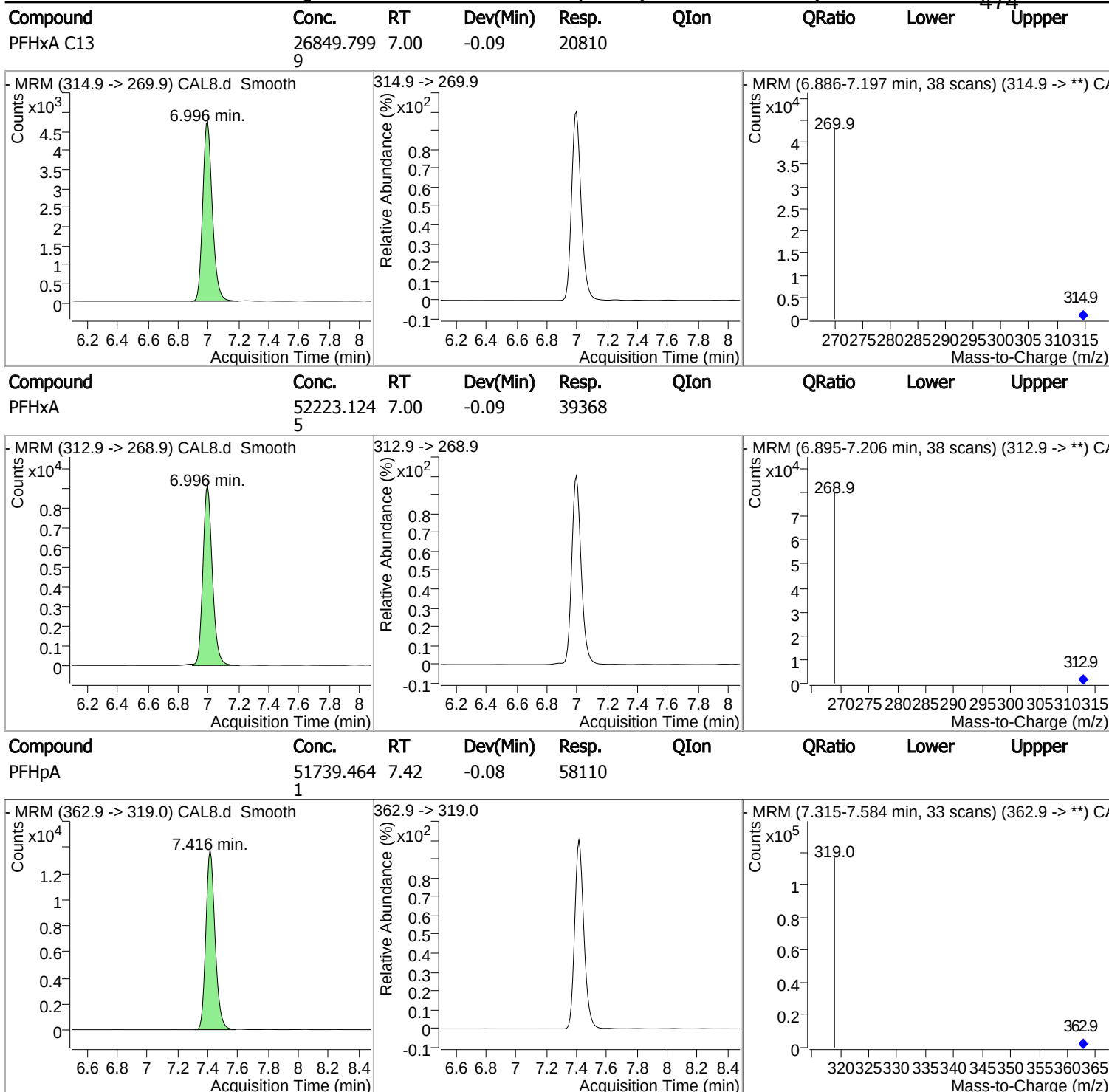
| Compound                    | RT                   | QIon           | Resp.  | Conc.              | Units | Dev(Min) |
|-----------------------------|----------------------|----------------|--------|--------------------|-------|----------|
| Internal Standards          |                      |                |        |                    |       |          |
| M PFOA C13                  | 7.709                | 416.9 -> 371.9 | 10866  | 10000.0000         | pg/ml | -0.067   |
| M PFOS C13                  | 7.942                | 502.9 -> 80.0  | 15569  | 28700.0000         | pg/ml | -0.050   |
| M d3-N-MeFOSAA              | 8.218                | 573.2 -> 419.0 | 6980   | 40000.0000         | pg/ml | -0.042   |
| System Monitoring Compounds |                      |                |        |                    |       |          |
| S PFHxA C13                 | 6.996                | 314.9 -> 269.9 | 20810  | 26849.7999         | pg/ml | -0.092   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |        | Recovery = 268.50% | *     |          |
| S PFDA C13                  | 8.127                | 514.9 -> 469.9 | 27321  | 24150.7518         | pg/ml | -0.050   |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |        | Recovery = 241.51% | *     |          |
| S d5-N-MeFOSAA              | 8.293                | 589.2 -> 419.0 | 13994  | 84776.0146         | pg/ml | -0.042   |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |        | Recovery = 211.94% | *     |          |
| Target Compounds            |                      |                |        |                    |       | QValue   |
| T PFBA                      | 2.133                | 213.0 -> 168.9 | 9239   | 52501.1713         | pg/ml | 100      |
| T PFPeA                     | 6.130                | 263.0 -> 219.0 | 18341  | 51358.7507         | pg/ml | 100      |
| T PFBS                      | 6.492                | 298.9 -> 80.0  | 14094  | 44778.5029         | pg/ml | 100      |
| T PFHxA                     | 6.996                | 312.9 -> 268.9 | 39368  | 52223.1245         | pg/ml | 100      |
| T PFHpA                     | 7.416                | 362.9 -> 319.0 | 58110  | 51739.4641         | pg/ml | 100      |
| T PFHxS-Total               | 7.449                | 398.9 -> 80.0  | 23619  | 47724.8296         | pg/ml | 100      |
| T 6.2 FTS                   | 7.700                | 427.0 -> 406.8 | 6066   | 47059.9874         | pg/ml | 100      |
| T PFOA-Total                | 7.710                | 412.9 -> 368.9 | 71799  | 50328.7203         | pg/ml | 100      |
| T PFHpS                     | 7.725                | 449.0 -> 79.7  | 12413  | 48111.3767         | pg/ml | 100      |
| T PFOS-Total                | 7.943                | 498.9 -> 80.0  | 40029  | 49694.2561         | pg/ml | 100      |
| T PFNA                      | 7.943                | 462.9 -> 418.9 | 45173  | 52196.5083         | pg/ml | 100      |
| T 8.2 FTS                   | 8.135                | 527.0 -> 81.0  | 10267  | 48132.6509         | pg/ml | 100      |
| T PFDA                      | 8.127                | 513.1 -> 469.0 | 82102  | 51420.7219         | pg/ml | 100      |
| T N-MeFOSAA                 | 8.218                | 570.2 -> 419.1 | 10518  | 50692.0337         | pg/ml | 100      |
| T FOSA                      | 8.254                | 497.9 -> 77.9  | 68440  | 51549.1890         | pg/ml | 100      |
| T PFDS                      | 8.284                | 599.0 -> 80.0  | 25596  | 50853.3125         | pg/ml | 100      |
| T PFUnA                     | 8.294                | 563.1 -> 519.0 | 93946  | 51079.0178         | pg/ml | 100      |
| T N-EtFOSAA                 | 8.302                | 584.2 -> 419.0 | 8667   | 50559.7048         | pg/ml | 100      |
| T PFDoA                     | 8.444                | 613.1 -> 569.0 | 137149 | 53247.4855         | pg/ml | 100      |
| T PFTrDA                    | 8.612                | 663.1 -> 619.0 | 155860 | 53053.0078         | pg/ml | 100      |
| T PFTA                      | 8.788                | 713.1 -> 669.1 | 131771 | 53474.3508         | pg/ml | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

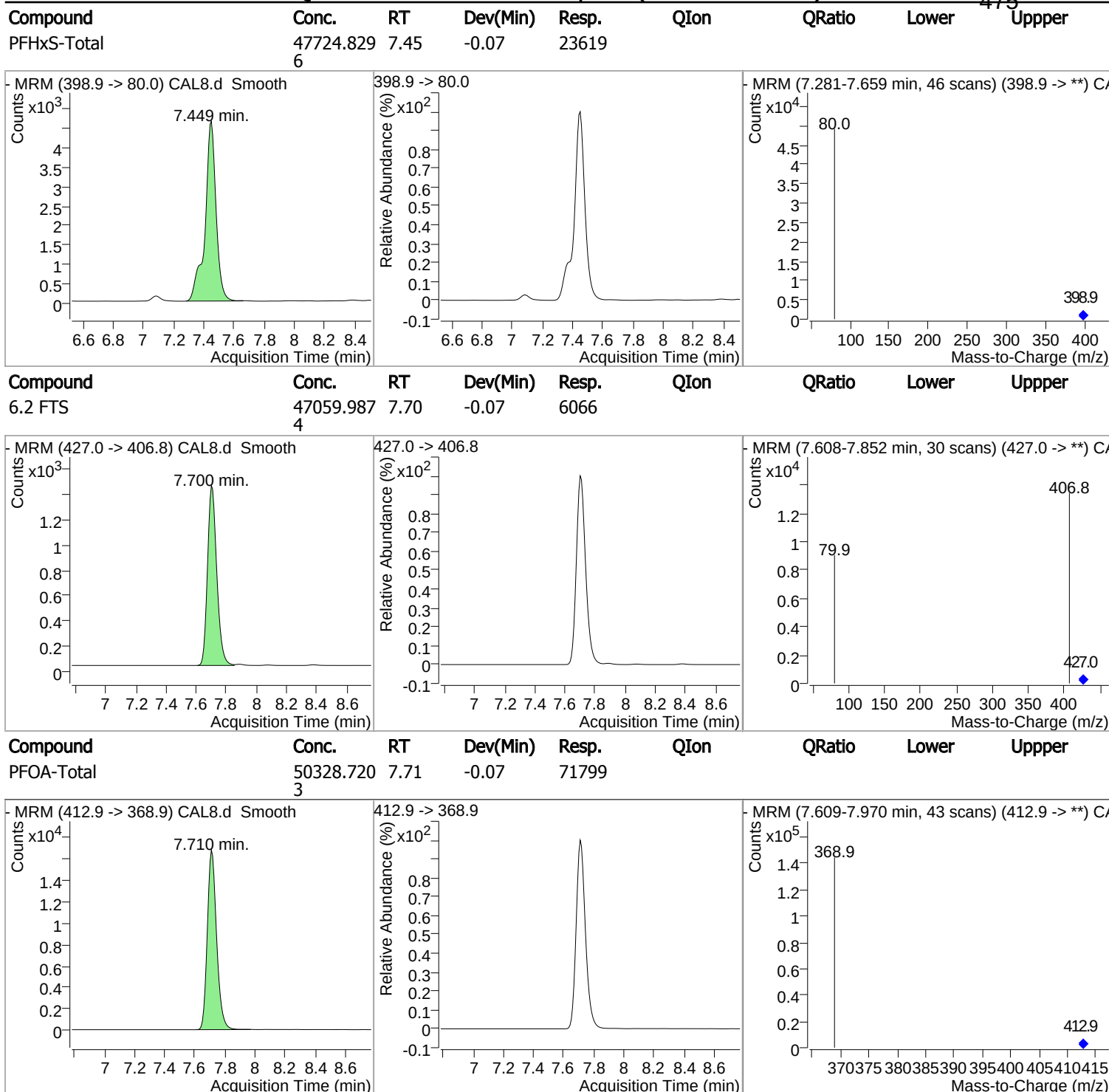
# Quantitation Results Report (Not Reviewed)



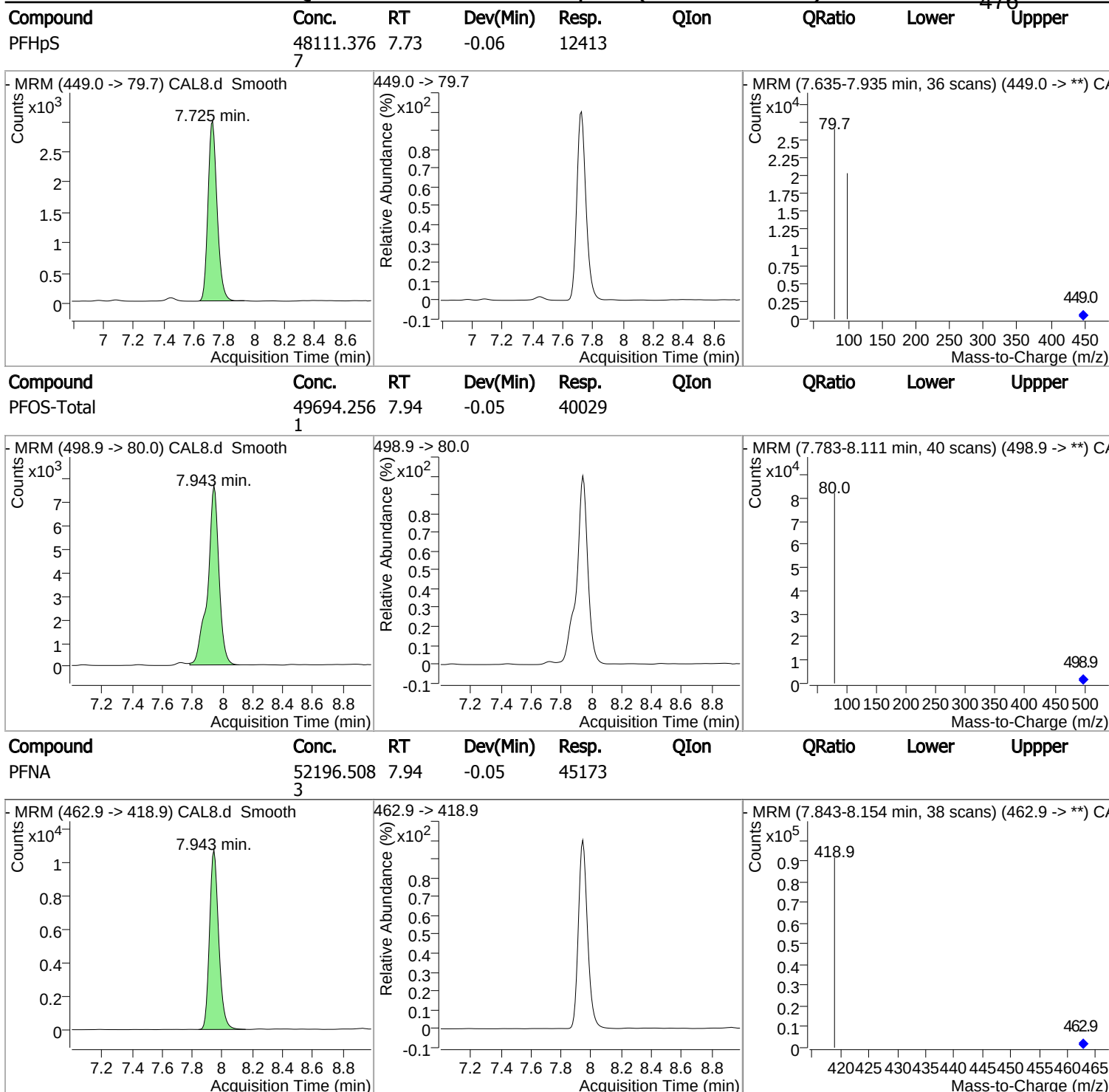
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)

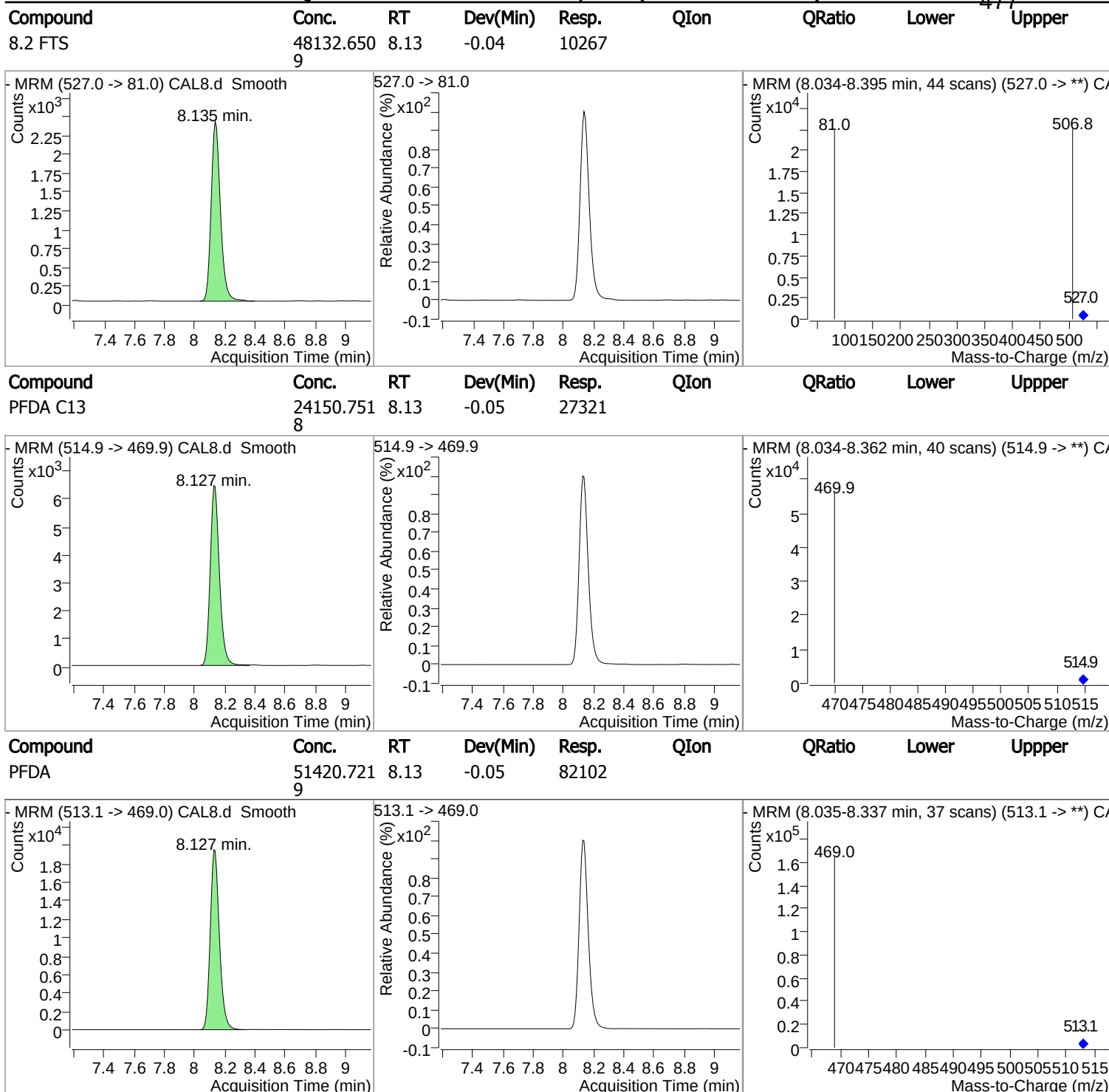


# Quantitation Results Report (Not Reviewed)

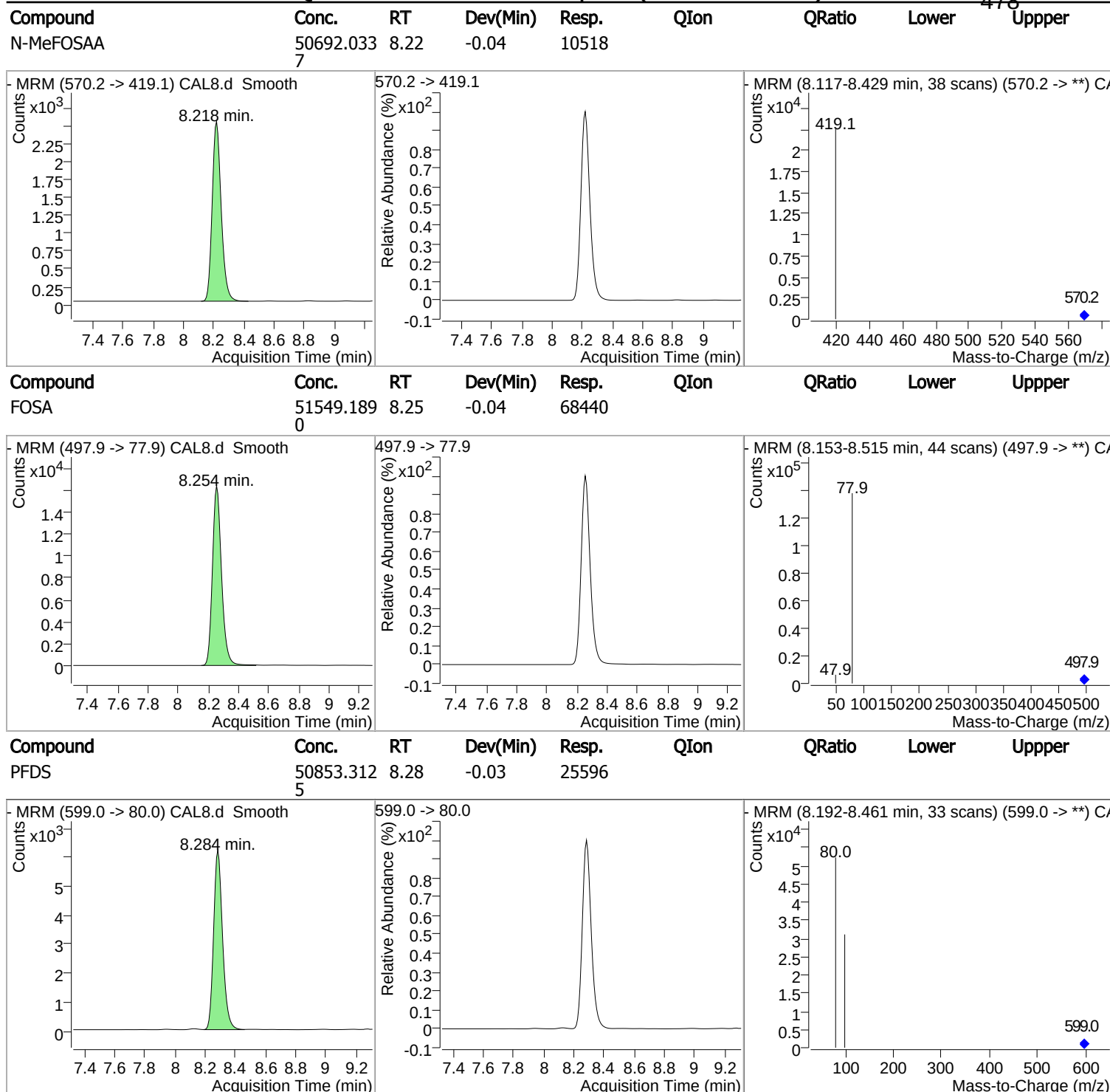




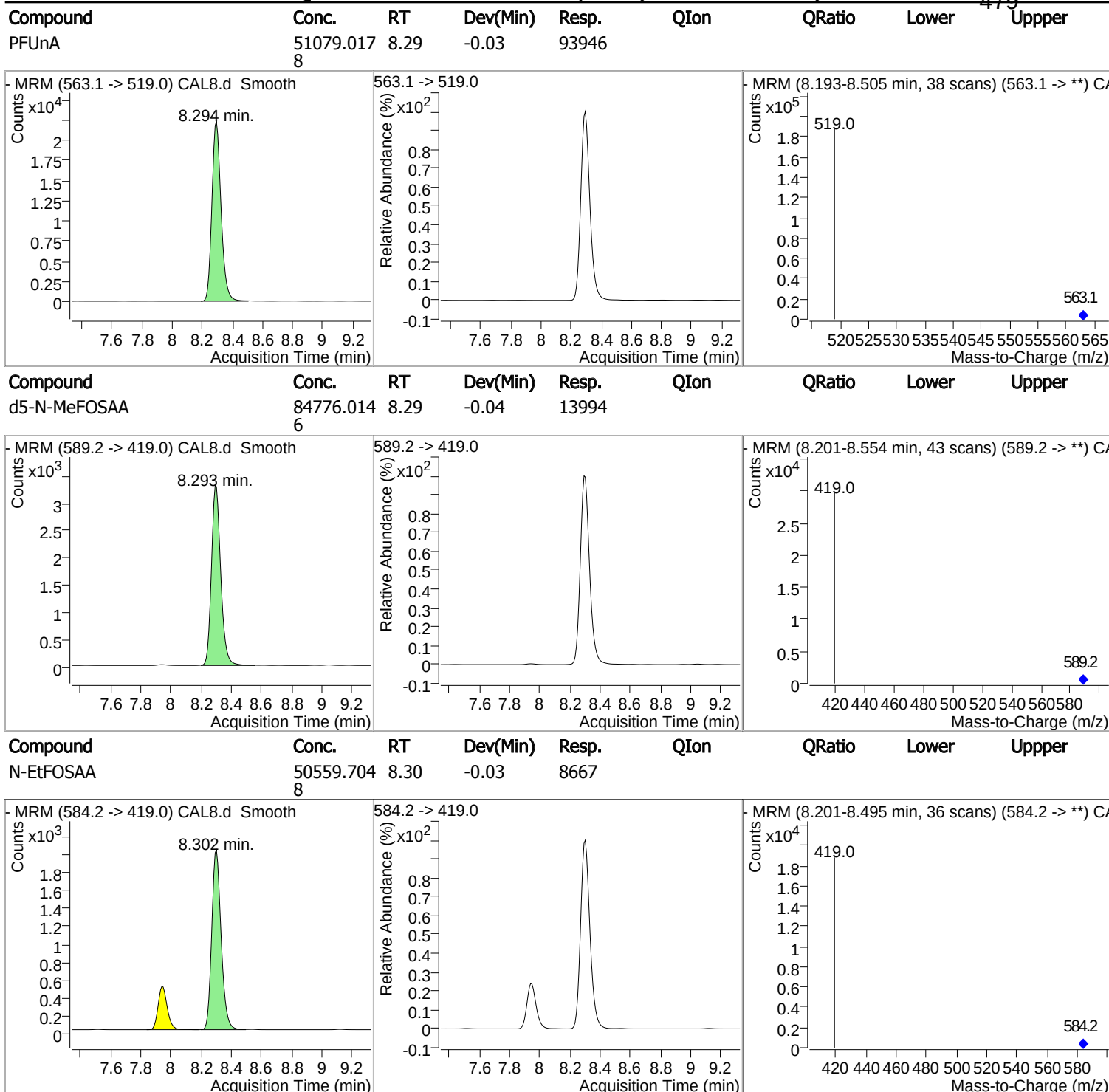
# Quantitation Results Report (Not Reviewed)



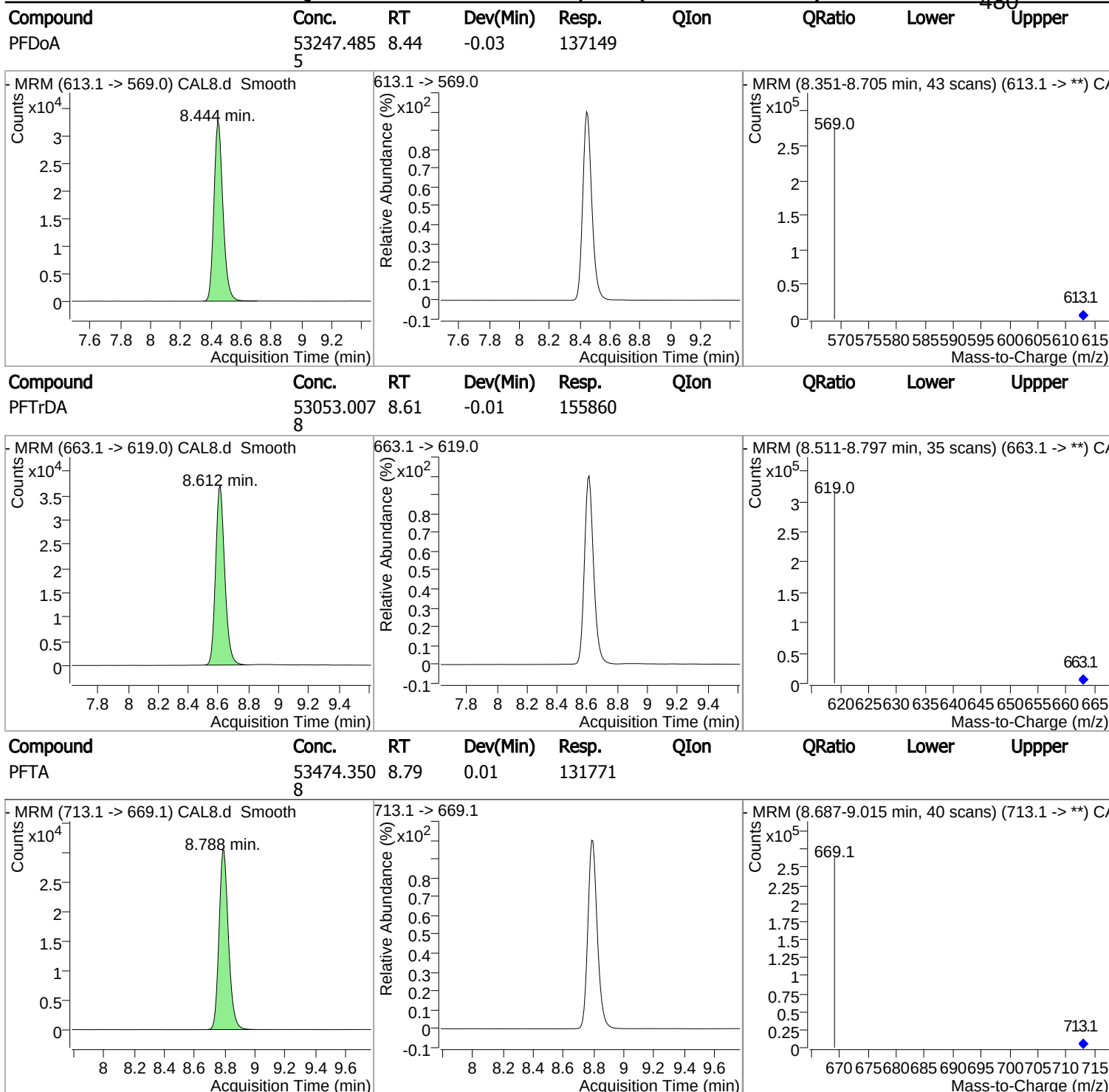
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



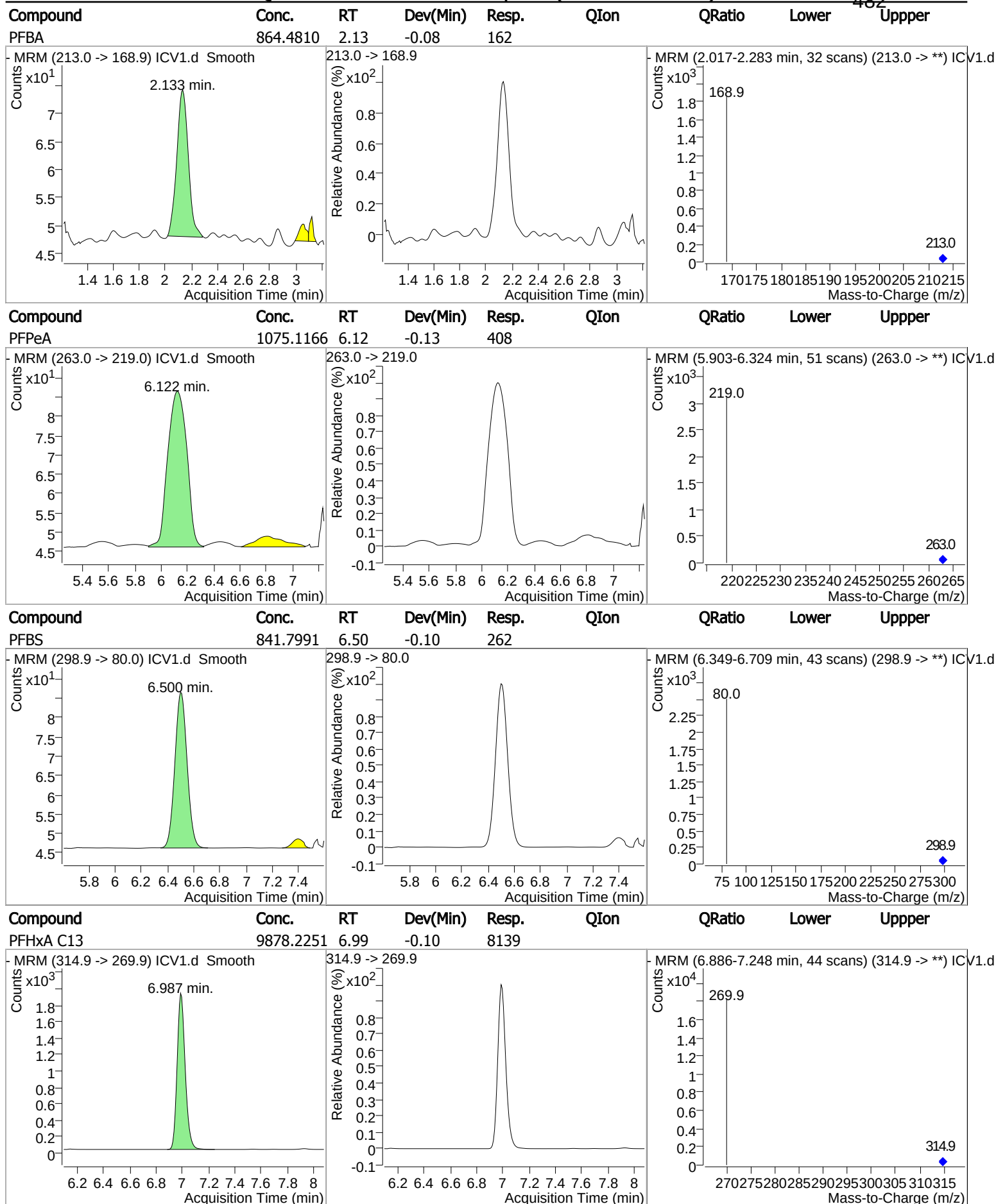
# Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | ICV1.d         | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/13/2019 8:01:20 PM |
| Sample Name    | ICV1           | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File |                | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | C.batch.bin    | Last Calib Update | 8/14/2019 2:32:16 PM |
| Ref Library    |                |                   |                      |

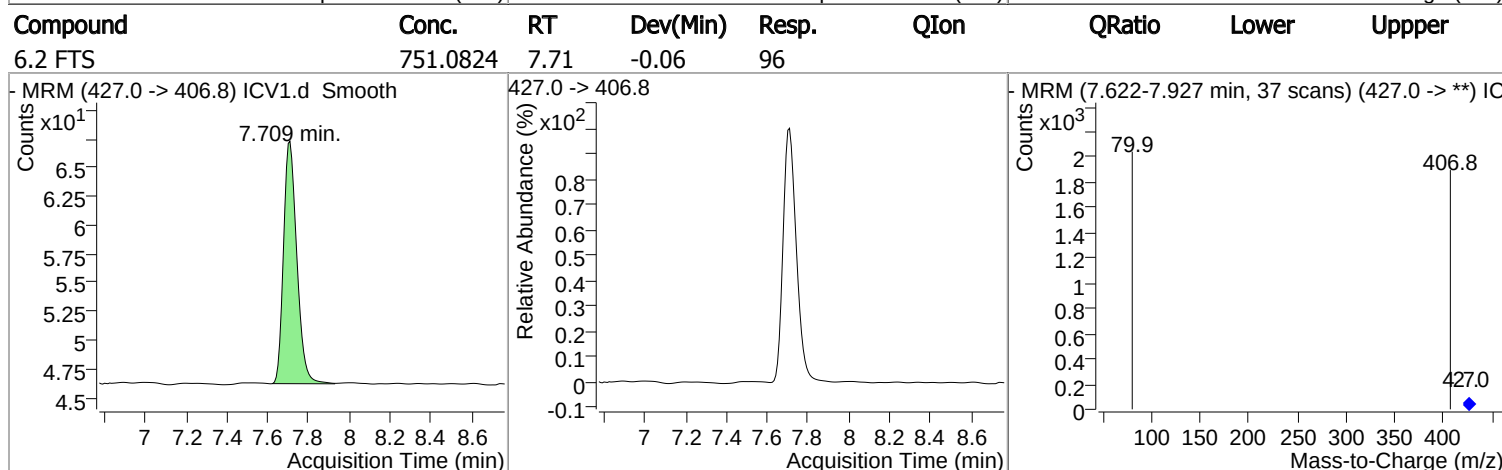
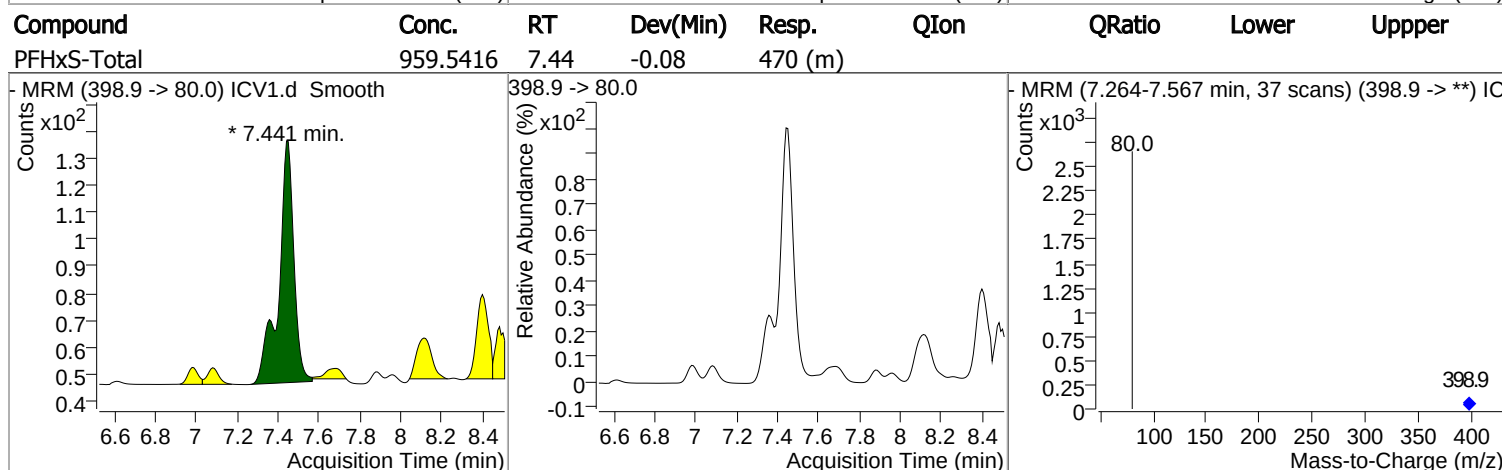
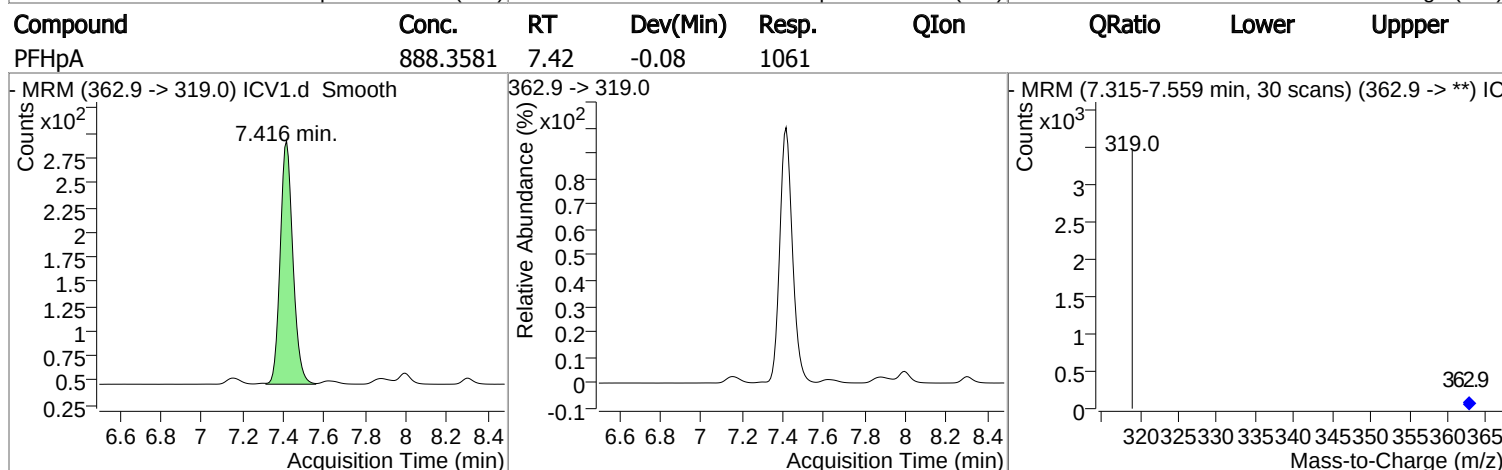
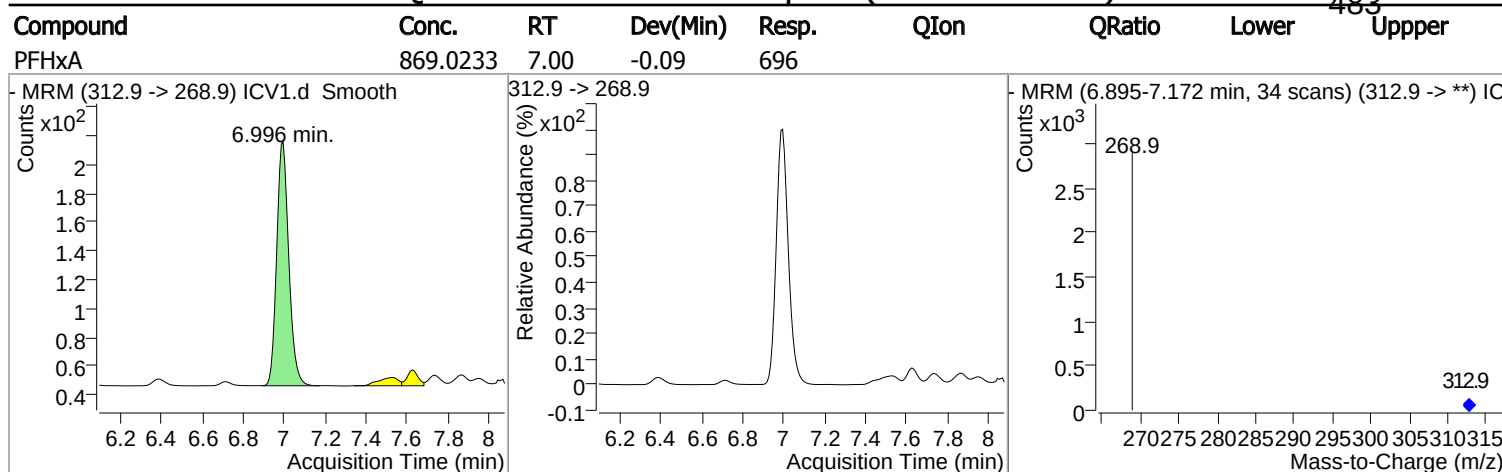
| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units |   | Dev(Min)      |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|---|---------------|
| Internal Standards          |                      |                |       |                    |       |   |               |
| M PFOA C13                  | 7.709                | 416.9 -> 371.9 | 11552 | 10000.0000         | pg/ml |   | -0.067        |
| M PFOS C13                  | 7.942                | 502.9 -> 80.0  | 15398 | 28700.0000         | pg/ml |   | -0.050        |
| M d3-N-MeFOSAA              | 8.218                | 573.2 -> 419.0 | 6625  | 40000.0000         | pg/ml | m | -0.042        |
| System Monitoring Compounds |                      |                |       |                    |       |   |               |
| S PFHxA C13                 | 6.987                | 314.9 -> 269.9 | 8139  | 9878.2251          | pg/ml |   | -0.101        |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 98.78%  |       |   |               |
| S PFDA C13                  | 8.127                | 514.9 -> 469.9 | 12907 | 10732.7058         | pg/ml |   | -0.050        |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 107.33% |       |   |               |
| S d5-N-MeFOSAA              | 8.293                | 589.2 -> 419.0 | 6464  | 41261.0109         | pg/ml |   | -0.042        |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 103.15% |       |   |               |
| Target Compounds            |                      |                |       |                    |       |   |               |
| T PFBA                      | 2.133                | 213.0 -> 168.9 | 162   | 864.4810           | pg/ml |   | QValue<br>100 |
| T PFPeA                     | 6.122                | 263.0 -> 219.0 | 408   | 1075.1166          | pg/ml |   | 100           |
| T PFBS                      | 6.500                | 298.9 -> 80.0  | 262   | 841.7991           | pg/ml |   | 100           |
| T PFHxA                     | 6.996                | 312.9 -> 268.9 | 696   | 869.0233           | pg/ml |   | 100           |
| T PFHpA                     | 7.416                | 362.9 -> 319.0 | 1061  | 888.3581           | pg/ml |   | 100           |
| T PFHxS-Total               | 7.441                | 398.9 -> 80.0  | 470   | 959.5416           | pg/ml | m | 100           |
| T 6.2 FTS                   | 7.709                | 427.0 -> 406.8 | 96    | 751.0824           | pg/ml |   | 100           |
| T PFOA-Total                | 7.710                | 412.9 -> 368.9 | 1640  | 1081.3964          | pg/ml |   | 100           |
| T PFHpS                     | 7.717                | 449.0 -> 79.7  | 316   | 1238.7790          | pg/ml |   | 100           |
| T PFOS-Total                | 7.943                | 498.9 -> 80.0  | 657   | 824.0855           | pg/ml | m | 100           |
| T PFNA                      | 7.943                | 462.9 -> 418.9 | 871   | 946.7696           | pg/ml |   | 100           |
| T 8.2 FTS                   | 8.135                | 527.0 -> 81.0  | 176   | 836.4173           | pg/ml |   | 100           |
| T PFDA                      | 8.127                | 513.1 -> 469.0 | 1661  | 978.4554           | pg/ml |   | 100           |
| T N-MeFOSAA                 | 8.227                | 570.2 -> 419.1 | 247   | 1255.8436          | pg/ml | m | 100           |
| T FOSA                      | 8.254                | 497.9 -> 77.9  | 1285  | 1020.0888          | pg/ml |   | 100           |
| T PFDS                      | 8.284                | 599.0 -> 80.0  | 582   | 1168.4793          | pg/ml |   | 100           |
| T PFUnA                     | 8.294                | 563.1 -> 519.0 | 2206  | 1128.4755          | pg/ml |   | 100           |
| T N-EtFOSAA                 | 8.302                | 584.2 -> 419.0 | 132   | 810.9697           | pg/ml | m | 100           |
| T PFDoA                     | 8.444                | 613.1 -> 569.0 | 2806  | 1024.9184          | pg/ml |   | 100           |
| T PFTTrDA                   | 8.612                | 663.1 -> 619.0 | 2657  | 850.6255           | pg/ml |   | 100           |
| T PFTA                      | 8.797                | 713.1 -> 669.1 | 2473  | 943.8673           | pg/ml |   | 100           |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

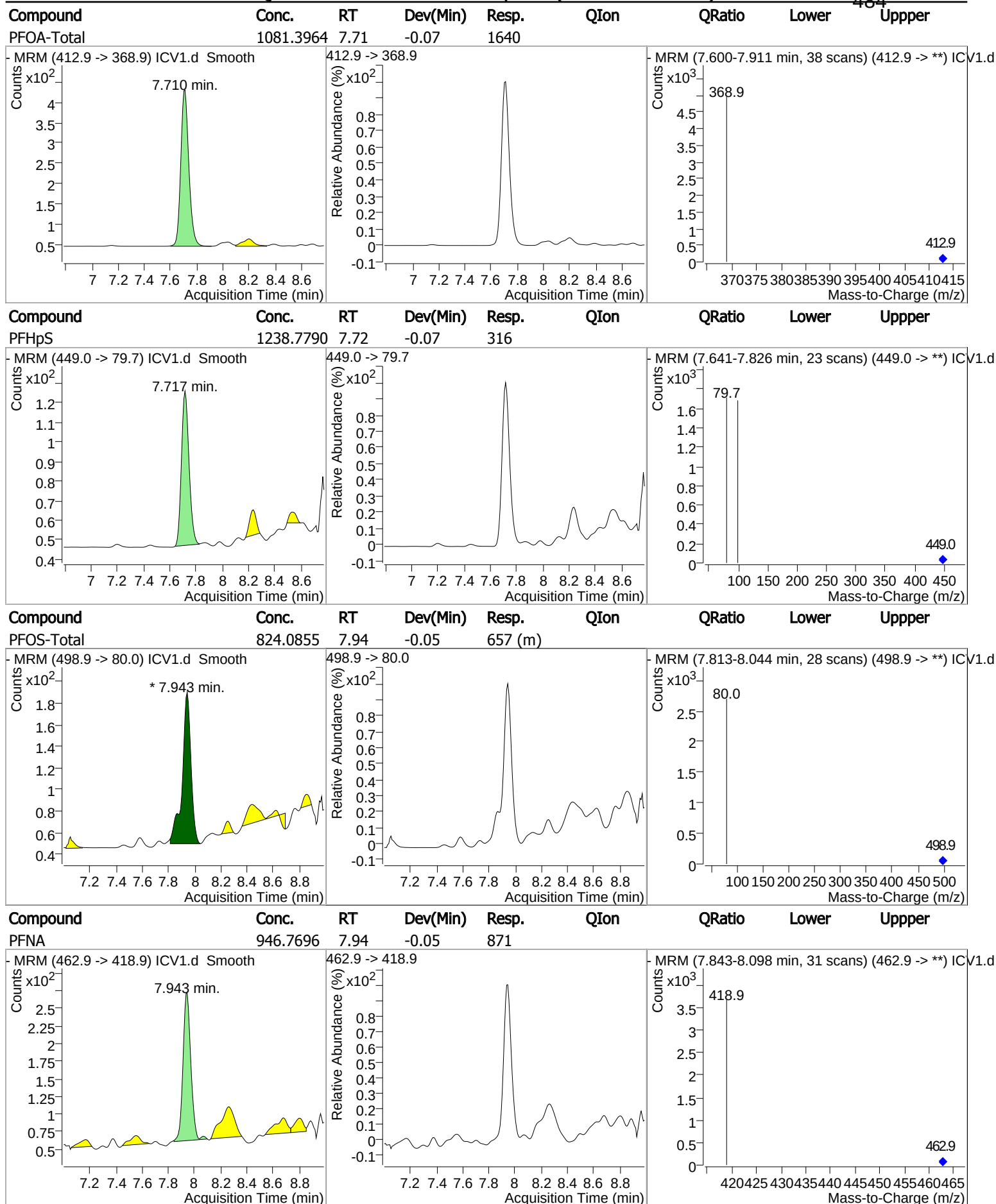
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



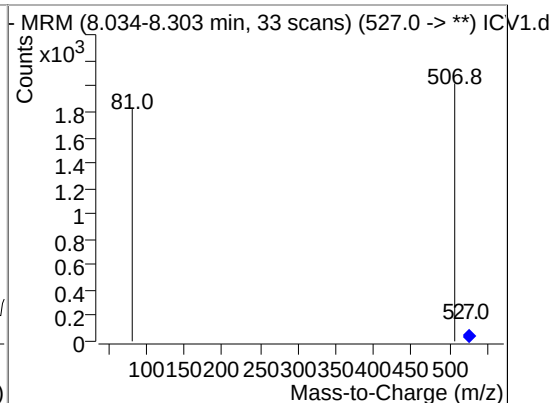
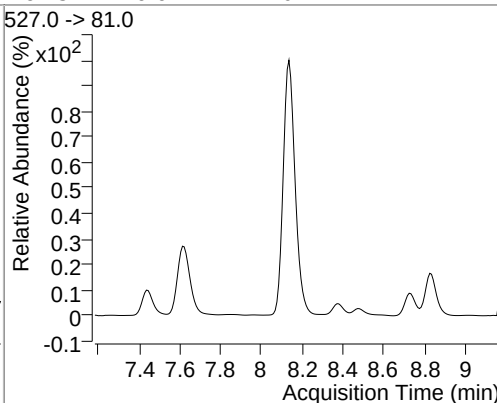
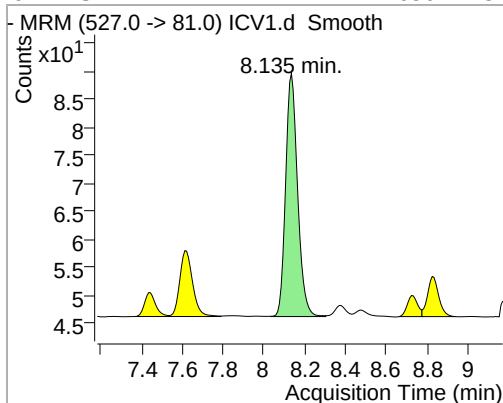
# Quantitation Results Report (Not Reviewed)



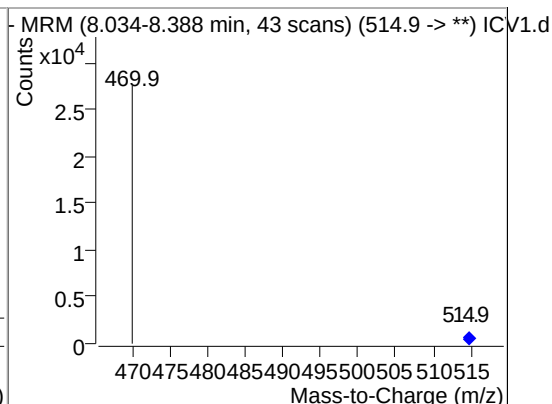
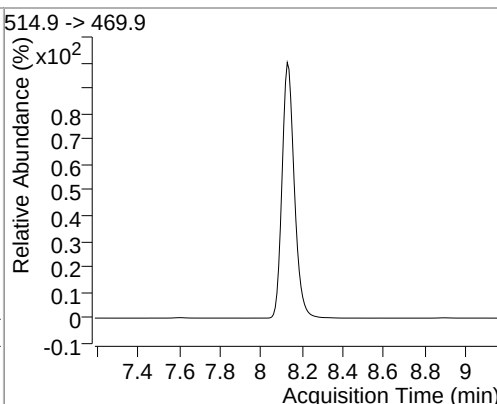
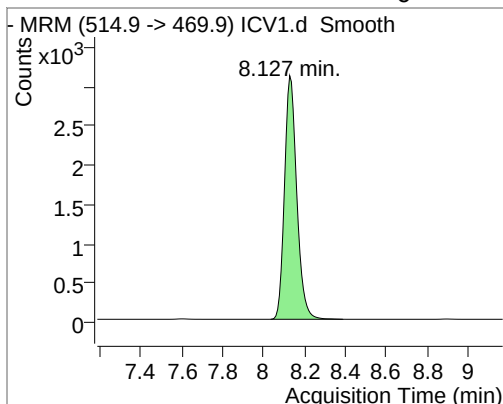


# Quantitation Results Report (Not Reviewed)

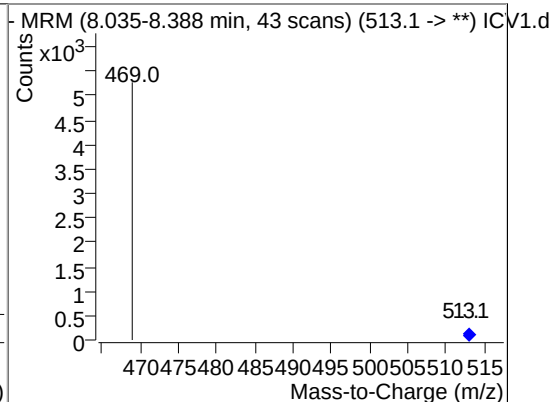
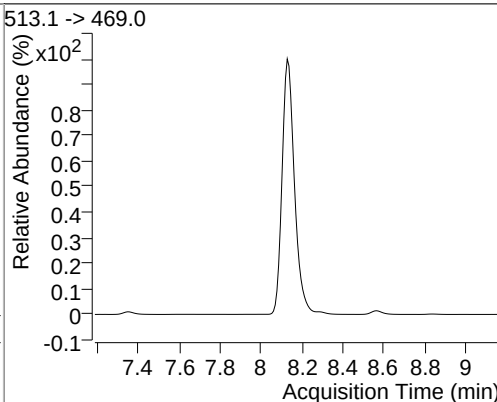
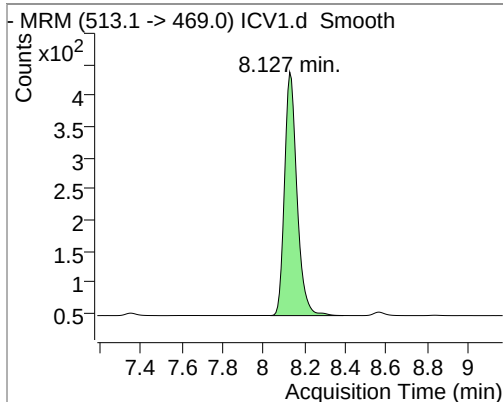
| Compound | Conc.    | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|----------|------|----------|-------|------|--------|-------|-------|
| 8.2 FTS  | 836.4173 | 8.13 | -0.04    | 176   |      |        |       |       |



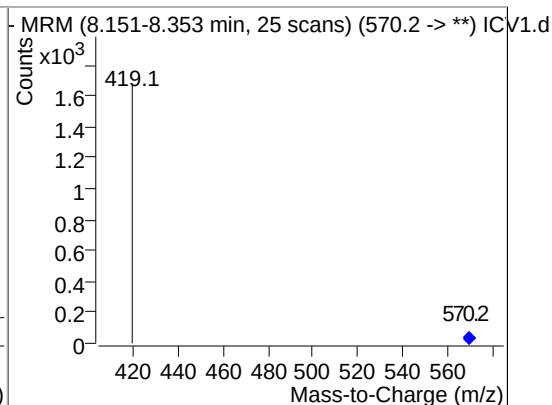
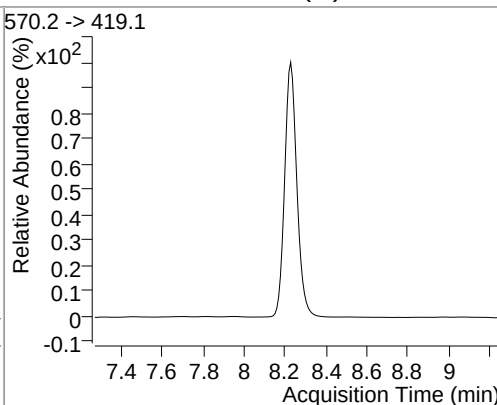
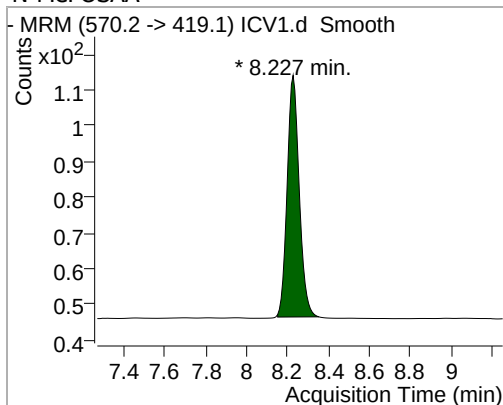
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFDA C13 | 10732.705 | 8.13 | -0.05    | 12907 |      |        |       |       |
| 8        |           |      |          |       |      |        |       |       |



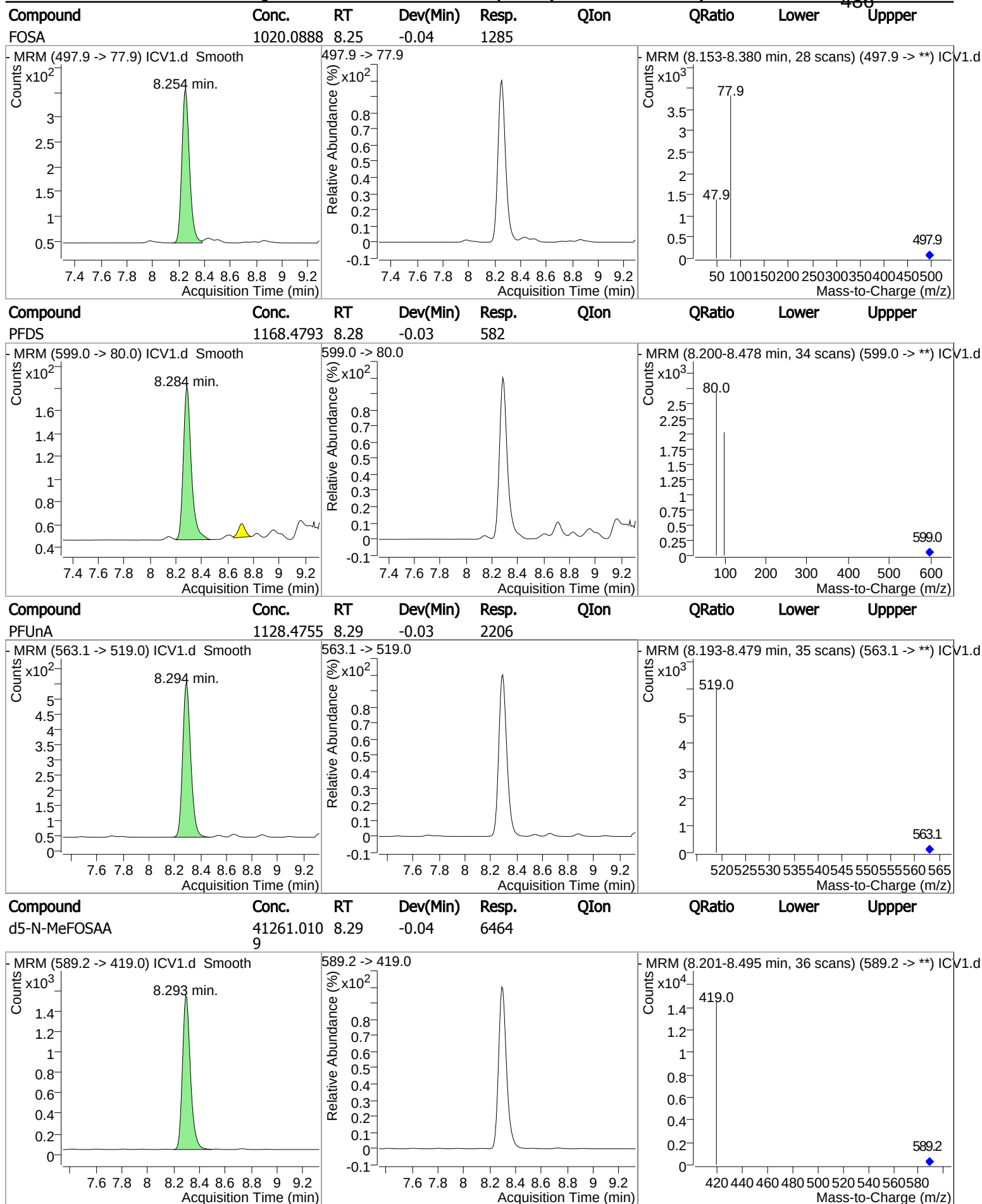
| Compound | Conc.    | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|----------|------|----------|-------|------|--------|-------|-------|
| PFDA     | 978.4554 | 8.13 | -0.05    | 1661  |      |        |       |       |



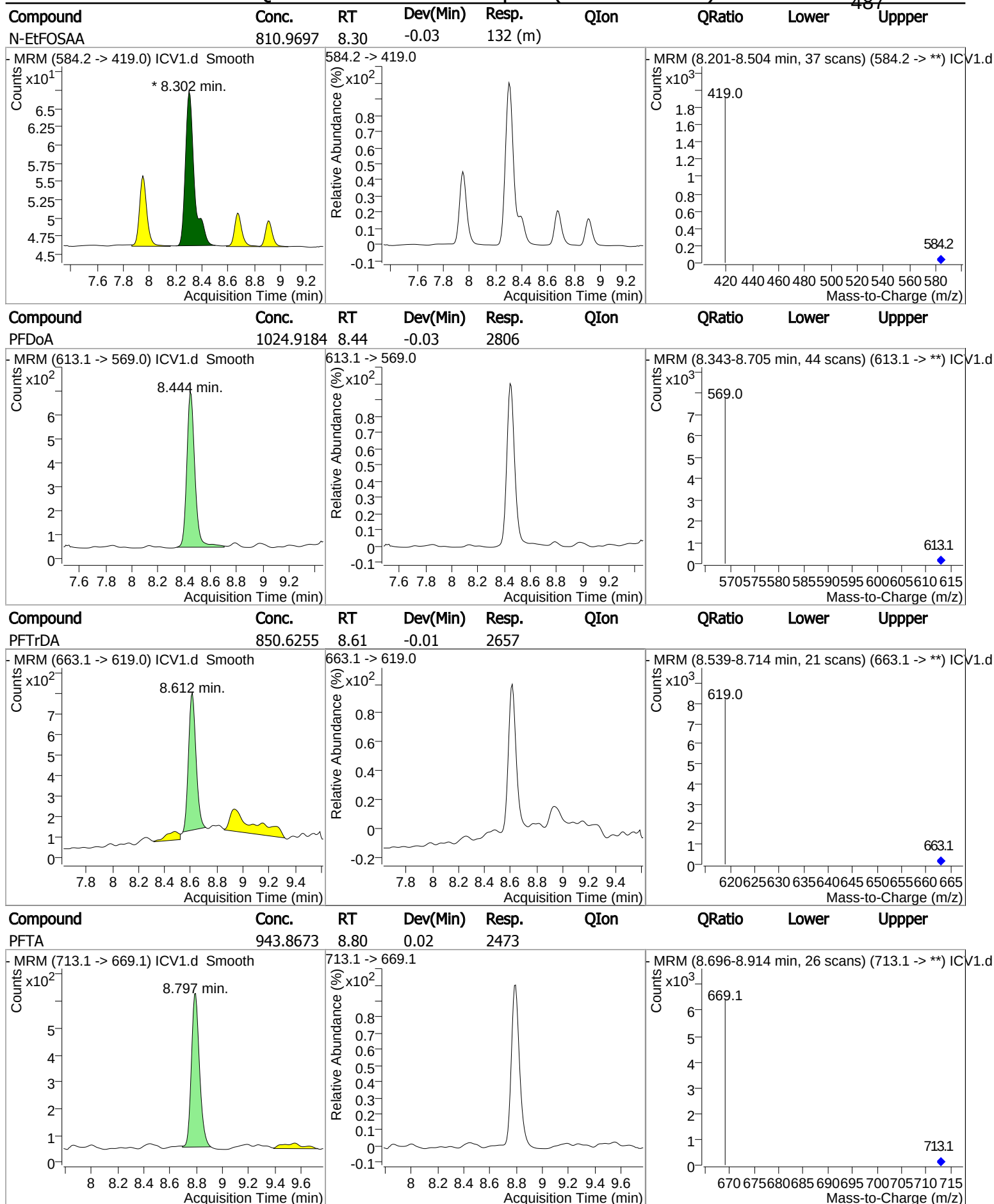
| Compound  | Conc.     | RT   | Dev(Min) | Resp.   | QIon | QRatio | Lower | Upper |
|-----------|-----------|------|----------|---------|------|--------|-------|-------|
| N-MeFOSAA | 1255.8436 | 8.23 | -0.03    | 247 (m) |      |        |       |       |



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# CONTINUING CALIBRATION VERIFICATION

## SOP 434-PFAAS

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Instrument ID: HPLC1

Calibration: 1900263

Lab File ID: CCV1082119.d

Calibration Date: 08/14/19 14:37

Sequence: S039480

Injection Date: 08/21/19

Lab Sample ID: S039480-CCV1

Injection Time: 12:07

| COMPOUND                               | TYPE | CONC. (ng/L) |     | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|----------------------------------------|------|--------------|-----|-----------------|-----------|---------|----------------|-----------|
|                                        |      | STD          | CCV | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| Perfluorobutanoic acid (PFBA)          | A    | 500          | 534 | 0.1543906       | 0.1729387 |         | 6.8            |           |
| Perfluorobutanesulfonic acid (PFBS)    | A    | 442          | 583 | 0.5510923       | 0.7657721 |         | 32.0           |           |
| Perfluoropentanoic acid (PFPeA)        | A    | 500          | 554 | 0.3040697       | 0.3642085 |         | 10.8           |           |
| Perfluorohexanoic acid (PFHxA)         | A    | 500          | 716 | 0.6714809       | 0.9930467 |         | 43.1           |           |
| Perfluorohexanesulfonic acid (PFHxS)   | A    | 455          | 498 | 0.8347983       | 0.9977494 |         | 9.4            |           |
| Perfluoroheptanoic acid (PFHpA)        | A    | 500          | 578 | 1.053666        | 1.194462  |         | 15.6           |           |
| Perfluoroheptanesulfonic acid (PFHpS)  | A    | 475          | 426 | 0.5117502       | 0.4262947 |         | -10.4          |           |
| Perfluorooctanoic acid (PFOA)          | A    | 500          | 597 | 1.330641        | 1.567197  |         | 19.4           |           |
| Perfluorooctanesulfonic acid (PFOS)    | A    | 462          | 633 | 1.438054        | 2.03548   |         | 37.1           |           |
| Perfluorooctanesulfonamide (FOSA)      | A    | 500          | 408 | 7.121342        | 6.203425  |         | -18.5          |           |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | A    | 475          | 492 | 0.2337119       | 0.2461649 |         | 3.6            |           |
| Perfluorononanoic acid (PFNA)          | A    | 500          | 478 | 0.842486        | 0.7616763 |         | -4.4           |           |
| Perfluorodecanoic acid (PFDA)          | A    | 500          | 491 | 1.468554        | 1.442856  |         | -1.8           |           |
| Perfluorodecanesulfonic acid (PFDS)    | A    | 482          | 466 | 0.9068341       | 0.89631   |         | -3.4           |           |
| N-EtFOSAA                              | A    | 500          | 557 | 0.9910125       | 1.093746  |         | 11.3           |           |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | A    | 480          | 489 | 0.3729975       | 0.4009279 |         | 2.0            |           |
| Perfluoroundecanoic acid (PFUnA)       | A    | 500          | 489 | 1.739723        | 1.655214  |         | -2.2           |           |
| N-MeFOSAA                              | A    | 500          | 306 | 1.146938        | 0.7272055 |         | -38.8          |           |
| Perfluorododecanoic acid (PFDoA)       | A    | 500          | 420 | 2.235401        | 1.993484  |         | -15.9          |           |
| Perfluorotridecanoic acid (PFTrDA)     | A    | 500          | 339 | 2.580637        | 1.832341  |         | -32.2          |           |
| Perfluorotetradecanoic acid (PFTA)     | A    | 500          | 660 | 2.262719        | 2.992626  |         | 32.0           |           |

**CONTINUING CALIBRATION VERIFICATION**  
**SOP 434-PFAAS**

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | HPLC1                          | Calibration:      | 1900263               |
| Lab File ID:   | CCV1082119.d                   | Calibration Date: | 08/14/19 14:37        |
| Sequence:      | S039480                        | Injection Date:   | 08/21/19              |
| Lab Sample ID: | S039480-CCV1                   | Injection Time:   | 12:07                 |

| COMPOUND    | TYPE | CONC. (ng/L) |       | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|-------------|------|--------------|-------|-----------------|-----------|---------|----------------|-----------|
|             |      | STD          | CCV   | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| 13C-PFHxA   | A    | 10000        | 10900 | 0.6955487       | 0.7793255 |         | 9.3            |           |
| 13C-PFDA    | A    | 10000        | 9480  | 1.05667         | 0.9864953 |         | -5.2           |           |
| d5-NEtFOSAA | A    | 40000        | 28000 | 0.8657046       | 0.6632122 |         | -29.9          |           |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

\* Values outside of QC limits

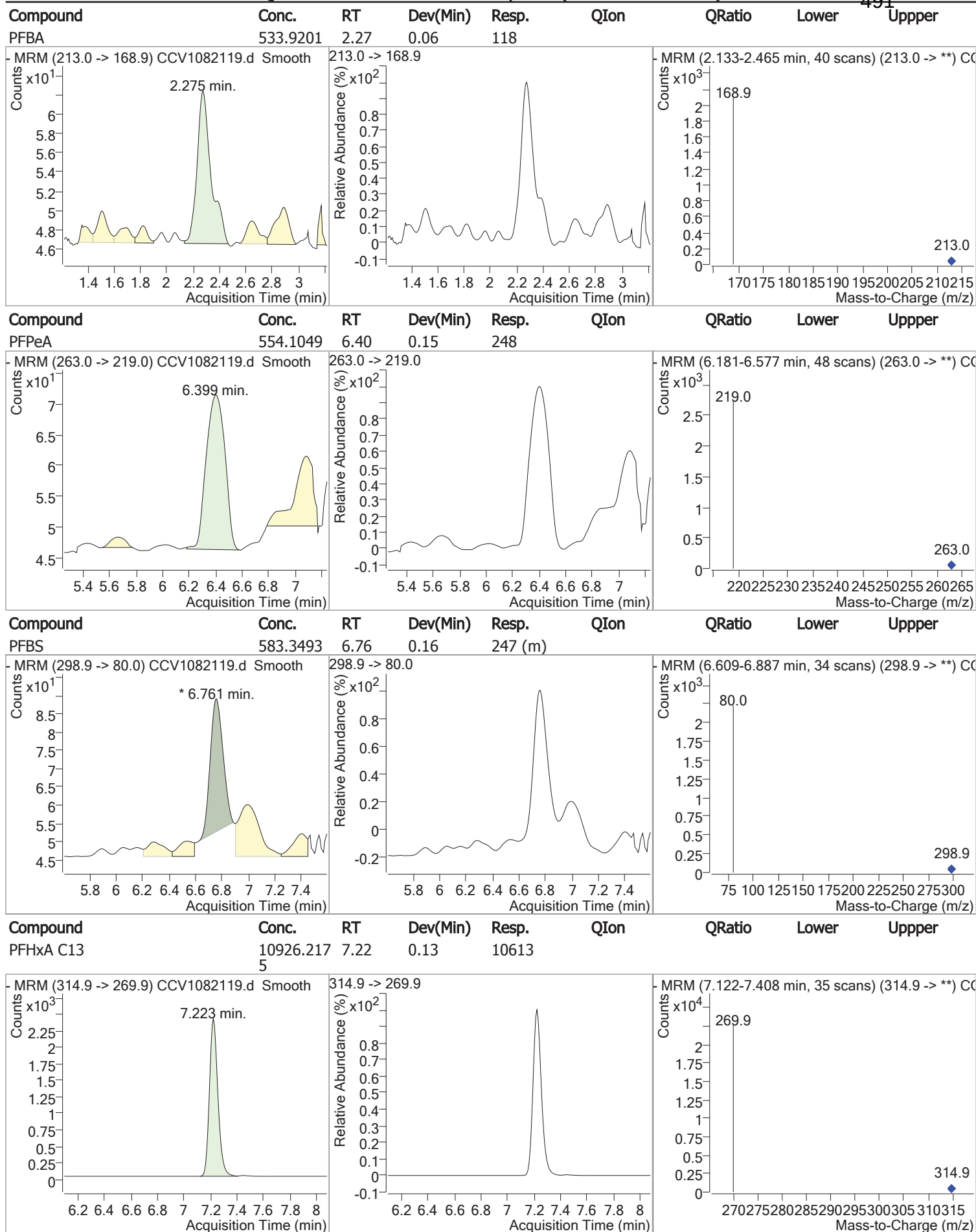
## Quantitation Results Report (Not Reviewed)

|                |                   |                   |                       |
|----------------|-------------------|-------------------|-----------------------|
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| Sample Name    | CCV1082119        | Instrument        | QQQ1                  |
| Vial           |                   | Multiplier        | 1.00                  |
| DA Method File | 081319.m          | Comment           |                       |
| Tune File      |                   | Tune Date         |                       |
| Batch Name     | B238243.batch.bin | Last Calib Update | 8/14/2019 2:32:09 PM  |
| Ref Library    |                   |                   |                       |

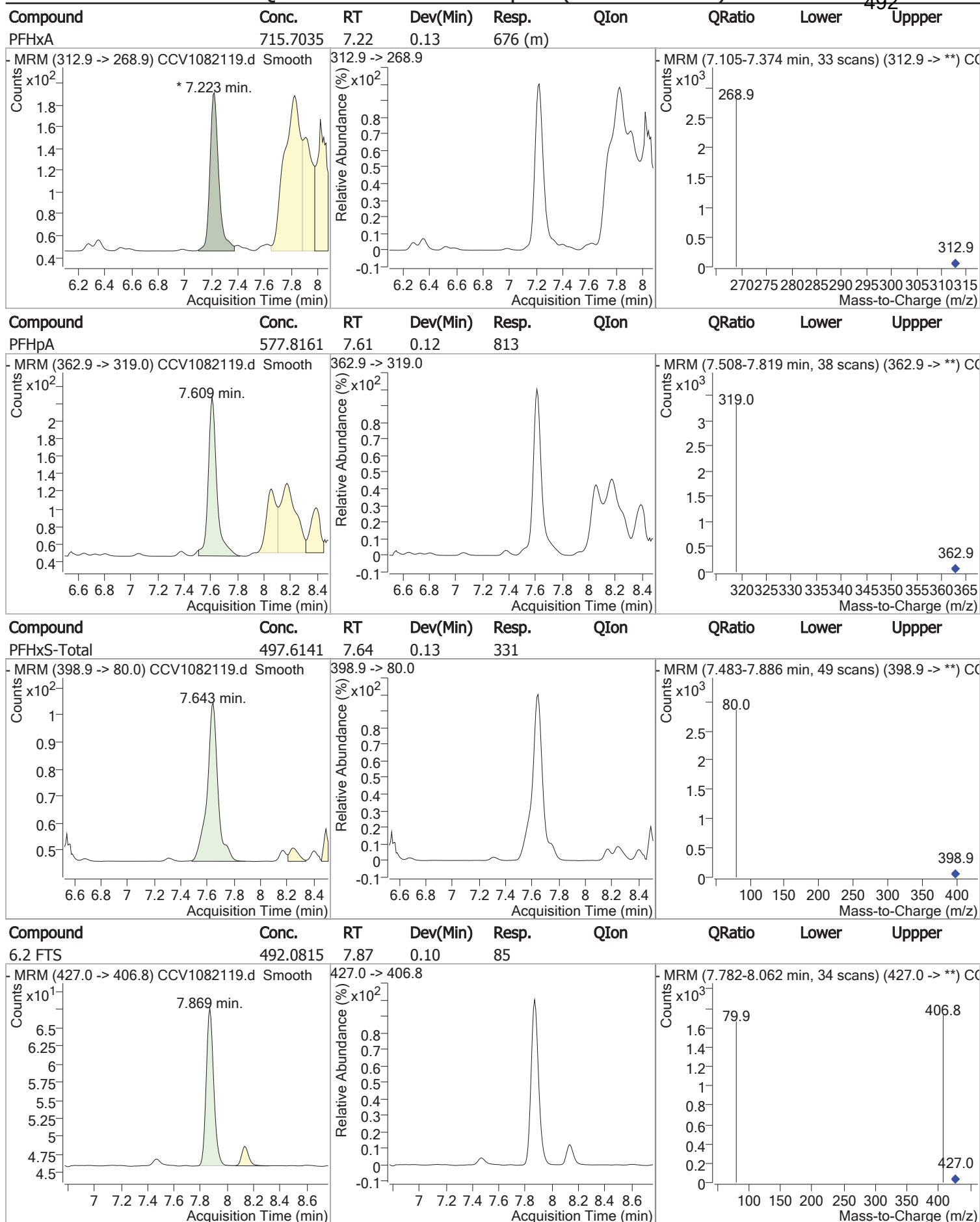
| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units |   | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|---|----------|
| Internal Standards          |                      |                |       |                    |       |   |          |
| M PFOA C13                  | 7.877                | 416.9 -> 371.9 | 13618 | 10000.0000         | pg/ml |   | 0.101    |
| M PFOS C13                  | 8.077                | 502.9 -> 80.0  | 20909 | 28700.0000         | pg/ml |   | 0.084    |
| M d3-N-MeFOSAA              | 8.319                | 573.2 -> 419.0 | 10211 | 40000.0000         | pg/ml | m | 0.059    |
| System Monitoring Compounds |                      |                |       |                    |       |   |          |
| S PFHxA C13                 | 7.223                | 314.9 -> 269.9 | 10613 | 10926.2175         | pg/ml |   | 0.135    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 109.26% |       |   |          |
| S PFDA C13                  | 8.245                | 514.9 -> 469.9 | 13434 | 9475.6367          | pg/ml |   | 0.067    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 94.76%  |       |   |          |
| S d5-N-MeFOSAA              | 8.394                | 589.2 -> 419.0 | 6772  | 28043.4205         | pg/ml | m | 0.059    |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 70.11%  |       |   |          |
| Target Compounds            |                      |                |       |                    |       |   | QValue   |
| T PFBA                      | 2.275                | 213.0 -> 168.9 | 118   | 533.9201           | pg/ml |   | 100      |
| T PFPeA                     | 6.399                | 263.0 -> 219.0 | 248   | 554.1049           | pg/ml |   | 100      |
| T PFBS                      | 6.761                | 298.9 -> 80.0  | 247   | 583.3493           | pg/ml | m | 100      |
| T PFHxA                     | 7.223                | 312.9 -> 268.9 | 676   | 715.7035           | pg/ml | m | 100      |
| T PFHpA                     | 7.609                | 362.9 -> 319.0 | 813   | 577.8161           | pg/ml |   | 100      |
| T PFHxS-Total               | 7.643                | 398.9 -> 80.0  | 331   | 497.6141           | pg/ml |   | 100      |
| T 6.2 FTS                   | 7.869                | 427.0 -> 406.8 | 85    | 492.0815           | pg/ml |   | 100      |
| T PFOA-Total                | 7.869                | 412.9 -> 368.9 | 1067  | 596.8487           | pg/ml | m | 100      |
| T PFHpS                     | 7.885                | 449.0 -> 79.7  | 148   | 425.7561           | pg/ml |   | 100      |
| T PFOS-Total                | 8.069                | 498.9 -> 80.0  | 685   | 633.3140           | pg/ml |   | 100      |
| T PFNA                      | 8.086                | 462.9 -> 418.9 | 519   | 478.1626           | pg/ml | m | 100      |
| T 8.2 FTS                   | 8.244                | 527.0 -> 81.0  | 140   | 489.4288           | pg/ml |   | 100      |
| T PFDA                      | 8.245                | 513.1 -> 469.0 | 982   | 490.9658           | pg/ml |   | 100      |
| T N-MeFOSAA                 | 8.319                | 570.2 -> 419.1 | 93    | 305.8002           | pg/ml |   | 100      |
| T FOSA                      | 8.363                | 497.9 -> 77.9  | 792   | 407.6704           | pg/ml |   | 100      |
| T PFDS                      | 8.377                | 599.0 -> 80.0  | 315   | 465.6221           | pg/ml |   | 100      |
| T PFUnA                     | 8.387                | 563.1 -> 519.0 | 1127  | 488.9492           | pg/ml |   | 100      |
| T N-EtFOSAA                 | 8.403                | 584.2 -> 419.0 | 140   | 556.6858           | pg/ml |   | 100      |
| T PFDoA                     | 8.536                | 613.1 -> 569.0 | 1357  | 420.4978           | pg/ml |   | 100      |
| T PFTTrDA                   | 8.687                | 663.1 -> 619.0 | 1248  | 338.8638           | pg/ml |   | 100      |
| T PFTA                      | 8.864                | 713.1 -> 669.1 | 1256  | 406.8079           | pg/ml | m | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

# Quantitation Results Report (Not Reviewed)

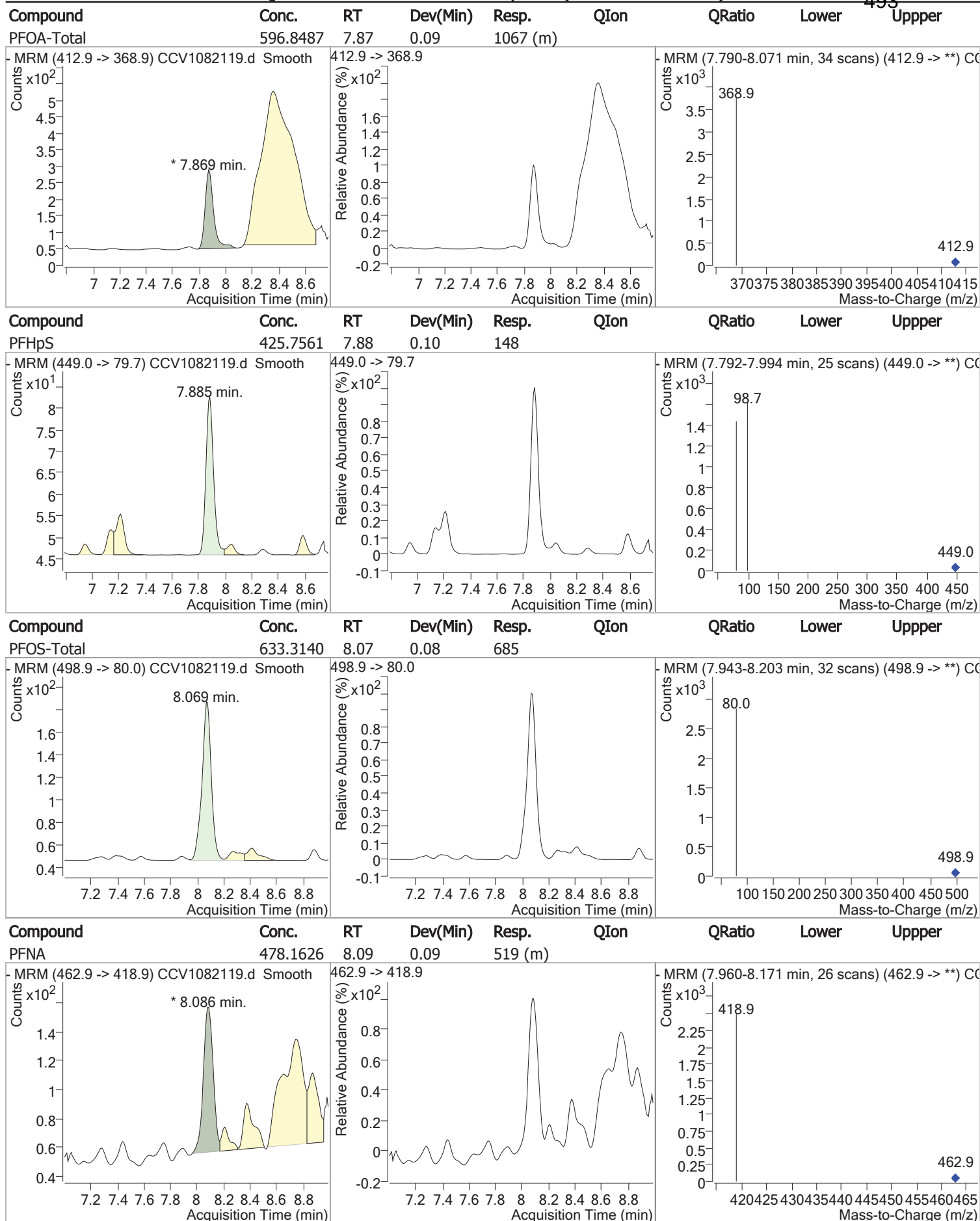


# Quantitation Results Report (Not Reviewed)

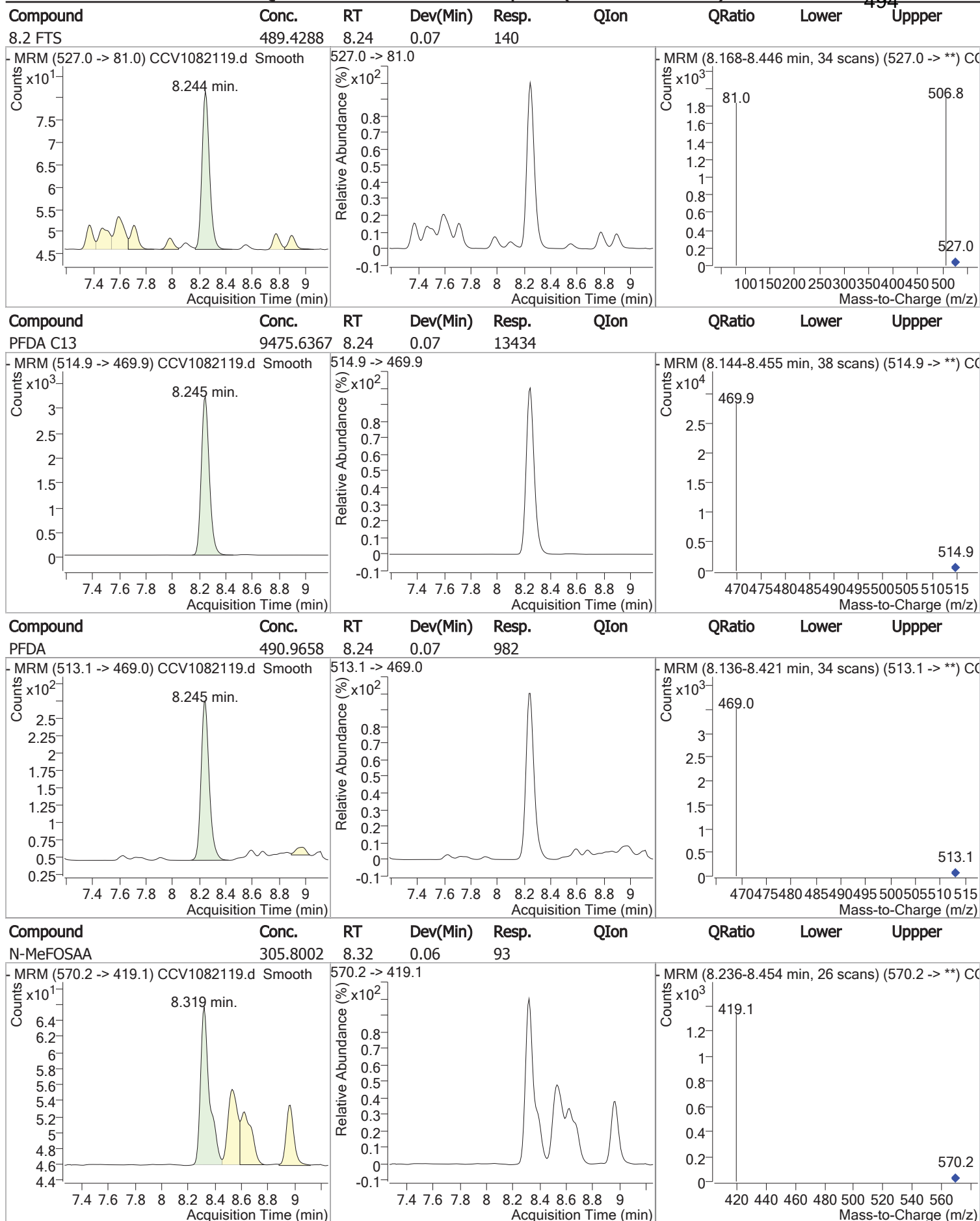




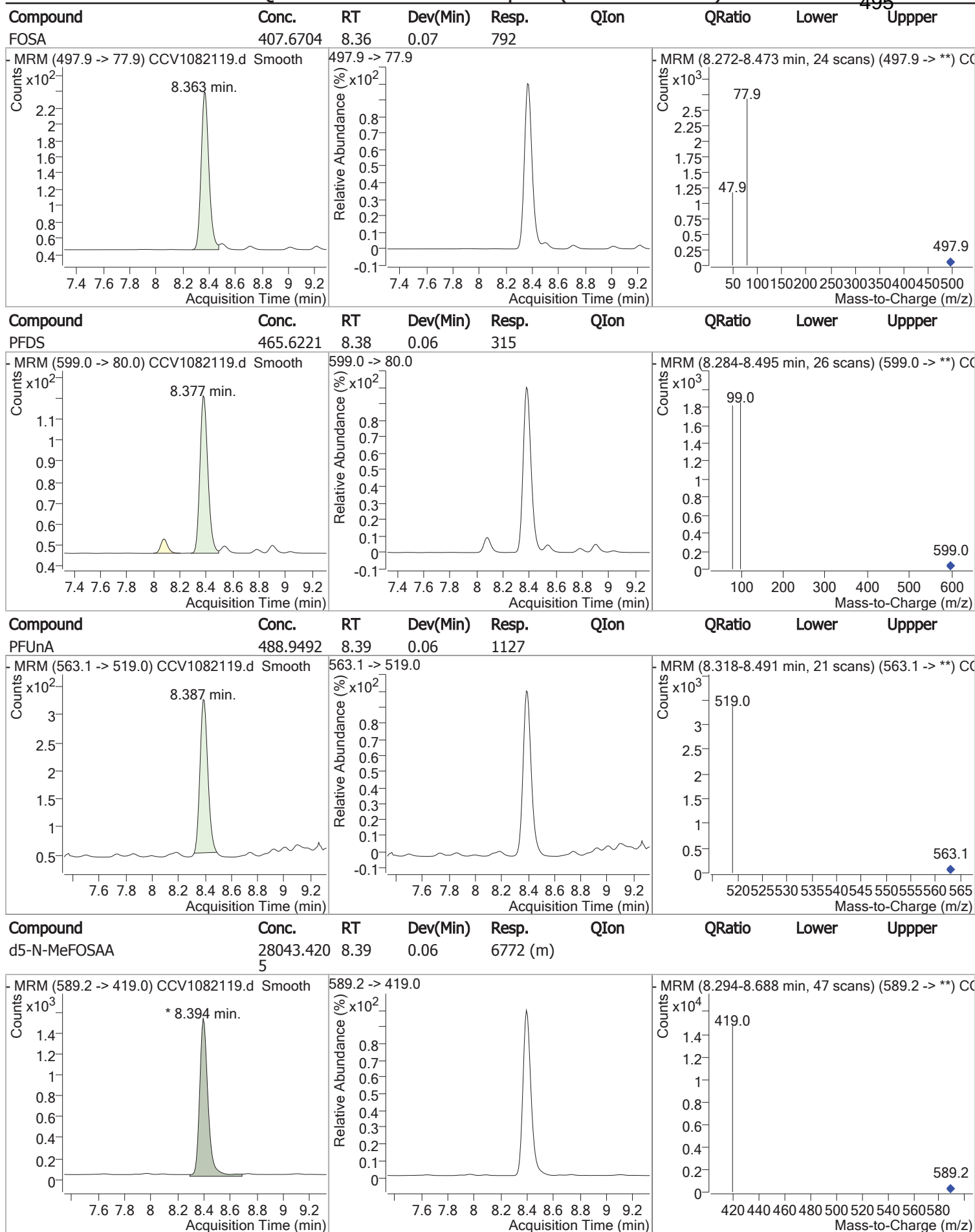
# Quantitation Results Report (Not Reviewed)



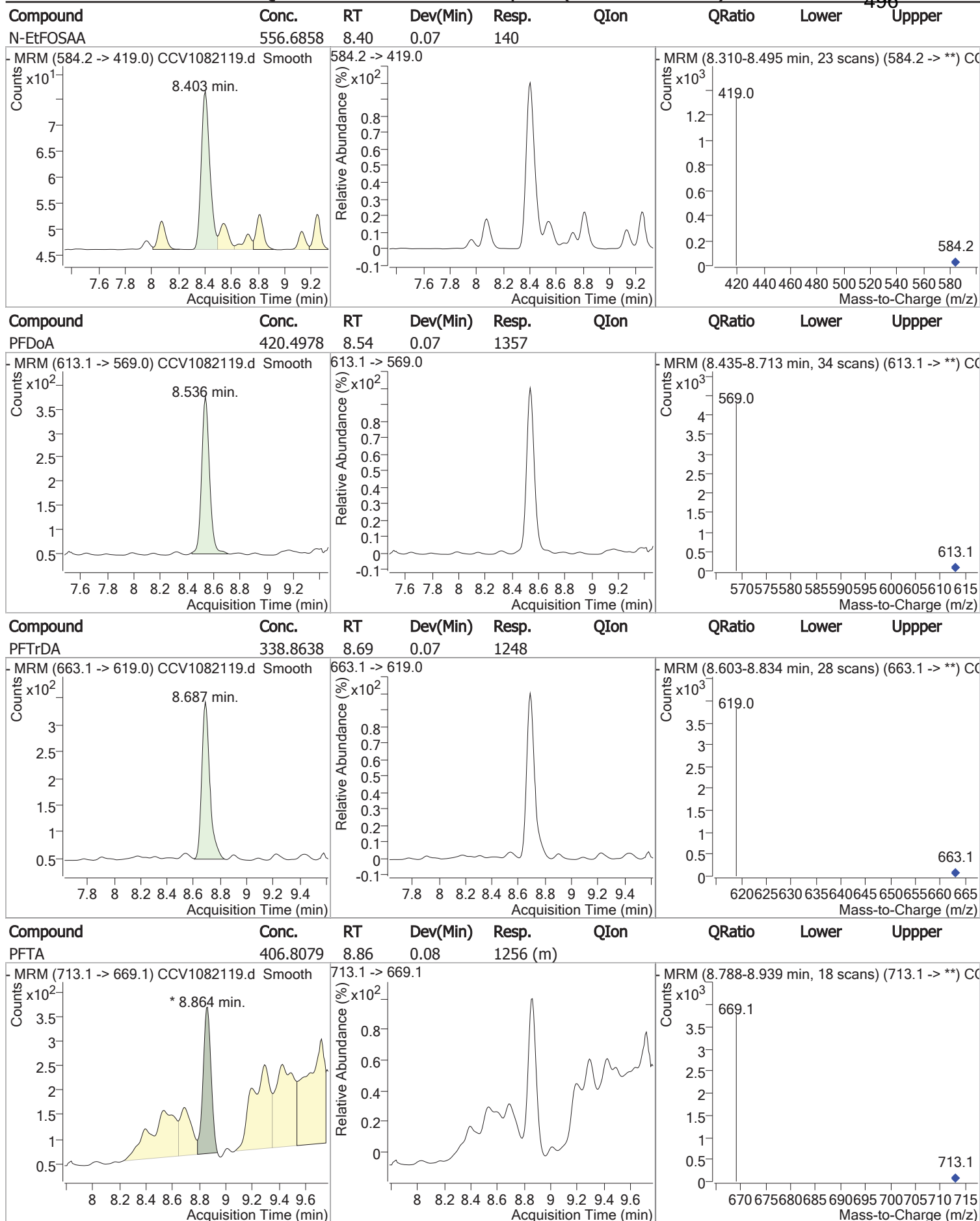
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# CONTINUING CALIBRATION VERIFICATION

## SOP 434-PFAAS

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Instrument ID: HPLC1

Calibration: 1900263

Lab File ID: CCV2082119.d

Calibration Date: 08/14/19 14:37

Sequence: S039480

Injection Date: 08/21/19

Lab Sample ID: S039480-CCV2

Injection Time: 15:16

| COMPOUND                               | TYPE | CONC. (ng/L) |      | RESPONSE FACTOR |              |         | % DIFF / DRIFT |           |
|----------------------------------------|------|--------------|------|-----------------|--------------|---------|----------------|-----------|
|                                        |      | STD          | CCV  | ICAL            | CCV          | MIN (#) | CCV            | LIMIT (#) |
| Perfluorobutanoic acid (PFBA)          | A    | 5000         | 3070 | 0.1543906       | 9.939407E-02 |         | -38.6          |           |
| Perfluorobutanesulfonic acid (PFBS)    | A    | 4420         | 3800 | 0.5510923       | 0.4987553    |         | -14.0          |           |
| Perfluoropentanoic acid (PFPeA)        | A    | 5000         | 4010 | 0.3040697       | 0.2632933    |         | -19.9          |           |
| Perfluorohexanoic acid (PFHxA)         | A    | 5000         | 4480 | 0.6714809       | 0.6217368    |         | -10.4          |           |
| Perfluorohexanesulfonic acid (PFHxS)   | A    | 4550         | 3910 | 0.8347983       | 0.7837514    |         | -14.1          |           |
| Perfluoroheptanoic acid (PFHpA)        | A    | 5000         | 4640 | 1.053666        | 0.9583748    |         | -7.3           |           |
| Perfluoroheptanesulfonic acid (PFHpS)  | A    | 4750         | 3930 | 0.5117502       | 0.3934196    |         | -17.3          |           |
| Perfluorooctanoic acid (PFOA)          | A    | 5000         | 4360 | 1.330641        | 1.144977     |         | -12.8          |           |
| Perfluorooctanesulfonic acid (PFOS)    | A    | 4620         | 3770 | 1.438054        | 1.212699     |         | -18.3          |           |
| Perfluorooctanesulfonamide (FOSA)      | A    | 5000         | 3630 | 7.121342        | 5.517579     |         | -27.5          |           |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | A    | 4750         | 6300 | 0.2337119       | 0.3150161    |         | 32.6           |           |
| Perfluorononanoic acid (PFNA)          | A    | 5000         | 5180 | 0.842486        | 0.8248384    |         | 3.6            |           |
| Perfluorodecanoic acid (PFDA)          | A    | 5000         | 4870 | 1.468554        | 1.430763     |         | -2.6           |           |
| Perfluorodecanesulfonic acid (PFDS)    | A    | 4820         | 3950 | 0.9068341       | 0.7608367    |         | -18.0          |           |
| N-EtFOSAA                              | A    | 5000         | 3870 | 0.9910125       | 0.760523     |         | -22.6          |           |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | A    | 4800         | 5940 | 0.3729975       | 0.4864776    |         | 23.7           |           |
| Perfluoroundecanoic acid (PFUnA)       | A    | 5000         | 5080 | 1.739723        | 1.720971     |         | 1.7            |           |
| N-MeFOSAA                              | A    | 5000         | 3950 | 1.146938        | 0.9382626    |         | -21.1          |           |
| Perfluorododecanoic acid (PFDoA)       | A    | 5000         | 4460 | 2.235401        | 2.113468     |         | -10.8          |           |
| Perfluorotridecanoic acid (PFTrDA)     | A    | 5000         | 4500 | 2.580637        | 2.4352       |         | -9.9           |           |
| Perfluorotetradecanoic acid (PFTA)     | A    | 5000         | 4990 | 2.262719        | 2.261639     |         | -0.3           |           |

**CONTINUING CALIBRATION VERIFICATION**  
**SOP 434-PFAAS**

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | HPLC1                          | Calibration:      | 1900263               |
| Lab File ID:   | CCV2082119.d                   | Calibration Date: | 08/14/19 14:37        |
| Sequence:      | S039480                        | Injection Date:   | 08/21/19              |
| Lab Sample ID: | S039480-CCV2                   | Injection Time:   | 15:16                 |

| COMPOUND    | TYPE | CONC. (ng/L) |       | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|-------------|------|--------------|-------|-----------------|-----------|---------|----------------|-----------|
|             |      | STD          | CCV   | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| 13C-PFHxA   | A    | 10000        | 9410  | 0.6955487       | 0.6711297 |         | -5.9           |           |
| 13C-PFDA    | A    | 10000        | 12200 | 1.05667         | 1.272235  |         | 22.2           |           |
| d5-NEtFOSAA | A    | 40000        | 38200 | 0.8657046       | 0.9024004 |         | -4.6           |           |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

\* Values outside of QC limits

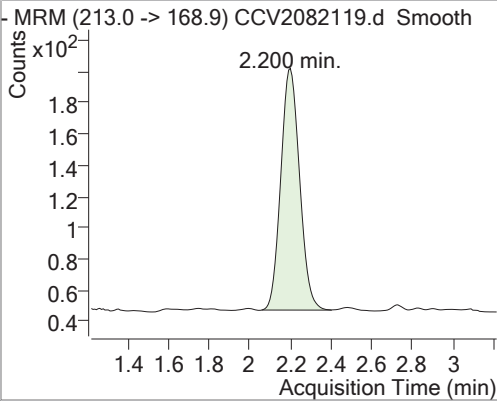
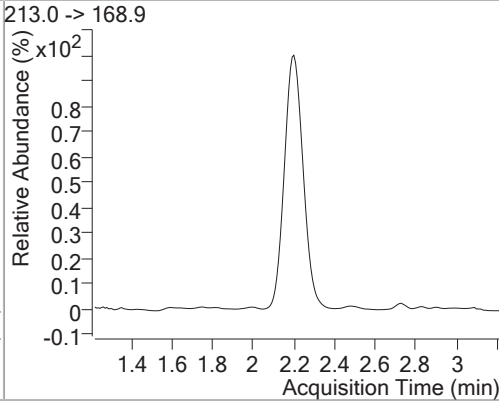
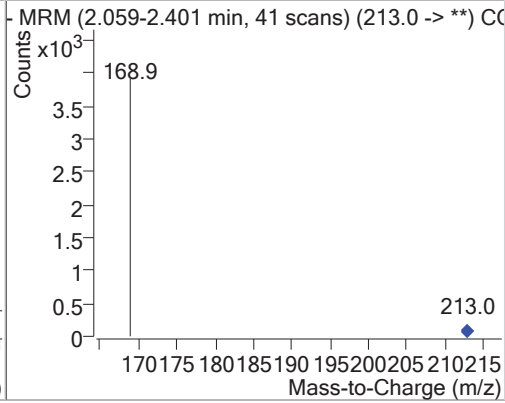
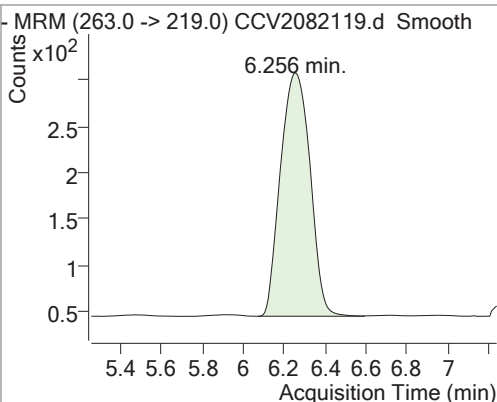
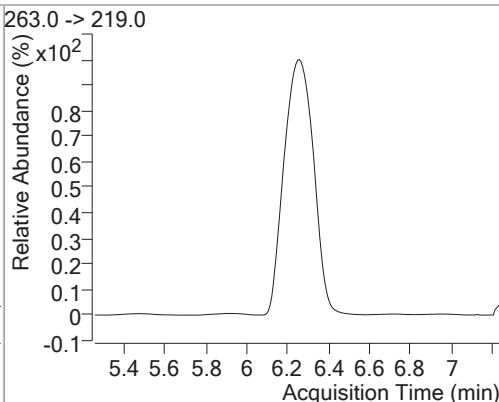
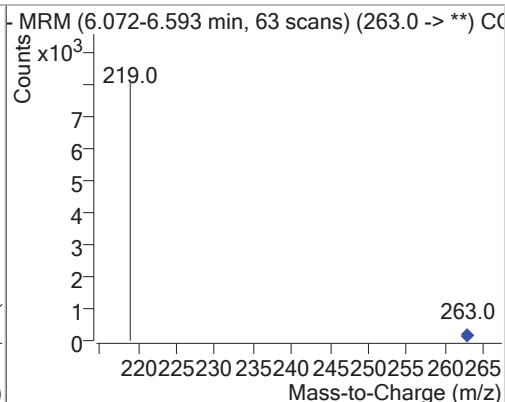
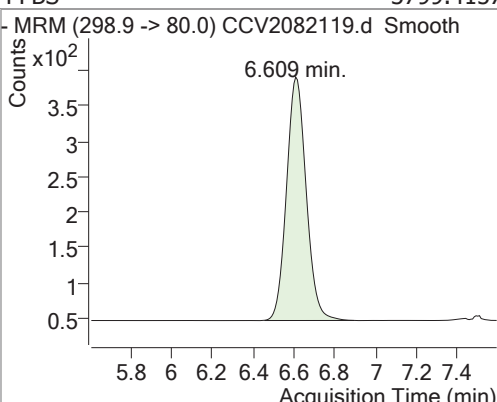
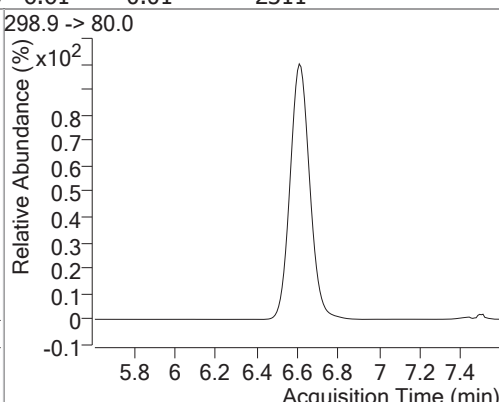
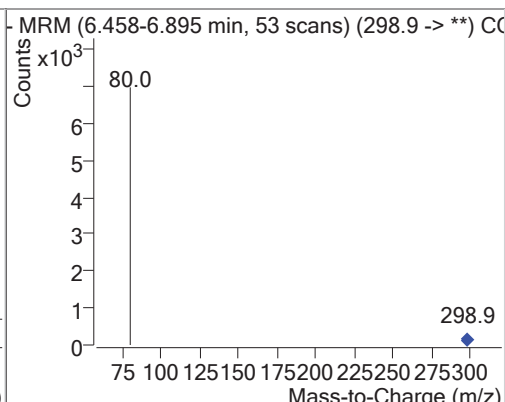
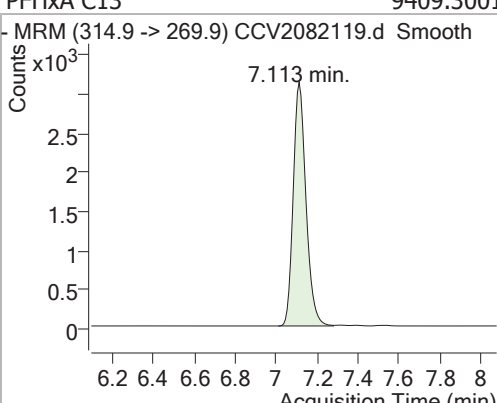
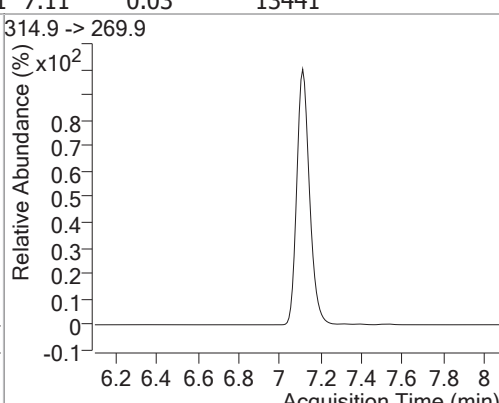
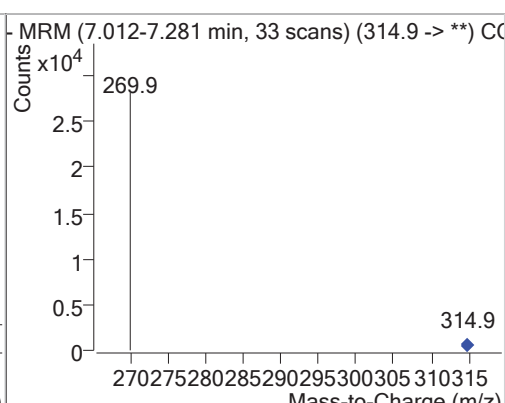
## Quantitation Results Report (Not Reviewed)

|                |                   |                   |                      |
|----------------|-------------------|-------------------|----------------------|
| Data File      | CCV2082119.d      | Operator          |                      |
| Acq. Method    | 21List021219.m    | Acq. Date-Time    | 8/21/2019 3:16:58 PM |
| Sample Name    | CCV2082119        | Instrument        | QQQ1                 |
| Vial           |                   | Multiplier        | 1.00                 |
| DA Method File | 081319.m          | Comment           |                      |
| Tune File      |                   | Tune Date         |                      |
| Batch Name     | B238243.batch.bin | Last Calib Update | 8/14/2019 2:32:09 PM |
| Ref Library    |                   |                   |                      |

| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units | Dev(Min) |       |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|----------|-------|
| Internal Standards          |                      |                |       |                    |       |          |       |
| M PFOA C13                  | 7.819                | 416.9 -> 371.9 | 20027 | 10000.0000         | pg/ml | 0.042    |       |
| M PFOS C13                  | 8.043                | 502.9 -> 80.0  | 30082 | 28700.0000         | pg/ml | 0.050    |       |
| M d3-N-MeFOSAA              | 8.302                | 573.2 -> 419.0 | 15307 | 40000.0000         | pg/ml | m        | 0.042 |
| System Monitoring Compounds |                      |                |       |                    |       |          |       |
| S PFHxA C13                 | 7.113                | 314.9 -> 269.9 | 13441 | 9409.3001          | pg/ml | 0.025    |       |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 94.09%  |       |          |       |
| S PFDA C13                  | 8.219                | 514.9 -> 469.9 | 25479 | 12220.2684         | pg/ml | 0.042    |       |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 122.20% |       |          |       |
| S d5-N-MeFOSAA              | 8.377                | 589.2 -> 419.0 | 13813 | 38157.3085         | pg/ml | 0.042    |       |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 95.39%  |       |          |       |
| Target Compounds            |                      |                |       |                    |       | QValue   |       |
| T PFBA                      | 2.200                | 213.0 -> 168.9 | 995   | 3068.6306          | pg/ml | 100      |       |
| T PFPeA                     | 6.256                | 263.0 -> 219.0 | 2637  | 4005.7300          | pg/ml | 100      |       |
| T PFBS                      | 6.609                | 298.9 -> 80.0  | 2311  | 3799.4157          | pg/ml | 100      |       |
| T PFHxA                     | 7.114                | 312.9 -> 268.9 | 6226  | 4480.9502          | pg/ml | 100      |       |
| T PFHpA                     | 7.533                | 362.9 -> 319.0 | 9597  | 4636.0984          | pg/ml | 100      |       |
| T PFHxS-Total               | 7.558                | 398.9 -> 80.0  | 3738  | 3908.8553          | pg/ml | 100      |       |
| T 6.2 FTS                   | 7.818                | 427.0 -> 406.8 | 1568  | 6297.1451          | pg/ml | 100      |       |
| T PFOA-Total                | 7.819                | 412.9 -> 368.9 | 11465 | 4360.5107          | pg/ml | 100      |       |
| T PFHpS                     | 7.826                | 449.0 -> 79.7  | 1959  | 3929.2243          | pg/ml | 100      |       |
| T PFOS-Total                | 8.044                | 498.9 -> 80.0  | 5872  | 3773.1620          | pg/ml | 100      |       |
| T PFNA                      | 8.044                | 462.9 -> 418.9 | 8260  | 5178.1426          | pg/ml | 100      |       |
| T 8.2 FTS                   | 8.227                | 527.0 -> 81.0  | 2448  | 5938.6305          | pg/ml | 100      |       |
| T PFDA                      | 8.220                | 513.1 -> 469.0 | 14327 | 4868.5092          | pg/ml | 100      |       |
| T N-MeFOSAA                 | 8.302                | 570.2 -> 419.1 | 1795  | 3945.5264          | pg/ml | 100      |       |
| T FOSA                      | 8.347                | 497.9 -> 77.9  | 10557 | 3625.9863          | pg/ml | 100      |       |
| T PFDS                      | 8.368                | 599.0 -> 80.0  | 3844  | 3952.4542          | pg/ml | 100      |       |
| T PFUnA                     | 8.378                | 563.1 -> 519.0 | 17233 | 5083.7376          | pg/ml | 100      |       |
| T N-EtFOSAA                 | 8.378                | 584.2 -> 419.0 | 1455  | 3870.8464          | pg/ml | 100      |       |
| T PFDoA                     | 8.520                | 613.1 -> 569.0 | 21164 | 4458.0665          | pg/ml | 100      |       |
| T PFTTrDA                   | 8.679                | 663.1 -> 619.0 | 24385 | 4503.5378          | pg/ml | 100      |       |
| T PFTA                      | 8.847                | 713.1 -> 669.1 | 22647 | 4986.4470          | pg/ml | 100      |       |

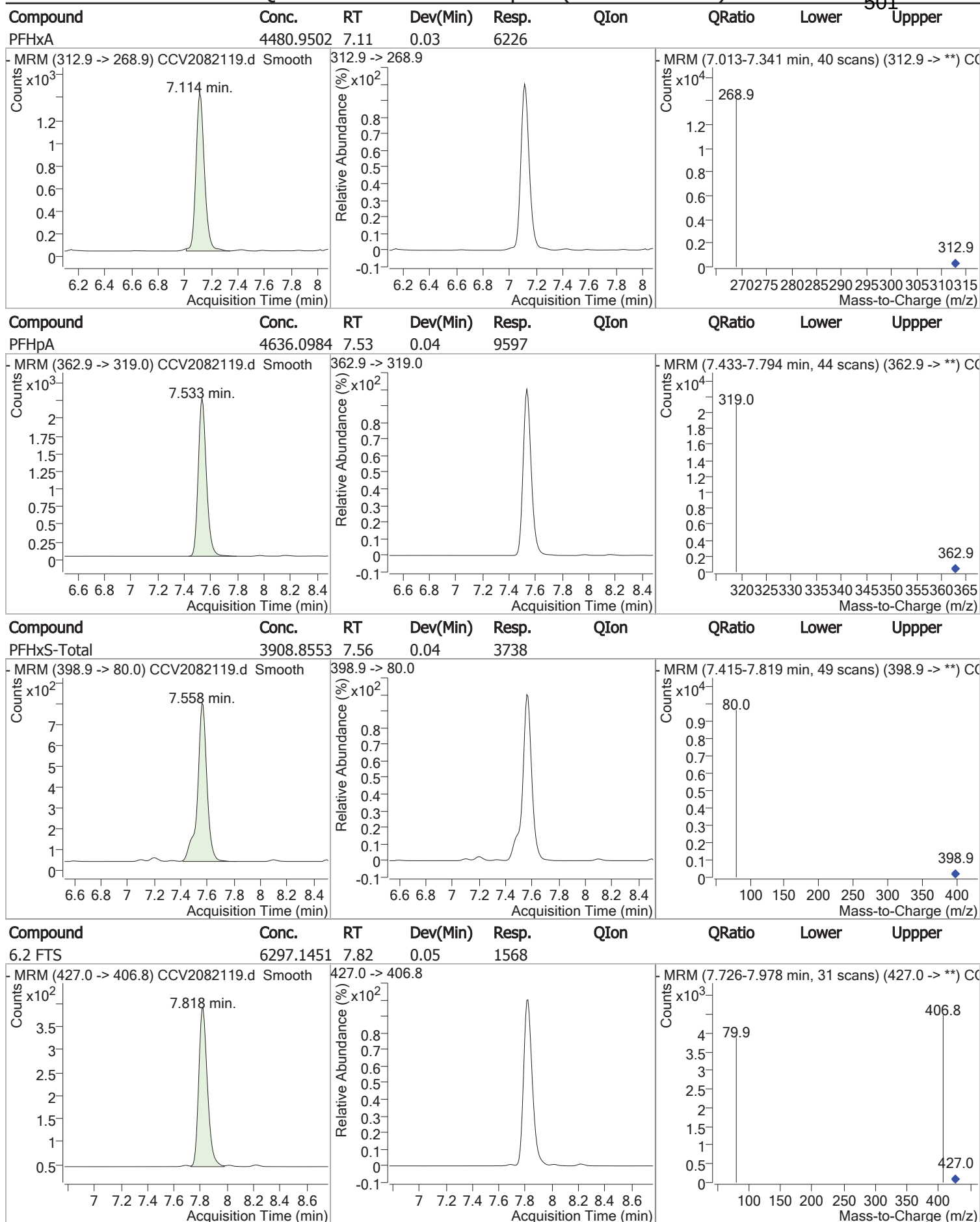
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

# Quantitation Results Report (Not Reviewed)

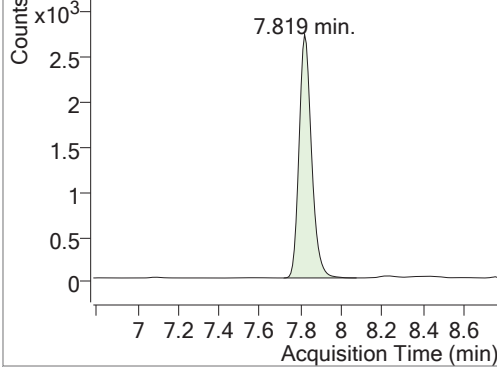
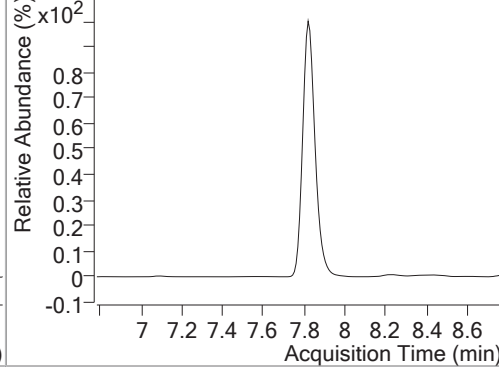
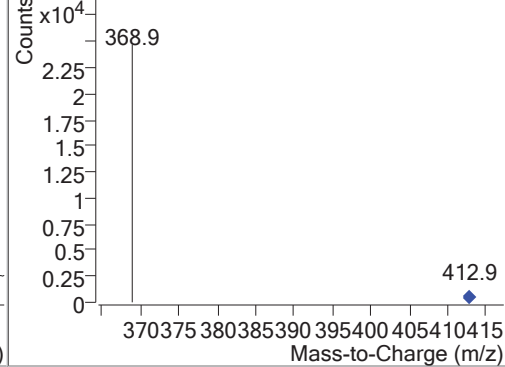
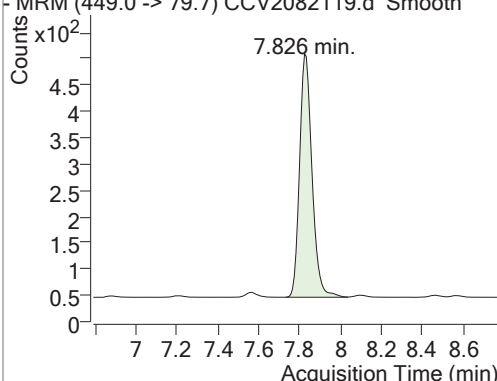
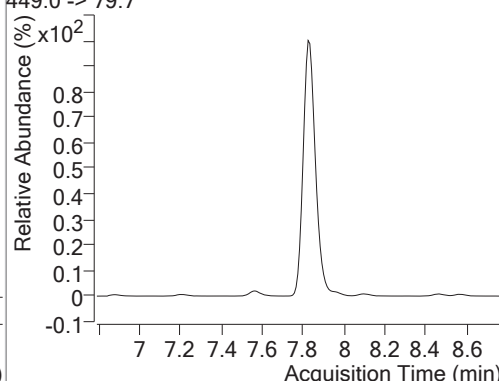
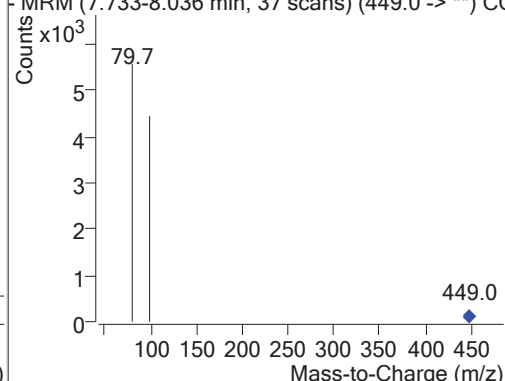
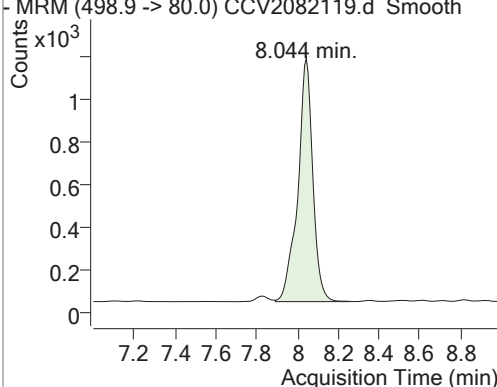
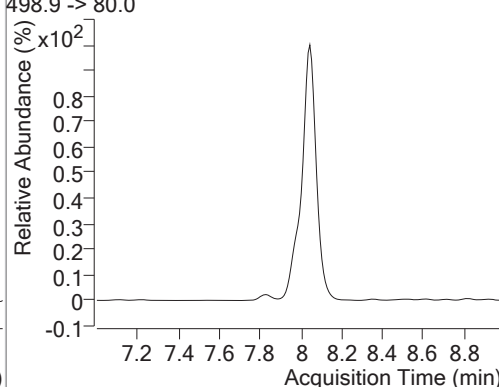
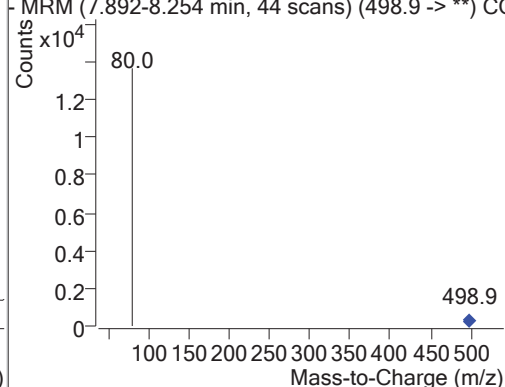
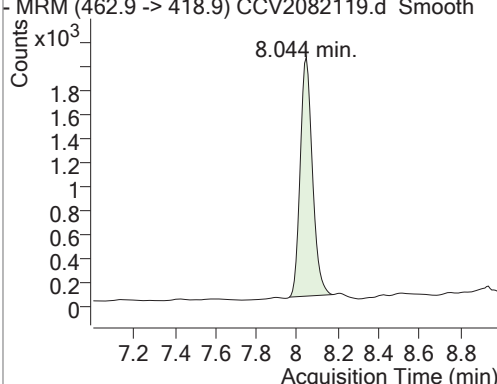
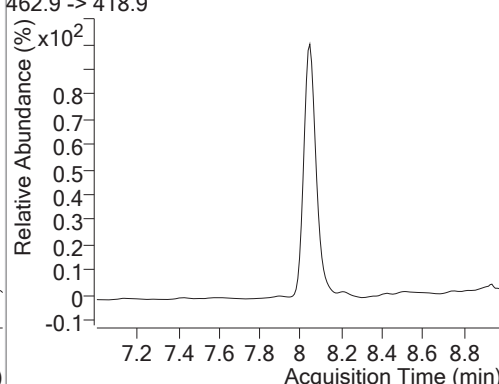
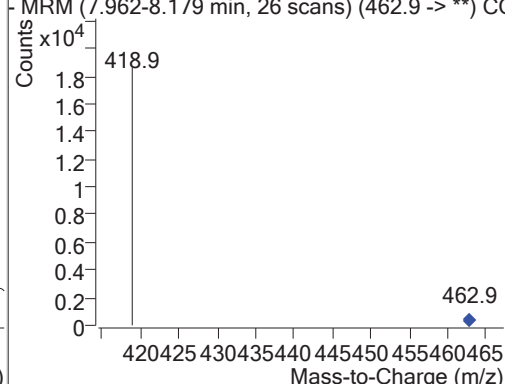
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|----------|-------|------|--------|-------|-------|
| PFBA                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3068.6306 | 2.20 | -0.02    | 995   |      |        |       |       |
| <div> <div> MRM (213.0 -&gt; 168.9) CCV2082119.d Smooth<br/>  </div> <div> MRM (213.0 -&gt; 168.9)<br/>  </div> <div> MRM (2.059-2.401 min, 41 scans) (213.0 -&gt; **) CCV2082119.d<br/>  </div> </div>       |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFPeA                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 4005.7300 | 6.26 | 0.01     | 2637  |      |        |       |       |
| <div> <div> MRM (263.0 -&gt; 219.0) CCV2082119.d Smooth<br/>  </div> <div> MRM (263.0 -&gt; 219.0)<br/>  </div> <div> MRM (6.072-6.593 min, 63 scans) (263.0 -&gt; **) CCV2082119.d<br/>  </div> </div>    |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFBS                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3799.4157 | 6.61 | 0.01     | 2311  |      |        |       |       |
| <div> <div> MRM (298.9 -&gt; 80.0) CCV2082119.d Smooth<br/>  </div> <div> MRM (298.9 -&gt; 80.0)<br/>  </div> <div> MRM (6.458-6.895 min, 53 scans) (298.9 -&gt; **) CCV2082119.d<br/>  </div> </div>   |           |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFHxA C13                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 9409.3001 | 7.11 | 0.03     | 13441 |      |        |       |       |
| <div> <div> MRM (314.9 -&gt; 269.9) CCV2082119.d Smooth<br/>  </div> <div> MRM (314.9 -&gt; 269.9)<br/>  </div> <div> MRM (7.012-7.281 min, 33 scans) (314.9 -&gt; **) CCV2082119.d<br/>  </div> </div> |           |      |          |       |      |        |       |       |



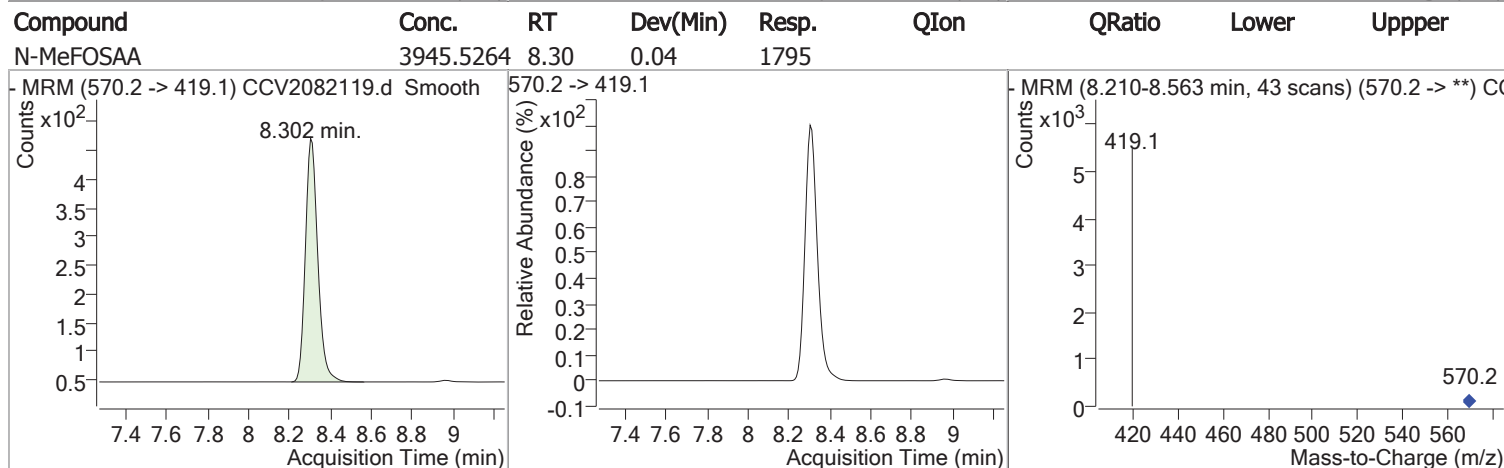
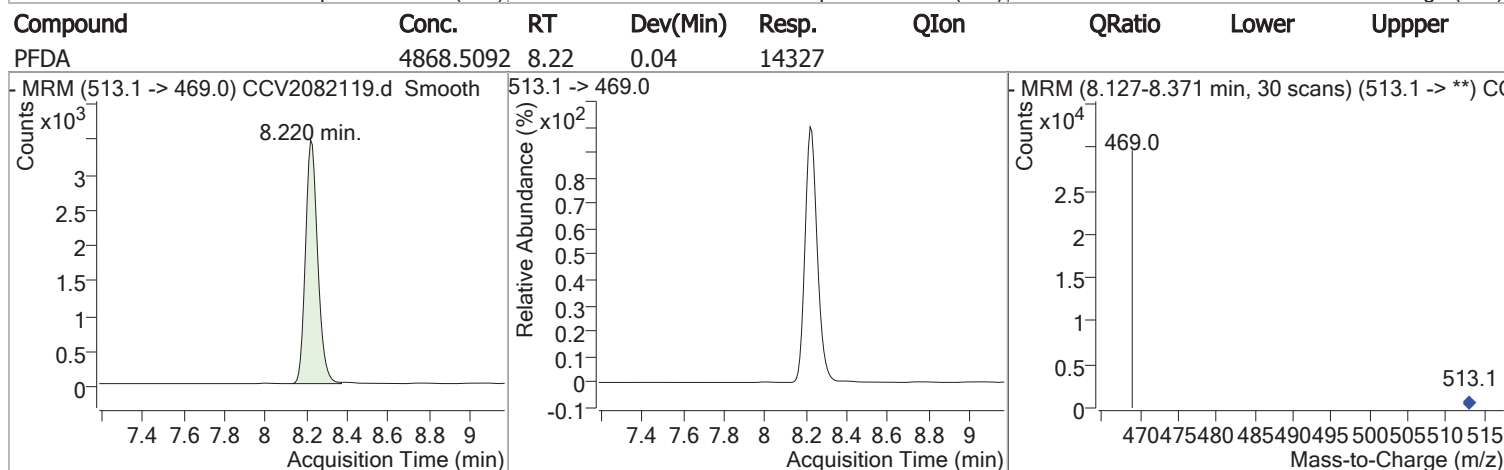
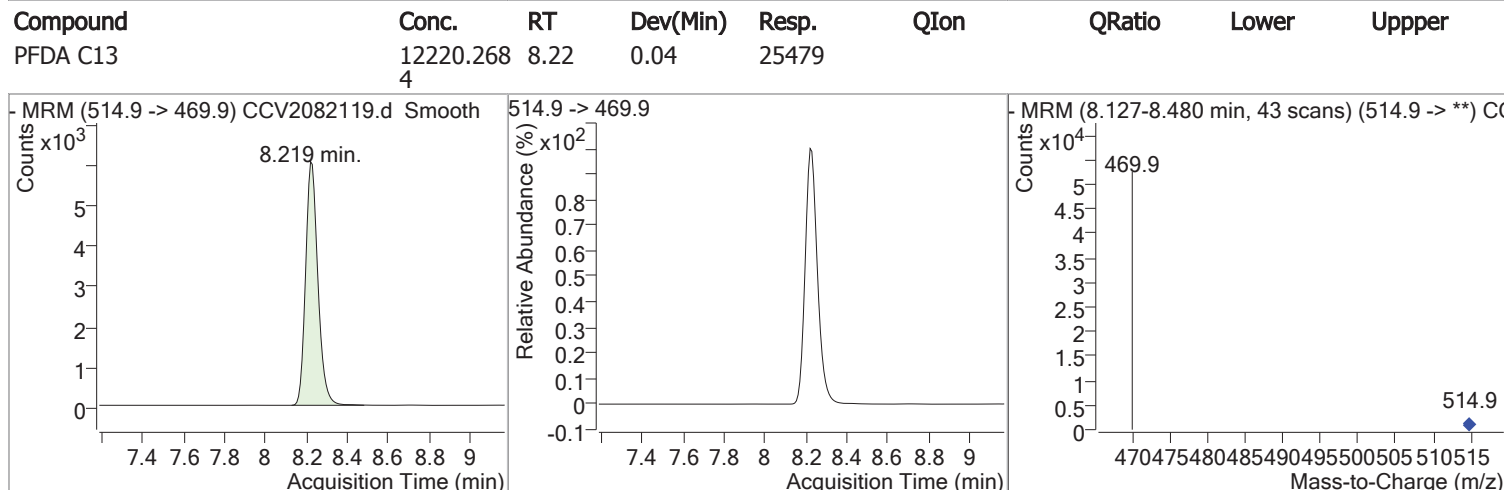
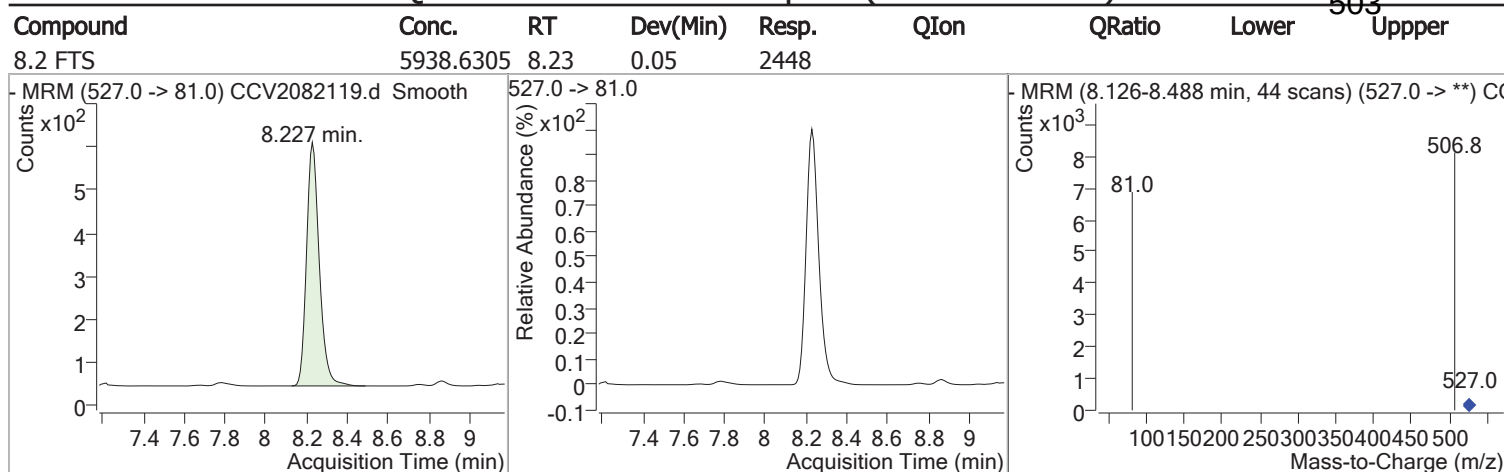
# Quantitation Results Report (Not Reviewed)



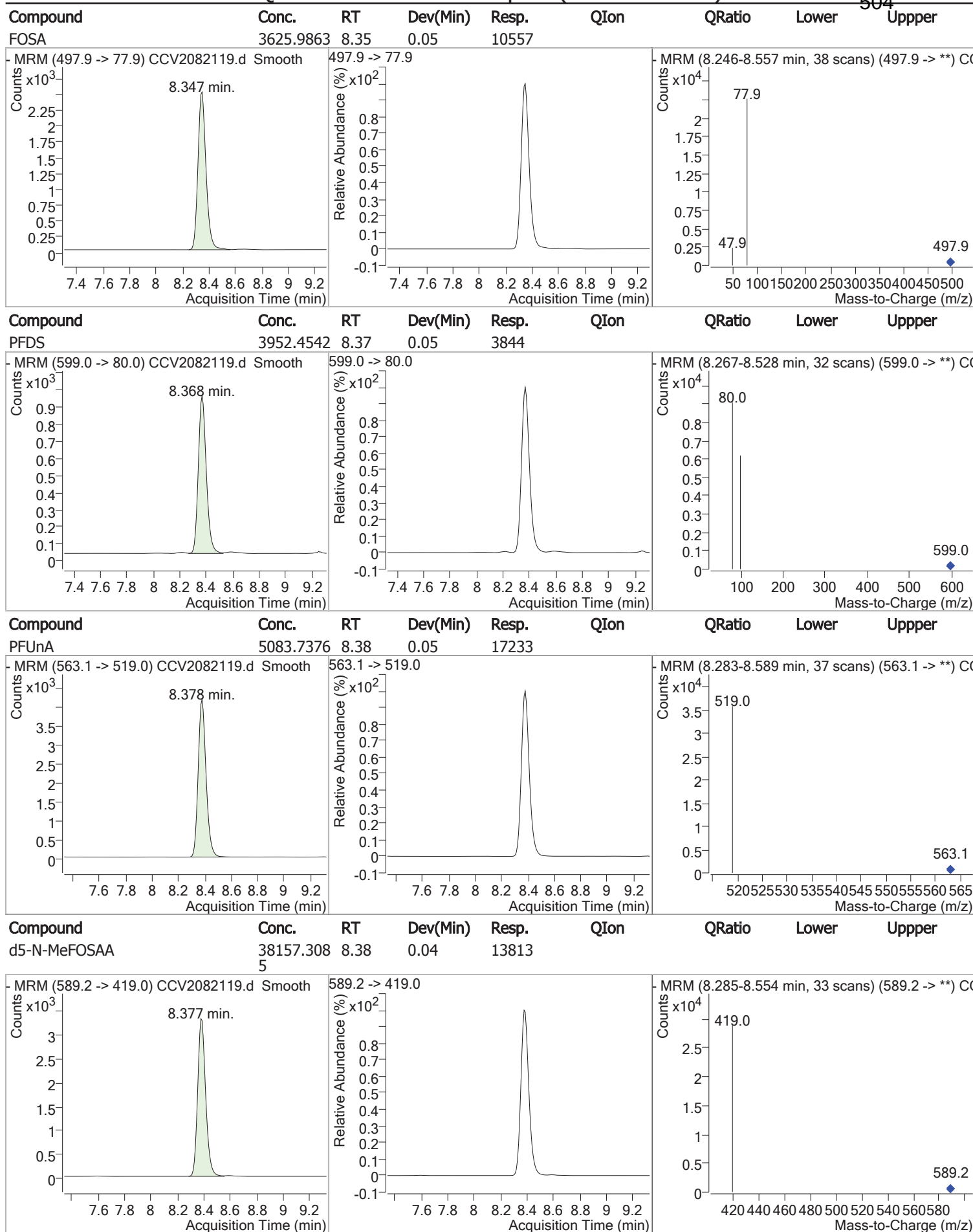
## Quantitation Results Report (Not Reviewed)

| Compound                                                                           | Conc.                                                                                | RT             | Dev(Min) | Resp.                                                                                 | QIon | QRatio                                                            | Lower | Upper |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------|----------|---------------------------------------------------------------------------------------|------|-------------------------------------------------------------------|-------|-------|
| PFOA-Total                                                                         | 4360.5107                                                                            | 7.82           | 0.04     | 11465                                                                                 |      |                                                                   |       |       |
| MRM (412.9 -> 368.9) CCV2082119.d Smooth                                           |                                                                                      | 412.9 -> 368.9 |          |                                                                                       |      | MRM (7.718-8.073 min, 43 scans) (412.9 -> **) CCV2082119.d Smooth |       |       |
|    |    |                |          |    |      |                                                                   |       |       |
| Compound                                                                           | Conc.                                                                                | RT             | Dev(Min) | Resp.                                                                                 | QIon | QRatio                                                            | Lower | Upper |
| PFHpS                                                                              | 3929.2243                                                                            | 7.83           | 0.04     | 1959                                                                                  |      |                                                                   |       |       |
| MRM (449.0 -> 79.7) CCV2082119.d Smooth                                            |                                                                                      | 449.0 -> 79.7  |          |                                                                                       |      | MRM (7.733-8.036 min, 37 scans) (449.0 -> **) CCV2082119.d Smooth |       |       |
|   |   |                |          |   |      |                                                                   |       |       |
| Compound                                                                           | Conc.                                                                                | RT             | Dev(Min) | Resp.                                                                                 | QIon | QRatio                                                            | Lower | Upper |
| PFOS-Total                                                                         | 3773.1620                                                                            | 8.04           | 0.05     | 5872                                                                                  |      |                                                                   |       |       |
| MRM (498.9 -> 80.0) CCV2082119.d Smooth                                            |                                                                                      | 498.9 -> 80.0  |          |                                                                                       |      | MRM (7.892-8.254 min, 44 scans) (498.9 -> **) CCV2082119.d Smooth |       |       |
|  |  |                |          |  |      |                                                                   |       |       |
| Compound                                                                           | Conc.                                                                                | RT             | Dev(Min) | Resp.                                                                                 | QIon | QRatio                                                            | Lower | Upper |
| PFNA                                                                               | 5178.1426                                                                            | 8.04           | 0.05     | 8260                                                                                  |      |                                                                   |       |       |
| MRM (462.9 -> 418.9) CCV2082119.d Smooth                                           |                                                                                      | 462.9 -> 418.9 |          |                                                                                       |      | MRM (7.962-8.179 min, 26 scans) (462.9 -> **) CCV2082119.d Smooth |       |       |
|  |  |                |          |  |      |                                                                   |       |       |

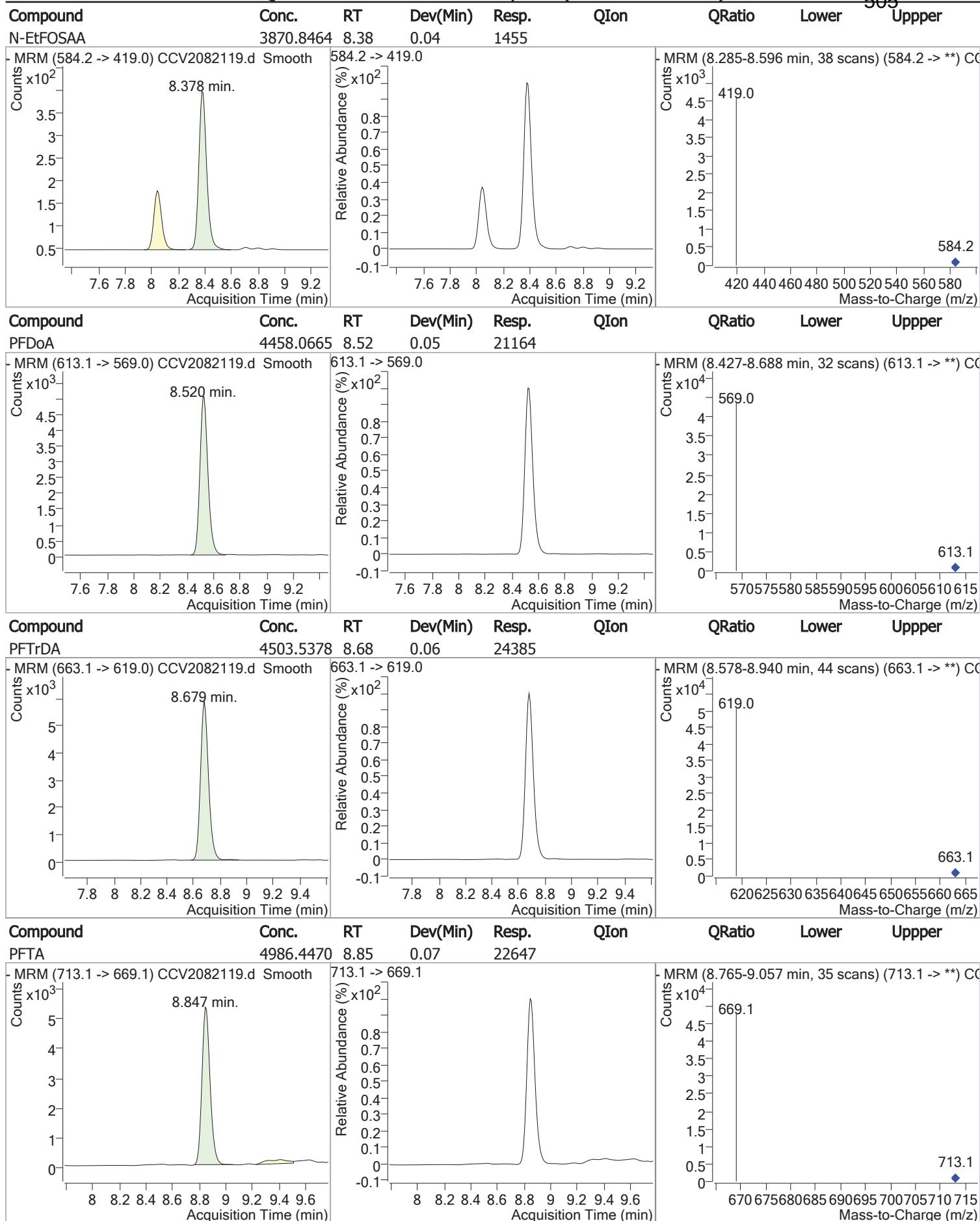
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



## Quantitation Results Report (Not Reviewed)



## CONTINUING CALIBRATION VERIFICATION

## SOP 434-PFAAS

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | HPLC1                          | Calibration:      | 1900263               |
| Lab File ID:   | CCV3082119.d                   | Calibration Date: | 08/14/19 14:37        |
| Sequence:      | S039480                        | Injection Date:   | 08/21/19              |
| Lab Sample ID: | S039480-CCV3                   | Injection Time:   | 17:38                 |

| COMPOUND                               | TYPE | CONC. (ng/L) |       | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|----------------------------------------|------|--------------|-------|-----------------|-----------|---------|----------------|-----------|
|                                        |      | STD          | CCV   | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| Perfluorobutanoic acid (PFBA)          | A    | 50000        | 33200 | 0.1543906       | 0.1074029 |         | -33.7          |           |
| Perfluorobutanesulfonic acid (PFBS)    | A    | 44200        | 40300 | 0.5510923       | 0.5286417 |         | -8.9           |           |
| Perfluoropentanoic acid (PFPeA)        | A    | 50000        | 41900 | 0.3040697       | 0.2751619 |         | -16.3          |           |
| Perfluorohexanoic acid (PFHxA)         | A    | 50000        | 50300 | 0.6714809       | 0.6974227 |         | 0.5            |           |
| Perfluorohexanesulfonic acid (PFHxS)   | A    | 45500        | 40600 | 0.8347983       | 0.8145647 |         | -10.7          |           |
| Perfluoroheptanoic acid (PFHpA)        | A    | 50000        | 48200 | 1.053666        | 0.9972092 |         | -3.5           |           |
| Perfluoroheptanesulfonic acid (PFHpS)  | A    | 47500        | 46000 | 0.5117502       | 0.4604938 |         | -3.2           |           |
| Perfluorooctanoic acid (PFOA)          | A    | 50000        | 46900 | 1.330641        | 1.23063   |         | -6.3           |           |
| Perfluorooctanesulfonic acid (PFOS)    | A    | 46200        | 40700 | 1.438054        | 1.307942  |         | -11.9          |           |
| Perfluorooctanesulfonamide (FOSA)      | A    | 50000        | 31500 | 7.121342        | 4.794152  |         | -37.0          |           |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | A    | 47500        | 61300 | 0.2337119       | 0.3067511 |         | 29.1           |           |
| Perfluorononanoic acid (PFNA)          | A    | 50000        | 55100 | 0.842486        | 0.878403  |         | 10.3           |           |
| Perfluorodecanoic acid (PFDA)          | A    | 50000        | 49200 | 1.468554        | 1.446292  |         | -1.6           |           |
| Perfluorodecanesulfonic acid (PFDS)    | A    | 48200        | 41300 | 0.9068341       | 0.7947108 |         | -14.3          |           |
| N-EtFOSAA                              | A    | 50000        | 35300 | 0.9910125       | 0.6929866 |         | -29.5          |           |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | A    | 48000        | 47300 | 0.3729975       | 0.387767  |         | -1.4           |           |
| Perfluoroundecanoic acid (PFUnA)       | A    | 50000        | 50200 | 1.739723        | 1.699509  |         | 0.4            |           |
| N-MeFOSAA                              | A    | 50000        | 38300 | 1.146938        | 0.9097072 |         | -23.5          |           |
| Perfluorododecanoic acid (PFDoA)       | A    | 50000        | 51400 | 2.235401        | 2.436572  |         | 2.8            |           |
| Perfluorotridecanoic acid (PFTrDA)     | A    | 50000        | 52000 | 2.580637        | 2.812686  |         | 4.0            |           |
| Perfluorotetradecanoic acid (PFTA)     | A    | 50000        | 50900 | 2.262719        | 2.310723  |         | 1.9            |           |

**CONTINUING CALIBRATION VERIFICATION**  
**SOP 434-PFAAS**

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | HPLC1                          | Calibration:      | 1900263               |
| Lab File ID:   | CCV3082119.d                   | Calibration Date: | 08/14/19 14:37        |
| Sequence:      | S039480                        | Injection Date:   | 08/21/19              |
| Lab Sample ID: | S039480-CCV3                   | Injection Time:   | 17:38                 |

| COMPOUND    | TYPE | CONC. (ng/L) |       | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|-------------|------|--------------|-------|-----------------|-----------|---------|----------------|-----------|
|             |      | STD          | CCV   | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| 13C-PFHxA   | A    | 10000        | 10000 | 0.6955487       | 0.7130204 |         | -0.03          |           |
| 13C-PFDA    | A    | 10000        | 10800 | 1.05667         | 1.122575  |         | 7.8            |           |
| d5-NEtFOSAA | A    | 40000        | 28600 | 0.8657046       | 0.6772673 |         | -28.4          |           |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

\* Values outside of QC limits

# Quantitation Results Report (Not Reviewed)

|                |                   |                   |                      |
|----------------|-------------------|-------------------|----------------------|
| Data File      | CCV3082119.d      | Operator          |                      |
| Acq. Method    | 21List021219.m    | Acq. Date-Time    | 8/21/2019 5:38:15 PM |
| Sample Name    | CCV3082119        | Instrument        | QQQ1                 |
| Vial           |                   | Multiplier        | 1.00                 |
| DA Method File | 081319.m          | Comment           |                      |
| Tune File      |                   | Tune Date         |                      |
| Batch Name     | B238243.batch.bin | Last Calib Update | 8/14/2019 2:32:09 PM |
| Ref Library    |                   |                   |                      |

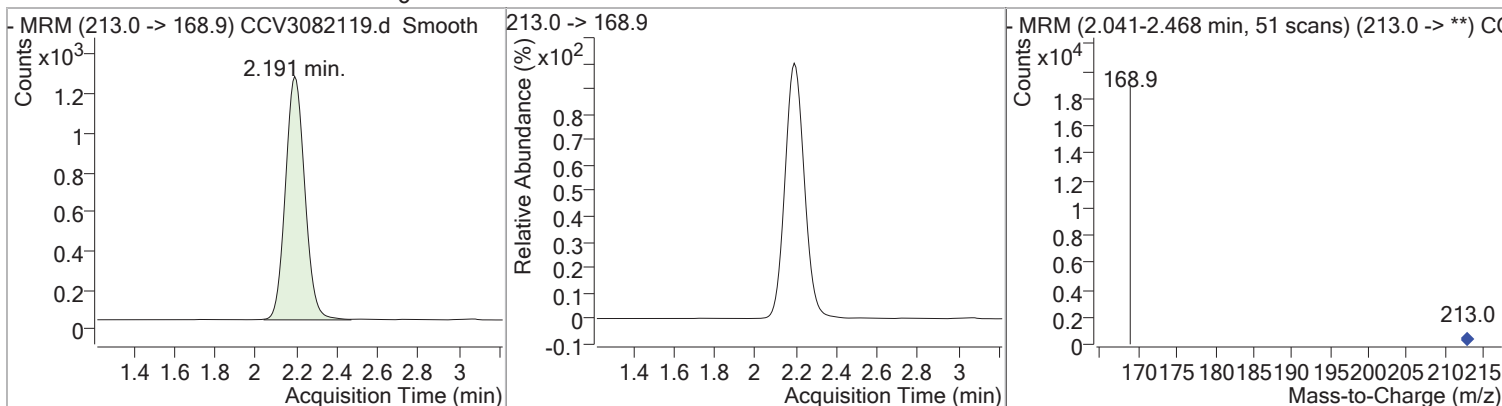
| Compound                    | RT                   | QIon           | Resp.  | Conc.              | Units | Dev(Min) |
|-----------------------------|----------------------|----------------|--------|--------------------|-------|----------|
| Internal Standards          |                      |                |        |                    |       |          |
| M PFOA C13                  | 7.827                | 416.9 -> 371.9 | 15349  | 10000.0000         | pg/ml | 0.050    |
| M PFOS C13                  | 8.052                | 502.9 -> 80.0  | 22564  | 28700.0000         | pg/ml | 0.059    |
| M d3-N-MeFOSAA              | 8.319                | 573.2 -> 419.0 | 13801  | 40000.0000         | pg/ml | 0.059    |
| System Monitoring Compounds |                      |                |        |                    |       |          |
| S PFHxA C13                 | 7.113                | 314.9 -> 269.9 | 10944  | 9996.6073          | pg/ml | 0.025    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |        | Recovery = 99.97%  |       |          |
| S PFDA C13                  | 8.236                | 514.9 -> 469.9 | 17230  | 10782.7279         | pg/ml | 0.059    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |        | Recovery = 107.83% |       |          |
| S d5-N-MeFOSAA              | 8.394                | 589.2 -> 419.0 | 9347   | 28637.7215         | pg/ml | 0.059    |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |        | Recovery = 71.59%  |       |          |
| Target Compounds            |                      |                |        |                    |       | QValue   |
| T PFBA                      | 2.191                | 213.0 -> 168.9 | 8243   | 33158.8996         | pg/ml | 100      |
| T PFPeA                     | 6.256                | 263.0 -> 219.0 | 21117  | 41862.9764         | pg/ml | 100      |
| T PFBS                      | 6.609                | 298.9 -> 80.0  | 18370  | 40270.8324         | pg/ml | 100      |
| T PFHxA                     | 7.114                | 312.9 -> 268.9 | 53523  | 50264.3007         | pg/ml | 100      |
| T PFHpA                     | 7.533                | 362.9 -> 319.0 | 76530  | 48239.5832         | pg/ml | 100      |
| T PFHxS-Total               | 7.567                | 398.9 -> 80.0  | 29138  | 40625.3186         | pg/ml | 100      |
| T 6.2 FTS                   | 7.818                | 427.0 -> 406.8 | 11455  | 61319.3084         | pg/ml | 100      |
| T PFOA-Total                | 7.827                | 412.9 -> 368.9 | 94444  | 46867.1115         | pg/ml | 100      |
| T PFHpS                     | 7.834                | 449.0 -> 79.7  | 17197  | 45991.1844         | pg/ml | 100      |
| T PFOS-Total                | 8.052                | 498.9 -> 80.0  | 47507  | 40694.9804         | pg/ml | 100      |
| T PFNA                      | 8.053                | 462.9 -> 418.9 | 67413  | 55144.0830         | pg/ml | 100      |
| T 8.2 FTS                   | 8.236                | 527.0 -> 81.0  | 14633  | 47336.2971         | pg/ml | 100      |
| T PFDA                      | 8.236                | 513.1 -> 469.0 | 110995 | 49213.5192         | pg/ml | 100      |
| T N-MeFOSAA                 | 8.319                | 570.2 -> 419.1 | 15693  | 38254.4761         | pg/ml | 100      |
| T FOSA                      | 8.355                | 497.9 -> 77.9  | 82702  | 31505.7179         | pg/ml | 100      |
| T PFDS                      | 8.385                | 599.0 -> 80.0  | 30115  | 41284.2607         | pg/ml | 100      |
| T PFUnA                     | 8.387                | 563.1 -> 519.0 | 130428 | 50203.3954         | pg/ml | 100      |
| T N-EtFOSAA                 | 8.394                | 584.2 -> 419.0 | 11954  | 35271.0556         | pg/ml | 100      |
| T PFDoA                     | 8.536                | 613.1 -> 569.0 | 186994 | 51396.0985         | pg/ml | 100      |
| T PFTrDA                    | 8.696                | 663.1 -> 619.0 | 215859 | 52016.3997         | pg/ml | 100      |
| T PFTA                      | 8.872                | 713.1 -> 669.1 | 177336 | 50946.6751         | pg/ml | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

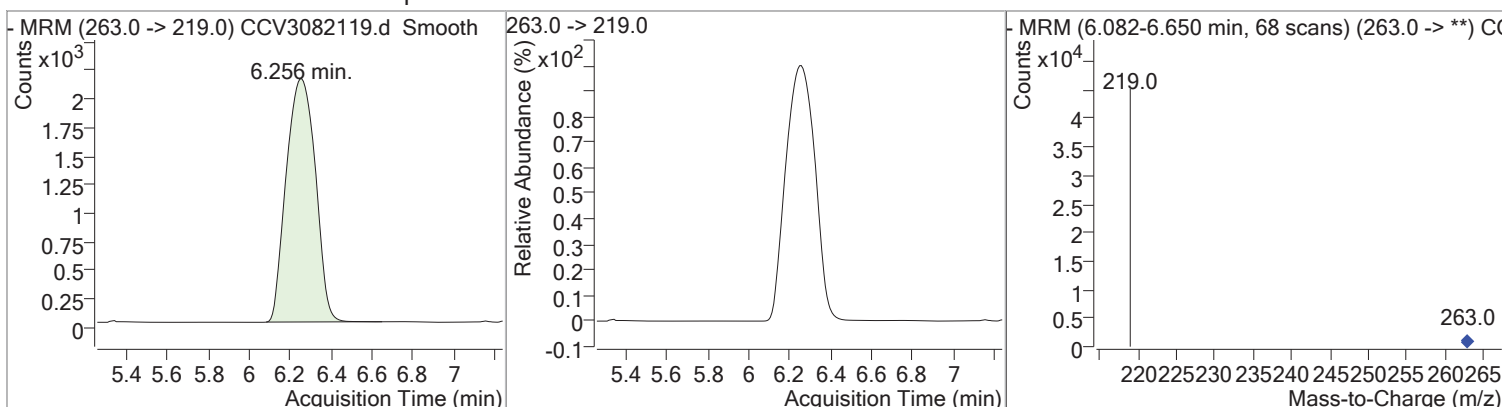


# Quantitation Results Report (Not Reviewed)

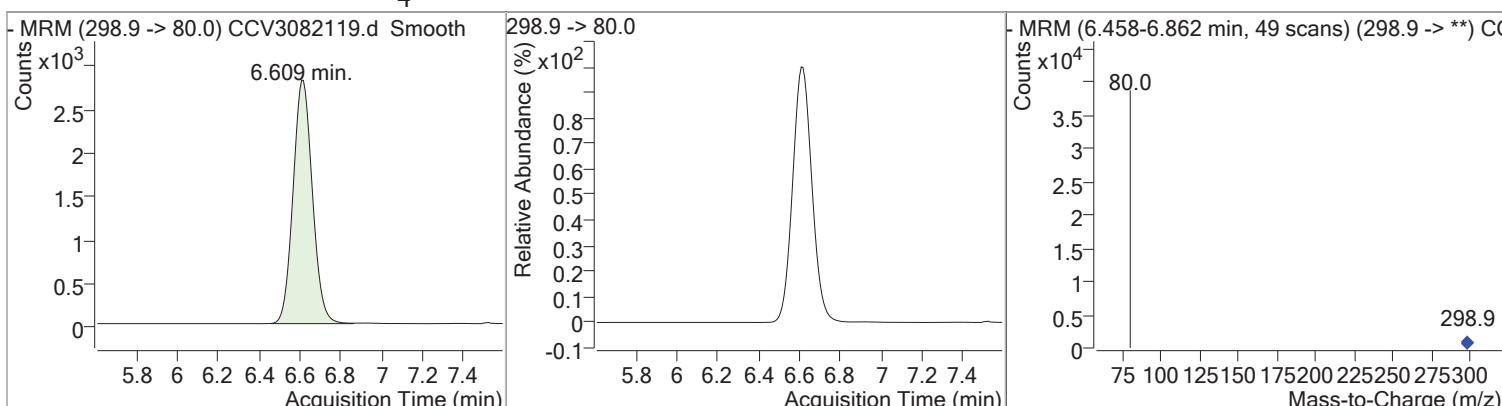
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFBA     | 33158.899 | 2.19 | -0.03    | 8243  |      |        |       |       |
|          | 6         |      |          |       |      |        |       |       |



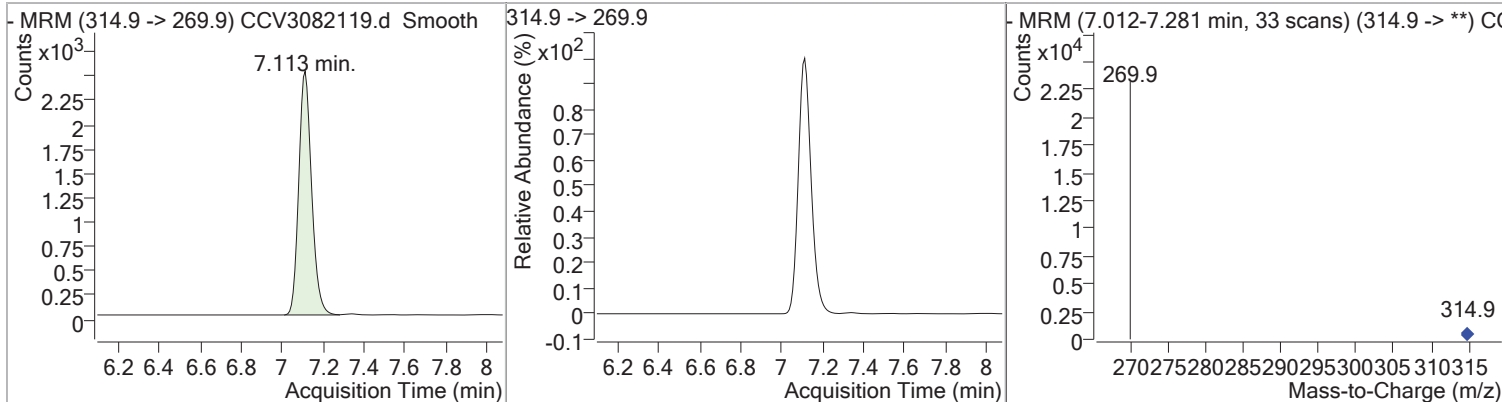
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFPeA    | 41862.976 | 6.26 | 0.01     | 21117 |      |        |       |       |
|          | 4         |      |          |       |      |        |       |       |



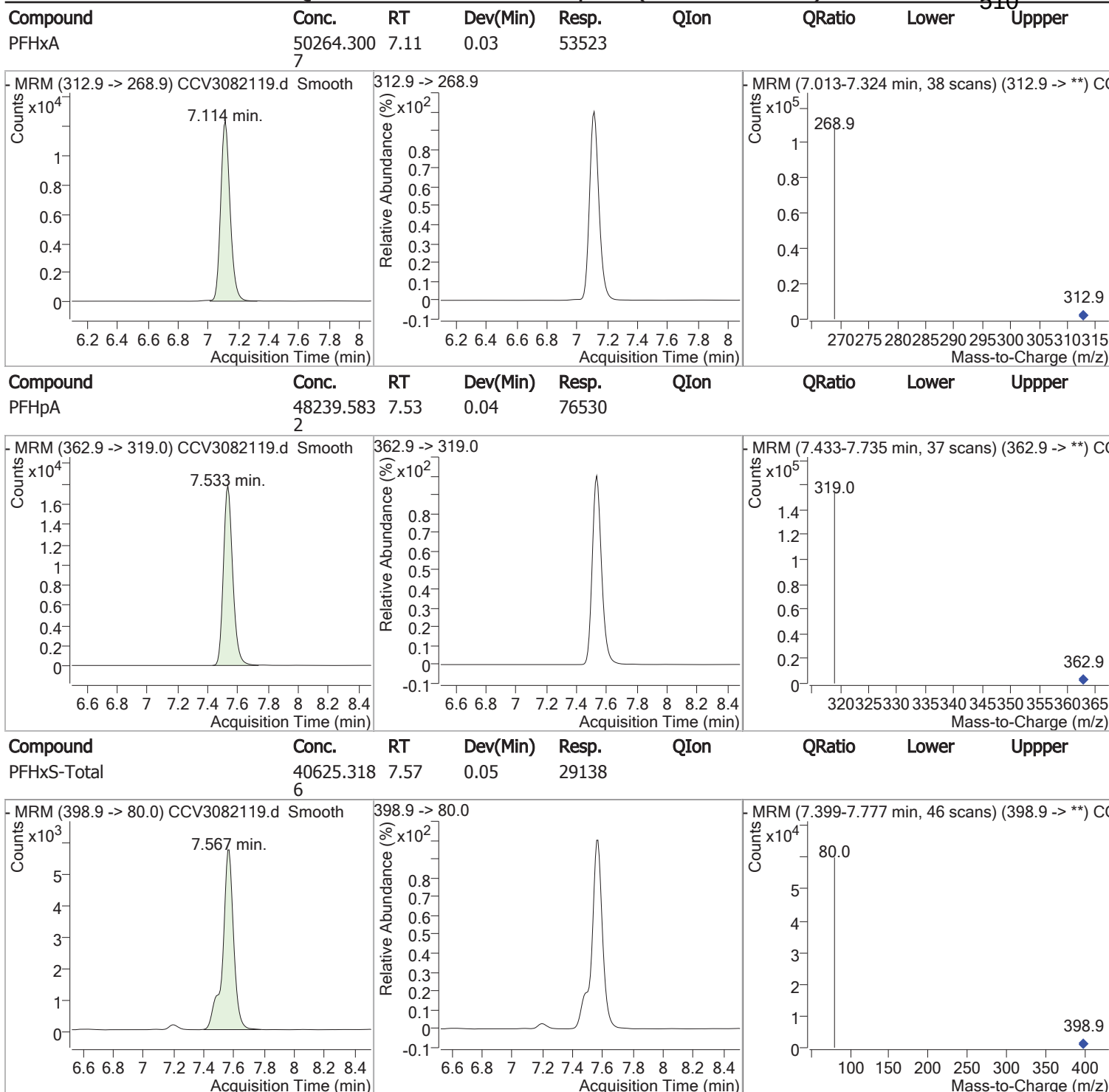
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFBS     | 40270.832 | 6.61 | 0.01     | 18370 |      |        |       |       |
|          | 4         |      |          |       |      |        |       |       |



| Compound  | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|-----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFHxA C13 | 9996.6073 | 7.11 | 0.03     | 10944 |      |        |       |       |

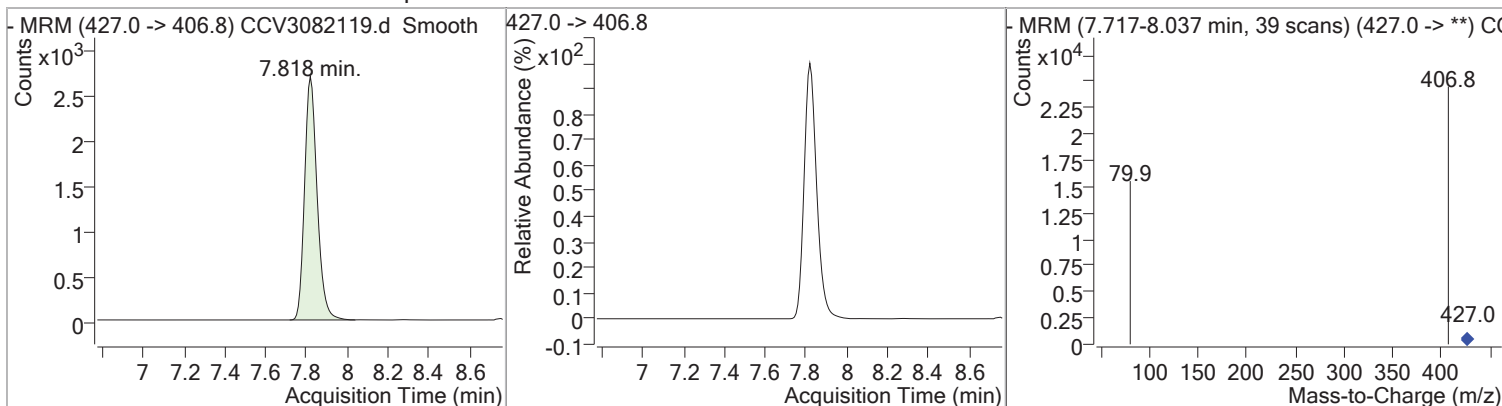


# Quantitation Results Report (Not Reviewed)

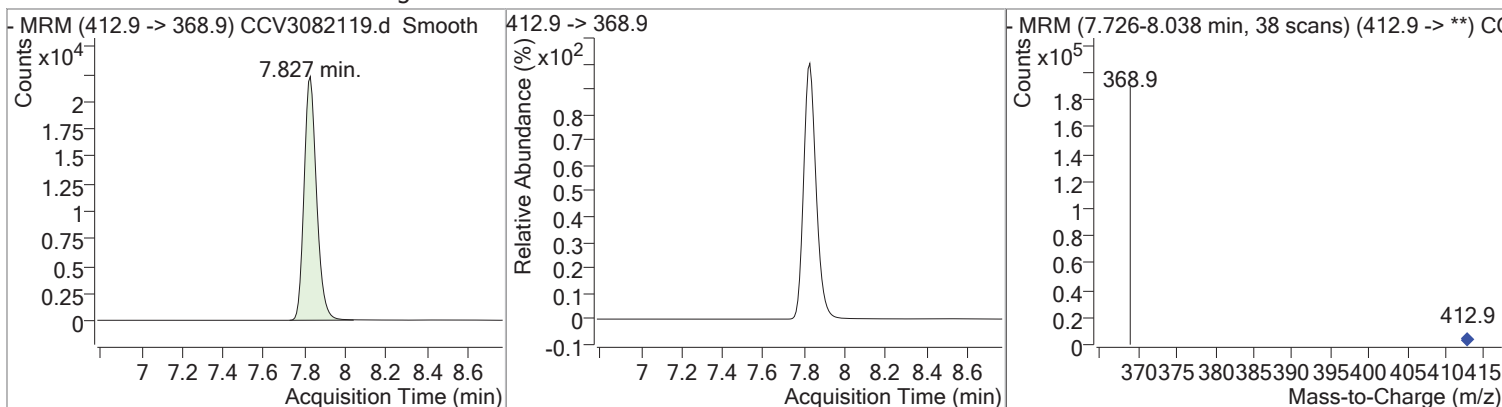


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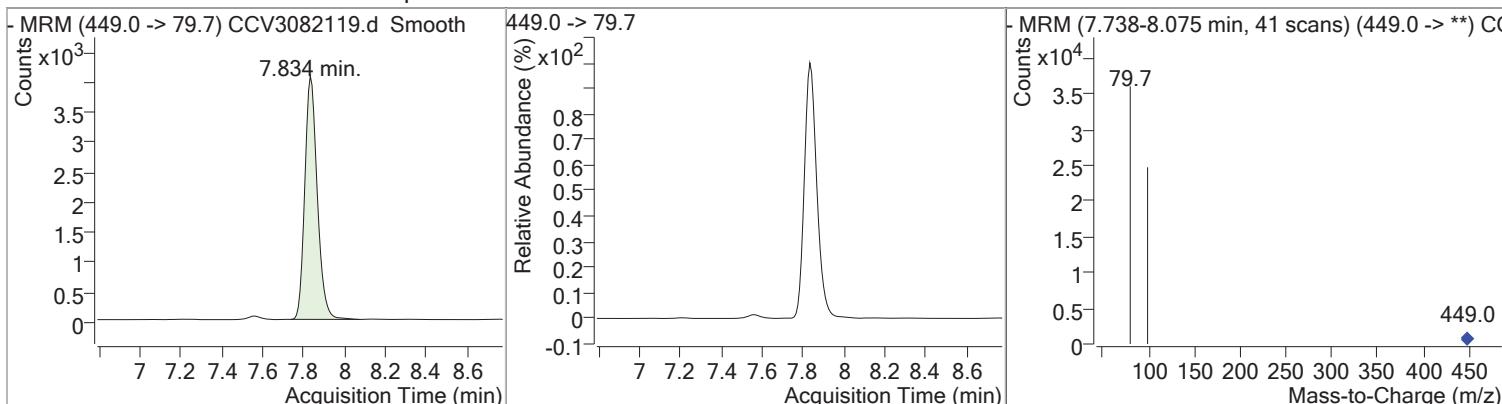
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| 6.2 FTS  | 61319.308 | 7.82 | 0.05     | 11455 |      |        |       |       |



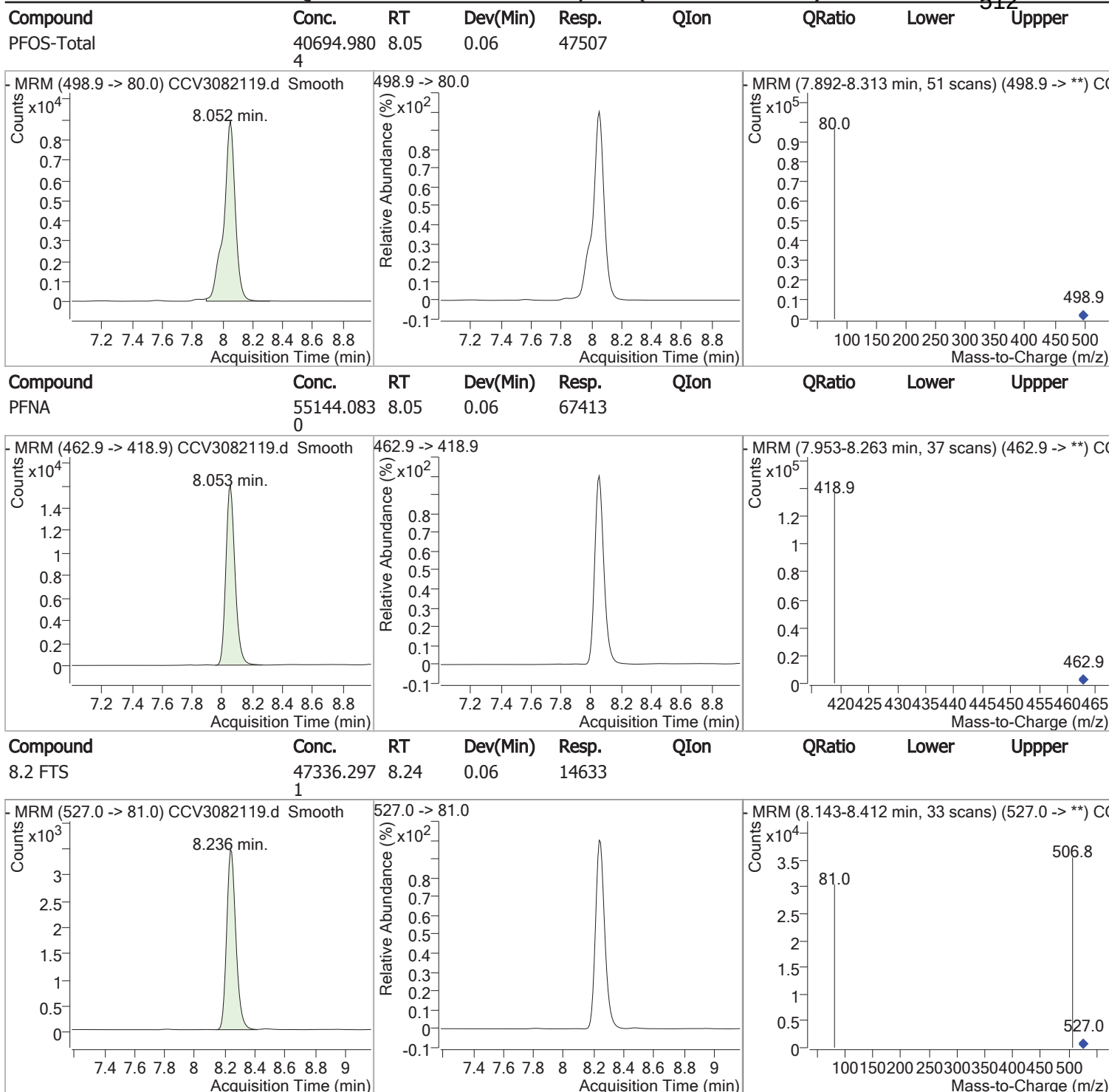
| Compound   | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|------------|-----------|------|----------|-------|------|--------|-------|-------|
| PFOA-Total | 46867.111 | 7.83 | 0.05     | 94444 |      |        |       |       |



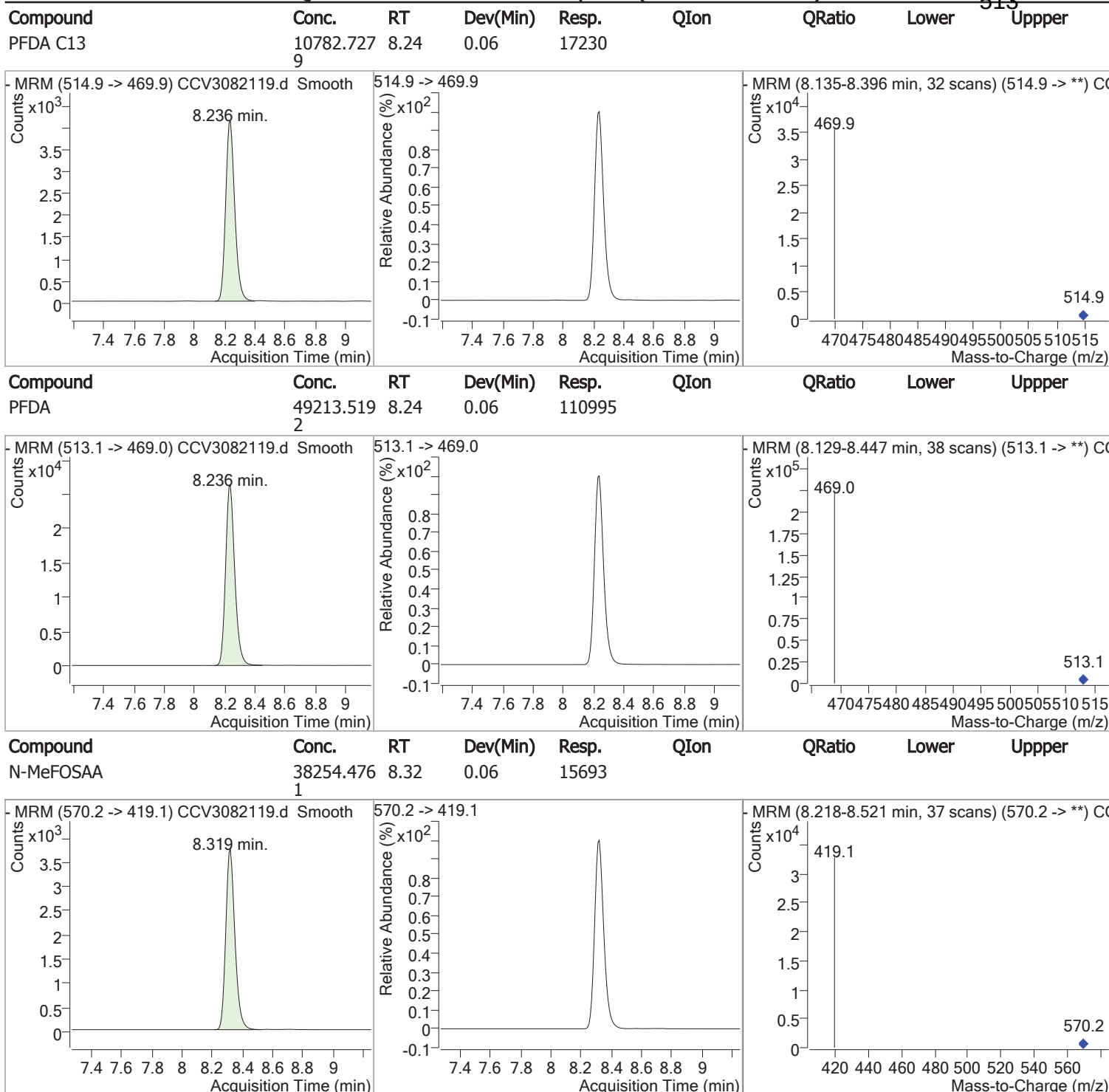
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFHpS    | 45991.184 | 7.83 | 0.05     | 17197 |      |        |       |       |



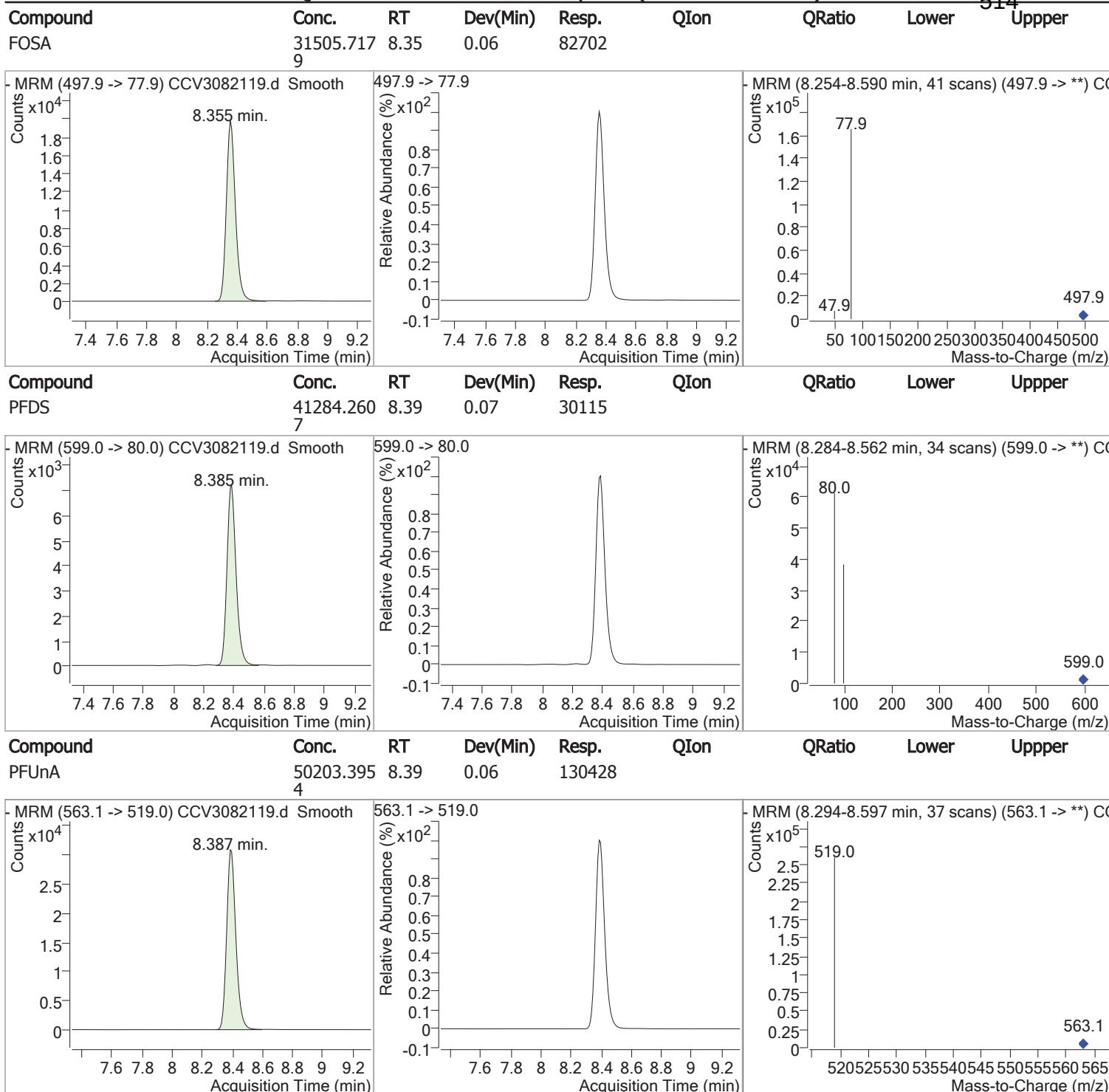
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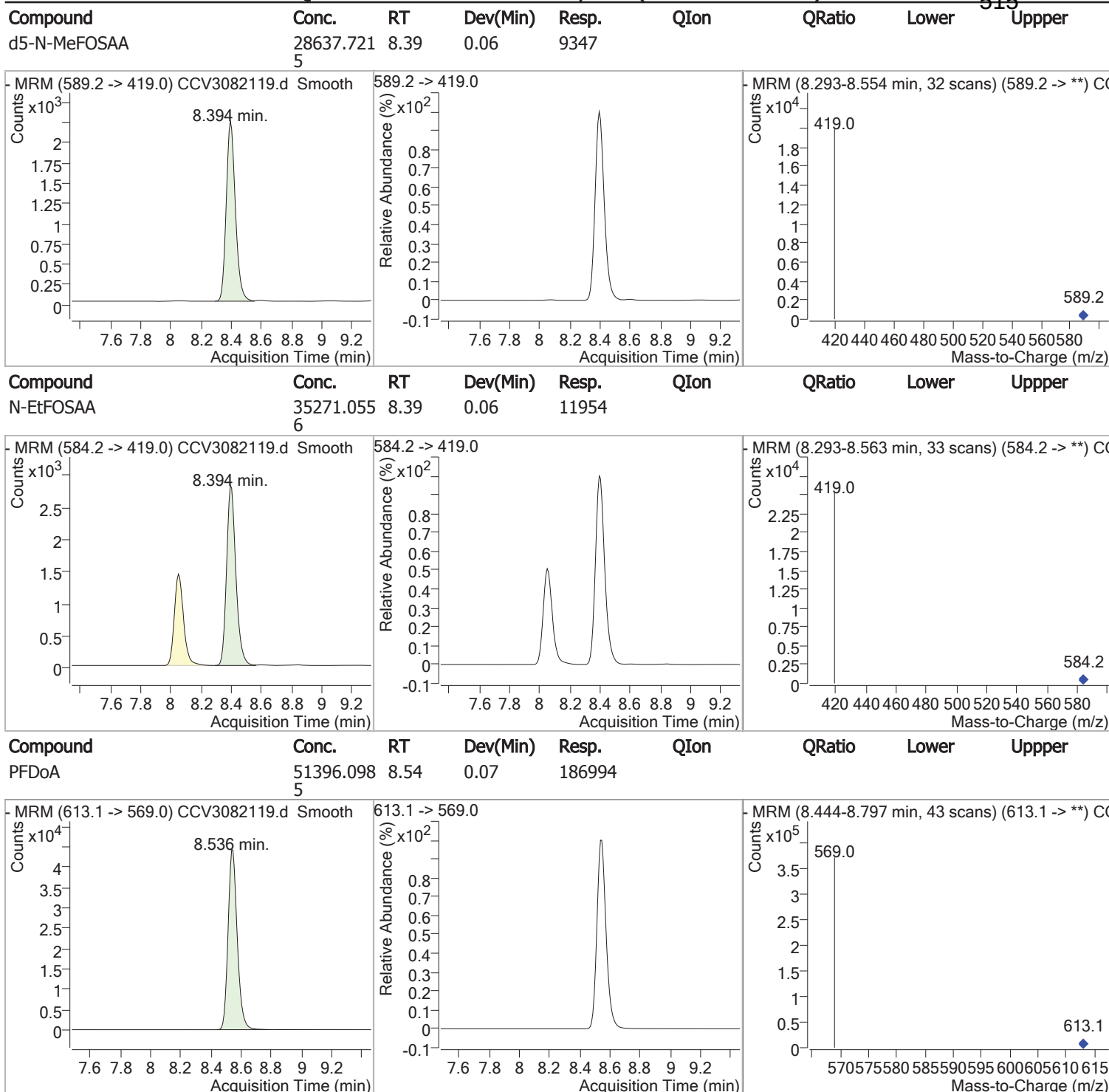
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# Quantitation Results Report (Not Reviewed)

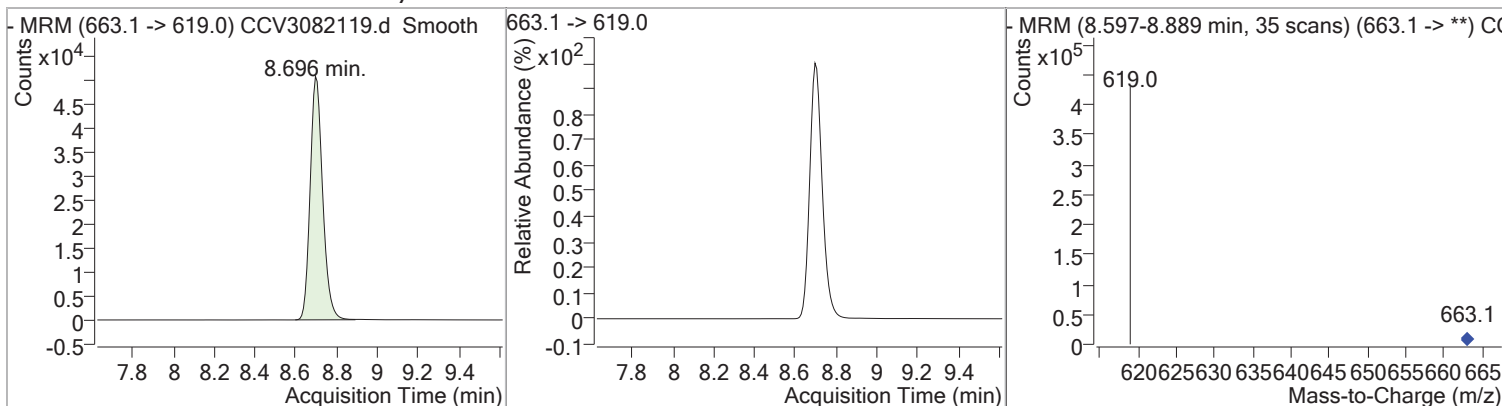


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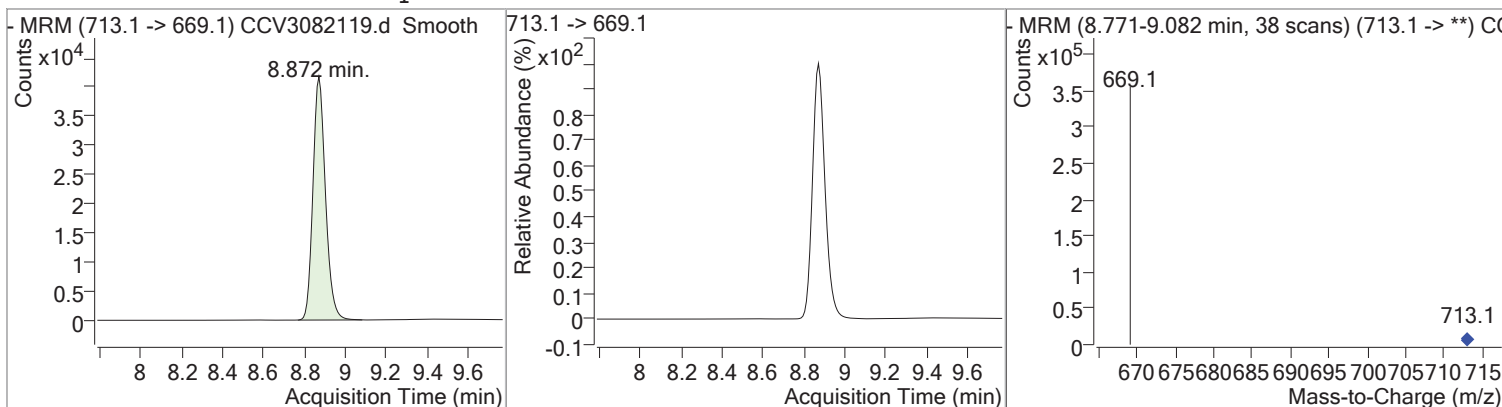


# Quantitation Results Report (Not Reviewed)

| Compound | Conc.     | RT   | Dev(Min) | Resp.  | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|--------|------|--------|-------|-------|
| PFTTrDA  | 52016.399 | 8.70 | 0.08     | 215859 |      |        |       |       |



| Compound | Conc.     | RT   | Dev(Min) | Resp.  | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|--------|------|--------|-------|-------|
| PFTA     | 50946.675 | 8.87 | 0.09     | 177336 |      |        |       |       |





## CONTINUING CALIBRATION VERIFICATION

## SOP 434-PFAAS

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Instrument ID: HPLC1

Calibration: 1900263

Lab File ID: CCV4082119.d

Calibration Date: 08/14/19 14:37

Sequence: S039480

Injection Date: 08/21/19

Lab Sample ID: S039480-CCV4

Injection Time: 21:00

| COMPOUND                               | TYPE | CONC. (ng/L) |     | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|----------------------------------------|------|--------------|-----|-----------------|-----------|---------|----------------|-----------|
|                                        |      | STD          | CCV | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| Perfluorobutanoic acid (PFBA)          | A    | 500          | 376 | 0.1543906       | 0.1218642 |         | -24.8          |           |
| Perfluorobutanesulfonic acid (PFBS)    | A    | 442          | 515 | 0.5510923       | 0.6765637 |         | 16.6           |           |
| Perfluoropentanoic acid (PFPeA)        | A    | 500          | 317 | 0.3040697       | 0.2086306 |         | -36.5          |           |
| Perfluorohexanoic acid (PFHxA)         | A    | 500          | 514 | 0.6714809       | 0.7129493 |         | 2.8            |           |
| Perfluorohexanesulfonic acid (PFHxS)   | A    | 455          | 622 | 0.8347983       | 1.247869  |         | 36.8           |           |
| Perfluoroheptanoic acid (PFHpA)        | A    | 500          | 403 | 1.053666        | 0.8337273 |         | -19.3          |           |
| Perfluoroheptanesulfonic acid (PFHpS)  | A    | 475          | 387 | 0.5117502       | 0.3877315 |         | -18.5          |           |
| Perfluorooctanoic acid (PFOA)          | A    | 500          | 422 | 1.330641        | 1.107853  |         | -15.6          |           |
| Perfluorooctanesulfonic acid (PFOS)    | A    | 462          | 486 | 1.438054        | 1.560407  |         | 5.1            |           |
| Perfluorooctanesulfonamide (FOSA)      | A    | 500          | 260 | 7.121342        | 3.956786  |         | -48.0          |           |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | A    | 475          | 791 | 0.2337119       | 0.3957242 |         | 66.5           |           |
| Perfluorononanoic acid (PFNA)          | A    | 500          | 690 | 0.842486        | 1.098577  |         | 37.9           |           |
| Perfluorodecanoic acid (PFDA)          | A    | 500          | 575 | 1.468554        | 1.69094   |         | 15.1           |           |
| Perfluorodecanesulfonic acid (PFDS)    | A    | 482          | 560 | 0.9068341       | 1.077687  |         | 16.2           |           |
| N-EtFOSAA                              | A    | 500          | 495 | 0.9910125       | 0.9724411 |         | -1.0           |           |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | A    | 480          | 510 | 0.3729975       | 0.4181119 |         | 6.3            |           |
| Perfluoroundecanoic acid (PFUnA)       | A    | 500          | 469 | 1.739723        | 1.587698  |         | -6.2           |           |
| N-MeFOSAA                              | A    | 500          | 275 | 1.146938        | 0.6536726 |         | -45.0          |           |
| Perfluorododecanoic acid (PFDoA)       | A    | 500          | 530 | 2.235401        | 2.512607  |         | 6.0            |           |
| Perfluorotridecanoic acid (PFTrDA)     | A    | 500          | 554 | 2.580637        | 2.996452  |         | 10.8           |           |
| Perfluorotetradecanoic acid (PFTA)     | A    | 500          | 345 | 2.262719        | 1.566658  |         | -30.9          |           |

**CONTINUING CALIBRATION VERIFICATION**  
**SOP 434-PFAAS**

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | HPLC1                          | Calibration:      | 1900263               |
| Lab File ID:   | CCV4082119.d                   | Calibration Date: | 08/14/19 14:37        |
| Sequence:      | S039480                        | Injection Date:   | 08/21/19              |
| Lab Sample ID: | S039480-CCV4                   | Injection Time:   | 21:00                 |

| COMPOUND    | TYPE | CONC. (ng/L) |       | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|-------------|------|--------------|-------|-----------------|-----------|---------|----------------|-----------|
|             |      | STD          | CCV   | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| 13C-PFHxA   | A    | 10000        | 8010  | 0.6955487       | 0.5715302 |         | -19.9          |           |
| 13C-PFDA    | A    | 10000        | 11100 | 1.05667         | 1.150715  |         | 10.5           |           |
| d5-NEtFOSAA | A    | 40000        | 34600 | 0.8657046       | 0.8176016 |         | -13.6          |           |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

\* Values outside of QC limits

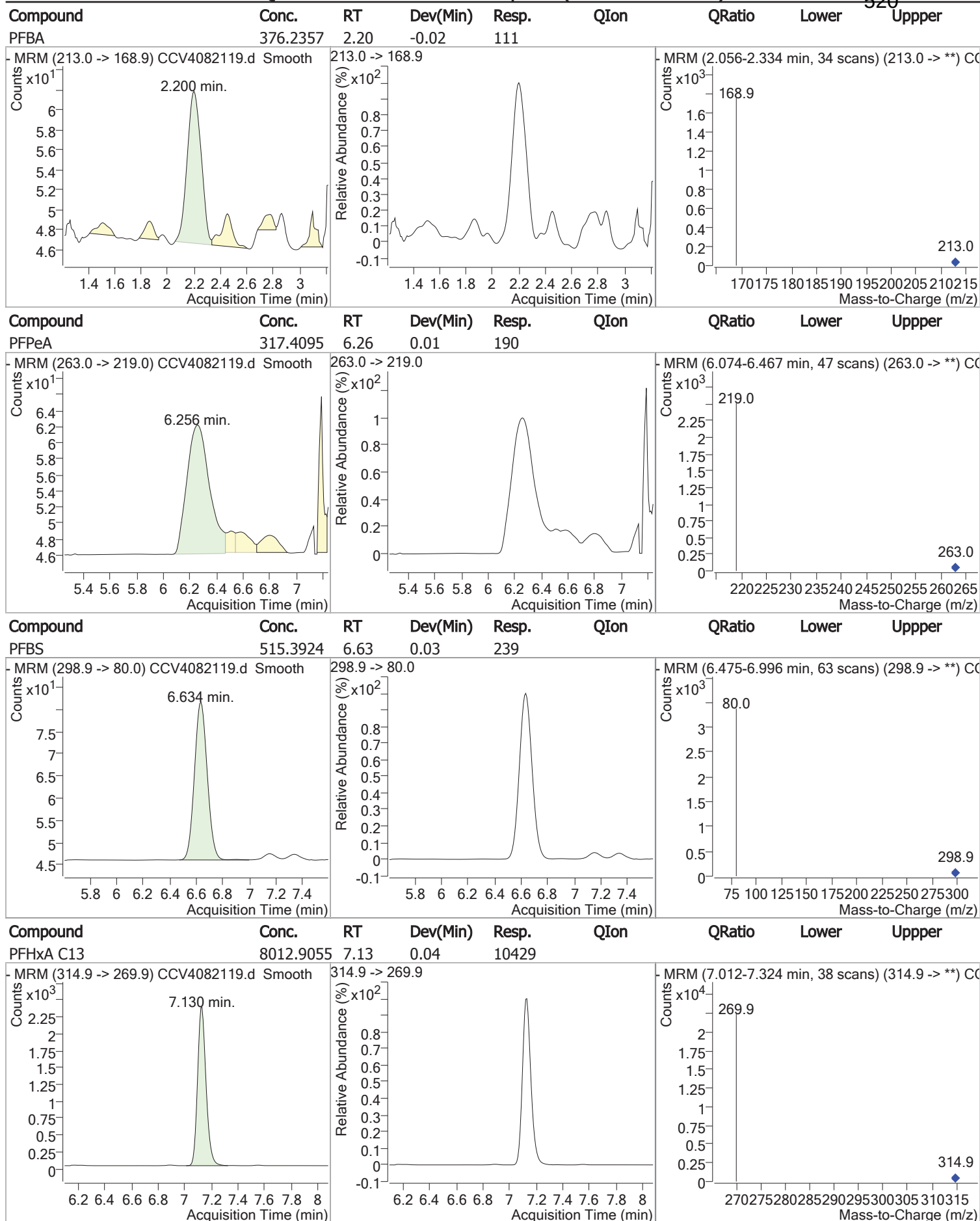
## Quantitation Results Report (Not Reviewed)

|                |                   |                   |                      |
|----------------|-------------------|-------------------|----------------------|
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| Acq. Method    | 21List021219.m    | Acq. Date-Time    | 8/21/2019 9:00:19 PM |
| Sample Name    | CCV4082119        | Instrument        | QQQ1                 |
| Vial           |                   | Multiplier        | 1.00                 |
| DA Method File | 081319.m          | Comment           |                      |
| Tune File      |                   | Tune Date         |                      |
| Batch Name     | B238243.batch.bin | Last Calib Update | 8/14/2019 2:32:09 PM |
| Ref Library    |                   |                   |                      |

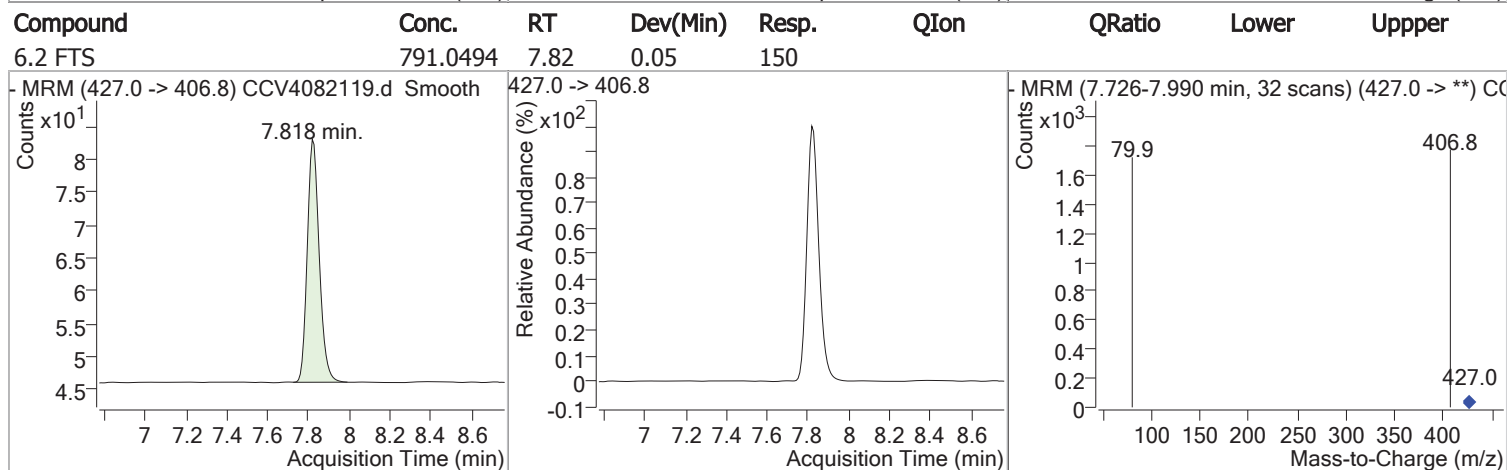
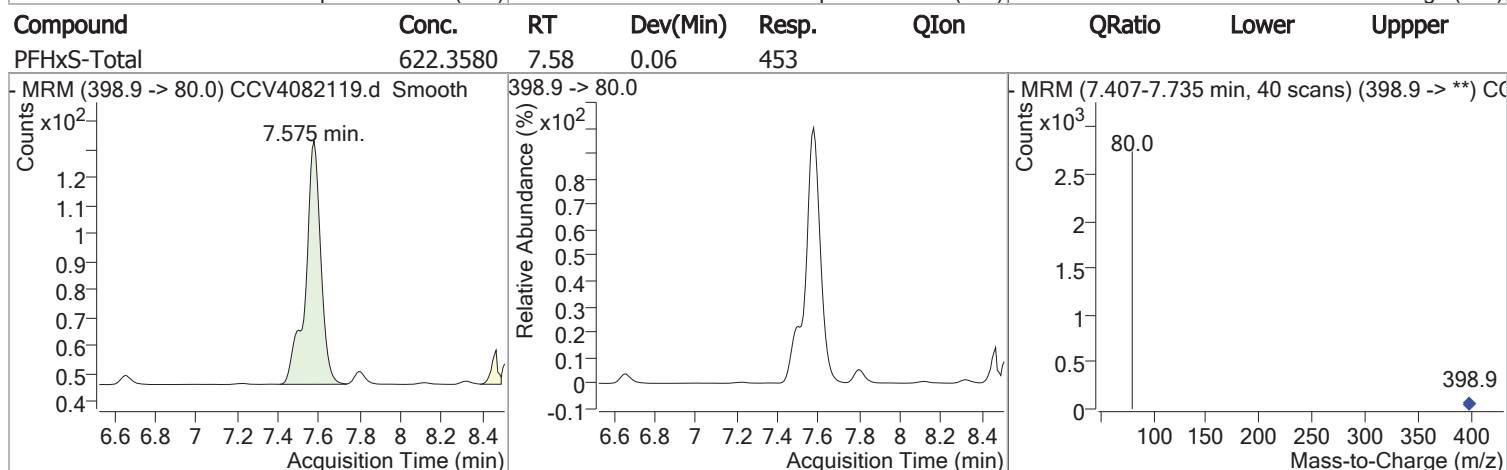
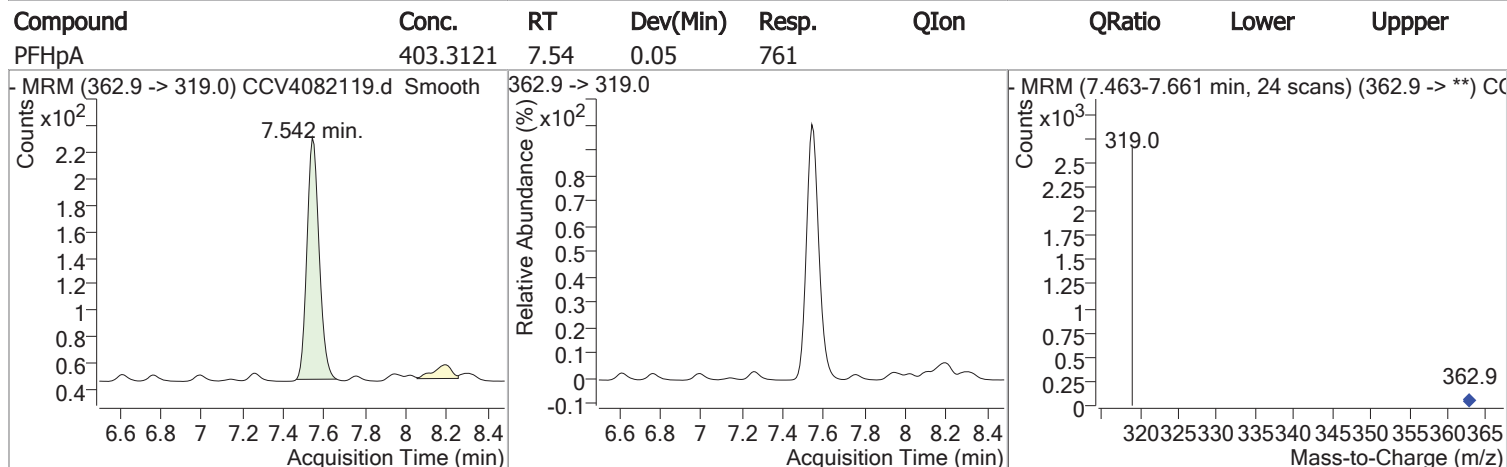
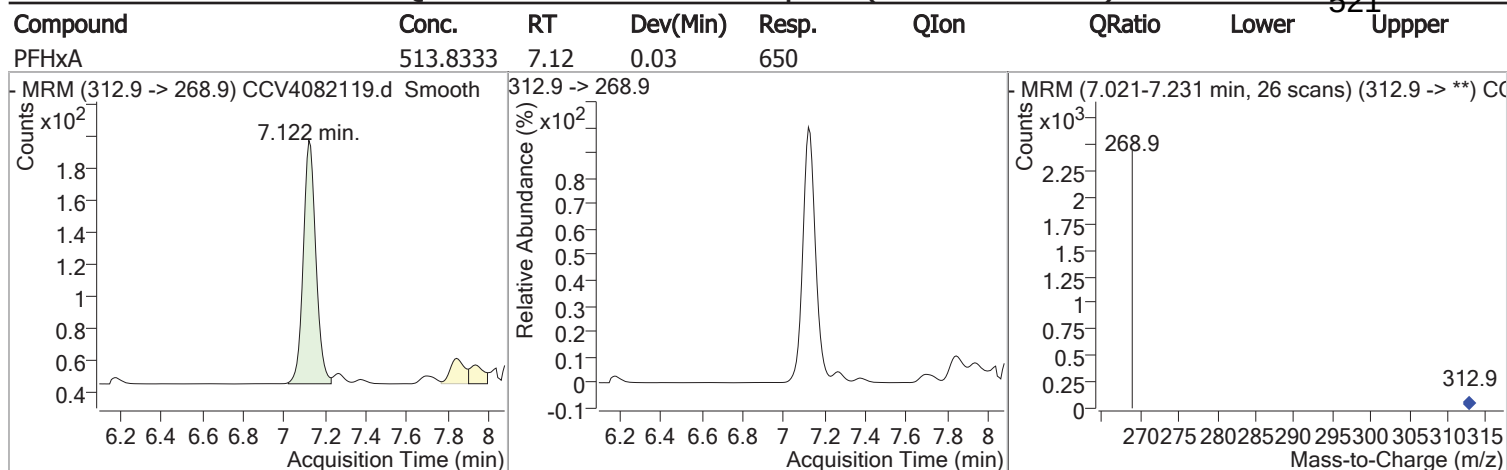
| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|----------|
| Internal Standards          |                      |                |       |                    |       |          |
| M PFOA C13                  | 7.827                | 416.9 -> 371.9 | 18247 | 10000.0000         | pg/ml | 0.050    |
| M PFOS C13                  | 8.052                | 502.9 -> 80.0  | 22911 | 28700.0000         | pg/ml | 0.059    |
| M d3-N-MeFOSAA              | 8.311                | 573.2 -> 419.0 | 14289 | 40000.0000         | pg/ml | 0.050    |
| System Monitoring Compounds |                      |                |       |                    |       |          |
| S PFHxA C13                 | 7.130                | 314.9 -> 269.9 | 10429 | 8012.9055          | pg/ml | 0.042    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 80.13%  |       |          |
| S PFDA C13                  | 8.228                | 514.9 -> 469.9 | 20997 | 11053.0220         | pg/ml | 0.050    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 110.53% |       |          |
| S d5-N-MeFOSAA              | 8.386                | 589.2 -> 419.0 | 11683 | 34571.6623         | pg/ml | 0.050    |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 86.43%  |       |          |
| Target Compounds            |                      |                |       |                    |       | QValue   |
| T PFBA                      | 2.200                | 213.0 -> 168.9 | 111   | 376.2357           | pg/ml | 100      |
| T PFPeA                     | 6.256                | 263.0 -> 219.0 | 190   | 317.4095           | pg/ml | 100      |
| T PFBS                      | 6.634                | 298.9 -> 80.0  | 239   | 515.3924           | pg/ml | 100      |
| T PFHxA                     | 7.122                | 312.9 -> 268.9 | 650   | 513.8333           | pg/ml | 100      |
| T PFHpA                     | 7.542                | 362.9 -> 319.0 | 761   | 403.3121           | pg/ml | 100      |
| T PFHxS-Total               | 7.575                | 398.9 -> 80.0  | 453   | 622.3580           | pg/ml | 100      |
| T 6.2 FTS                   | 7.818                | 427.0 -> 406.8 | 150   | 791.0494           | pg/ml | 100      |
| T PFOA-Total                | 7.827                | 412.9 -> 368.9 | 1011  | 421.9127           | pg/ml | 100      |
| T PFHpS                     | 7.843                | 449.0 -> 79.7  | 147   | 387.2414           | pg/ml | 100      |
| T PFOS-Total                | 8.052                | 498.9 -> 80.0  | 576   | 485.5010           | pg/ml | 100      |
| T PFNA                      | 8.053                | 462.9 -> 418.9 | 1002  | 689.6609           | pg/ml | 100      |
| T 8.2 FTS                   | 8.244                | 527.0 -> 81.0  | 160   | 510.4062           | pg/ml | 100      |
| T PFDA                      | 8.228                | 513.1 -> 469.0 | 1543  | 575.3822           | pg/ml | 100      |
| T N-MeFOSAA                 | 8.311                | 570.2 -> 419.1 | 117   | 274.8785           | pg/ml | 100      |
| T FOSA                      | 8.355                | 497.9 -> 77.9  | 707   | 260.0281           | pg/ml | 100      |
| T PFDS                      | 8.377                | 599.0 -> 80.0  | 415   | 559.8455           | pg/ml | 100      |
| T PFUnA                     | 8.387                | 563.1 -> 519.0 | 1449  | 469.0052           | pg/ml | 100      |
| T N-EtFOSAA                 | 8.394                | 584.2 -> 419.0 | 174   | 494.9451           | pg/ml | 100      |
| T PFDoA                     | 8.536                | 613.1 -> 569.0 | 2292  | 529.9995           | pg/ml | 100      |
| T PFTrDA                    | 8.696                | 663.1 -> 619.0 | 2734  | 554.1488           | pg/ml | 100      |
| T PFTA                      | 8.864                | 713.1 -> 669.1 | 1429  | 345.4158           | pg/ml | m100     |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

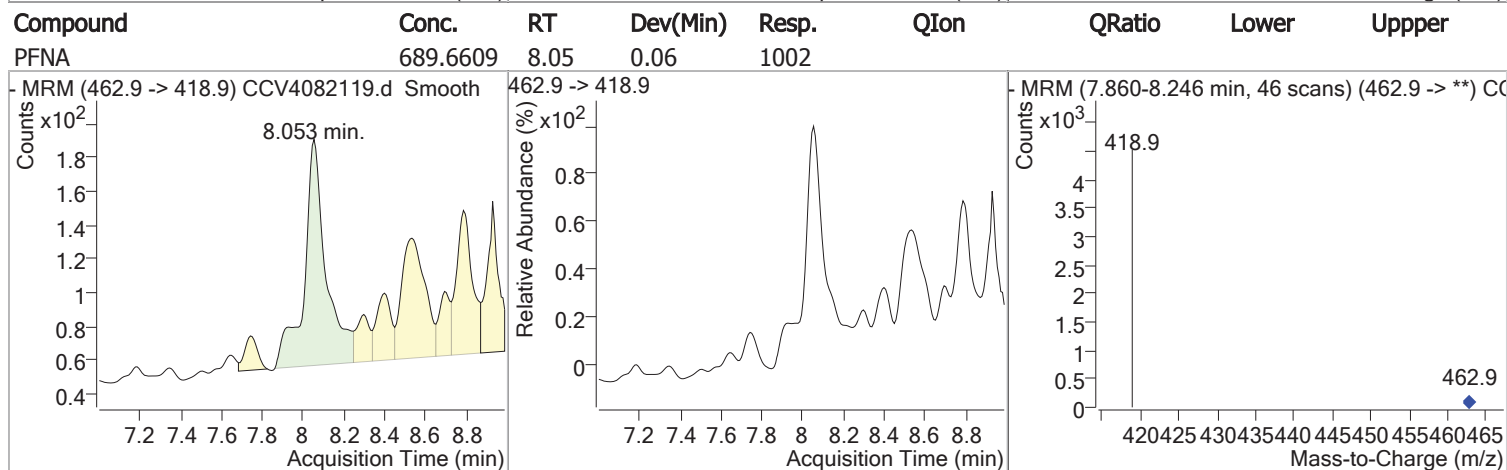
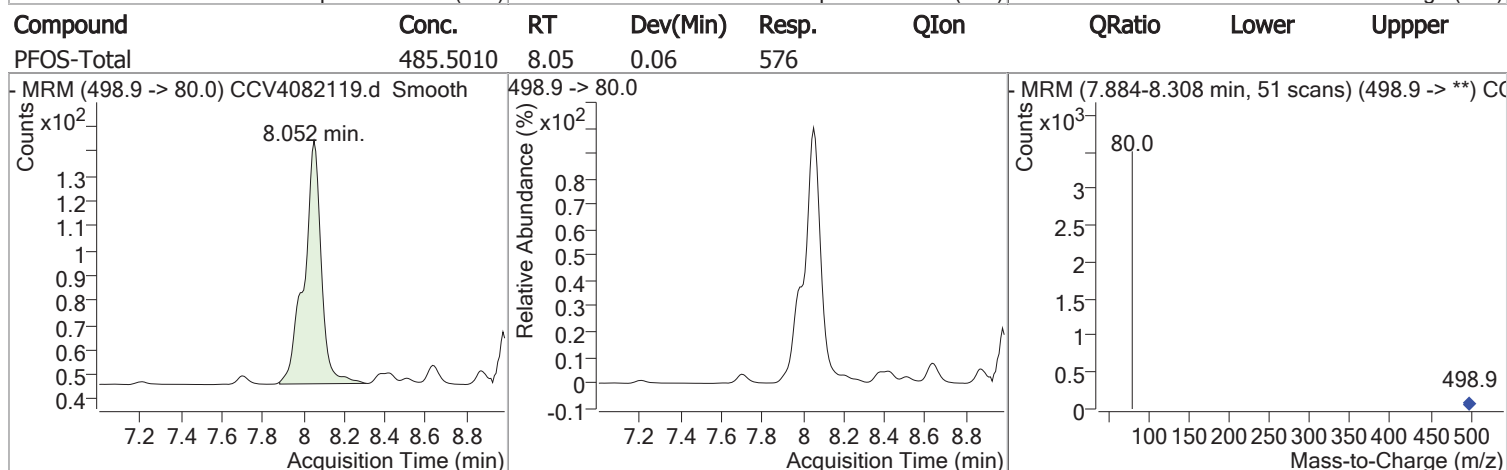
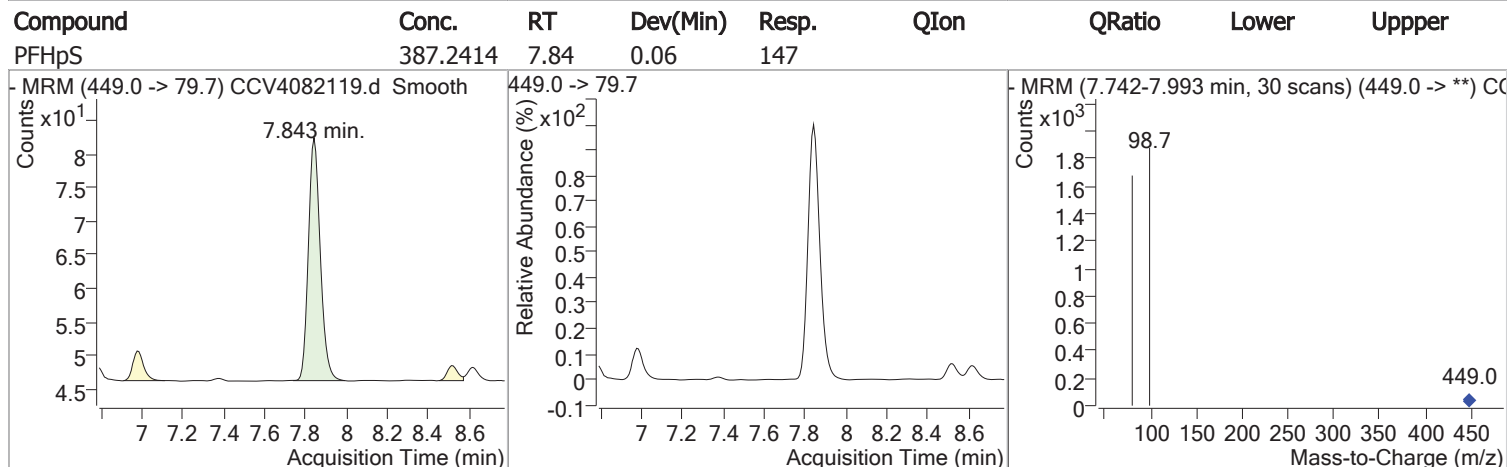
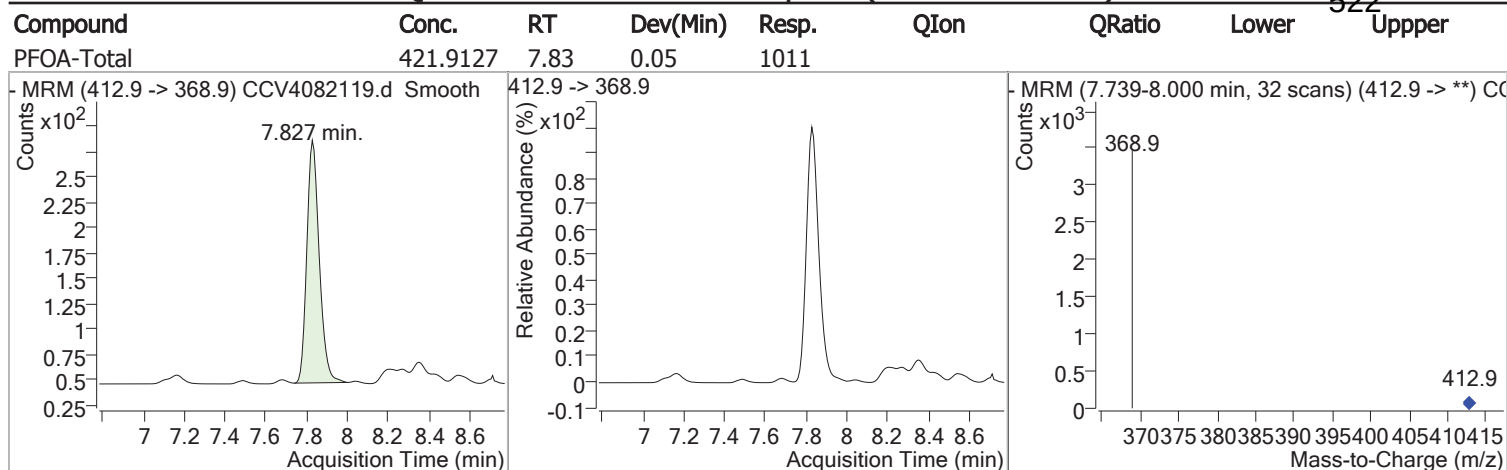
## Quantitation Results Report (Not Reviewed)



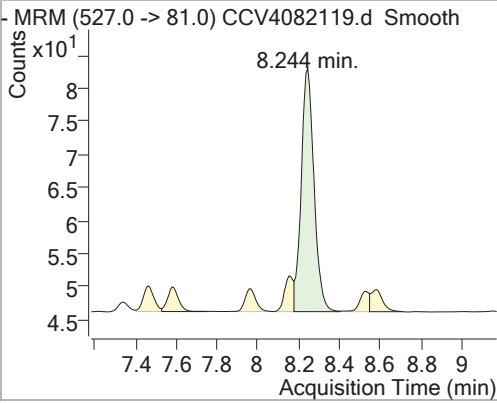
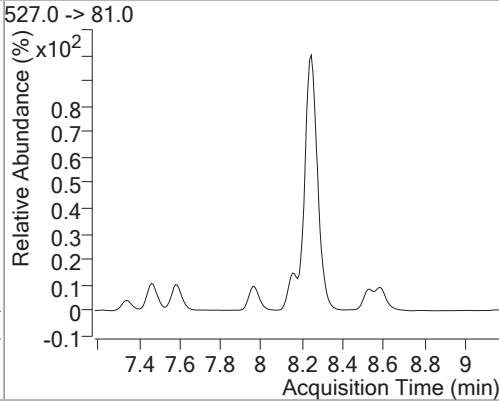
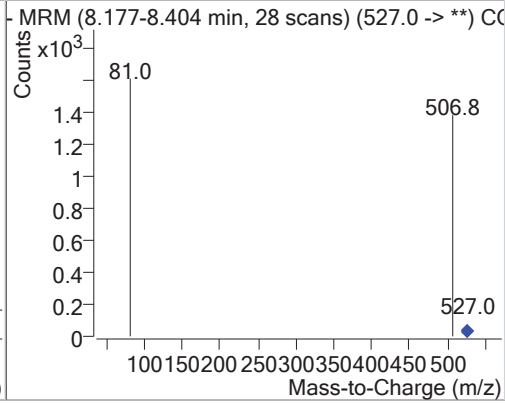
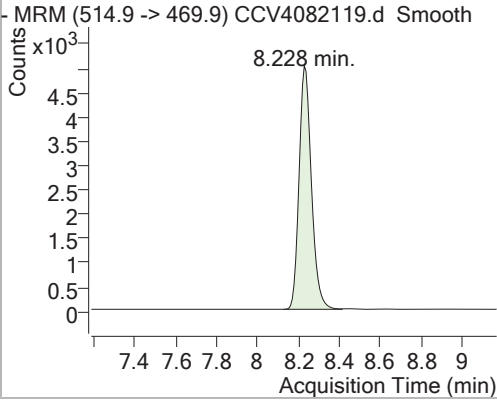
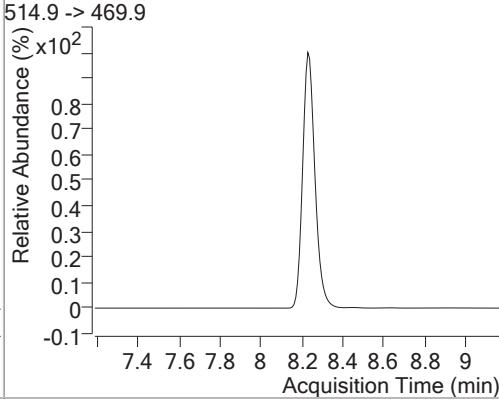
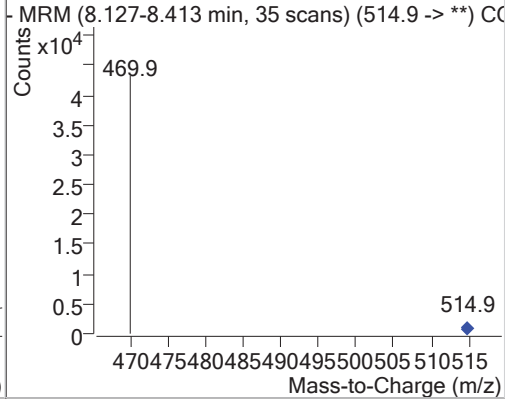
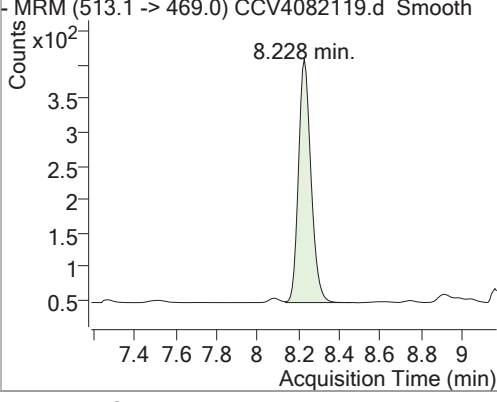
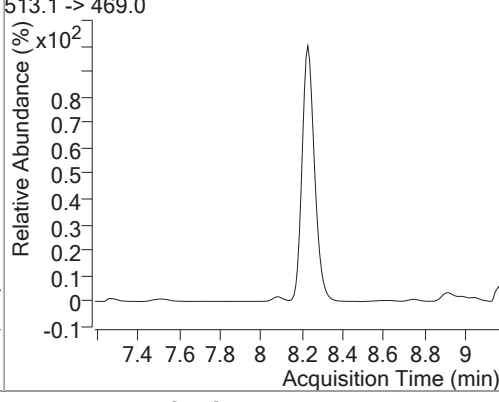
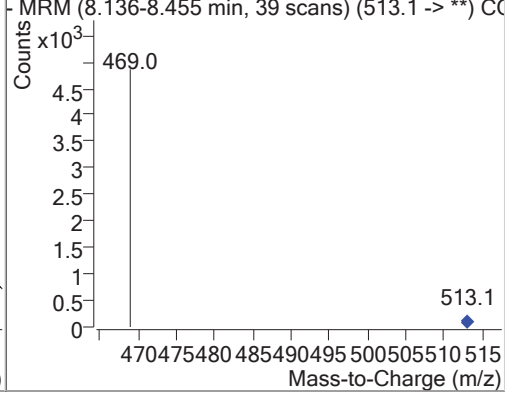
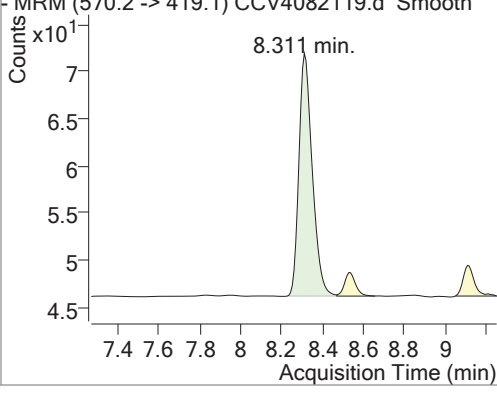
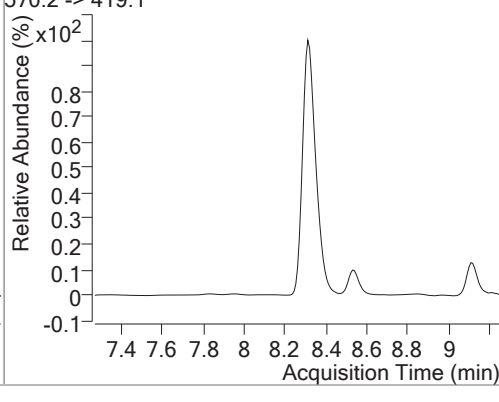
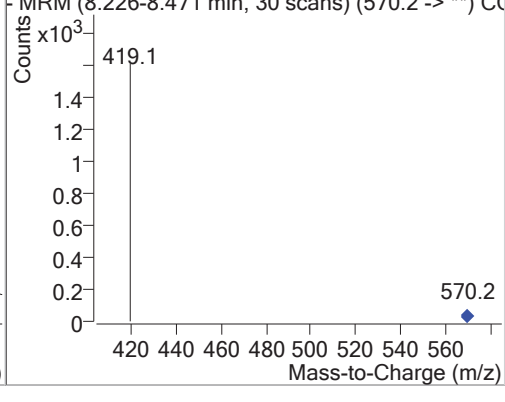
## Quantitation Results Report (Not Reviewed)



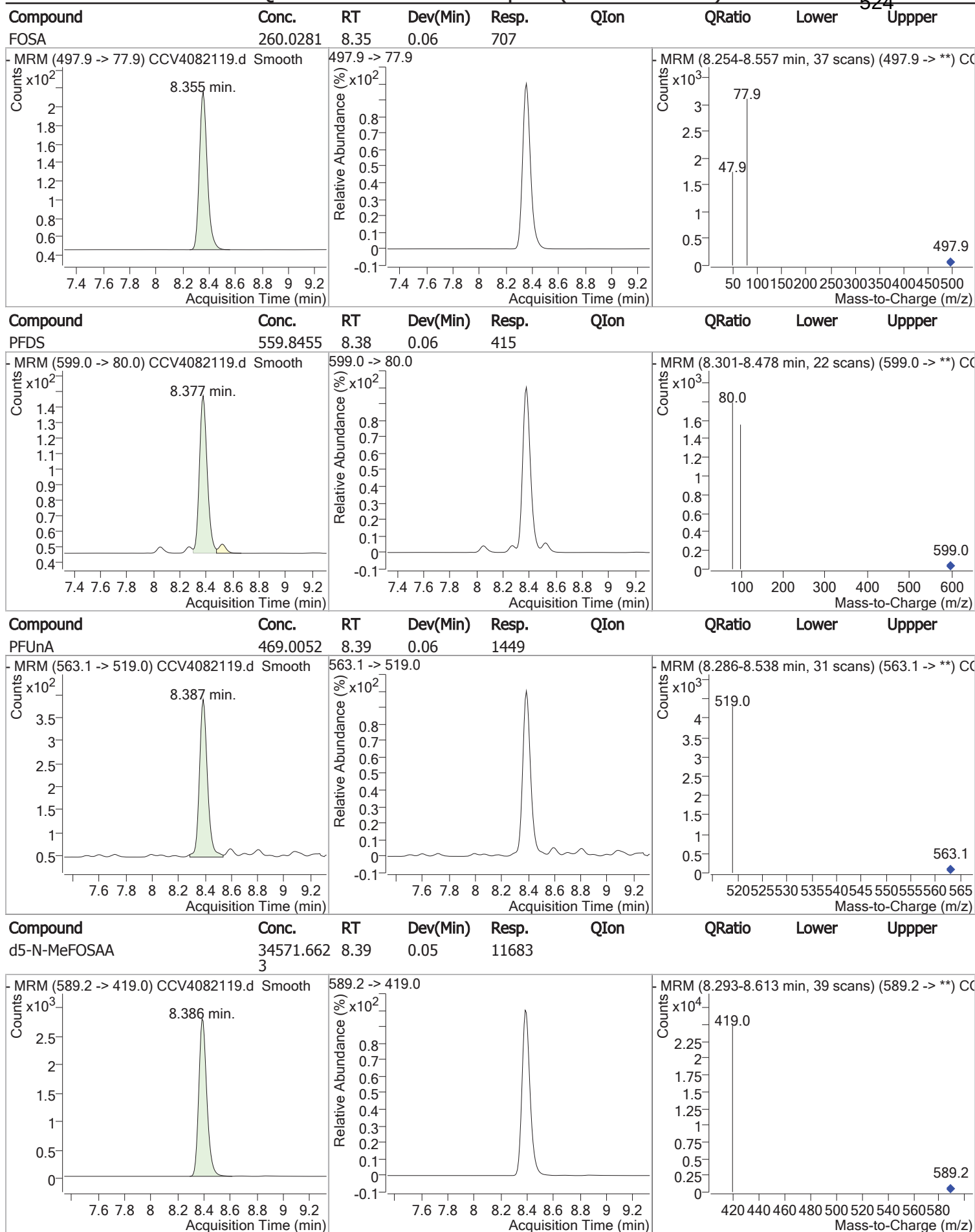
## Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)

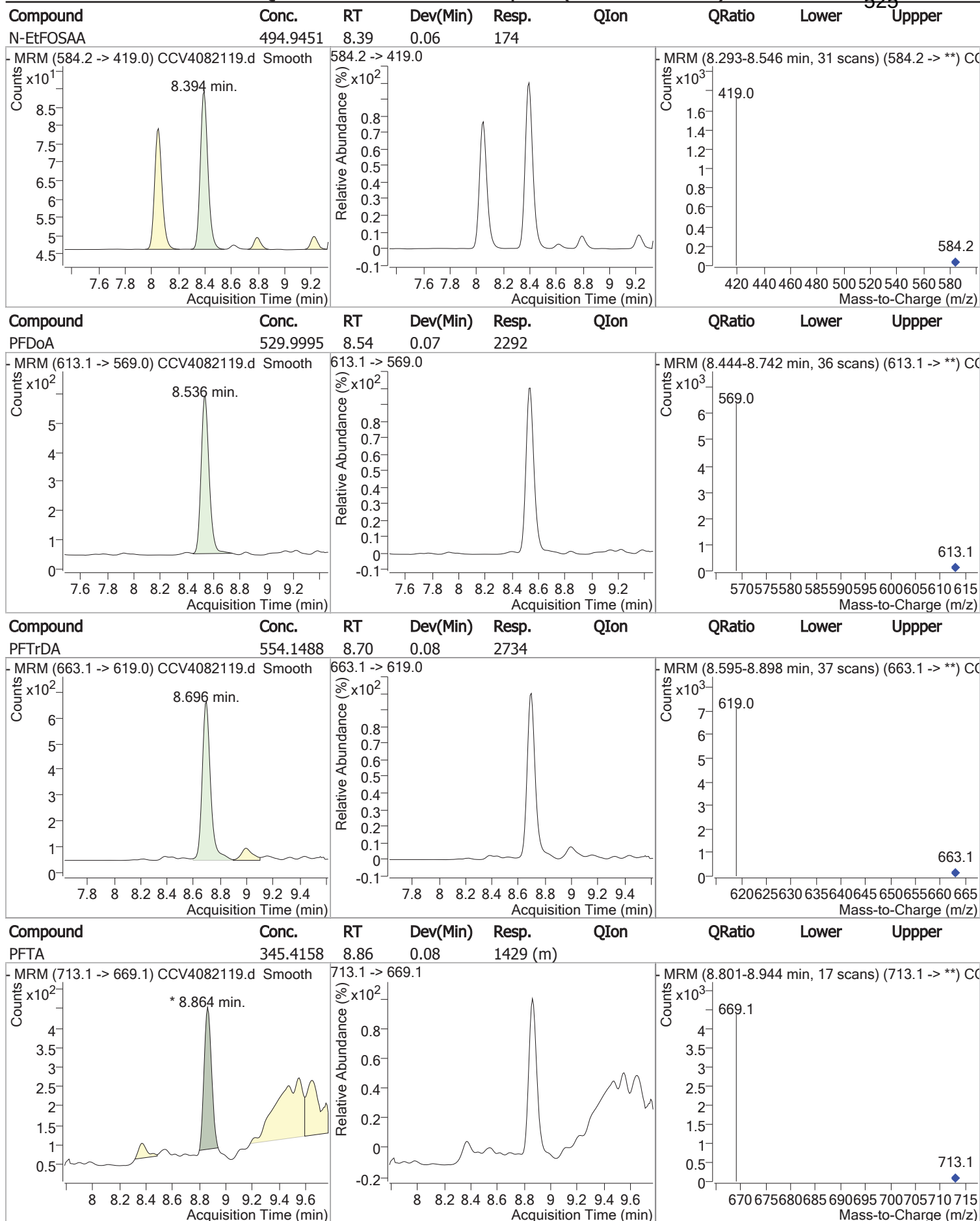
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.          | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------|----------|-------|------|--------|-------|-------|
| 8.2 FTS                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 510.4062       | 8.24 | 0.07     | 160   |      |        |       |       |
| <div> <div> MRM (527.0 -&gt; 81.0) CCV4082119.d Smooth<br/>  </div> <div> MRM (527.0 -&gt; 81.0)<br/>  </div> <div> MRM (8.177-8.404 min, 28 scans) (527.0 -&gt; **) CCV4082119.d<br/>  </div> </div>         |                |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.          | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFDA C13                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 11053.022<br>0 | 8.23 | 0.05     | 20997 |      |        |       |       |
| <div> <div> MRM (514.9 -&gt; 469.9) CCV4082119.d Smooth<br/>  </div> <div> MRM (514.9 -&gt; 469.9)<br/>  </div> <div> MRM (8.127-8.413 min, 35 scans) (514.9 -&gt; **) CCV4082119.d<br/>  </div> </div>    |                |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.          | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| PFDA                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 575.3822       | 8.23 | 0.05     | 1543  |      |        |       |       |
| <div> <div> MRM (513.1 -&gt; 469.0) CCV4082119.d Smooth<br/>  </div> <div> MRM (513.1 -&gt; 469.0)<br/>  </div> <div> MRM (8.136-8.455 min, 39 scans) (513.1 -&gt; **) CCV4082119.d<br/>  </div> </div> |                |      |          |       |      |        |       |       |
| Compound                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Conc.          | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
| N-MeFOSAA                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 274.8785       | 8.31 | 0.05     | 117   |      |        |       |       |
| <div> <div> MRM (570.2 -&gt; 419.1) CCV4082119.d Smooth<br/>  </div> <div> MRM (570.2 -&gt; 419.1)<br/>  </div> <div> MRM (8.226-8.471 min, 30 scans) (570.2 -&gt; **) CCV4082119.d<br/>  </div> </div> |                |      |          |       |      |        |       |       |

## Quantitation Results Report (Not Reviewed)





## Quantitation Results Report (Not Reviewed)



# CONTINUING CALIBRATION VERIFICATION

## SOP 434-PFAAS

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Instrument ID: HPLC1

Calibration: 1900263

Lab File ID: CCV1082319.d

Calibration Date: 08/14/19 14:37

Sequence: S039525

Injection Date: 08/23/19

Lab Sample ID: S039525-CCV1

Injection Time: 13:54

| COMPOUND                               | TYPE | CONC. (ng/L) |      | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|----------------------------------------|------|--------------|------|-----------------|-----------|---------|----------------|-----------|
|                                        |      | STD          | CCV  | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| Perfluorobutanoic acid (PFBA)          | A    | 500          | 509  | 0.1543906       | 0.1648856 |         | 1.8            |           |
| Perfluorobutanesulfonic acid (PFBS)    | A    | 442          | 625  | 0.5510923       | 0.8210034 |         | 41.5           |           |
| Perfluoropentanoic acid (PFPeA)        | A    | 500          | 474  | 0.3040697       | 0.3113215 |         | -5.3           |           |
| Perfluorohexanoic acid (PFHxA)         | A    | 500          | 667  | 0.6714809       | 0.9252651 |         | 33.4           |           |
| Perfluorohexanesulfonic acid (PFHxS)   | A    | 455          | 387  | 0.8347983       | 0.776173  |         | -14.9          |           |
| Perfluoroheptanoic acid (PFHpA)        | A    | 500          | 743  | 1.053666        | 1.53497   |         | 48.5           |           |
| Perfluoroheptanesulfonic acid (PFHpS)  | A    | 475          | 614  | 0.5117502       | 0.6150133 |         | 29.3           |           |
| Perfluorooctanoic acid (PFOA)          | A    | 500          | 421  | 1.330641        | 1.104305  |         | -15.9          |           |
| Perfluorooctanesulfonic acid (PFOS)    | A    | 462          | 415  | 1.438054        | 1.334308  |         | -10.1          |           |
| Perfluorooctanesulfonamide (FOSA)      | A    | 500          | 413  | 7.121342        | 6.282936  |         | -17.4          |           |
| 6:2 Fluorotelomersulfonate (6:2 FTS A) | A    | 475          | 784  | 0.2337119       | 0.3920206 |         | 65.0           |           |
| Perfluorononanoic acid (PFNA)          | A    | 500          | 497  | 0.842486        | 0.7911983 |         | -0.7           |           |
| Perfluorodecanoic acid (PFDA)          | A    | 500          | 534  | 1.468554        | 1.568465  |         | 6.7            |           |
| Perfluorodecanesulfonic acid (PFDS)    | A    | 482          | 421  | 0.9068341       | 0.8110223 |         | -12.6          |           |
| N-EtFOSAA                              | A    | 500          | 1100 | 0.9910125       | 2.170808  |         | 121            |           |
| 8:2 Fluorotelomersulfonate (8:2 FTS A) | A    | 480          | 707  | 0.3729975       | 0.5793618 |         | 47.3           |           |
| Perfluoroundecanoic acid (PFUnA)       | A    | 500          | 678  | 1.739723        | 2.295294  |         | 35.6           |           |
| N-MeFOSAA                              | A    | 500          | 611  | 1.146938        | 1.452143  |         | 22.1           |           |
| Perfluorododecanoic acid (PFDoA)       | A    | 500          | 638  | 2.235401        | 3.022584  |         | 27.5           |           |
| Perfluorotridecanoic acid (PFTrDA)     | A    | 500          | 474  | 2.580637        | 2.560773  |         | -5.3           |           |
| Perfluorotetradecanoic acid (PFTA)     | A    | 500          | 531  | 2.262719        | 2.407474  |         | 6.2            |           |

**CONTINUING CALIBRATION VERIFICATION**  
**SOP 434-PFAAS**

|                |                                |                   |                       |
|----------------|--------------------------------|-------------------|-----------------------|
| Laboratory:    | Con-Test Analytical Laboratory | Work Order:       | 19H0576               |
| Client:        | Dvirka And Bartilucci          | Project:          | Farrand Controls Site |
| Instrument ID: | HPLC1                          | Calibration:      | 1900263               |
| Lab File ID:   | CCV1082319.d                   | Calibration Date: | 08/14/19 14:37        |
| Sequence:      | S039525                        | Injection Date:   | 08/23/19              |
| Lab Sample ID: | S039525-CCV1                   | Injection Time:   | 13:54                 |

| COMPOUND    | TYPE | CONC. (ng/L) |       | RESPONSE FACTOR |           |         | % DIFF / DRIFT |           |
|-------------|------|--------------|-------|-----------------|-----------|---------|----------------|-----------|
|             |      | STD          | CCV   | ICAL            | CCV       | MIN (#) | CCV            | LIMIT (#) |
| 13C-PFHxA   | A    | 10000        | 12900 | 0.6955487       | 0.9214335 |         | 29.2           |           |
| 13C-PFDA    | A    | 10000        | 11000 | 1.05667         | 1.141226  |         | 9.6            |           |
| d5-NEtFOSAA | A    | 40000        | 34800 | 0.8657046       | 0.8232092 |         | -13.0          |           |

# Column to be used to flag Response Factor and %Diff/Drift values with an asterisk

\* Values outside of QC limits

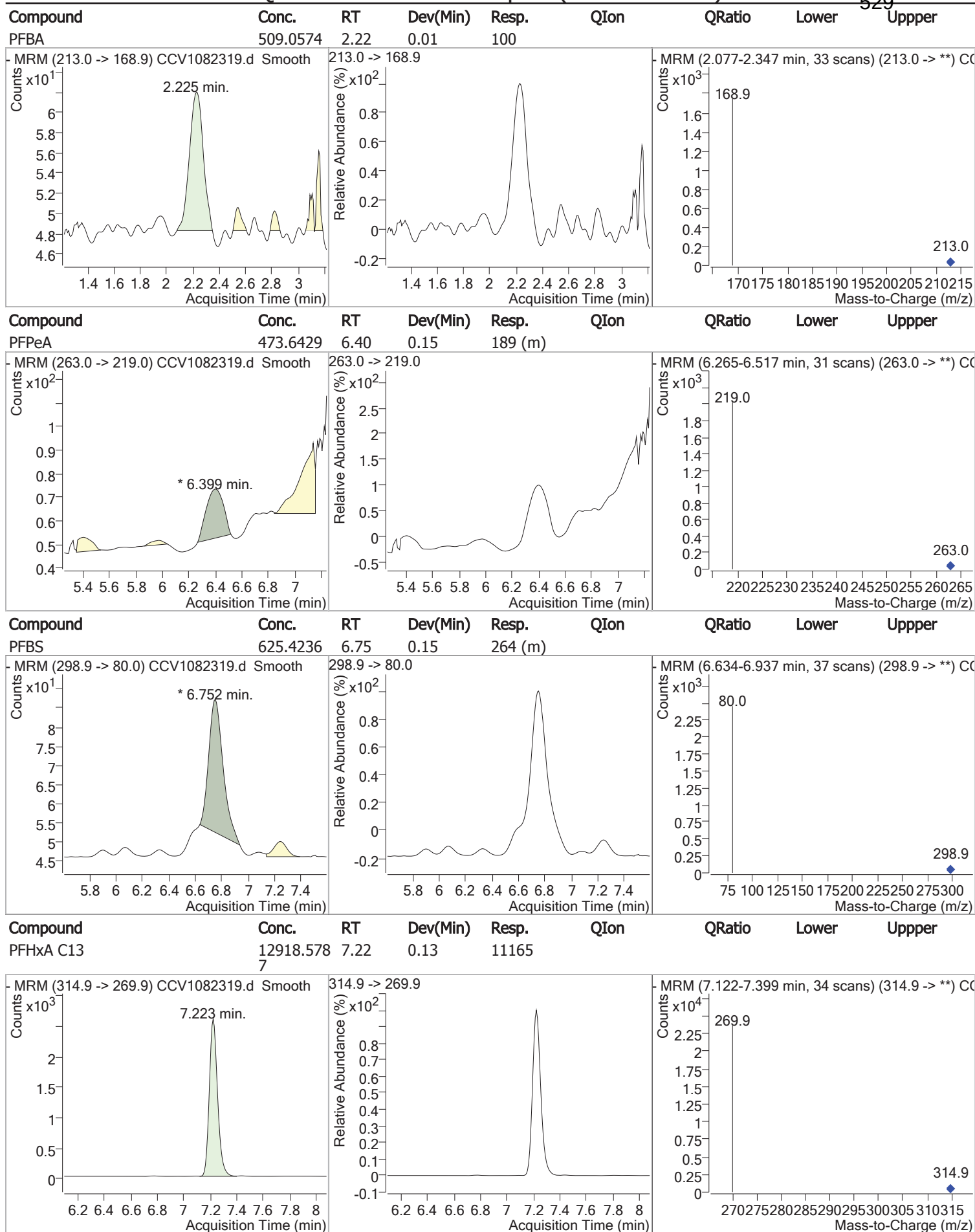
## Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | CCV1082319.d   | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/23/2019 1:54:08 PM |
| Sample Name    | CCV1082219     | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File | 081319.m       | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | 1.batch.bin    | Last Calib Update | 8/14/2019 2:32:09 PM |
| Ref Library    |                |                   |                      |

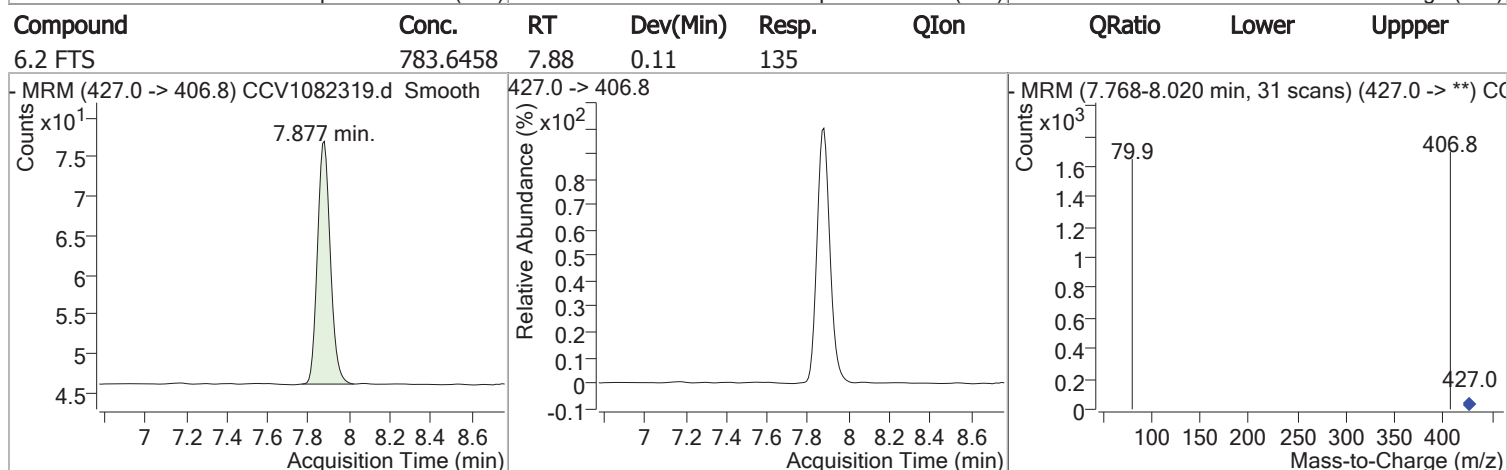
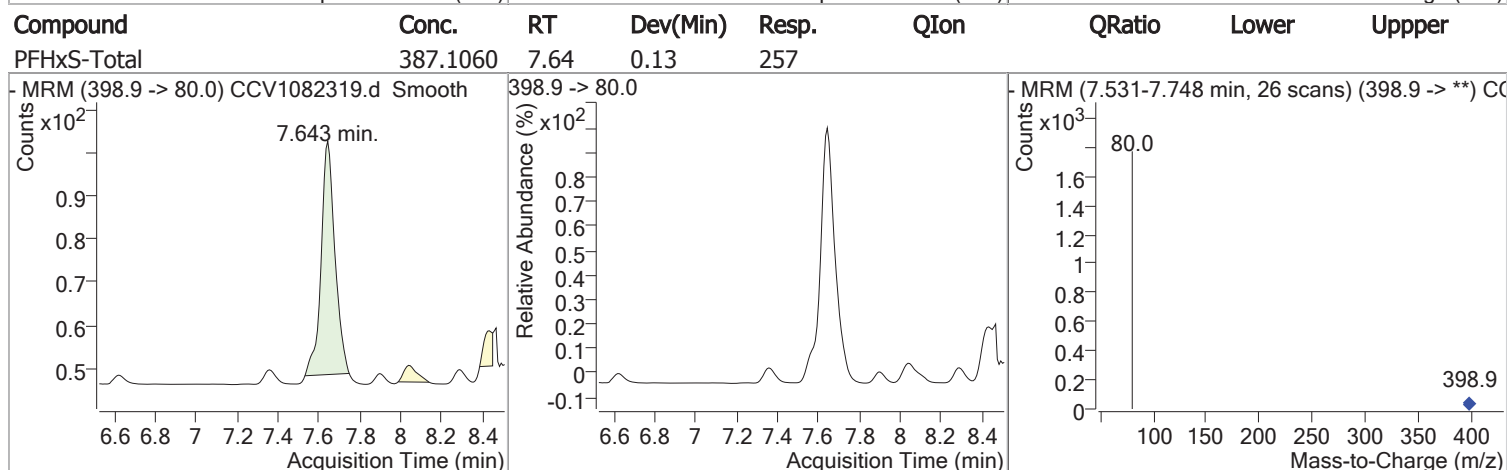
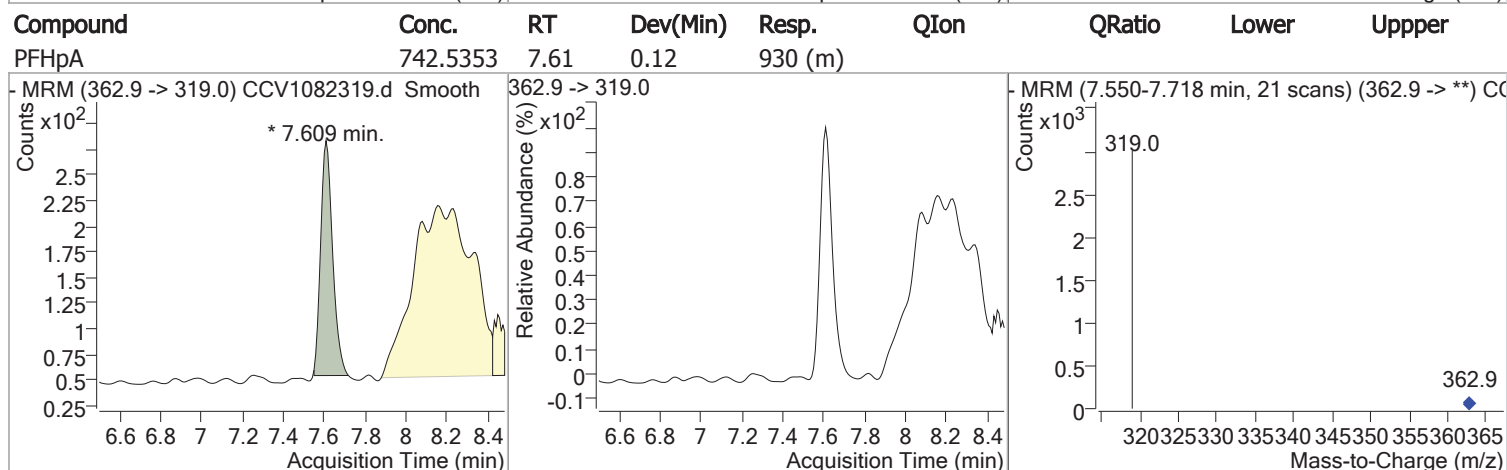
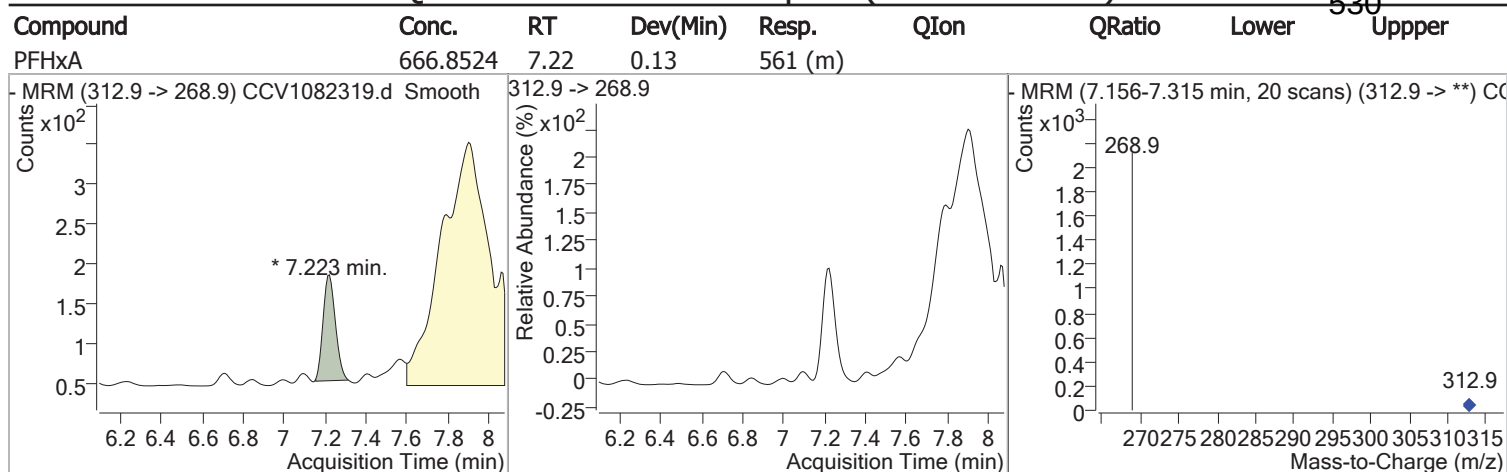
| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units   | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|--------------------|---------|----------|
| Internal Standards          |                      |                |       |                    |         |          |
| M PFOA C13                  | 7.877                | 416.9 -> 371.9 | 12117 | 10000.0000         | pg/ml   | 0.101    |
| M PFOS C13                  | 8.077                | 502.9 -> 80.0  | 20854 | 28700.0000         | pg/ml   | 0.084    |
| M d3-N-MeFOSAA              | 8.327                | 573.2 -> 419.0 | 8894  | 40000.0000         | pg/ml   | 0.067    |
| System Monitoring Compounds |                      |                |       |                    |         |          |
| S PFHxA C13                 | 7.223                | 314.9 -> 269.9 | 11165 | 12918.5787         | pg/ml   | 0.135    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 129.19% |         |          |
| S PFDA C13                  | 8.253                | 514.9 -> 469.9 | 13828 | 10961.8859         | pg/ml   | 0.076    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 109.62% |         |          |
| S d5-N-MeFOSAA              | 8.403                | 589.2 -> 419.0 | 7322  | 34808.7620         | pg/ml   | 0.067    |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 87.02%  |         |          |
| Target Compounds            |                      |                |       |                    |         | QValue   |
| T PFBA                      | 2.225                | 213.0 -> 168.9 | 100   | 509.0574           | pg/ml   | 100      |
| T PFPeA                     | 6.399                | 263.0 -> 219.0 | 189   | 473.6429           | pg/ml m | 100      |
| T PFBS                      | 6.752                | 298.9 -> 80.0  | 264   | 625.4236           | pg/ml m | 100      |
| T PFHxA                     | 7.223                | 312.9 -> 268.9 | 561   | 666.8524           | pg/ml m | 100      |
| T PFHpA                     | 7.609                | 362.9 -> 319.0 | 930   | 742.5353           | pg/ml m | 100      |
| T PFHxS-Total               | 7.643                | 398.9 -> 80.0  | 257   | 387.1060           | pg/ml   | 100      |
| T 6.2 FTS                   | 7.877                | 427.0 -> 406.8 | 135   | 783.6458           | pg/ml   | 100      |
| T PFOA-Total                | 7.878                | 412.9 -> 368.9 | 669   | 420.5620           | pg/ml m | 100      |
| T PFHpS                     | 7.885                | 449.0 -> 79.7  | 212   | 614.2363           | pg/ml   | 100      |
| T PFOS-Total                | 8.077                | 498.9 -> 80.0  | 448   | 415.1532           | pg/ml   | 100      |
| T PFNA                      | 8.078                | 462.9 -> 418.9 | 479   | 496.6959           | pg/ml   | 100      |
| T 8.2 FTS                   | 8.261                | 527.0 -> 81.0  | 202   | 707.2506           | pg/ml   | 100      |
| T PFDA                      | 8.253                | 513.1 -> 469.0 | 950   | 533.7075           | pg/ml   | 100      |
| T N-MeFOSAA                 | 8.328                | 570.2 -> 419.1 | 161   | 610.6467           | pg/ml   | 100      |
| T FOSA                      | 8.372                | 497.9 -> 77.9  | 699   | 412.8956           | pg/ml   | 100      |
| T PFDS                      | 8.385                | 599.0 -> 80.0  | 284   | 421.3163           | pg/ml   | 100      |
| T PFUnA                     | 8.404                | 563.1 -> 519.0 | 1391  | 678.0286           | pg/ml   | 100      |
| T N-EtFOSAA                 | 8.411                | 584.2 -> 419.0 | 241   | 1104.8795          | pg/ml   | 100      |
| T PFDoA                     | 8.545                | 613.1 -> 569.0 | 1831  | 637.5720           | pg/ml   | 100      |
| T PFTrDA                    | 8.704                | 663.1 -> 619.0 | 1551  | 473.5767           | pg/ml   | 100      |
| T PFTA                      | 8.872                | 713.1 -> 669.1 | 1459  | 530.7983           | pg/ml m | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

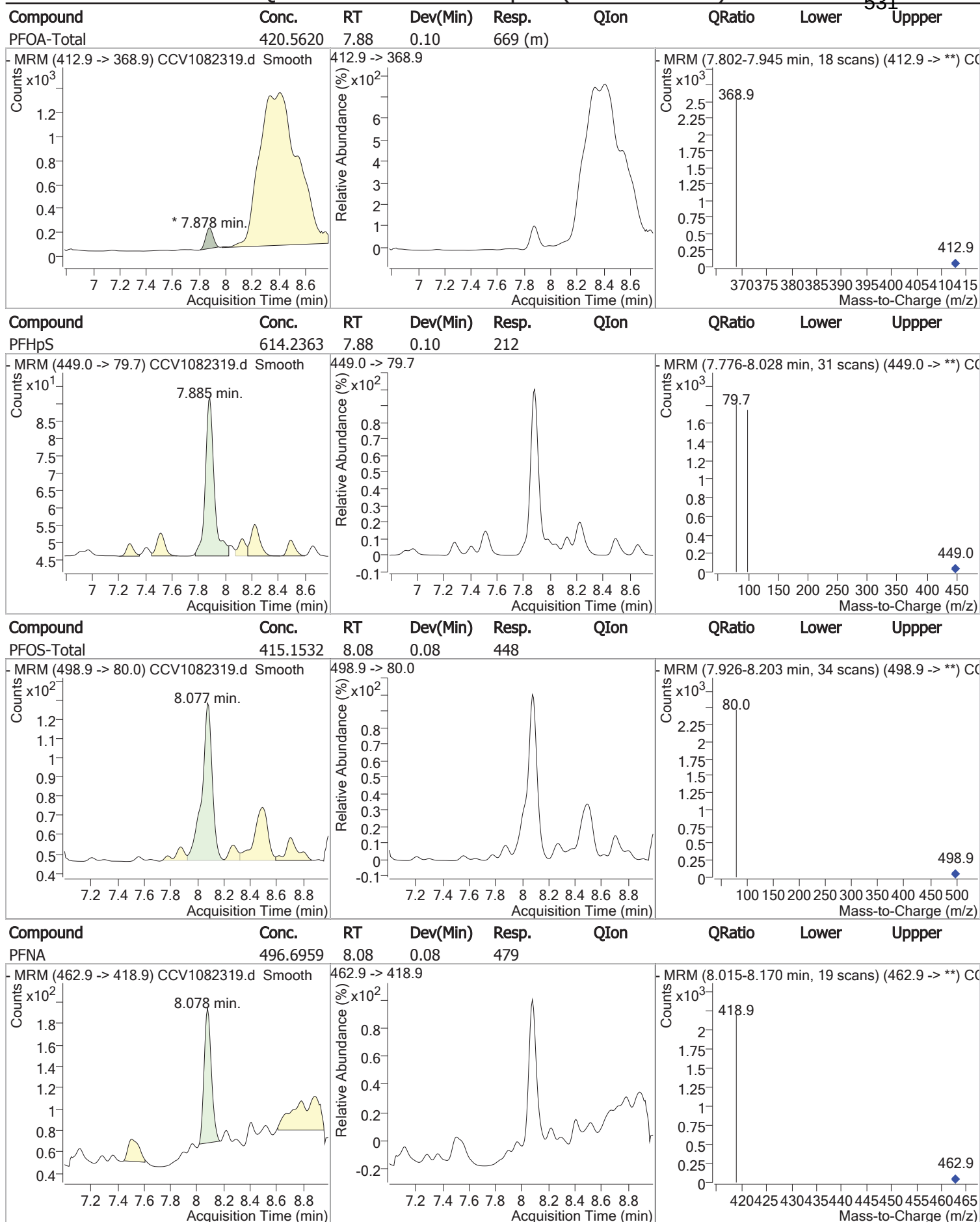
# Quantitation Results Report (Not Reviewed)



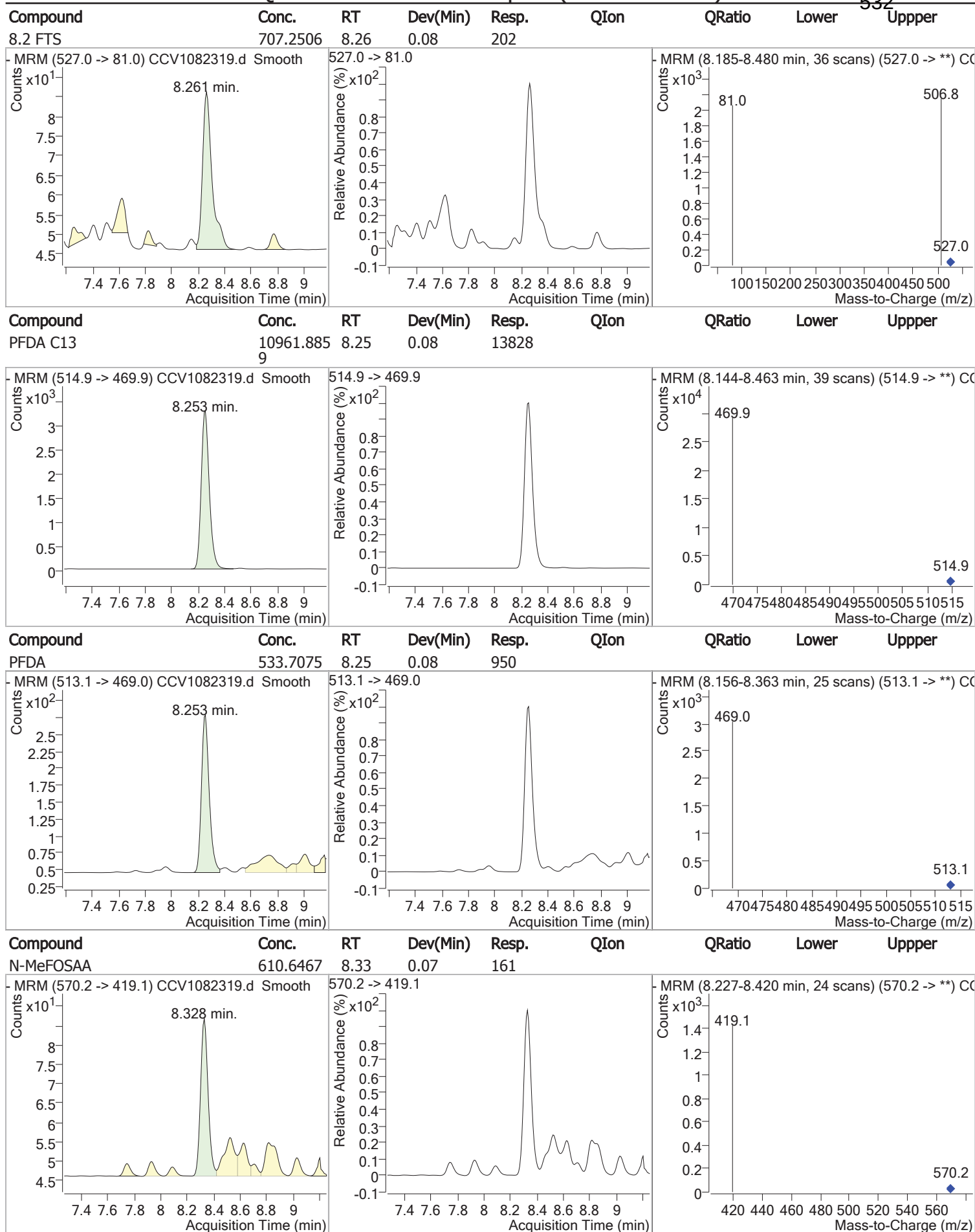
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)

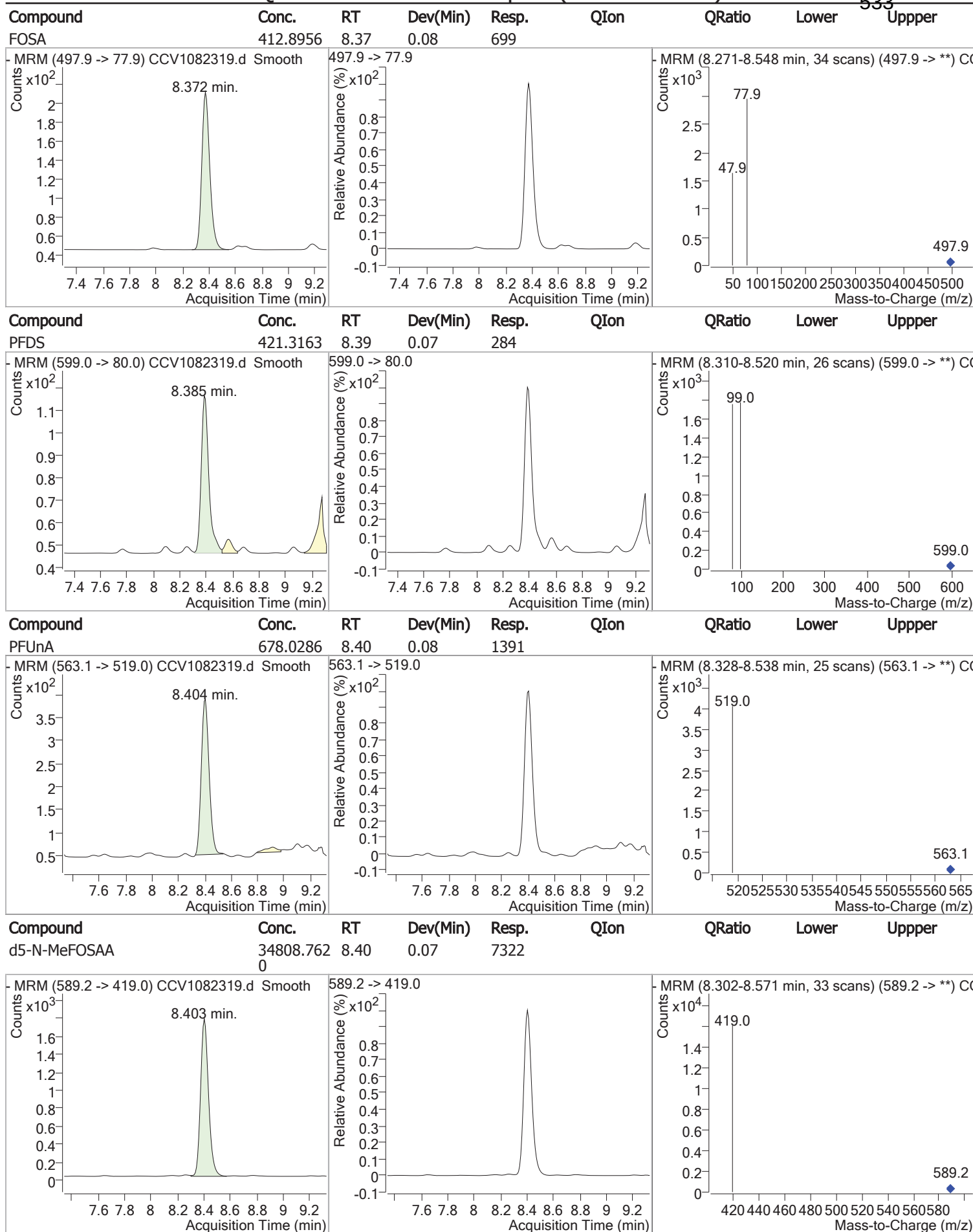


# Quantitation Results Report (Not Reviewed)

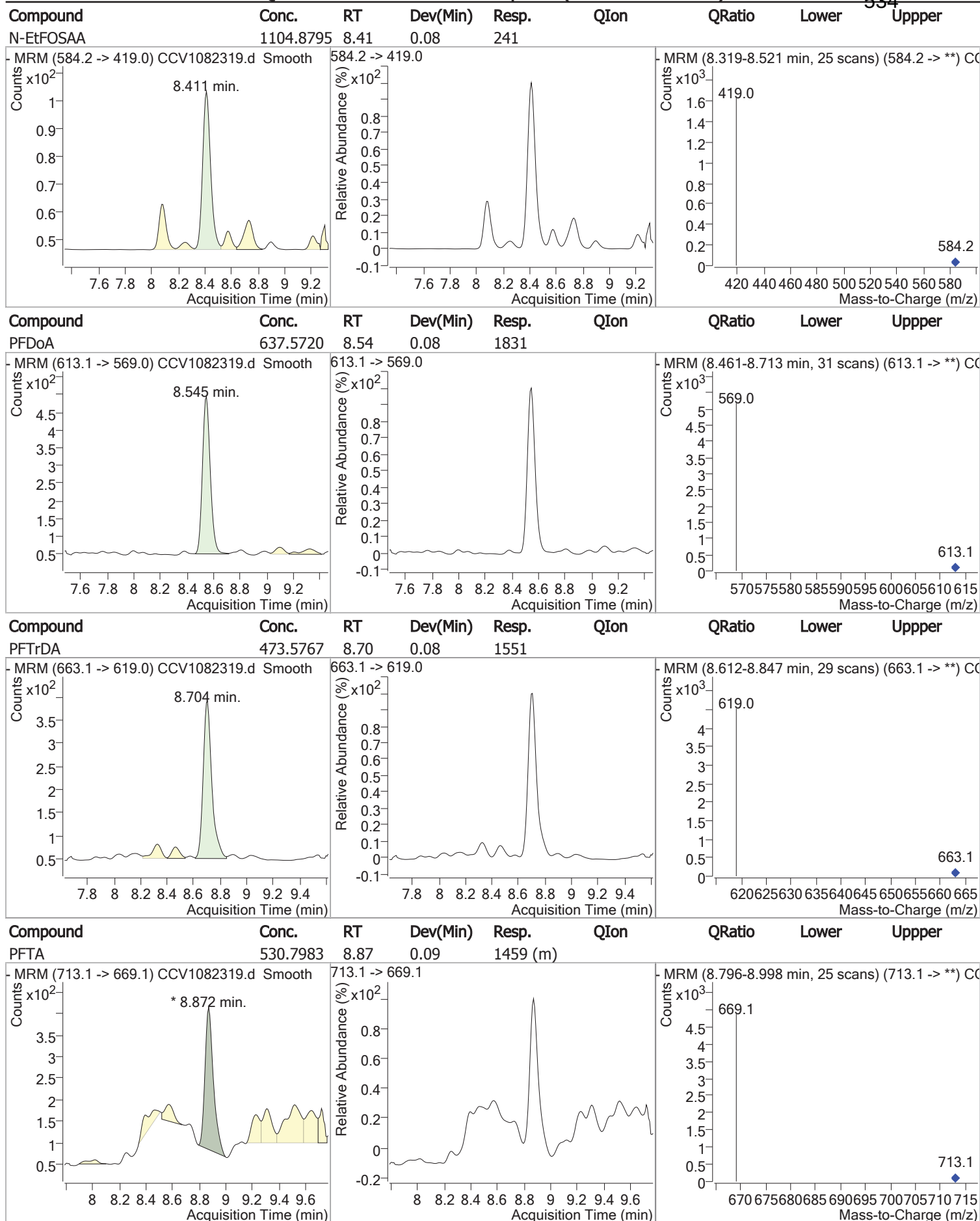




# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



**8 - FORM VIII**  
**INTERNAL STANDARD AREA AND RT SUMMARY**  
**SOP 434-PFAAS**

535

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Sequence: S039480

Instrument: HPLC1

Calibration: 1900263

| Internal Standard                        | Response | RT       | Reference Response                  | Reference RT | Area % | Area % Limits                   | RT Diff | RT Diff Limit | Q |
|------------------------------------------|----------|----------|-------------------------------------|--------------|--------|---------------------------------|---------|---------------|---|
| <b>Calibration Check (S039480-CCV1 )</b> |          |          | <i>Lab File ID: CCV1082119.d</i>    |              |        | <i>Analyzed: 08/21/19 12:07</i> |         |               |   |
| 13C-PFOA                                 | 13618.2  | 7.877483 | 14022.56                            | 7.700883     | 97     | 50 - 150                        | 0.1766  | +/-0.50       |   |
| 13C-PFOS                                 | 20908.88 | 8.07695  | 18678.12                            | 7.933983     | 112    | 50 - 150                        | 0.1430  | +/-0.50       |   |
| d3-NMeFOSAA                              | 10211    | 8.318983 | 11636.93                            | 8.20125      | 88     | 50 - 150                        | 0.1177  | +/-0.50       |   |
| <b>MW-21R (19H0576-03 )</b>              |          |          | <i>Lab File ID: 19H0576-03.d</i>    |              |        | <i>Analyzed: 08/21/19 13:23</i> |         |               |   |
| 13C-PFOA                                 | 16196.45 | 7.860667 | 13618.2                             | 7.877483     | 119    | 50 - 150                        | -0.0168 | +/-0.50       |   |
| 13C-PFOS                                 | 22285.73 | 8.08535  | 20908.88                            | 8.07695      | 107    | 50 - 150                        | 0.0084  | +/-0.50       |   |
| d3-NMeFOSAA                              | 10631.67 | 8.344216 | 10211                               | 8.318983     | 104    | 50 - 150                        | 0.0252  | +/-0.50       |   |
| <b>Calibration Check (S039480-CCV2 )</b> |          |          | <i>Lab File ID: CCV2082119.d</i>    |              |        | <i>Analyzed: 08/21/19 15:16</i> |         |               |   |
| 13C-PFOA                                 | 20027.29 | 7.818617 | 13618.2                             | 7.877483     | 147    | 50 - 150                        | -0.0589 | +/-0.50       |   |
| 13C-PFOS                                 | 30081.89 | 8.0433   | 20908.88                            | 8.07695      | 144    | 50 - 150                        | -0.0336 | +/-0.50       |   |
| d3-NMeFOSAA                              | 15306.93 | 8.302167 | 10211                               | 8.318983     | 150    | 50 - 150                        | -0.0168 | +/-0.50       |   |
| <b>Calibration Check (S039480-CCV3 )</b> |          |          | <i>Lab File ID: CCV3082119.d</i>    |              |        | <i>Analyzed: 08/21/19 17:38</i> |         |               |   |
| 13C-PFOA                                 | 15348.93 | 7.827017 | 20027.29                            | 7.818617     | 77     | 50 - 150                        | 0.0084  | +/-0.50       |   |
| 13C-PFOS                                 | 22563.73 | 8.051717 | 30081.89                            | 8.0433       | 75     | 50 - 150                        | 0.0084  | +/-0.50       |   |
| d3-NMeFOSAA                              | 13800.51 | 8.318983 | 15306.93                            | 8.302167     | 90     | 50 - 150                        | 0.0168  | +/-0.50       |   |
| <b>Blank (B238243-BLK1 )</b>             |          |          | <i>Lab File ID: B238243-BLK1R.d</i> |              |        | <i>Analyzed: 08/21/19 19:19</i> |         |               |   |
| 13C-PFOA                                 | 17361.18 | 7.827017 | 15348.93                            | 7.827017     | 113    | 50 - 150                        | 0.0000  | +/-0.50       |   |
| 13C-PFOS                                 | 23374.38 | 8.051717 | 22563.73                            | 8.051717     | 104    | 50 - 150                        | 0.0000  | +/-0.50       |   |
| d3-NMeFOSAA                              | 12048.32 | 8.310567 | 13800.51                            | 8.318983     | 87     | 50 - 150                        | -0.0084 | +/-0.50       |   |
| <b>MW-21S (19H0576-05 )</b>              |          |          | <i>Lab File ID: 19H0576-05R.d</i>   |              |        | <i>Analyzed: 08/21/19 19:44</i> |         |               |   |
| 13C-PFOA                                 | 15200.48 | 7.85225  | 15348.93                            | 7.827017     | 99     | 50 - 150                        | 0.0252  | +/-0.50       |   |
| 13C-PFOS                                 | 19381.36 | 8.07695  | 22563.73                            | 8.051717     | 86     | 50 - 150                        | 0.0252  | +/-0.50       |   |
| d3-NMeFOSAA                              | 9401.185 | 8.3358   | 13800.51                            | 8.318983     | 68     | 50 - 150                        | 0.0168  | +/-0.50       |   |
| <b>Calibration Check (S039480-CCV4 )</b> |          |          | <i>Lab File ID: CCV4082119.d</i>    |              |        | <i>Analyzed: 08/21/19 21:00</i> |         |               |   |
| 13C-PFOA                                 | 18247.12 | 7.827017 | 15348.93                            | 7.827017     | 119    | 50 - 150                        | 0.0000  | +/-0.50       |   |
| 13C-PFOS                                 | 22911.31 | 8.051717 | 22563.73                            | 8.051717     | 102    | 50 - 150                        | 0.0000  | +/-0.50       |   |
| d3-NMeFOSAA                              | 14288.94 | 8.310567 | 13800.51                            | 8.318983     | 104    | 50 - 150                        | -0.0084 | +/-0.50       |   |

**8 - FORM VIII**  
**INTERNAL STANDARD AREA AND RT SUMMARY**  
**SOP 434-PFAAS**

536

Laboratory: Con-Test Analytical Laboratory

Work Order: 19H0576

Client: Dvirka And Bartilucci

Project: Farrand Controls Site

Sequence: S039525

Instrument: HPLC1

Calibration: 1900263

| Internal Standard                        | Response | RT       | Reference Response                | Reference RT | Area % | Area % Limits                   | RT Diff | RT Diff Limit | Q |
|------------------------------------------|----------|----------|-----------------------------------|--------------|--------|---------------------------------|---------|---------------|---|
| <b>Calibration Check (S039525-CCV1 )</b> |          |          | <i>Lab File ID: CCV1082319.d</i>  |              |        | <i>Analyzed: 08/23/19 13:54</i> |         |               |   |
| 13C-PFOA                                 | 12116.99 | 7.877483 | 14022.56                          | 7.700883     | 86     | 50 - 150                        | 0.1766  | +/-0.50       |   |
| 13C-PFOS                                 | 20853.97 | 8.07695  | 18678.12                          | 7.933983     | 112    | 50 - 150                        | 0.1430  | +/-0.50       |   |
| d3-NMeFOSAA                              | 8894.45  | 8.327383 | 11636.93                          | 8.20125      | 76     | 50 - 150                        | 0.1261  | +/-0.50       |   |
| <b>LCS (B238243-BS1 )</b>                |          |          | <i>Lab File ID: B238243-BS1.d</i> |              |        | <i>Analyzed: 08/23/19 14:13</i> |         |               |   |
| 13C-PFOA                                 | 12333.03 | 7.869067 | 12116.99                          | 7.877483     | 102    | 50 - 150                        | -0.0084 | +/-0.50       |   |
| 13C-PFOS                                 | 19407.51 | 8.07695  | 20853.97                          | 8.07695      | 93     | 50 - 150                        | 0.0000  | +/-0.50       |   |
| d3-NMeFOSAA                              | 10708.08 | 8.327383 | 8894.45                           | 8.327383     | 120    | 50 - 150                        | 0.0000  | +/-0.50       |   |

**QC DATA**

# 1 - FORM I

## ANALYSIS DATA SHEET

538

Blank

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B238243-BLK1          |
|             |                                | File ID:       | B238243-BLK1R.d       |
| Sampled:    |                                | Prepared:      | 08/19/19 00:00        |
|             |                                | Analyzed:      | 08/21/19 19:19        |
| Solids:     |                                | Preparation:   | SOP 434-PFAAS         |
|             |                                | Dilution:      |                       |
| Batch:      | B238243                        | Sequence:      | S039480               |
|             |                                | Calibration:   | 1900263               |
|             |                                | Instrument:    | HPLC1                 |
| Column:     | 1                              |                |                       |

| CAS NO.    | COMPOUND                               | CONC. (ng/L) | MDL | RL  | Q |
|------------|----------------------------------------|--------------|-----|-----|---|
| 375-73-5   | Perfluorobutanesulfonic acid (PFBS)    |              | 2.0 | 2.0 |   |
| 307-24-4   | Perfluorohexanoic acid (PFHxA)         |              | 2.0 | 2.0 |   |
| 375-85-9   | Perfluoroheptanoic acid (PFHpA)        |              | 2.0 | 2.0 |   |
| 375-22-4   | Perfluorobutanoic acid (PFBA)          |              | 2.0 | 2.0 |   |
| 335-77-3   | Perfluorodecanesulfonic acid (PFDS)    |              | 2.0 | 2.0 |   |
| 375-92-8   | Perfluoroheptanesulfonic acid (PFHpS)  |              | 2.0 | 2.0 |   |
| 75491-6    | Perfluorooctanesulfonamide (FOSA)      |              | 2.0 | 2.0 |   |
| 2706-90-3  | Perfluoropentanoic acid (PFPeA)        |              | 2.0 | 2.0 |   |
|            | 6:2 Fluorotelomersulfonate (6:2 FTS A) |              | 2.0 | 2.0 |   |
|            | 8:2 Fluorotelomersulfonate (8:2 FTS A) |              | 2.0 | 2.0 |   |
| 355-46-4   | Perfluorohexanesulfonic acid (PFHxS)   |              | 2.0 | 2.0 |   |
| 335-67-1   | Perfluorooctanoic acid (PFOA)          |              | 2.0 | 2.0 |   |
| 1763-23-1  | Perfluorooctanesulfonic acid (PFOS)    |              | 2.0 | 2.0 |   |
| 375-95-1   | Perfluorononanoic acid (PFNA)          |              | 2.0 | 2.0 |   |
| 335-76-2   | Perfluorodecanoic acid (PFDA)          |              | 2.0 | 2.0 |   |
|            | N-MeFOSAA                              |              | 2.0 | 2.0 |   |
| 2058-94-8  | Perfluoroundecanoic acid (PFUnA)       |              | 2.0 | 2.0 |   |
|            | N-EtFOSAA                              |              | 2.0 | 2.0 |   |
| 307-55-1   | Perfluorododecanoic acid (PFDoA)       |              | 2.0 | 2.0 |   |
| 72629-94-8 | Perfluorotridecanoic acid (PFTTrDA)    |              | 2.0 | 2.0 |   |
| 376-06-7   | Perfluorotetradecanoic acid (PFTA)     |              | 2.0 | 2.0 |   |

## Quantitation Results Report (Not Reviewed)

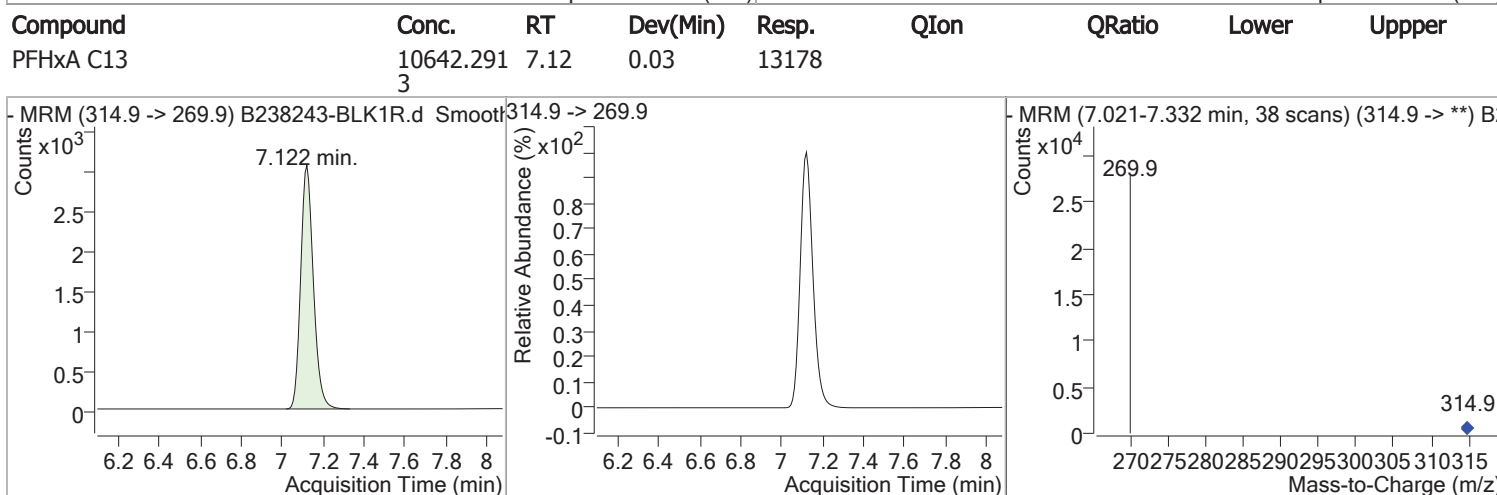
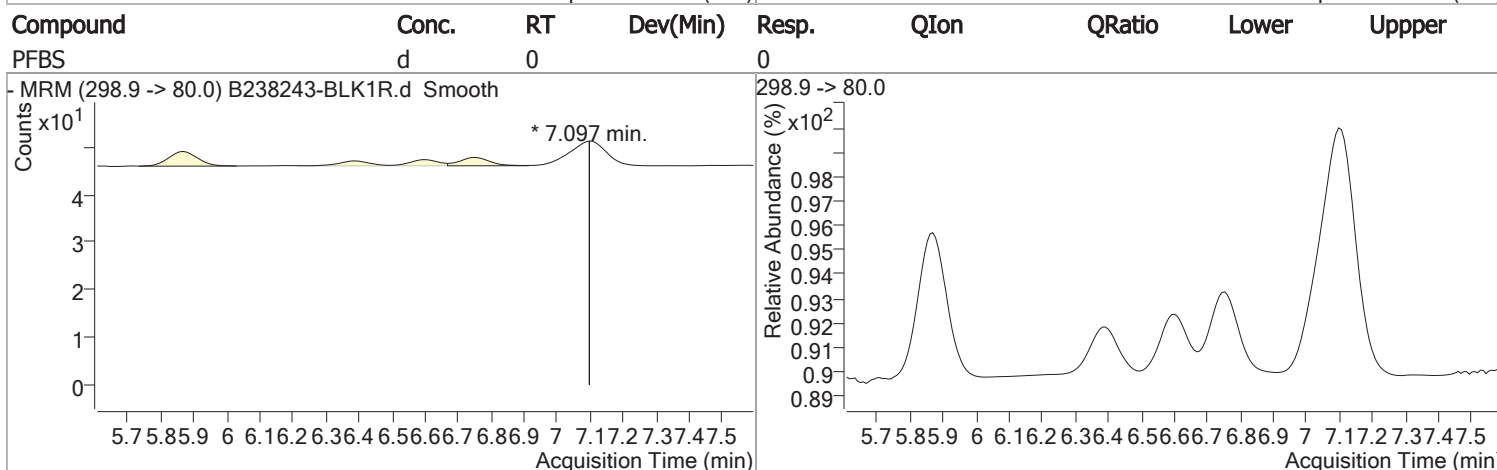
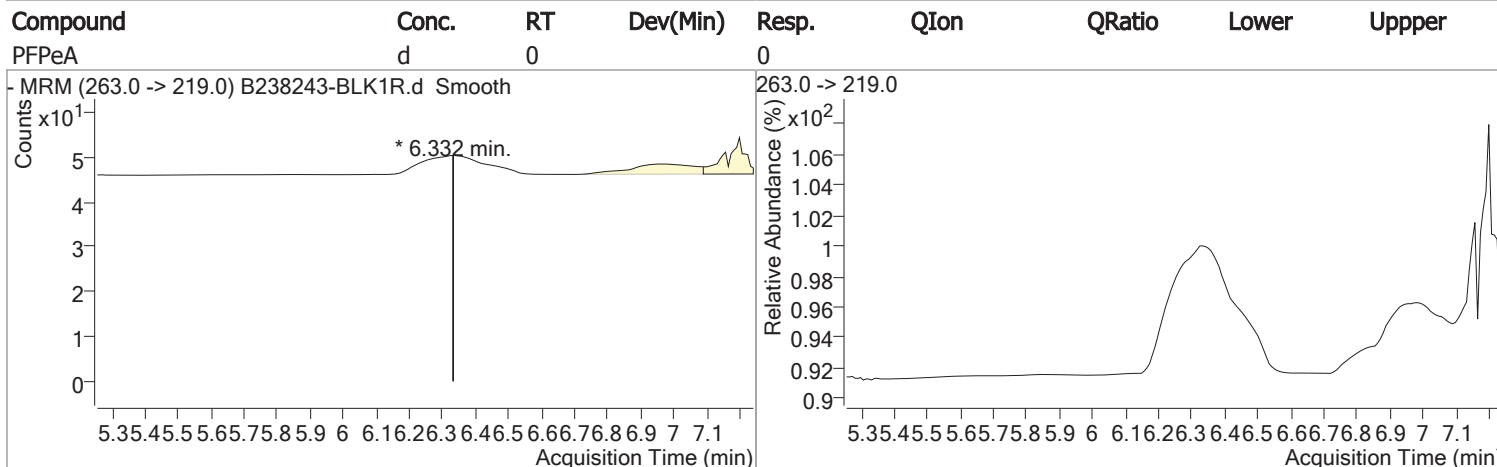
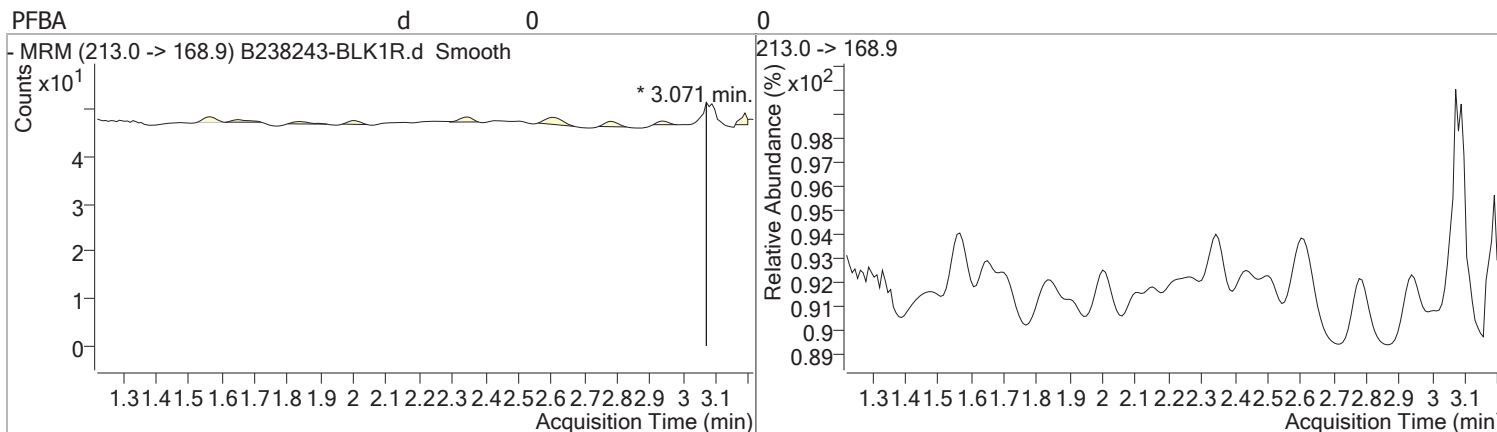
|                |                   |                   |                      |
|----------------|-------------------|-------------------|----------------------|
| Data File      | B238243-BLK1R.d   | Operator          |                      |
| Acq. Method    | 21List021219.m    | Acq. Date-Time    | 8/21/2019 7:19:15 PM |
| Sample Name    | B238243-BLK1      | Instrument        | QQQ1                 |
| Vial           |                   | Multiplier        | 1.00                 |
| DA Method File | 081319.m          | Comment           |                      |
| Tune File      |                   | Tune Date         |                      |
| Batch Name     | B238243.batch.bin | Last Calib Update | 8/14/2019 2:32:09 PM |
| Ref Library    |                   |                   |                      |

| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units |    | Dev(Min) |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|----|----------|
| Internal Standards          |                      |                |       |                    |       |    |          |
| M PFOA C13                  | 7.827                | 416.9 -> 371.9 | 17361 | 10000.0000         | pg/ml |    | 0.050    |
| M PFOS C13                  | 8.052                | 502.9 -> 80.0  | 23374 | 28700.0000         | pg/ml |    | 0.059    |
| M d3-N-MeFOSAA              | 8.311                | 573.2 -> 419.0 | 12048 | 40000.0000         | pg/ml | m  | 0.050    |
| System Monitoring Compounds |                      |                |       |                    |       |    |          |
| S PFHxA C13                 | 7.122                | 314.9 -> 269.9 | 13178 | 10642.2913         | pg/ml |    | 0.034    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 106.42% |       |    |          |
| S PFDA C13                  | 8.228                | 514.9 -> 469.9 | 15750 | 8714.0225          | pg/ml |    | 0.050    |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 87.14%  |       |    |          |
| S d5-N-MeFOSAA              | 8.386                | 589.2 -> 419.0 | 8025  | 28164.4992         | pg/ml | m  | 0.050    |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 70.41%  |       |    |          |
| Target Compounds            |                      |                |       |                    |       |    | QValue   |
| T PFBA                      | 3.071                | 213.0 -> 168.9 | 0     | 0.0000             | pg/ml | md | 1        |
| T PFPeA                     | 6.332                | 263.0 -> 219.0 | 0     | 0.0000             | pg/ml | md | 1        |
| T PFBS                      | 7.097                | 298.9 -> 80.0  | 0     | 0.0000             | pg/ml | md | 1        |
| T PFHxA                     | 7.114                | 312.9 -> 268.9 | 0     | 0.0000             | pg/ml | md | 1        |
| T PFHpA                     | 7.306                | 362.9 -> 319.0 | 0     | 0.0000             | pg/ml | md | 1        |
| T PFHxS-Total               | 8.189                | 398.9 -> 80.0  | 0     | 0.0000             | pg/ml | md | 1        |
| T 6.2 FTS                   | 8.617                | 427.0 -> 406.8 | 0     | 0.0000             | pg/ml | md | 1        |
| T PFOA-Total                | 7.827                | 412.9 -> 368.9 | 390   | 171.3157           | pg/ml |    | 100      |
| T PFHpS                     | 8.331                | 449.0 -> 79.7  | 0     | 0.0000             | pg/ml | md | 1        |
| T PFOS-Total                | 8.573                | 498.9 -> 80.0  | 0     | 0.0000             | pg/ml | md | 1        |
| T PFNA                      | 8.566                | 462.9 -> 418.9 | 691   | 499.3859           | pg/ml |    | 100      |
| T 8.2 FTS                   | 7.512                | 527.0 -> 81.0  | 0     | 0.0000             | pg/ml | md | 1        |
| T PFDA                      | 8.884                | 513.1 -> 469.0 | 0     | 0.0000             | pg/ml | md | 1        |
| T N-MeFOSAA                 | 7.546                | 570.2 -> 419.1 | 0     | 0.0000             | pg/ml | md | 1        |
| T FOSA                      | 8.548                | 497.9 -> 77.9  | 0     | 0.0000             | pg/ml | md | 1        |
| T PFDS                      | 8.806                | 599.0 -> 80.0  | 0     | 0.0000             | pg/ml | md | 1        |
| T PFUnA                     | 8.076                | 563.1 -> 519.0 | 0     | 0.0000             | pg/ml | md | 1        |
| T N-EtFOSAA                 | 7.436                | 584.2 -> 419.0 | 0     | 0.0000             | pg/ml | md | 1        |
| T PFDoA                     | 9.049                | 613.1 -> 569.0 | 0     | 0.0000             | pg/ml | md | 1        |
| T PFTTrDA                   | 9.209                | 663.1 -> 619.0 | 0     | 0.0000             | pg/ml | md | 1        |
| T PFTA                      | 9.579                | 713.1 -> 669.1 | 847   | 215.1304           | pg/ml |    | 100      |

(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

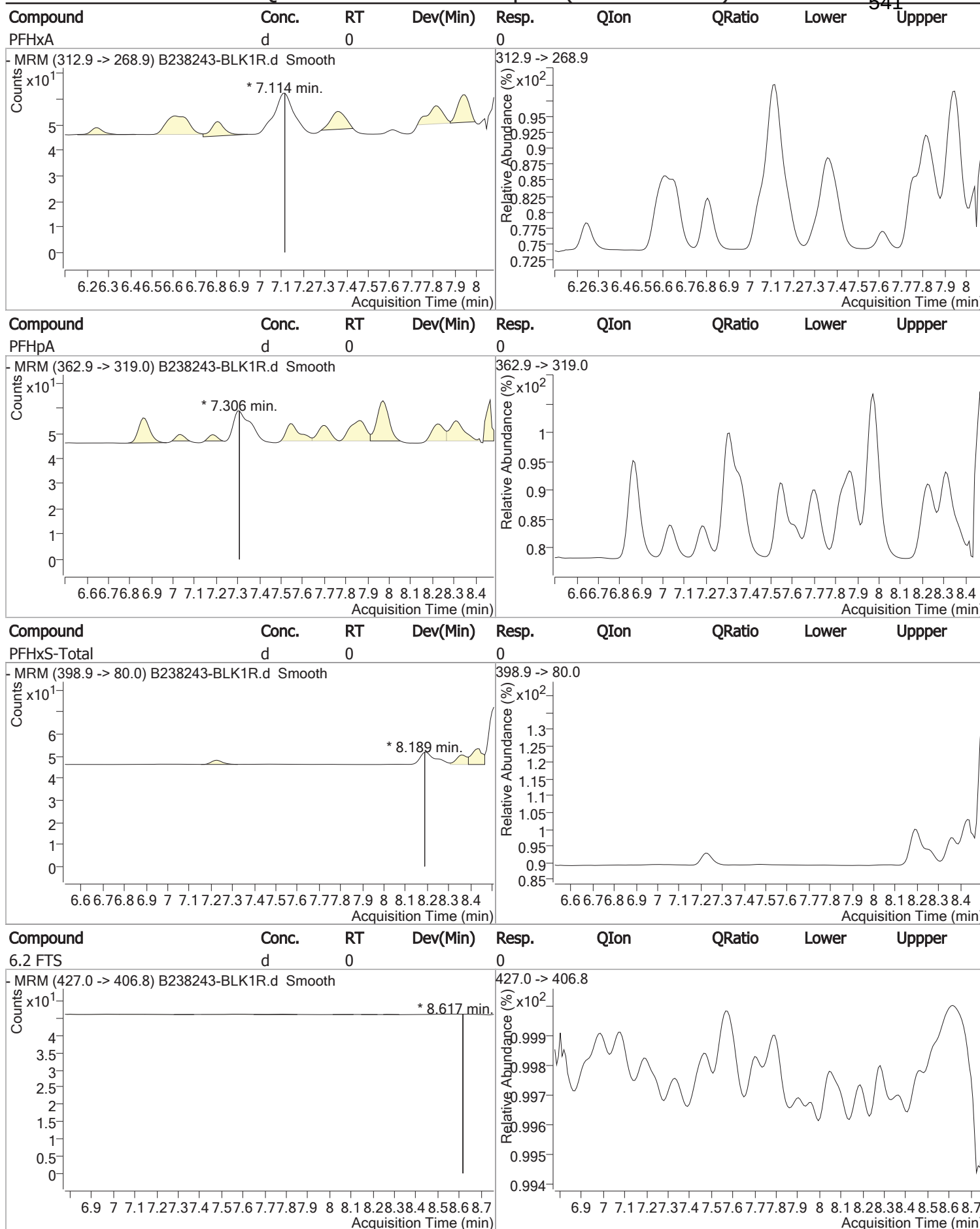
# Quantitation Results Report (Not Reviewed)

| Compound | Conc. | RT | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-------|----|----------|-------|------|--------|-------|-------|
|----------|-------|----|----------|-------|------|--------|-------|-------|

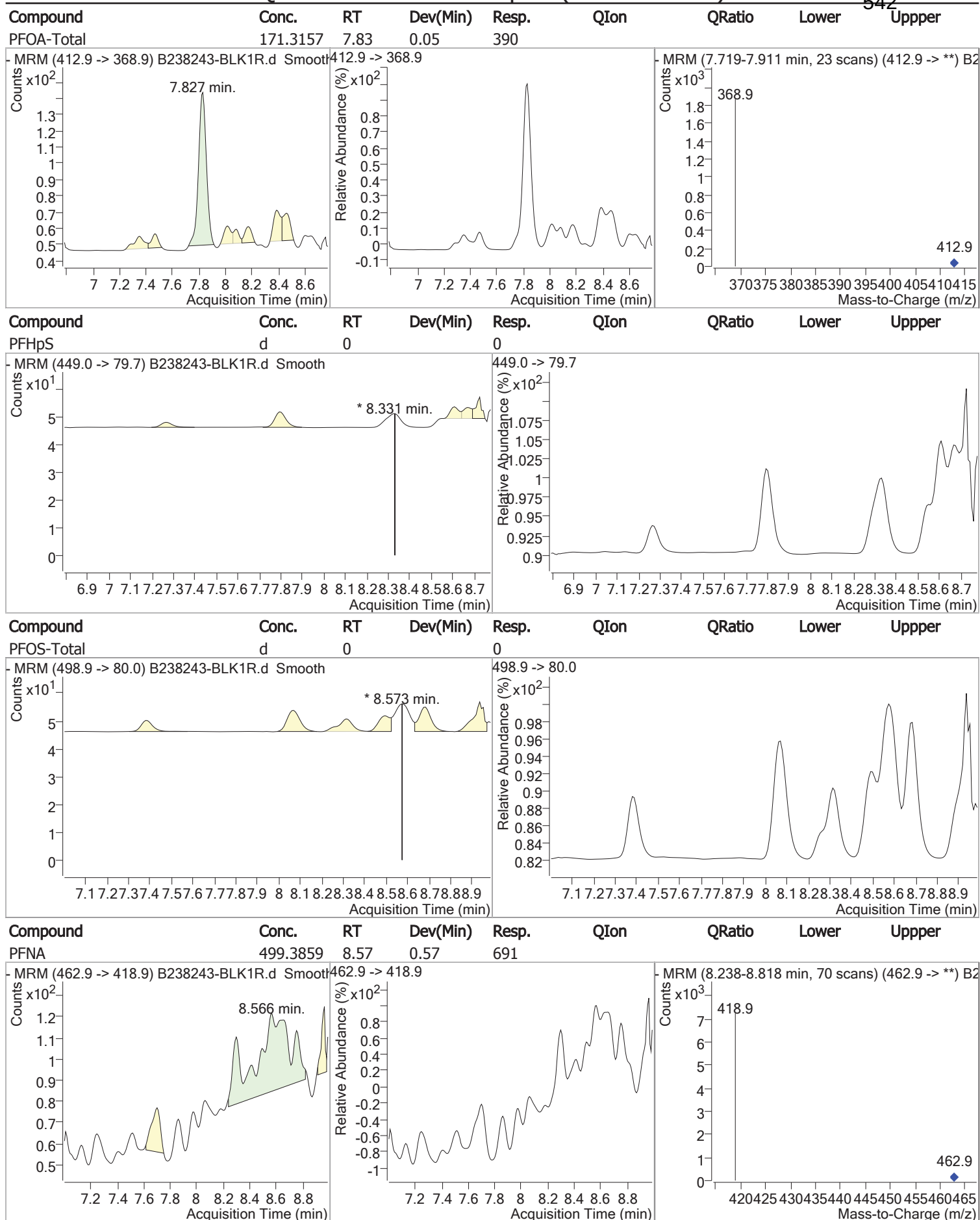




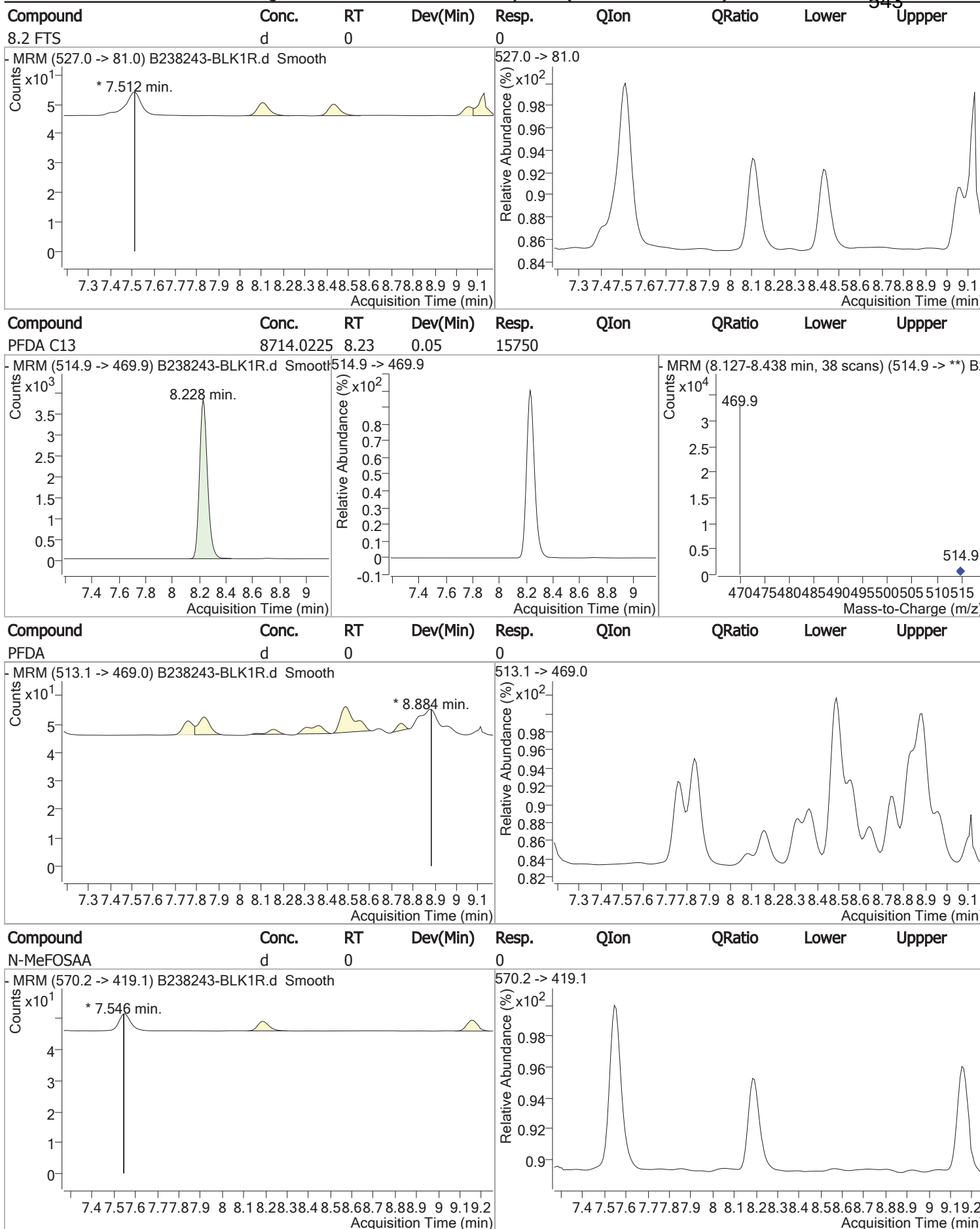
# Quantitation Results Report (Not Reviewed)



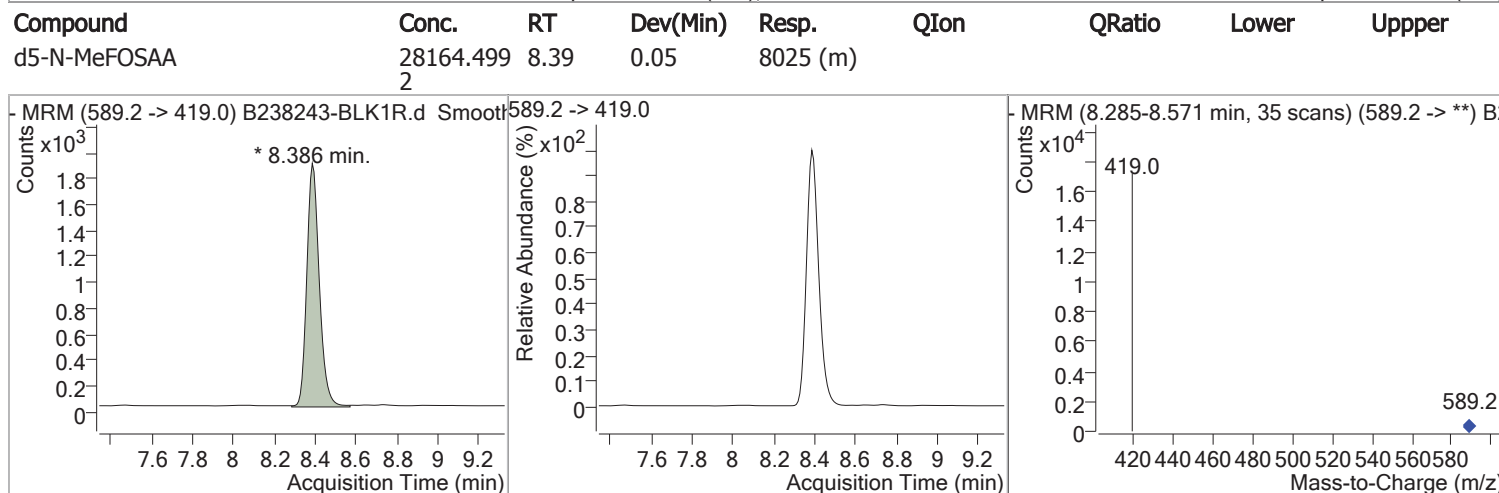
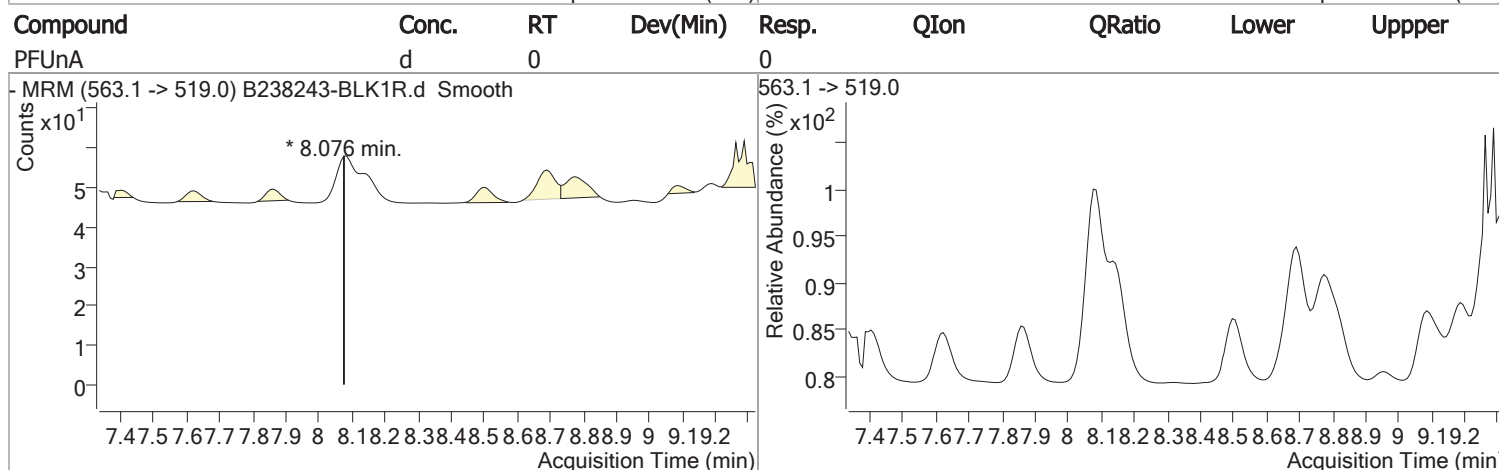
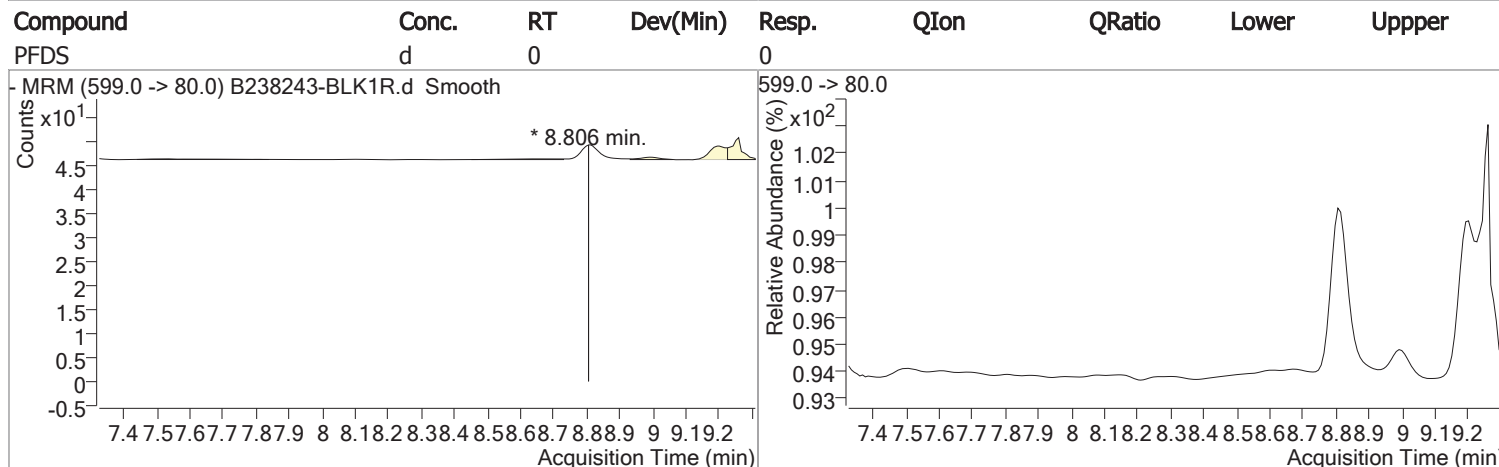
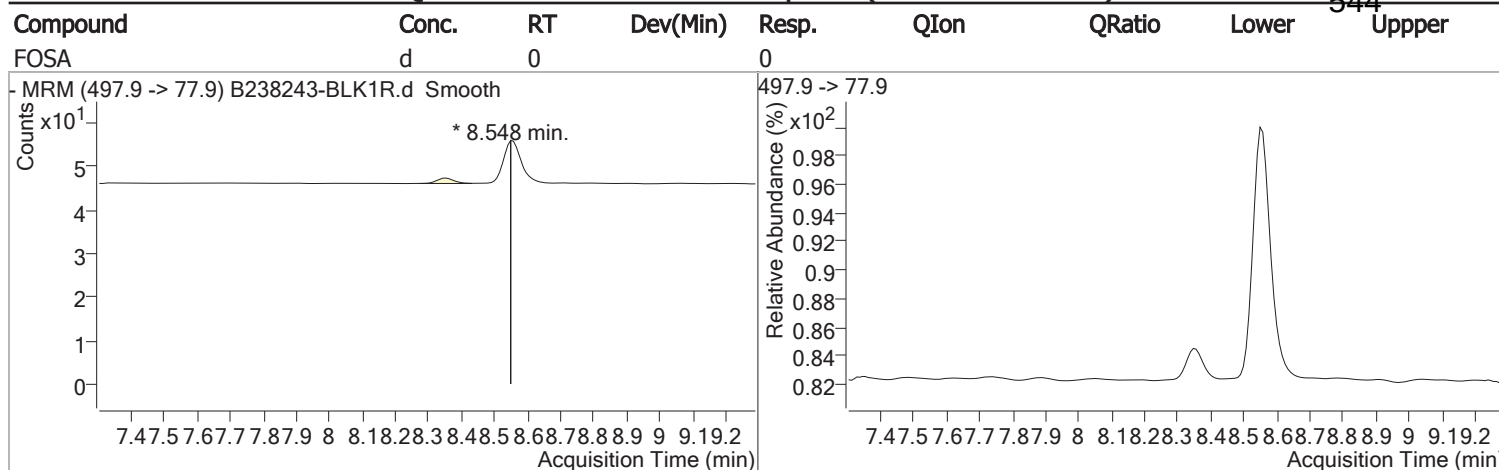
# Quantitation Results Report (Not Reviewed)



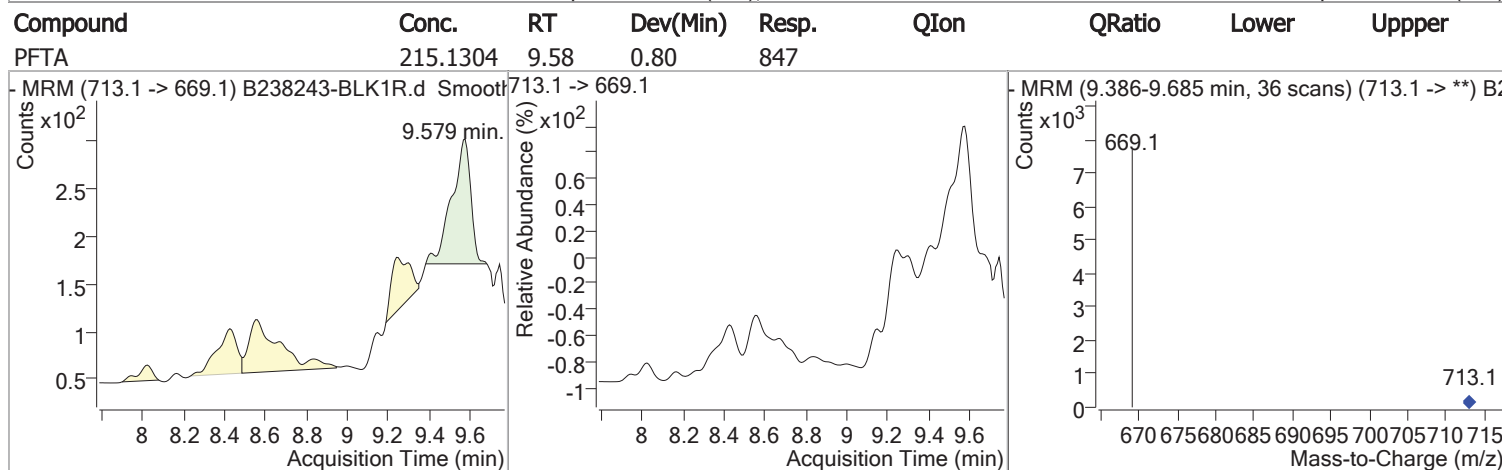
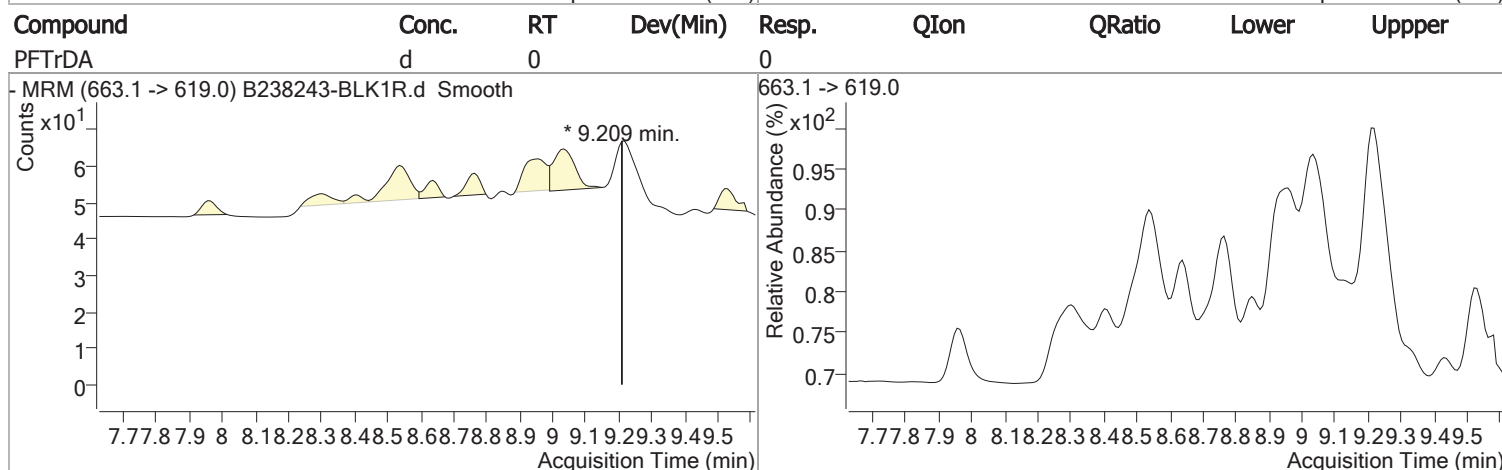
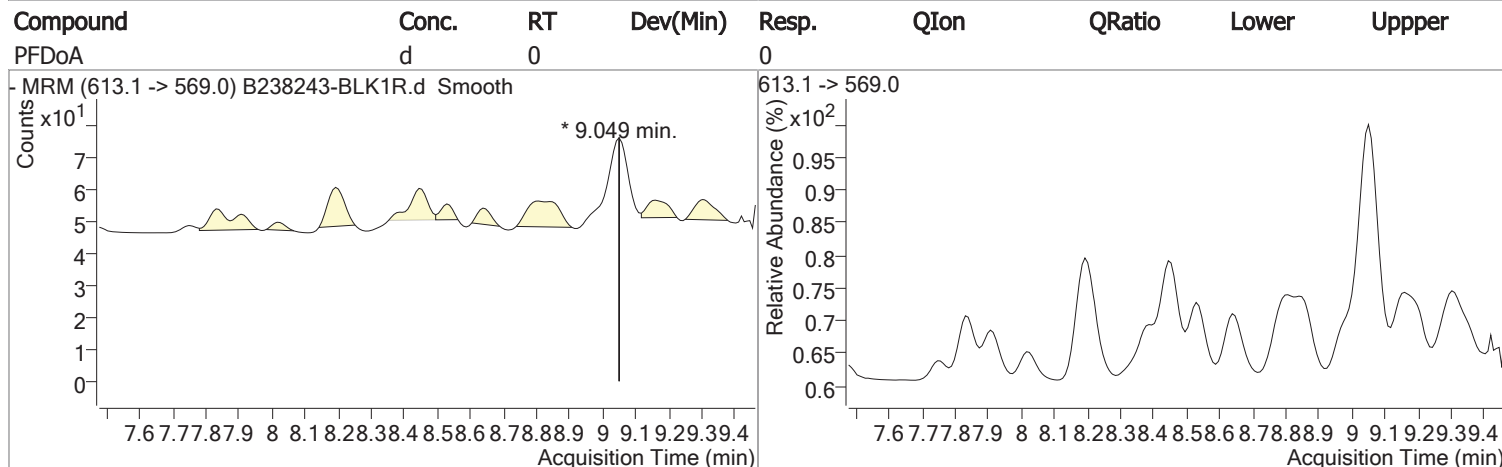
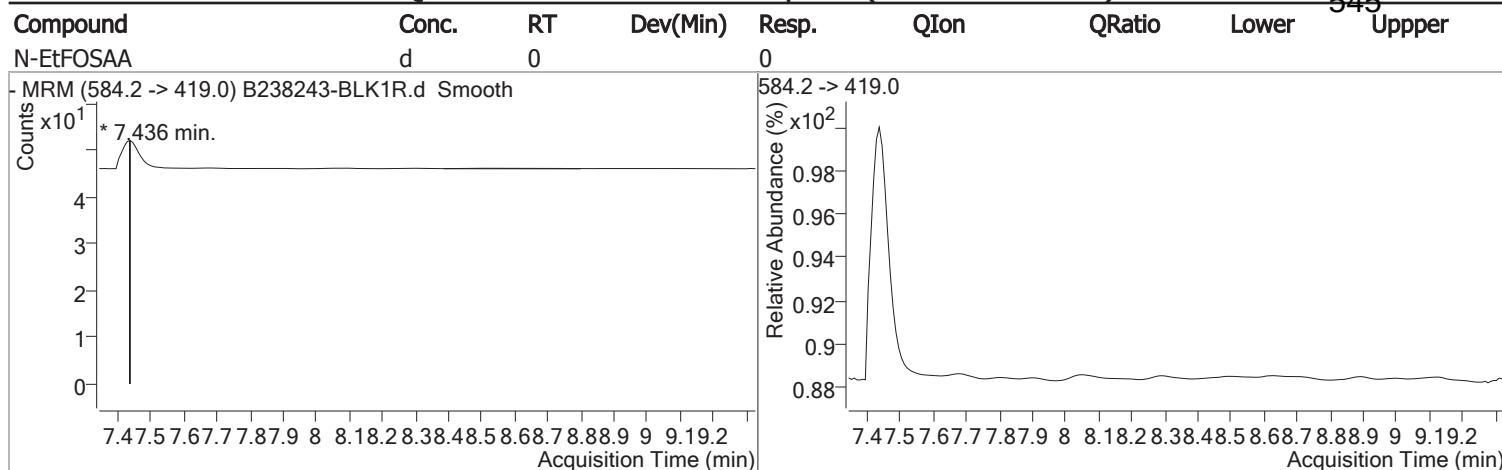
# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# Quantitation Results Report (Not Reviewed)



# 1 - FORM I

## ANALYSIS DATA SHEET

### LCS

546

|             |                                |                |                       |
|-------------|--------------------------------|----------------|-----------------------|
| Laboratory: | Con-Test Analytical Laboratory | Work Order:    | 19H0576               |
| Client:     | Dvirka And Bartilucci          | Project:       | Farrand Controls Site |
| Matrix:     | Water                          | Laboratory ID: | B238243-BS1           |
|             |                                | File ID:       | B238243-BS1.d         |
| Sampled:    |                                | Prepared:      | 08/19/19 00:00        |
|             |                                | Analyzed:      | 08/23/19 14:13        |
| Solids:     |                                | Preparation:   | SOP 434-PFAAS         |
|             |                                | Dilution:      |                       |
| Batch:      | B238243                        | Sequence:      | S039525               |
|             |                                | Calibration:   | 1900263               |
|             |                                | Instrument:    | HPLC1                 |
| Column:     | 1                              |                |                       |

| CAS NO.    | COMPOUND                               | CONC. (ng/L) | MDL | RL  | Q |
|------------|----------------------------------------|--------------|-----|-----|---|
| 375-73-5   | Perfluorobutanesulfonic acid (PFBS)    | 7.86         | 2.0 | 2.0 |   |
| 307-24-4   | Perfluorohexanoic acid (PFHxA)         | 9.42         | 2.0 | 2.0 |   |
| 375-85-9   | Perfluoroheptanoic acid (PFHpA)        | 8.87         | 2.0 | 2.0 |   |
| 375-22-4   | Perfluorobutanoic acid (PFBA)          | 7.80         | 2.0 | 2.0 |   |
| 335-77-3   | Perfluorodecanesulfonic acid (PFDS)    | 8.07         | 2.0 | 2.0 |   |
| 375-92-8   | Perfluoroheptanesulfonic acid (PFHpS)  | 7.48         | 2.0 | 2.0 |   |
| 75491-6    | Perfluorooctanesulfonamide (FOSA)      | 6.03         | 2.0 | 2.0 |   |
| 2706-90-3  | Perfluoropentanoic acid (PFPeA)        | 11.2         | 2.0 | 2.0 |   |
|            | 6:2 Fluorotelomersulfonate (6:2 FTS A) | 11.6         | 2.0 | 2.0 |   |
|            | 8:2 Fluorotelomersulfonate (8:2 FTS A) | 10.3         | 2.0 | 2.0 |   |
| 355-46-4   | Perfluorohexanesulfonic acid (PFHxS)   | 6.61         | 2.0 | 2.0 |   |
| 335-67-1   | Perfluorooctanoic acid (PFOA)          | 10.4         | 2.0 | 2.0 |   |
| 1763-23-1  | Perfluorooctanesulfonic acid (PFOS)    | 8.06         | 2.0 | 2.0 |   |
| 375-95-1   | Perfluorononanoic acid (PFNA)          | 9.57         | 2.0 | 2.0 |   |
| 335-76-2   | Perfluorodecanoic acid (PFDA)          | 10.8         | 2.0 | 2.0 |   |
|            | N-MeFOSAA                              | 10.5         | 2.0 | 2.0 |   |
| 2058-94-8  | Perfluoroundecanoic acid (PFUnA)       | 11.2         | 2.0 | 2.0 |   |
|            | N-EtFOSAA                              | 7.99         | 2.0 | 2.0 |   |
| 307-55-1   | Perfluorododecanoic acid (PFDoA)       | 9.60         | 2.0 | 2.0 |   |
| 72629-94-8 | Perfluorotridecanoic acid (PFTTrDA)    | 10.8         | 2.0 | 2.0 |   |
| 376-06-7   | Perfluorotetradecanoic acid (PFTA)     | 10.1         | 2.0 | 2.0 |   |

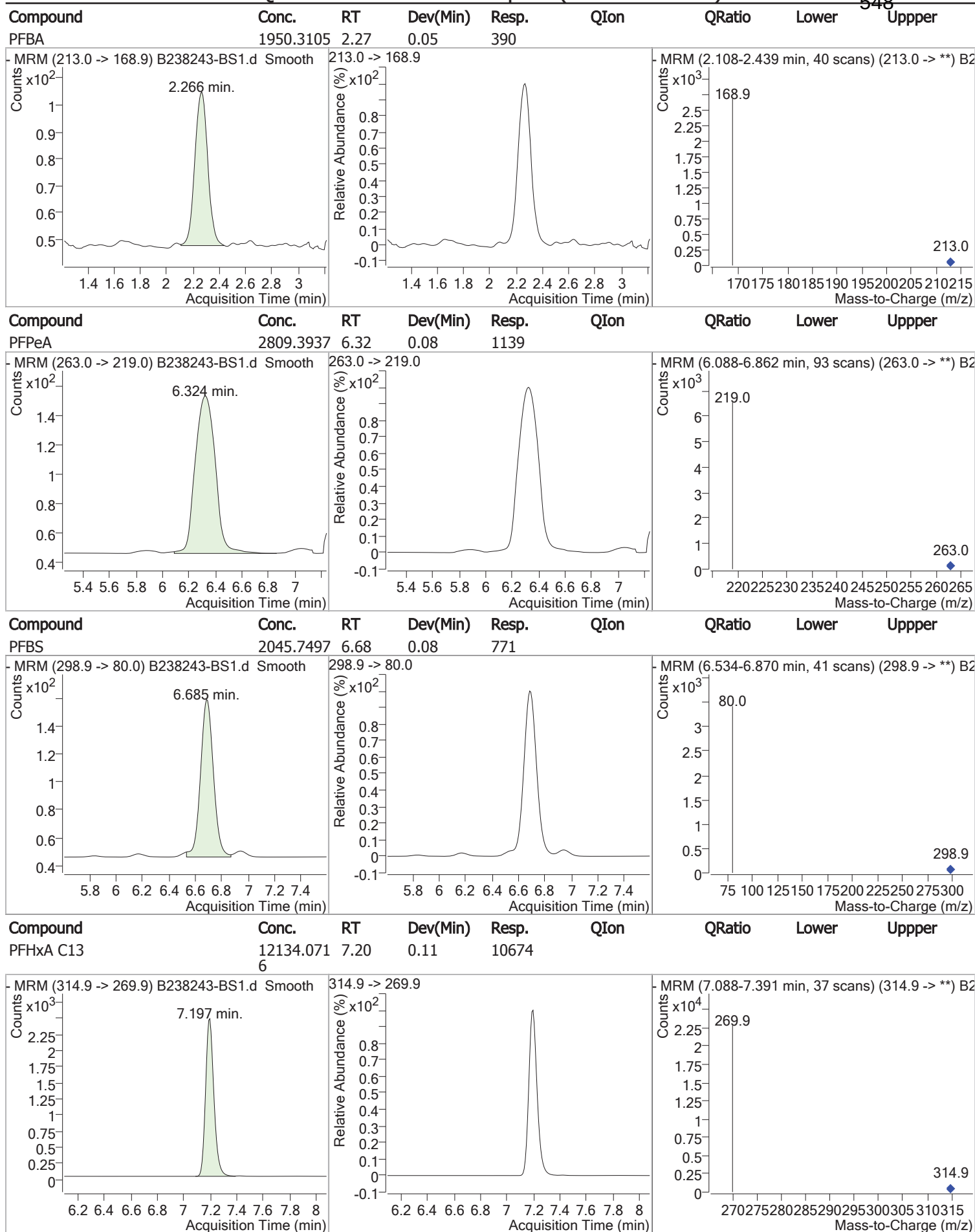
## Quantitation Results Report (Not Reviewed)

|                |                |                   |                      |
|----------------|----------------|-------------------|----------------------|
| Data File      | B238243-BS1.d  | Operator          |                      |
| Acq. Method    | 21List021219.m | Acq. Date-Time    | 8/23/2019 2:13:56 PM |
| Sample Name    | B238243-BS1    | Instrument        | QQQ1                 |
| Vial           |                | Multiplier        | 1.00                 |
| DA Method File | 081319.m       | Comment           |                      |
| Tune File      |                | Tune Date         |                      |
| Batch Name     | 1.batch.bin    | Last Calib Update | 8/14/2019 2:32:09 PM |
| Ref Library    |                |                   |                      |

| Compound                    | RT                   | QIon           | Resp. | Conc.              | Units |        | Dev(Min)      |
|-----------------------------|----------------------|----------------|-------|--------------------|-------|--------|---------------|
| Internal Standards          |                      |                |       |                    |       |        |               |
| M PFOA C13                  | 7.869                | 416.9 -> 371.9 | 12333 | 10000.0000         | pg/ml | m      | 0.093         |
| M PFOS C13                  | 8.077                | 502.9 -> 80.0  | 18637 | 28700.0000         | pg/ml |        | 0.084         |
| M d3-N-MeFOSAA              | 8.327                | 573.2 -> 419.0 | 10708 | 40000.0000         | pg/ml |        | 0.067         |
| System Monitoring Compounds |                      |                |       |                    |       |        |               |
| S PFHxA C13                 | 7.197                | 314.9 -> 269.9 | 10674 | 12134.0716         | pg/ml | m<br>* | 0.109         |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 121.34% |       |        |               |
| S PFDA C13                  | 8.245                | 514.9 -> 469.9 | 17736 | 13813.3263         | pg/ml |        | 0.067         |
| Spiked Amount: 10000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 138.13% |       |        |               |
| S d5-N-MeFOSAA              | 8.394                | 589.2 -> 419.0 | 11394 | 44992.5726         | pg/ml |        | 0.059         |
| Spiked Amount: 40000.000    | Range: 70.0 - 130.0% |                |       | Recovery = 112.48% |       |        |               |
| Target Compounds            |                      |                |       |                    |       |        |               |
| T PFBA                      | 2.266                | 213.0 -> 168.9 | 390   | 1950.3105          | pg/ml | m      | QValue<br>100 |
| T PFPeA                     | 6.324                | 263.0 -> 219.0 | 1139  | 2809.3937          | pg/ml |        | 100           |
| T PFBS                      | 6.685                | 298.9 -> 80.0  | 771   | 2045.7497          | pg/ml |        | 100           |
| T PFHxA                     | 7.198                | 312.9 -> 268.9 | 2015  | 2354.5472          | pg/ml |        | 100           |
| T PFHpA                     | 7.601                | 362.9 -> 319.0 | 2825  | 2216.5222          | pg/ml |        | 100           |
| T PFHxS-Total               | 7.634                | 398.9 -> 80.0  | 1020  | 1722.0067          | pg/ml |        | 100           |
| T 6.2 FTS                   | 7.869                | 427.0 -> 406.8 | 468   | 3032.0360          | pg/ml |        | 100           |
| T PFOA-Total                | 7.869                | 412.9 -> 368.9 | 4193  | 2589.7478          | pg/ml |        | 100           |
| T PFHpS                     | 7.885                | 449.0 -> 79.7  | 601   | 1947.2553          | pg/ml |        | 100           |
| T PFOS-Total                | 8.077                | 498.9 -> 80.0  | 2161  | 2240.6888          | pg/ml |        | 100           |
| T PFNA                      | 8.078                | 462.9 -> 418.9 | 2351  | 2393.0857          | pg/ml |        | 100           |
| T 8.2 FTS                   | 8.253                | 527.0 -> 81.0  | 686   | 2687.7823          | pg/ml |        | 100           |
| T PFDA                      | 8.245                | 513.1 -> 469.0 | 4893  | 2699.8166          | pg/ml |        | 100           |
| T N-MeFOSAA                 | 8.328                | 570.2 -> 419.1 | 832   | 2614.6716          | pg/ml |        | 100           |
| T FOSA                      | 8.363                | 497.9 -> 77.9  | 3070  | 1507.1315          | pg/ml |        | 100           |
| T PFDS                      | 8.385                | 599.0 -> 80.0  | 1266  | 2101.4194          | pg/ml |        | 100           |
| T PFUnA                     | 8.395                | 563.1 -> 519.0 | 5844  | 2799.4711          | pg/ml |        | 100           |
| T N-EtFOSAA                 | 8.403                | 584.2 -> 419.0 | 526   | 1998.6881          | pg/ml |        | 100           |
| T PFDoA                     | 8.536                | 613.1 -> 569.0 | 7016  | 2399.8951          | pg/ml |        | 100           |
| T PFTTrDA                   | 8.696                | 663.1 -> 619.0 | 8968  | 2689.6448          | pg/ml |        | 100           |
| T PFTA                      | 8.864                | 713.1 -> 669.1 | 7095  | 2536.7963          | pg/ml | 100    |               |

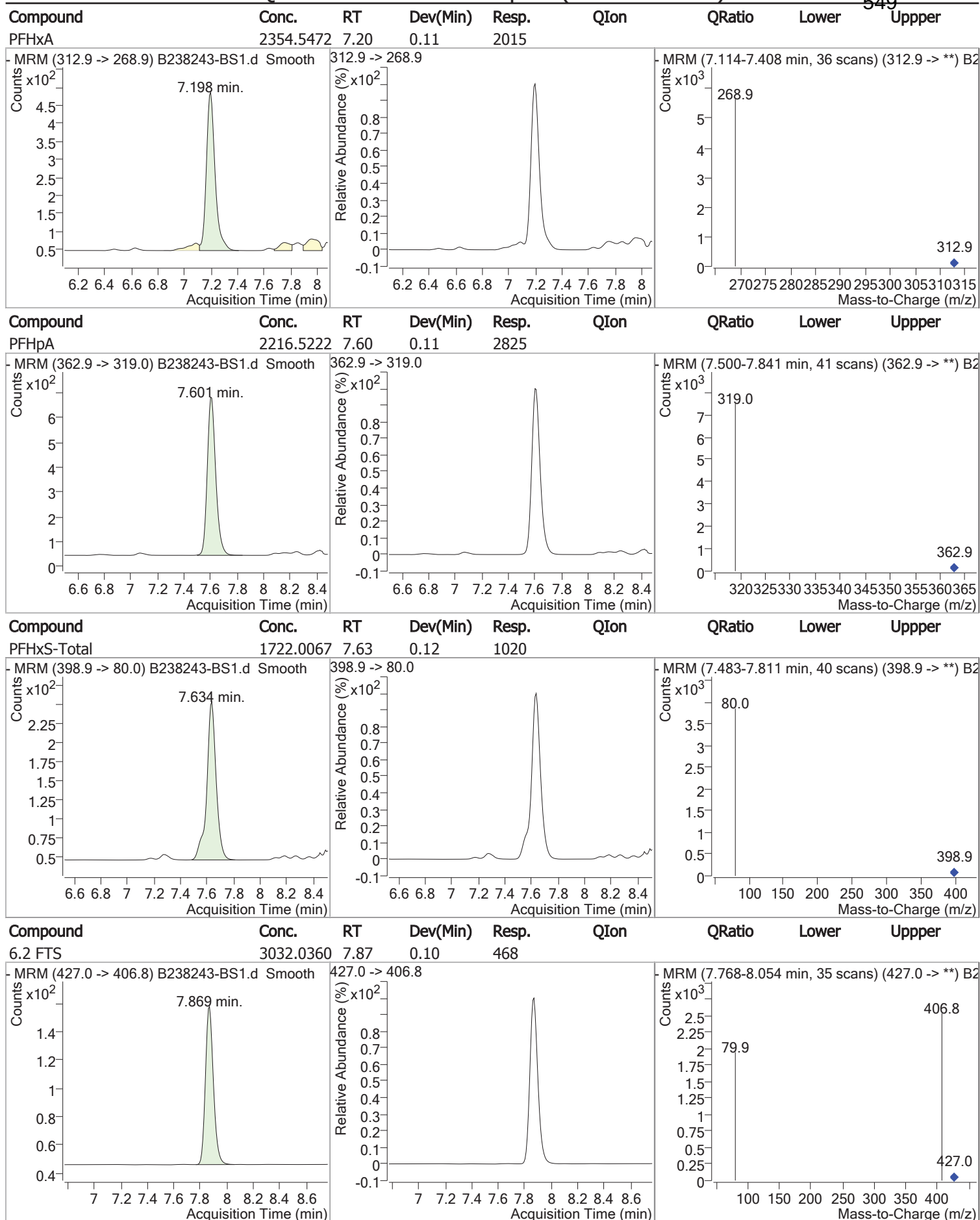
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed; (\*) = Surrogate Percent Recovery Out of Range; (d): Zeroed Peak

# Quantitation Results Report (Not Reviewed)

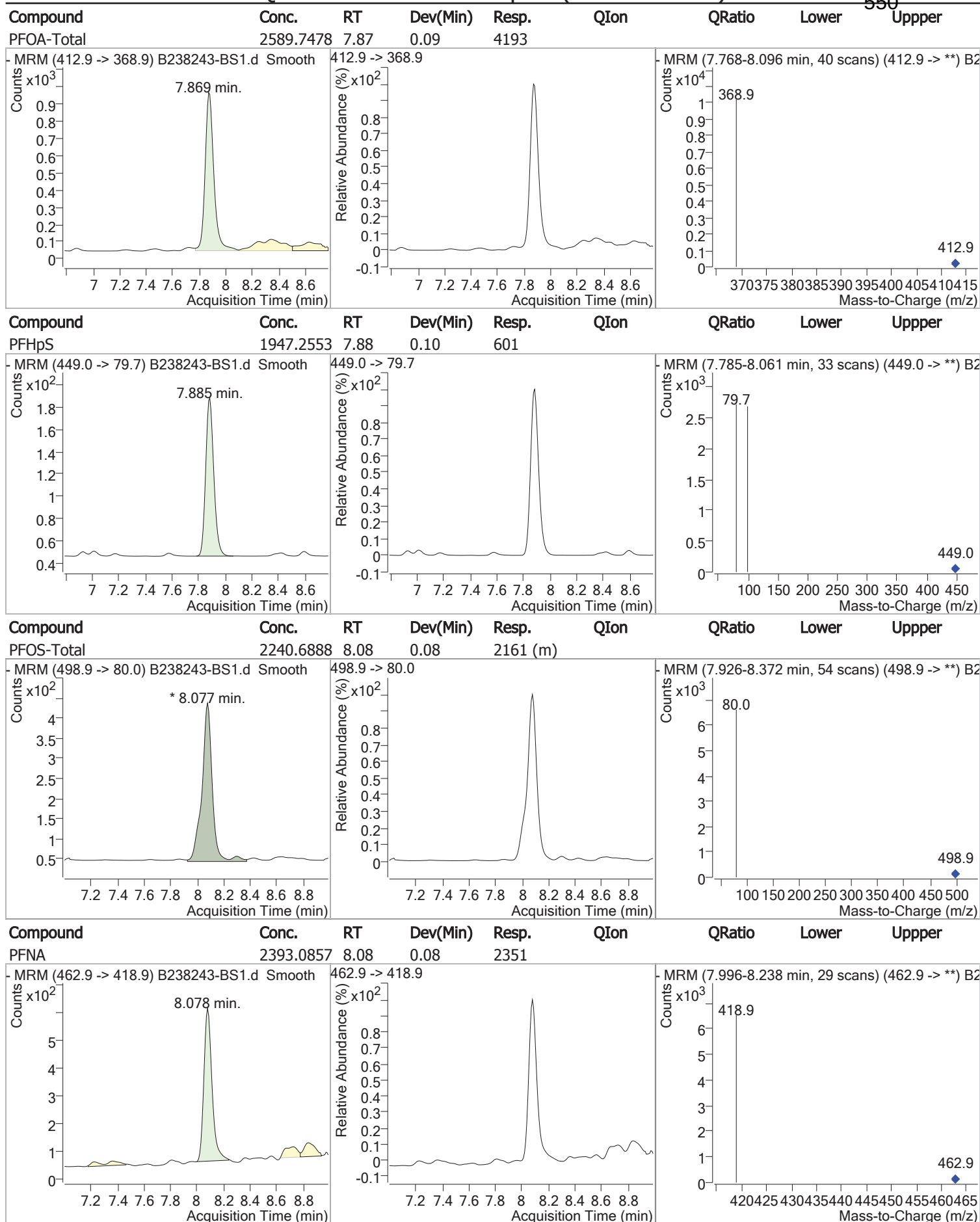




# Quantitation Results Report (Not Reviewed)

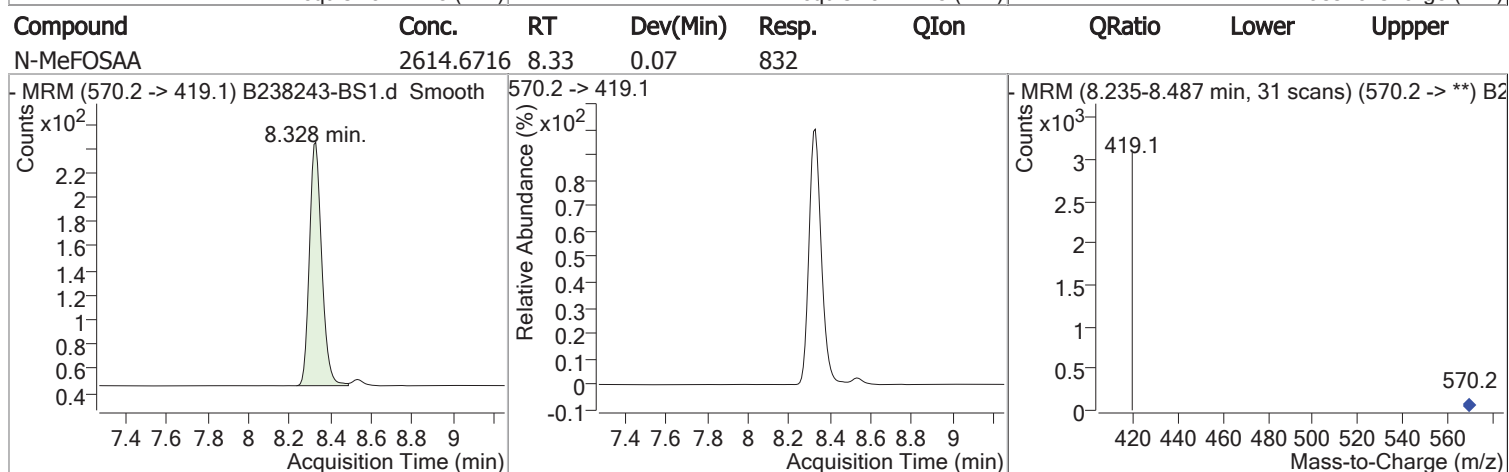
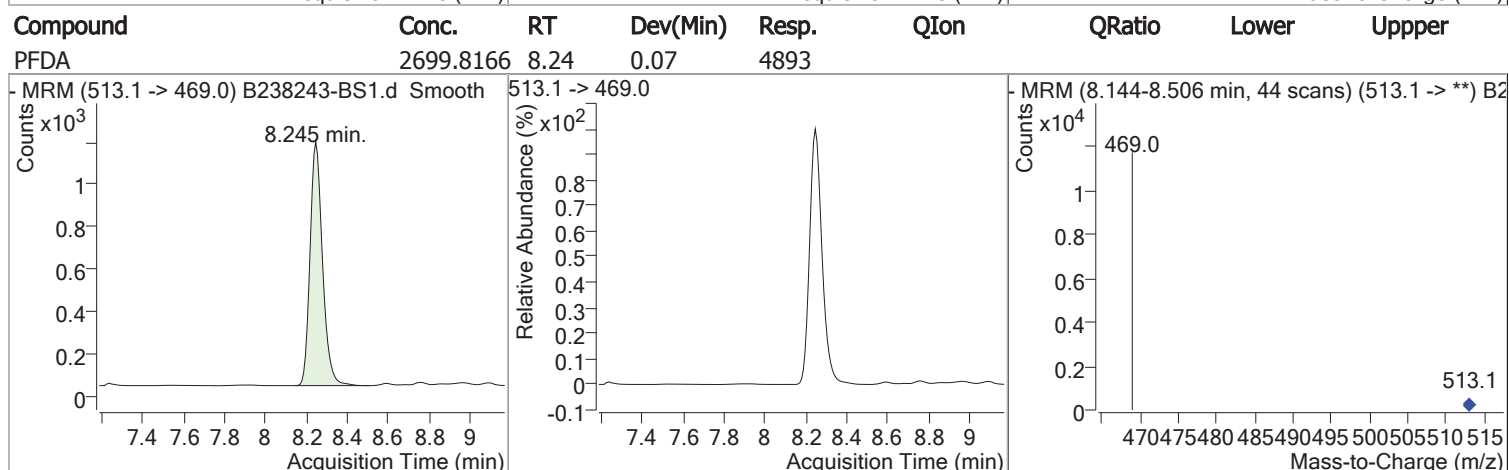
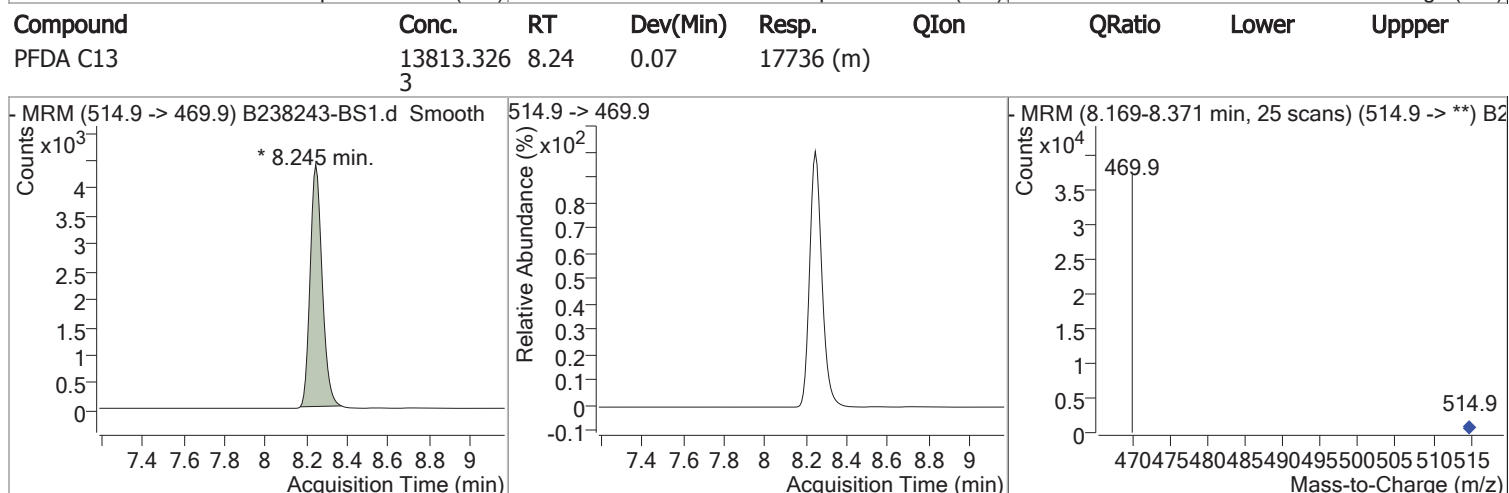
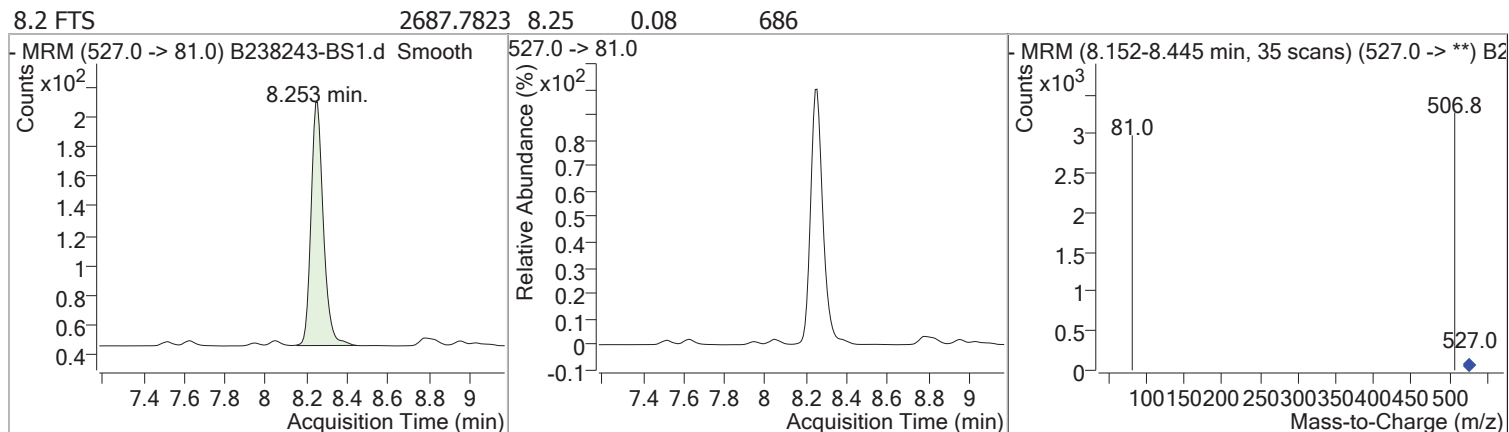


# Quantitation Results Report (Not Reviewed)



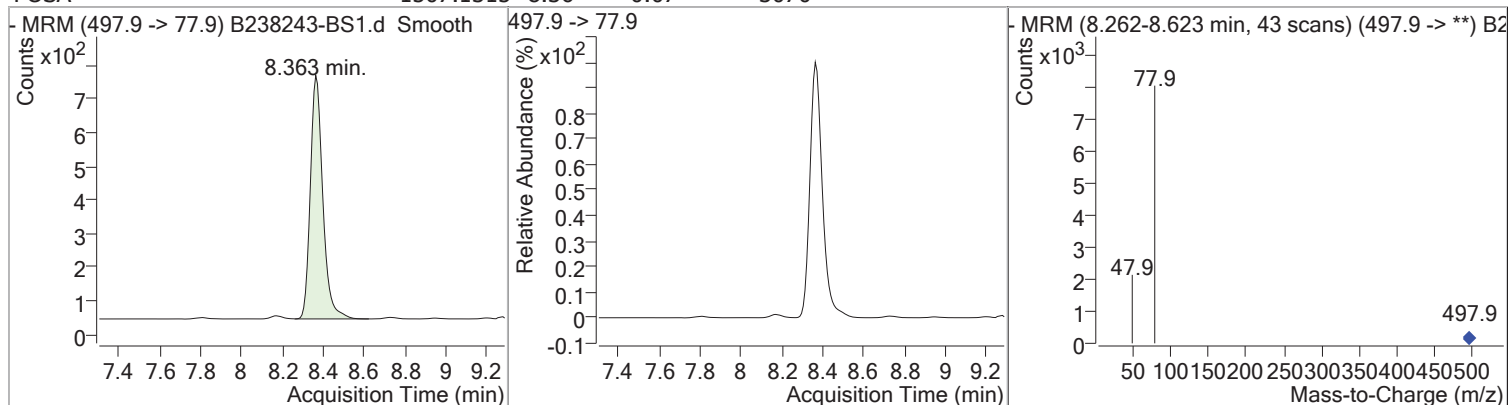
# Quantitation Results Report (Not Reviewed)

| Compound | Conc. | RT | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-------|----|----------|-------|------|--------|-------|-------|
|----------|-------|----|----------|-------|------|--------|-------|-------|

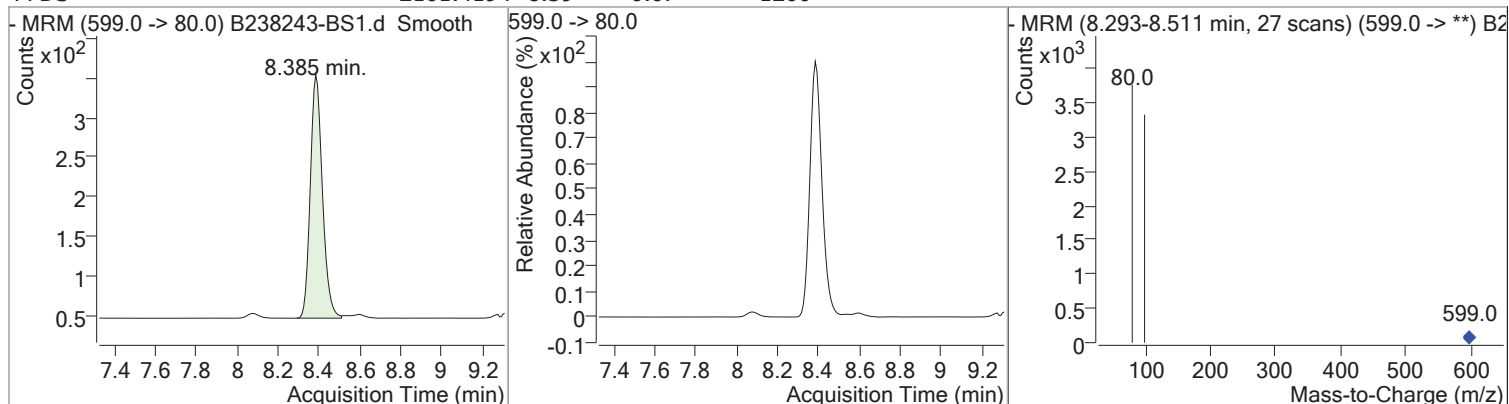


# Quantitation Results Report (Not Reviewed)

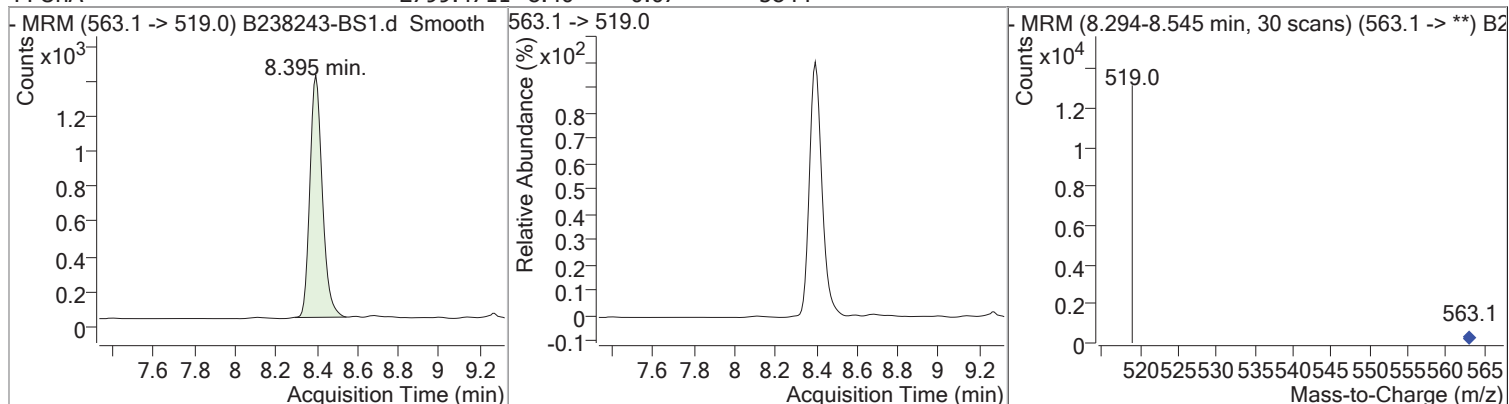
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| FOSA     | 1507.1315 | 8.36 | 0.07     | 3070  |      |        |       |       |



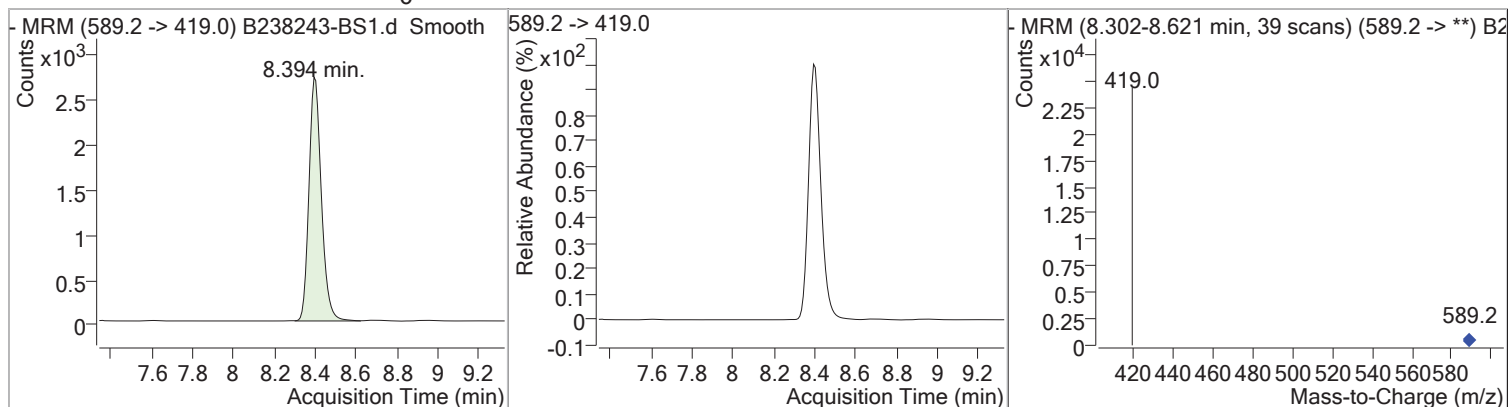
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFDS     | 2101.4194 | 8.39 | 0.07     | 1266  |      |        |       |       |



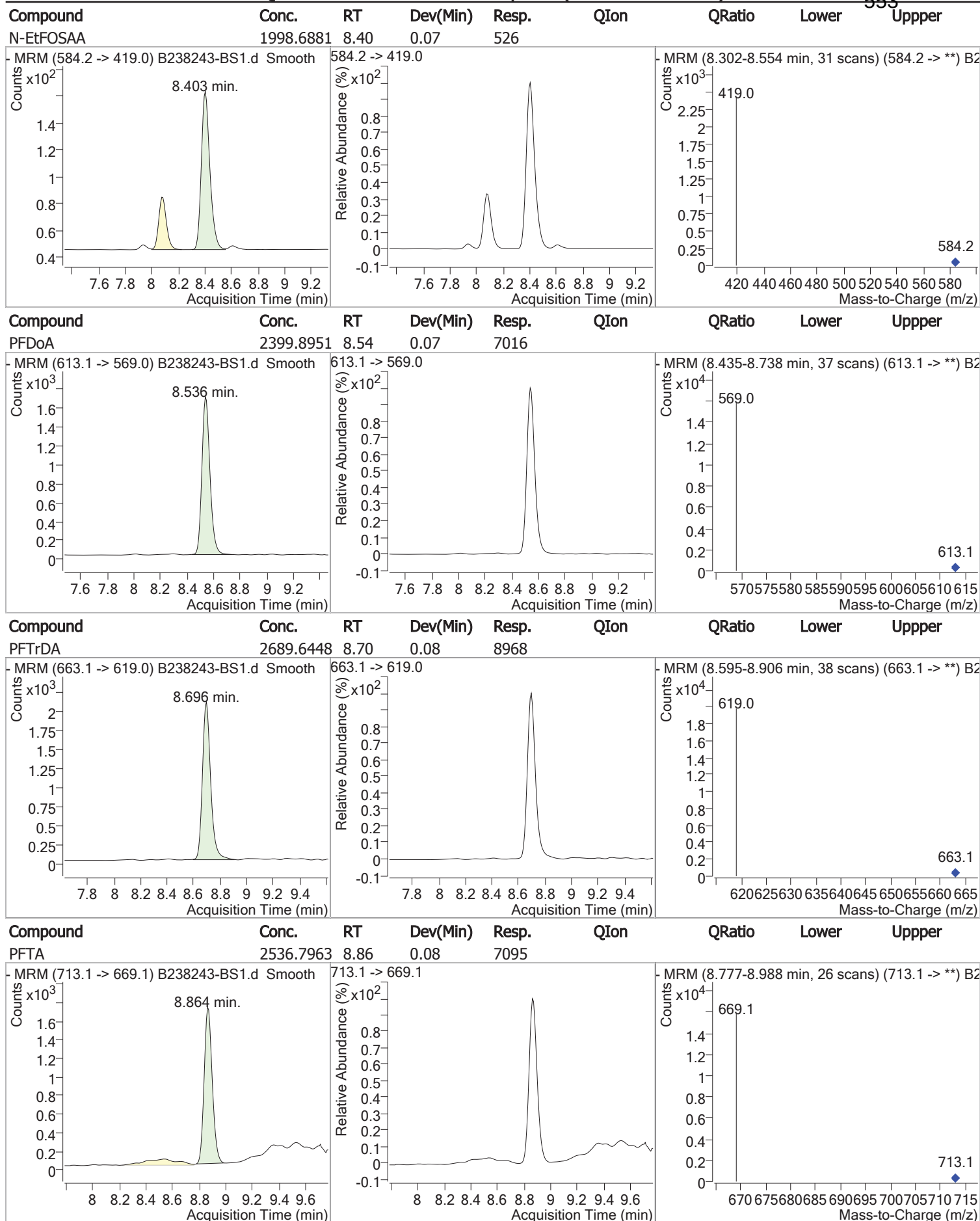
| Compound | Conc.     | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|----------|-----------|------|----------|-------|------|--------|-------|-------|
| PFUnA    | 2799.4711 | 8.40 | 0.07     | 5844  |      |        |       |       |



| Compound     | Conc.      | RT   | Dev(Min) | Resp. | QIon | QRatio | Lower | Upper |
|--------------|------------|------|----------|-------|------|--------|-------|-------|
| d5-N-MeFOSAA | 44992.5726 | 8.39 | 0.06     | 11394 |      |        |       |       |



## Quantitation Results Report (Not Reviewed)



Analysis  
PFAS trace

## PREPARATION BENCH SHEET

B238243

Con-Test Analytical Laboratory

Prepared using: SOP 434-PFAAS

Surrogate Solution  
1908171 Surr 537 R1

Spiking Solution  
1907465 Low 537 LCS

Matrix: Water

| Lab Number   | Sample ID and Source Sample   | Due Date | Expires  | Concentrated | Add'l Notes | Initial (mL) | Final (mL) | ul Spike | ul Surrogate | Extraction Comments |
|--------------|-------------------------------|----------|----------|--------------|-------------|--------------|------------|----------|--------------|---------------------|
| B238243-BLK1 | Blank                         |          |          |              |             |              |            |          | 10           |                     |
| B238243-BS1  | LCS                           |          |          |              |             |              |            | 25       | 10           |                     |
| B238243-MS1  | Matrix Spike [19H0528-04]     |          |          |              |             |              |            | 25       | 10           |                     |
| B238243-MSD1 | Matrix Spike Dup [19H0528-04] |          |          |              |             |              |            | 25       | 10           |                     |
| 19H0528-04   | MW-22R                        | 08/23/19 | 08/22/19 |              |             |              |            |          | 10           | MS/MSD              |
| 19H0528-06   | MW-22S                        | 08/23/19 | 08/22/19 |              |             |              |            |          | 10           |                     |
| 19H0528-07   | Blind Duplicate               | 08/23/19 | 08/22/19 |              |             |              |            |          | 10           |                     |
| 19H0576-03   | MW-21R                        | 08/26/19 | 08/23/19 |              |             |              |            |          | 10           |                     |
| 19H0576-05   | MW-21S                        | 08/26/19 | 08/23/19 |              |             |              |            |          | 10           |                     |
| 19H0617-02   | Field Blank                   | 08/22/19 | 08/26/19 |              |             |              |            |          | 10           |                     |
| 19H0617-03   | P-15                          | 08/22/19 | 08/26/19 |              |             |              |            |          | 10           |                     |
| 19H0617-04   | P-5S                          | 08/22/19 | 08/26/19 |              |             |              |            |          | 10           |                     |
| 19H0955-06   | E Blank                       | 08/27/19 | 08/30/19 |              |             |              |            |          | 10           |                     |

SPE Cartridges E#1902050

Start Date/Time \_\_\_\_\_

Stop Date/Time \_\_\_\_\_

| Standard ID# | Description             | Manufacture Lot# |
|--------------|-------------------------|------------------|
| 1705357      | Ammonium Acetate        | NA               |
| 1808012      | SenSafe pH Strips       | N/A              |
| 1907441      | Methanol-LC/MS Grade    | 0000223946       |
| 1908032      | Trizma pre-set crystals | SLBZ6597         |

S/L

JFC

Spikedby/Witnessed By

8/19/19  
Date

JFC

Extracted By

8/19/19  
Date

**S039480**

Instrument: HPLC1

Calibration ID: 1900263

| Lab Number   | Analysis   | Container | Order | Position | STD ID  | ISTD ID | Client |
|--------------|------------|-----------|-------|----------|---------|---------|--------|
| S039480-CCV1 | QC         |           | 1     |          | 1905418 | 1907362 |        |
| 19H0528-04   | PFAS trace | A         | 2     |          |         | 1907362 |        |
| B238243-MS1  | QC         |           | 3     |          |         | 1907362 |        |
| B238243-MSD1 | QC         |           | 4     |          |         | 1907362 |        |
| 19H0576-03   | PFAS trace | A         | 5     |          |         | 1907362 |        |
| 19H0617-04   | PFAS trace | A         | 6     |          |         | 1907362 |        |
| S039480-CCV2 | QC         |           | 7     |          | 1905419 | 1907362 |        |
| 19H0955-06   | PFAS trace | A         | 8     |          |         | 1907362 |        |
| S039480-CCV3 | QC         |           | 9     |          | 1905420 | 1907362 |        |
| B238243-BLK1 | QC         |           | 10    |          |         | 1907362 |        |
| 19H0576-05   | PFAS trace | A         | 11    |          |         | 1907362 |        |
| 19H0617-02   | PFAS trace | A         | 12    |          |         | 1907362 |        |
| 19H0617-03   | PFAS trace | A         | 13    |          |         | 1907362 |        |
| 19H0528-06   | PFAS trace | A         | 14    |          |         | 1907362 |        |
| S039480-CCV4 | QC         |           | 15    |          | 1905418 | 1907362 |        |

Samples Loaded By

Date

Data Processed By

Date

S039525

Instrument: HPLC1

Calibration ID: 1900263

| Lab Number   | Analysis | Container | Order | Position | STD ID  | ISTD ID | Client |
|--------------|----------|-----------|-------|----------|---------|---------|--------|
| S039525-CCV1 | QC       |           | 1     |          | 1905418 | 1907362 |        |
| B238243-BS1  | QC       |           | 2     |          |         | 1907362 |        |