2018 PERIODIC REVIEW REPORT

Alsy Manufacturing, Inc.
270-280 Duffy Avenue
Hicksville, NY
NYSDEC Site # 1-30-027

August 2018

Prepared For:

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1.0 INTRODUCTION

This document represents the 2018 periodic review report (PRR) for the Alsy Manufacturing, Inc. site (referred to as "the site"). It summarizes and evaluates all data collected by Environmental Assessment and Remediations (EAR) between February 2018 and May 2018, in response to directives provided in New York State Department of Environmental Conservation (NYSDEC) Standby Contractor Authorization Form dated February 2018 (Callout ID:129534). Currently, the site is listed under the New York State Registry of Inactive Hazardous Waste Disposal Sites (NYS Registry) and is associated with site number 1-30-027.

Site activities requested in the callout consisted of the following:

- Site inspection: general inspection of current site condition and usage.
- Inspection of Sub-Slab Depressurization Systems (SSDS): ensure SSDSs are currently in place and operational.
- Groundwater sampling event: monitoring well network sampling and analytical evaluation, to assess current effectiveness of site remedy.

2.0 SITE OVERVIEW

Historical discharge of industrial and metal plating operations waste to the onsite dry wells and ground surface has resulted in hazardous waste impact to the sub-surface environment; including soil, soil gas, and groundwater contamination. The contaminants of concern at the site include inorganics (metals) and volatile organic compounds (VOCs).

2.1 SITE LOCATION

The site is located at 270 and 280 Duffy Avenue; in an urban area in Hicksville, Nassau County, New York. It occupies approximately four acres of land and is bounded on the north by the Long Island Railroad and a construction and demolition debris reclaimer; a residential neighborhood to the south; and industrial/commercial operations to the east and west. The site contains two one-story commercial buildings (270 and 280 Duffy Avenue), with adjacent asphalt-paved parking areas. Within one mile of the site, multiple additional inactive hazardous waste disposal sites exist. A site location map has been included as Figure 1 and a site map has been included as Figure 2.

2.2 GEOLOGIC SETTING

As discussed in the site's Site Management Plan (SMP), the site's surface is primarily covered by buildings or asphalt pavement. Beneath the site are two water bearing geologic units: the Upper Glacial Aquifer (UGA) and the Magothy Aquifer (Magothy). The UGA is an unconfined aquifer consisting of Upper Pleistocene deposits—poorly sorted sands and gravel—and is found from grade to a depth of approximately 80 feet below ground surface (bgs). The Magothy is located below the UGA and consists of finer sands, silt, and small amounts of clay. In this area, the upper surface of the Magothy is found approximately 100 feet bgs. In the vicinity of the site, the UGA and the Magothy are in direct hydraulic connection. Both the UGA and Magothy have been designated as sole-source aquifers and are protected under state and federal legislation.

At the site, depth to groundwater is approximately 57 feet bgs. As discussed in the SMP, groundwater flow is to the south/southeast.

2.3 SITE HISTORY

Site remediation as described in the March 2005 Record of Decision (ROD) began in January 2010 and was completed in July 2010. Remediation activities included pre and post remediation groundwater sampling, excavation and disposal of impacted dry well structures, excavation and disposal of impacted soil to approximately 25 feet bgs, installation of two separate subsurface stormwater management systems (and associated piping to parking lot and roof drainage), backfill of excavated areas with clean fill, and paving of excavated areas. Additionally, two sentinel monitoring wells were installed (MW-1 and MW-2).

In order to address onsite exposures related to soil vapor, the current owner of the site installed two SSDS at the site in 2009. One SSDS was installed at 270 Duffy Avenue and one SSDS was installed at 280 Duffy Avenue.

The SMP for the site, initially prepared by Dvirka and Bartillucci Consulting Engineers, and in accordance with the requirements listed in section 6.3(b) of NYSDEC Division of Environmental Remediation, Technical Guidance for Site Investigation and Remediation, May 2010 (DER-10) was subsequently updated by the NYSDEC in January 2014.

3.0 MONITORING PLAN COMPLIANCE

The monitoring plan is designed to assess the performance and effectiveness of the remedy in meeting objectives for the site. As outlined in the SMP, the monitoring program involves periodic inspections of the site as well as the collection and analysis of groundwater samples. The periodic inspections are performed to determine if all Engineering Controls (EC) and Institutional Controls (IC) are in compliance. Current ECs installed at the site include:

- SSDSs installed at 270 Duffy Avenue and 280 Duffy Avenue.

Current ICs include:

- Compliance with the Environmental Notice, by the property owner, with all elements of the SMP:
    - The property may only be used for commercial or industrial use; provided that the long-term ECs/ICs included in the SMP are employed.
    - The property may not be used for a higher level of use, such as unrestricted use, without additional remediation and amendment of the Environmental Notice; as approved by the NYSDEC.
    - All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with the SMP.
    - The use of the groundwater underlying the property is prohibited without treatment rendering it safe for its intended use.
    - The potential for vapor intrusion must be evaluated for any new buildings developed on the site and any potential impacts that are identified must be mitigated.
    - Vegetable gardens and farming, including livestock and dairy farming, on the property are prohibited.
    - The site owner or remedial party will submit to NYSDEC a written statement that certifies, under penalty of perjury, that controls employed at the controlled property are unchanged from the previous certification or that any changes to the controls were approved by the NYSDEC and nothing has occurred that impairs the ability of the controls to protect public health and the environment or that constitute a violation or failure to comply with the SMP. NYSDEC retains the right to access such controlled property at any time in order to evaluate the continued maintenance of any and all controls. This certification shall be submitted annually, or an alternate period of time that NYSDEC may allow and will be made by an expert that the NYSDEC finds acceptable.
- All ECs must be operated and maintained as specified in the SMP.
- All ECs on the site must be inspected and certified at a frequency and in a manner defined in the SMP.
- Groundwater and soil vapor monitoring must be performed as defined in the SMP.

- Data and information pertinent to site management of the property must be reported at the frequency and in a manner defined in the SMP.
- Onsite and offsite environmental monitoring devices, including groundwater monitoring wells, must be protected and replaced as necessary to ensure the devices function in the manner specified in the SMP.

During the period covered in this report, EAR was tasked with determining the current operational status of the onsite SSDSs, inspecting the current condition of the groundwater monitoring well network, and conducting a groundwater sampling event. Details of the field work performed by EAR have been outlined below.

3.1 SITE INSPECTION

A site inspection was performed on April 20, 2018, by EAR. As determined by EAR, no obvious signs of onsite excavation were observed, and site usage appears to be consistent with use reported in the SMP.

During this event, inspections of SSDSs installed at 270 and 280 Duffy Avenue were completed. At 270 Duffy Avenue, SSDS components were in place, but not operating. Warped PVC runs were observed leading to each vent point and one of the three vent lines was disconnected, due to broken PVC. The broken vent line connected the SSDS to the building's north most vent point. Remaining vent points were connected and no breaks in the lines were observed. At 280 Duffy Avenue, SSDS components were in place, but not operating. Connection between the SSDS and its vent point was intact, with no breaks or warping in the connection observed.

3.2 GROUNDWATER SAMPLING

On May 31, 2018, groundwater samples were collected from eight accessible monitoring wells: AMS-2, ERM-1, ERM-3, LMS-3, LMS-4, LMS-5, MW-1, and MW-2. AMS-1, LMS-1, and MW-3, could not located at the time of sampling. As reported previously, AMS-1 and MW-3 have been paved over (see Site Activities Letter Report, dated June 22, 2017)

Prior to sampling, EAR inspected the current condition of each accessible well in the groundwater monitoring well network. Manhole and wellhead conditions of all site wells were inspected for accessibility, security, and well integrity. Depth to water and total well depth were then measured and recorded.

Each well was purged utilizing a low-flow submersible pump, using new lengths of high density polyethylene (HDPE) tubing at each location. Purge water was screened using a YSI model 556 multi-parameter probe with a flow-thru cell. All wells were purged a minimum of one well volume, with purging continuing until values for temperature, pH, and oxidation/reduction potential (ORP) reached stabilization. These parameters, as well as dissolved oxygen and specific conductivity, were recorded prior to sample collection. Once stabilization was reached, groundwater samples were collected utilizing an inertia pump and HDPE tubing. A new length of HDPE tubing was utilized at each well and all reusable purge/sampling equipment was decontaminated between sample locations, in

accordance with EAR's standard operating procedures. Field screening readings have been tabulated and included as Table 1. Groundwater sampling field sheets are included in Appendix A.

All samples collected were placed into the appropriate, laboratory-provided containers and immediately placed in a cooler with ice to maintain a temperature of four degrees Celsius, or lower. Following collection, samples were returned to EAR, temporarily stored in EAR's sample refrigerator, picked up from EAR by the laboratory's courier, and delivered to the laboratory for analysis.

As directed by the NYSDEC, QA/QC samples were collected/prepared in the field and submitted for laboratory analysis. These samples include a blind duplicate (MW-X, collected from ERM-3), a Matrix Spike/Matrix Spike Duplicate (MS/MSD) sample (collected from LMS-3), an equipment blank ("Equipment_Blank"), and laboratory-prepared trip blank ("Trip_Blank").

Eight groundwater monitoring well samples and four QA/QC samples were submitted to a NYSDEC standby contracted laboratory, TestAmerica, Inc. (TestAmerica), for analysis of volatile organic compounds (VOCs), via EPA Method 8260; metals, via EPA Methods 6010 and 7470; total cyanide, via EPA Method 9012; and 1,4 dioxane, via EPA Method 8670 SIM.

Additionally, groundwater samples collected from ERM-3, LMS-3, LMS-4, and MW-1 were submitted to TestAmerica for analysis of polyfluoroalkyl substances (PFAS), via EPA Method 537.

Trip blanks were submitted for analysis of VOCs, via EPA Method 8260.

All samples were submitted for standard 10-day turnaround time. Category A deliverables were requested for samples submitted for VOCs, metals, and total cyanide analysis. Category B deliverables were requested for samples submitted for 1,4 dioxane and PFAS analysis.

Laboratory reports for all analyses have been included in Appendix B.

Data validation services were requested by the NYSDEC for samples requiring Category B deliverables. These services were provided by EAR and included DUSR generation and EQuIS EDD file validation. The DUSRs indicated no rejections of the data and reported the data as usable for intended purposes. DUSRs have been included in Appendix C.

Laboratory analytical and field data were compiled into EQuIS EDD file packages and submitted to NYENVDATA on July 27, 2018.

3.3 ANALYTICAL RESULTS

VOC analytical results are included as Table 2 and are compared to NYSDEC TOGS 1.1.1 Class GA water quality standards and guidance values (TOGS). All compounds for this analysis were reported below TOGS water quality standards/guidance values. Tetrachloroethene (PCE) was reported in one well (LMS-3), at a concentration of 1 µg/L. PCE was also detected in four other monitoring wells (AMS-2, ERM-3, LMS-5, and MW-1), but at estimated concentrations below the reporting limit. Concentrations of acetone, bromodichloromethane, bromoform, chloroform, dibromochloromethane, and methylene chloride were also detected by the laboratory.

Analytical results for metals and cyanide are tabulated on Table 3 and are compared to TOGS standards and guidance values. Several metals, including cadmium, chromium, iron, lead, manganese, nickel, selenium, and sodium were detected at elevated concentrations above their respective TOGS standard/guidance values. Post maps for select contaminants of concern are included as Figures 3-6. Cyanide was detected in AMS-2 (93 µg/L), ERM-1 (21 µg/L), ERM-3 (laboratory estimated 6.2 µg/L), and LMS-4 (laboratory estimated 3 µg/L).

Analytical results for 1,4 dioxane have been included on Table 4. The compound was detected in MW-2, at 0.5 µg/L. It was also detected at estimated concentrations, below the reporting limit, in all other wells sampled.

PFAS analytical results have been tabulated on Table 5. Analytical results for PFOS, PFOA, and combined PFOS/PFOA have been compared to the US EPA Health Advisory Level for Drinking Water, which is currently 70 ng/L. Analytical results for all samples submitted for PFAS analysis were reported at concentrations below this level. In each well sampled, several PFAS compounds were reported above their respective laboratory reporting limit.

QA/QC sample summary tables are provided in Appendix D.

3.4 ANALYTICAL RESULTS COMPARISON

Analytical results from the May 2018 sampling event were compared to previous sampling events, conducted in October 2013, December 2014, February 2016, and March 2017. For all sampling events, VOC concentrations were reported below TOGS values. May 2018 levels are comparably higher than the previous referenced sampling events. A comparison of VOC concentrations for groundwater sampling events conducted to date has been provided as Table 6.

When considering inorganics and comparing groundwater analytical results from October 2013 to present; the May 2018 levels are comparably higher. A side-by-side comparison of inorganics concentrations for groundwater sampling events conducted to date has been provided as Table 7.

1,4 dioxane and PFAS have not been previously sampled for. As such, a historical comparison cannot be performed.

4.0 DISCUSSION

4.1 SITE INSPECTION

- No apparent excavation activities were performed at the site during the current reporting period.
- There was no indication that use of groundwater has occurred at the site during the reporting period.
- Observed site usage appears to be consistent with restrictions placed on the site.
- Onsite SSDSs currently installed at 270 and 280 Duffy Avenue were not operating at the time of inspection. Warped and broken piping was observed while inspecting the SSDS installed at 270 Duffy Avenue.

4.2 GROUNDWATER MONITORING

- VOC detections were below TOGS guidance/standard values.
- May 2018 levels are comparably higher than previous sampling rounds for VOCs and inorganic compounds.
- 1,4 dioxane was detected in a MW-1, at 0.5 µg/L and at estimated concentrations in all other wells sampled.
- PFAS were detected in all wells sampled. Concentrations ranged from not detected to 26.6 ng/L (PFOS, LMS-3). Reported concentrations were below the US EPA Health Advisory Level for Drinking Water.

Based on periodic site inspection observations and groundwater sampling results, the remedy is consistent with the objectives for the site. EAR recommends continued implementation of the monitoring plan in accordance with SMP requirements.

5.0 CERTIFICATION

As required by the NYSDEC, an *Engineering Controls—Standby Consultant/Contractor Certification Form* (certification form) for the period covered in this report has been completed, signed, and included in this section. Where applicable, the certification form has been reviewed and approved by a Qualified Environmental Professional.

During this reporting period, it has been determined that operation of the onsite SSDSs are not in compliance with the SMP.

Additional discrepancies between the current site status and those outlined on the certification form exist and include the following:

- Current site use appears to be more commercial, than industrial. However, the site's Environmental Notice allows for commercial use of the property.

The NYSDEC has been notified of these discrepancies and the certification form has been completed reflecting these differences.

Enclosure 1
Engineering Controls - Standby Consultant/Contractor Certification Form

Site Details **Box 1**

Site No. 130027

Site Name Alsy Manufacturing, Inc.

Site Address: 270/280 Duffy Avenue Zip Code: 11801
City/Town: Hicksville
County: Nassau
Site Acreage: 4.0

Reporting Period: February 13, 2015 to February 13, 2018

	YES	NO
1. Is the information above correct?	✓	☐
If NO, include handwritten above or on a separate sheet.		
2. To your knowledge has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	✓
3. To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	✓
4. To your knowledge have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	☐	✓

If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.

5. To your knowledge is the site currently undergoing development?	☐	✓

Box 2

Use appears to be mainly commercial, but, as discussed with NYSDEC, Environmental Notice allows for commercial use.

	YES	NO
6. Is the current site use consistent with the use(s) listed below? Industrial	☐	✓
7. Are all ICs/ECs in place and functioning as designed?	☐	✓

Vapor mitigation systems installed at 270 & 280 Duffy Avenue were not operating at the time of site inspection. Damaged system plumbing was observed at 270 Duffy Ave.

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Standby Consultant/Contractor

08/02/18
Date

SITE NO. 130027 **Box 3**

Description of Institutional Controls

Parcel	Owner	Institutional Control
Sect 11, Block G, Lot 184	Jeff Cohen	
LI Industrial Group is current owner of property, David Hercman is current site contact.		Ground Water Use Restriction Landuse Restriction Soil Management Plan Site Management Plan Monitoring Plan

In order to notify all interested parties, an Environmental Notice was filed with the county on 5/29/2013

The environmental notice requires compliance with a Site Management Plan, limits the future use of t property to commercial/industrial use, and restricts groundwater usage without proper treatment. Residual contamination in soil is present at depth in some locations, so excavation controls are part of SMP. There is no engineered cover system that needs to be maintained/protected.

Sect 11, Block G, Lot 191	Jeff Cohen	
LI Industrial Group is current owner of property, David Hercman is current site contact.		Monitoring Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction Site Management Plan

In order to notify all interested parties, an Environmental Notice was filed with the county on 5/29/2013

The environmental notice requires compliance with a Site Management Plan, limits the future use of t property to commercial/industrial use, and restricts groundwater usage without proper treatment. Residual contamination in soil is present at depth in some locations, so excavation controls are part of SMP. There is no engineered cover system that needs to be maintained/protected.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
Sect 11, Block G, Lot 184	Vapor Mitigation

A vapor mitigation system has been installed and requires periodic testing, and reporting on operational statu as specified by DEC and the Site Management Plan. Monitoring wells are present and need to be protected.

Sect 11, Block G, Lot 191	Vapor Mitigation

A vapor mitigation system has been installed and requires periodic testing, and reporting on operational statu as specified by DEC and the Site Management Plan. Monitoring wells are present and need to be protected.

Box 5

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

   a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;

   b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and compete.

	YES	NO
	☑	☐

"Yes" was checked assuming point 1, part "b" refers to generation of PRR. It does not confirm that IC/ECs are in compliance with SMP. As noted below, property owner is responsible for addressing non-compliance with SMP.

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

   (a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

   (b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

   (c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

	YES	NO
	☐	☑

IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.

Signature of Standby Consultant/Contractor

08/02/18
Date

Vapor mitigation systems installed at 270 & 280 Duffy Avenue are not currently operating. As discussed with NYSDEC, current property owner is responsible operation and maintenance of vapor mitigation systems installed at 270 & 280 Duffy Avenue. Corrective Measures Work Plan will be requested from property owner.

Box 6

IC/EC CERTIFICATIONS

Qualified Environmental Professional Signature

I certify that all information in Boxes 2 through 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Jaime Allen at Environmental Assessment + Remediations
print name

225 Atlantic Ave

Patchogue, NY 11772,
(print business address)

am certifying as a Qualified Environmental Professional.

Signature of Qualified Environmental Professional	Stamp (Required for PE)	Date
Jaime Allen		8/10/18

6.0 REFERENCES

NYSDEC. *Division of Water Technical and Operational Guidance Series (1.1.1*): *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations.* June 1998.

NYSDEC. *Record of Decision: Alsy Manufacturing, Inc. Site, Hicksville, Nassau County, New York, Site Number 1-30-027*. March 2005.

NYSDEC. *Site Management Plan: NYSDEC Site Number: 1-30-027*. January 2014 Revision.

TABLES

TABLE 1

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 1-30-027

ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

Groundwater Analytical Results
EAR Field Screening

Location	Date Collected	Casing Elevation (feet)	Water Level (feet)	Total Well Depth (feet)	Calculated GWEL (feet)	Dissolved Oxygen (mg/L)	Temperature (°C)	pH	ORP (Oxidation Reduction Potential) (mV)	Conductivity (uS)
AMS-2	05/31/18	131.41	59.62	70.93	71.79	3.38	16.89	5.54	-69.2	410
ERM-1	05/31/18	131.77	60.66	70.04	71.11	6.07	16.23	5.08	-15.1	281
ERM-3	05/31/18	131.45	59.78	75.67	71.67	2.51	16.36	5.69	-204.0	453
LMS-2	05/31/18	133.58	61.37	72.35	72.21	Groundwater sample was not collected.				
LMS-3	05/31/18	132.56	60.68	70.13	71.88	8.35	16.11	8.00	-133.9	661
LMS-4	05/31/18	133.23	60.97	72.76	72.26	5.51	16.50	5.68	-37.6	168
LMS-5	05/31/18	132.84	60.51	70.04	72.33	7.54	16.16	6.93	-284.0	517
MW-1	05/31/18	129.26	58.12	129.17	71.14	1.43	15.83	8.39	-360.2	225
MW-2	05/31/18	129.67	58.72	90.09	70.95	8.65	15.27	5.62	-170.0	323

TABLE 2

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results (µg/L)
TestAmerica, Inc.
Methods: SW8260C

Location	Date Collected	Acetone	Bromodichloromethane	Bromoform	Carbon Disulfide	Chloroform	Dibromochloromethane	Methylene Chloride	Tetrachloroethene	Total VOCs
AMS-2	05/31/18	<5	<1	<1	<1	<1	<1	<1	**0.25 J**	**0.25**
ERM-1	05/31/18	**5.8**	<1	<1	<1	<1	<1	**0.29 J**	**0.16 J**	**6**
ERM-3	05/31/18	**3.80 J**	<1	<1	<1	<1	<1	<1	<1	**4**
LMS-3	05/31/18	**7.4**	<1	<1	<1	<1	<1	<1	**1**	**8**
LMS-4	05/31/18	**3.10 J**	<1	<1	<1	<1	<1	<1	<1	**3**
LMS-5	05/31/18	**6.9**	<1	<1	**0.27 J**	<1	<1	**0.30 J**	**0.75 J**	**8**
MW-1	05/31/18	<5	**1.8**	**2.3**	<1	**1.5**	**2.5**	**0.40 J**	**0.35 J**	**9**
MW-2	05/31/18	**7**	<1	<1	<1	**0.24 J**	<1	**0.33 J**	<1	**8**
NYSDEC TOGS 1.1.1 Class GA Standard/Guidance		**50**	**50**	**50**	**60**	**7**	**50**	**5**	**5**	n/a

Notes:
J-Laboratory estimated value
n/a-No value established

The chemicals listed below were reported below the LRL:

1,1 Dichloroethane
1,1 Dichloroethene
1,1,1 Trichloroethane
1,1,2 Trichloroethane
1,1,2,2 Tetrachloroethane
1,2 Dibromoethane
1,2 Dichlorobenzene
1,2 Dichloroethane
1,2 Dichloropropane
1,2,3 Trichlorobenzene
1,2,4 Trichlorobenzene
1,3 Dichlorobenzene
1,4 Dichlorobenzene
1,4-Dioxane
2-Hexanone
4-Methyl-2-Pentanone
Benzene
Bromochloromethane
Bromomethane
c 1,3 Dichloropropene
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloromethane
cis-1,2-Dichloroethene
Cyclohexane
Cyclohexane, methyl-
Dibromochloropropane
Dichlorodifluoromethane
Ethylbenzene
Freon 113
Isopropylbenzene
m + p Xylene
Methyl acetate
Methyl Ethyl Ketone
MTBE
o-Xylene
Styrene
t 1,3 Dichloropropene
Toluene
Total BTEX
trans-1,2-Dichloroethene
Trichloroethylene
Trichlorofluoromethane
Vinyl Chloride

TABLE 3

Alsy Manufacturing
270/280 Duffy Avenue
Hicksville, NY
Spill #130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results (µg/L)
TestAmerica, Inc.
Methods: SW6010C (Metals), SW7470A (Mercury), SW9012 (Total Cyanide)

Location	Date Collected	Aluminum	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium (total)	Cobalt	Copper	Cyanide	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Sodium	Vanadium	Zinc
AMS-2	05/31/18	**550**	**16.4**	**163 J**	<2	<4	**20,400**	**7.20 J**	**2.40 J**	**178**	**93**	**9,110**	**7.20 J**	**2,320 J**	**158**	<0.2	**249**	**4,470 J**	**44.7**	**62,600**	**6.40 J**	**87.7**
ERM-1	05/31/18	**10,700**	<15	**65.70 J**	**1.20 J**	<4	**20,800**	**9.20 J**	**1.90 J**	**59.8**	**21**	**5,810**	**7.40 J**	**2,310 J**	**489**	<0.2	**31.20 J**	**1,610 J**	<20	**24,000**	**8.40 J**	**84.8**
ERM-3	05/31/18	**2,230**	**4.40 J**	**227**	**0.31 J**	<4	**25,000**	**2.10 J**	<50	**8.40 J**	**6.2 J**	**7,110**	<10	**2,840 J**	**99.8**	<0.2	**1,170**	**5,890**	**35.8**	**58,900**	**5.70 J**	**90.3**
LMS-3	05/31/18	**506**	<15	**136 J**	<2	**0.42 J**	**58,900**	**6.50 J**	<50	**6.90 J**	<10	**537**	<10	**3,310 J**	**12.20 J**	<0.2	<40	**6,930**	<20	**79,800**	<50	**38.9**
LMS-4	05/31/18	**263**	<15	**42.80 J**	<2	<4	**10,300**	**2 J**	<50	**35.4**	**3 BJ**	**284**	<10	**903 J**	**2.30 J**	<0.2	**205**	**966 J**	<20	**11,700**	<50	**84.2**
LMS-5	05/31/18	**15,700**	**20.9**	**301**	**1.70 J**	**17.6**	**48,500**	**231**	**8.50 J**	**73.2**	<10	**27,800**	**35.3**	**5,900**	**3,020**	**0.44**	**110**	**7,540**	<20	**41,000**	**62.9**	**400**
MW-1	05/31/18	**244**	<15	**87.50 J**	<2	<4	**13,100**	**4.30 J**	**123**	<25	<10	**3,320**	**2.70 J**	**1,180 J**	**3,750**	**0.36**	**4.70 J**	**4,520 J**	<20	**15,800**	**6.90 J**	**44.1**
MW-2	05/31/18	**1,630**	<15	**143 J**	<2	<4	**24,800**	**2.30 J**	<50	<25	<10	**3,660**	<10	**3,230 J**	**124**	<0.2	**2.10 J**	**4,170 J**	<20	**37,400**	**5.30 J**	**19.50 J**

NYSDEC TOGS 1.1.1 Class GA Standard/Guidance	n/a	**25**	**1,000**	**3**	**5**	n/a	**50**	n/a	**200**	**200**	**300**	**25**	**35,000**	**300**	**0.7**	**100**	n/a	**10**	**20,000**	n/a	**2,000**

Notes:
J-Laboratory estimated value.
B-Analyte was detected in associated laboratory blank.
n/a-No value established
Gray higlighted values exceed TOGS 1.1.1 standard/guidance values.

The chemicals listed below were reported below the LRL:

Antimony
Silver
Thallium

TABLE 4

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

Groundwater Analytical Results (µg/L)
TestAmerica, Inc.
Methods: SW8270D-SIM

Location	Date Collected	1,4-Dioxane
AMS-2	05/31/18	0.06 J
ERM-1	05/31/18	0.03 J
ERM-3	05/31/18	0.13 J
LMS-3	05/31/18	0.03 J
LMS-4	05/31/18	0.05 J
LMS-5	05/31/18	0.04 J
MW-1	05/31/18	**0.5**
MW-2	05/31/18	0.07 J

Notes:
J-Laboratory estimated value

TABLE 5

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results (ng/L)
TestAmerica, Inc.
Methods: E537-LL

Parameter	Location				EPA Health Advisory Level for Drinking Water
	ERM-3	LMS-3	LMS-4	MW-1	
Date Collected	05/31/18	05/31/18	05/31/18	05/31/18	
2-(N-methyl perfluorooctanesulfonamido) acetic acid	**0.68 J**	**0.76 J**	**0.69 J**	**0.62 J**	n/a
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	**0.62 J**	**0.63 J**	<1.72	<1.64	n/a
Perfluorobutanesulfonic Acid (PFBS)	**1.29 J**	**7.69**	**0.95 J**	**1.28 J**	n/a
Perfluorobutyric Acid (PFBA)	**7.21**	**8.08**	**4**	**3.89**	n/a
Perfluorodecane Sulfonic Acid	<1.79	<1.81	**0.43 J**	**0.37 J**	n/a
Perfluorodecanoic Acid (PFDA)	**5.12**	**4.22**	**12.7**	<1.64	n/a
Perfluorododecanoic Acid (PFDoA)	<1.79	<1.81	**0.49 J**	<1.64	n/a
Perfluoroheptane Sulfonate (PFHpS)	**0.58 J**	**1.45 J**	<1.72	**0.56 J**	n/a
Perfluoroheptanoic Acid (PFHpA)	**6.33**	**6.34**	**3.95**	**3.33**	n/a
Perfluorohexanesulfonic Acid (PFHxS)	**2.53**	**14.2**	**1.66 BJ**	**1.64**	n/a
Perfluorohexanoic Acid (PFHxA)	**8.58**	**12.7**	**4.49**	**3.38**	n/a
Perfluorononanoic Acid (PFNA)	**2.74**	**5.57**	**2.33**	**1.28 J**	n/a
Perfluorooctane Sulfonamide (FOSA)	**0.64 J**	**0.64 J**	<1.72	<1.64	n/a
Perfluorooctanesulfonic Acid (PFOS)	**8.76**	**26.6**	**6.99**	**3.07**	**70**
Perfluorooctanoic Acid (PFOA)	**11.9**	**16.9**	**9.25**	**5.61**	**70**
Perfluoropentanoic Acid (PFPeA)	**15.4**	**18.6**	**6.17**	**4.77**	n/a
Perfluorotetradecanoic Acid (PFTeA)	<1.79	<1.81	<1.72	<1.64	n/a
Perfluorotridecanoic Acid (PFTriA)	<1.79	<1.81	<1.72	<1.64	n/a
Perfluoroundecanoic Acid (PFUnA)	**1.24 J**	**3.66**	**1.34 J**	**0.88 J**	n/a
SODIUM 1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2)	**0.75 BJ**	<1.81	**0.75 BJ**	<1.64	n/a
SODIUM 1H,1H,2H,2H-PERFLUOROOCTANE SULFONATE (6:2)	<1.79	1.02 J	**5**	<1.64	n/a
Combined PFOA & PFOS	**20.66**	**43.5**	**16.24**	**8.68**	**70**

Notes:
J-Laboratory estimated value.
B-Analyte was detected in associated laboratory blank.
n/a-No value established

TABLE 6

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results (µg/L): Historical Summary Table
Methods: SW8260C (VOCs)

Location	Date Collected	Acetone	Benzene	Bromodichloromethane	Bromoform	Carbon Disulfide	Chloroform	cis-1,2-Dichloroethene	Dibromochloromethane	Methylene Chloride	Tetrachloroethene	Trichloroethylene	Total VOCs
AMS-2	10/16/13	<5	<1	<1	<1	<1	<1	<1	<1	<1	**0.16 J**	**0.10 J**	**0.26**
	12/29/14	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	02/16/16	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	03/21/17	<2.5	<0.7	<1	<1	<1	<1	<1	<1	<3	<1	<1	<161
	05/31/18	<5	<1	<1	<1	<1	<1	<1	<1	<1	**0.25 J**	<1	**0.25**
ERM-1	10/16/13	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<122
	12/31/14	<5	**0.73 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	**0.73**
	02/16/16	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	03/21/17	<5	<0.7	<1	<1	<1	<1	<1	<1	<3	<1	<1	<213
	05/31/18	**5.8**	<1	<1	<1	<1	<1	<1	<1	**0.29 J**	**0.16 J**	<1	**6**
ERM-3	10/17/13	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<122
	12/31/14	<5	<1	<1	<1	<1	<1	<1	<1	<1	**0.21 J**	<1	**0.21**
	02/16/16	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	03/21/17	<2.5	<0.7	<1	<1	<1	<1	<1	<1	<3	<1	<1	<161
	05/31/18	**3.80 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**4**
LMS-1	10/16/13	<5	<1	<1	<1	<1	<1	**0.41 J**	<1	<1	**1.6**	**0.23 J**	**2**
	12/31/14	<5	<1	<1	<1	<1	**1.7**	**0.58 J**	<1	<1	**3.4**	**0.31 J**	**6**
	02/16/16	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
	03/21/17	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
	05/31/18	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
LMS-3	10/16/13	<5	<1	<1	<1	<1	<1	<1	<1	<1	**0.46 J**	<1	**0.46**
	12/29/14	<5	<1	<1	<1	<1	<1	<1	<1	<1	**0.27 J**	<1	**0.27**
	02/16/16	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
	04/28/17	<5	<0.7	<1	<1	<1	<1	<1	<1	<3	<1	<1	<213
	05/31/18	**7.4**	<1	<1	<1	<1	<1	<1	<1	<1	**1**	<1	**8**
LMS-4	10/17/13	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<122
	12/29/14	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	02/16/16	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	03/21/17	<2.5	<0.7	<1	<1	<1	<1	<1	<1	<3	<1	<1	<161
	05/31/18	**3.10 J**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	**3**
LMS-5	10/16/13	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<122
	12/29/14	<5	<1	<1	<1	<1	**0.50 J**	<1	<1	<1	<1	<1	**0.5**
	02/16/16	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	03/21/17	<2.5	<0.7	<1	<1	<1	<1	<1	<1	<3	<1	<1	<161
	05/31/18	**6.9**	<1	<1	<1	**0.27 J**	<1	<1	<1	**0.30 J**	**0.75 J**	<1	**8**
MW-1	10/17/13	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<122
	12/31/14	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	02/16/16	<5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<121
	03/21/17	<2.5	<0.7	<1	<1	<1	<1	<1	<1	<3	<1	<1	<161
	05/31/18	<5	<1	**1.8**	**2.3**	<1	**1.5**	<1	**2.5**	**0.40 J**	**0.35 J**	<1	**9**
MW-2	10/17/13	<5	<1	<1	<1	<1	<1	<1	<1	<1	**0.81 J**	**0.22 J**	**1**
	12/31/14	<5	<1	<1	<1	<1	<1	<1	<1	<1	**0.24 J**	**0.14 J**	**0.38**
	02/16/16	<5	<1	<1	<1	<1	<1	<1	<1	<1	**0.14 J**	<1	**0.14**
	03/21/17	<2.5	<0.7	<1	<1	<1	<1	<1	<1	<3	<1	<1	<161
	05/31/18	**7**	<1	<1	<1	<1	**0.24 J**	<1	<1	**0.33 J**	<1	<1	**8**
NYSDEC TOGS 1.1.1 Class GA Standard/Guidance Values		**50**	**1**	**50**	**50**	**60**	**7**	**5**	**50**	**5**	**5**	**5**	n/a

Notes:
J-Laboratory estimated value
ns-Not sampled, wells were inaccessible
n/a-No value established
Laboratory analysis for 10/17/13, 12/31/14, 02/16/16, and 05/31/18 sampling events conducted by Test America Laboratories, Inc.
Laboratory analysis for 03/31/17 and 04/28/17 sampling events conducted by Phoenix Environmental Laboratories, Inc.

The chemicals listed below were reported below the LRL:

1,1 Dichloroethane	1,3 Dichlorobenzene	Chloromethane	MTBE
1,1 Dichloroethene	1,4 Dichlorobenzene	Cyclohexane	o-Xylene
1,1,1 Trichloroethane	1,4-Dioxane	Cyclohexane, methyl-	Styrene
1,1,2 Trichloroethane	2-Hexanone	Dibromochloropropane	t 1,3 Dichloropropene
1,1,2,2 Tetrachloroethane	4-Methyl-2-Pentanone	Dichlorodifluoromethane	Toluene
1,2 Dibromoethane	Bromochloromethane	Ethylbenzene	trans-1,2-Dichloroethene
1,2 Dichlorobenzene	Bromomethane	Freon 113	Trichlorofluoromethane
1,2 Dichloroethane	c 1,3 Dichloropropene	Isopropylbenzene	Vinyl Chloride
1,2 Dichloropropane	Carbon Tetrachloride	m + p Xylene	
1,2,3 Trichlorobenzene	Chlorobenzene	Methyl acetate	
1,2,4 Trichlorobenzene	Chloroethane	Methyl Ethyl Ketone	

TABLE 7

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results (µg/L): Historical Summary Table
Methods: SW6010C (Metals), SW7470A (Mercury), SW9010/SW9012 (Total Cyanide)

Location	Date Collected	Aluminum	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium	Cobalt	Copper	Cyanide	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Vanadium	Zinc
AMS-2	10/16/13	39.4 J	<15	76.2 J	<2	<4	19,800	<10	<50	45.6	20	114 J	<10	2,440 J	61.7	<0.2	787	3,420 J	28.3	<10	24,900	<50	72.1
	12/29/14	88.5 J	<15	152 J	<2	<4	26,600	<10	<50	45.4	50	275	<10	2,870 J	87.2	<0.2	764	5,290	15.8 J	<10	36,200	<50	75.6
	02/16/16	<200	<15	84 J	<2	<4	23,300	<10	<50	14.4 J	4.5 J	<150	<10	2,640 J	95.4	<0.2	318	5,890	41.7	<10	39,300	<50	28.6 J
	03/21/17	280	10	80	<1	<1	19,800	<1	<2	70	50	2,700	<2	2,020	80	<0.2	230	5,300	50	<1	42,200	3	30
	05/31/18	550	16.4	163 J	<2	<4	20,400	7.20 J	2.40 J	178	93	9,110	7.20 J	2,320 J	158	<0.2	249	4,470 J	44.7	<10	62,600	6.40 J	87.7
ERM-1	10/16/13	3,620	<15	206	<2	1.6 J	44,500	4.2 J	<50	23.8 J	<10	2,770	6.9 J	4,770 J	912	<0.2	19.6 J	7,050	<20	<10	61,800	8.6 J	81.1
	12/31/14	853	<15	24.1 J	<2	<4	7,200	144	<50	62.5	10 J	1,670	<10	711 J	148	<0.2	69	2,850 J	<20	<10	2,260,000	<50	18.4 J
	02/16/16	196 J	<15	39.9 J	<2	<4	14,000	5.9 J	<50	<25	<10	350	<10	1,510 J	22.3	<0.2	15.9 J	2,290 J	<20	<10	19,300	<50	10.4 J
	03/21/17	3,360	10	70	<1	<1	23,500	30	<2	30	<10	3,290	10	2,290	430	<0.2	30	3,200	<10	<1	22,700	10	40
	05/31/18	10,700	<15	65.70 J	1.20 J	<4	20,800	9.20 J	1.90 J	59.8	21	5,810	7.40 J	2,310 J	489	<0.2	31.20 J	1,610 J	<20	<10	24,000	8.40 J	84.8
ERM-3	10/17/13	766	<15	81.6 J	<2	<4	14,500	<10	<50	<25	10 J	4,100	<10	1,810 J	69.8	<0.2	3,080	2,250 J	39.2	<10	16,800	<50	36.4
	12/31/14	553	<15	153 J	<2	<4	22,200	86.1	<50	<25	<10	1,620	<10	2,580 J	58.1	<0.2	1,530	3,810 J	24.4	<10	38,900	<50	53.1
	02/16/16	101 J	<15	117 J	<2	<4	20,600	<10	<50	<25	4.4 J	109 J	<10	2,410 J	37.3	<0.2	757	4,170 J	40.6	<10	35,900	<50	37.3
	03/21/17	430	<4	350	<1	<1	30,200	50	2	10	<10	900	<2	3,380	30	<0.2	1,380	8,500	30	<1	90,500	<2	100
	05/31/18	2,230	4.40 J	227	0.31 J	<4	25,000	2.10 J	<50	8.40 J	6.2 J	7,110	<10	2,840 J	99.8	<0.2	1,170	5,890	35.8	<10	58,900	5.70 J	90.3
LMS-1	10/16/13	1,150	<15	112 J	<2	<4	30,700	<10	<50	<25	<10	1,250	<10	3,390 J	62	<0.2	<40	5,800	<20	<10	31,900	<50	30.5
	12/31/14	2,480	<15	199 J	<2	<4	38,300	9.7 J	<50	23.2 J	<10	2,750	6.1 J	3,890 J	75.9	<0.2	<40	7,020	<20	<10	66,700	5.2 J	48.6
	02/16/16	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
	03/21/17	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
	05/31/18	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
LMS-3	10/16/13	424	<15	94.3 J	<2	<4	51,300	4.5 J	<50	<25	<10	105 J	<10	2,420 J	5.80 J	<0.2	<40	5,710	<20	<10	46,100	<50	34.5
	12/29/14	3,030	<15	173 J	<2	2.8 J	144,000	10	<50	18.4 J	<10	4,130	11.3	6,150	84.5	<0.2	<40	5,820	<20	<10	46,600	5.9 J	374
	02/16/16	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns
	04/28/17	3,520	<4	150	<1	4	137,000	10	<2	50	<10	4,180	10	6,240	90	<0.2	10	7,400	<10	<1	65,600	10	360
	05/31/18	506	<15	136 J	<2	0.42 J	58,900	6.50 J	<50	6.90 J	<10	537	<10	3,310 J	12.20 J	<0.2	<40	6,930	<20	<10	79,800	<50	38.9
LMS-4	10/17/13	215	<15	87.1 J	<2	<4	11,400	<10	<50	22.2 J	<10	334	<10	980 J	1.7 J	<0.2	205	3,010 J	11.1 J	<10	10,300	<50	78.2
	12/29/14	11,800	8.4 J	153 J	<2	<4	13,900	35.3	<50	226	110	13,400	16.3	1,700 J	59.7	<0.2	287	3,650 J	7 J	<10	14,100	22.8 J	251
	02/16/16	12,700	5.60 J	107 J	<2	<4	7,220	150	<50	119	31	8,940	<10	759 J	60.7	<0.2	402	2,670 J	<20	<10	17,400	12.6 J	337
	03/21/17	340	<4	110	<1	<1	12,200	3	<2	70	<10	260	<2	1,180	10	<0.2	380	1,800	<10	<1	32,600	<2	240
	05/31/18	263	<15	42.80 J	<2	<4	10,300	2 J	<50	35.4	3 BJ	284	<10	903 J	2.30 J	<0.2	205	966 J	<20	<10	11,700	<50	84.2
LMS-5	10/16/13	549	<15	151 J	<2	<4	33,600	<10	<50	<25	<10	302	<10	3,600 J	634	0.73	<40	8,380	<20	<10	72,000	<50	11.6 J
	12/29/14	20,300	23.6	477	1.7 J	87	37,000	37.8	10.9 J	81	<10	33,800	57.4	5,880	3,960	1.1	37.1 J	9,990	<20	1.9 J	126,000	66.9	1,200
	02/16/16	400	<15	335	<2	<4	34,100	10.6	<50	5.3 J	<10	372	<10	4,160 J	776	<0.2	23 J	9,730	<20	<10	167,000	<50	9.5 J
	03/21/17	9,630	20	310	1	1	29,100	10	2	40	<10	12,400	10	3,680	1,320	<0.2	10	10,300	<10	<1	93,500	40	70
	05/31/18	15,700	20.9	301	1.70 J	17.6	48,500	231	8.50 J	73.2	<10	27,800	35.3	5,900	3,020	0.44	110	7,540	<20	<10	41,000	62.9	400
MW-1	10/17/13	153 J	<15	93.4 J	<2	<4	38,500	<10	89.5	<25	<10	1,570	<10	4,740 J	1,380	0.62	<40	7,360	<20	<10	56,800	<50	<30
	12/31/14	213	<15	115 J	<2	<4	47,200	<10	127	<25	<10	1,810	<10	6,150	1,860	0.36	<40	9,130	<20	<10	68,100	<50	18.1 J
	02/16/16	<200	<15	114 J	<2	<4	43,400	<10	61.7	<25	<10	1,010	<10	4,870 J	1,830	0.26	<40	11,700	<20	<10	69,700	<50	<30
	03/21/17	120	<4	100	<1	<1	34,100	<1	30	<5	<10	500	<2	3,210	2,600	<0.2	2	10,500	<10	<1	40,900	<2	10
	05/31/18	244	<15	87.50 J	<2	<4	13,100	4.30 J	123	<25	<10	3,320	2.70 J	1,180 J	3,750	0.36	4.70 J	4,520 J	<20	<10	15,800	6.90 J	44.1
MW-2	10/17/13	96.7 J	<15	164 J	<2	<4	14,200	<10	<50	<25	<10	223	<10	1,700 J	4.9 J	<0.2	<40	4,650 J	<20	<10	54,300	<50	<30
	12/31/14	6,940	<15	136 J	<2	<4	12,800	8.1 J	<50	31.6	<10	9,700	6.7 J	1,720 J	252	<0.2	<40	4,490 J	<20	<10	37,700	15.5 J	46.1
	02/16/16	107 J	<15	112 J	<2	15.5	13,500	<10	<50	63	<10	938	<10	1,760 J	35.5	<0.2	<40	3,700 J	<20	<10	36,400	<50	356
	03/21/17	920	<4	210	<1	<1	24,500	1	<2	<5	<10	1,430	<2	2,830	30	<0.2	1	7,400	<10	<1	69,600	3	20
	05/31/18	1,630	<15	143 J	<2	<4	24,800	2.30 J	<50	<25	<10	3,660	<10	3,230 J	124	<0.2	2.10 J	4,170 J	<20	<10	37,400	5.30 J	19.50 J
NYSDEC TOGS 1.1.1 Class GA Standard/Guidance Values		na	25	1,000	3	5	na	50	na	200	200	300	25	35,000	300	0.7	100	na	10	50	20,000	na	2,000

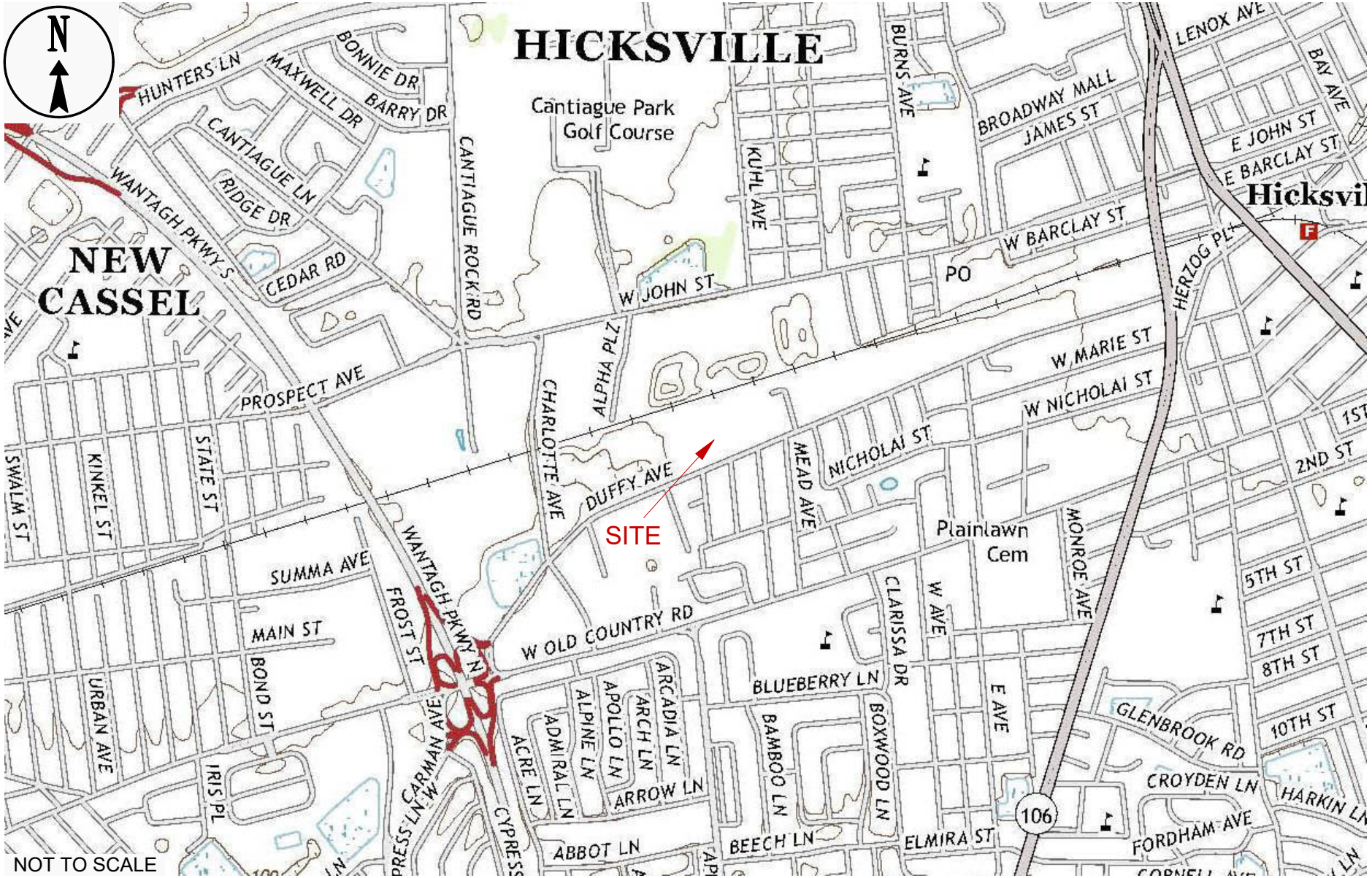
Notes:
J-Laboratory estimated value
ns-Not sampled, wells were inaccessible
n/a-No value established
Gray higlighted values exceed TOGS 1.1.1 standard/guidance values.
Laboratory analysis for 10/17/13, 12/31/14, 02/16/16, and 05/31/18 sampling events conducted by Test America Laboratories, Inc.
Laboratory analysis for 03/31/17 and 04/28/17 sampling events conducted by Phoenix Environmental Laboratories, Inc.

The chemicals listed below were reported below the Lower Reporting Limit (LRL):

Antimony Thallium

FIGURES

FIGURE 1



ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Site Location Map

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
NYSDEC Site # 130027

FIGURE 2

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Site Map

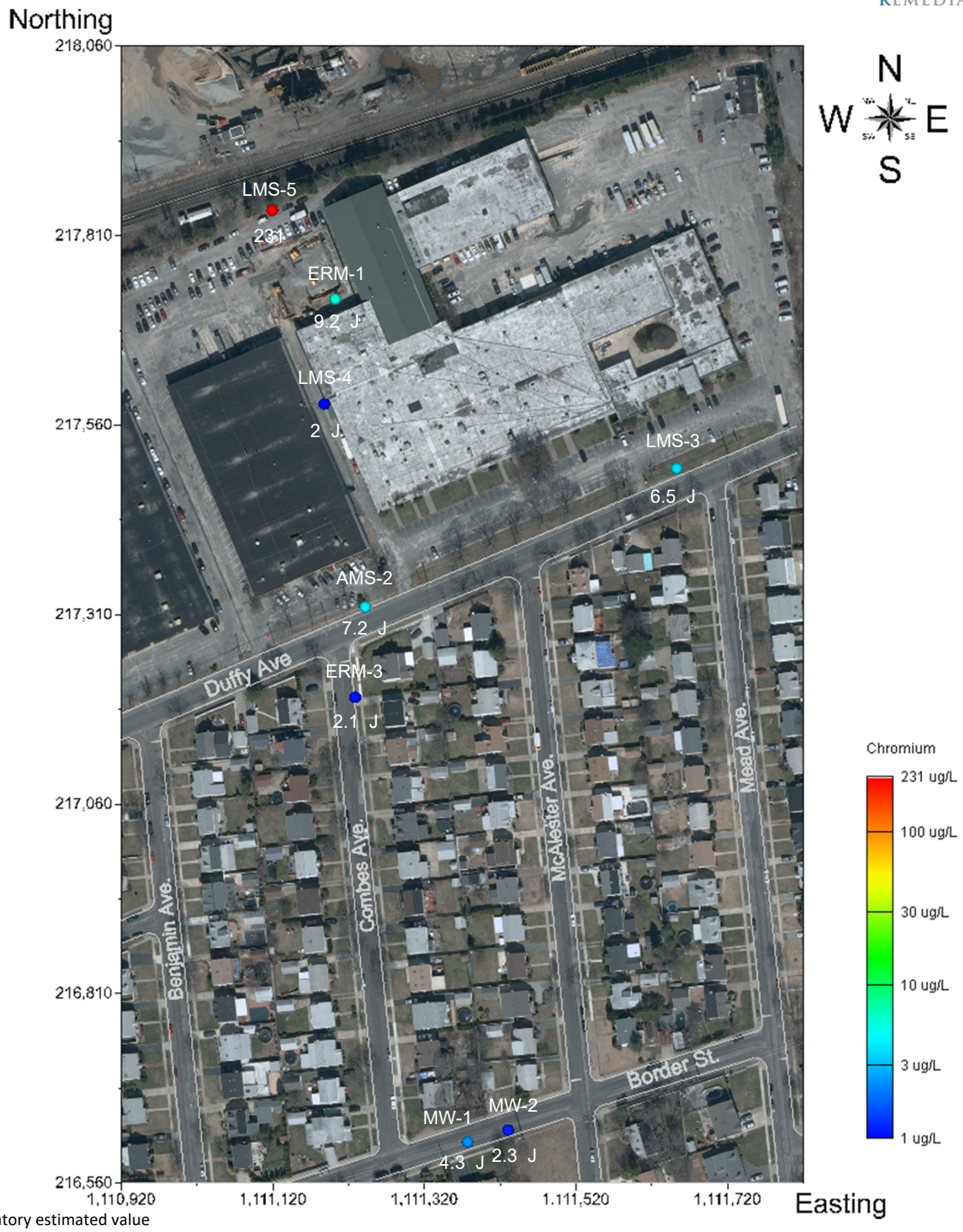
Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
NYSDEC Site # 130027

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site #130027

FIGURE 3

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results: Chromium
May 2018
Test America, Inc.



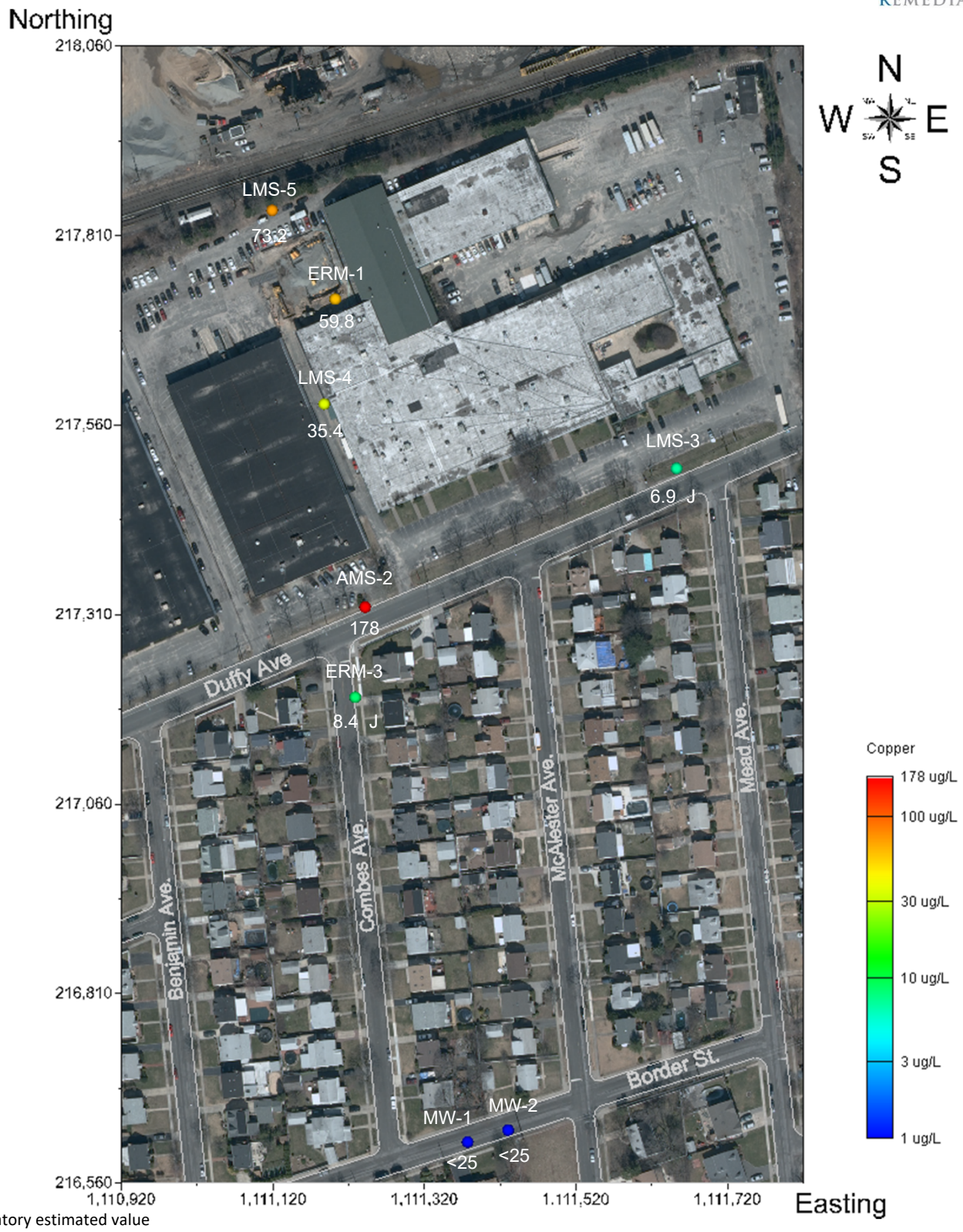
J-Laboratory estimated value

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site #130027

FIGURE 4

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results: Copper
May 2018
Test America, Inc.



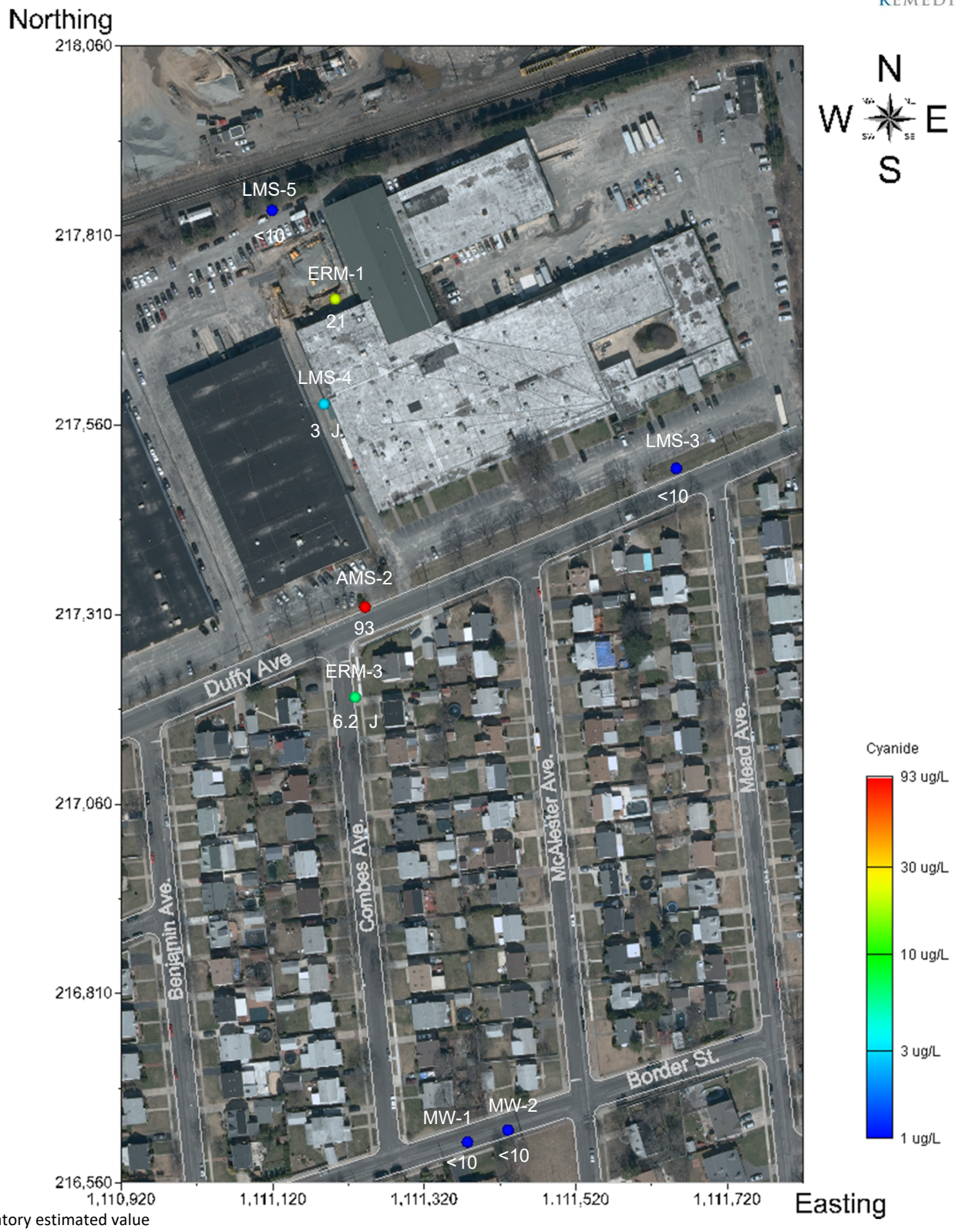
J-Laboratory estimated value

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site #130027

FIGURE 5

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results: Cyanide
May 2018
Test America, Inc.



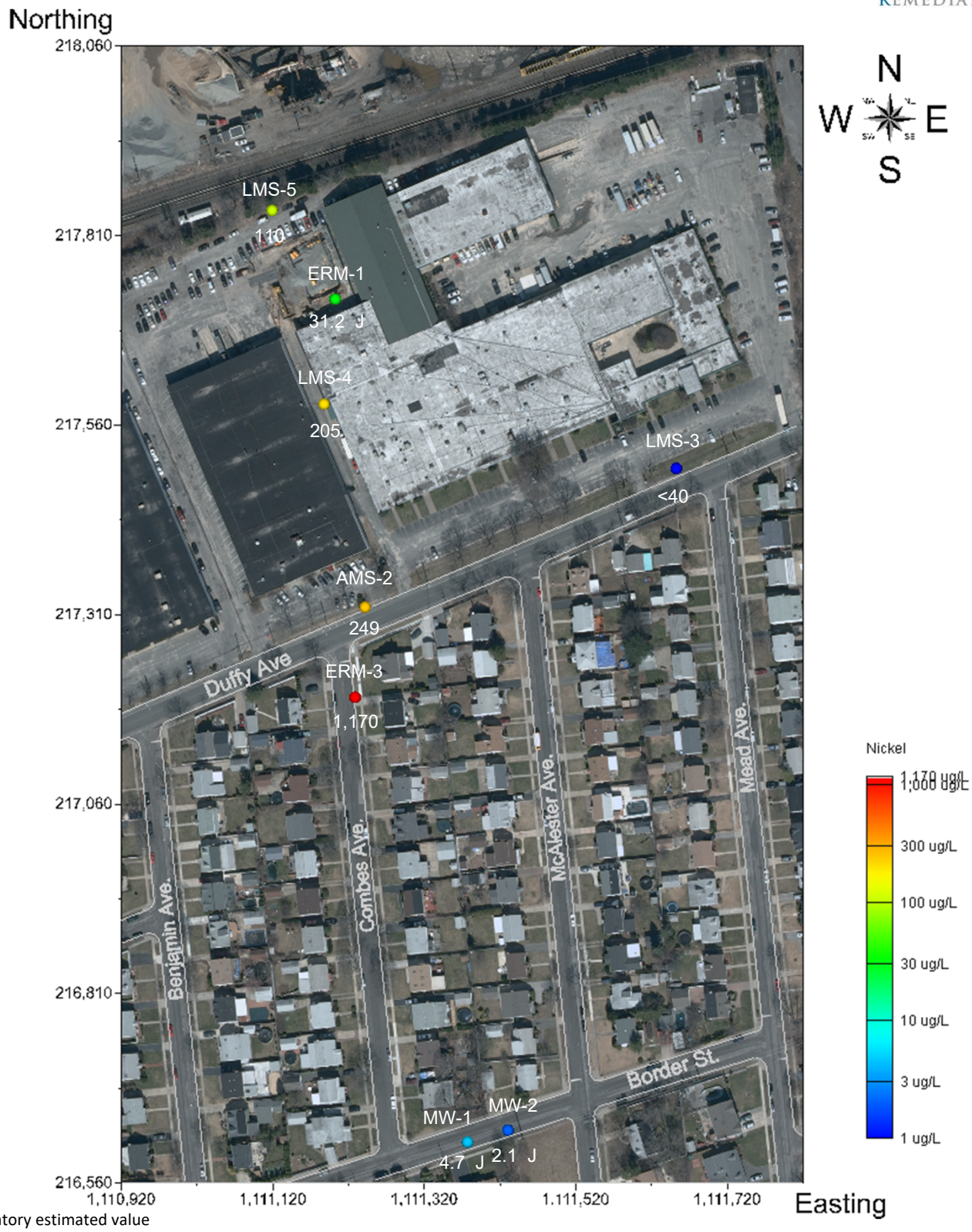
J-Laboratory estimated value

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site #130027

FIGURE 6

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results: Nickel
May 2018
Test America, Inc.



J-Laboratory estimated value

APPENDIX A—FIELD NOTES

DEC-HICKSVILLE 270 4/20/18

START: 0800 ON: 0930 OFF: 1215 END: 1345

PURPOSE: PERFORM SITE INSPECTION
EQUIP: OZ FSSO, METAL DETECTOR, DIGIAL CAMERA.
ONSITE: EAR - SG/BC, PM/FM
WEATHER: ~40°F, SUNNY

NOTES:
- 0930-1004, ATTEMPTED TO LOCATE LMS-1 @ LOCATION POSTED ON MAP. USED METAL DETECTOR TO ASSIST W/ LOCATING. UNABLE TO LOCATE WELL.
- AMS-1, PAVED OVER
- MW-3, PAVED OVER
- SSDS @ 280 NOT OPERATING
- SSDS @ 270 NOT OPERATING & DAMAGE TO PIPING WAS OBSERVED
- SEE PHOTOS FROM SITE VISIT.
- NO EVIDENCE OF STIE EXCAVATION OBSERVED.

1 OF 1. 80 SG

Groundwater Sampling Sheet: Stabilization Purge Method

Site: DEC-Hicksville 270

Date: 5/31/18

Techs: BCC HS

Start Time: 0630

End Time:

Equipment: YSI Monsoon
WLM
Gen.

	WELL ID	Well Size (inches)	Total Well Depth (ft)	Depth to Water (ft)	Length of Column (ft)	One Standing Water Well Volume	Total Gallons Purged	Time Sampled	DO (mg/L)	Temp. °C	pH	ORP	Specific Conductance	Notes
MW-2	MW-2	2"	129.17	58.12	71.05	12.43	14	9:15	1.43	15.83	8.39	-360.2	225	
X	ERM-3	4.0	75.67	59.78	15.89	10.54	12	1050	2.51	16.36	5.69	-204.0	453	
	LMS-4	2.0	72.76	60.97	11.79	2.06	3.0	1135	5.51	16.50	5.68	-37.6	168	
	LMS-3	2.0	70.13	60.68	9.45	1.65	3.0	1235	8.35	16.11	8.00	-133.9	661	MS/MSD
	AMS-2	4.0	70.93	59.62	11.31	7.49	13.0	1445	3.38	16.89	5.54	-69.2	410	
	ERM-1	4.0	70.04	60.66	9.38	6.21	8.0	1350	6.07	16.23	5.08	-15.1	281	
just range	LMS-2	2.0	72.35	61.37	[illegible]									

LMS-1 - could not locate
Trip Blank - 1500
Equipment Blank: Time - 1335

Well Size (inches)		0.5	0.75	1	1.5	2	4	6	8
Multiplier based on 4 well volumes		0.06	0.11	0.18	0.42	0.7	2.65	6	10.4
Multiplier based on 1 well volume		0.015	0.0275	0.045	0.105	0.175	0.663	1.5	2.6

Purge a minimum of 1 well volume & then wait for stabillization

Tolerance for stability:

Specific Conductance (3%)
temperature (3%)
pH +/- 0.1 units

Record DO & ORP but do not use for stability

Duplicate: ERM-3 → MW-X

Guidelines for Field Screening Values:

pH = 5 - 9

Temperature = 10 - 19 (except for VERY warm days - please try to keep purge container cool)

DO = less than 12 (unless very close to a sparge well)

If readings are not in this range please try to recalibrate (except for temp, which cannot be calibrated). If they remain out of range, please do not write the value on the sheet - it is an equipment error.

PLEASE CONTACT THE PMs IF THERE IS A PROBLEM. THIS DATA IS IMPORTANT AND INCORRECT DATA IS WORSE THAN NO DATA. WE REALLY APPRECIATE YOUR WORK TO KEEP E.A.R. A TOP COMPANY IN THE FIELD

[illegible]

WELL CONDITION WORKSHEET

Site: DEC-HICKSVILLE270
Date: 5/31/18
Techs: BCL, HS

Please complete for all wells sampled

Well ID	Well Diameter (inches)	Concrete Pad in Good Condition?	Number of Bolts	Bolts in Place?	Number of Bolts Secure?	Bolt Receivers in Place and Operational?	Well Cap in Place and Operational?	Well ID Marked on Well/ Well Cap?	North Marked on Well Riser?	Notes
MW-1	2"	Yes	2	Yes	2	Yes	3 OUT OF	Yes	Yes	well head cut @ angle
ERM-3	4"	Yes	2	Yes	2	yes	Yes	Yes	Yes	
LMS-4	2"	Yes	2	Yes	2	Yes	Yes	Yes	Yes	
LMS-3	2"	No	2	Yes	2	Yes	Yes	Yes	No	Set in asphalt ~ 2" below grade
ERM-1	2"	Yes	2	Yes	2	Yes	Yes	Yes	Yes	Top of casing has deep crack
AMS-2	4"	Yes	2	NO	2	Yes	Yes	Yes	Yes	1 missing bolt

Additional Notes:

Groundwater Sampling Sheet: Stabilization Purge Method

Site: DEC - Hicksville 270

Date: 5/31/18

Techs: BCC HS

Start Time:

End Time:

Equipment:

WELL ID	Well Size (inches)	Total Well Depth (ft.)	Depth to Water (ft.)	Length of Column (ft.)	One Standing Water Well Volume (gal.)	Total Gallons Purged (gal.)	Time Sampled (hh:mm)	[check units on YSI and confirm that parameter is in the correct units] DO (mg/L)	Temp. (°C)	pH	ORP (mV)	Specific Conductance (uS/cm)	NOTES
MW-2	2.0	90.09	58.72	31.37	5.49	6	09 15	8.65	15.27	5.62	-170.7	323	
MMS-5	2.0	70.04	60.51	9.53	1.6	3	10:16	7.54	16.16	6.93	-284.0	517	
MMS-2	4"	70.93	59.62	11.31	7.50								

Well Size (inches)	0.5	0.75	1	1.5	2	4	6	8
Multiplier based on 4 well volume	0.06	0.11	0.18	0.42	0.7	2.65	6	10.4
Multiplier based on 1 well volume	0.015	0.0275	0.045	0.105	0.175	0.663	1.5	2.6

Purge a minimum of 1 well volume & then wait for stabilization

Tolerance for stability:

Specific Conductance (3%)

temperature (3%)

pH +/- 0.1 units

Record DO & ORP but DO NOT use for stability

Guidelines for Field Screening Values:

pH range = 5 - 9

Temperature range = 10 - 19 (except for VERY warm days - please try to keep purge container cool/shaded area)

DO range = less than 12 (unless very close to a sparge well)

If readings are not in this range please try to recalibrate (except for temp, which cannot be calibrated). If they remain out of range, please do not write the value on the sheet - it is an equipment error.

PLEASE CONTACT THE PM IF THERE IS A PROBLEM. THIS DATA IS IMPORTANT AND INCORRECT DATA IS WORSE THAN NO DATA. WE REALLY APPRECIATE YOUR WORK TO KEEP E.A.R. A TOP COMPANY IN THE FIELD

[as of 05/05/17]

WELL CONDITION WORKSHEET

Site: DEC-HICKSVILLE270
Date:
Techs:

Please complete for all wells sampled

Well ID	Well Diameter (inches)	Concrete Pad in Good Condition?	Number of Bolts	Bolts in Place?	Number of Bolts Secure?	Bolt Receivers in Place and Operational?	Well Cap in Place and Operational?	Well ID Marked on Well/ Well Cap?	North Marked on Well Riser?	Notes
MW-2	2	YES	2	YES	2	YES	Some of	YES	YES	well cut on another
LMS-5	2	N/A	2	YES	2	YES	YES	YES	YES	
AMS-2	4	N/A	4	3 of 3	2	YES	YES	YES	YES	

Additional Notes:

APPENDIX B—LABORATORY REPORTS

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 460-157434-1

Job Description: DEC-HICKSVILLE270 Site:130027

Contract Number: C008010

For:
New York State D.E.C.
625 Broadway
12th Floor
Albany, NY 12233-7017

Attention: Carl Hoffman

Approved for release.
Thomas A Chupela
Project Management Assistant I
6/14/2018 10:19 AM

Designee for
Melissa Haas, Project Manager I
777 New Durham Road, Edison, NJ, 08817
(203)944-1310
melissa.haas@testamericainc.com
06/14/2018

cc: Mr. Stephen Goetz
Mr. Greg Mann
Mrs. Tracy Salvitti

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

Job Number: 460-157434-1

Job Description: DEC-HICKSVILLE270 Site:130027

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Approved for release.
Thomas A Chupela
Project Management Assistant I
6/14/2018 10:19 AM

Designee for
Melissa Haas

CASE NARRATIVE

Client: New York State D.E.C.

Project: DEC-HICKSVILLE270 Site:130027

Report Number: 460-157434-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT
The samples were received on 6/1/2018 6:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8º C.

Receipt Exceptions

Due to different deliverable requirements, the 1,4-Dioxane samples were moved to a -2 job number to be reported separately from all other methods.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

VOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MW-1 (460-157434-1), ERM-3 (460-157434-2), LMS-4 (460-157434-3), LMS-3 (460-157434-4), AMS-2 (460-157434-5), ERM-1 (460-157434-6), MW-X (460-157434-7), Equipment Blank (460-157434-8), Trip Blank (460-157434-9), MW-2 (460-157434-10) and LMS-5 (460-157434-11) were analyzed for Volatile organic compounds (GC-MS) in accordance with EPA SW-846 Methods 8260C. The samples were analyzed on 06/07/2018.

No difficulties were encountered during the volatiles analysis.

All quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Samples MW-1 (460-157434-1), ERM-3 (460-157434-2), LMS-4 (460-157434-3), LMS-3 (460-157434-4), AMS-2 (460-157434-5), ERM-1 (460-157434-6), MW-X (460-157434-7), Equipment Blank (460-157434-8), MW-2 (460-157434-10) and LMS-5 (460-157434-11) were analyzed for Total Metals (ICP) in accordance with EPA SW-846 Methods 6010C. The samples were prepared on 06/07/2018 and 06/09/2018 and analyzed on 06/08/2018 and 06/11/2018.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No other difficulties were encountered during the Total Metals (ICP) analysis.

All other quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MW-1 (460-157434-1), ERM-3 (460-157434-2), LMS-4 (460-157434-3), LMS-3 (460-157434-4), AMS-2 (460-157434-5), ERM-1 (460-157434-6), MW-X (460-157434-7), Equipment Blank (460-157434-8), MW-2 (460-157434-10) and LMS-5 (460-157434-11) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared and analyzed on 06/11/2018 and 06/12/2018.

No difficulties were encountered during the Hg analysis.

All quality control parameters were within the acceptance limits.

TOTAL CYANIDE

Samples MW-1 (460-157434-1), ERM-3 (460-157434-2), LMS-4 (460-157434-3), LMS-3 (460-157434-4), AMS-2 (460-157434-5), ERM-1 (460-157434-6), MW-X (460-157434-7), Equipment Blank (460-157434-8), MW-2 (460-157434-10) and LMS-5 (460-157434-11) were analyzed for total cyanide in accordance with EPA SW-846 Method 9012B. The samples were prepared on 06/05/2018 and 06/06/2018 and analyzed on 06/06/2018 and 06/08/2018.

The method blank for 526300 contained Total Cyanide above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Refer to the QC report for details.

No other difficulties were encountered during the cyanide analysis.

All other quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-157434-1	**MW-1**					
Bromoform		2.3		1.0	ug/L	8260C
Chlorodibromomethane		2.5		1.0	ug/L	8260C
Chloroform		1.5		1.0	ug/L	8260C
Dichlorobromomethane		1.8		1.0	ug/L	8260C
Methylene Chloride		0.40	J	1.0	ug/L	8260C
Tetrachloroethene		0.35	J	1.0	ug/L	8260C
Aluminum		244		200	ug/L	6010C
Barium		87.5	J	200	ug/L	6010C
Calcium		13100		5000	ug/L	6010C
Chromium		4.3	J	10.0	ug/L	6010C
Cobalt		123		50.0	ug/L	6010C
Iron		3320		150	ug/L	6010C
Lead		2.7	J	10.0	ug/L	6010C
Magnesium		1180	J	5000	ug/L	6010C
Manganese		3750		15.0	ug/L	6010C
Nickel		4.7	J	40.0	ug/L	6010C
Potassium		4520	J	5000	ug/L	6010C
Sodium		15800		5000	ug/L	6010C
Vanadium		6.9	J	50.0	ug/L	6010C
Zinc		44.1		30.0	ug/L	6010C
Mercury		0.36		0.20	ug/L	7470A
460-157434-2	**ERM-3**					
Acetone		3.8	J	5.0	ug/L	8260C
Aluminum		2230		200	ug/L	6010C
Arsenic		4.4	J	15.0	ug/L	6010C
Barium		227		200	ug/L	6010C
Beryllium		0.31	J	2.0	ug/L	6010C
Calcium		25000		5000	ug/L	6010C
Chromium		2.1	J	10.0	ug/L	6010C
Copper		8.4	J	25.0	ug/L	6010C
Iron		7110		150	ug/L	6010C
Magnesium		2840	J	5000	ug/L	6010C
Manganese		99.8		15.0	ug/L	6010C
Nickel		1170		40.0	ug/L	6010C
Potassium		5890		5000	ug/L	6010C
Selenium		35.8		20.0	ug/L	6010C
Sodium		58900		5000	ug/L	6010C
Vanadium		5.7	J	50.0	ug/L	6010C
Zinc		90.3		30.0	ug/L	6010C
Cyanide, Total		0.0062	J	0.010	mg/L	9012B

EXECUTIVE SUMMARY - Detections

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-157434-3	**LMS-4**					
Acetone		3.1	J	5.0	ug/L	8260C
Aluminum		263		200	ug/L	6010C
Barium		42.8	J	200	ug/L	6010C
Calcium		10300		5000	ug/L	6010C
Chromium		2.0	J	10.0	ug/L	6010C
Copper		35.4		25.0	ug/L	6010C
Iron		284		150	ug/L	6010C
Magnesium		903	J	5000	ug/L	6010C
Manganese		2.3	J	15.0	ug/L	6010C
Nickel		205		40.0	ug/L	6010C
Potassium		966	J	5000	ug/L	6010C
Sodium		11700		5000	ug/L	6010C
Zinc		84.2		30.0	ug/L	6010C
Cyanide, Total		0.0030	J B	0.010	mg/L	9012B
460-157434-4	**LMS-3**					
Acetone		7.4		5.0	ug/L	8260C
Tetrachloroethene		1.0		1.0	ug/L	8260C
Aluminum		506		200	ug/L	6010C
Barium		136	J	200	ug/L	6010C
Cadmium		0.42	J	4.0	ug/L	6010C
Calcium		58900		5000	ug/L	6010C
Chromium		6.5	J	10.0	ug/L	6010C
Copper		6.9	J	25.0	ug/L	6010C
Iron		537		150	ug/L	6010C
Magnesium		3310	J	5000	ug/L	6010C
Manganese		12.2	J	15.0	ug/L	6010C
Potassium		6930		5000	ug/L	6010C
Sodium		79800		5000	ug/L	6010C
Zinc		38.9		30.0	ug/L	6010C

EXECUTIVE SUMMARY - Detections

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Sample ID / Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-157434-5	**AMS-2**					
Tetrachloroethene		0.25	J	1.0	ug/L	8260C
Aluminum		550		200	ug/L	6010C
Arsenic		16.4		15.0	ug/L	6010C
Barium		163	J	200	ug/L	6010C
Calcium		20400		5000	ug/L	6010C
Chromium		7.2	J	10.0	ug/L	6010C
Cobalt		2.4	J	50.0	ug/L	6010C
Copper		178		25.0	ug/L	6010C
Iron		9110		150	ug/L	6010C
Lead		7.2	J	10.0	ug/L	6010C
Magnesium		2320	J	5000	ug/L	6010C
Manganese		158		15.0	ug/L	6010C
Nickel		249		40.0	ug/L	6010C
Potassium		4470	J	5000	ug/L	6010C
Selenium		44.7		20.0	ug/L	6010C
Sodium		62600		5000	ug/L	6010C
Vanadium		6.4	J	50.0	ug/L	6010C
Zinc		87.7		30.0	ug/L	6010C
Cyanide, Total		0.093	B	0.010	mg/L	9012B
460-157434-6	**ERM-1**					
Acetone		5.8		5.0	ug/L	8260C
Methylene Chloride		0.29	J	1.0	ug/L	8260C
Tetrachloroethene		0.16	J	1.0	ug/L	8260C
Aluminum		10700		200	ug/L	6010C
Barium		65.7	J	200	ug/L	6010C
Beryllium		1.2	J	2.0	ug/L	6010C
Calcium		20800		5000	ug/L	6010C
Chromium		9.2	J	10.0	ug/L	6010C
Cobalt		1.9	J	50.0	ug/L	6010C
Copper		59.8		25.0	ug/L	6010C
Iron		5810		150	ug/L	6010C
Lead		7.4	J	10.0	ug/L	6010C
Magnesium		2310	J	5000	ug/L	6010C
Manganese		489		15.0	ug/L	6010C
Nickel		31.2	J	40.0	ug/L	6010C
Potassium		1610	J	5000	ug/L	6010C
Sodium		24000		5000	ug/L	6010C
Vanadium		8.4	J	50.0	ug/L	6010C
Zinc		84.8		30.0	ug/L	6010C
Cyanide, Total		0.021	B	0.010	mg/L	9012B

EXECUTIVE SUMMARY - Detections

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-157434-7	**MW-X**					
Acetone		5.2		5.0	ug/L	8260C
Aluminum		783		200	ug/L	6010C
Barium		228		200	ug/L	6010C
Calcium		25500		5000	ug/L	6010C
Iron		3980		150	ug/L	6010C
Magnesium		2840	J	5000	ug/L	6010C
Manganese		70.7		15.0	ug/L	6010C
Nickel		1110		40.0	ug/L	6010C
Potassium		6010		5000	ug/L	6010C
Selenium		35.8		20.0	ug/L	6010C
Sodium		59700		5000	ug/L	6010C
Vanadium		2.8	J	50.0	ug/L	6010C
Zinc		102		30.0	ug/L	6010C
Cyanide, Total		0.0064	J B	0.010	mg/L	9012B
460-157434-8EB	**EQUIPMENT BLANK**					
Acetone		7.6		5.0	ug/L	8260C
Chloroform		0.62	J	1.0	ug/L	8260C
Methylene Chloride		4.1		1.0	ug/L	8260C
m-Xylene & p-Xylene		0.63	J	1.0	ug/L	8260C
o-Xylene		0.34	J	1.0	ug/L	8260C
460-157434-9TB	**TRIP BLANK**					
Methylene Chloride		0.28	J	1.0	ug/L	8260C
460-157434-10	**MW-2**					
Acetone		7.0		5.0	ug/L	8260C
Chloroform		0.24	J	1.0	ug/L	8260C
Methylene Chloride		0.33	J	1.0	ug/L	8260C
Aluminum		1630		200	ug/L	6010C
Barium		143	J	200	ug/L	6010C
Calcium		24800		5000	ug/L	6010C
Chromium		2.3	J	10.0	ug/L	6010C
Iron		3660		150	ug/L	6010C
Magnesium		3230	J	5000	ug/L	6010C
Manganese		124		15.0	ug/L	6010C
Nickel		2.1	J	40.0	ug/L	6010C
Potassium		4170	J	5000	ug/L	6010C
Sodium		37400		5000	ug/L	6010C
Vanadium		5.3	J	50.0	ug/L	6010C
Zinc		19.5	J	30.0	ug/L	6010C

EXECUTIVE SUMMARY - Detections

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Sample ID Analyte	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
460-157434-11	**LMS-5**					
Acetone		6.9		5.0	ug/L	8260C
Carbon disulfide		0.27	J	1.0	ug/L	8260C
Methylene Chloride		0.30	J	1.0	ug/L	8260C
Tetrachloroethene		0.75	J	1.0	ug/L	8260C
Aluminum		15700		200	ug/L	6010C
Arsenic		20.9		15.0	ug/L	6010C
Barium		301		200	ug/L	6010C
Beryllium		1.7	J	2.0	ug/L	6010C
Cadmium		17.6		4.0	ug/L	6010C
Calcium		48500		5000	ug/L	6010C
Chromium		231		10.0	ug/L	6010C
Cobalt		8.5	J	50.0	ug/L	6010C
Copper		73.2		25.0	ug/L	6010C
Iron		27800		150	ug/L	6010C
Lead		35.3		10.0	ug/L	6010C
Magnesium		5900		5000	ug/L	6010C
Manganese		3020		15.0	ug/L	6010C
Nickel		110		40.0	ug/L	6010C
Potassium		7540		5000	ug/L	6010C
Sodium		41000		5000	ug/L	6010C
Vanadium		62.9		50.0	ug/L	6010C
Zinc		400		30.0	ug/L	6010C
Mercury		0.44		0.20	ug/L	7470A

METHOD SUMMARY

Client: New York State D.E.C. Job Number: 460-157434-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds by GC/MS	TAL EDI	SW846 8260C	
Purge and Trap	TAL EDI		SW846 5030C
Metals (ICP)	TAL EDI	SW846 6010C	
Preparation, Total Metals	TAL EDI		SW846 3010A
Mercury (CVAA)	TAL EDI	SW846 7470A	
Preparation, Mercury	TAL EDI		SW846 7470A
Cyanide, Total andor Amenable	TAL EDI	SW846 9012B	
Cyanide, Total and/or Amenable, Distillation	TAL EDI		SW846 9012B

Lab References:

TAL EDI = TestAmerica Edison

Method References:

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

METHOD / ANALYST SUMMARY

Client: New York State D.E.C. Job Number: 460-157434-1

Method	Analyst	Analyst ID
SW846 8260C	Tupayachi, Audberto	AAT
SW846 6010C	Chang, Churn Der	CDC
SW846 7470A	Sheikh, Razia B	RBS
SW846 9012B	Vu, Huan	HTV

SAMPLE SUMMARY

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
460-157434-1	MW-1	Water	05/31/2018 0915	06/01/2018 1800
460-157434-2	ERM-3	Water	05/31/2018 1050	06/01/2018 1800
460-157434-3	LMS-4	Water	05/31/2018 1135	06/01/2018 1800
460-157434-4	LMS-3	Water	05/31/2018 1235	06/01/2018 1800
460-157434-4MS	LMS-3	Water	05/31/2018 1235	06/01/2018 1800
460-157434-4MSD	LMS-3	Water	05/31/2018 1235	06/01/2018 1800
460-157434-4DU	LMS-3	Water	05/31/2018 1235	06/01/2018 1800
460-157434-5	AMS-2	Water	05/31/2018 1445	06/01/2018 1800
460-157434-6	ERM-1	Water	05/31/2018 1350	06/01/2018 1800
460-157434-7	MW-X	Water	05/31/2018 0000	06/01/2018 1800
460-157434-8EB	Equipment Blank	Water	05/31/2018 1335	06/01/2018 1800
460-157434-9TB	Trip Blank	Water	05/31/2018 1500	06/01/2018 1800
460-157434-10	MW-2	Water	05/31/2018 0915	06/01/2018 1800
460-157434-11	LMS-5	Water	05/31/2018 1016	06/01/2018 1800

SAMPLE RESULTS

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **MW-1**

Lab Sample ID: 460-157434-1 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672501.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1452			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1452				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	5.0	U	1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	2.3		0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	2.5		0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.5		0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.8		0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	0.40	J	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	0.35	J	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: MW-1

Lab Sample ID: 460-157434-1 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672501.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1452			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1452				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102		74 - 132
4-Bromofluorobenzene	96		77 - 124
Dibromofluoromethane (Surr)	101		72 - 131
Toluene-d8 (Surr)	100		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **MW-1**

Lab Sample ID: 460-157434-1 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672501.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1452			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1452				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: ERM-3

Lab Sample ID: 460-157434-2 Date Sampled: 05/31/2018 1050
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672502.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1515			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1515				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	3.8	J	1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	1.0	U	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	1.0	U	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: ERM-3

Lab Sample ID: 460-157434-2 Date Sampled: 05/31/2018 1050
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672502.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1515			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1515				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		74 - 132
4-Bromofluorobenzene	95		77 - 124
Dibromofluoromethane (Surr)	99		72 - 131
Toluene-d8 (Surr)	97		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **ERM-3**

Lab Sample ID: 460-157434-2 Date Sampled: 05/31/2018 1050
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672502.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1515			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1515				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-4

Lab Sample ID: 460-157434-3 Date Sampled: 05/31/2018 1135
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672503.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1538			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1538				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	3.1	J	1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	1.0	U	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	1.0	U	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-4

Lab Sample ID: 460-157434-3 Date Sampled: 05/31/2018 1135
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672503.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1538			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1538				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	94		74 - 132
4-Bromofluorobenzene	92		77 - 124
Dibromofluoromethane (Surr)	97		72 - 131
Toluene-d8 (Surr)	95		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-4

Lab Sample ID: 460-157434-3 Date Sampled: 05/31/2018 1135
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672503.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1538			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1538				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-3

Lab Sample ID: 460-157434-4 Date Sampled: 05/31/2018 1235
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672500.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1429			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	7.4		1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	1.0	U	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	1.0		0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-3

Lab Sample ID: 460-157434-4 Date Sampled: 05/31/2018 1235
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672500.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1429			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1429				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96		74 - 132
4-Bromofluorobenzene	95		77 - 124
Dibromofluoromethane (Surr)	97		72 - 131
Toluene-d8 (Surr)	96		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-3

Lab Sample ID: 460-157434-4 Date Sampled: 05/31/2018 1235
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672500.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1429			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1429				

Tentatively Identified Compounds **Number TIC's Found: 1**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	
67-63-0	Isopropyl alcohol	3.07	45	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: AMS-2

Lab Sample ID: 460-157434-5 Date Sampled: 05/31/2018 1445
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672504.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1601			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1601				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	5.0	U	1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	1.0	U	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	0.25	J	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: AMS-2

Lab Sample ID: 460-157434-5 Date Sampled: 05/31/2018 1445
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672504.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1601			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1601				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	97		74 - 132
4-Bromofluorobenzene	92		77 - 124
Dibromofluoromethane (Surr)	98		72 - 131
Toluene-d8 (Surr)	94		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: AMS-2

Lab Sample ID: 460-157434-5 Date Sampled: 05/31/2018 1445
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672504.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1601			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1601				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: ERM-1

Lab Sample ID: 460-157434-6 Date Sampled: 05/31/2018 1350
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672505.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1624			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1624				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	5.8		1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	0.29	J	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	0.16	J	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **ERM-1**

Lab Sample ID: 460-157434-6 Date Sampled: 05/31/2018 1350
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672505.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1624			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1624				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		74 - 132
4-Bromofluorobenzene	92		77 - 124
Dibromofluoromethane (Surr)	98		72 - 131
Toluene-d8 (Surr)	93		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **ERM-1**

Lab Sample ID: 460-157434-6 Date Sampled: 05/31/2018 1350
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672505.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1624			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1624				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **MW-X**

Lab Sample ID: 460-157434-7 Date Sampled: 05/31/2018 0000
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672506.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1647			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1647				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	5.2		1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	1.0	U	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	1.0	U	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: MW-X

Lab Sample ID: 460-157434-7 Date Sampled: 05/31/2018 0000
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672506.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1647			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1647				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		74 - 132
4-Bromofluorobenzene	94		77 - 124
Dibromofluoromethane (Surr)	100		72 - 131
Toluene-d8 (Surr)	95		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: MW-X

Lab Sample ID: 460-157434-7 Date Sampled: 05/31/2018 0000
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672506.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1647			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1647				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **Equipment Blank**

Lab Sample ID: 460-157434-8EB Date Sampled: 05/31/2018 1335
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672498.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1342			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1342				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	7.6		1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	0.62	J	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	4.1		0.21	1.0
m-Xylene & p-Xylene	0.63	J	0.28	1.0
o-Xylene	0.34	J	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	1.0	U	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **Equipment Blank**

Lab Sample ID: 460-157434-8EB Date Sampled: 05/31/2018 1335
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672498.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1342			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1342				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	100		74 - 132
4-Bromofluorobenzene	97		77 - 124
Dibromofluoromethane (Surr)	99		72 - 131
Toluene-d8 (Surr)	97		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **Equipment Blank**

Lab Sample ID: 460-157434-8EB Date Sampled: 05/31/2018 1335
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672498.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1342			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1342				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 460-157434-9TB Date Sampled: 05/31/2018 1500
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1406			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1406				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	5.0	U	1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	0.28	J	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	1.0	U	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 460-157434-9TB Date Sampled: 05/31/2018 1500
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1406			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1406				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	101		74 - 132
4-Bromofluorobenzene	97		77 - 124
Dibromofluoromethane (Surr)	97		72 - 131
Toluene-d8 (Surr)	97		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **Trip Blank**

Lab Sample ID: 460-157434-9TB Date Sampled: 05/31/2018 1500
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672499.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1406			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1406				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: MW-2

Lab Sample ID: 460-157434-10 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672507.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1710			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1710				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	7.0		1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	0.24	J	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	0.33	J	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	1.0	U	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: MW-2

Lab Sample ID: 460-157434-10 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672507.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1710			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1710				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	98		74 - 132
4-Bromofluorobenzene	94		77 - 124
Dibromofluoromethane (Surr)	100		72 - 131
Toluene-d8 (Surr)	96		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **MW-2**

Lab Sample ID: 460-157434-10 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672507.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1710			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1710				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-5

Lab Sample ID: 460-157434-11 Date Sampled: 05/31/2018 1016
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672508.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1733			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1733				

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	6.9		1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	0.27	J	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	0.30	J	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0
Tetrachloroethene	0.75	J	0.12	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-5

Lab Sample ID: 460-157434-11 Date Sampled: 05/31/2018 1016
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672508.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1733			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1733				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99		74 - 132
4-Bromofluorobenzene	97		77 - 124
Dibromofluoromethane (Surr)	101		72 - 131
Toluene-d8 (Surr)	97		80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **LMS-5**

Lab Sample ID: 460-157434-11 Date Sampled: 05/31/2018 1016
Client Matrix: Water Date Received: 06/01/2018 1800

8260C Volatile Organic Compounds by GC/MS

Analysis Method:	8260C	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Prep Method:	5030C	Prep Batch:	N/A	Lab File ID:	N672508.D
Dilution:	1.0			Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1733			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1733				

Tentatively Identified Compounds **Number TIC's Found: 0**

Cas Number	Analyte	RT	Est. Result (ug/L)	Qualifier
	Tentatively Identified Compound		None	

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: MW-1

Lab Sample ID: 460-157434-1 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526636	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2018 0023			Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	244		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	87.5	J	7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	13100		222	5000
Chromium	4.3	J	1.3	10.0
Cobalt	123		1.7	50.0
Copper	25.0	U	5.1	25.0
Iron	3320		34.2	150
Lead	2.7	J	2.5	10.0
Magnesium	1180	J	177	5000
Manganese	3750		0.99	15.0
Nickel	4.7	J	1.7	40.0
Potassium	4520	J	323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	15800		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	6.9	J	2.5	50.0
Zinc	44.1		3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1430			Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.36		0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: ERM-3

Lab Sample ID: 460-157434-2 Date Sampled: 05/31/2018 1050
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526285	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526088	Lab File ID:	525928D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2018 2324			Final Weight/Volume:	50 mL
Prep Date:	06/07/2018 2205				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	2230		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	4.4	J	2.7	15.0
Barium	227		7.7	200
Beryllium	0.31	J	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	25000		222	5000
Chromium	2.1	J	1.3	10.0
Cobalt	50.0	U	1.7	50.0
Copper	8.4	J	5.1	25.0
Iron	7110		34.2	150
Lead	10.0	U	2.5	10.0
Magnesium	2840	J	177	5000
Manganese	99.8		0.99	15.0
Nickel	1170		1.7	40.0
Potassium	5890		323	5000
Selenium	35.8		6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	58900		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	5.7	J	2.5	50.0
Zinc	90.3		3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1432			Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-4

Lab Sample ID: 460-157434-3 Date Sampled: 05/31/2018 1135
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526285	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526088	Lab File ID:	525928D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2018 2327			Final Weight/Volume:	50 mL
Prep Date:	06/07/2018 2205				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	263		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	42.8	J	7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	10300		222	5000
Chromium	2.0	J	1.3	10.0
Cobalt	50.0	U	1.7	50.0
Copper	35.4		5.1	25.0
Iron	284		34.2	150
Lead	10.0	U	2.5	10.0
Magnesium	903	J	177	5000
Manganese	2.3	J	0.99	15.0
Nickel	205		1.7	40.0
Potassium	966	J	323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	11700		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	50.0	U	2.5	50.0
Zinc	84.2		3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1433			Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-3

Lab Sample ID: 460-157434-4 Date Sampled: 05/31/2018 1235
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526285	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526088	Lab File ID:	525928D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2018 1600			Final Weight/Volume:	50 mL
Prep Date:	06/07/2018 2205				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	506		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	136	J	7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	0.42	J	0.22	4.0
Calcium	58900		222	5000
Chromium	6.5	J	1.3	10.0
Cobalt	50.0	U	1.7	50.0
Copper	6.9	J	5.1	25.0
Iron	537		34.2	150
Lead	10.0	U	2.5	10.0
Magnesium	3310	J	177	5000
Manganese	12.2	J	0.99	15.0
Nickel	40.0	U	1.7	40.0
Potassium	6930		323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	79800		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	50.0	U	2.5	50.0
Zinc	38.9		3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1349			Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: AMS-2

Lab Sample ID: 460-157434-5 Date Sampled: 05/31/2018 1445
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526636	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2018 0027			Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	550		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	16.4		2.7	15.0
Barium	163	J	7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	20400		222	5000
Chromium	7.2	J	1.3	10.0
Cobalt	2.4	J	1.7	50.0
Copper	178		5.1	25.0
Iron	9110		34.2	150
Lead	7.2	J	2.5	10.0
Magnesium	2320	J	177	5000
Manganese	158		0.99	15.0
Nickel	249		1.7	40.0
Potassium	4470	J	323	5000
Selenium	44.7		6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	62600		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	6.4	J	2.5	50.0
Zinc	87.7		3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-527160	Lab File ID:	527160hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1434			Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1221				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: ERM-1

Lab Sample ID: 460-157434-6 Date Sampled: 05/31/2018 1350
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526636	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2018 0031			Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	10700		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	65.7	J	7.7	200
Beryllium	1.2	J	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	20800		222	5000
Chromium	9.2	J	1.3	10.0
Cobalt	1.9	J	1.7	50.0
Copper	59.8		5.1	25.0
Iron	5810		34.2	150
Lead	7.4	J	2.5	10.0
Magnesium	2310	J	177	5000
Manganese	489		0.99	15.0
Nickel	31.2	J	1.7	40.0
Potassium	1610	J	323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	24000		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	8.4	J	2.5	50.0
Zinc	84.8		3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-527160	Lab File ID:	527160hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1435			Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1221				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: MW-X

Lab Sample ID: 460-157434-7 Date Sampled: 05/31/2018 0000
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526636	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2018 0035			Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	783		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	228		7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	25500		222	5000
Chromium	10.0	U	1.3	10.0
Cobalt	50.0	U	1.7	50.0
Copper	25.0	U	5.1	25.0
Iron	3980		34.2	150
Lead	10.0	U	2.5	10.0
Magnesium	2840	J	177	5000
Manganese	70.7		0.99	15.0
Nickel	1110		1.7	40.0
Potassium	6010		323	5000
Selenium	35.8		6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	59700		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	2.8	J	2.5	50.0
Zinc	102		3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-527160	Lab File ID:	527160hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1437			Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1221				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: **Equipment Blank**

Lab Sample ID: 460-157434-8EB Date Sampled: 05/31/2018 1335
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526636	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2018 0038			Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	200	U	28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	200	U	7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	5000	U	222	5000
Chromium	10.0	U	1.3	10.0
Cobalt	50.0	U	1.7	50.0
Copper	25.0	U	5.1	25.0
Iron	150	U	34.2	150
Lead	10.0	U	2.5	10.0
Magnesium	5000	U	177	5000
Manganese	15.0	U	0.99	15.0
Nickel	40.0	U	1.7	40.0
Potassium	5000	U	323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	5000	U	460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	50.0	U	2.5	50.0
Zinc	30.0	U	3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-527160	Lab File ID:	527160hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1439			Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1221				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: MW-2

Lab Sample ID: 460-157434-10 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526636	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2018 0042			Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	1630		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	143	J	7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	24800		222	5000
Chromium	2.3	J	1.3	10.0
Cobalt	50.0	U	1.7	50.0
Copper	25.0	U	5.1	25.0
Iron	3660		34.2	150
Lead	10.0	U	2.5	10.0
Magnesium	3230	J	177	5000
Manganese	124		0.99	15.0
Nickel	2.1	J	1.7	40.0
Potassium	4170	J	323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	37400		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	5.3	J	2.5	50.0
Zinc	19.5	J	3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-527168	Lab File ID:	527160hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1454			Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1249				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: New York State D.E.C. Job Number: 460-157434-1

Client Sample ID: LMS-5

Lab Sample ID: 460-157434-11 Date Sampled: 05/31/2018 1016
Client Matrix: Water Date Received: 06/01/2018 1800

6010C Metals (ICP)

Analysis Method:	6010C	Analysis Batch:	460-526636	Instrument ID:	ICP5
Prep Method:	3010A	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	06/11/2018 0046			Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	15700		28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	20.9		2.7	15.0
Barium	301		7.7	200
Beryllium	1.7	J	0.23	2.0
Cadmium	17.6		0.22	4.0
Calcium	48500		222	5000
Chromium	231		1.3	10.0
Cobalt	8.5	J	1.7	50.0
Copper	73.2		5.1	25.0
Iron	27800		34.2	150
Lead	35.3		2.5	10.0
Magnesium	5900		177	5000
Manganese	3020		0.99	15.0
Nickel	110		1.7	40.0
Potassium	7540		323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	41000		460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	62.9		2.5	50.0
Zinc	400		3.6	30.0

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Prep Method:	7470A	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0			Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1428			Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.44		0.12	0.20

General Chemistry

Client Sample ID: MW-1

Lab Sample ID: 460-157434-1 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.010	U	mg/L	0.0020	0.010	1.0	9012B

Analysis Batch: 460-525592 Analysis Date: 06/06/2018 1149
Prep Batch: 460-525268 Prep Date: 06/05/2018 1050

General Chemistry

Client Sample ID: **ERM-3**

Lab Sample ID: 460-157434-2 Date Sampled: 05/31/2018 1050
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.0062	J	mg/L	0.0020	0.010	1.0	9012B

Analysis Batch: 460-525592 Analysis Date: 06/06/2018 1153
Prep Batch: 460-525268 Prep Date: 06/05/2018 1050

General Chemistry

Client Sample ID: **LMS-4**

Lab Sample ID: 460-157434-3 Date Sampled: 05/31/2018 1135
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.0030	J B	mg/L	0.0020	0.010	1.0	9012B

Analysis Batch: 460-526300 Analysis Date: 06/08/2018 1312
Prep Batch: 460-525577 Prep Date: 06/06/2018 1214

General Chemistry

Client Sample ID: **LMS-3**

Lab Sample ID: 460-157434-4 Date Sampled: 05/31/2018 1235
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.010	U	mg/L	0.0020	0.010	1.0	9012B

Analysis Batch: 460-526300 Analysis Date: 06/08/2018 1312
Prep Batch: 460-525577 Prep Date: 06/06/2018 1214

General Chemistry

Client Sample ID: **AMS-2**

Lab Sample ID: 460-157434-5 Date Sampled: 05/31/2018 1445
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.093	B	mg/L	0.0020	0.010	1.0	9012B

Analysis Batch: 460-526300 Analysis Date: 06/08/2018 1315
Prep Batch: 460-525577 Prep Date: 06/06/2018 1214

General Chemistry

Client Sample ID: ERM-1

Lab Sample ID: 460-157434-6 Date Sampled: 05/31/2018 1350
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.021	B	mg/L	0.0020	0.010	1.0	9012B

Analysis Batch: 460-526300 Analysis Date: 06/08/2018 1316
Prep Batch: 460-525577 Prep Date: 06/06/2018 1214

General Chemistry

Client Sample ID: **MW-X**

Lab Sample ID: 460-157434-7 Date Sampled: 05/31/2018 0000
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.0064	J B	mg/L	0.0020	0.010	1.0	9012B

Analysis Batch: 460-526300 Analysis Date: 06/08/2018 1317
Prep Batch: 460-525577 Prep Date: 06/06/2018 1214

General Chemistry

Client Sample ID: **Equipment Blank**

Lab Sample ID: 460-157434-8EB Date Sampled: 05/31/2018 1335
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.010	U	mg/L	0.0020	0.010	1.0	9012B
Analysis Batch: 460-526300	Analysis Date: 06/08/2018 1318						
Prep Batch: 460-525577	Prep Date: 06/06/2018 1214						

General Chemistry

Client Sample ID: **MW-2**

Lab Sample ID: 460-157434-10 Date Sampled: 05/31/2018 0915
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.010	U	mg/L	0.0020	0.010	1.0	9012B
Analysis Batch: 460-526300	Analysis Date: 06/08/2018 1319						
Prep Batch: 460-525577	Prep Date: 06/06/2018 1214						

General Chemistry

Client Sample ID: **LMS-5**

Lab Sample ID: 460-157434-11 Date Sampled: 05/31/2018 1016
Client Matrix: Water Date Received: 06/01/2018 1800

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Cyanide, Total	0.010	U	mg/L	0.0020	0.010	1.0	9012B

Analysis Batch: 460-526300 Analysis Date: 06/08/2018 1319
Prep Batch: 460-525577 Prep Date: 06/06/2018 1214

DATA REPORTING QUALIFIERS

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Section	Qualifier	Description
GC/MS VOA		
	U	Analyzed for but not detected.
	J	Indicates an estimated value.
Metals		
	U	Indicates analyzed for but not detected.
	4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
	J	Sample result is greater than the MDL but below the CRDL
General Chemistry		
	B	Compound was found in the blank and sample.
	U	Indicates analyzed for but not detected.
	J	Sample result is greater than the MDL but below the CRDL

QUALITY CONTROL RESULTS

Client: New York State D.E.C. Job Number: 460-157434-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:460-525777					
LCS 460-525777/3	Lab Control Sample	T	Water	8260C	
MB 460-525777/7	Method Blank	T	Water	8260C	
460-157434-1	MW-1	T	Water	8260C	
460-157434-2	ERM-3	T	Water	8260C	
460-157434-3	LMS-4	T	Water	8260C	
460-157434-4	LMS-3	T	Water	8260C	
460-157434-4MS	Matrix Spike	T	Water	8260C	
460-157434-4MSD	Matrix Spike Duplicate	T	Water	8260C	
460-157434-5	AMS-2	T	Water	8260C	
460-157434-6	ERM-1	T	Water	8260C	
460-157434-7	MW-X	T	Water	8260C	
460-157434-8EB	Equipment Blank	T	Water	8260C	
460-157434-9TB	Trip Blank	T	Water	8260C	
460-157434-10	MW-2	T	Water	8260C	
460-157434-11	LMS-5	T	Water	8260C	

Report Basis
T = Total

Client: New York State D.E.C. Job Number: 460-157434-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-526088					
LCS 460-526088/2-A	Lab Control Sample	T	Water	3010A	
MB 460-526088/1-A	Method Blank	T	Water	3010A	
460-157434-2	ERM-3	T	Water	3010A	
460-157434-3	LMS-4	T	Water	3010A	
460-157434-4	LMS-3	T	Water	3010A	
460-157434-4DU	Duplicate	T	Water	3010A	
460-157434-4MS	Matrix Spike	T	Water	3010A	
Analysis Batch:460-526285					
LCS 460-526088/2-A	Lab Control Sample	T	Water	6010C	460-526088
MB 460-526088/1-A	Method Blank	T	Water	6010C	460-526088
460-157434-2	ERM-3	T	Water	6010C	460-526088
460-157434-3	LMS-4	T	Water	6010C	460-526088
460-157434-4	LMS-3	T	Water	6010C	460-526088
460-157434-4DU	Duplicate	T	Water	6010C	460-526088
460-157434-4MS	Matrix Spike	T	Water	6010C	460-526088
Prep Batch: 460-526450					
LCS 460-526450/2-A	Lab Control Sample	T	Water	3010A	
MB 460-526450/1-A	Method Blank	T	Water	3010A	
460-157434-1	MW-1	T	Water	3010A	
460-157434-5	AMS-2	T	Water	3010A	
460-157434-6	ERM-1	T	Water	3010A	
460-157434-7	MW-X	T	Water	3010A	
460-157434-8EB	Equipment Blank	T	Water	3010A	
460-157434-10	MW-2	T	Water	3010A	
460-157434-11	LMS-5	T	Water	3010A	
460-157549-P-1-B DU	Duplicate	T	Water	3010A	
460-157549-P-1-C MS	Matrix Spike	T	Water	3010A	
Analysis Batch:460-526636					
LCS 460-526450/2-A	Lab Control Sample	T	Water	6010C	460-526450
460-157434-1	MW-1	T	Water	6010C	460-526450
460-157434-5	AMS-2	T	Water	6010C	460-526450
460-157434-6	ERM-1	T	Water	6010C	460-526450
460-157434-7	MW-X	T	Water	6010C	460-526450
460-157434-8EB	Equipment Blank	T	Water	6010C	460-526450
460-157434-10	MW-2	T	Water	6010C	460-526450
460-157434-11	LMS-5	T	Water	6010C	460-526450
460-157549-P-1-B DU	Duplicate	T	Water	6010C	460-526450
460-157549-P-1-C MS	Matrix Spike	T	Water	6010C	460-526450

Client: New York State D.E.C. Job Number: 460-157434-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 460-526829					
LCS 460-526829/2-A	Lab Control Sample	T	Water	7470A	
MB 460-526829/1-A	Method Blank	T	Water	7470A	
460-157434-1	MW-1	T	Water	7470A	
460-157434-2	ERM-3	T	Water	7470A	
460-157434-3	LMS-4	T	Water	7470A	
460-157434-4	LMS-3	T	Water	7470A	
460-157434-4DU	Duplicate	T	Water	7470A	
460-157434-4MS	Matrix Spike	T	Water	7470A	
460-157434-11	LMS-5	T	Water	7470A	
Analysis Batch:460-526893					
LCS 460-526829/2-A	Lab Control Sample	T	Water	7470A	460-526829
MB 460-526829/1-A	Method Blank	T	Water	7470A	460-526829
460-157434-1	MW-1	T	Water	7470A	460-526829
460-157434-2	ERM-3	T	Water	7470A	460-526829
460-157434-3	LMS-4	T	Water	7470A	460-526829
460-157434-4	LMS-3	T	Water	7470A	460-526829
460-157434-4DU	Duplicate	T	Water	7470A	460-526829
460-157434-4MS	Matrix Spike	T	Water	7470A	460-526829
460-157434-11	LMS-5	T	Water	7470A	460-526829
Prep Batch: 460-527160					
LCS 460-527160/2-A	Lab Control Sample	T	Water	7470A	
MB 460-527160/1-A	Method Blank	T	Water	7470A	
460-157434-5	AMS-2	T	Water	7470A	
460-157434-6	ERM-1	T	Water	7470A	
460-157434-7	MW-X	T	Water	7470A	
460-157434-8EB	Equipment Blank	T	Water	7470A	
460-158047-E-1-C DU	Duplicate	T	Water	7470A	
460-158047-E-1-D MS	Matrix Spike	T	Water	7470A	
Prep Batch: 460-527168					
LCS 460-527168/2-A	Lab Control Sample	T	Water	7470A	
MB 460-527168/1-A	Method Blank	T	Water	7470A	
460-157434-10	MW-2	T	Water	7470A	
460-157883-A-4-B DU	Duplicate	T	Water	7470A	
460-157883-E-4-D MS	Matrix Spike	T	Water	7470A	

Client: New York State D.E.C. Job Number: 460-157434-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:460-527218					
LCS 460-527160/2-A	Lab Control Sample	T	Water	7470A	460-527160
MB 460-527160/1-A	Method Blank	T	Water	7470A	460-527160
LCS 460-527168/2-A	Lab Control Sample	T	Water	7470A	460-527168
MB 460-527168/1-A	Method Blank	T	Water	7470A	460-527168
460-157434-5	AMS-2	T	Water	7470A	460-527160
460-157434-6	ERM-1	T	Water	7470A	460-527160
460-157434-7	MW-X	T	Water	7470A	460-527160
460-157434-8EB	Equipment Blank	T	Water	7470A	460-527160
460-157434-10	MW-2	T	Water	7470A	460-527168
460-157883-A-4-B DU	Duplicate	T	Water	7470A	460-527168
460-157883-E-4-D MS	Matrix Spike	T	Water	7470A	460-527168
460-158047-E-1-C DU	Duplicate	T	Water	7470A	460-527160
460-158047-E-1-D MS	Matrix Spike	T	Water	7470A	460-527160
Analysis Batch:460-527484					
MB 460-526450/1-A	Method Blank	T	Water	6010C	460-526450

Report Basis
T = Total

Client: New York State D.E.C. Job Number: 460-157434-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 460-525268					
LCS 460-525268/2-A	Lab Control Sample	T	Water	9012B	
MB 460-525268/1-A	Method Blank	T	Water	9012B	
460-157349-D-6-B MS	Matrix Spike	T	Water	9012B	
460-157349-D-6-C MSD	Matrix Spike Duplicate	T	Water	9012B	
460-157434-1	MW-1	T	Water	9012B	
460-157434-2	ERM-3	T	Water	9012B	
Prep Batch: 460-525577					
LCS 460-525577/2-A	Lab Control Sample	T	Water	9012B	
MB 460-525577/1-A	Method Blank	T	Water	9012B	
460-157434-3	LMS-4	T	Water	9012B	
460-157434-4	LMS-3	T	Water	9012B	
460-157434-4MS	Matrix Spike	T	Water	9012B	
460-157434-4MSD	Matrix Spike Duplicate	T	Water	9012B	
460-157434-5	AMS-2	T	Water	9012B	
460-157434-6	ERM-1	T	Water	9012B	
460-157434-7	MW-X	T	Water	9012B	
460-157434-8EB	Equipment Blank	T	Water	9012B	
460-157434-10	MW-2	T	Water	9012B	
460-157434-11	LMS-5	T	Water	9012B	
Analysis Batch:460-525592					
LCS 460-525268/2-A	Lab Control Sample	T	Water	9012B	460-525268
MB 460-525268/1-A	Method Blank	T	Water	9012B	460-525268
460-157349-D-6-B MS	Matrix Spike	T	Water	9012B	460-525268
460-157349-D-6-C MSD	Matrix Spike Duplicate	T	Water	9012B	460-525268
460-157434-1	MW-1	T	Water	9012B	460-525268
460-157434-2	ERM-3	T	Water	9012B	460-525268
Analysis Batch:460-526300					
LCS 460-525577/2-A	Lab Control Sample	T	Water	9012B	460-525577
MB 460-525577/1-A	Method Blank	T	Water	9012B	460-525577
460-157434-3	LMS-4	T	Water	9012B	460-525577
460-157434-4	LMS-3	T	Water	9012B	460-525577
460-157434-4MS	Matrix Spike	T	Water	9012B	460-525577
460-157434-4MSD	Matrix Spike Duplicate	T	Water	9012B	460-525577
460-157434-5	AMS-2	T	Water	9012B	460-525577
460-157434-6	ERM-1	T	Water	9012B	460-525577
460-157434-7	MW-X	T	Water	9012B	460-525577
460-157434-8EB	Equipment Blank	T	Water	9012B	460-525577
460-157434-10	MW-2	T	Water	9012B	460-525577
460-157434-11	LMS-5	T	Water	9012B	460-525577

Client: New York State D.E.C. Job Number: 460-157434-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis
T = Total

Client: New York State D.E.C. Job Number: 460-157434-1

Surrogate Recovery Report

8260C Volatile Organic Compounds by GC/MS

Client Matrix: Water

Lab Sample ID	Client Sample ID	DCA %Rec	BFB %Rec	DBFM %Rec	TOL %Rec
460-157434-1	MW-1	102	96	101	100
460-157434-2	ERM-3	100	95	99	97
460-157434-3	LMS-4	94	92	97	95
460-157434-4	LMS-3	96	95	97	96
460-157434-5	AMS-2	97	92	98	94
460-157434-6	ERM-1	98	92	98	93
460-157434-7	MW-X	99	94	100	95
460-157434-8	Equipment Blank	100	97	99	97
460-157434-9	Trip Blank	101	97	97	97
460-157434-10	MW-2	98	94	100	96
460-157434-11	LMS-5	99	97	101	97
MB 460-525777/7		96	95	97	96
LCS 460-525777/3		96	99	101	97
460-157434-4 MS	LMS-3 MS	96	99	99	96
460-157434-4 MSD	LMS-3 MSD	94	97	100	95

Surrogate	Acceptance Limits
DCA = 1,2-Dichloroethane-d4 (Surr)	74-132
BFB = 4-Bromofluorobenzene	77-124
DBFM = Dibromofluoromethane (Surr)	72-131
TOL = Toluene-d8 (Surr)	80-120

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-525777

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-525777/7	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N672486.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 0907	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 0907				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
1,1,1-Trichloroethane	1.0	U	0.28	1.0
1,1,2,2-Tetrachloroethane	1.0	U	0.19	1.0
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	U	0.34	1.0
1,1,2-Trichloroethane	1.0	U	0.080	1.0
1,1-Dichloroethane	1.0	U	0.24	1.0
1,1-Dichloroethene	1.0	U	0.34	1.0
1,2,3-Trichlorobenzene	1.0	U	0.35	1.0
1,2,4-Trichlorobenzene	1.0	U	0.27	1.0
1,2-Dibromo-3-Chloropropane	1.0	U	0.23	1.0
1,2-Dichlorobenzene	1.0	U	0.22	1.0
1,2-Dichloroethane	1.0	U	0.25	1.0
1,2-Dichloropropane	1.0	U	0.18	1.0
1,3-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dichlorobenzene	1.0	U	0.33	1.0
1,4-Dioxane	50	U	8.7	50
2-Butanone (MEK)	5.0	U	2.2	5.0
2-Hexanone	5.0	U	0.72	5.0
4-Methyl-2-pentanone (MIBK)	5.0	U	0.63	5.0
Acetone	5.0	U	1.1	5.0
Benzene	1.0	U	0.090	1.0
Bromoform	1.0	U	0.18	1.0
Bromomethane	1.0	U	0.18	1.0
Carbon disulfide	1.0	U	0.22	1.0
Carbon tetrachloride	1.0	U	0.33	1.0
Chlorobenzene	1.0	U	0.24	1.0
Chlorobromomethane	1.0	U	0.30	1.0
Chlorodibromomethane	1.0	U	0.22	1.0
Chloroethane	1.0	U	0.37	1.0
Chloroform	1.0	U	0.22	1.0
Chloromethane	1.0	U	0.22	1.0
cis-1,2-Dichloroethene	1.0	U	0.26	1.0
cis-1,3-Dichloropropene	1.0	U	0.16	1.0
Cyclohexane	1.0	U	0.26	1.0
Dichlorobromomethane	1.0	U	0.15	1.0
Dichlorodifluoromethane	1.0	U	0.14	1.0
Ethylbenzene	1.0	U	0.30	1.0
Ethylene Dibromide	1.0	U	0.19	1.0
Isopropylbenzene	1.0	U	0.32	1.0
Methyl acetate	5.0	U	0.58	5.0
Methyl tert-butyl ether	1.0	U	0.13	1.0
Methylcyclohexane	1.0	U	0.22	1.0
Methylene Chloride	1.0	U	0.21	1.0
m-Xylene & p-Xylene	1.0	U	0.28	1.0
o-Xylene	1.0	U	0.32	1.0
Styrene	1.0	U	0.17	1.0

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-525777

Method: 8260C
Preparation: 5030C

Lab Sample ID:	MB 460-525777/7	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N672486.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 0907	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 0907				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Tetrachloroethene	1.0	U	0.12	1.0
Toluene	1.0	U	0.25	1.0
trans-1,2-Dichloroethene	1.0	U	0.18	1.0
trans-1,3-Dichloropropene	1.0	U	0.19	1.0
Trichloroethene	1.0	U	0.22	1.0
Trichlorofluoromethane	1.0	U	0.15	1.0
Vinyl chloride	1.0	U	0.060	1.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	74 - 132
4-Bromofluorobenzene	95	77 - 124
Dibromofluoromethane (Surr)	97	72 - 131
Toluene-d8 (Surr)	96	80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Control Sample - Batch: 460-525777

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 460-525777/3	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N672482.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 0735	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 0735				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
1,1,1-Trichloroethane	20.0	20.0	100	75 - 125	
1,1,2,2-Tetrachloroethane	20.0	18.0	90	74 - 120	
1,1,2-Trichloro-1,2,2-trifluoroethane	20.0	20.3	102	59 - 150	
1,1,2-Trichloroethane	20.0	19.8	99	78 - 120	
1,1-Dichloroethane	20.0	20.0	100	77 - 123	
1,1-Dichloroethene	20.0	19.9	100	74 - 123	
1,2,3-Trichlorobenzene	20.0	20.0	100	78 - 131	
1,2,4-Trichlorobenzene	20.0	19.8	99	80 - 124	
1,2-Dibromo-3-Chloropropane	20.0	17.4	87	55 - 134	
1,2-Dichlorobenzene	20.0	20.6	103	80 - 120	
1,2-Dichloroethane	20.0	19.0	95	76 - 121	
1,2-Dichloropropane	20.0	20.7	103	77 - 123	
1,3-Dichlorobenzene	20.0	20.2	101	80 - 120	
1,4-Dichlorobenzene	20.0	21.2	106	80 - 120	
1,4-Dioxane	400	381	95	10 - 150	
2-Butanone (MEK)	100	105	105	64 - 120	
2-Hexanone	100	101	101	71 - 125	
4-Methyl-2-pentanone (MIBK)	100	99.7	100	78 - 124	
Acetone	100	111	111	39 - 150	
Benzene	20.0	20.0	100	77 - 121	
Bromoform	20.0	17.6	88	53 - 120	
Bromomethane	20.0	20.6	103	10 - 150	
Carbon disulfide	20.0	19.6	98	69 - 133	
Carbon tetrachloride	20.0	19.6	98	70 - 132	
Chlorobenzene	20.0	20.3	102	80 - 120	
Chlorobromomethane	20.0	20.8	104	77 - 127	
Chlorodibromomethane	20.0	18.6	93	73 - 120	
Chloroethane	20.0	21.5	107	52 - 150	
Chloroform	20.0	19.8	99	80 - 120	
Chloromethane	20.0	23.6	118	56 - 131	
cis-1,2-Dichloroethene	20.0	20.7	103	80 - 120	
cis-1,3-Dichloropropene	20.0	19.5	98	77 - 120	
Cyclohexane	20.0	18.4	92	56 - 150	
Dichlorobromomethane	20.0	20.0	100	76 - 120	
Dichlorodifluoromethane	20.0	19.6	98	50 - 131	
Ethylbenzene	20.0	20.3	102	80 - 120	
Ethylene Dibromide	20.0	19.5	97	80 - 120	
Isopropylbenzene	20.0	19.3	96	80 - 123	
Methyl acetate	40.0	42.3	106	66 - 144	
Methyl tert-butyl ether	20.0	19.7	99	79 - 122	
Methylcyclohexane	20.0	19.5	97	61 - 145	

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Control Sample - Batch: 460-525777

Method: 8260C
Preparation: 5030C

Lab Sample ID:	LCS 460-525777/3	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N672482.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 0735	Units:	ug/L	Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 0735				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Methylene Chloride	20.0	19.2	96	77 - 123	
m-Xylene & p-Xylene	20.0	20.2	101	80 - 120	
o-Xylene	20.0	19.5	98	80 - 120	
Styrene	20.0	19.8	99	80 - 120	
Tetrachloroethene	20.0	18.9	95	78 - 122	
Toluene	20.0	19.2	96	80 - 120	
trans-1,2-Dichloroethene	20.0	19.9	99	79 - 120	
trans-1,3-Dichloropropene	20.0	19.3	96	76 - 120	
Trichloroethene	20.0	20.1	100	77 - 120	
Trichlorofluoromethane	20.0	20.0	100	71 - 143	
Vinyl chloride	20.0	21.1	106	62 - 138	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	74 - 132
4-Bromofluorobenzene	99	77 - 124
Dibromofluoromethane (Surr)	101	72 - 131
Toluene-d8 (Surr)	97	80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-525777

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	460-157434-4	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N672495.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1233			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1233				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	460-157434-4	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N672496.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1256			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1256				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
1,1,1-Trichloroethane	91	104	75 - 125	13	30		
1,1,2,2-Tetrachloroethane	90	88	74 - 120	3	30		
1,1,2-Trichloro-1,2,2-trifluoroethane	95	107	59 - 150	11	30		
1,1,2-Trichloroethane	89	88	78 - 120	1	30		
1,1-Dichloroethane	95	101	77 - 123	6	30		
1,1-Dichloroethene	94	99	74 - 123	5	30		
1,2,3-Trichlorobenzene	88	94	78 - 131	7	30		
1,2,4-Trichlorobenzene	90	96	80 - 124	6	30		
1,2-Dibromo-3-Chloropropane	79	82	55 - 134	5	30		
1,2-Dichlorobenzene	90	97	80 - 120	8	30		
1,2-Dichloroethane	88	93	76 - 121	6	30		
1,2-Dichloropropane	94	103	77 - 123	9	30		
1,3-Dichlorobenzene	89	97	80 - 120	9	30		
1,4-Dichlorobenzene	94	101	80 - 120	7	30		
1,4-Dioxane	88	88	10 - 150	0	30		
2-Butanone (MEK)	99	106	64 - 120	7	30		
2-Hexanone	96	105	71 - 125	10	30		
4-Methyl-2-pentanone (MIBK)	95	104	78 - 124	9	30		
Acetone	86	93	39 - 150	7	30		
Benzene	92	95	77 - 121	4	30		
Bromoform	87	88	53 - 120	1	30		
Bromomethane	110	120	10 - 150	8	30		
Carbon disulfide	93	101	69 - 133	8	30		
Carbon tetrachloride	94	99	70 - 132	5	30		
Chlorobenzene	94	101	80 - 120	7	30		
Chlorobromomethane	87	95	77 - 127	8	30		
Chlorodibromomethane	90	92	73 - 120	2	30		
Chloroethane	117	119	52 - 150	1	30		
Chloroform	91	102	80 - 120	12	30		
Chloromethane	109	131	56 - 131	18	30		
cis-1,2-Dichloroethene	91	100	80 - 120	10	30		
cis-1,3-Dichloropropene	88	91	77 - 120	3	30		

Client: New York State D.E.C. Job Number: 460-157434-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-525777

Method: 8260C
Preparation: 5030C

MS Lab Sample ID:	460-157434-4	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N672495.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1233			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1233				5 mL
Leach Date:	N/A				

MSD Lab Sample ID:	460-157434-4	Analysis Batch:	460-525777	Instrument ID:	CVOAMS11
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N672496.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5 mL
Analysis Date:	06/07/2018 1256			Final Weight/Volume:	5 mL
Prep Date:	06/07/2018 1256				5 mL
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyclohexane	84	95	56 - 150	12	30		
Dichlorobromomethane	89	97	76 - 120	8	30		
Dichlorodifluoromethane	87	96	50 - 131	10	30		
Ethylbenzene	92	97	80 - 120	6	30		
Ethylene Dibromide	89	93	80 - 120	5	30		
Isopropylbenzene	91	99	80 - 123	8	30		
Methyl acetate	94	109	66 - 144	15	30		
Methyl tert-butyl ether	91	97	79 - 122	6	30		
Methylcyclohexane	92	100	61 - 145	8	30		
Methylene Chloride	88	95	77 - 123	8	30		
m-Xylene & p-Xylene	92	97	80 - 120	6	30		
o-Xylene	90	98	80 - 120	8	30		
Styrene	91	92	80 - 120	1	30		
Tetrachloroethene	90	96	78 - 122	6	30		
Toluene	89	94	80 - 120	6	30		
trans-1,2-Dichloroethene	89	99	79 - 120	11	30		
trans-1,3-Dichloropropene	89	93	76 - 120	5	30		
Trichloroethene	91	99	77 - 120	8	30		
Trichlorofluoromethane	97	106	71 - 143	9	30		
Vinyl chloride	97	104	62 - 138	7	30		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	94	74 - 132
4-Bromofluorobenzene	99	97	77 - 124
Dibromofluoromethane (Surr)	99	100	72 - 131
Toluene-d8 (Surr)	96	95	80 - 120

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-526088

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-526088/1-A	Analysis Batch:	460-526285	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-526088	Lab File ID:	525928D1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2018 1541	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/07/2018 2205				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	200	U	7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	5000	U	222	5000
Chromium	10.0	U	1.3	10.0
Cobalt	50.0	U	1.7	50.0
Copper	25.0	U	5.1	25.0
Iron	150	U	34.2	150
Lead	10.0	U	2.5	10.0
Magnesium	5000	U	177	5000
Manganese	15.0	U	0.99	15.0
Nickel	40.0	U	1.7	40.0
Potassium	5000	U	323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	5000	U	460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	50.0	U	2.5	50.0
Zinc	30.0	U	3.6	30.0

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Control Sample - Batch: 460-526088

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-526088/2-A	Analysis Batch:	460-526285	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-526088	Lab File ID:	525928D1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2018 1658	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/07/2018 2205				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	1953	98	80 - 120	
Antimony	500	462.8	93	80 - 120	
Arsenic	2000	1892	95	80 - 120	
Barium	2000	2129	106	80 - 120	
Beryllium	50.0	47.81	96	80 - 120	
Cadmium	50.0	50.94	102	80 - 120	
Calcium	20000	20550	103	80 - 120	
Chromium	200	208.3	104	80 - 120	
Cobalt	500	542.2	108	80 - 120	
Copper	250	243.6	97	80 - 120	
Iron	1000	971.0	97	80 - 120	
Lead	500	538.4	108	80 - 120	
Magnesium	20000	20520	103	80 - 120	
Manganese	500	538.1	108	80 - 120	
Nickel	500	528.9	106	80 - 120	
Potassium	20000	18540	93	80 - 120	
Selenium	2000	1959	98	80 - 120	
Silver	50.0	47.84	96	80 - 120	
Sodium	20000	19420	97	80 - 120	
Thallium	2000	2318	116	80 - 120	
Vanadium	500	532.5	107	80 - 120	
Zinc	500	525.3	105	80 - 120	

Client: New York State D.E.C. Job Number: 460-157434-1

Matrix Spike - Batch: 460-526088

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-157434-4	Analysis Batch:	460-526285	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-526088	Lab File ID:	525928D1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2018 1552	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/07/2018 2205				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	506		2000	2570	103	75 - 125	
Antimony	20.0	U	500	472.5	95	75 - 125	
Arsenic	15.0	U	2000	1944	97	75 - 125	
Barium	136	J	2000	2249	106	75 - 125	
Beryllium	2.0	U	50.0	47.92	96	75 - 125	
Cadmium	0.42	J	50.0	50.78	101	75 - 125	
Calcium	58900		20000	82350	117	75 - 125	
Chromium	6.5	J	200	214.3	104	75 - 125	
Cobalt	50.0	U	500	538.3	108	75 - 125	
Copper	6.9	J	250	250.6	97	75 - 125	
Iron	537		1000	1480	94	75 - 125	
Lead	10.0	U	500	527.9	106	75 - 125	
Magnesium	3310	J	20000	23430	101	75 - 125	
Manganese	12.2	J	500	541.7	106	75 - 125	
Nickel	40.0	U	500	521.1	104	75 - 125	
Potassium	6930		20000	26240	97	75 - 125	
Selenium	20.0	U	2000	2010	101	75 - 125	
Silver	10.0	U	50.0	48.30	97	75 - 125	
Sodium	79800		20000	103600	119	75 - 125	
Thallium	20.0	U	2000	2263	113	75 - 125	
Vanadium	50.0	U	500	533.0	107	75 - 125	
Zinc	38.9		500	559.9	104	75 - 125	

Client: New York State D.E.C. Job Number: 460-157434-1

Duplicate - Batch: 460-526088

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-157434-4	Analysis Batch:	460-526285	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-526088	Lab File ID:	525928D1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/08/2018 1556	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/07/2018 2205				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	506		523.4	3	20	
Antimony	20.0	U	20.0	NC	20	U
Arsenic	15.0	U	15.0	NC	20	U
Barium	136	J	139.3	2	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	0.42	J	0.497	17	20	J
Calcium	58900		60450	3	20	
Chromium	6.5	J	7.40	13	20	J
Cobalt	50.0	U	50.0	NC	20	U
Copper	6.9	J	6.54	5	20	J
Iron	537		528.9	2	20	
Lead	10.0	U	10.0	NC	20	U
Magnesium	3310	J	3356	1	20	J
Manganese	12.2	J	12.10	0.9	20	J
Nickel	40.0	U	40.0	NC	20	U
Potassium	6930		7204	4	20	
Selenium	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Sodium	79800		81700	2	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	38.9		39.30	1	20	

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-526450

Method: 6010C
Preparation: 3010A

Lab Sample ID:	MB 460-526450/1-A	Analysis Batch:	460-527484	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-526450	Lab File ID:	527386D1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/13/2018 1620	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Aluminum	200	U	28.6	200
Antimony	20.0	U	2.9	20.0
Arsenic	15.0	U	2.7	15.0
Barium	200	U	7.7	200
Beryllium	2.0	U	0.23	2.0
Cadmium	4.0	U	0.22	4.0
Calcium	5000	U	222	5000
Chromium	10.0	U	1.3	10.0
Cobalt	50.0	U	1.7	50.0
Copper	25.0	U	5.1	25.0
Iron	150	U	34.2	150
Lead	10.0	U	2.5	10.0
Magnesium	5000	U	177	5000
Manganese	15.0	U	0.99	15.0
Nickel	40.0	U	1.7	40.0
Potassium	5000	U	323	5000
Selenium	20.0	U	6.6	20.0
Silver	10.0	U	1.1	10.0
Sodium	5000	U	460	5000
Thallium	20.0	U	5.4	20.0
Vanadium	50.0	U	2.5	50.0
Zinc	30.0	U	3.6	30.0

Client: New York State D.E.C. Job Number: 460-157434-1

Lab Control Sample - Batch: 460-526450

Method: 6010C
Preparation: 3010A

Lab Sample ID:	LCS 460-526450/2-A	Analysis Batch:	460-526636	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2018 1309	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	2000	2113	106	80 - 120	
Antimony	500	512.7	103	80 - 120	
Arsenic	2000	2020	101	80 - 120	
Barium	2000	2226	111	80 - 120	
Beryllium	50.0	52.67	105	80 - 120	
Cadmium	50.0	55.17	110	80 - 120	
Calcium	20000	21580	108	80 - 120	
Chromium	200	228.4	114	80 - 120	
Cobalt	500	559.0	112	80 - 120	
Copper	250	260.8	104	80 - 120	
Iron	1000	1055	106	80 - 120	
Lead	500	556.3	111	80 - 120	
Magnesium	20000	21140	106	80 - 120	
Manganese	500	568.9	114	80 - 120	
Nickel	500	552.3	110	80 - 120	
Potassium	20000	20040	100	80 - 120	
Selenium	2000	2044	102	80 - 120	
Silver	50.0	52.21	104	80 - 120	
Sodium	20000	20580	103	80 - 120	
Thallium	2000	2337	117	80 - 120	
Vanadium	500	554.5	111	80 - 120	
Zinc	500	567.2	113	80 - 120	

Client: New York State D.E.C. Job Number: 460-157434-1

Matrix Spike - Batch: 460-526450

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-157549-P-1-C MS	Analysis Batch:	460-526636	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2018 1238	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	200	U	2000	2132	107	75 - 125	
Antimony	20.0	U	500	519.1	104	75 - 125	
Arsenic	15.0	U	2000	2055	103	75 - 125	
Barium	36.5	J	2000	2236	110	75 - 125	
Beryllium	2.0	U	50.0	52.71	105	75 - 125	
Cadmium	4.0	U	50.0	53.90	108	75 - 125	
Calcium	56100		20000	79140	115	75 - 125	
Chromium	10.0	U	200	223.0	112	75 - 125	
Cobalt	50.0	U	500	550.3	110	75 - 125	
Copper	25.0	U	250	264.8	106	75 - 125	
Iron	11300		1000	12540	125	75 - 125	4
Lead	3.8	J	500	550.2	109	75 - 125	
Magnesium	8510		20000	29320	104	75 - 125	
Manganese	46.8		500	605.2	112	75 - 125	
Nickel	40.0	U	500	541.3	108	75 - 125	
Potassium	4720	J	20000	25370	103	75 - 125	
Selenium	20.0	U	2000	2058	103	75 - 125	
Silver	10.0	U	50.0	52.44	105	75 - 125	
Sodium	82300		20000	106300	120	75 - 125	4
Thallium	20.0	U	2000	2261	113	75 - 125	
Vanadium	50.0	U	500	549.9	110	75 - 125	
Zinc	30.0	U	500	556.6	111	75 - 125	

Client: New York State D.E.C. Job Number: 460-157434-1

Duplicate - Batch: 460-526450

Method: 6010C
Preparation: 3010A

Lab Sample ID:	460-157549-P-1-B DU	Analysis Batch:	460-526636	Instrument ID:	ICP5
Client Matrix:	Water	Prep Batch:	460-526450	Lab File ID:	526448D1.asc
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	06/10/2018 1241	Units:	ug/L	Final Weight/Volume:	50 mL
Prep Date:	06/09/2018 0055				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Aluminum	200	U	200	NC	20	U
Antimony	20.0	U	20.0	NC	20	U
Arsenic	15.0	U	15.0	NC	20	U
Barium	36.5	J	37.96	4	20	J
Beryllium	2.0	U	2.0	NC	20	U
Cadmium	4.0	U	4.0	NC	20	U
Calcium	56100		58380	4	20	
Chromium	10.0	U	10.0	NC	20	U
Cobalt	50.0	U	50.0	NC	20	U
Copper	25.0	U	25.0	NC	20	U
Iron	11300		11780	4	20	
Lead	3.8	J	3.32	12	20	J
Magnesium	8510		8891	4	20	
Manganese	46.8		48.86	4	20	
Nickel	40.0	U	40.0	NC	20	U
Potassium	4720	J	4902	4	20	J
Selenium	20.0	U	20.0	NC	20	U
Silver	10.0	U	10.0	NC	20	U
Sodium	82300		84700	3	20	
Thallium	20.0	U	20.0	NC	20	U
Vanadium	50.0	U	50.0	NC	20	U
Zinc	30.0	U	30.0	NC	20	U

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-526829

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 460-526829/1-A	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1346	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.12	0.20

Lab Control Sample - Batch: 460-526829

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-526829/2-A	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1347	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.910	91	80 - 120	

Matrix Spike - Batch: 460-526829

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-157434-4	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1352	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	1.00	100	75 - 125	

Client: New York State D.E.C. Job Number: 460-157434-1

Duplicate - Batch: 460-526829

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-157434-4	Analysis Batch:	460-526893	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-526829	Lab File ID:	526829hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/11/2018 1351	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/11/2018 1210				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-527160

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 460-527160/1-A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-527160	Lab File ID:	527160hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1342	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1221				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.12	0.20

Lab Control Sample - Batch: 460-527160

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-527160/2-A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-527160	Lab File ID:	527160hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1344	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1221				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.926	93	80 - 120	

Matrix Spike - Batch: 460-527160

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-158047-E-1-D MS	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-527160	Lab File ID:	527160hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1349	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1221				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	1.01	101	75 - 125	

Client: New York State D.E.C. Job Number: 460-157434-1

Duplicate - Batch: 460-527160

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-158047-E-1-C DU	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-527160	Lab File ID:	527160hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1347	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1221				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-527168

Method: 7470A
Preparation: 7470A

Lab Sample ID:	MB 460-527168/1-A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-527168	Lab File ID:	527160hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1441	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1249				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	0.20	U	0.12	0.20

Lab Control Sample - Batch: 460-527168

Method: 7470A
Preparation: 7470A

Lab Sample ID:	LCS 460-527168/2-A	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-527168	Lab File ID:	527160hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1442	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1249				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	1.00	0.936	94	80 - 120	

Matrix Spike - Batch: 460-527168

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-157883-E-4-D MS	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-527168	Lab File ID:	527160hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1447	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1249				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.20	U	1.00	0.812	81	75 - 125	

Client: New York State D.E.C. Job Number: 460-157434-1

Duplicate - Batch: 460-527168

Method: 7470A
Preparation: 7470A

Lab Sample ID:	460-157883-A-4-B DU	Analysis Batch:	460-527218	Instrument ID:	LEEMAN6
Client Matrix:	Water	Prep Batch:	460-527168	Lab File ID:	527160hg1.CSV
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	06/12/2018 1446	Units:	ug/L	Final Weight/Volume:	30 mL
Prep Date:	06/12/2018 1249				
Leach Date:	N/A				

Analyte	Sample Result/Qual		Result	RPD	Limit	Qual
Mercury	0.20	U	0.20	NC	20	U

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-525268

Method: 9012B
Preparation: 9012B

Lab Sample ID:	MB 460-525268/1-A	Analysis Batch:	460-525592	Instrument ID:	Lachat3
Client Matrix:	Water	Prep Batch:	460-525268	Lab File ID:	OM_6-6-2018_10-05-17
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6 mL
Analysis Date:	06/06/2018 1121	Units:	mg/L	Final Weight/Volume:	6 mL
Prep Date:	06/05/2018 1050				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	0.010	U	0.0020	0.010

Lab Control Sample - Batch: 460-525268

Method: 9012B
Preparation: 9012B

Lab Sample ID:	LCS 460-525268/2-A	Analysis Batch:	460-525592	Instrument ID:	Lachat3
Client Matrix:	Water	Prep Batch:	460-525268	Lab File ID:	OM_6-6-2018_10-05-17
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6 mL
Analysis Date:	06/06/2018 1122	Units:	mg/L	Final Weight/Volume:	6 mL
Prep Date:	06/05/2018 1050				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.100	0.106	106	85 - 115	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-525268

Method: 9012B
Preparation: 9012B

MS Lab Sample ID:	460-157349-D-6-B MS	Analysis Batch:	460-525592	Instrument ID:	Lachat3
Client Matrix:	Water	Prep Batch:	460-525268	Lab File ID:	OM_6-6-2018_10-05-17
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6 mL
Analysis Date:	06/06/2018 1141			Final Weight/Volume:	6 mL
Prep Date:	06/05/2018 1050				
Leach Date:	N/A				

MSD Lab Sample ID:	460-157349-D-6-C MSD	Analysis Batch:	460-525592	Instrument ID:	Lachat3
Client Matrix:	Water	Prep Batch:	460-525268	Lab File ID:	OM_6-6-2018_10-05-17
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6 mL
Analysis Date:	06/06/2018 1142			Final Weight/Volume:	6 mL
Prep Date:	06/05/2018 1050				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	101	107	90 - 110	4	20		

Client: New York State D.E.C. Job Number: 460-157434-1

Method Blank - Batch: 460-525577

Method: 9012B
Preparation: 9012B

Lab Sample ID:	MB 460-525577/1-A	Analysis Batch:	460-526300	Instrument ID:	Lachat3
Client Matrix:	Water	Prep Batch:	460-525577	Lab File ID:	OM_6-8-2018_12-12-30
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.0 mL
Analysis Date:	06/08/2018 1259	Units:	mg/L	Final Weight/Volume:	6.0 mL
Prep Date:	06/06/2018 1214				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Cyanide, Total	0.00373	J	0.0024	0.012

Lab Control Sample - Batch: 460-525577

Method: 9012B
Preparation: 9012B

Lab Sample ID:	LCS 460-525577/2-A	Analysis Batch:	460-526300	Instrument ID:	Lachat3
Client Matrix:	Water	Prep Batch:	460-525577	Lab File ID:	OM_6-8-2018_12-12-30
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	5.0 mL
Analysis Date:	06/08/2018 1300	Units:	mg/L	Final Weight/Volume:	6.0 mL
Prep Date:	06/06/2018 1214				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Cyanide, Total	0.120	0.119	99	85 - 115	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 460-525577

Method: 9012B
Preparation: 9012B

MS Lab Sample ID:	460-157434-4	Analysis Batch:	460-526300	Instrument ID:	Lachat3
Client Matrix:	Water	Prep Batch:	460-525577	Lab File ID:	OM_6-8-2018_12-12-30
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6.0 mL
Analysis Date:	06/08/2018 1313			Final Weight/Volume:	6.0 mL
Prep Date:	06/06/2018 1214				
Leach Date:	N/A				

MSD Lab Sample ID:	460-157434-4	Analysis Batch:	460-526300	Instrument ID:	Lachat3
Client Matrix:	Water	Prep Batch:	460-525577	Lab File ID:	OM_6-8-2018_12-12-30
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	6.0 mL
Analysis Date:	06/08/2018 1314			Final Weight/Volume:	6.0 mL
Prep Date:	06/06/2018 1214				
Leach Date:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Cyanide, Total	95	94	90 - 110	1	20		

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

Chain of Custody Record

NYSC 460501

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: BCC HS	Lab PM: Haas, Melissa	Carrier Tracking No(s):	COC No: 460-97630-62083.2
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations				Job #: 157434
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:	Analysis Requested		Preservation Codes: A - HCL M - Hexane B - NaOH N - None
City: Patchogue	TAT Requested (days): 10 days			
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027	Project #: 46013163			
Site:	SSOW#:			Other:

460-157434 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8260C - TCL VOCs + 10 TICs (SOM01.2)	6010C, 7470A - TAL Metals	9012B - Cyanide, Total	Total Number of co	Special Instructions/Note:
			Preservation Code:			A	D	B		
MW-1	5/31/18	0915	G	Water	N	X	X	X	7	1
ERM-3		1050		Water	N				2	2
LMS-4		1135		Water	N				2	3
LMS-3		1235		Water	Y				3	4
AMS-2		1445		Water	N				2	5
ERM-1		1350		Water	N				2	6
MW-X		—		Water	N				2	7
Equipment Blank		1335		Water	N				7	8
Trip Blank		1500		Water	N				3	9
				Water						
				Water						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **NY Cat A**

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/31/18 1700	EAR	EAR Fridge	5/31/18 1700	EAR
EAR SAMPLE FRIDGE	6-01-18 1117	EAR	WILLIAM A. Vigliotta	6-01-18 1117	EAR
WILLIAM A. Vigliotta	6-01-18 1117	EAR	[signature]	6/1/18 11:20	EAR

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

03 6-1-18 1500 — 6/1/18 1830 — 6/1/18 1200 — 24/LB FRA ((NO Cx

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

Chain of Custody Record

NYSC 460501

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: BCC HS	Lab PM: Haas, Melissa	Carrier Tracking No(s):	COC No: 460-97630-62083.1
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations		Analysis Requested		Job #: 157434
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:			Preservation Codes:
City: Patchogue	TAT Requested (days): 10 days			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			Other:
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027	Project #: 46013163			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8270D_SIM_MS_ID - 1,4-Dioxane (GC/MS SIM Isotope Dil	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N	N		
MW-1	5/31/18	0915	G	Water	N	X		1
ERM-3		1050		Water	N			2
LMS-4		1135		Water	N			3
LMS-3		1235		Water	Y			4
AMS-2		1445		Water	N			5
ERM-1		1350		Water	N			6
MW-X		—		Water	N			7
Equipment Blank	↓	1335	↓	Water	N	↓		8
				Water				
				Water				
				Water				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **NY Cat B**

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Blake Cuthbert	5/31/18 1700	EAR	EAR Fridge	5/31/18 1700	EAR
EAR SAMPLE FRIDGE	6-01-18 1117	EAR	William A. Vigliotta	6-01-18 1117	EAR
William A. Vigliotta	6-01-18 1117	EAR		6/1/18 1125	VA

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks:

OS 6-1-18 1500 — 6/1/12 18.00 2.8 — 6/1/18 1800

Ver: 08/04/2016

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

1/2 coolers

Chain of Custody Record

NYSC 460501

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: EAR-DG/EL	Lab PM: Haas, Melissa	Carrier Tracking No(s):	COC No: 460-97630-62083.2
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations				Job #: 57434
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:			
City: Patchogue	TAT Requested (days): 10 days			
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027	Project #: 46013163			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8260C - TCL VOCs + 10 TICs (SOM01.2)	6010C, 7470A - TAL Metals	9012B - Cyanide, Total	Total Number of containers	Special Instructions/Note:
			Preservation Code				A	D	B		
MW-2	5/31/18	0915	G	Water		N	X	X	X		10
LMS-5	5/31/18	1016	G	Water		N	X	X	X		11
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							
				Water							

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **NY Cat A**

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
DG	5/31/18 / 1330	EAR	EAR SAMPLE FRIDGE	5/31/18 / 1330	EAR
EAR SAMPLE FRIDGE	6-01-18 11:17	EAR	WILLIAM A. VIGLIOTTA	6-01-18 1117	EAR
WILLIAM A. VIGLIOTTA	6-01-18 11:17	EAR.	OS	6/1/18 1126	TB

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

OS 6-7-18 / 1500 — 6/1/18 18:00 [signature] 06/1/18 1800 TA EA

Ver: 08/04/2016

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

Chain of Custody Record

NYSC

TestAmerica
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Client Information	Sampler: EAR-DG/EL	Lab PM: Haas, Melissa	Carrier Tracking No(s): 460501	COC No: 460-97630-62083.1
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations		Analysis Requested		Job #: 157434
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:			Preservation Codes:
City: Patchogue	TAT Requested (days): 10 days			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			Other:
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027	Project #: 46013163			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	8270D_SIM_MS_ID - 1,4-Dioxane (GC/MS SIM Isotope Dil	Total Number of containers	Special Instructions/Note:
MW-2	5/31/18	0915	G	Water		N	X		10
LMS-5	5/31/18	1016	G	Water		N	X		11
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					
				Water					

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **NY Cat B**

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
DG	5/31/18/1330	EAR	EAR SAMPLE FRIDGE	5/31/18/1330	EAR
EAR SAMPLE FRIDGE	6-01-18 11:17	EAR	WILLIAM A. VIGLIOTTA	6-01-18 11:17	EAR
WILLIAM A. VIGLIOTTA	6-01-18 11:17	EAR		6/1/18/1120	

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

DS 6-1-18 1500 — 6/1/18 17:00 — 6/1/18 1800

Ver: 08/04/2016

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 157434

Number of Coolers: 1 IR Gun # 11

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	2.8 °C	2.8 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1				<2								>12			
2				<2								>12			
3				<2								>12			
4				<2								>12			
4DUP(MS)				<2								>12			
4MS				<2								>12			
5				<2								>12			
6				<2								>12			
7				<2								>12			
8				<2								>12			
10				<2								>12			
11				<2								>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: _____ **Date:** 6/1/18

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 460-157434-1

Login Number: 157434
List Number: 1
Creator: Rivera, Kenneth

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Job Number: 460-157434-2

Job Description: DEC-HICKSVILLE270 Site:130027

Contract Number: C008010

For:
New York State D.E.C.
625 Broadway
12th Floor
Albany, NY 12233-7017

Attention: Carl Hoffman

Melissa Haas

Approved for release.
Melissa Haas
Project Manager I
6/6/2018 6:26 AM

Melissa Haas, Project Manager I
777 New Durham Road, Edison, NJ, 08817
(203)944-1310
melissa.haas@testamericainc.com
06/06/2018

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

Job Number: 460-157434-2

Job Description: DEC-HICKSVILLE270 Site:130027

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Approved for release.
Melissa Haas
Project Manager I
6/6/2018 6:26 AM

Melissa Haas

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CASE NARRATIVE

Client: New York State D.E.C.

Project: DEC-HICKSVILLE270 Site:130027

Report Number: 460-157434-2

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT

The samples were received on 06/01/2018; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.8 C.

Receipt Exceptions

Due to different deliverable requirements, the 1,4-Dioxane samples were moved to a -2 job number to be reported separately from all other methods.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

8270D, SIM, ISOTOPE DILUTION

Samples MW-1 (460-157434-1), ERM-3 (460-157434-2), LMS-4 (460-157434-3), LMS-3 (460-157434-4), AMS-2 (460-157434-5), ERM-1 (460-157434-6), MW-X (460-157434-7), Equipment Blank (460-157434-8), MW-2 (460-157434-10) and LMS-5 (460-157434-11) were analyzed for 8270D, SIM, Isotope Dilution in accordance with 8270D. The samples were prepared and analyzed on 06/05/2018.

No difficulties were encountered during the 8270D, SIM, Isotope Dilution analysis.

All quality control parameters were within the acceptance limits.

Sample Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 460-157434-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-157434-1	MW-1	Water	05/31/18 09:15	06/01/18 18:00
460-157434-2	ERM-3	Water	05/31/18 10:50	06/01/18 18:00
460-157434-3	LMS-4	Water	05/31/18 11:35	06/01/18 18:00
460-157434-4	LMS-3	Water	05/31/18 12:35	06/01/18 18:00
460-157434-5	AMS-2	Water	05/31/18 14:45	06/01/18 18:00
460-157434-6	ERM-1	Water	05/31/18 13:50	06/01/18 18:00
460-157434-7	MW-X	Water	05/31/18 00:00	06/01/18 18:00
460-157434-8	Equipment Blank	Water	05/31/18 13:35	06/01/18 18:00
460-157434-10	MW-2	Water	05/31/18 09:15	06/01/18 18:00
460-157434-11	LMS-5	Water	05/31/18 10:16	06/01/18 18:00

Detection Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 460-157434-2

Client Sample ID: MW-1 — Lab Sample ID: 460-157434-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.50		0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: ERM-3 — Lab Sample ID: 460-157434-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.13	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: LMS-4 — Lab Sample ID: 460-157434-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.054	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: LMS-3 — Lab Sample ID: 460-157434-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.031	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: AMS-2 — Lab Sample ID: 460-157434-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.064	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: ERM-1 — Lab Sample ID: 460-157434-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.025	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: MW-X — Lab Sample ID: 460-157434-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.14	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: Equipment Blank — Lab Sample ID: 460-157434-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.14	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 460-157434-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.065	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

Client Sample ID: LMS-5 — Lab Sample ID: 460-157434-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	0.042	J	0.20	0.016	ug/L	1		8270D SIM ID	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 460-157434-2

Method	Method Description	Protocol	Laboratory
8270D SIM ID	Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)	SW846	TAL EDI
3510C	Liquid-Liquid Extraction (Separatory Funnel)	SW846	TAL EDI

Protocol References:

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

Laboratory References:

TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Client Sample ID: MW-1
Date Collected: 05/31/18 09:15
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-1
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.50		0.20	0.016	ug/L		06/05/18 08:01	06/05/18 19:13	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*38*		*10 - 150*	*06/05/18 08:01*	*06/05/18 19:13*	*1*

Client Sample ID: ERM-3
Date Collected: 05/31/18 10:50
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-2
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.13	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 19:31	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*39*		*10 - 150*	*06/05/18 08:01*	*06/05/18 19:31*	*1*

Client Sample ID: LMS-4
Date Collected: 05/31/18 11:35
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-3
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.054	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 19:49	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*41*		*10 - 150*	*06/05/18 08:01*	*06/05/18 19:49*	*1*

Client Sample ID: LMS-3
Date Collected: 05/31/18 12:35
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-4
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.031	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 16:33	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*39*		*10 - 150*	*06/05/18 08:01*	*06/05/18 16:33*	*1*

Client Sample ID: AMS-2
Date Collected: 05/31/18 14:45
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-5
Matrix: Water

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.064	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 17:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*34*		*10 - 150*	*06/05/18 08:01*	*06/05/18 17:27*	*1*

Client Sample ID: ERM-1
Lab Sample ID: 460-157434-6
Date Collected: 05/31/18 13:50
Matrix: Water
Date Received: 06/01/18 18:00

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.025	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 17:44	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*43*		*10 - 150*	*06/05/18 08:01*	*06/05/18 17:44*	*1*

Client Sample ID: MW-X
Lab Sample ID: 460-157434-7
Date Collected: 05/31/18 00:00
Matrix: Water
Date Received: 06/01/18 18:00

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.14	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 18:02	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*37*		*10 - 150*	*06/05/18 08:01*	*06/05/18 18:02*	*1*

Client Sample ID: Equipment Blank
Lab Sample ID: 460-157434-8
Date Collected: 05/31/18 13:35
Matrix: Water
Date Received: 06/01/18 18:00

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.14	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 18:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*36*		*10 - 150*	*06/05/18 08:01*	*06/05/18 18:20*	*1*

Client Sample ID: MW-2
Lab Sample ID: 460-157434-10
Date Collected: 05/31/18 09:15
Matrix: Water
Date Received: 06/01/18 18:00

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.065	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 18:38	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*40*		*10 - 150*	*06/05/18 08:01*	*06/05/18 18:38*	*1*

Client Sample ID: LMS-5
Lab Sample ID: 460-157434-11
Date Collected: 05/31/18 10:16
Matrix: Water
Date Received: 06/01/18 18:00

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.042	J	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 18:56	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*34*		*10 - 150*	*06/05/18 08:01*	*06/05/18 18:56*	*1*

Isotope Dilution Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 460-157434-2

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

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

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DXE (10-150)
460-157434-1	MW-1	38
460-157434-2	ERM-3	39
460-157434-3	LMS-4	41
460-157434-4	LMS-3	39
460-157434-4 MS	LMS-3	38
460-157434-4 MSD	LMS-3	30
460-157434-5	AMS-2	34
460-157434-6	ERM-1	43
460-157434-7	MW-X	37
460-157434-8	Equipment Blank	36
460-157434-10	MW-2	40
460-157434-11	LMS-5	34
MB 460-525204/1-A	Method Blank	40

Surrogate Legend

DXE = 1,4-Dioxane-d8

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

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

		Percent Isotope Dilution Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	DXE (10-200)
LCS 460-525204/2-A	Lab Control Sample	40

Surrogate Legend

DXE = 1,4-Dioxane-d8

Method: 8270D SIM ID - Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

Lab Sample ID: MB 460-525204/1-A
Matrix: Water
Analysis Batch: 525311

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525204

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.20	U	0.20	0.016	ug/L		06/05/18 08:01	06/05/18 15:57	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8	*40*		*10 - 150*	*06/05/18 08:01*	*06/05/18 15:57*	*1*

Lab Sample ID: LCS 460-525204/2-A
Matrix: Water
Analysis Batch: 525311

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525204

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			1.60	1.83		ug/L		114	10 - 200		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8	*40*		*10 - 200*

Lab Sample ID: 460-157434-4 MS
Matrix: Water
Analysis Batch: 525311

Client Sample ID: LMS-3
Prep Type: Total/NA
Prep Batch: 525204

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	0.031	J	1.60	1.66		ug/L		102	70 - 130		

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Dioxane-d8	*38*		*10 - 150*

Lab Sample ID: 460-157434-4 MSD
Matrix: Water
Analysis Batch: 525311

Client Sample ID: LMS-3
Prep Type: Total/NA
Prep Batch: 525204

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	0.031	J	1.60	1.56		ug/L		95	70 - 130	7	20

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Dioxane-d8	*30*		*10 - 150*

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
J	Indicates an estimated value.
U	Analyzed for but not detected.

Glossary

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

GC/MS Semi VOA

Prep Batch: 525204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-157434-1	MW-1	Total/NA	Water	3510C	
460-157434-2	ERM-3	Total/NA	Water	3510C	
460-157434-3	LMS-4	Total/NA	Water	3510C	
460-157434-4	LMS-3	Total/NA	Water	3510C	
460-157434-5	AMS-2	Total/NA	Water	3510C	
460-157434-6	ERM-1	Total/NA	Water	3510C	
460-157434-7	MW-X	Total/NA	Water	3510C	
460-157434-8	Equipment Blank	Total/NA	Water	3510C	
460-157434-10	MW-2	Total/NA	Water	3510C	
460-157434-11	LMS-5	Total/NA	Water	3510C	
MB 460-525204/1-A	Method Blank	Total/NA	Water	3510C	
LCS 460-525204/2-A	Lab Control Sample	Total/NA	Water	3510C	
460-157434-4 MS	LMS-3	Total/NA	Water	3510C	
460-157434-4 MSD	LMS-3	Total/NA	Water	3510C	

Analysis Batch: 525311

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
460-157434-1	MW-1	Total/NA	Water	8270D SIM ID	525204
460-157434-2	ERM-3	Total/NA	Water	8270D SIM ID	525204
460-157434-3	LMS-4	Total/NA	Water	8270D SIM ID	525204
460-157434-4	LMS-3	Total/NA	Water	8270D SIM ID	525204
460-157434-5	AMS-2	Total/NA	Water	8270D SIM ID	525204
460-157434-6	ERM-1	Total/NA	Water	8270D SIM ID	525204
460-157434-7	MW-X	Total/NA	Water	8270D SIM ID	525204
460-157434-8	Equipment Blank	Total/NA	Water	8270D SIM ID	525204
460-157434-10	MW-2	Total/NA	Water	8270D SIM ID	525204
460-157434-11	LMS-5	Total/NA	Water	8270D SIM ID	525204
MB 460-525204/1-A	Method Blank	Total/NA	Water	8270D SIM ID	525204
LCS 460-525204/2-A	Lab Control Sample	Total/NA	Water	8270D SIM ID	525204
460-157434-4 MS	LMS-3	Total/NA	Water	8270D SIM ID	525204
460-157434-4 MSD	LMS-3	Total/NA	Water	8270D SIM ID	525204

Client Sample ID: MW-1
Date Collected: 05/31/18 09:15
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 19:13	SK	TAL EDI

Client Sample ID: ERM-3
Date Collected: 05/31/18 10:50
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 19:31	SK	TAL EDI

Client Sample ID: LMS-4
Date Collected: 05/31/18 11:35
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 19:49	SK	TAL EDI

Client Sample ID: LMS-3
Date Collected: 05/31/18 12:35
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 16:33	SK	TAL EDI

Client Sample ID: AMS-2
Date Collected: 05/31/18 14:45
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 17:27	SK	TAL EDI

Client Sample ID: ERM-1
Date Collected: 05/31/18 13:50
Date Received: 06/01/18 18:00

Lab Sample ID: 460-157434-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 17:44	SK	TAL EDI

Lab Chronicle

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 460-157434-2

Client Sample ID: MW-X
Lab Sample ID: 460-157434-7
Date Collected: 05/31/18 00:00
Matrix: Water
Date Received: 06/01/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 18:02	SK	TAL EDI

Client Sample ID: Equipment Blank
Lab Sample ID: 460-157434-8
Date Collected: 05/31/18 13:35
Matrix: Water
Date Received: 06/01/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 18:20	SK	TAL EDI

Client Sample ID: MW-2
Lab Sample ID: 460-157434-10
Date Collected: 05/31/18 09:15
Matrix: Water
Date Received: 06/01/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 18:38	SK	TAL EDI

Client Sample ID: LMS-5
Lab Sample ID: 460-157434-11
Date Collected: 05/31/18 10:16
Matrix: Water
Date Received: 06/01/18 18:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			525204	06/05/18 08:01	ANM	TAL EDI
Total/NA	Analysis	8270D SIM ID		1	525311	06/05/18 18:56	SK	TAL EDI

Laboratory References:
TAL EDI = TestAmerica Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

Accreditation/Certification Summary

Client: New York State D.E.C. TestAmerica Job ID: 460-157434-2
Project/Site: DEC-HICKSVILLE270 Site:130027

Laboratory: TestAmerica Edison

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11452	04-01-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
8270D SIM ID	3510C	Water	1,4-Dioxane

8270D_SIM_MS_ID

Semivolatile Organic Compounds (GC/MS SIM / Isotope Dilution)

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rtxi-5Sil M ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DXE #
MW-1	460-157434-1	38
ERM-3	460-157434-2	39
LMS-4	460-157434-3	41
LMS-3	460-157434-4	39
AMS-2	460-157434-5	34
ERM-1	460-157434-6	43
MW-X	460-157434-7	37
Equipment Blank	460-157434-8	36
MW-2	460-157434-10	40
LMS-5	460-157434-11	34
	MB 460-525204/1-A	40
LMS-3 MS	460-157434-4 MS	38
LMS-3 MSD	460-157434-4 MSD	30

	QC LIMITS
DXE = 1,4-Dioxane-d8	10-150

Column to be used to flag recovery values

FORM II 8270D SIM ID

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Matrix: Water Level: Low

GC Column (1): Rtxi-5Sil M ID: 0.25(mm)

Client Sample ID	Lab Sample ID	DXE #
	LCS 460-525204/2-A	40

	QC LIMITS
DXE = 1,4-Dioxane-d8	10-200

Column to be used to flag recovery values

FORM II 8270D SIM ID

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Matrix: Water Level: Low Lab File ID: C29817.D

Lab ID: LCS 460-525204/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	1.60	1.83	114	10-200	
1,4-Dioxane-d8	32.0	12.7	40	10-200	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM ID

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Matrix: Water Level: Low Lab File ID: C29819.D

Lab ID: 460-157434-4 MS Client ID: LMS-3 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	1.60	0.031 J	1.66	102	70-130	
1,4-Dioxane-d8	32.0	12	12.1	38	10-150	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM ID

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Matrix: Water Level: Low Lab File ID: C29820.D

Lab ID: 460-157434-4 MSD Client ID: LMS-3 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	1.60	1.56	95	7	20	70-130	
1,4-Dioxane-d8	32.0	9.62	30			10-150	

Column to be used to flag recovery and RPD values

FORM III 8270D SIM ID

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Lab File ID: C29816.D Lab Sample ID: MB 460-525204/1-A

Matrix: Water Date Extracted: 06/05/2018 08:01

Instrument ID: CBNAMS13 Date Analyzed: 06/05/2018 15:57

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 460-525204/2-A	C29817.D	06/05/2018 16:15
LMS-3	460-157434-4	C29818.D	06/05/2018 16:33
LMS-3 MS	460-157434-4 MS	C29819.D	06/05/2018 16:51
LMS-3 MSD	460-157434-4 MSD	C29820.D	06/05/2018 17:09
AMS-2	460-157434-5	C29821.D	06/05/2018 17:27
ERM-1	460-157434-6	C29822.D	06/05/2018 17:44
MW-X	460-157434-7	C29823.D	06/05/2018 18:02
Equipment Blank	460-157434-8	C29824.D	06/05/2018 18:20
MW-2	460-157434-10	C29825.D	06/05/2018 18:38
LMS-5	460-157434-11	C29826.D	06/05/2018 18:56
MW-1	460-157434-1	C29827.D	06/05/2018 19:13
ERM-3	460-157434-2	C29828.D	06/05/2018 19:31
LMS-4	460-157434-3	C29829.D	06/05/2018 19:49

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Lab File ID: C28985.D DFTPP Injection Date: 05/11/2018

Instrument ID: CBNAMS13 DFTPP Injection Time: 12:33

Analysis Batch No.: 518314

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	42.1	
68	Less than 2.0 % of mass 69	0.7	(1.8) 1
69	Mass 69 relative abundance	40.1	
70	Less than 2.0 % of mass 69	0.2	(0.4) 1
127	40.0 - 60.0 % of mass 198	47.0	
197	Less than 1.0 % of mass 198	0.0	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.7	
275	10.0 - 30.0 % of mass 198	26.5	
365	Greater than 1.0 % of mass 198	3.4	
441	Present but less than mass 443	15.2	(79.7) 3
442	Greater than 40.0 % of mass 198	94.8	
443	17.0 - 23.0 % of mass 442	19.1	(20.1) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	ICIS 460-518314/2	C28986.D	05/11/2018	12:48
	STD8 460-518314/3	C28987.D	05/11/2018	13:08
	STD7 460-518314/4	C28988.D	05/11/2018	13:27
	STD6 460-518314/5	C28989.D	05/11/2018	14:16
	STD4 460-518314/6	C28990.D	05/11/2018	14:35
	STD3 460-518314/7	C28991.D	05/11/2018	15:44
	STD2 460-518314/8	C28992.D	05/11/2018	16:02
	STD1 460-518314/9	C28993.D	05/11/2018	17:20

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Lab File ID: C29814.D DFTPP Injection Date: 06/05/2018

Instrument ID: CBNAMS13 DFTPP Injection Time: 14:54

Analysis Batch No.: 525311

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0 - 60.0 % of mass 198	37.1	
68	Less than 2.0 % of mass 69	0.4	(1.2) 1
69	Mass 69 relative abundance	36.5	
70	Less than 2.0 % of mass 69	0.2	(0.5) 1
127	40.0 - 60.0 % of mass 198	44.3	
197	Less than 1.0 % of mass 198	0.7	
198	Base Peak, 100 % relative abundance	100.0	
199	5.0- 9.0 % of mass 198	6.8	
275	10.0 - 30.0 % of mass 198	26.9	
365	Greater than 1.0 % of mass 198	3.6	
441	Present but less than mass 443	15.7	(78.9) 3
442	Greater than 40.0 % of mass 198	103.1	
443	17.0 - 23.0 % of mass 442	20.0	(19.4) 2

1-Value is % mass 69 2-Value is % mass 442 3-Value is % mass 443

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 460-525311/2	C29815a.D	06/05/2018	15:39
	MB 460-525204/1-A	C29816.D	06/05/2018	15:57
	LCS 460-525204/2-A	C29817.D	06/05/2018	16:15
LMS-3	460-157434-4	C29818.D	06/05/2018	16:33
LMS-3 MS	460-157434-4 MS	C29819.D	06/05/2018	16:51
LMS-3 MSD	460-157434-4 MSD	C29820.D	06/05/2018	17:09
AMS-2	460-157434-5	C29821.D	06/05/2018	17:27
ERM-1	460-157434-6	C29822.D	06/05/2018	17:44
MW-X	460-157434-7	C29823.D	06/05/2018	18:02
Equipment Blank	460-157434-8	C29824.D	06/05/2018	18:20
MW-2	460-157434-10	C29825.D	06/05/2018	18:38
LMS-5	460-157434-11	C29826.D	06/05/2018	18:56
MW-1	460-157434-1	C29827.D	06/05/2018	19:13
ERM-3	460-157434-2	C29828.D	06/05/2018	19:31
LMS-4	460-157434-3	C29829.D	06/05/2018	19:49

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Sample No.: CCVIS 460-525311/2 Date Analyzed: 06/05/2018 15:39

Instrument ID: CBNAMS13 GC Column: Rtxi-5Sil MS ID: 0.25(mm)

Lab File ID (Standard): C29815a.D Heated Purge: (Y/N) N

Calibration ID: 68479

		DCBd4					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		306512	5.82				
UPPER LIMIT							
LOWER LIMIT							
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 460-525204/1-A		291211	5.82				
LCS 460-525204/2-A		292689	5.82				
460-157434-4	LMS-3	293785	5.82				
460-157434-4 MS	LMS-3 MS	286750	5.82				
460-157434-4 MSD	LMS-3 MSD	304144	5.82				
460-157434-5	AMS-2	316416	5.82				
460-157434-6	ERM-1	280920	5.82				
460-157434-7	MW-X	309814	5.82				
460-157434-8	Equipment Blank	300537	5.82				
460-157434-10	MW-2	282570	5.82				
460-157434-11	LMS-5	293999	5.82				
460-157434-1	MW-1	265808	5.82				
460-157434-2	ERM-3	298345	5.82				
460-157434-3	LMS-4	283502	5.82				

Column used to flag values outside QC limits

FORM VIII 8270D SIM ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: MW-1 | Lab Sample ID: 460-157434-1

Matrix: Water | Lab File ID: C29827.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 09:15

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 19:13

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.50		0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	38		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29827.D
Lims ID: 460-157434-G-1-A
Client ID: MW-1
Sample Type: Client
Inject. Date: 05-Jun-2018 19:13:30 ALS Bottle#: 14 Worklist Smp#: 14
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-014
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:54:29 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:54:38

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	795513	1.51	37.9	
	2 1,4-Dioxane	88	3.249	3.235	0.014	85	16154	0.0627		
*	4 1,4-Dichlorobenzene-d4	152	5.820	5.816	0.004	98	265808	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

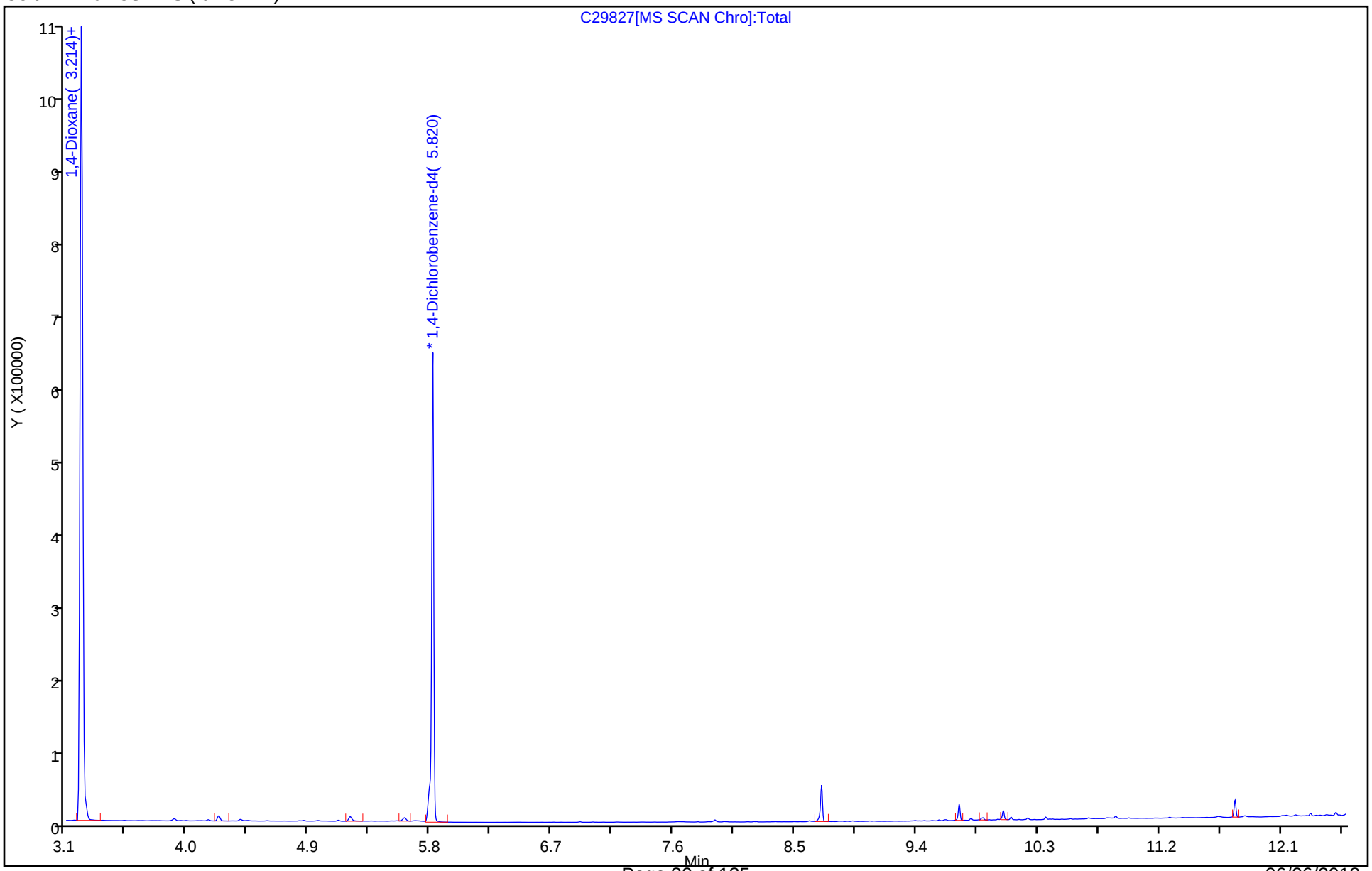
Report Date: 06-Jun-2018 13:54:38 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29827.D

Injection Date:	05-Jun-2018 19:13:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-G-1-A	Lab Sample ID:	460-157434-1	Worklist Smp#:	14
Client ID:	MW-1				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)

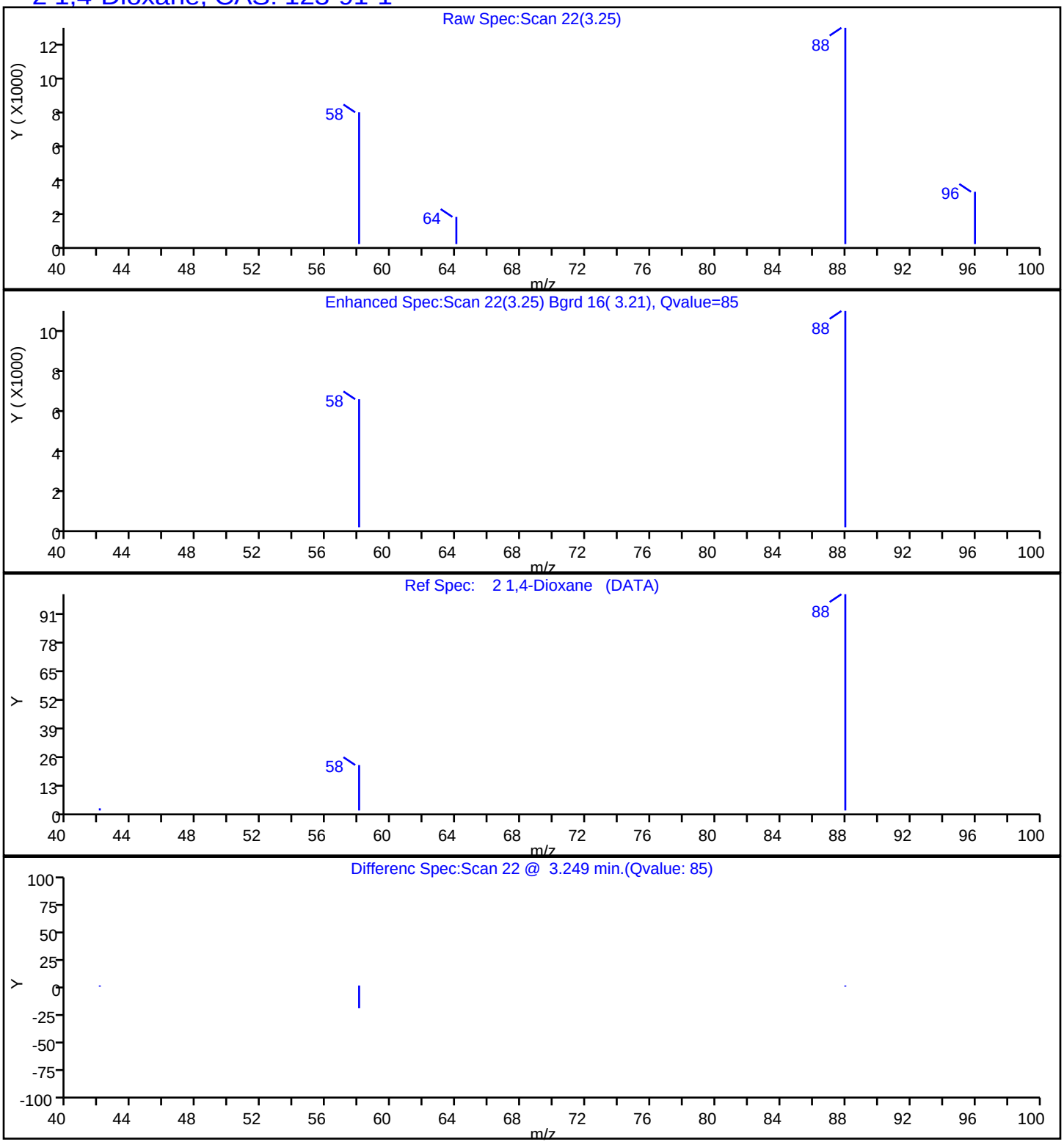


TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29827.D

Injection Date:	05-Jun-2018 19:13:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-1-A	Lab Sample ID:	460-157434-1		
Client ID:	MW-1				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

2 1,4-Dioxane, CAS: 123-91-1

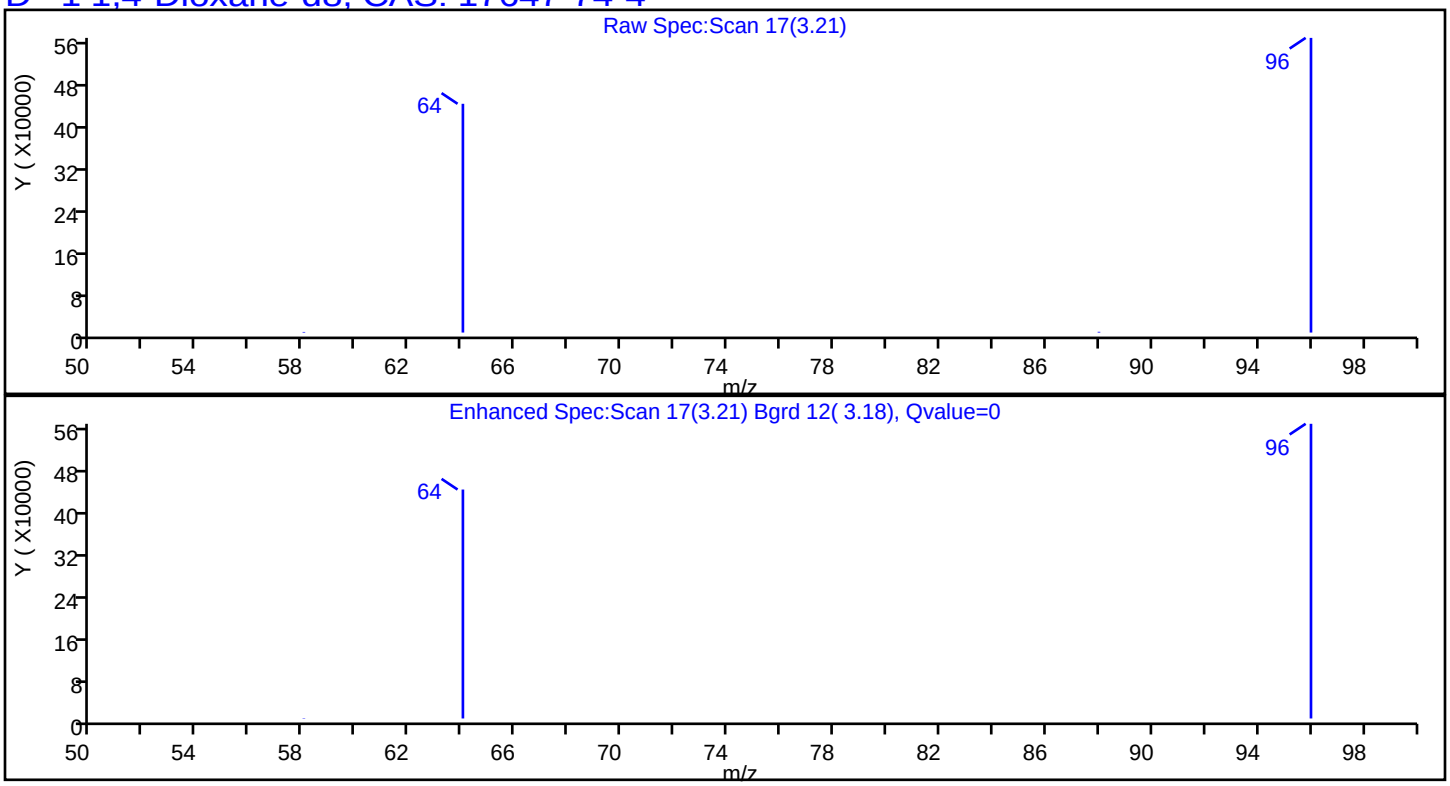


Report Date: 06-Jun-2018 13:54:38 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29827.D				
Injection Date:	05-Jun-2018 19:13:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-1-A	Lab Sample ID:	460-157434-1		
Client ID:	MW-1				
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	14
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: ERM-3 | Lab Sample ID: 460-157434-2

Matrix: Water | Lab File ID: C29828.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 10:50

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 19:31

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.13	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	39		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29828.D
Lims ID: 460-157434-G-2-A
Client ID: ERM-3
Sample Type: Client
Inject. Date: 05-Jun-2018 19:31:30 ALS Bottle#: 15 Worklist Smp#: 15
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-015
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:54:29 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:54:47

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	924163	1.57	39.2	
	2 1,4-Dioxane	88	3.242	3.235	0.007	92	4906	0.0164		
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	97	298345	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

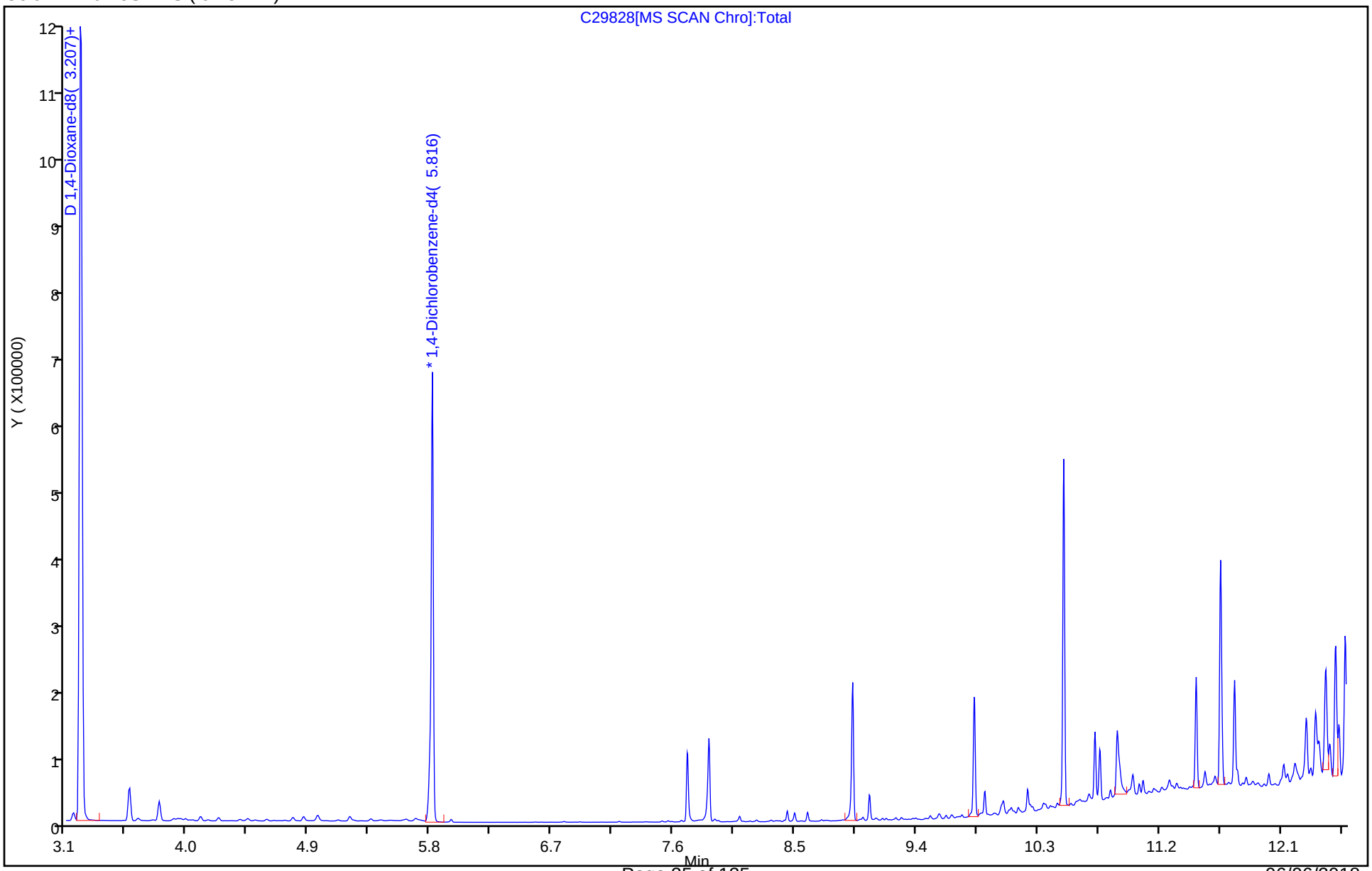
Report Date: 06-Jun-2018 13:54:47 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29828.D

Injection Date:	05-Jun-2018 19:31:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-G-2-A	Lab Sample ID:	460-157434-2	Worklist Smp#:	15
Client ID:	ERM-3				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)

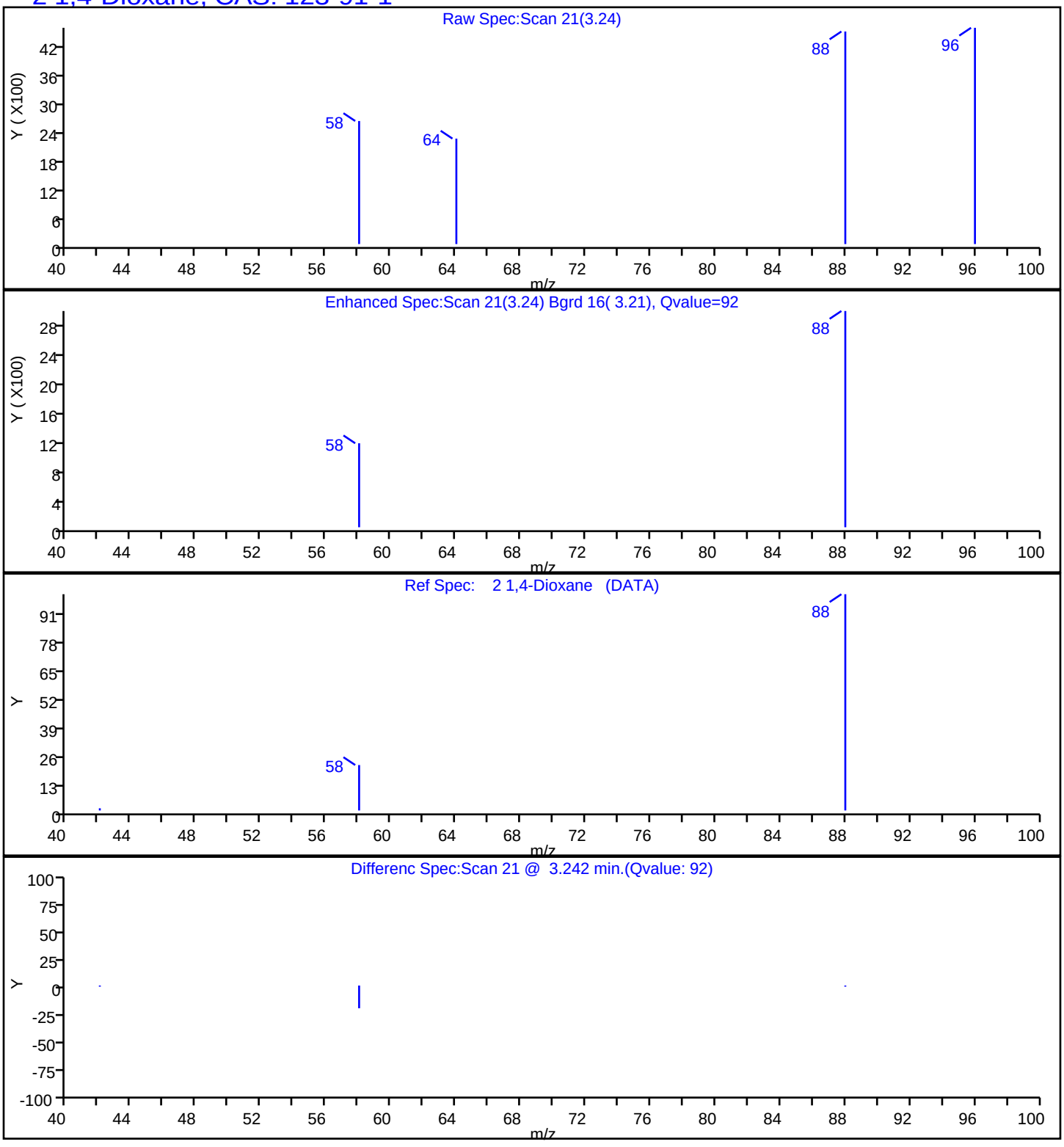


TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29828.D

Injection Date:	05-Jun-2018 19:31:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-2-A	Lab Sample ID:	460-157434-2		
Client ID:	ERM-3				
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

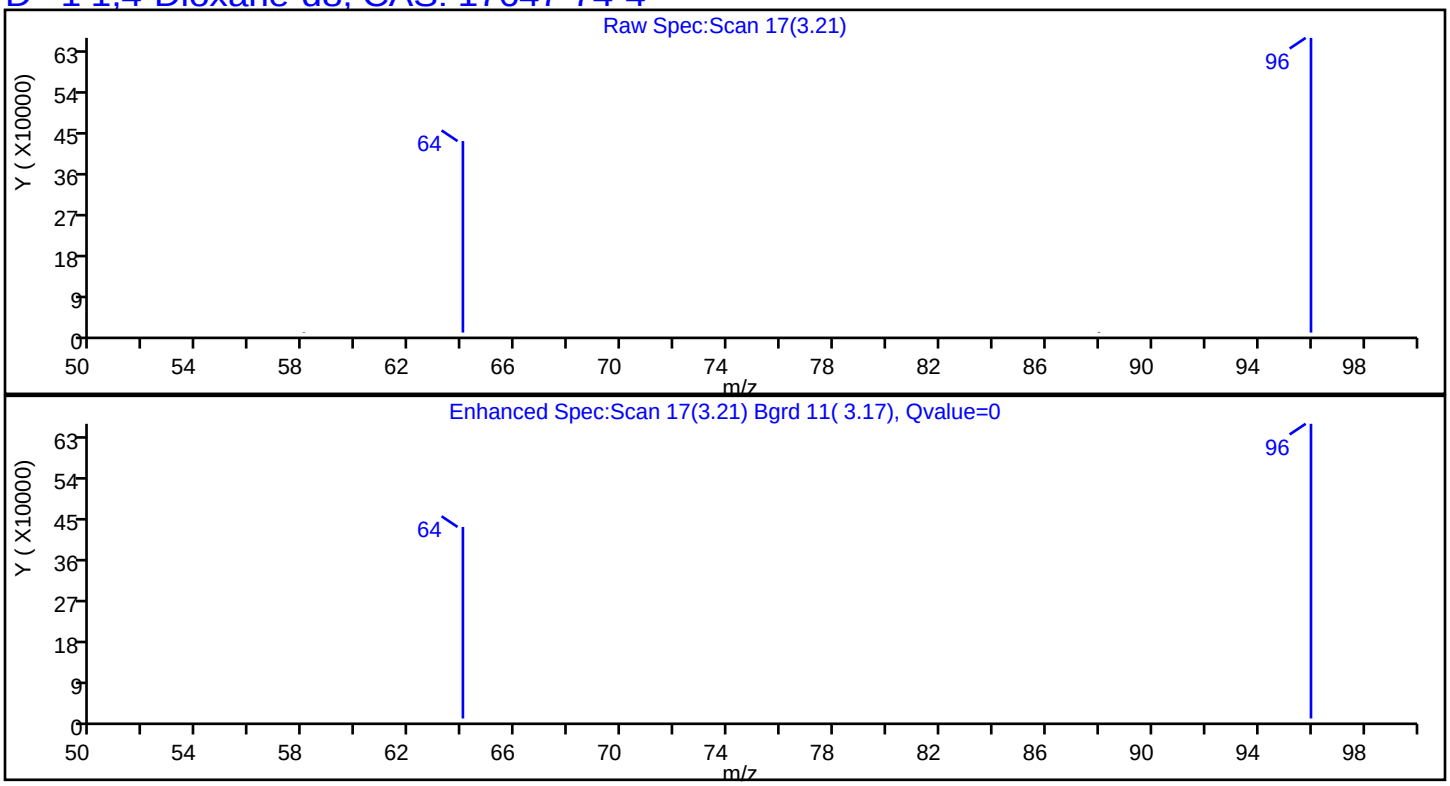
2 1,4-Dioxane, CAS: 123-91-1



TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29828.D				
Injection Date:	05-Jun-2018 19:31:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-2-A	Lab Sample ID:	460-157434-2		
Client ID:	ERM-3				
Operator ID:		ALS Bottle#:	15	Worklist Smp#:	15
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: LMS-4 | Lab Sample ID: 460-157434-3

Matrix: Water | Lab File ID: C29829.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 11:35

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 19:49

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.054	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	41		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29829.D
Lims ID: 460-157434-G-3-A
Client ID: LMS-4
Sample Type: Client
Inject. Date: 05-Jun-2018 19:49:30 ALS Bottle#: 16 Worklist Smp#: 16
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-016
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:55:24 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:55:24

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	921933	1.65	41.1	
	2 1,4-Dioxane	88	3.249	3.235	0.014	62	2032	0.006809		
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	98	283502	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

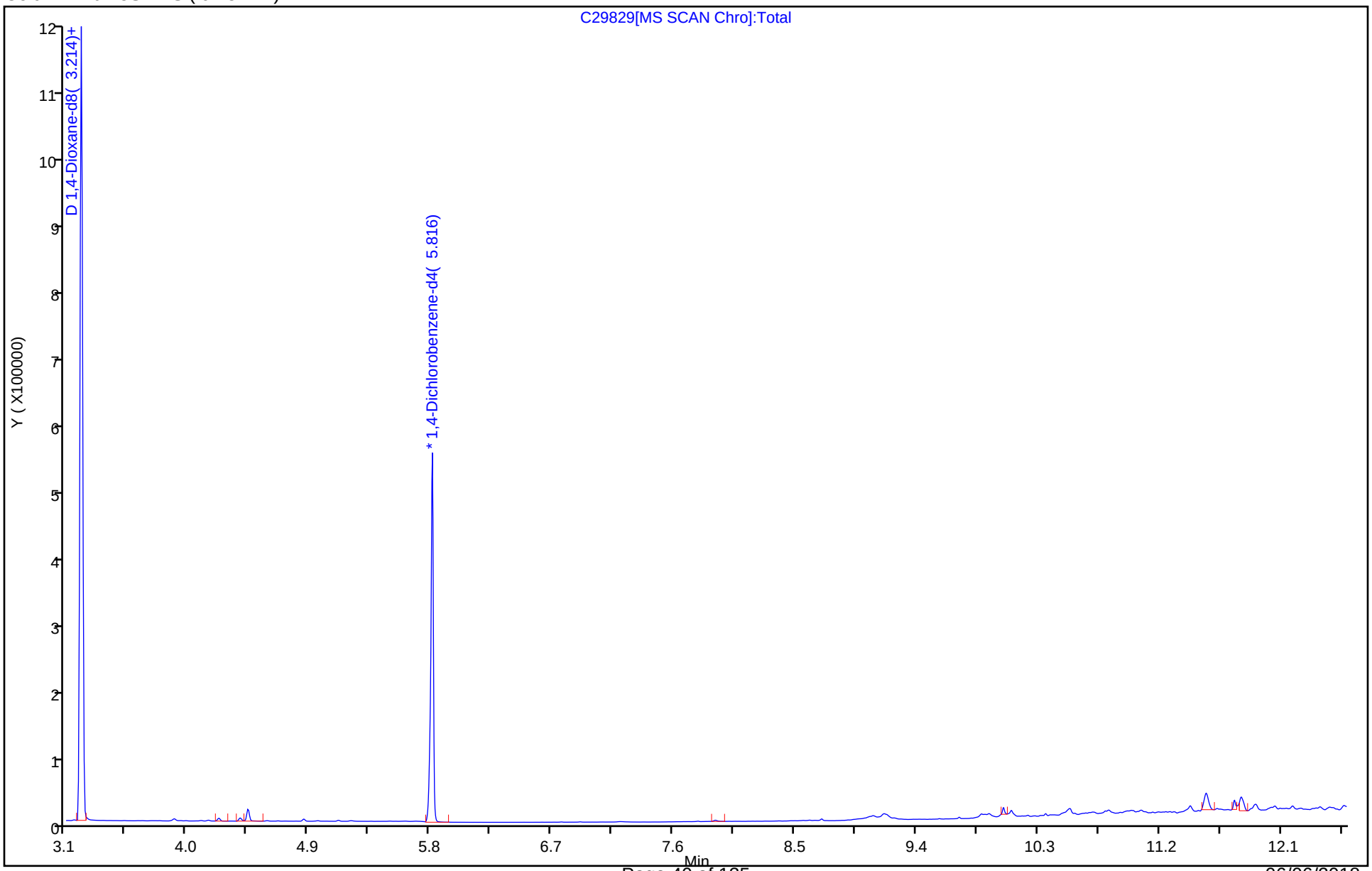
Report Date: 06-Jun-2018 13:55:24 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29829.D

Injection Date:	05-Jun-2018 19:49:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-G-3-A	Lab Sample ID:	460-157434-3	Worklist Smp#:	16
Client ID:	LMS-4				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)

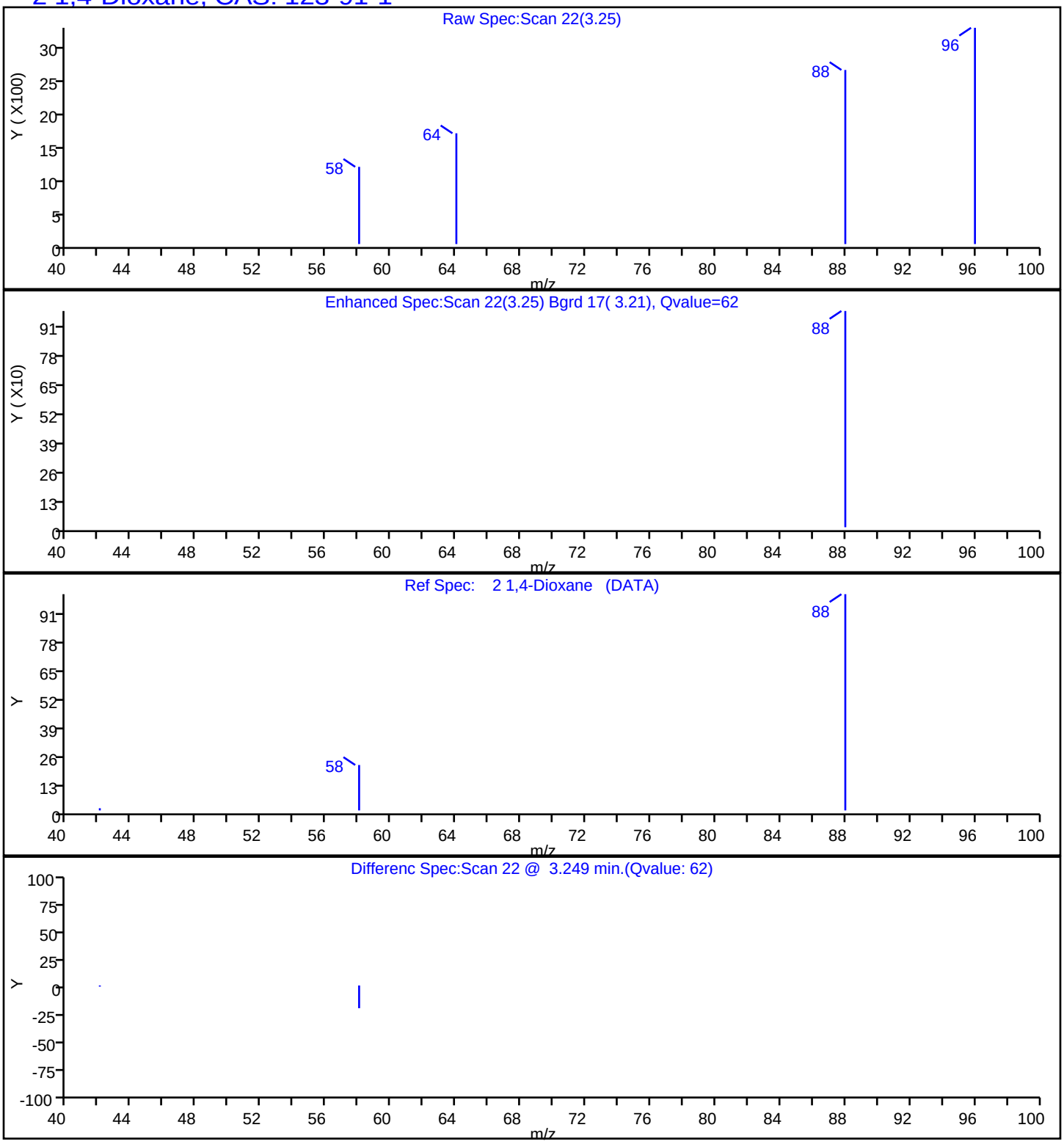


TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29829.D

Injection Date:	05-Jun-2018 19:49:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-3-A	Lab Sample ID:	460-157434-3		
Client ID:	LMS-4				
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

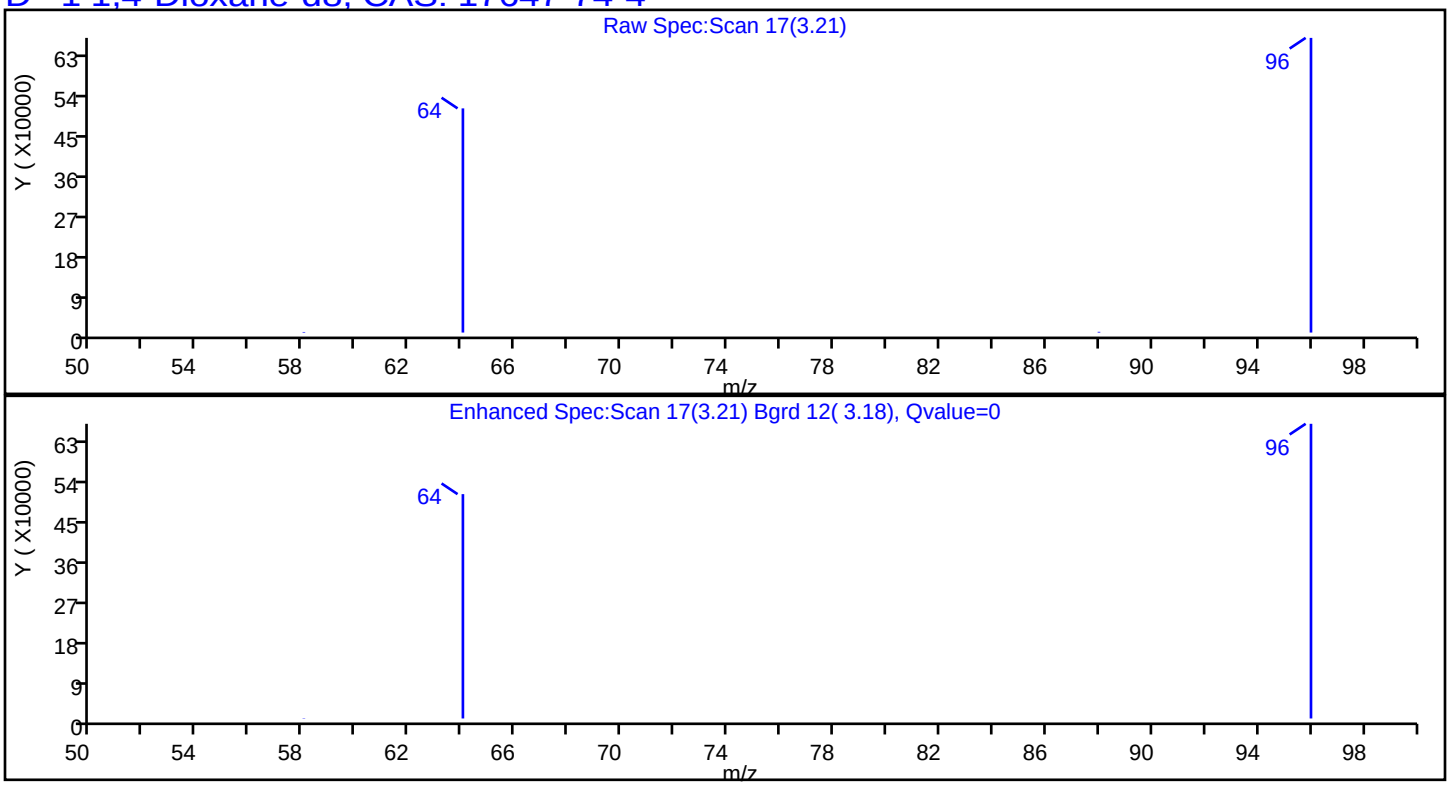
2 1,4-Dioxane, CAS: 123-91-1



TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29829.D				
Injection Date:	05-Jun-2018 19:49:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-3-A	Lab Sample ID:	460-157434-3		
Client ID:	LMS-4				
Operator ID:		ALS Bottle#:	16	Worklist Smp#:	16
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: LMS-3 | Lab Sample ID: 460-157434-4

Matrix: Water | Lab File ID: C29818.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 12:35

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 16:33

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.031	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	39		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29818.D
Lims ID: 460-157434-F-4-B
Client ID: LMS-3
Sample Type: Client
Inject. Date: 05-Jun-2018 16:33:30 ALS Bottle#: 5 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-005
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 14:03:41 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:51:54

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	894723	1.54	38.5	
	2 1,4-Dioxane	88	3.249	3.235	0.014	62	1126	0.003888		
*	4 1,4-Dichlorobenzene-d4	152	5.820	5.816	0.004	99	293785	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

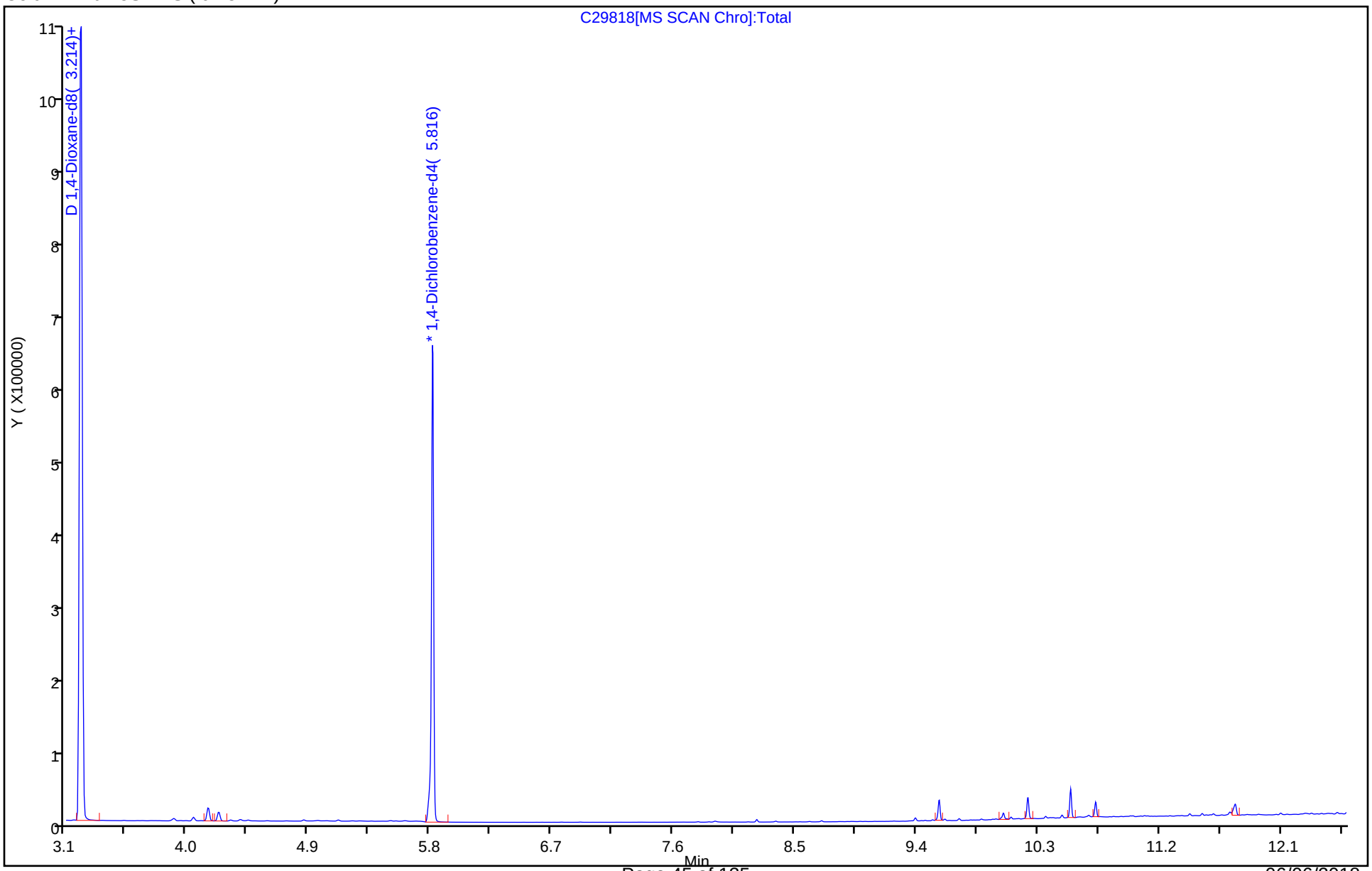
Report Date: 06-Jun-2018 14:03:41 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29818.D

Injection Date:	05-Jun-2018 16:33:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-F-4-B	Lab Sample ID:	460-157434-4	Worklist Smp#:	5
Client ID:	LMS-3				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)

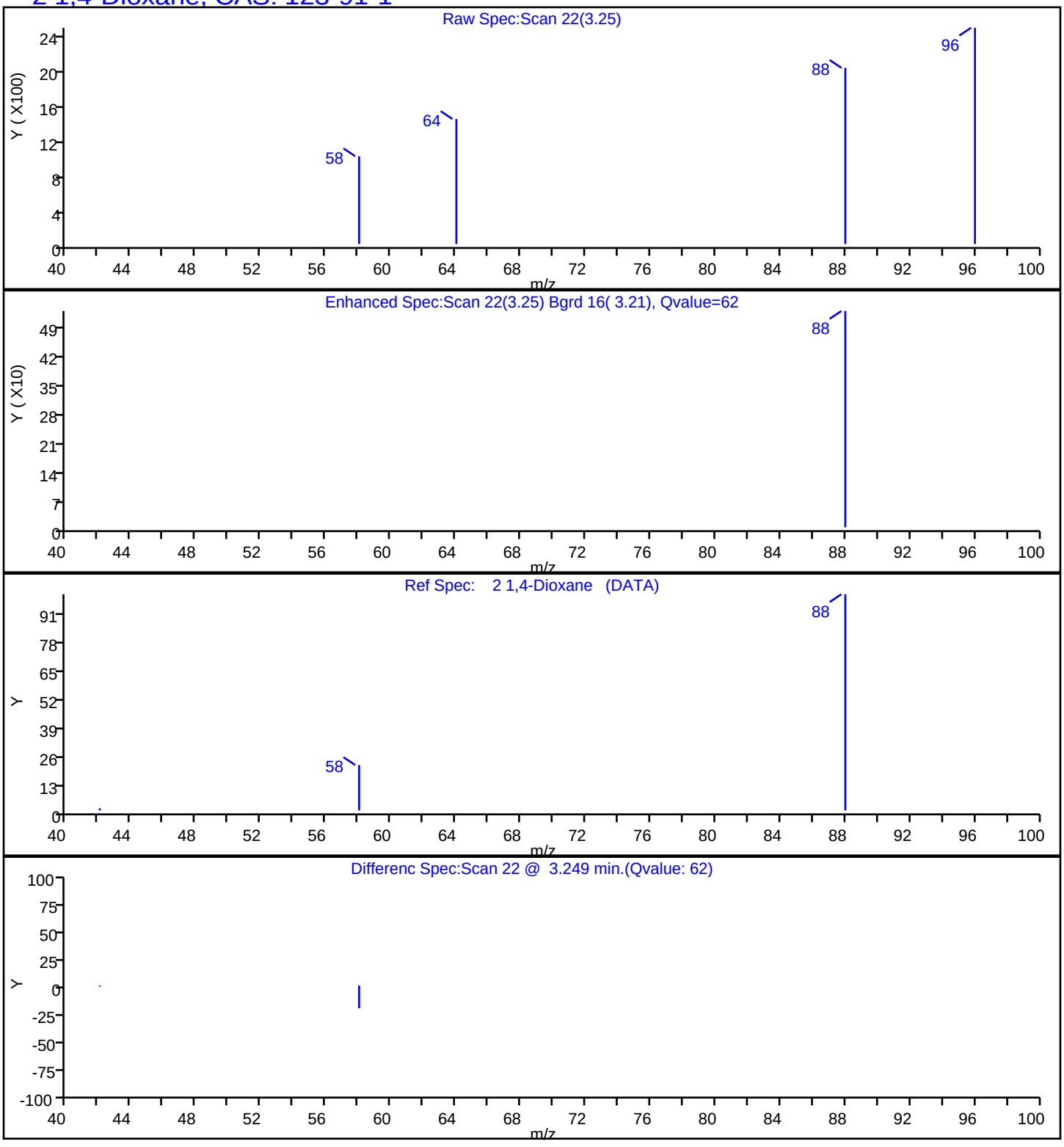


TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29818.D

Injection Date:	05-Jun-2018 16:33:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-4-B	Lab Sample ID:	460-157434-4		
Client ID:	LMS-3				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

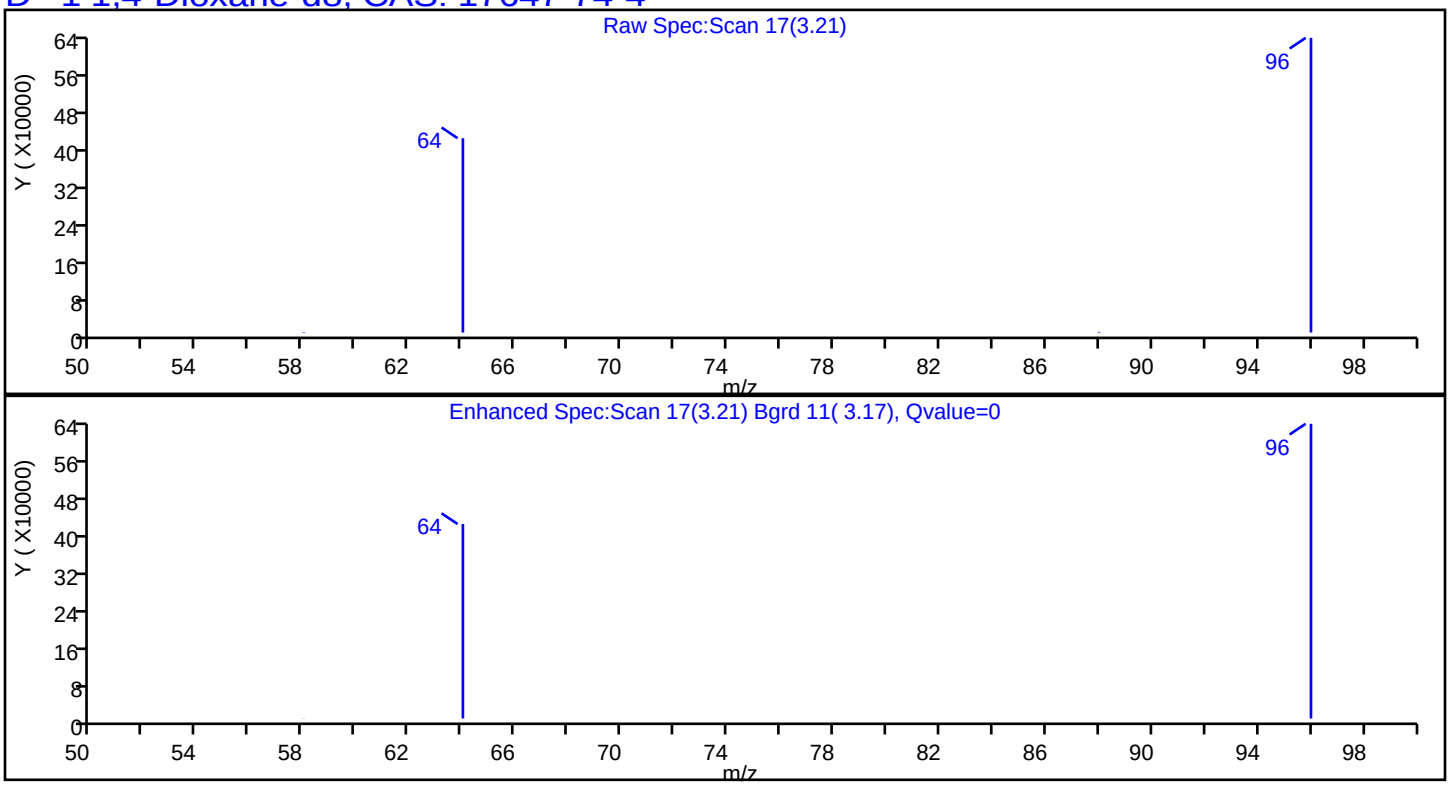
2 1,4-Dioxane, CAS: 123-91-1



TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29818.D				
Injection Date:	05-Jun-2018 16:33:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-4-B	Lab Sample ID:	460-157434-4		
Client ID:	LMS-3				
Operator ID:		ALS Bottle#:	5	Worklist Smp#:	5
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: AMS-2 | Lab Sample ID: 460-157434-5

Matrix: Water | Lab File ID: C29821.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 14:45

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 17:27

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.064	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	34		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29821.D
Lims ID: 460-157434-G-5-A
Client ID: AMS-2
Sample Type: Client
Inject. Date: 05-Jun-2018 17:27:30 ALS Bottle#: 8 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-008
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 14:03:28 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:53:04

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	849895	1.36	34.0	
	2 1,4-Dioxane	88	3.249	3.235	0.014	62	2200	0.007997		
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	96	316416	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

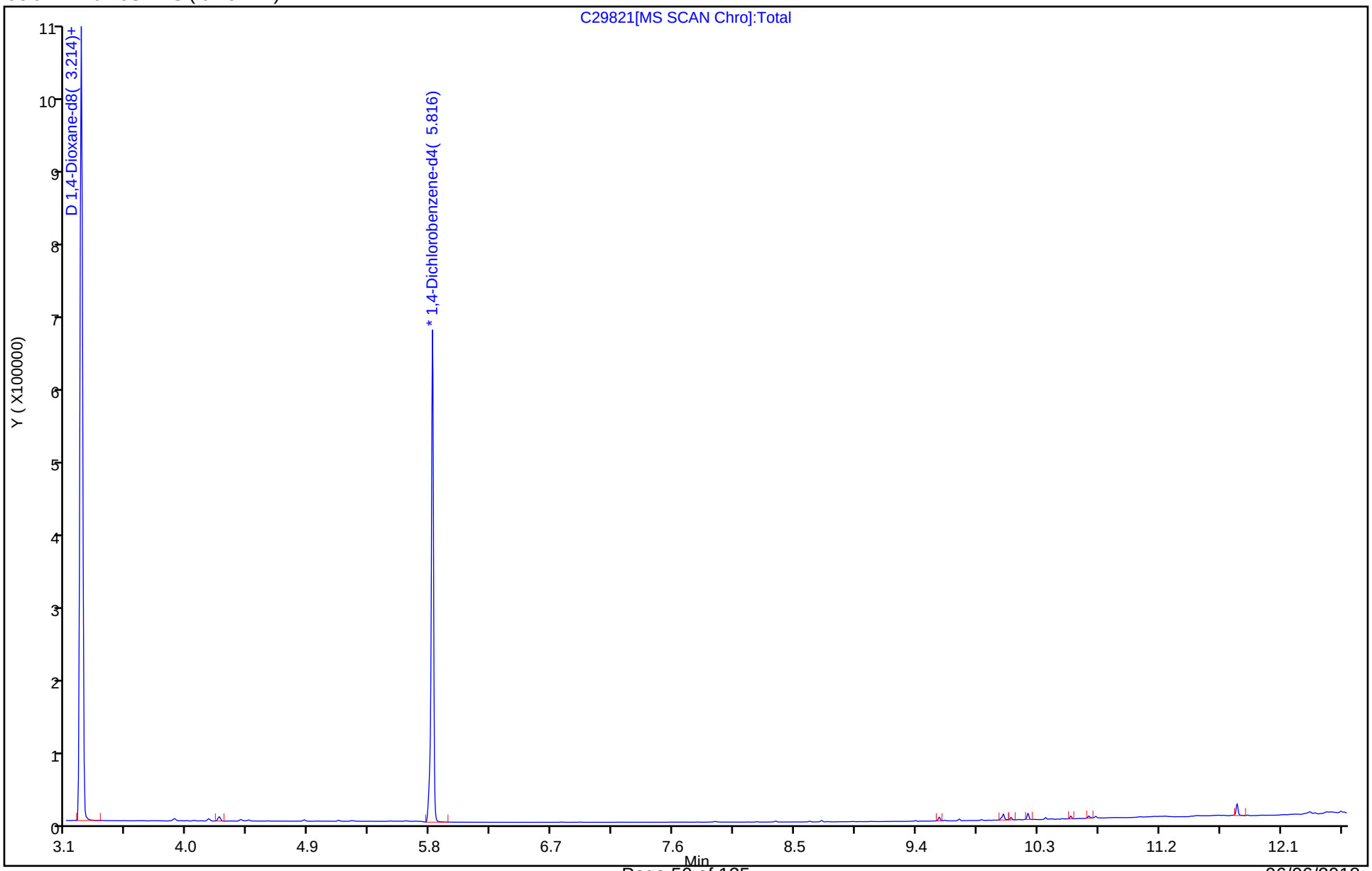
Report Date: 06-Jun-2018 14:03:29 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29821.D

Injection Date:	05-Jun-2018 17:27:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-G-5-A	Lab Sample ID:	460-157434-5	Worklist Smp#:	8
Client ID:	AMS-2				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)

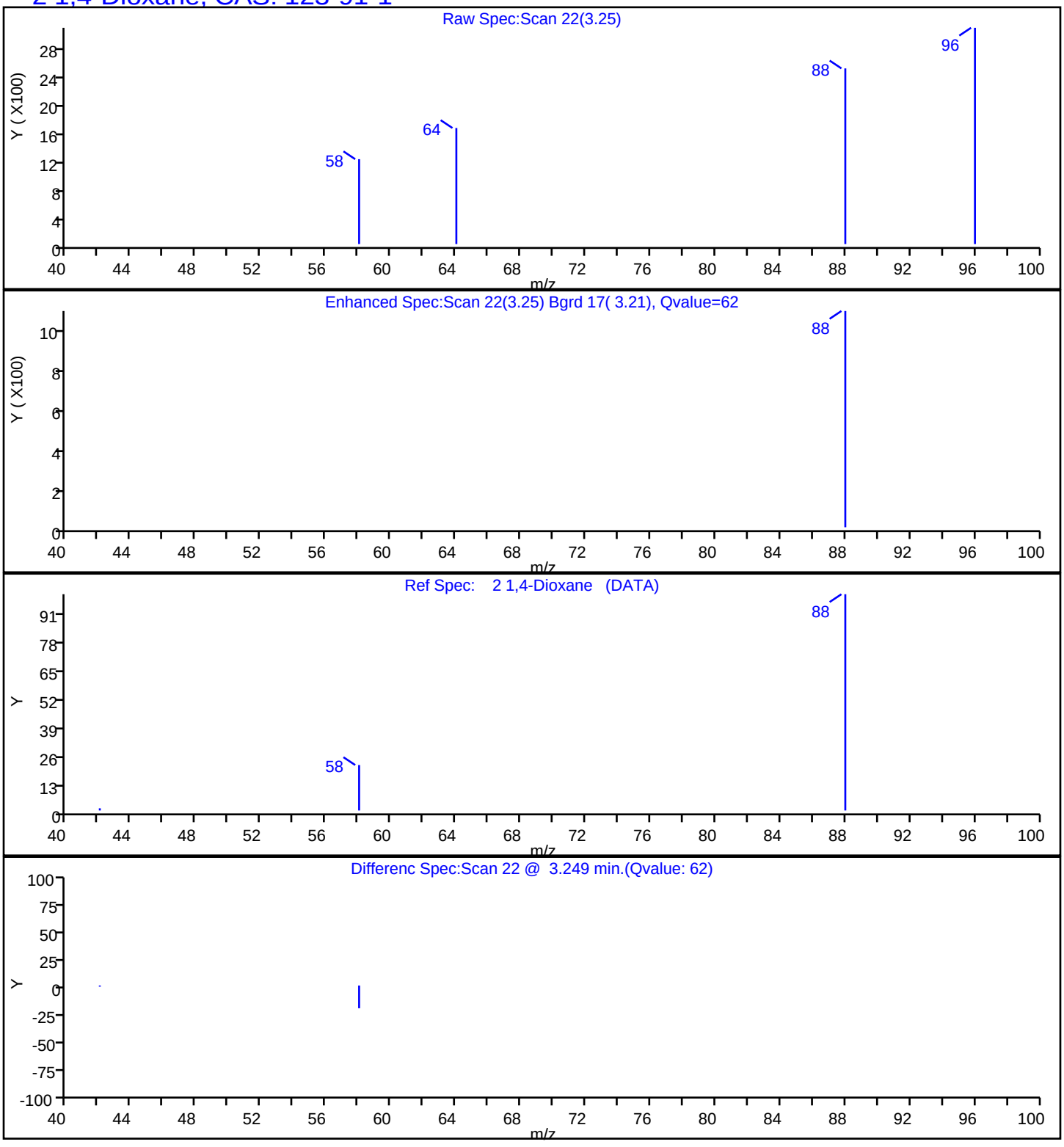


TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29821.D

Injection Date:	05-Jun-2018 17:27:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-5-A	Lab Sample ID:	460-157434-5		
Client ID:	AMS-2				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

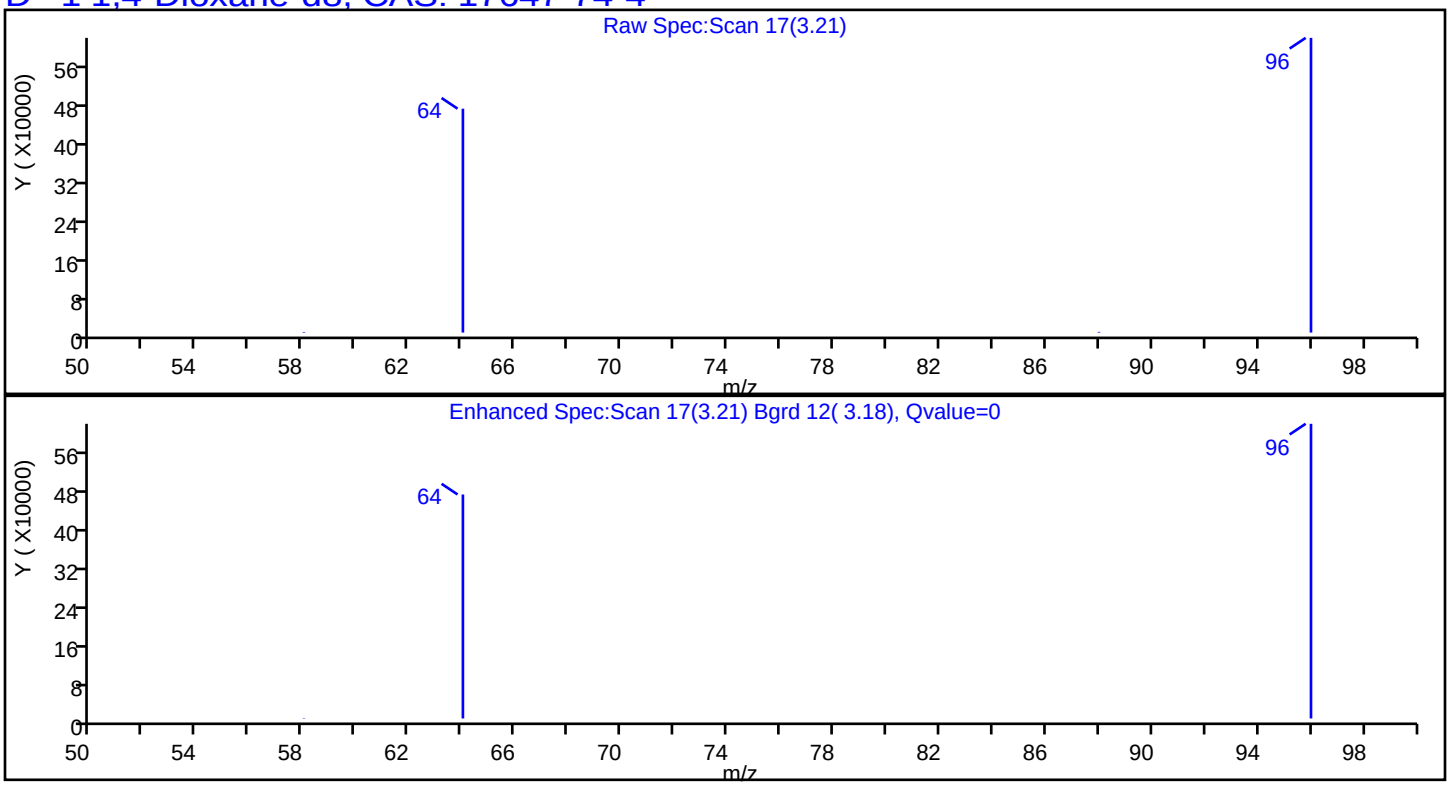
2 1,4-Dioxane, CAS: 123-91-1



TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29821.D				
Injection Date:	05-Jun-2018 17:27:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-5-A	Lab Sample ID:	460-157434-5		
Client ID:	AMS-2				
Operator ID:		ALS Bottle#:	8	Worklist Smp#:	8
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: ERM-1 | Lab Sample ID: 460-157434-6

Matrix: Water | Lab File ID: C29822.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 13:50

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 17:44

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.025	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	43		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29822.D
Lims ID: 460-157434-F-6-A
Client ID: ERM-1
Sample Type: Client
Inject. Date: 05-Jun-2018 17:44:30 ALS Bottle#: 9 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-009
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 14:03:15 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:53:21

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.221	3.228	-0.007	0	945550	1.70	42.6	
	2 1,4-Dioxane	88	3.256	3.235	0.021	62	970	0.003169		
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	96	280920	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

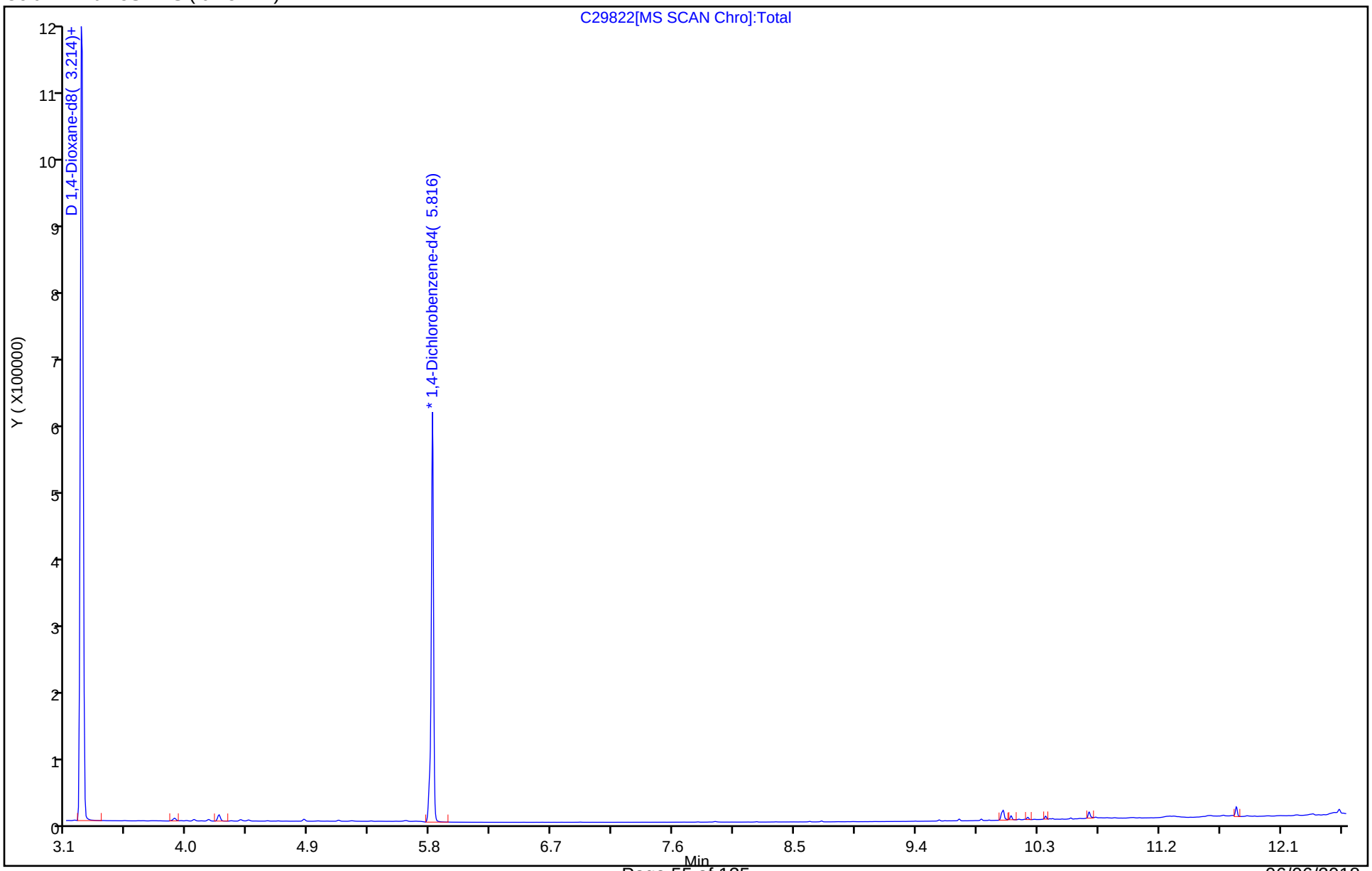
Report Date: 06-Jun-2018 14:03:16 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29822.D

Injection Date:	05-Jun-2018 17:44:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-F-6-A	Lab Sample ID:	460-157434-6	Worklist Smp#:	9
Client ID:	ERM-1				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)

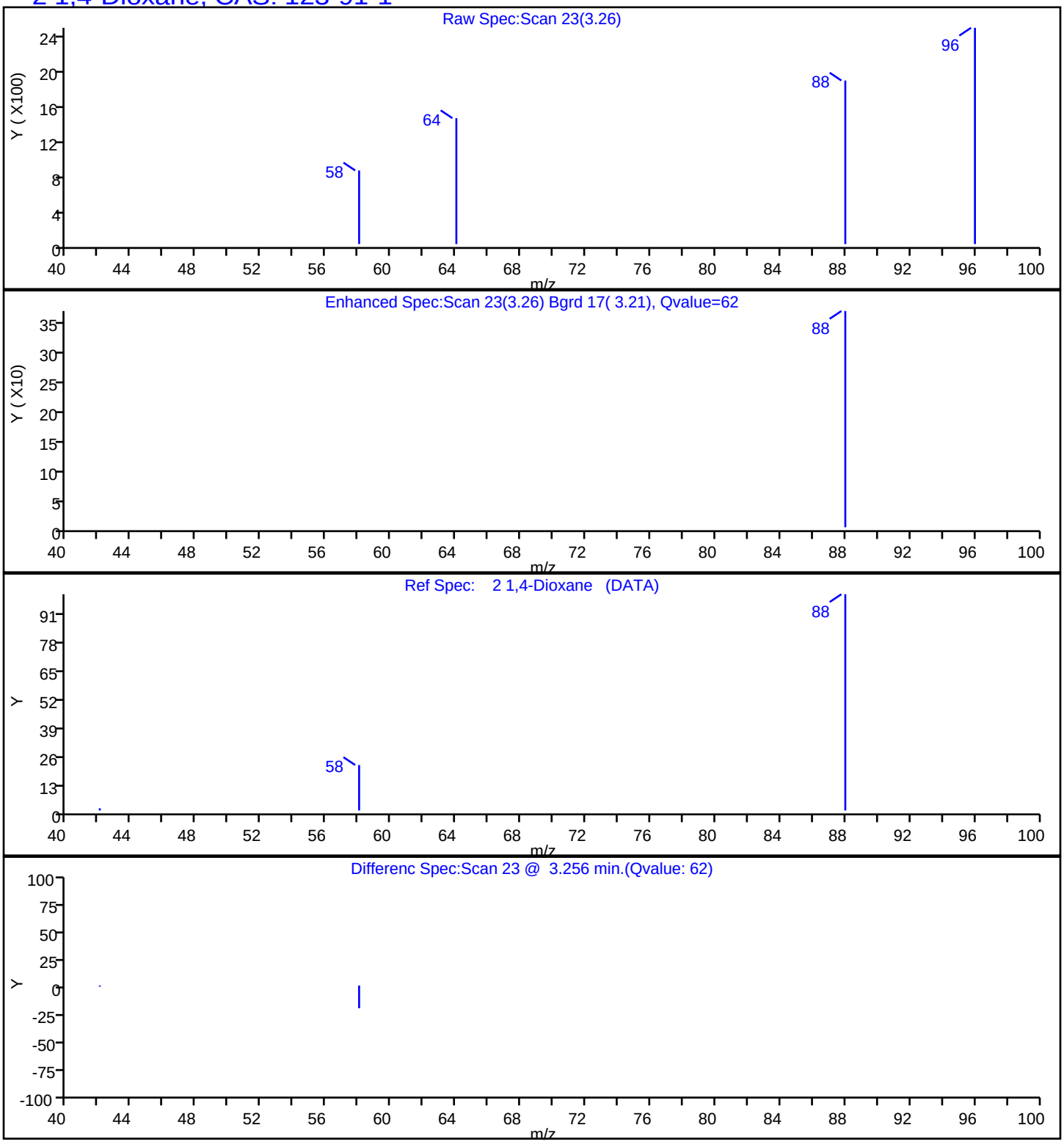


TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29822.D

Injection Date:	05-Jun-2018 17:44:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-6-A	Lab Sample ID:	460-157434-6		
Client ID:	ERM-1				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

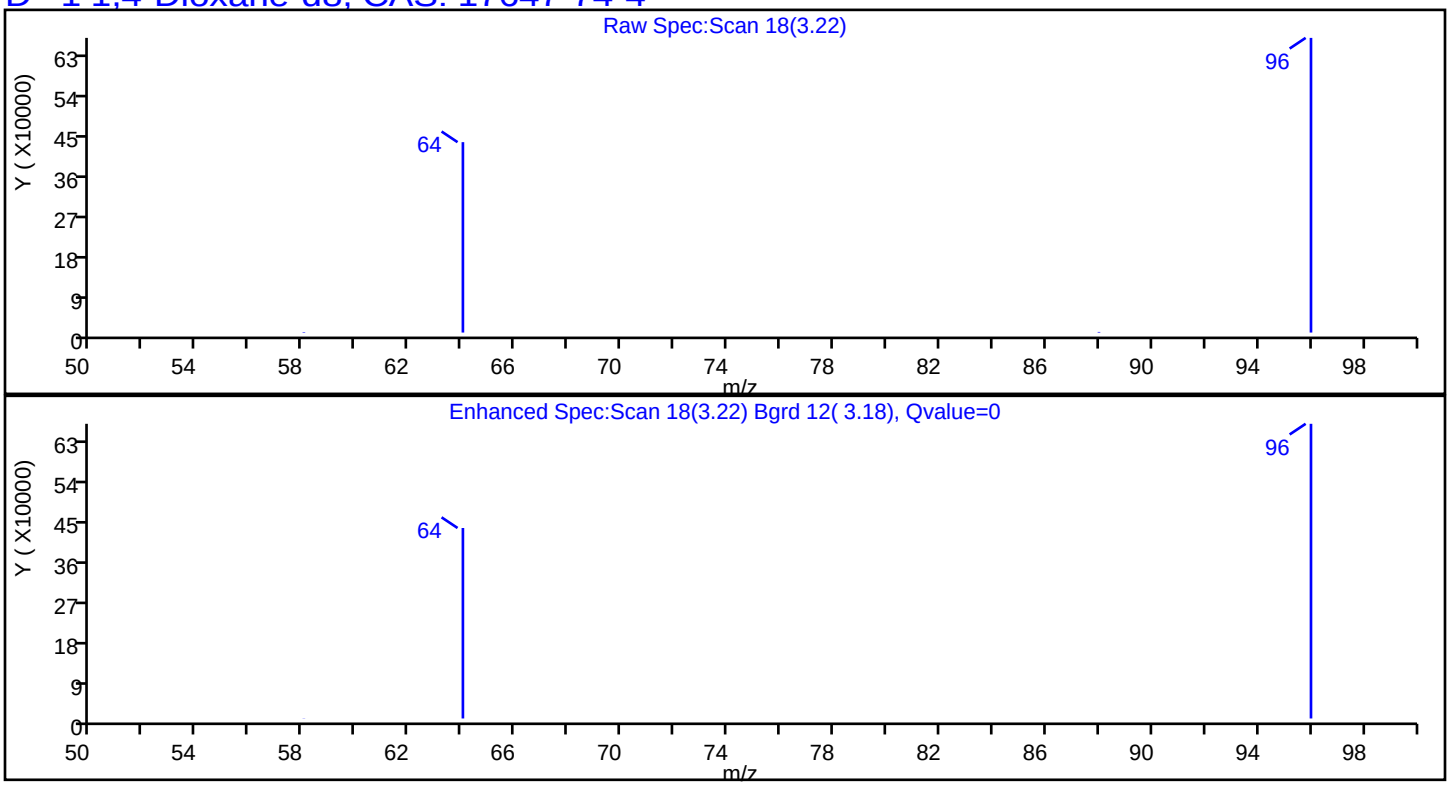
2 1,4-Dioxane, CAS: 123-91-1



Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29822.D

Injection Date:	05-Jun-2018 17:44:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-6-A	Lab Sample ID:	460-157434-6		
Client ID:	ERM-1				
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	9
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: MW-X | Lab Sample ID: 460-157434-7

Matrix: Water | Lab File ID: C29823.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 00:00

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 18:02

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.14	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	37		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29823.D
Lims ID: 460-157434-G-7-A
Client ID: MW-X
Sample Type: Client
Inject. Date: 05-Jun-2018 18:02:30 ALS Bottle#: 10 Worklist Smp#: 10
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-010
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:53:21 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:53:31

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	899677	1.47	36.7	
	2 1,4-Dioxane	88	3.249	3.235	0.014	92	5225	0.0179		
*	4 1,4-Dichlorobenzene-d4	152	5.820	5.816	0.004	98	309814	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

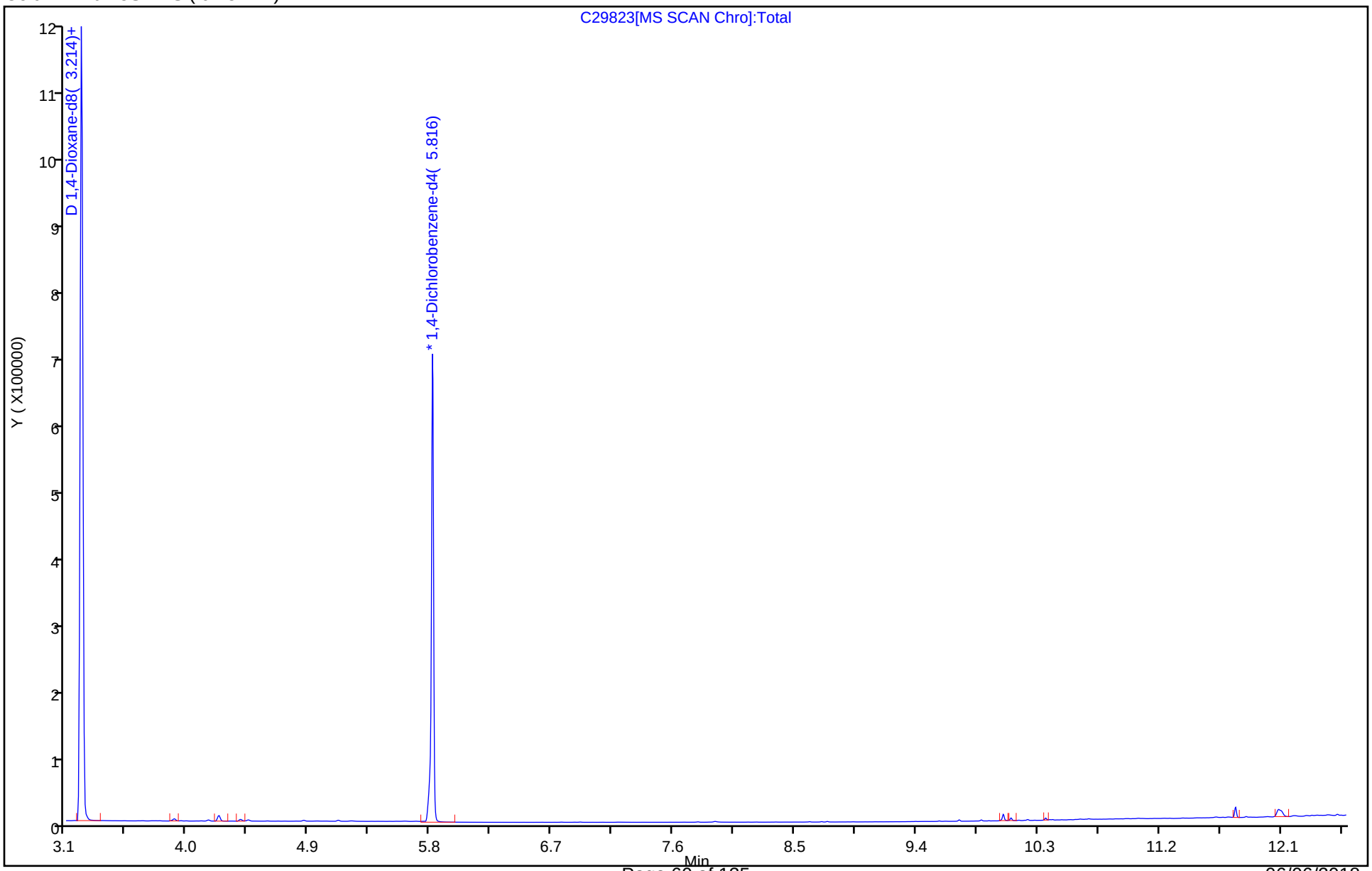
Report Date: 06-Jun-2018 13:53:32 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29823.D

Injection Date:	05-Jun-2018 18:02:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-G-7-A	Lab Sample ID:	460-157434-7	Worklist Smp#:	10
Client ID:	MW-X				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)

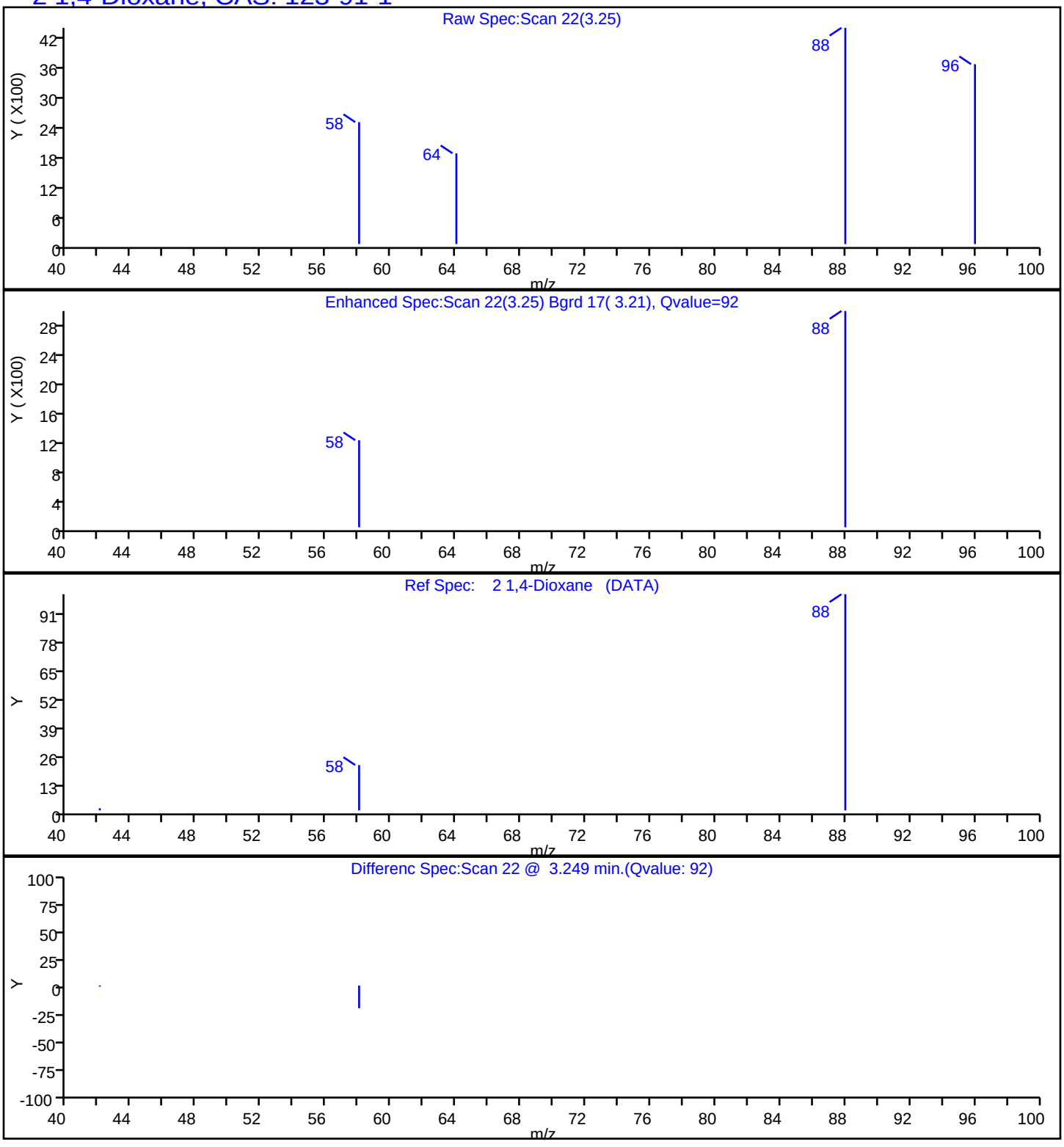


TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29823.D

Injection Date:	05-Jun-2018 18:02:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-7-A	Lab Sample ID:	460-157434-7		
Client ID:	MW-X				
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

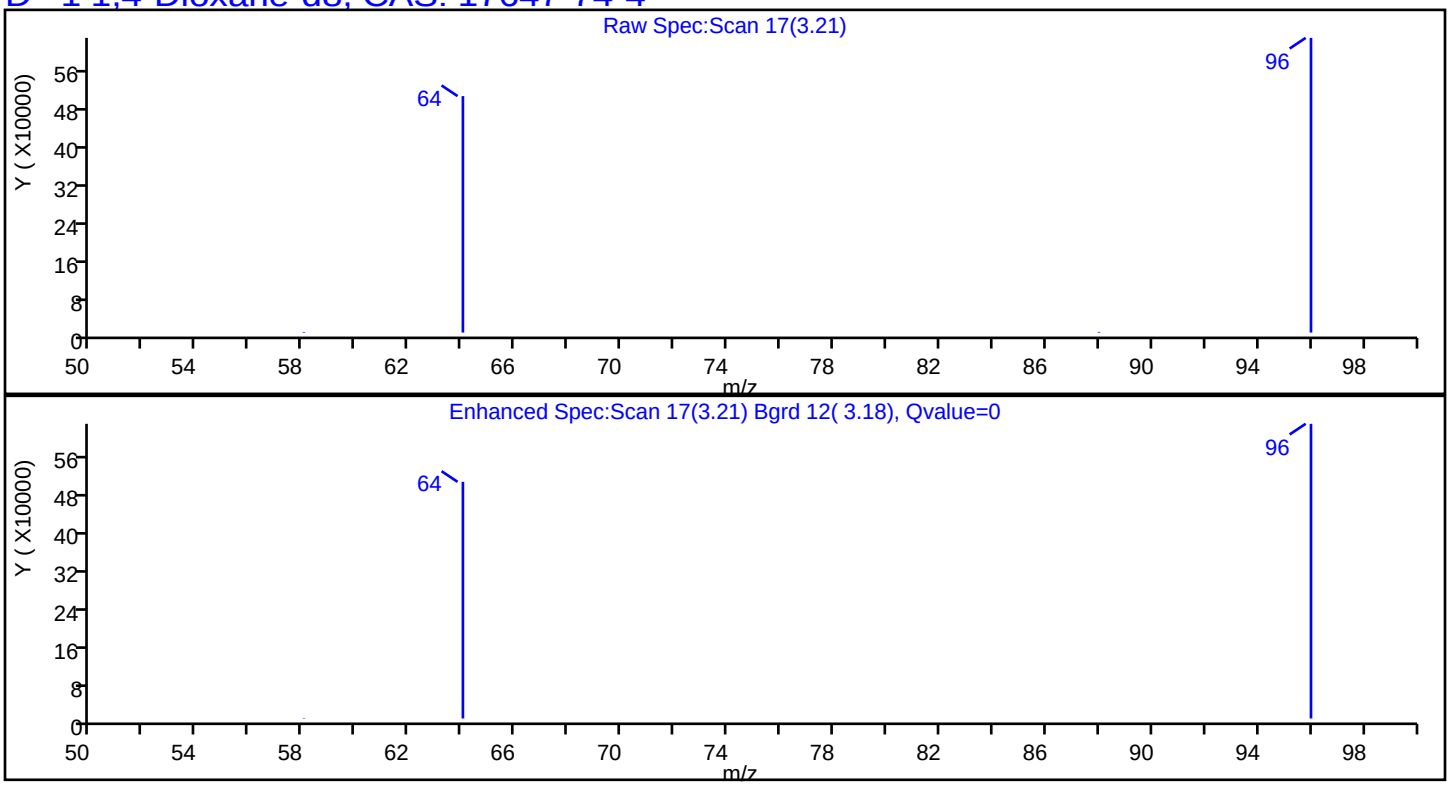
2 1,4-Dioxane, CAS: 123-91-1



TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29823.D				
Injection Date:	05-Jun-2018 18:02:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-G-7-A	Lab Sample ID:	460-157434-7		
Client ID:	MW-X				
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	10
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: Equipment Blank | Lab Sample ID: 460-157434-8

Matrix: Water | Lab File ID: C29824.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 13:35

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 18:20

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.14	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	36		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29824.D
Lims ID: 460-157434-F-8-A
Client ID: Equipment Blank
Sample Type: Client
Inject. Date: 05-Jun-2018 18:20:30 ALS Bottle#: 11 Worklist Smp#: 11
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-011
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:53:21 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:53:49

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	849612	1.43	35.8	
	2 1,4-Dioxane	88	3.249	3.235	0.014	91	4935	0.0179		
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	97	300537	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

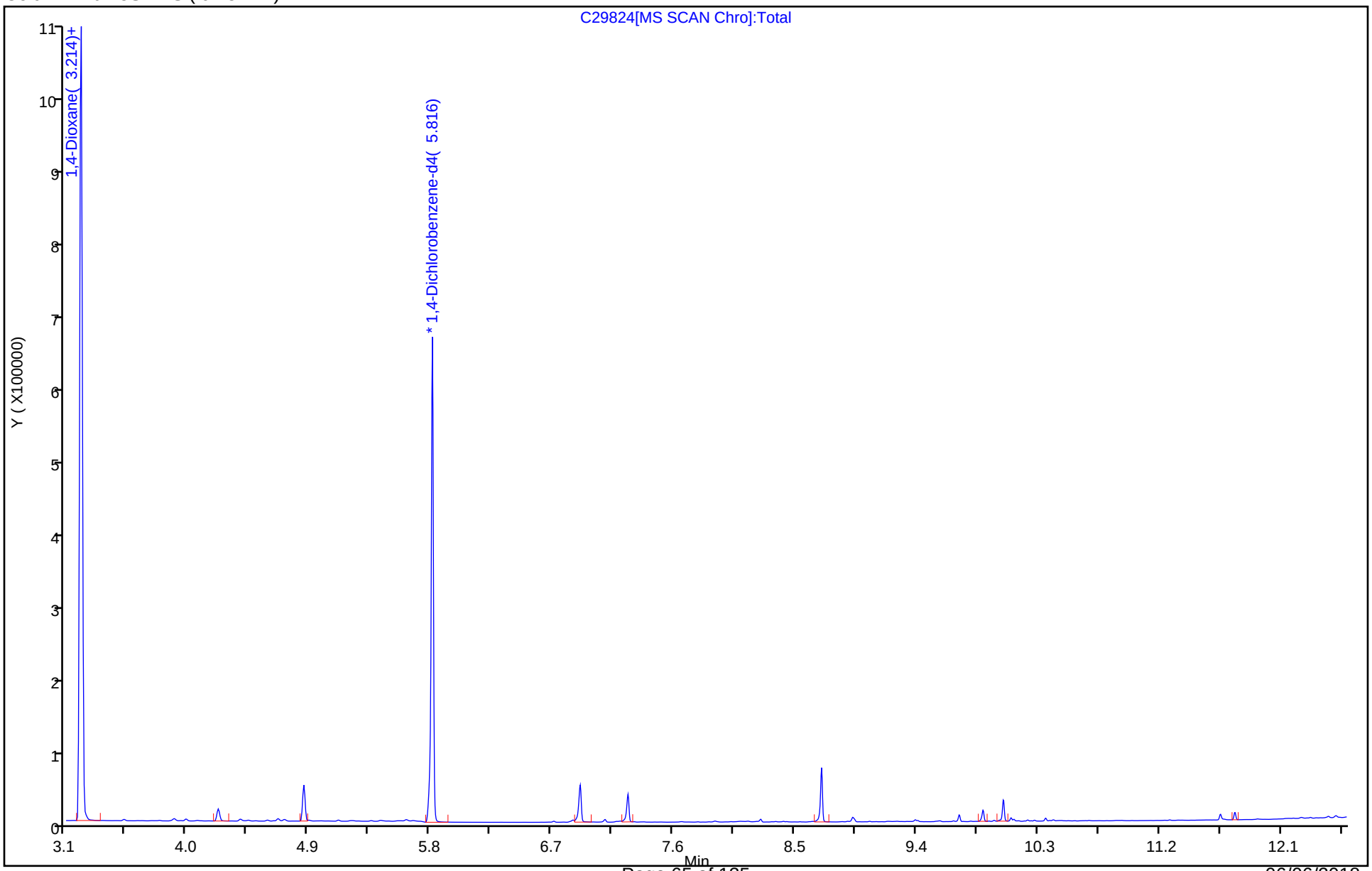
Report Date: 06-Jun-2018 13:53:49 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29824.D

Injection Date:	05-Jun-2018 18:20:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-F-8-A	Lab Sample ID:	460-157434-8	Worklist Smp#:	11
Client ID:	Equipment Blank				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

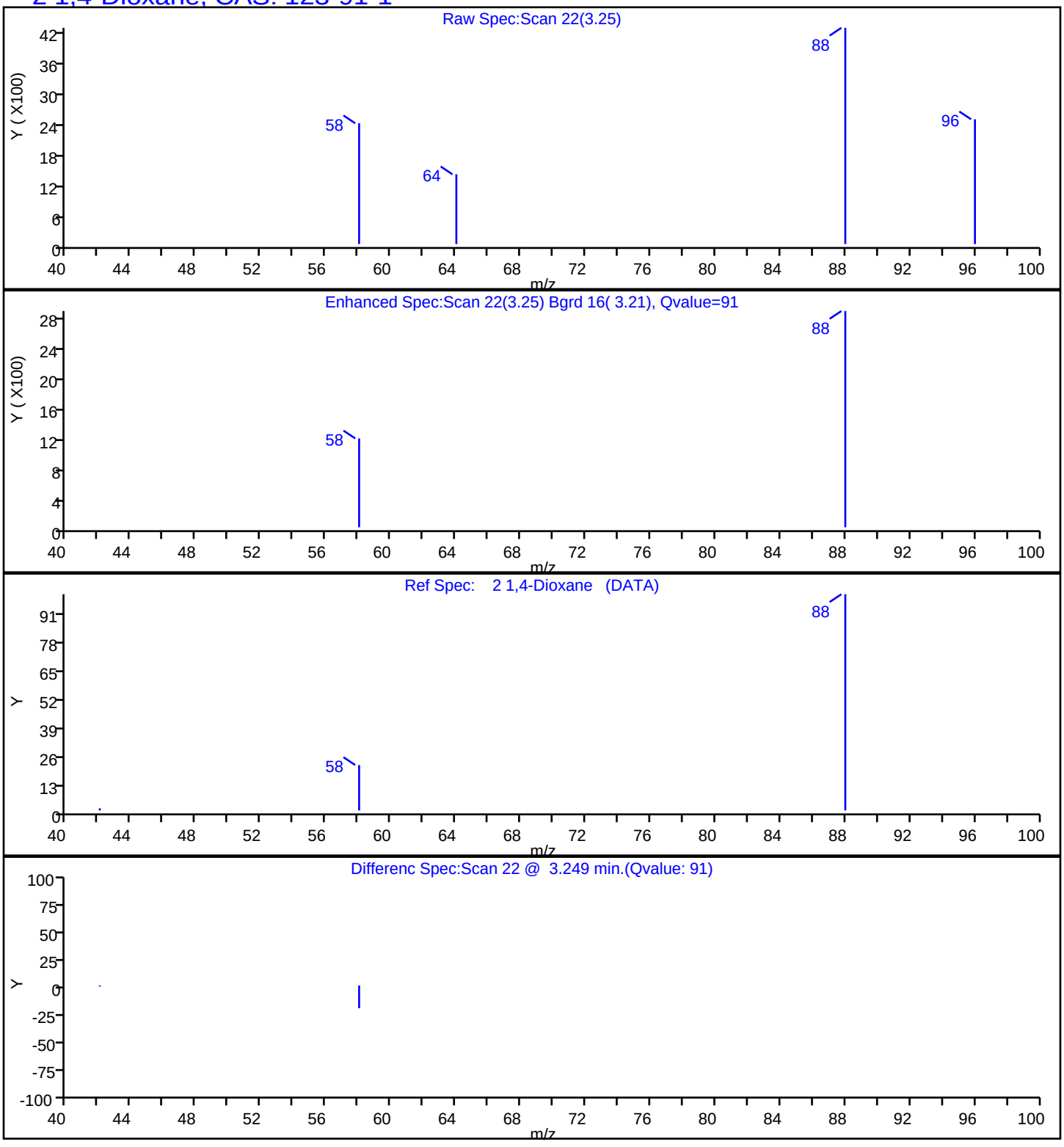
Column: Rtxi-5Sil MS (0.25 mm)



TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29824.D				
Injection Date:	05-Jun-2018 18:20:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-8-A	Lab Sample ID:	460-157434-8		
Client ID:	Equipment Blank				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

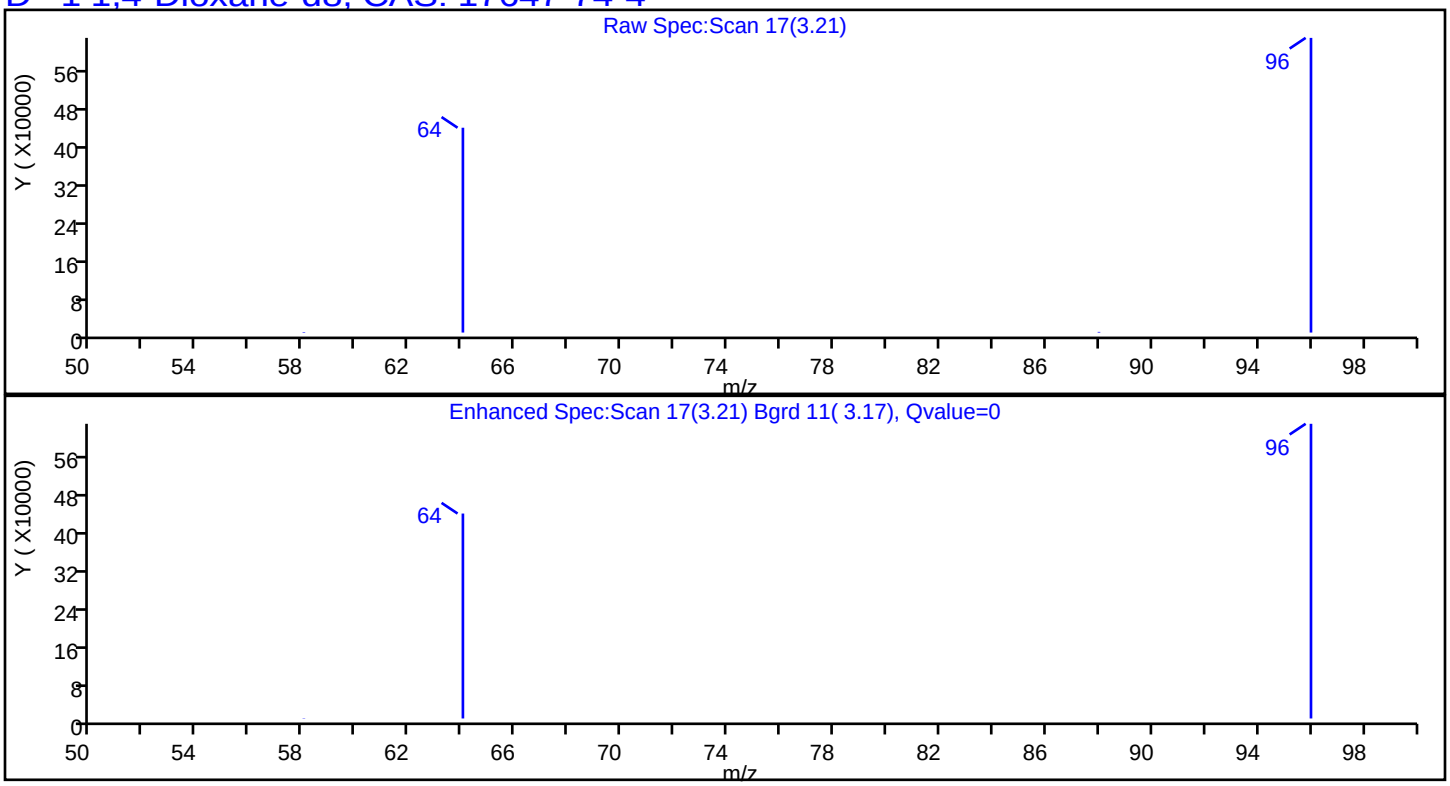
2 1,4-Dioxane, CAS: 123-91-1



TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29824.D				
Injection Date:	05-Jun-2018 18:20:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-8-A	Lab Sample ID:	460-157434-8		
Client ID:	Equipment Blank				
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	11
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: MW-2 | Lab Sample ID: 460-157434-10

Matrix: Water | Lab File ID: C29825.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 09:15

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 18:38

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.065	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	40		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29825.D
Lims ID: 460-157434-F-10-A
Client ID: MW-2
Sample Type: Client
Inject. Date: 05-Jun-2018 18:38:30 ALS Bottle#: 12 Worklist Smp#: 12
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-012
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 14:03:04 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:54:10

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	901336	1.61	40.3	
	2 1,4-Dioxane	88	3.249	3.235	0.014	62	2365	0.008106		
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	97	282570	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

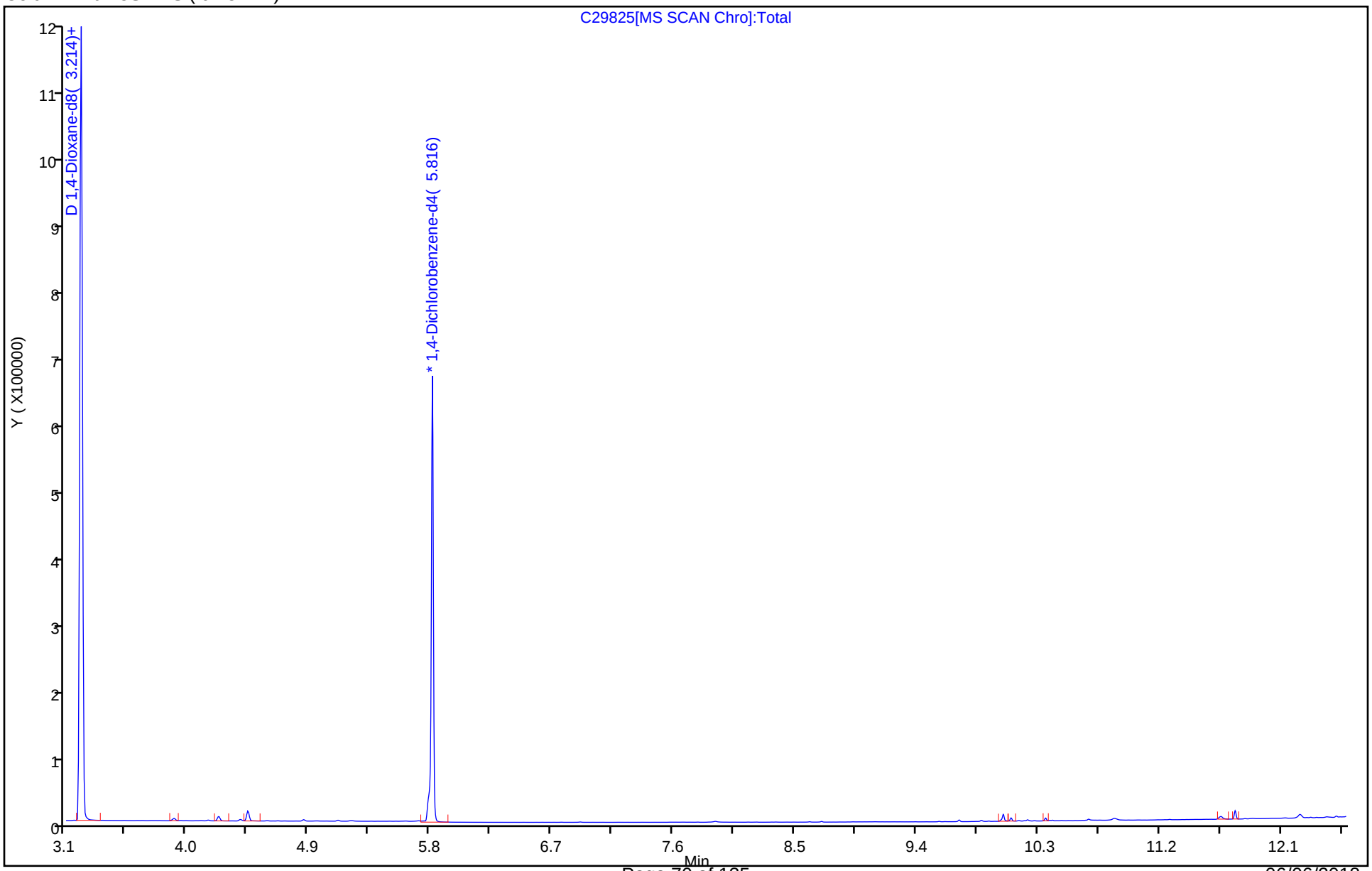
Report Date: 06-Jun-2018 14:03:05 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29825.D

Injection Date:	05-Jun-2018 18:38:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-F-10-A	Lab Sample ID:	460-157434-10	Worklist Smp#:	12
Client ID:	MW-2				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)

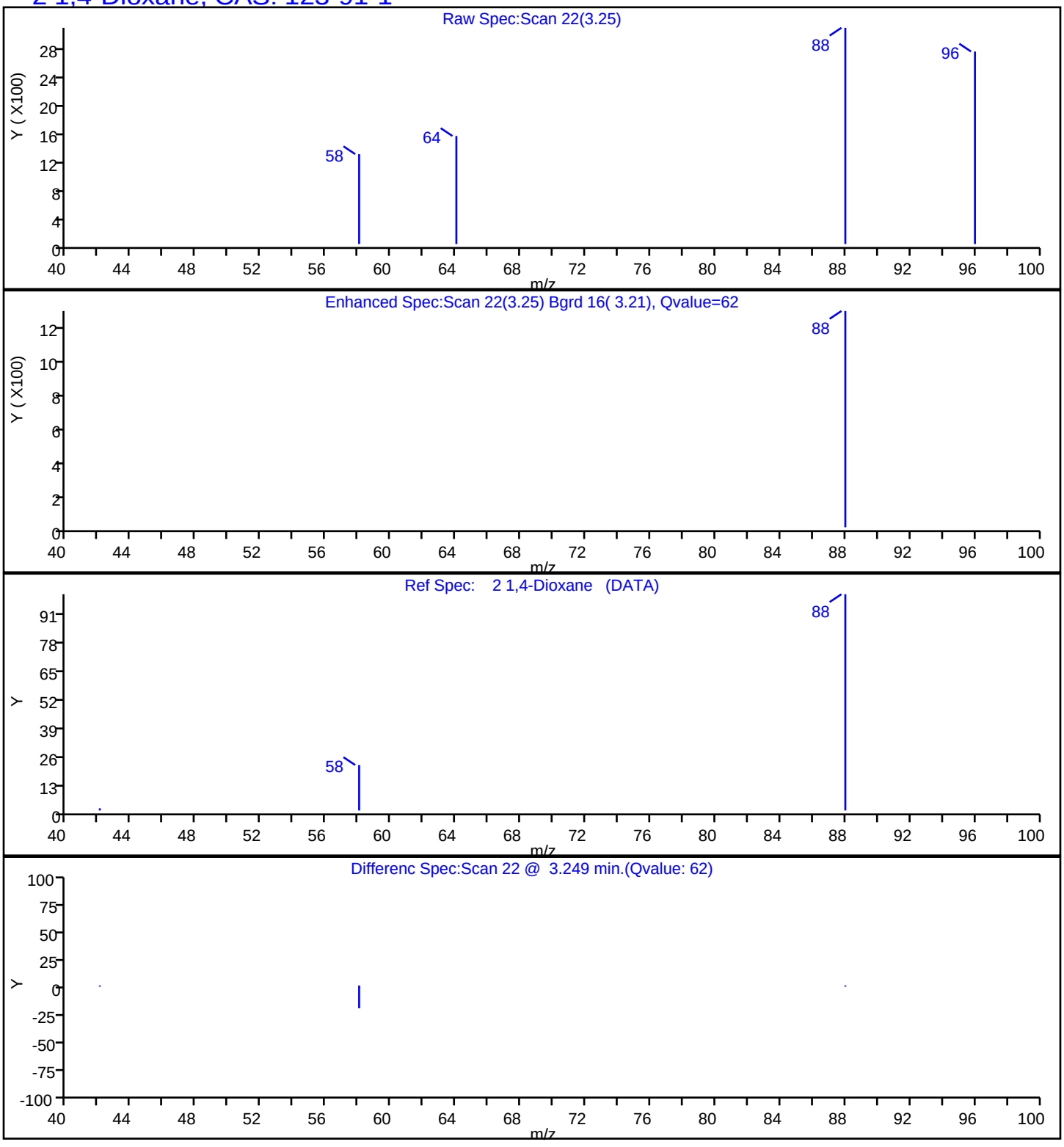


TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29825.D

Injection Date:	05-Jun-2018 18:38:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-10-A	Lab Sample ID:	460-157434-10		
Client ID:	MW-2				
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

2 1,4-Dioxane, CAS: 123-91-1

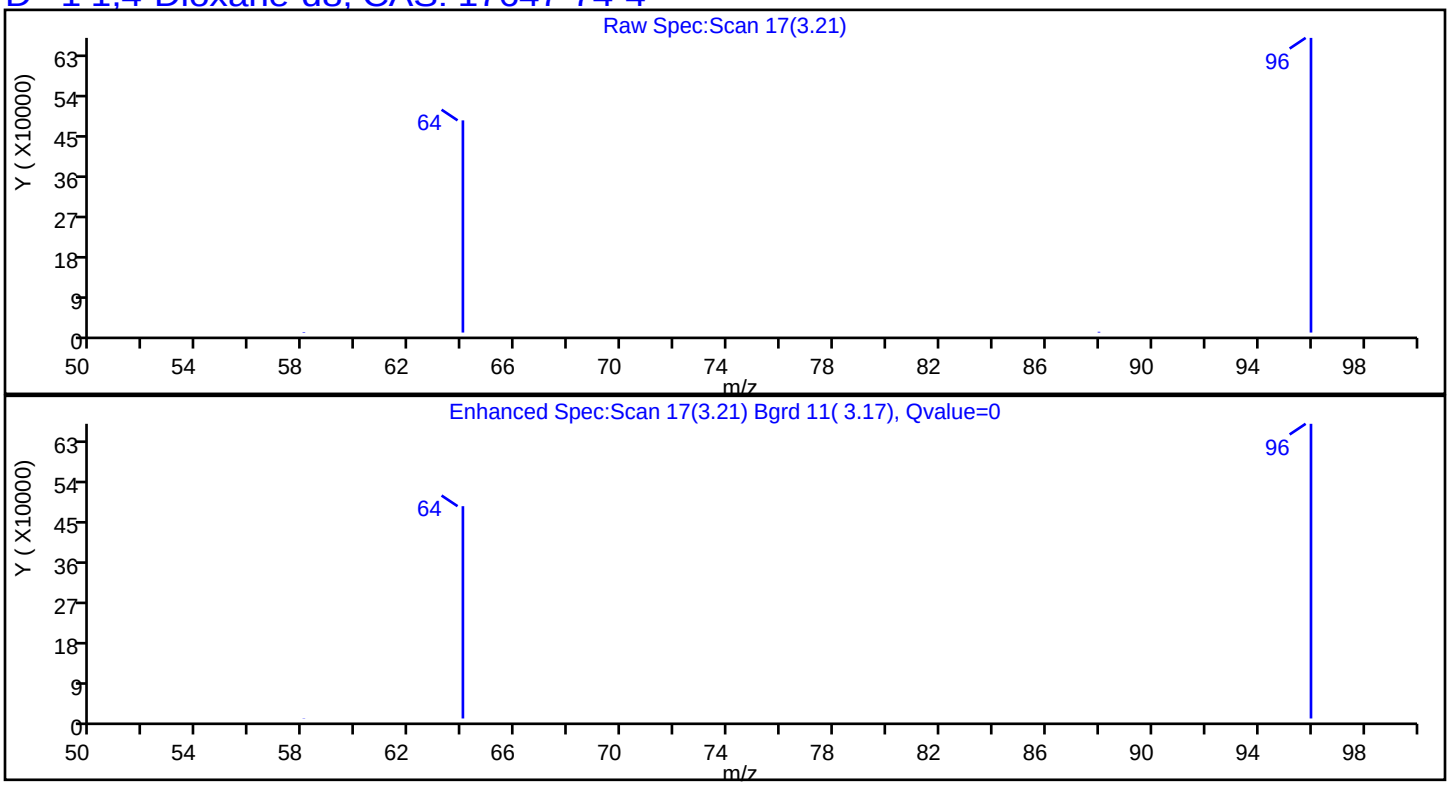


Report Date: 06-Jun-2018 14:03:05 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29825.D				
Injection Date:	05-Jun-2018 18:38:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-10-A	Lab Sample ID:	460-157434-10		
Client ID:	MW-2				
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	12
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: LMS-5 | Lab Sample ID: 460-157434-11

Matrix: Water | Lab File ID: C29826.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 10:16

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 18:56

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.042	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	34		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29826.D
Lims ID: 460-157434-F-11-A
Client ID: LMS-5
Sample Type: Client
Inject. Date: 05-Jun-2018 18:56:30 ALS Bottle#: 13 Worklist Smp#: 13
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-013
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 14:02:58 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:54:29

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	789511	1.36	34.0	
	2 1,4-Dioxane	88	3.242	3.235	0.007	62	1355	0.005302		
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	98	293999	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

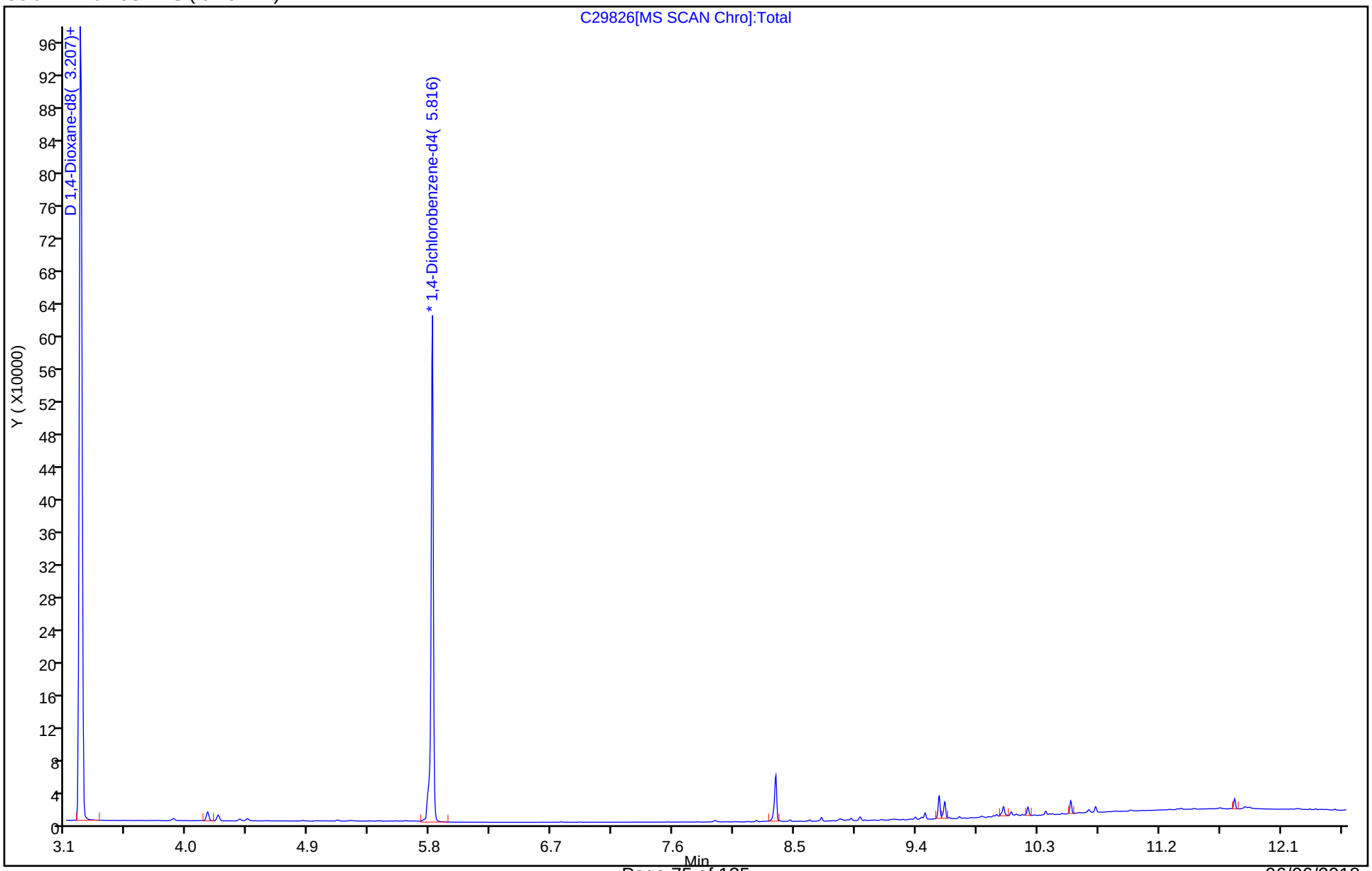
Report Date: 06-Jun-2018 14:02:59 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29826.D

Injection Date:	05-Jun-2018 18:56:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-F-11-A	Lab Sample ID:	460-157434-11	Worklist Smp#:	13
Client ID:	LMS-5				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

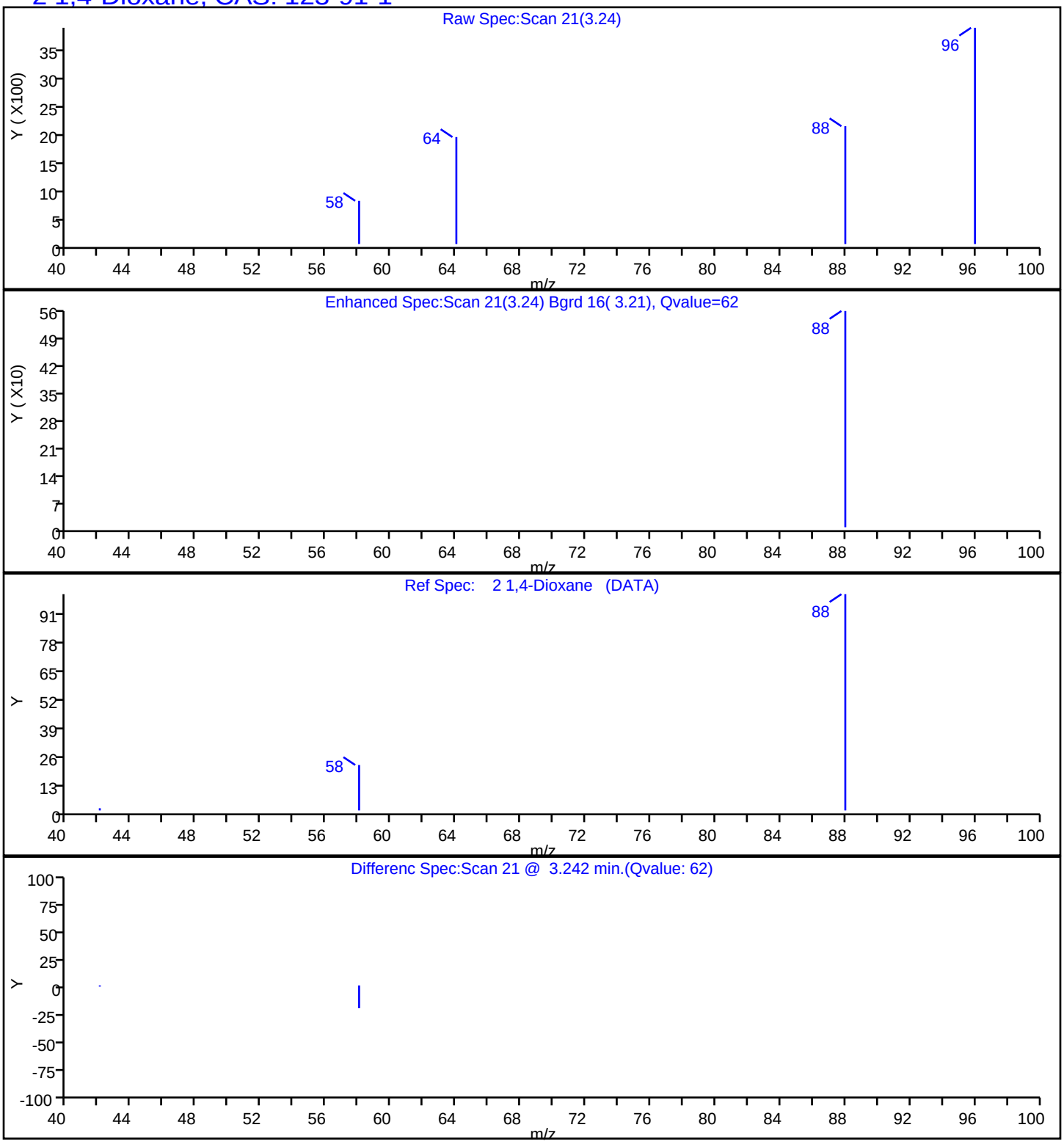
Column: Rtxi-5Sil MS (0.25 mm)



TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29826.D				
Injection Date:	05-Jun-2018 18:56:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-11-A	Lab Sample ID:	460-157434-11		
Client ID:	LMS-5				
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

2 1,4-Dioxane, CAS: 123-91-1

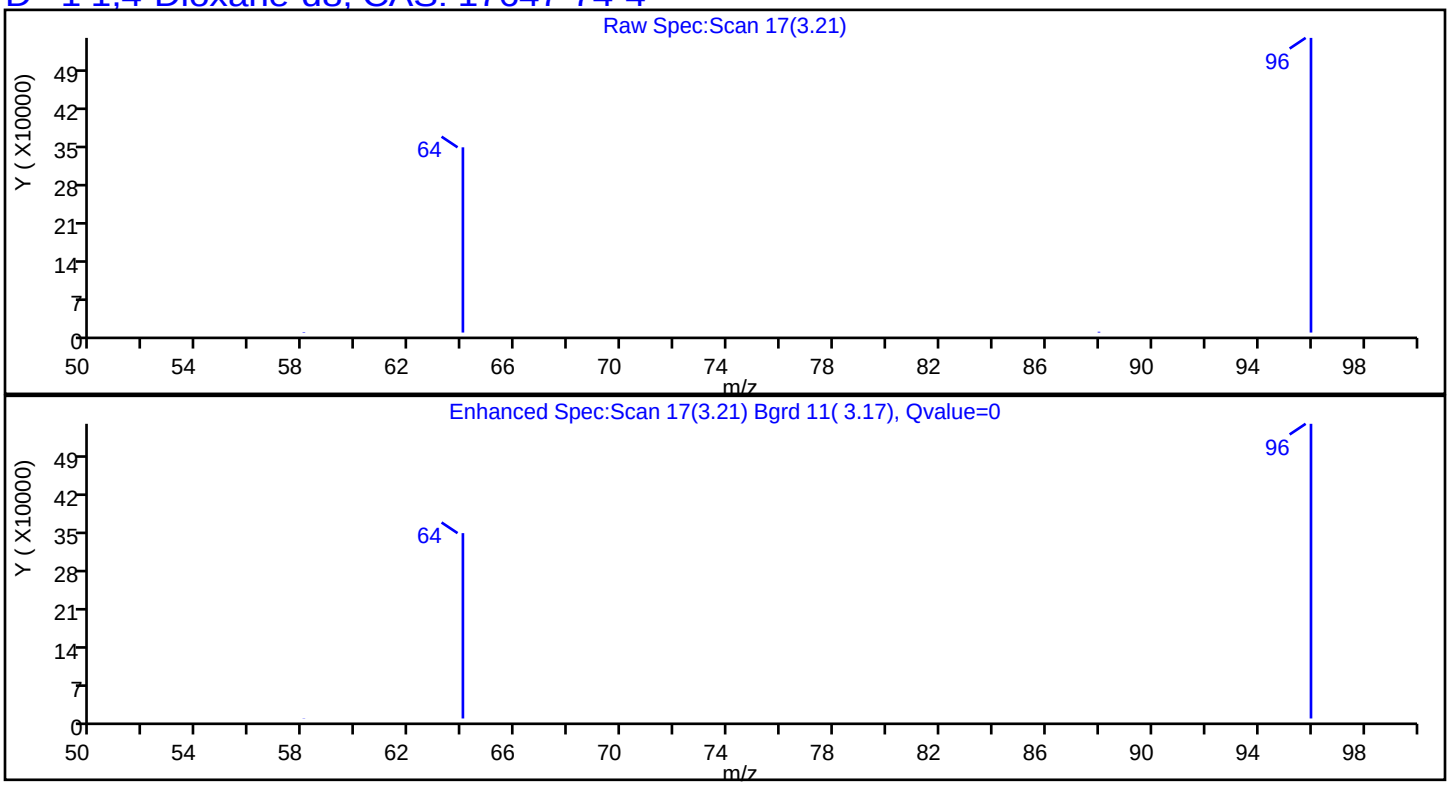


Report Date: 06-Jun-2018 14:02:59 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29826.D				
Injection Date:	05-Jun-2018 18:56:30	Instrument ID:	CBNAMS13		
Lims ID:	460-157434-F-11-A	Lab Sample ID:	460-157434-11		
Client ID:	LMS-5				
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	13
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Edison Job No.: 460-157434-2 Analy Batch No.: 518314

SDG No.:

Instrument ID: CBNAMS13 GC Column: Rtxi-5Sil M ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2018 12:48 Calibration End Date: 05/11/2018 17:20 Calibration ID: 68479

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 460-518314/9	C28993.D
Level 2	STD2 460-518314/8	C28992.D
Level 3	STD3 460-518314/7	C28991.D
Level 4	ICIS 460-518314/2	C28986.D
Level 5	STD8 460-518314/3	C28987.D
Level 6	STD7 460-518314/4	C28988.D
Level 7	STD6 460-518314/5	C28989.D
Level 8	STD4 460-518314/6	C28990.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5		B	M1	M2								
1,4-Dioxane	1.4707 1.1835	1.4974 1.2114	1.3755 1.3268	1.2864	1.0062	AveID		1.2947				12.5		50.0			
1,4-Dioxane-d8	0.4001 0.3970	0.3939 0.3945	0.3865 0.3964	0.3977	0.3963	Ave		0.3953				1.0		50.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Edison Job No.: 460-157434-2 Analy Batch No.: 518314

SDG No.:

Instrument ID: CBNAMS13 GC Column: Rtxi-5Sil M ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2018 12:48 Calibration End Date: 05/11/2018 17:20 Calibration ID: 68479

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 460-518314/9	C28993.D
Level 2	STD2 460-518314/8	C28992.D
Level 3	STD3 460-518314/7	C28991.D
Level 4	ICIS 460-518314/2	C28986.D
Level 5	STD8 460-518314/3	C28987.D
Level 6	STD7 460-518314/4	C28988.D
Level 7	STD6 460-518314/5	C28989.D
Level 8	STD4 460-518314/6	C28990.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/ML)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4	LVL 5
1,4-Dioxane		AveID	19118 1516533	40300 779650	88487 176553	413818	6531196	0.0200 2.00	0.0400 1.00	0.100 0.200	0.500	10.0
1,4-Dioxane-d8	DCBd 4	Ave	2599863 2562721	2691312 2574395	2573218 2661308	2573458	2596349	4.00 4.00	4.00 4.00	4.00 4.00	4.00	4.00

Curve Type Legend:

Ave = Average ISTD
AveID = Average isotope dilution

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28986.D
Lims ID: icis
Client ID:
Sample Type: ICIS Calib Level: 5
Inject. Date: 11-May-2018 12:48:30 ALS Bottle#: 9 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0071845-002
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 14-May-2018 12:12:25 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: johnstonm1 Date: 11-May-2018 13:27:37

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.400	3.400	0.000	0	2573458	4.00	4.02	a
	2 1,4-Dioxane	88	3.428	3.428	0.000	79	413818	0.5000	0.4968	
*	4 1,4-Dichlorobenzene-d4	152	5.952	5.952	0.000	98	323558	0.2000	0.2000	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM_ISOTOPL5_00001 Amount Added: 1.00 Units: mL

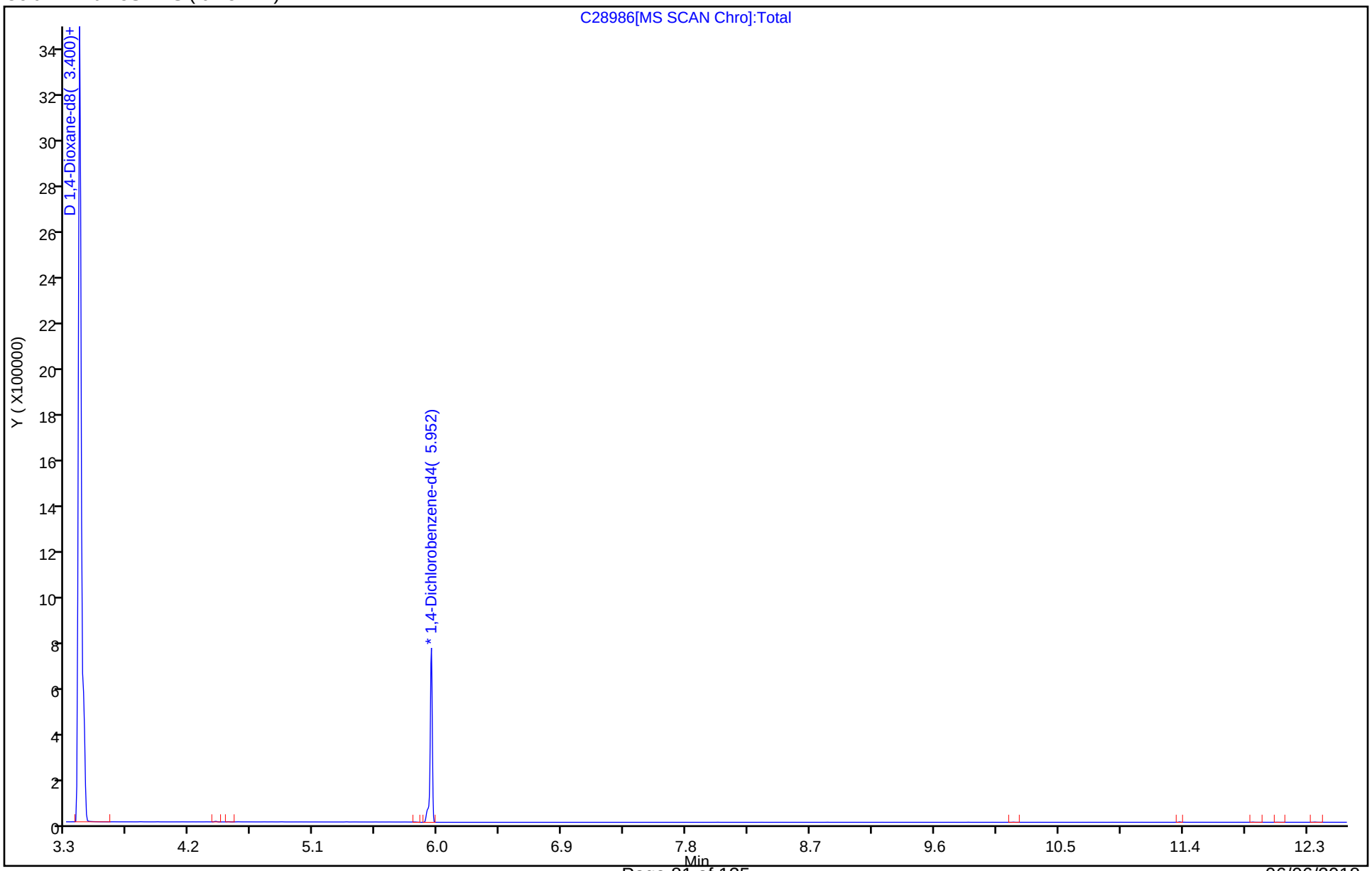
Report Date: 14-May-2018 12:12:25 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28986.D

Injection Date:	11-May-2018 12:48:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	icis			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Edison

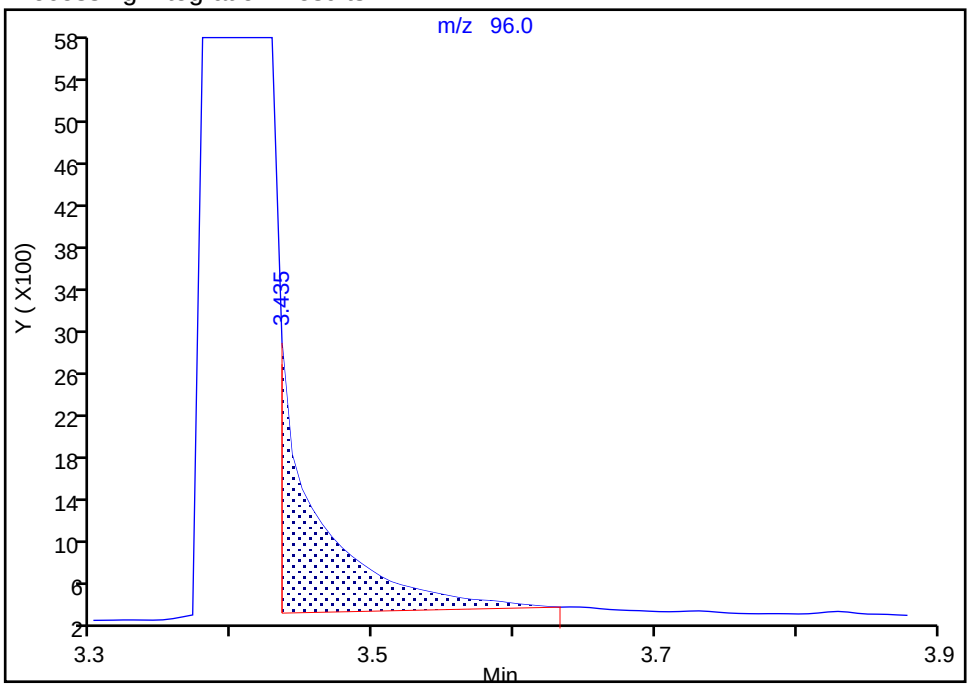
Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28986.D				
Injection Date:	11-May-2018 12:48:30	Instrument ID:	CBNAMS13		
Lims ID:	icis				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	2
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4

Signal: 1

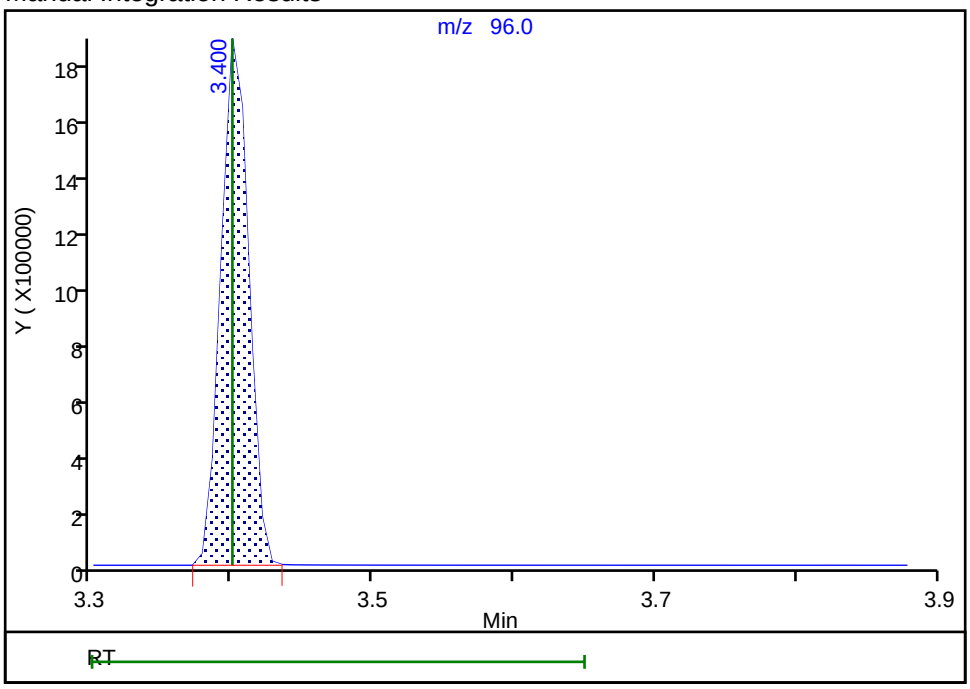
Processing Integration Results

RT: 3.43
Area: 5015
Amount: 4.029831
Amount Units: ug/ml



Manual Integration Results

RT: 3.40
Area: 2573458
Amount: 4.024073
Amount Units: ug/ml



Reviewer: johnstonm1, 11-May-2018 13:27:27

Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28987.D
Lims ID: STD8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 11-May-2018 13:08:30 ALS Bottle#: 10 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0071845-003
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 14-May-2018 12:12:25 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: johnstonm1 Date: 11-May-2018 13:28:03

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.392	3.400	-0.008	0	2596349	4.00	4.01	a
	2 1,4-Dioxane	88	3.421	3.428	-0.007	78	6531196	10.0	7.77	
*	4 1,4-Dichlorobenzene-d4	152	5.944	5.952	-0.008	97	327569	0.2000	0.2000	

QC Flag Legend

Review Flags
a - User Assigned ID

Reagents:

SM_ISOTOPL8_00001 Amount Added: 1.00 Units: mL

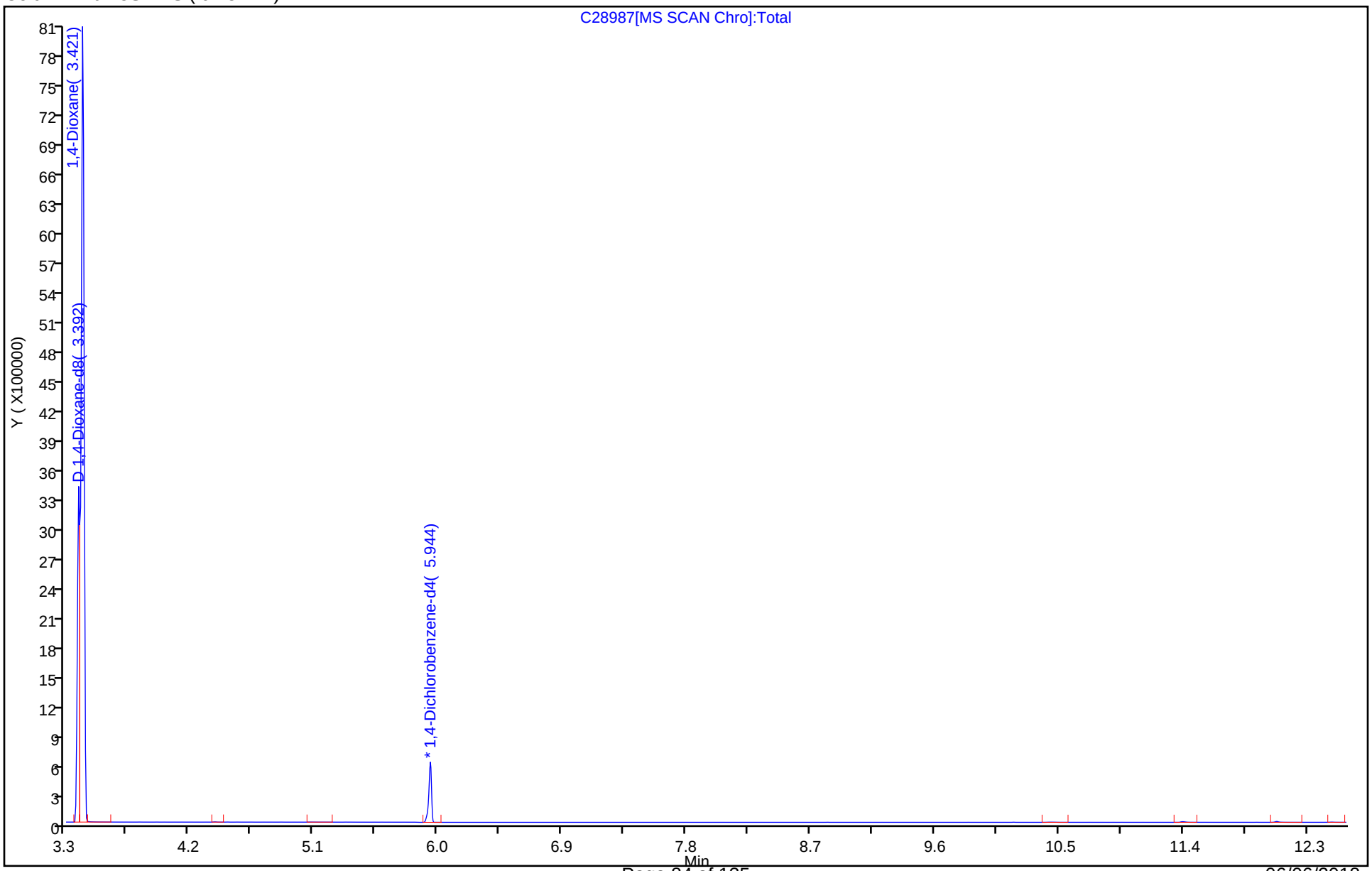
Report Date: 14-May-2018 12:12:26 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28987.D

Injection Date:	11-May-2018 13:08:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	STD8			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



Manual Integration/User Assign Peak Report

TestAmerica Edison

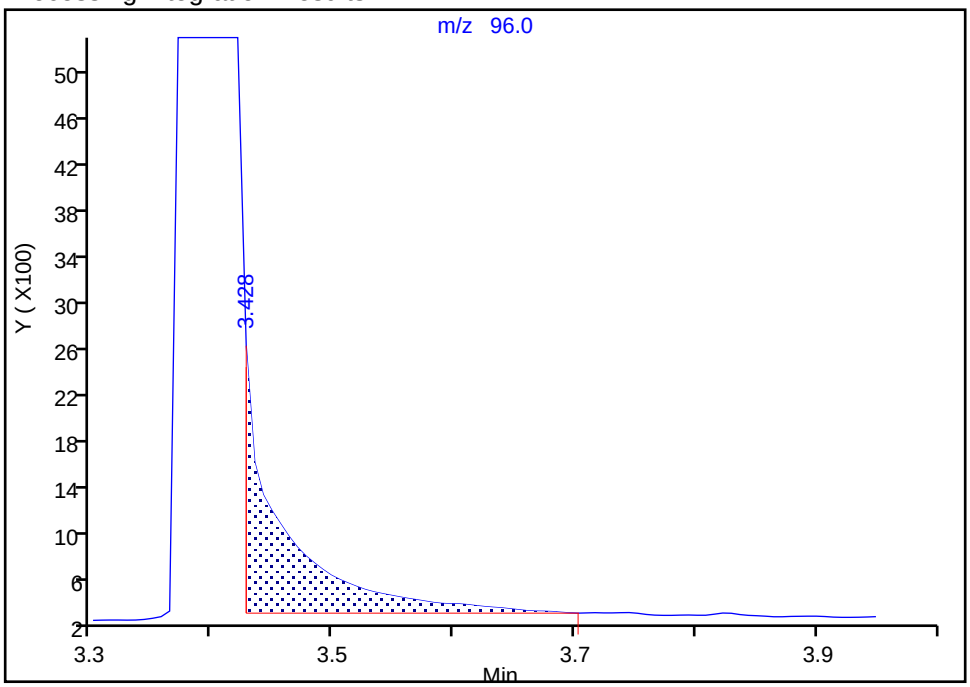
Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28987.D
Injection Date: 11-May-2018 13:08:30 Instrument ID: CBNAMS13
Lims ID: STD8
Client ID:
Operator ID: ALS Bottle#: 10 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: 8270_Isotope Limit Group: MSS 8270 Isotope Dilution IS
Column: Rtxi-5Sil MS (0.25 mm) Detector MS SCAN

D 1 1,4-Dioxane-d8, CAS: 17647-74-4

Signal: 1

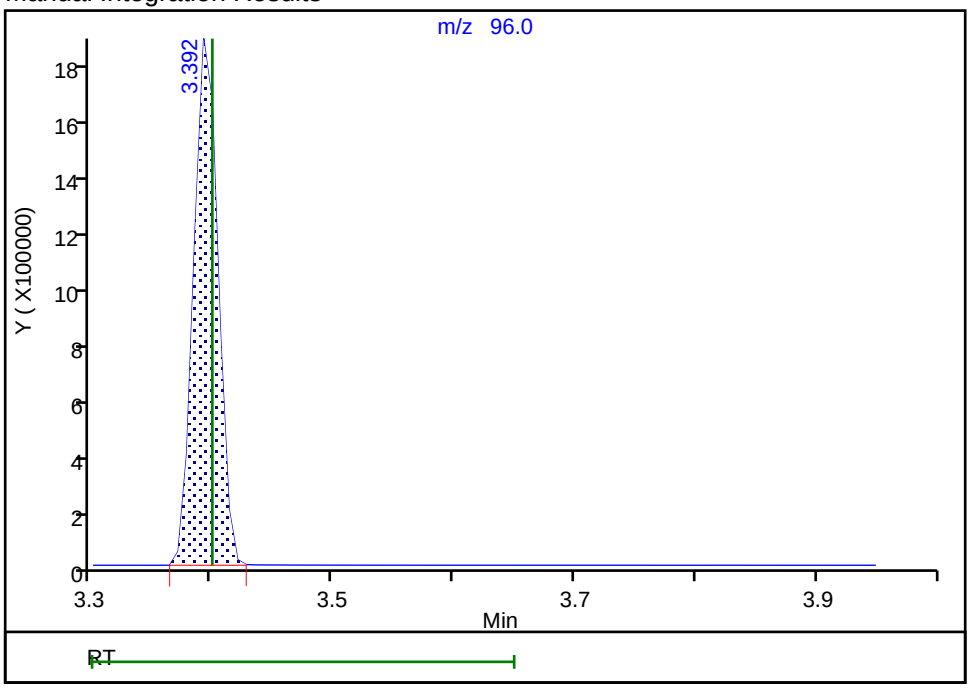
Processing Integration Results

RT: 3.43
Area: 5002
Amount: 0.015330
Amount Units: ug/ml



Manual Integration Results

RT: 3.39
Area: 2596349
Amount: 4.010155
Amount Units: ug/ml



Reviewer: johnstonm1, 11-May-2018 13:27:45
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28988.D
Lims ID: STD7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 11-May-2018 13:27:30 ALS Bottle#: 11 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0071845-004
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 14-May-2018 12:12:26 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: johnstonm1 Date: 14-May-2018 08:54:21

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.400	3.400	0.000	0	2562721	4.00	4.02	
	2 1,4-Dioxane	88	3.428	3.428	0.000	79	1516533	2.00	1.83	
*	4 1,4-Dichlorobenzene-d4	152	5.948	5.952	-0.004	99	322762	0.2000	0.2000	

Reagents:

SM_ISOTOPL7_00001 Amount Added: 1.00 Units: mL

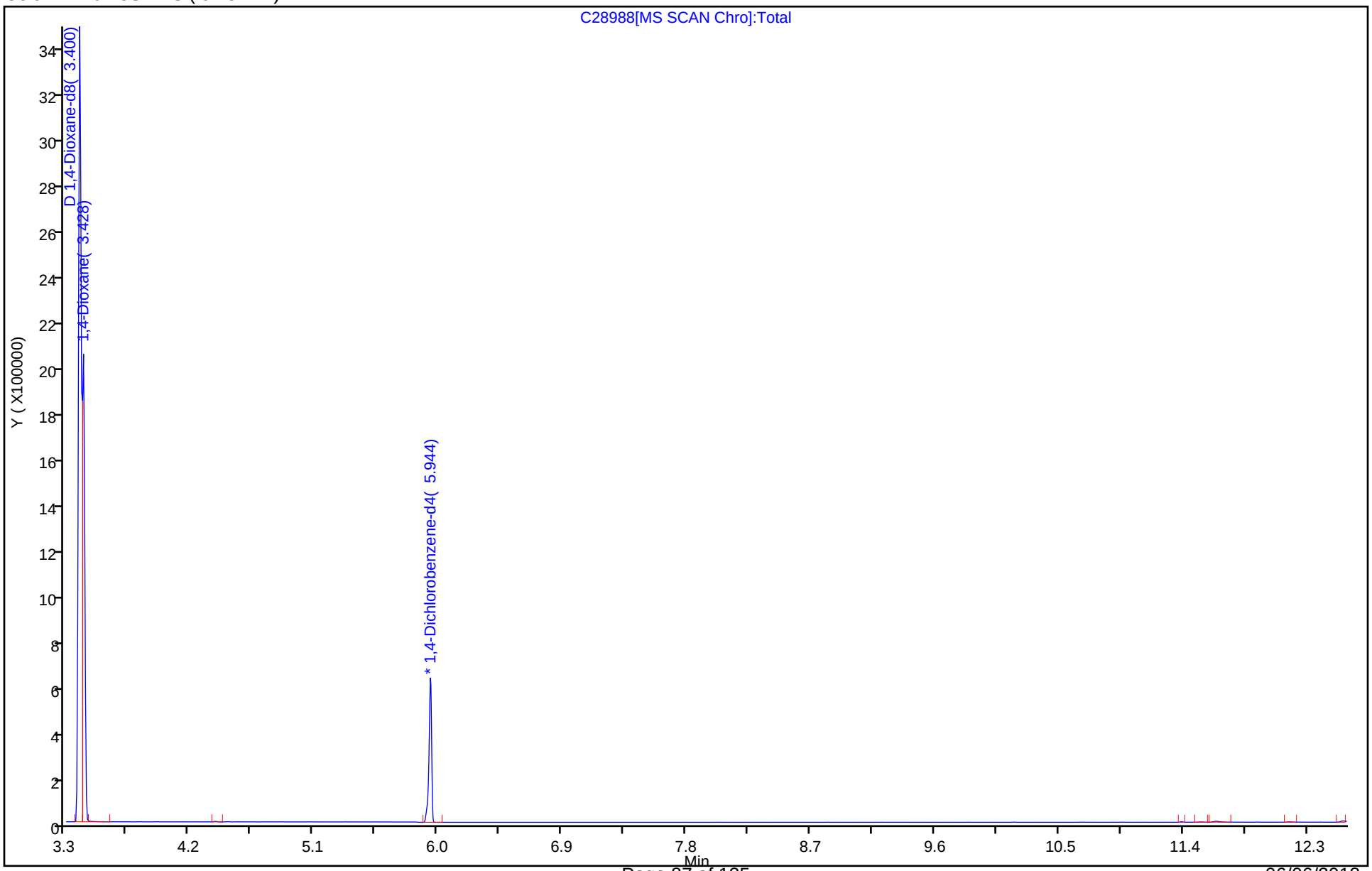
Report Date: 14-May-2018 12:12:26 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28988.D

Injection Date:	11-May-2018 13:27:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	STD7			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28989.D
Lims ID: STD6
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 11-May-2018 14:16:30 ALS Bottle#: 12 Worklist Smp#: 5
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0071845-005
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 14-May-2018 12:12:27 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: johnstonm1 Date: 14-May-2018 08:54:26

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.400	3.400	0.000	0	2574395	4.00	3.99	
	2 1,4-Dioxane	88	3.428	3.428	0.000	82	779650	1.00	0.9356	
*	4 1,4-Dichlorobenzene-d4	152	5.948	5.952	-0.004	97	326300	0.2000	0.2000	

Reagents:

SM_ISOTOPL6_00001 Amount Added: 1.00 Units: mL

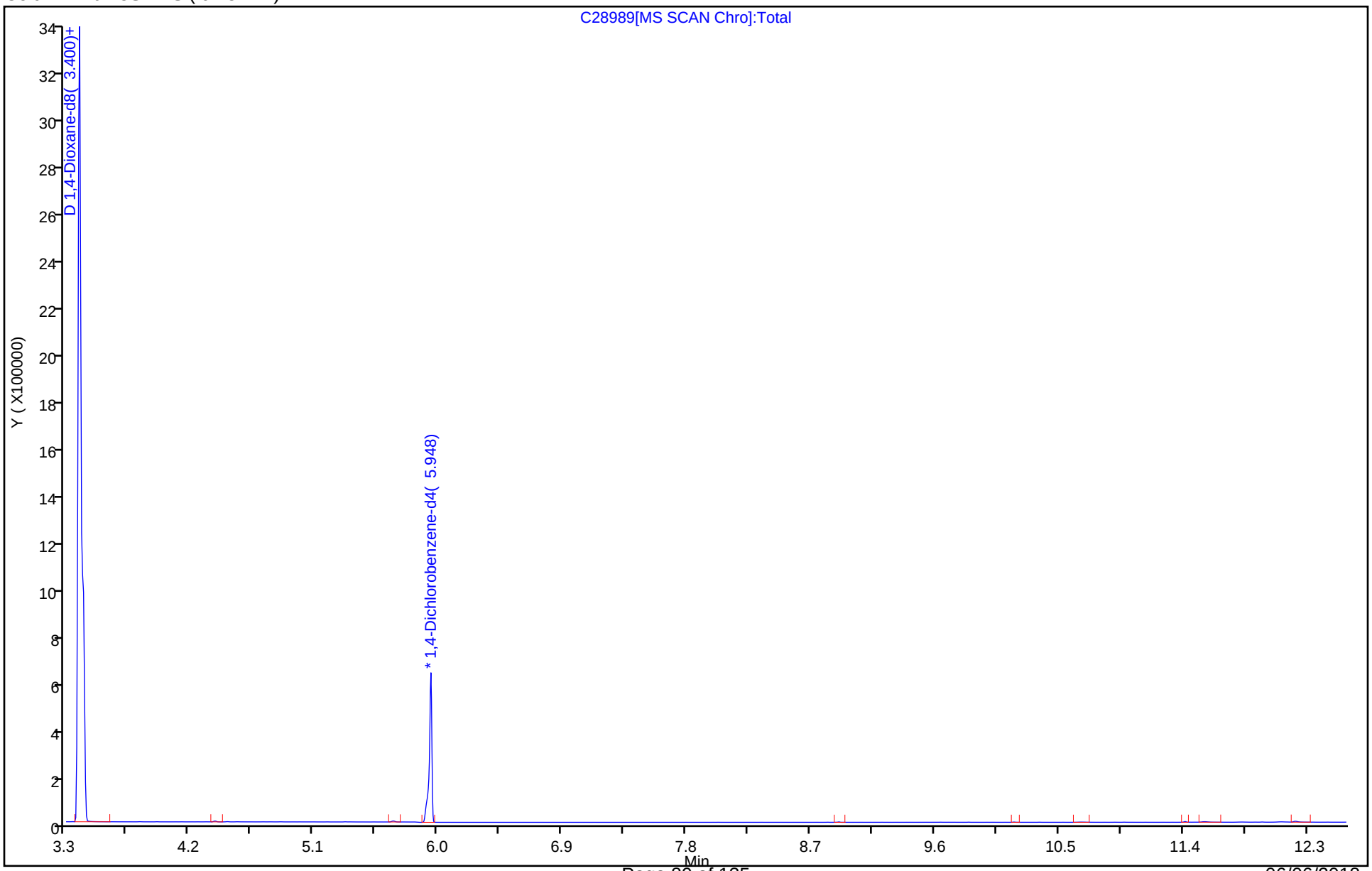
Report Date: 14-May-2018 12:12:27 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28989.D

Injection Date:	11-May-2018 14:16:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	STD6			Worklist Smp#:	5
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28990.D
Lims ID: STD4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 11-May-2018 14:35:30 ALS Bottle#: 13 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0071845-006
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 14-May-2018 12:12:28 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: johnstonm1 Date: 14-May-2018 08:54:33

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.399	3.400	-0.001	0	2661308	4.00	4.01	
	2 1,4-Dioxane	88	3.428	3.428	0.000	79	176553	0.2000	0.2050	
*	4 1,4-Dichlorobenzene-d4	152	5.944	5.952	-0.008	96	335668	0.2000	0.2000	

Reagents:

SM_ISOTOPL4_00001 Amount Added: 1.00 Units: mL

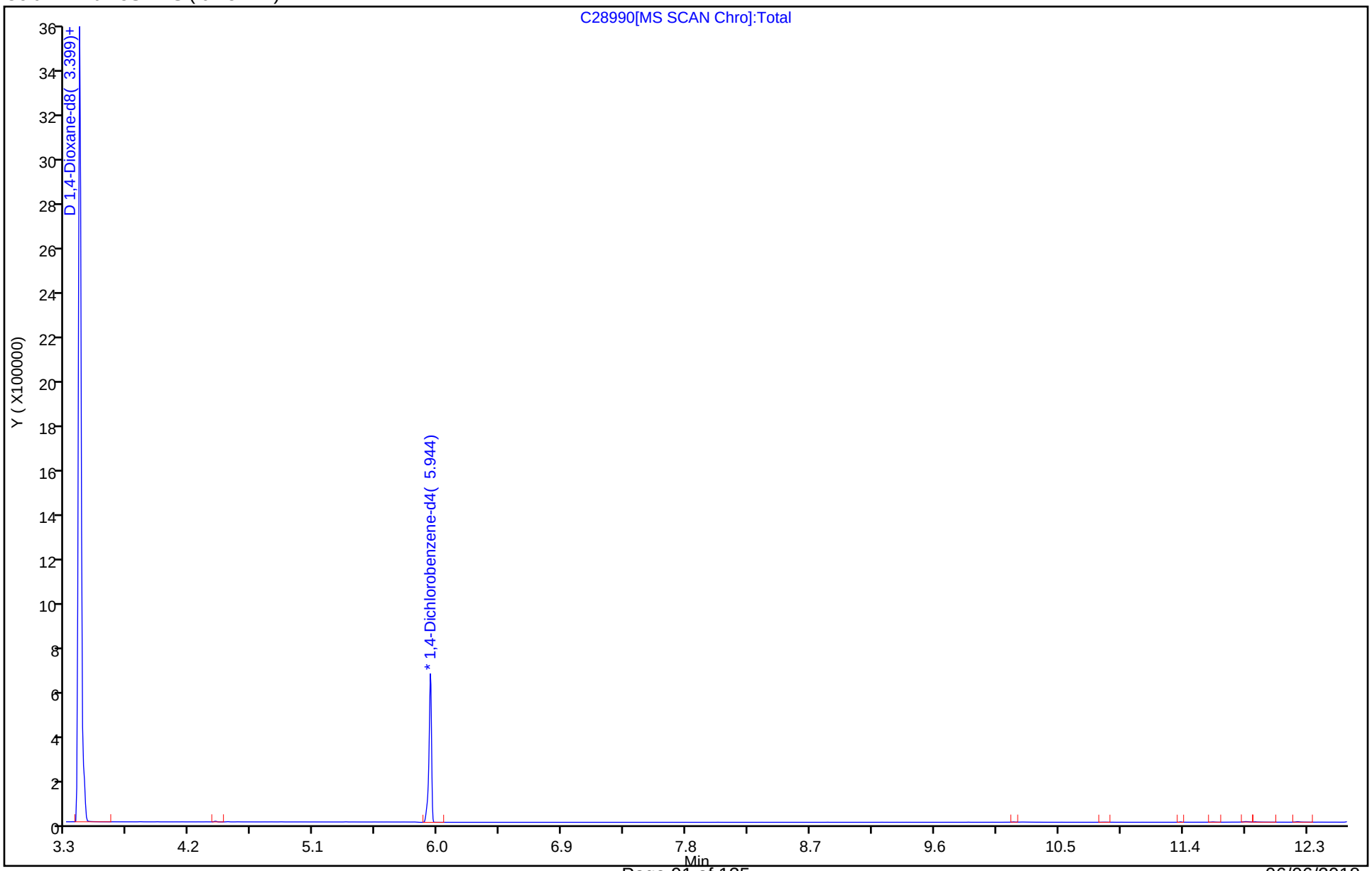
Report Date: 14-May-2018 12:12:28 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28990.D

Injection Date:	11-May-2018 14:35:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	STD4			Worklist Smp#:	6
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28991.D
Lims ID: STD3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 11-May-2018 15:44:30 ALS Bottle#: 14 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0071845-007
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 14-May-2018 12:12:28 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: johnstonm1 Date: 14-May-2018 08:54:37

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.400	3.400	0.000	0	2573218	4.00	3.91	
	2 1,4-Dioxane	88	3.428	3.428	0.000	81	88487	0.1000	0.1062	
*	4 1,4-Dichlorobenzene-d4	152	5.948	5.948	0.000	97	332866	0.2000	0.2000	

Reagents:

SM_ISOTOPL3_00001 Amount Added: 1.00 Units: mL

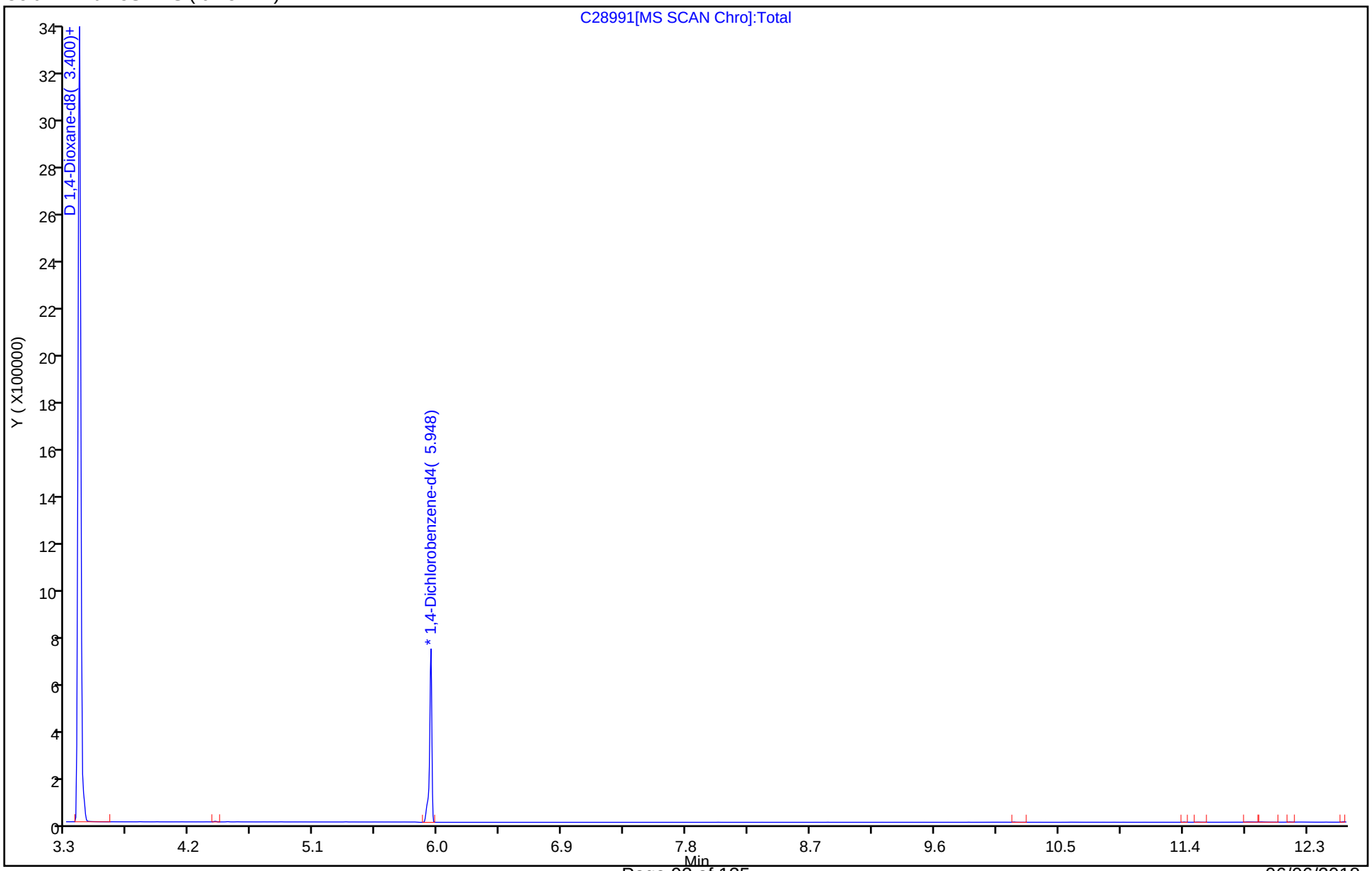
Report Date: 14-May-2018 12:12:29 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28991.D

Injection Date:	11-May-2018 15:44:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	STD3			Worklist Smp#:	7
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28992.D
Lims ID: STD2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 11-May-2018 16:02:30 ALS Bottle#: 15 Worklist Smp#: 8
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0071845-008
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 14-May-2018 12:12:29 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: johnstonm1 Date: 14-May-2018 08:54:44

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.400	3.400	0.000	0	2691312	4.00	3.99	
	2 1,4-Dioxane	88	3.435	3.428	0.007	85	40300	0.0400	0.0463	
*	4 1,4-Dichlorobenzene-d4	152	5.948	5.948	0.000	97	341640	0.2000	0.2000	

Reagents:

SM_ISOTOPL2_00001 Amount Added: 1.00 Units: mL

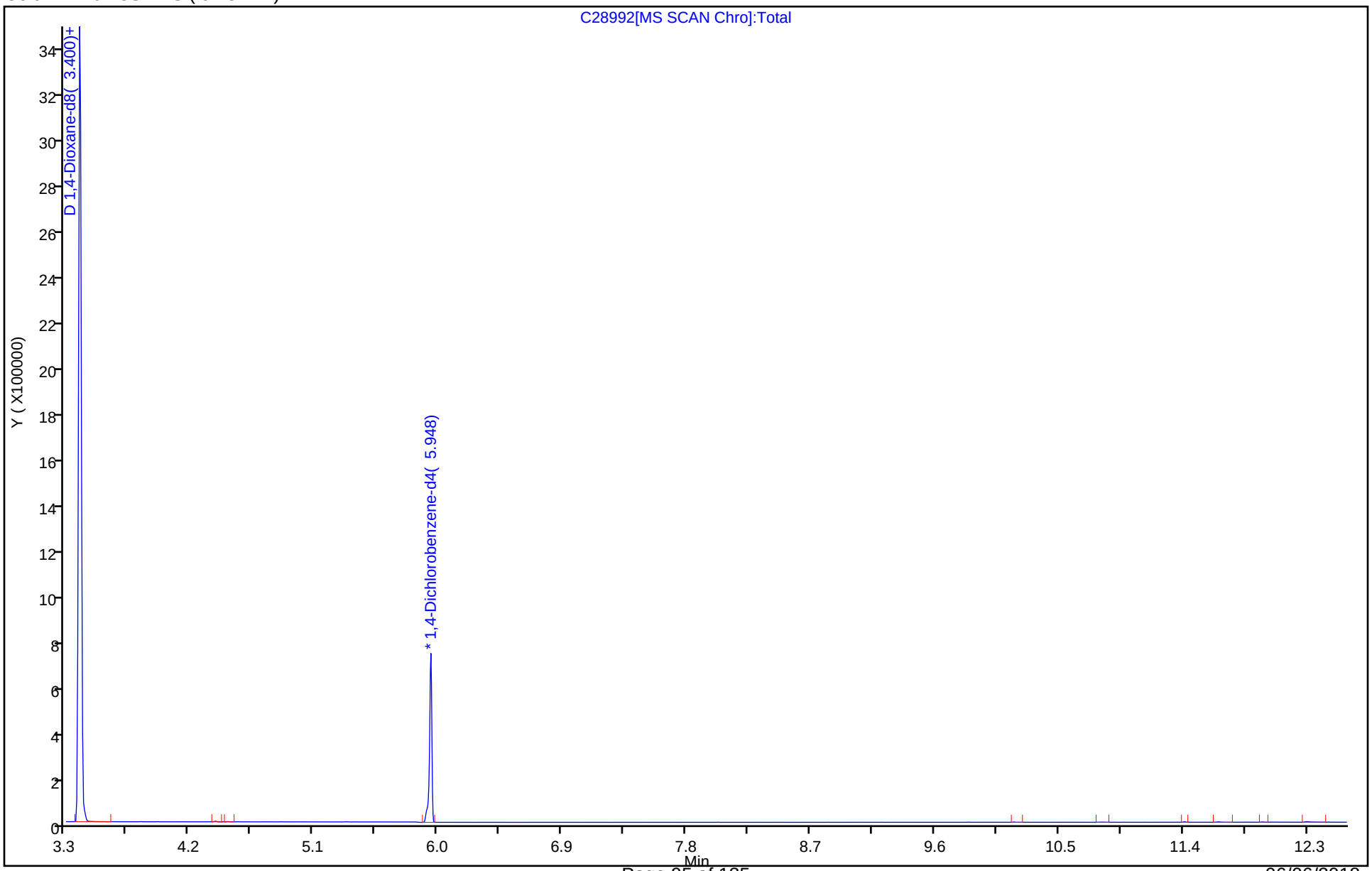
Report Date: 14-May-2018 12:12:29 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28992.D

Injection Date:	11-May-2018 16:02:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	STD2			Worklist Smp#:	8
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D
Lims ID: STD1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 11-May-2018 17:20:30 ALS Bottle#: 16 Worklist Smp#: 9
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0071845-009
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 14-May-2018 12:12:30 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK013

First Level Reviewer: johnstonm1 Date: 14-May-2018 08:54:50

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.400	3.400	0.000	0	2599863	4.00	4.05	
	2 1,4-Dioxane	88	3.428	3.428	0.000	87	19118	0.0200	0.0227	
*	4 1,4-Dichlorobenzene-d4	152	5.948	5.948	0.000	98	324883	0.2000	0.2000	

Reagents:

SM_ISOTOPL1_00001 Amount Added: 1.00 Units: mL

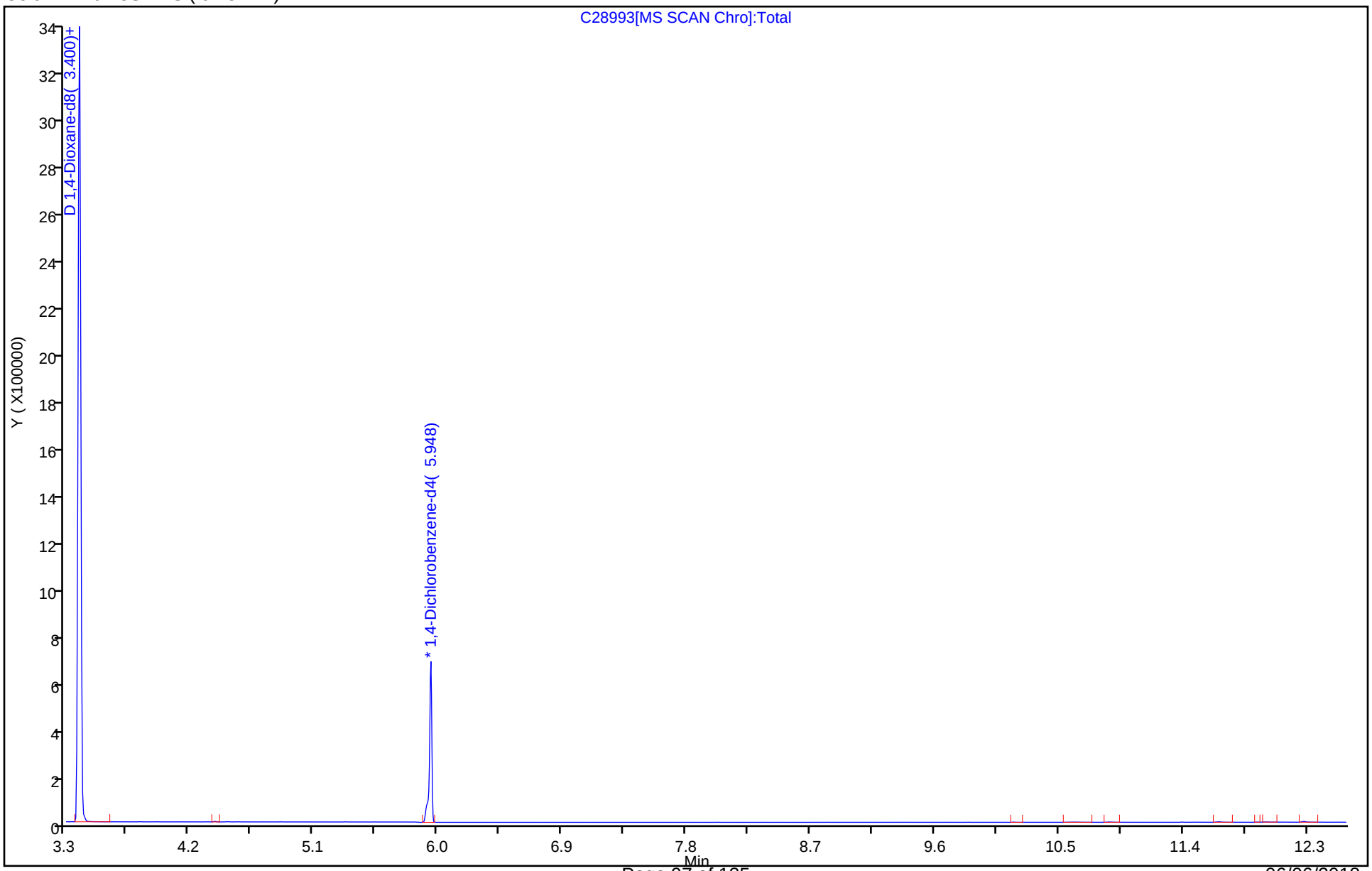
Report Date: 14-May-2018 12:12:30 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Injection Date:	11-May-2018 17:20:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	STD1			Worklist Smp#:	9
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Lab Sample ID: CCVIS 460-525311/2 Calibration Date: 06/05/2018 15:39

Instrument ID: CBNAMS13 Calib Start Date: 05/11/2018 12:48

GC Column: Rtxi-5Sil MS ID: 0.25(mm) Calib End Date: 05/11/2018 17:20

Lab File ID: C29815a.D Conc. Units: ug/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	AveID	1.295	1.265		489	500	-2.3	
1,4-Dioxane-d8	Ave	0.3953	0.3748		3790	4000	-5.2	50.0

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29815a.D
Lims ID: ccvis
Client ID:
Sample Type: CCVIS
Inject. Date: 05-Jun-2018 15:39:30 ALS Bottle#: 2 Worklist Smp#: 2
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-002
Operator ID: Instrument ID: CBNAMS13
Sublist: chrom-8270_Isotope*sub1

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:50:51 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:50:51

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.207	3.228	-0.021	0	2297335	4.00	3.79	
	2 1,4-Dioxane	88	3.235	3.235	0.000	78	363390	0.5000	0.4887	
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	97	306512	0.2000	0.2000	

Reagents:

SM_ISOTOPL5_00001 Amount Added: 1.00 Units: mL

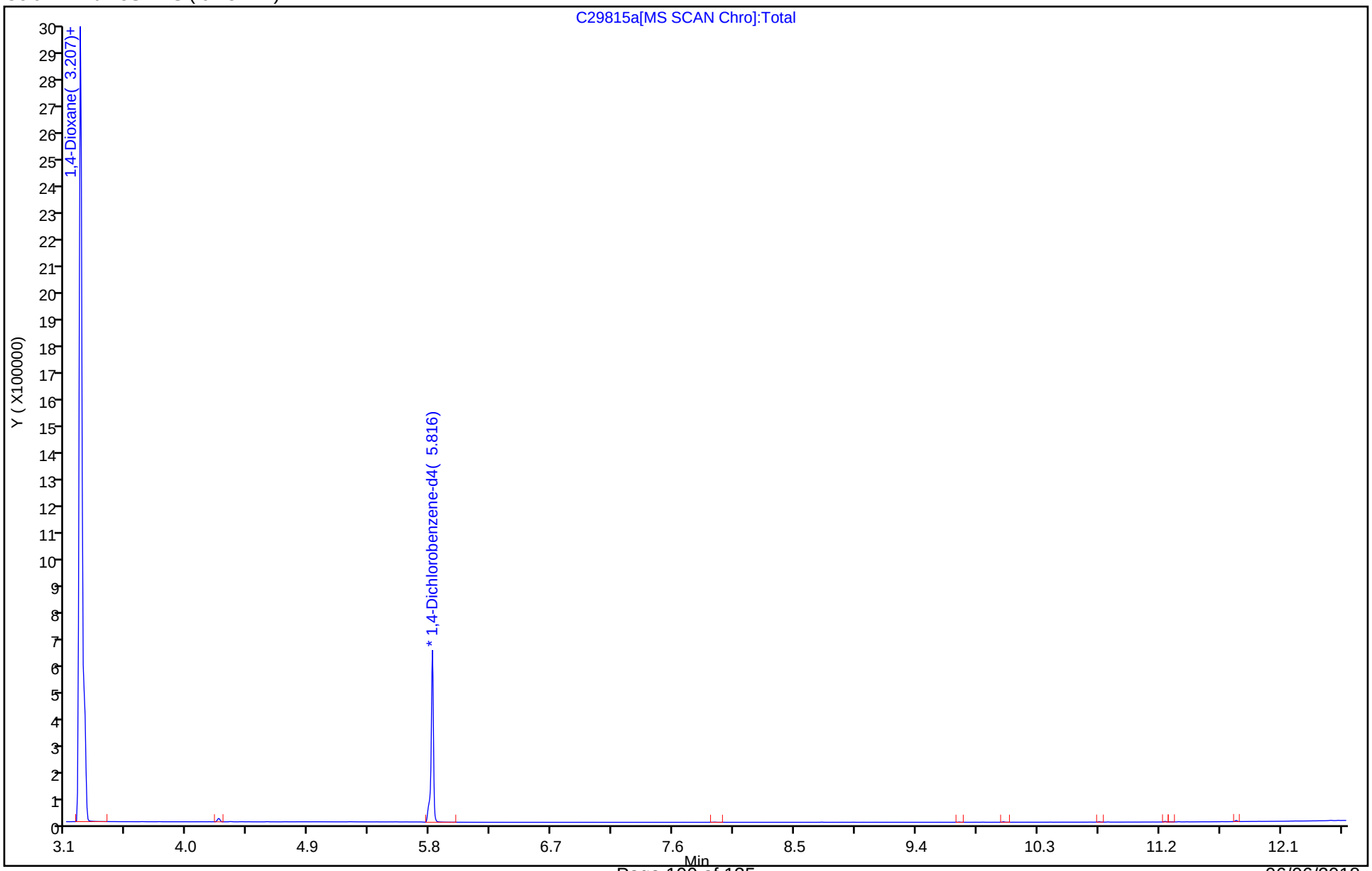
Report Date: 06-Jun-2018 13:50:52 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29815a.D

Injection Date:	05-Jun-2018 15:39:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	ccvis			Worklist Smp#:	2
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



TestAmerica Edison
Target Compound Quantitation Report

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28985.D				
Lims ID:	DFTPP				
Client ID:					
Sample Type:	DFTPP				
Inject. Date:	11-May-2018 12:33:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	460-0071845-001				
Operator ID:		Instrument ID:	CBNAMS13		
Method:	\\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\8270_Isotope.m				
Limit Group:	MSS 8270 Isotope Dilution IS				
Last Update:	14-May-2018 12:12:23	Calib Date:	11-May-2018 17:20:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D				
Column 1 :	Rtxi-5Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK013				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags

3 DFTPP

Reagents:

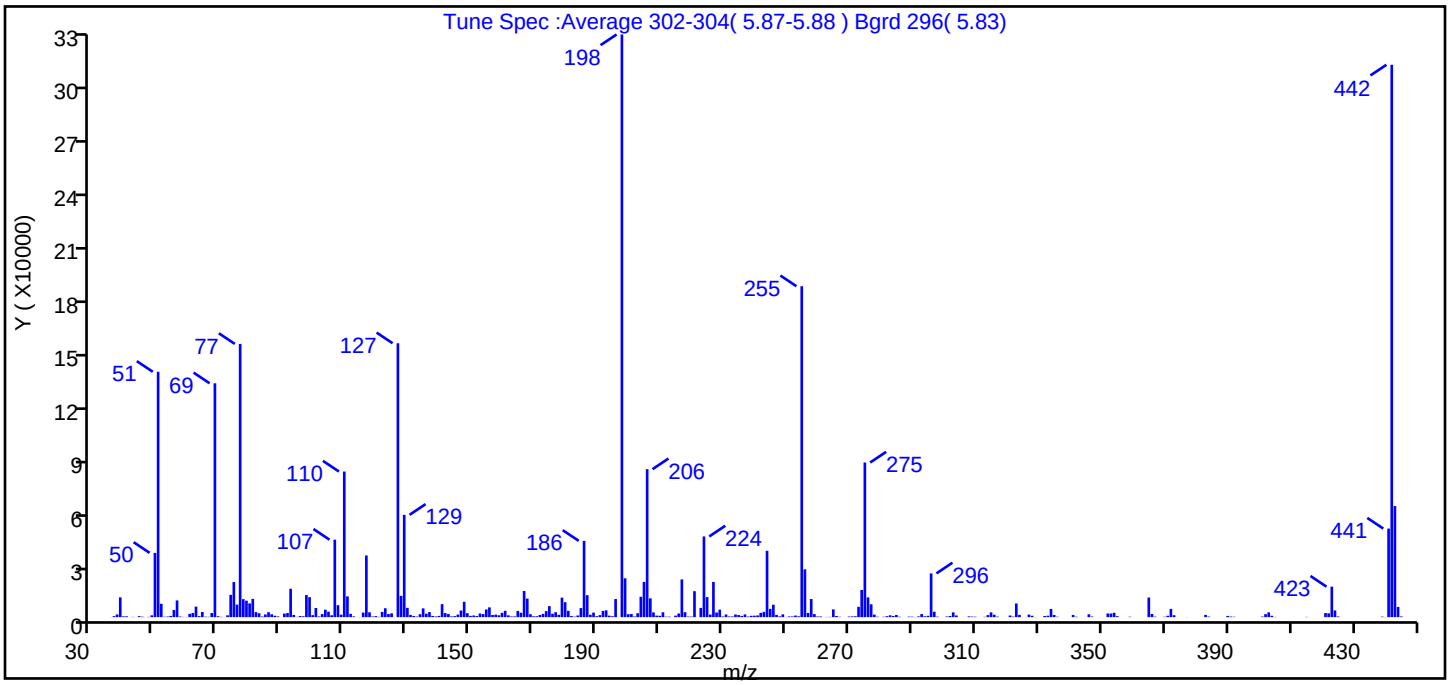
SMDFTP_CH_00024 Amount Added: 1.00 Units: mL

MS Tune Report

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28985.D
Injection Date: 11-May-2018 12:33:30 Instrument ID: CBNAMS13
Lims ID: DFTPP
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: 8270_Isotope Limit Group: MSS 8270 Isotope Dilution IS
Tune Method: DFTPP Method 8270

3 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	42.1
68	<2% of mass 69	0.7 (1.8)
69	Present	40.1
70	<2% of mass 69	0.2 (0.4)
127	40-60% of mass 198	47.0
197	<1% of mass 198	0.0
199	5-9% of mass 198	6.7
275	10-30% of mass 198	26.5
365	>1% of mass 198	3.4
441	Present but less than mass 443	15.2 (79.7)
442	>40% of mass 198	94.8
443	17-23% of mass 442	19.1 (20.1)

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28985.D\8270_Isotope.rslt\spectra.d
Injection Date: 11-May-2018 12:33:30
Spectrum: Tune Spec :Average 302-304(5.87-5.88) Bgrd 296(5.83)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 315

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	49	118.00	2662	199.00	21424	284.00	629
37.00	560	119.00	356	200.00	1603	285.00	1209
38.00	1472	120.00	579	201.00	1724	286.00	232
39.00	10876	121.00	155	202.00	387	289.00	295
40.00	455	122.00	2863	203.00	2164	290.00	241
41.00	481	123.00	4900	204.00	11226	291.00	106
42.00	39	124.00	1725	205.00	19392	292.00	398
43.00	136	125.00	2104	206.00	81552	293.00	1687
45.00	569	127.00	150976	207.00	10345	294.00	477
46.00	256	128.00	11721	208.00	2633	295.00	726
47.00	48	129.00	56400	209.00	858	296.00	24112
48.00	154	130.00	5115	210.00	754	297.00	2986
49.00	996	131.00	1239	211.00	2693	298.00	280
50.00	35424	132.00	659	212.00	261	301.00	344
51.00	135232	133.00	329	213.00	275	302.00	633
52.00	7359	134.00	1590	215.00	837	303.00	2643
53.00	210	135.00	4840	216.00	2019	304.00	933
54.00	335	136.00	1900	217.00	20784	308.00	434
55.00	677	137.00	2771	218.00	2720	309.00	311
56.00	3922	138.00	678	219.00	327	310.00	233
57.00	9214	139.00	389	220.00	311	313.00	174
58.00	331	140.00	654	221.00	14315	314.00	1138
59.00	120	141.00	7166	223.00	5085	315.00	2625
60.00	90	142.00	2254	224.00	44488	316.00	1335
61.00	1811	143.00	1719	225.00	11061	317.00	300
62.00	2317	144.00	426	226.00	1424	321.00	894
63.00	5816	145.00	563	227.00	19384	322.00	294
64.00	555	146.00	1400	228.00	2545	323.00	7522
65.00	2842	147.00	3667	229.00	4119	324.00	1244
66.00	251	148.00	8479	230.00	384	326.00	59
67.00	178	149.00	2193	231.00	1459	327.00	1399
68.00	2257	150.00	689	232.00	385	328.00	759
69.00	128904	151.00	917	233.00	373	329.00	56

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28985.D\8270_Isotope.rslt\spectra.d
Injection Date: 11-May-2018 12:33:30
Spectrum: Tune Spec :Average 302-304(5.87-5.88) Bgrd 296(5.83)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 315

m/z	Y	m/z	Y	m/z	Y	m/z	Y
70.00	507	152.00	605	234.00	1468	332.00	652
71.00	162	153.00	1996	235.00	1159	333.00	788
72.00	53	154.00	1704	236.00	695	334.00	4537
73.00	1010	155.00	4248	237.00	1514	335.00	1179
74.00	12272	156.00	5394	238.00	342	336.00	228
75.00	19344	157.00	1184	239.00	721	341.00	1210
76.00	6896	158.00	1388	240.00	795	342.00	233
77.00	150592	159.00	1030	241.00	946	346.00	1584
78.00	9919	160.00	2360	242.00	2348	347.00	356
79.00	9058	161.00	3502	243.00	2909	352.00	2034
80.00	7582	162.00	993	244.00	36560	353.00	1993
81.00	10071	163.00	375	245.00	4562	354.00	2402
82.00	2783	164.00	408	246.00	6853	355.00	538
83.00	2157	165.00	3389	247.00	1236	359.00	225
84.00	351	166.00	2398	248.00	451	365.00	10809
85.00	1479	167.00	14423	249.00	1549	366.00	1720
86.00	2732	168.00	10214	250.00	103	367.00	253
87.00	1579	169.00	1613	251.00	388	370.00	225
88.00	770	170.00	482	252.00	391	371.00	728
89.00	398	171.00	499	253.00	887	372.00	4559
91.00	1966	172.00	1186	254.00	465	373.00	1064
92.00	2232	173.00	1788	255.00	182400	377.00	50
93.00	15636	174.00	3316	256.00	26352	383.00	1257
94.00	1209	175.00	6051	257.00	2312	384.00	308
95.00	145	176.00	1886	258.00	9992	390.00	678
96.00	595	177.00	2731	259.00	1687	391.00	307
97.00	457	178.00	1265	260.00	360	392.00	218
98.00	12185	179.00	10767	261.00	375	401.00	324
99.00	10997	180.00	8233	263.00	112	402.00	1656
100.00	1090	181.00	3487	264.00	144	403.00	2639
101.00	5050	182.00	613	265.00	4290	404.00	756
102.00	377	183.00	260	266.00	632	405.00	123
103.00	1699	184.00	916	267.00	207	415.00	151
104.00	4132	185.00	4991	270.00	335	421.00	2267

Report Date: 14-May-2018 12:12:24 Chrom Revision: 2.2 11-May-2018 08:54:46
Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28985.D\8270_Isotope.rslt\spectra.d
Injection Date: 11-May-2018 12:33:30
Spectrum: Tune Spec :Average 302-304(5.87-5.88) Bgrd 296(5.83)
Base Peak: 198.00
Minimum % Base Peak: 0
Number of Points: 315

m/z	Y	m/z	Y	m/z	Y	m/z	Y
105.00	3036	186.00	42056	271.00	409	422.00	2101
106.00	1022	187.00	12106	272.00	486	423.00	16800
107.00	42696	188.00	1318	273.00	5701	424.00	3696
108.00	6612	189.00	2517	274.00	14971	425.00	385
109.00	1360	190.00	518	275.00	85240	439.00	278
110.00	80256	191.00	1108	276.00	10891	440.00	84
111.00	11459	192.00	3454	277.00	7084	441.00	48816
112.00	1823	193.00	3761	278.00	1373	442.00	304448
113.00	420	194.00	809	279.00	229	443.00	61224
115.00	100	195.00	507	281.00	211	444.00	5633
116.00	2517	196.00	9992	282.00	541	445.00	392
117.00	33992	198.00	321152	283.00	1038		

TestAmerica Edison
Target Compound Quantitation Report

Data File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29814.D				
Lims ID:	DFTPP				
Client ID:					
Sample Type:	DFTPP				
Inject. Date:	05-Jun-2018 14:54:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Sample Info:	460-0073241-001				
Misc. Info.:	DFTPP				
Operator ID:		Instrument ID:	CBNAMS13		
Method:	\\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m				
Limit Group:	MSS 8270 Isotope Dilution IS				
Last Update:	06-Jun-2018 13:50:41	Calib Date:	11-May-2018 17:20:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Isotopic Dilution	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D				
Column 1 :	Rtxi-5Sil MS (0.25 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: khlungprakhons		Date:	06-Jun-2018 13:50:41		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags

3 DFTPP

Reagents:

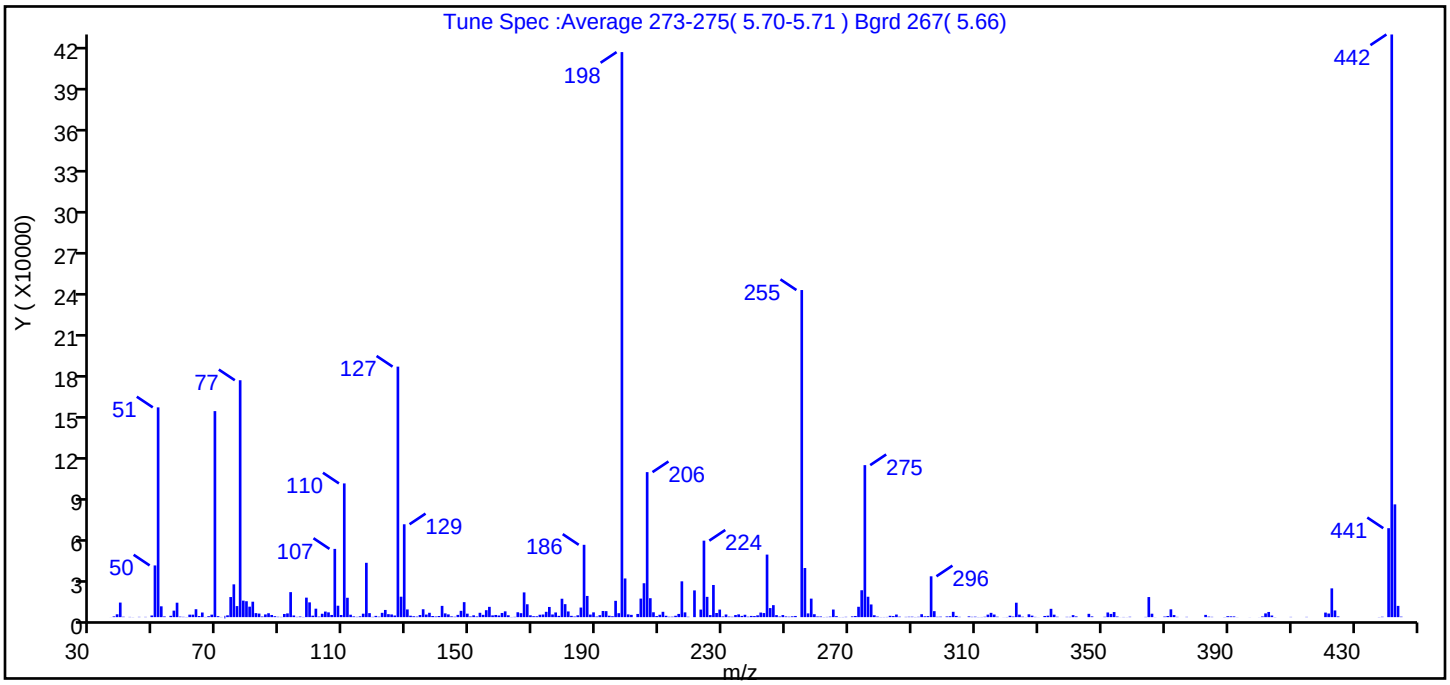
SMDFTP_CH_00024 Amount Added: 1.00 Units: mL

MS Tune Report

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29814.D
Injection Date: 05-Jun-2018 14:54:30 Instrument ID: CBNAMS13
Lims ID: DFTPP
Client ID:
Operator ID: ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: 8270_Isotope Limit Group: MSS 8270 Isotope Dilution IS
Tune Method: DFTPP Method 8270

3 DFTPP



m/z	Ion Abundance Criteria	% Relative Abundance
198	Base peak, 100% relative abundance	100.0
51	30-60% of mass 198	37.1
68	<2% of mass 69	0.4 (1.2)
69	Present	36.5
70	<2% of mass 69	0.2 (0.5)
127	40-60% of mass 198	44.3
197	<1% of mass 198	0.7
199	5-9% of mass 198	6.8
275	10-30% of mass 198	26.9
365	>1% of mass 198	3.6
441	Present but less than mass 443	15.7 (78.9)
442	>40% of mass 198	103.1
443	17-23% of mass 442	20.0 (19.4)

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29814.D\8270_Isotope.rslt\spectra.d
Injection Date: 05-Jun-2018 14:54:30
Spectrum: Tune Spec :Average 273-275(5.70-5.71) Bgrd 267(5.66)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	42	126.00	1196	211.00	3924	302.00	655
37.00	561	127.00	183808	212.00	991	303.00	3913
38.00	2087	128.00	14993	213.00	291	304.00	897
39.00	10693	129.00	68144	214.00	337	305.00	222
40.00	310	130.00	5664	215.00	1004	308.00	574
42.00	167	131.00	1061	216.00	2367	309.00	239
43.00	74	132.00	641	217.00	26280	310.00	337
45.00	205	133.00	400	218.00	3495	311.00	114
47.00	188	134.00	1542	219.00	288	312.00	132
49.00	1212	135.00	5796	221.00	19624	313.00	286
50.00	37944	136.00	1892	223.00	5543	314.00	1837
51.00	153920	137.00	3200	224.00	56120	315.00	3149
52.00	7946	138.00	830	225.00	14887	316.00	1908
53.00	517	139.00	464	226.00	1519	317.00	335
55.00	972	140.00	832	227.00	23600	319.00	53
56.00	4768	141.00	8263	228.00	3040	320.00	122
57.00	10593	142.00	2756	229.00	5556	321.00	1025
58.00	361	143.00	2013	230.00	492	322.00	424
59.00	232	144.00	567	231.00	1947	323.00	10585
60.00	126	145.00	295	232.00	422	324.00	1842
61.00	1821	146.00	1658	233.00	277	325.00	357
62.00	1820	147.00	4630	234.00	1528	326.00	58
63.00	5815	148.00	11004	235.00	2036	327.00	2097
64.00	782	149.00	2550	236.00	916	328.00	1089
65.00	3400	150.00	481	237.00	1743	329.00	193
66.00	139	151.00	1335	238.00	342	330.00	51
67.00	677	152.00	499	239.00	908	332.00	858
68.00	1825	153.00	3196	240.00	789	333.00	1061
69.00	151168	154.00	1684	241.00	1326	334.00	6109
70.00	705	155.00	5103	242.00	3361	335.00	1800
71.00	128	156.00	7552	243.00	3017	336.00	309
72.00	1	157.00	1293	244.00	45896	339.00	220
73.00	1334	158.00	1601	245.00	6653	340.00	200

Report Date: 06-Jun-2018 13:50:42 Chrom Revision: 2.2 11-May-2018 08:54:46
Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29814.D\8270_Isotope.rslt\spectra.d
Injection Date: 05-Jun-2018 14:54:30
Spectrum: Tune Spec :Average 273-275(5.70-5.71) Bgrd 267(5.66)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	14742	159.00	1188	246.00	8799	341.00	1481
75.00	24064	160.00	3052	247.00	1489	342.00	513
76.00	8108	161.00	4254	248.00	432	346.00	2432
77.00	173824	162.00	1368	249.00	1539	347.00	546
78.00	12117	163.00	121	250.00	502	351.00	259
79.00	11672	164.00	211	251.00	319	352.00	3427
80.00	7694	165.00	3584	252.00	587	353.00	2371
81.00	11327	166.00	2916	253.00	864	354.00	3733
82.00	2948	167.00	18160	255.00	240000	355.00	453
83.00	2622	168.00	9451	256.00	36048	356.00	37
84.00	465	169.00	1356	257.00	2741	357.00	138
85.00	1992	170.00	689	258.00	13594	358.00	57
86.00	2861	171.00	629	259.00	2149	359.00	264
87.00	1583	172.00	1753	260.00	477	364.00	176
88.00	687	173.00	1937	261.00	483	365.00	14739
89.00	278	174.00	3904	262.00	104	366.00	2524
90.00	186	175.00	7473	263.00	181	367.00	59
91.00	2330	176.00	1955	264.00	382	370.00	417
92.00	2752	177.00	3442	265.00	5595	371.00	850
93.00	18352	178.00	951	266.00	705	372.00	5734
94.00	1228	179.00	13511	267.00	83	373.00	1503
95.00	209	180.00	9537	268.00	119	374.00	210
96.00	473	181.00	4185	269.00	231	377.00	211
97.00	137	182.00	961	271.00	559	383.00	1654
98.00	14312	183.00	432	272.00	850	384.00	384
99.00	10848	184.00	1361	273.00	7603	385.00	222
100.00	1074	185.00	7035	274.00	19736	389.00	105
101.00	6212	186.00	53080	275.00	111536	390.00	703
102.00	384	187.00	15550	276.00	14956	391.00	581
103.00	2478	188.00	1876	277.00	9313	392.00	536
104.00	4101	189.00	3517	278.00	1392	393.00	62
105.00	3500	190.00	427	279.00	431	397.00	51
106.00	1597	191.00	1432	280.00	114	400.00	54
107.00	50080	192.00	4524	281.00	117	401.00	497

Report Date: 06-Jun-2018 13:50:42 Chrom Revision: 2.2 11-May-2018 08:54:46
Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29814.D\8270_Isotope.rslt\spectra.d
Injection Date: 05-Jun-2018 14:54:30
Spectrum: Tune Spec :Average 273-275(5.70-5.71) Bgrd 267(5.66)
Base Peak: 442.00
Minimum % Base Peak: 0
Number of Points: 340

m/z	Y	m/z	Y	m/z	Y	m/z	Y
108.00	8385	193.00	4408	282.00	154	402.00	2754
109.00	1563	194.00	1039	283.00	985	403.00	3801
110.00	98120	195.00	676	284.00	787	404.00	1193
111.00	14215	196.00	11977	285.00	1915	405.00	105
112.00	1777	197.00	2905	286.00	359	410.00	179
113.00	556	198.00	414592	288.00	199	415.00	186
114.00	215	199.00	28384	289.00	302	421.00	3336
115.00	597	200.00	2020	290.00	323	422.00	2658
116.00	2535	201.00	1674	291.00	124	423.00	21120
117.00	39872	202.00	2	292.00	255	424.00	4916
118.00	2944	203.00	2347	293.00	2151	425.00	512
119.00	205	204.00	13616	294.00	585	438.00	110
120.00	931	205.00	24872	295.00	741	439.00	285
121.00	353	206.00	106408	296.00	29968	441.00	65272
122.00	3162	207.00	13896	297.00	4391	442.00	427520
123.00	5284	208.00	3577	298.00	266	443.00	82744
124.00	2193	209.00	793	299.00	345	444.00	8258
125.00	1973	210.00	1760	301.00	495	445.00	349

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: | Lab Sample ID: MB 460-525204/1-A

Matrix: Water | Lab File ID: C29816.D

Analysis Method: 8270D SIM ID | Date Collected:

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 15:57

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.20	U	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	40		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29816.D
Lims ID: MB 460-525204/1-A
Client ID:
Sample Type: MB
Inject. Date: 05-Jun-2018 15:57:30 ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-003
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 14:04:01 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:51:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D 1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	930792	4.00	1.62	
* 4 1,4-Dichlorobenzene-d4	152	5.820	5.816	0.004	99	291211	0.2000	0.2000	

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

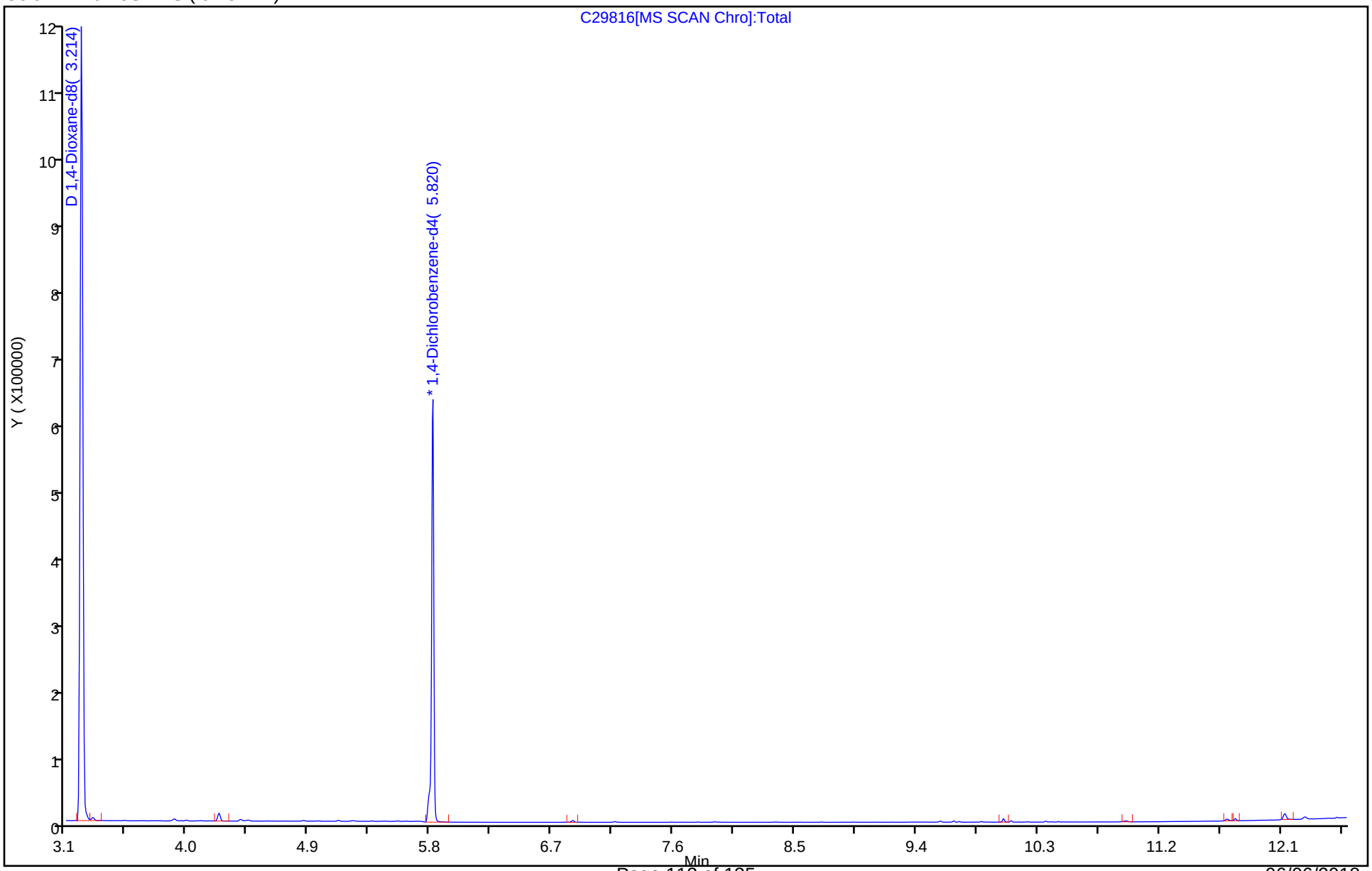
Report Date: 06-Jun-2018 14:04:02 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29816.D

Injection Date:	05-Jun-2018 15:57:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	MB 460-525204/1-A			Worklist Smp#:	3
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



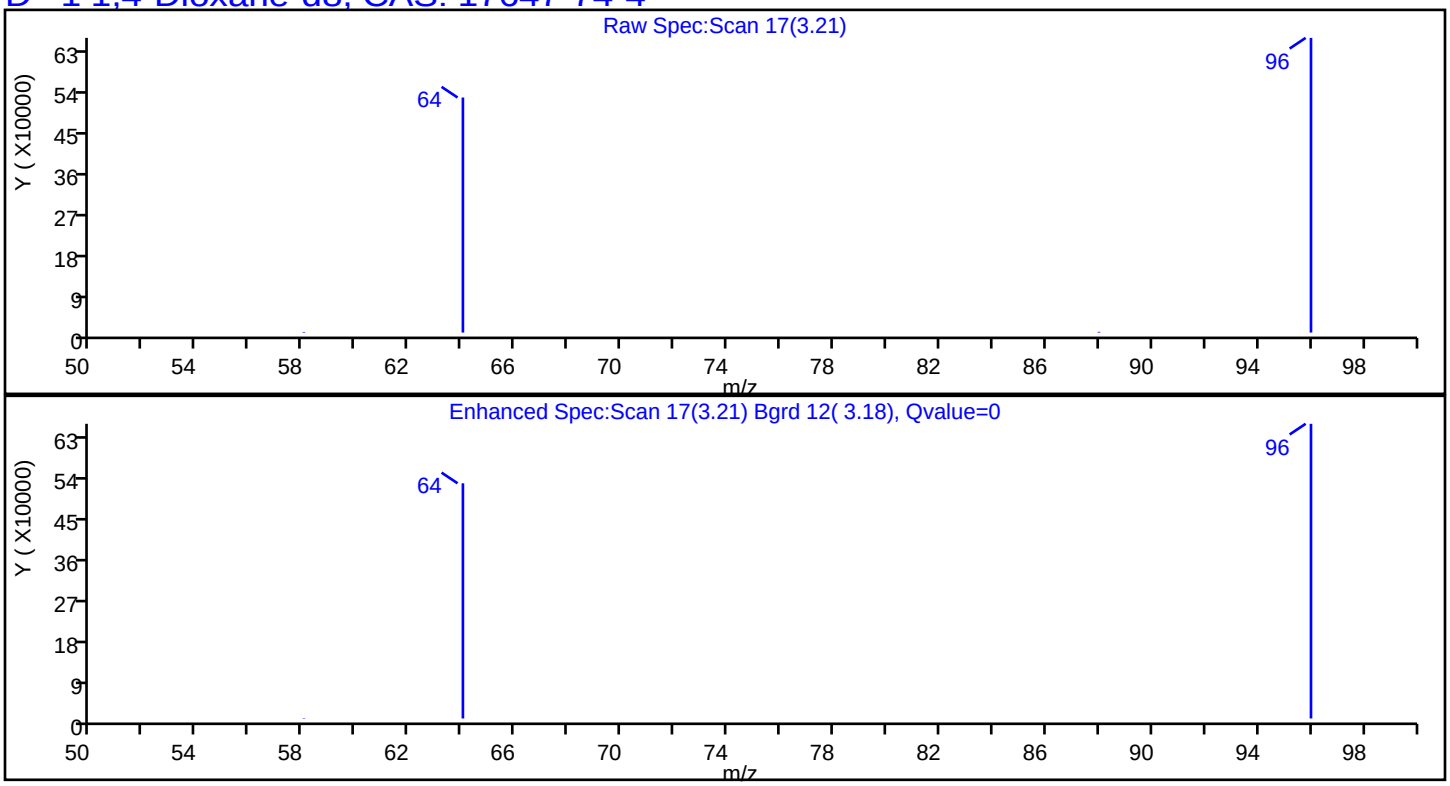
Report Date: 06-Jun-2018 14:04:02 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29816.D

Injection Date:	05-Jun-2018 15:57:30	Instrument ID:	CBNAMS13		
Lims ID:	MB 460-525204/1-A				
Client ID:					
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	3
Injection Vol:	5.0 ul	Dil. Factor:	1.0000		
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		
Column:	Rtxi-5Sil MS (0.25 mm)	Detector	MS SCAN		

D 1 1,4-Dioxane-d8, CAS: 17647-74-4



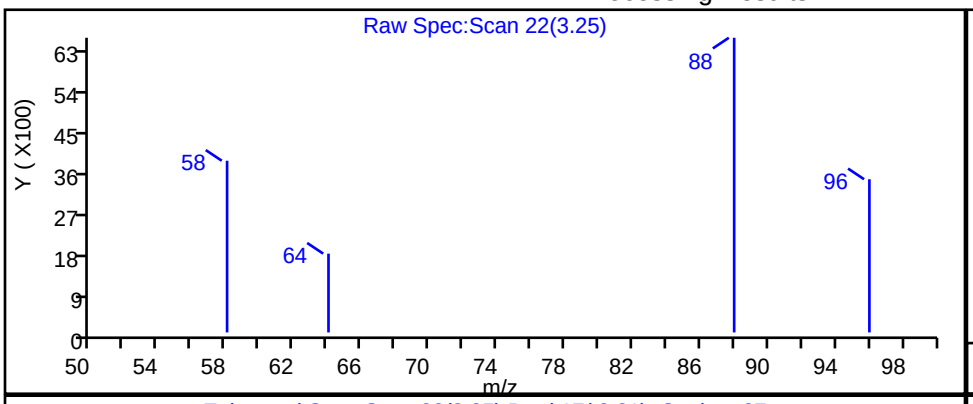
User Disabled Compound Report

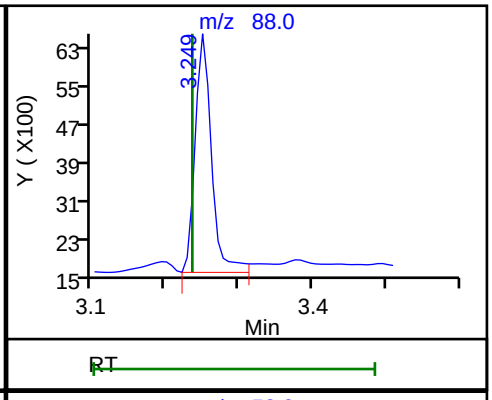
TestAmerica Edison

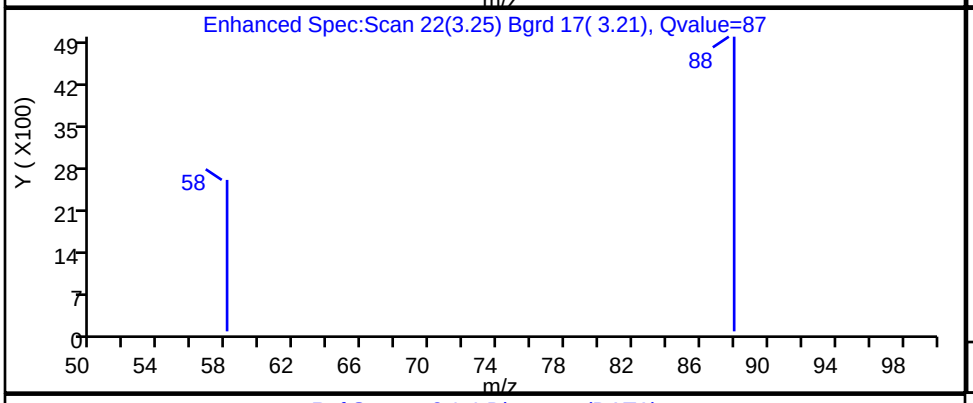
Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29816.D
Injection Date: 05-Jun-2018 15:57:30 Instrument ID: CBNAMS13
Lims ID: MB 460-525204/1-A
Client ID:
Operator ID: ALS Bottle#: 3 Worklist Smp#: 3
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Method: 8270_Isotope Limit Group: MSS 8270 Isotope Dilution IS
Column: Rtxi-5Sil MS (0.25 mm) Detector MS SCAN

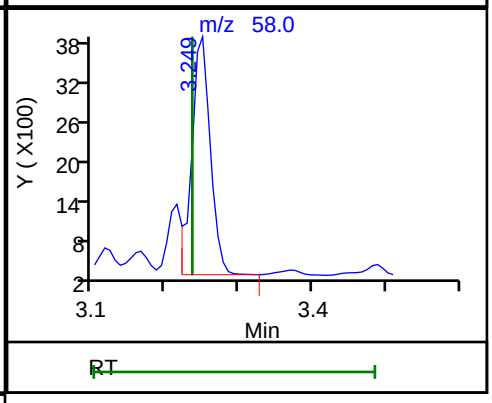
2 1,4-Dioxane, CAS: 123-91-1

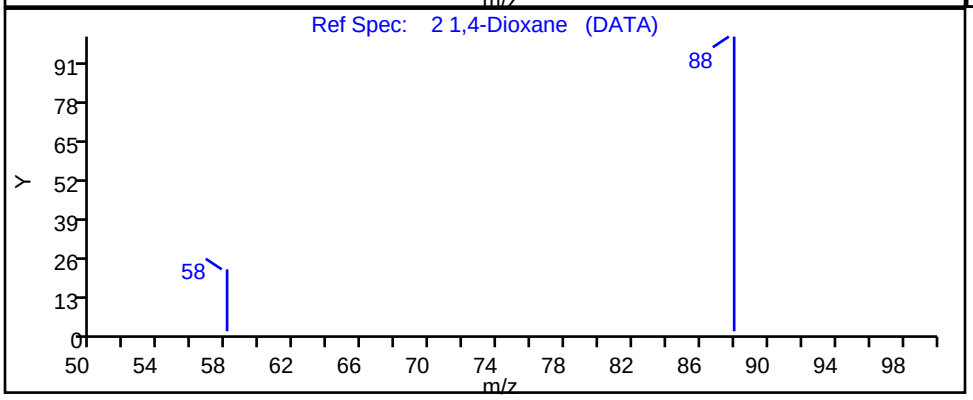
Processing Results











RT	Mass	Response	Amount
3.25	88.00	7733	0.025667
3.25	58.00	6389	

Reviewer: khlungprakhons, 06-Jun-2018 14:03:59
Audit Action: Marked Compound Undetected Audit Reason: Invalid Compound ID

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 460-525204/2-A

Matrix: Water | Lab File ID: C29817.D

Analysis Method: 8270D SIM ID | Date Collected:

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 16:15

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.83		0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	40		10-200

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29817.D
Lims ID: LCS 460-525204/2-A
Client ID:
Sample Type: LCS
Inject. Date: 05-Jun-2018 16:15:30 ALS Bottle#: 4 Worklist Smp#: 4
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-004
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:50:51 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:51:32

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	918629	4.00	1.59	
	2 1,4-Dioxane	88	3.242	3.235	0.007	80	67867	0.2000	0.2282	
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	98	292689	0.2000	0.2000	

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

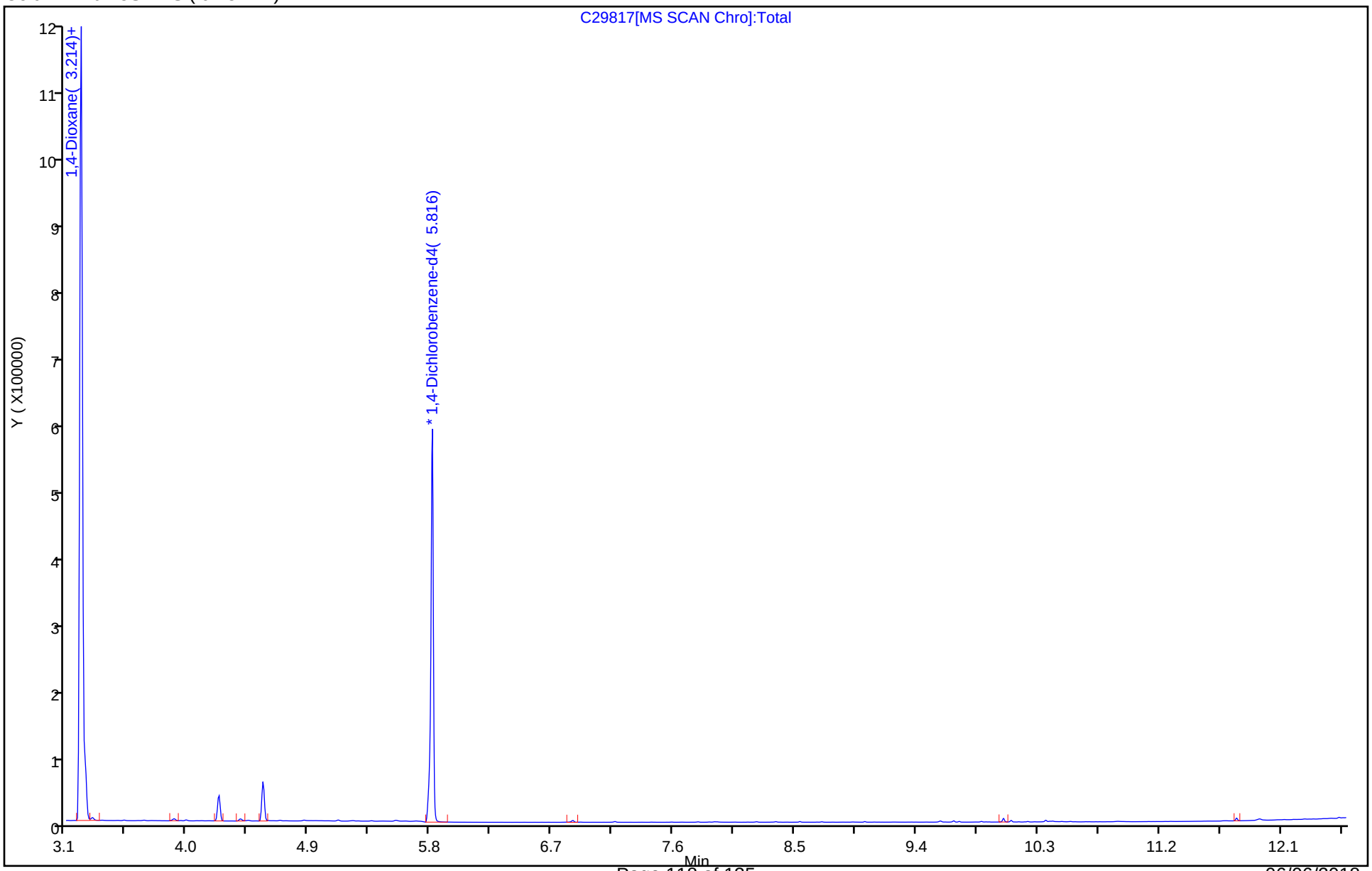
Report Date: 06-Jun-2018 13:51:32 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29817.D

Injection Date:	05-Jun-2018 16:15:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	LCS 460-525204/2-A			Worklist Smp#:	4
Client ID:					
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: LMS-3 MS | Lab Sample ID: 460-157434-4 MS

Matrix: Water | Lab File ID: C29819.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 12:35

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 16:51

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.66		0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	38		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29819.D
Lims ID: 460-157434-G-4-A MS
Client ID: LMS-3
Sample Type: Client
Inject. Date: 05-Jun-2018 16:51:30 ALS Bottle#: 6 Worklist Smp#: 6
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-006
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:51:54 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:52:39

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/ml	%Rec	Flags
D	1 1,4-Dioxane-d8	96	3.221	3.228	-0.007	0	856546	1.51	37.8	
	2 1,4-Dioxane	88	3.249	3.235	0.014	81	57591	0.2077		
*	4 1,4-Dichlorobenzene-d4	152	5.820	5.816	0.004	99	286750	0.2000		

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

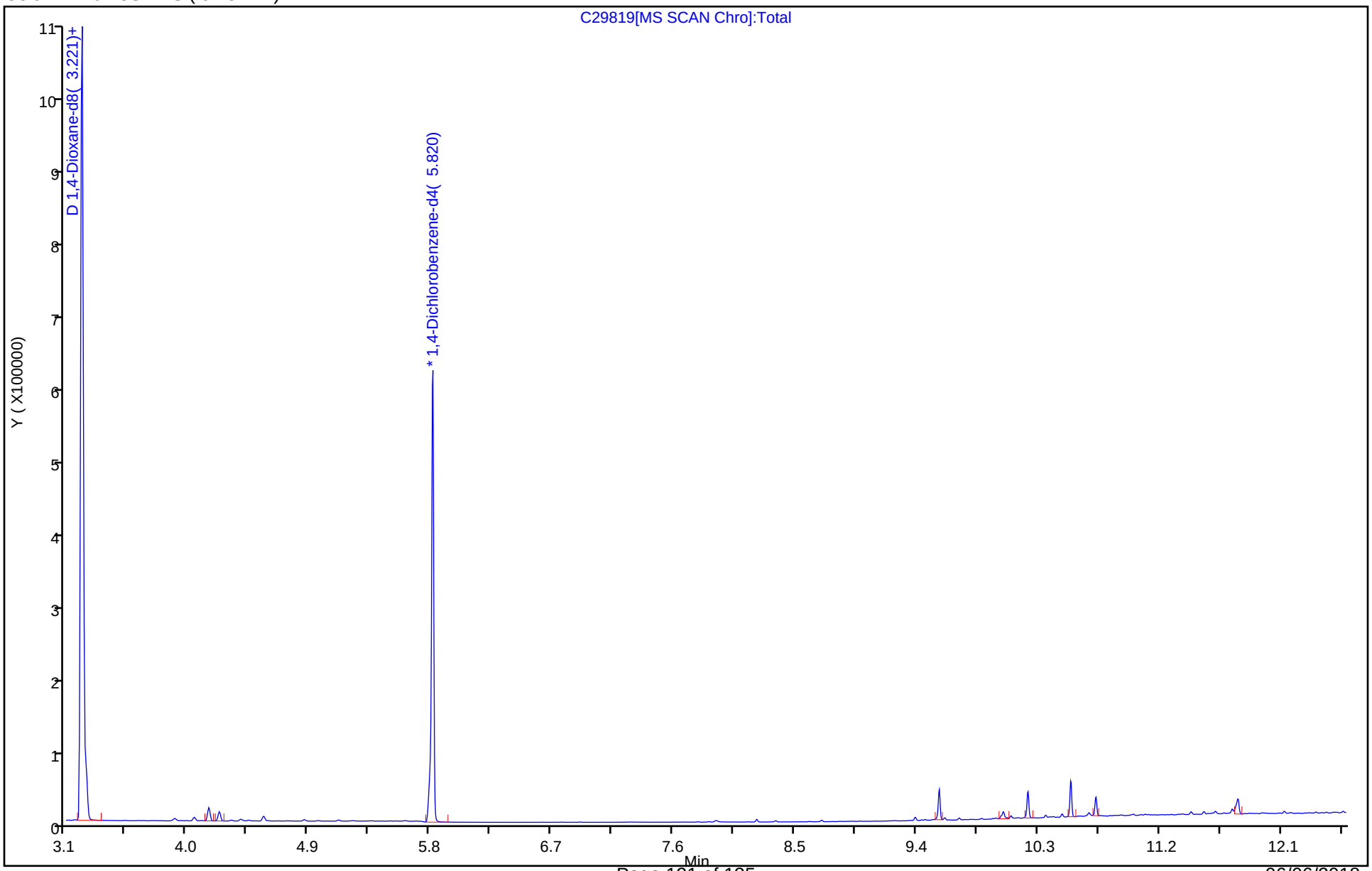
Report Date: 06-Jun-2018 13:52:39 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29819.D

Injection Date:	05-Jun-2018 16:51:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-G-4-A MS	Lab Sample ID:	Client 460-525311/6-A	Worklist Smp#:	6
Client ID:	LMS-3				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2

SDG No.:

Client Sample ID: LMS-3 MSD | Lab Sample ID: 460-157434-4 MSD

Matrix: Water | Lab File ID: C29820.D

Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 12:35

Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01

Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 17:09

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 5(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.56		0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	30		10-150

TestAmerica Edison
Target Compound Quantitation Report

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29820.D
Lims ID: 460-157434-F-4-A MSD
Client ID: LMS-3
Sample Type: MSD
Inject. Date: 05-Jun-2018 17:09:30 ALS Bottle#: 7 Worklist Smp#: 7
Injection Vol: 5.0 ul Dil. Factor: 1.0000
Sample Info: 460-0073241-007
Operator ID: Instrument ID: CBNAMS13

Method: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\8270_Isotope.m
Limit Group: MSS 8270 Isotope Dilution IS
Last Update: 06-Jun-2018 13:51:54 Calib Date: 11-May-2018 17:20:30
Integrator: RTE ID Type: RT Order ID
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Edison\ChromData\CBNAMS13\20180511-71845.b\C28993.D

Column 1 : Rtxi-5Sil MS (0.25 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: khlungprakhons Date: 06-Jun-2018 13:52:47

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/ml	OnCol Amt ug/ml	Flags
D	1 1,4-Dioxane-d8	96	3.214	3.228	-0.014	0	722690	4.00	1.20	
	2 1,4-Dioxane	88	3.242	3.235	0.007	80	45481	0.2000	0.1944	
*	4 1,4-Dichlorobenzene-d4	152	5.816	5.816	0.000	97	304144	0.2000	0.2000	

Reagents:

SM_iso_d4istd_00001 Amount Added: 20.00 Units: uL Run Reagent

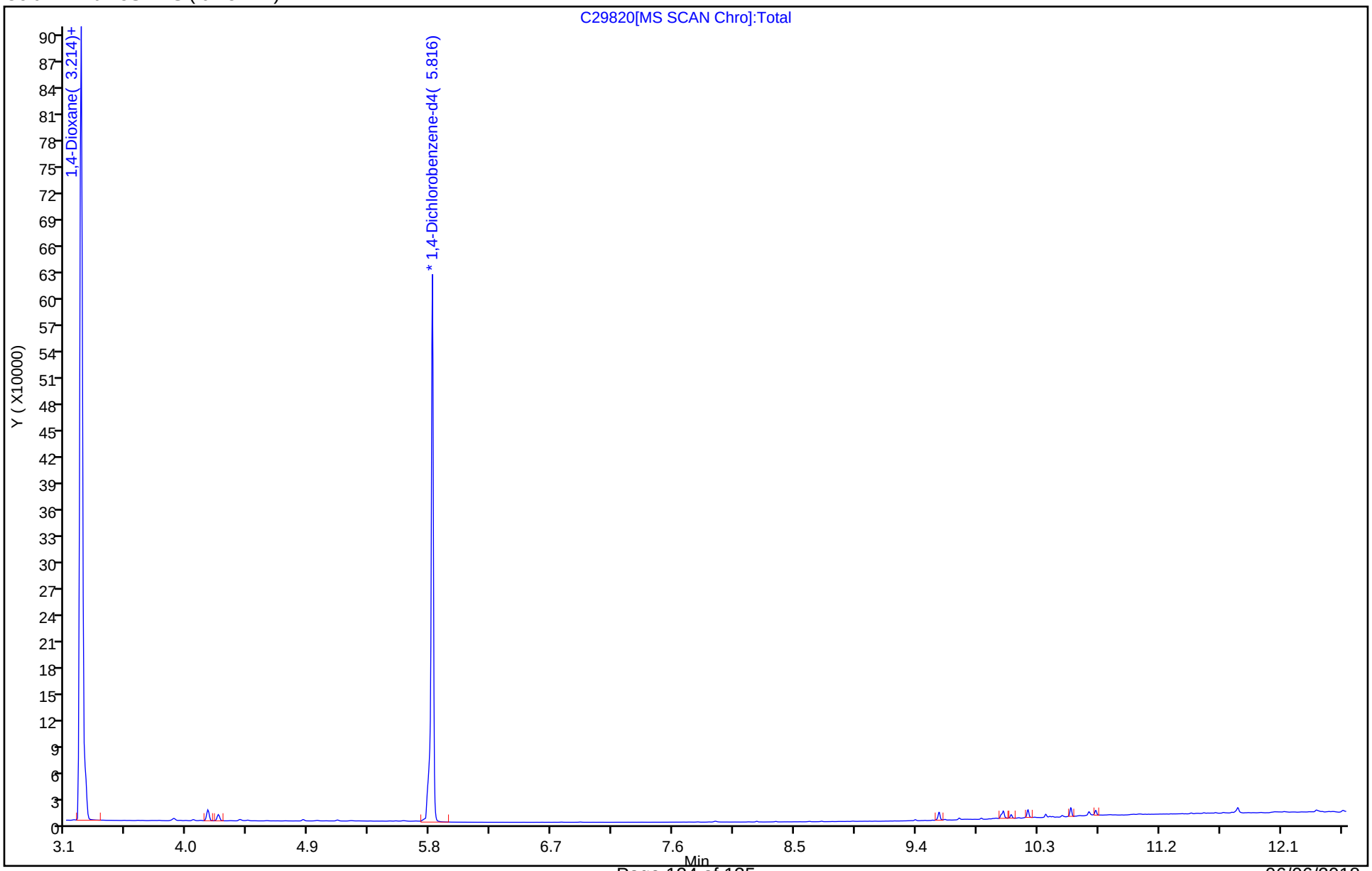
Report Date: 06-Jun-2018 13:52:47 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Edison

Data File: \\ChromNA\Edison\ChromData\CBNAMS13\20180605-73241.b\C29820.D

Injection Date:	05-Jun-2018 17:09:30	Instrument ID:	CBNAMS13	Operator ID:	
Lims ID:	460-157434-F-4-A MSD			Worklist Smp#:	7
Client ID:	LMS-3				
Injection Vol:	5.0 ul	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	8270_Isotope	Limit Group:	MSS 8270 Isotope Dilution IS		

Column: Rtxi-5Sil MS (0.25 mm)



GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Instrument ID: CBNAMS13 Start Date: 05/11/2018 12:33

Analysis Batch Number: 518314 End Date: 05/11/2018 17:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 460-518314/1		05/11/2018 12:33	1	C28985.D	Rtxi-5Sil MS 0.25(mm)
ICIS 460-518314/2		05/11/2018 12:48	1	C28986.D	Rtxi-5Sil MS 0.25(mm)
STD8 460-518314/3 IC		05/11/2018 13:08	1	C28987.D	Rtxi-5Sil MS 0.25(mm)
STD7 460-518314/4 IC		05/11/2018 13:27	1	C28988.D	Rtxi-5Sil MS 0.25(mm)
STD6 460-518314/5 IC		05/11/2018 14:16	1	C28989.D	Rtxi-5Sil MS 0.25(mm)
STD4 460-518314/6 IC		05/11/2018 14:35	1	C28990.D	Rtxi-5Sil MS 0.25(mm)
STD3 460-518314/7 IC		05/11/2018 15:44	1	C28991.D	Rtxi-5Sil MS 0.25(mm)
STD2 460-518314/8 IC		05/11/2018 16:02	1	C28992.D	Rtxi-5Sil MS 0.25(mm)
STD1 460-518314/9 IC		05/11/2018 17:20	1	C28993.D	Rtxi-5Sil MS 0.25(mm)
ICV 460-518314/10		05/11/2018 17:43	1		Rtxi-5Sil MS 0.25(mm)

8270D SIM ID

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Instrument ID: CBNAMS13 Start Date: 06/05/2018 14:54

Analysis Batch Number: 525311 End Date: 06/05/2018 19:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 460-525311/1		06/05/2018 14:54	1	C29814.D	Rtxi-5Sil MS 0.25(mm)
CCVIS 460-525311/2		06/05/2018 15:39	1	C29815a.D	Rtxi-5Sil MS 0.25(mm)
MB 460-525204/1-A		06/05/2018 15:57	1	C29816.D	Rtxi-5Sil MS 0.25(mm)
LCS 460-525204/2-A		06/05/2018 16:15	1	C29817.D	Rtxi-5Sil MS 0.25(mm)
460-157434-4		06/05/2018 16:33	1	C29818.D	Rtxi-5Sil MS 0.25(mm)
460-157434-4 MS		06/05/2018 16:51	1	C29819.D	Rtxi-5Sil MS 0.25(mm)
460-157434-4 MSD		06/05/2018 17:09	1	C29820.D	Rtxi-5Sil MS 0.25(mm)
460-157434-5		06/05/2018 17:27	1	C29821.D	Rtxi-5Sil MS 0.25(mm)
460-157434-6		06/05/2018 17:44	1	C29822.D	Rtxi-5Sil MS 0.25(mm)
460-157434-7		06/05/2018 18:02	1	C29823.D	Rtxi-5Sil MS 0.25(mm)
460-157434-8		06/05/2018 18:20	1	C29824.D	Rtxi-5Sil MS 0.25(mm)
460-157434-10		06/05/2018 18:38	1	C29825.D	Rtxi-5Sil MS 0.25(mm)
460-157434-11		06/05/2018 18:56	1	C29826.D	Rtxi-5Sil MS 0.25(mm)
460-157434-1		06/05/2018 19:13	1	C29827.D	Rtxi-5Sil MS 0.25(mm)
460-157434-2		06/05/2018 19:31	1	C29828.D	Rtxi-5Sil MS 0.25(mm)
460-157434-3		06/05/2018 19:49	1	C29829.D	Rtxi-5Sil MS 0.25(mm)

8270D SIM ID

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Batch Number: 525204 Batch Start Date: 06/05/18 08:01 Batch Analyst: Maraon, Alissandra N

Batch Method: 3510C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	OP_1,4-DX_SP 00002	OP_14-DX_surr 00003
MB 460-525204/1		3510C, 8270D SIM ID		250 mL	2 mL	7 SU	<2 SU		20 uL
LCS 460-525204/2		3510C, 8270D SIM ID		250 mL	2 mL	7 SU	<2 SU	200 uL	20 uL
460-157434-G-4 MS	LMS-3	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU	200 uL	20 uL
460-157434-F-4 MSD	LMS-3	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU	200 uL	20 uL
460-157434-F-4	LMS-3	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU		20 uL
460-157434-G-5	AMS-2	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU		20 uL
460-157434-F-6	ERM-1	3510C, 8270D SIM ID	T	250 mL	2 mL	5 SU	<2 SU		20 uL
460-157434-G-7	MW-X	3510C, 8270D SIM ID	T	250 mL	2 mL	5 SU	<2 SU		20 uL
460-157434-F-8	Equipment Blank	3510C, 8270D SIM ID	T	250 mL	2 mL	5 SU	<2 SU		20 uL
460-157434-F-10	MW-2	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU		20 uL
460-157434-F-11	LMS-5	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU		20 uL
460-157434-G-1	MW-1	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU		20 uL
460-157434-G-2	ERM-3	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU		20 uL
460-157434-G-3	LMS-4	3510C, 8270D SIM ID	T	250 mL	2 mL	6 SU	<2 SU		20 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

8270D SIM ID

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Edison Job No.: 460-157434-2

SDG No.:

Batch Number: 525204 Batch Start Date: 06/05/18 08:01 Batch Analyst: Maraon, Alissandra N

Batch Method: 3510C Batch End Date:

Batch Notes	
Acid Used for pH Adjustment ID	186983
Base Used to Adjust pH ID	OP2558
Batch Comment	BNA WATER ISOTOPE
Analyst ID - Concentration	am
Analyst ID - Extraction	am
Method/Fraction	BNA WATER ISOTOPE
Prep Solvent ID	MeCL2 198202
Prep Solvent Volume Used	120 mL
Analyst ID - Spike Analyst	GB
Analyst ID - Spike Witness Analyst	am
Sufficient Volume for Batch QC	Yes

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

Chain of Custody Record

NYSC 460501

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

06/06/2018

Client Information	Sampler: BCC HS	Lab PM: Haas, Melissa	Carrier Tracking No(s):	COC No: 460-97630-62083.2
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations		Analysis Requested		Job #: 157434
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:			Preservation Codes: A - HCL M - Hexane B - NaOH N - None
City: Patchogue	TAT Requested (days): 10 days			
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027	Project #: 46013163			
Site:	SSOW#:			Other:

460-157434 Chain of Custody

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8260C - TCL VOCs + 10 TICs (SOM01.2)	6010C, 7470A - TAL Metals	9012B - Cyanide, Total	Total Number of co	Special Instructions/Note:
			Preservation Code:			A	D	B		
MW-1	5/31/18	0915	G	Water	N	X	X	X	7	1
ERM-3		1050		Water	N				2	2
LMS-4		1135		Water	N				2	3
LMS-3		1235		Water	Y				3	4
AMS-2		1445		Water	N				2	5
ERM-1		1350		Water	N				2	6
MW-X		—		Water	N				2	7
Equipment Blank		1335		Water	N				7	8
Trip Blank		1500		Water	N				3	9
				Water						
				Water						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **NY Cat A**

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/31/18 1700	EAR	EAR Fridge	5/31/18 1700	EAR
EAR SAMPLE FRIDGE	6-01-18 1117	EAR	WILLIAM A. Vigliotta	6-01-18 1117	EAR
WILLIAM A. Vigliotta	6-01-18 1117	EAR	[signature]	6/1/18 1120	EAR

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

03 6-1-18 1500 — 6/1/18 1120 — 6/1/18 1200 — 24/18 FRI 11 NO CS

Ver: 08/04/2016

Page 130 of 135

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

Chain of Custody Record

NYSC 460501

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

06/06/2018

Client Information	Sampler: BCC HS	Lab PM: Haas, Melissa	Carrier Tracking No(s):	COC No: 460-97630-62083.1
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations		Analysis Requested		Job #: 157434
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:			Preservation Codes:
City: Patchogue	TAT Requested (days): 10 days			A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			Other:
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027	Project #: 46013163			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8270D_SIM_MS_ID - 1,4-Dioxane (GC/MS SIM Isotope Dil	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N	X		
MW-1	5/31/18	0915	G	Water	N	X		1
ERM-3		1050		Water	N			2
LMS-4		1135		Water	N			3
LMS-3		1235		Water	Y			4
AMS-2		1445		Water	N			5
ERM-1		1350		Water	N			6
MW-X		—		Water	N			7
Equipment Blank	↓	1335	↓	Water	N	↓		8
				Water				
				Water				
				Water				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **NY Cat B**

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Blake Cuthbert	5/31/18 1700	EAR	EAR Fridge	5/31/18 1700	EAR
EAR SAMPLE FRIDGE	6-01-18 1117	EAR	William A. Vigliotta	6-01-18 1117	EAR
William A. Vigliotta	6-01-18 1117	EAR		6/1/18 1125	VA

Custody Seals Intact: △ Yes △ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

OS 6-1-18 1500 — 6/1/18 18.00 2.8 — 6/1/18 1800

Ver: 08/04/2016

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

1/2 coolers

Chain of Custody Record

NYSC 460501

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: EAR-DG/EL	Lab PM: Haas, Melissa	Carrier Tracking No(s):	COC No: 460-97630-62083.2
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations		Analysis Requested		Job #: B74334
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:			Preservation Codes:
City: Patchogue	TAT Requested (days): 10 days			A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			Other:
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027	Project #: 46013163			
Site:	SSOW#:			

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8260C - TCL VOCs + 10 TICs (SOM01.2)	6010C, 7470A - TAL Metals	9012B - Cyanide, Total	Total Number of containers	Special Instructions/Note:
			Preservation Code:			A	D	B		
MW-2	5/31/18	0915	G	Water	N	X	X	X		10
LMS-5	5/31/18	1016	G	Water	N	X	X	X		11
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						
				Water						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **NY Cat A**

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
DG	5/31/18 / 1330	EAR	EAR SAMPLE FRIDGE	5/31/18 / 1330	EAR
EAR SAMPLE FRIDGE	6-01-18 11:17	EAR	William A. Vigliotta	6-01-18 11:17	EAR
William A. Vigliotta	6-01-18 11:17	EAR	DS	6/1/18 1136	TAL

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

DS 6-7-18 / 1500 — 6/1/18 18:20 — 06/1/18 1800 TAL EAR

Ver: 08/04/2016

06/06/2018

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Phone (732) 549-3900 Fax (732) 549-3679

Chain of Custody Record

NYSC 460501

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: EAR-DG/EL	Lab PM: Haas, Melissa	Carrier Tracking No(s):	COC No: 460-97630-62083.1
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations				Job #: 157434
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:			
City: Patchogue	TAT Requested (days): 10 days			
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027	Project #: 46013163			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	8270D_SIM_MS_ID - 1,4-Dioxane (GC/MS SIM Isotope Dil	Total Number of containers	Special Instructions/Note:
			Preservation Code:		N	N		
MW-2	5/31/18	0915	G	Water	N	X	10	
LMS-5	5/31/18	1016	G	Water	N	X	11	
				Water				
				Water				
				Water				
				Water				
				Water				
				Water				
				Water				
				Water				
				Water				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) **NY Cat B**

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	DG	5/31/18/1330	EAR	EAR SAMPLE FRIDGE	5/31/18/1330	EAR
2	EAR SAMPLE FRIDGE	6-01-18 11:17	EAR	WILLIAM A. VIGLIOTTA	6-01-18 11:17	EAR
3	WILLIAM A. VIGLIOTTA	6-01-18 11:17	EAR		6/1/18/1120	

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks:

6-1-18 1500 — 6/1/18 17:00 — 6/1/18 1800

Ver: 08/04/2016

06/06/2018

TestAmerica Edison
Receipt Temperature and pH Log

Job Number: 157434

Number of Coolers: 1 IR Gun # 11

Cooler Temperatures

	RAW	CORRECTED		RAW	CORRECTED		RAW	CORRECTED
Cooler #1:	2.8 °C	2.8 °C	Cooler #4:	°C	°C	Cooler #7:	°C	°C
Cooler #2:	°C	°C	Cooler #5:	°C	°C	Cooler #8:	°C	°C
Cooler #3:	°C	°C	Cooler #6:	°C	°C	Cooler #9:	°C	°C

TALS Sample Number	Ammonia (pH<2)	COD (pH<2)	Nitrate Nitrite (pH<2)	Metals* (pH<2)	Hardness (pH<2)	Pest (pH 5-9)	EPH or QAM (pH<2)	Phenols (pH<2)	Sulfide (pH>9)	TKN (pH<2)	TOC (pH<2)	Total Cyanide (pH>12)	Total Phos (pH<2)	Other	Other
1				<2								>12			
2				<2								>12			
3				<2								>12			
4				<2								>12			
4DUP(MS)				<2								>12			
4MS				<2								>12			
5				<2								>12			
6				<2								>12			
7				<2								>12			
8				<2								>12			
10				<2								>12			
11				<2								>12			

If pH adjustments are required record the information below:

Sample No(s). adjusted: _____

Preservative Name/Conc.: _____ Volume of Preservative used (ml): _____

Lot # of Preservative(s): _____ Expiration Date: _____

The appropriate Project Manager and Department Manager should be notified about the samples which were pH adjusted.

** Samples for Metal analysis which are out of compliance must be acidified at least 24 hours prior to analysis.*

Initials: _____ **Date:** 6/1/18

06/06/2018

Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 460-157434-2

Login Number: 157434
List Number: 1
Creator: Rivera, Kenneth

List Source: TestAmerica Edison

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 200-43678-1

Job Description: DEC-HICKSVILLE270 Site:130027

Contract Number: C008010

For:
New York State D.E.C.
625 Broadway
12th Floor
Albany, NY 12233-7017

Attention: Carl Hoffman

Approved for release.
Thomas A Chupela
Project Management Assistant I
6/22/2018 9:23 AM

Designee for
Melissa Haas, Project Manager I
777 New Durham Road, Edison, NJ, 08817
(203)944-1310
melissa.haas@testamericainc.com
06/22/2018

The test results in this report meet all NELAP requirements unless specified within the case narrative. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Edison Project Manager.

TestAmerica Edison Certifications and Approvals: Connecticut: CTDOH #PH-0200, New Jersey: NJDEP (NELAP) #12028, New York: NYDOH (NELAP) #11452, NYDOH (ELAP) #11452, Pennsylvania: PADEP (NELAP) 68-00522 and Rhode Island: RIDOH LAO00132

Job Number: 200-43678-1

Job Description: DEC-HICKSVILLE270 Site:130027

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.

Approved for release.
Thomas A Chupela
Project Management Assistant I
6/22/2018 9:23 AM

Designee for
Melissa Haas

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CASE NARRATIVE

Client: New York State D.E.C.

Project: DEC-HICKSVILLE270 Site:130027

Report Number: 200-43678-1

This case narrative is in the form of an exception report, where only the anomalies related to this report, method specific performance and/or QA/QC issues are discussed. If there are no issues to report, this narrative will include a statement that documents that there are no relevant data issues.

It should be noted that samples with elevated Reporting Limits (RLs) as a result of a dilution may not be able to satisfy customer reporting limits in some cases. Such increases in the RLs are unavoidable but acceptable consequence of sample dilution that enables quantification of target analytes or interferences which exceed the calibration range of the instrument.

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

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

RECEIPT
The samples were received on 6/2/2018 9:35 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2C of the required temperature or method specified range. For samples with a specified temperature of 4C, samples with a temperature ranging from just above freezing temperature of water to 6C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

PERFLUORINATED HYDROCARBONS (PFC)
Samples ERM-3 (200-43678-1), LMS-3 (200-43678-2), LMS-4 (200-43678-3), MW-1 (200-43678-4), MW-X (200-43678-5) and EQUIPMENT BLANK (200-43678-6) were analyzed for Perfluorinated Hydrocarbons (PFC) in accordance with PFC. The samples were prepared on 06/08/2018 and analyzed on 06/12/2018.

The low-level continuing calibration verification recovers slightly above control limits for 8:2 FTS. The analyte is not detected above the reporting limit in the associated samples, therefore the data is reported. ERM-3 (200-43678-1), LMS-3 (200-43678-2), LMS-3 (200-43678-2[MS]), LMS-3 (200-43678-2[MSD]), LMS-4 (200-43678-3), MW-1 (200-43678-4), MW-X (200-43678-5), EQUIPMENT BLANK (200-43678-6), (CCVL 200-130505/6), (LCS 200-130388/2-A) and (MB 200-130388/1-A)

Isotope Dilution Analyte (IDA) recovery for M2-6:2FTS is above the method recommended limit for the following samples: MW-X (200-43678-5) and EQUIPMENT BLANK (200-43678-6). Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

8:2 FTS, Perfluorohexanesulfonic acid (PFHxS), Perfluorohexanoic acid (PFHxA), Perfluorooctanoic acid (PFOA) and Perfluoropentanoic acid (PFPeA) were detected in method blank MB 200-130388/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

Refer to the QC report for details.

No other difficulties were encountered during the Perfluorinated Hydrocarbons (PFC) analysis.

All other quality control parameters were within the acceptance limits.

Sample Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 200-43678-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
200-43678-1	ERM-3	Water	05/31/18 10:50	06/02/18 09:35
200-43678-2	LMS-3	Water	05/31/18 12:35	06/02/18 09:35
200-43678-3	LMS-4	Water	05/31/18 11:35	06/02/18 09:35
200-43678-4	MW-1	Water	05/31/18 09:15	06/02/18 09:35
200-43678-5	MW-X	Water	05/31/18 00:00	06/02/18 09:35
200-43678-6	EQUIPMENT BLANK	Water	05/31/18 13:35	06/02/18 09:35

Detection Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 200-43678-1

Client Sample ID: ERM-3 — Lab Sample ID: 200-43678-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.21		1.79	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	15.4	B	1.79	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	8.58	B	1.79	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.33		1.79	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	11.9	B	1.79	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	2.74		1.79	0.23	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	5.12		1.79	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.24	J	1.79	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.29	J	1.79	0.79	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.53	B	1.79	0.25	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.58	J	1.79	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.76		1.79	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorooctane Sulfonamide (FOSA)	0.64	J	1.79	0.40	ng/L	1		537 (modified)	Total/NA
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.68	J	1.79	0.54	ng/L	1		537 (modified)	Total/NA
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	0.62	J	1.79	0.54	ng/L	1		537 (modified)	Total/NA
8:2 FTS	0.75	J B	1.79	0.54	ng/L	1		537 (modified)	Total/NA

Client Sample ID: LMS-3 — Lab Sample ID: 200-43678-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	8.08		1.81	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	18.6	B	1.81	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	12.7	B	1.81	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.34		1.81	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	16.9	B	1.81	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	5.57		1.81	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	4.22		1.81	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	3.66		1.81	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	7.69		1.81	0.80	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14.2	B	1.81	0.25	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	1.45	J	1.81	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	26.6		1.81	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorooctane Sulfonamide (FOSA)	0.64	J	1.81	0.40	ng/L	1		537 (modified)	Total/NA
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.76	J	1.81	0.54	ng/L	1		537 (modified)	Total/NA
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	0.63	J	1.81	0.54	ng/L	1		537 (modified)	Total/NA
6:2 FTS	1.02	J	1.81	0.54	ng/L	1		537 (modified)	Total/NA

Client Sample ID: LMS-4 — Lab Sample ID: 200-43678-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	4.00		1.72	0.38	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	6.17	B	1.72	0.38	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	4.49	B	1.72	0.38	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.95		1.72	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	9.25	B	1.72	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	2.33		1.72	0.22	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: LMS-4 (Continued) — Lab Sample ID: 200-43678-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorodecanoic acid (PFDA)	12.7		1.72	0.38	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.34	J	1.72	0.38	ng/L	1		537 (modified)	Total/NA
Perfluorododecanoic acid (PFDoA)	0.49	J	1.72	0.38	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	0.95	J	1.72	0.76	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.66	J B	1.72	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	6.99		1.72	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.43	J	1.72	0.38	ng/L	1		537 (modified)	Total/NA
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.69	J	1.72	0.52	ng/L	1		537 (modified)	Total/NA
6:2 FTS	5.00		1.72	0.52	ng/L	1		537 (modified)	Total/NA
8:2 FTS	0.75	J B	1.72	0.52	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-1 — Lab Sample ID: 200-43678-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	3.89		1.64	0.36	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	4.77	B	1.64	0.36	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	3.38	B	1.64	0.36	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	3.33		1.64	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	5.61	B	1.64	0.39	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	1.28	J	1.64	0.21	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	0.88	J	1.64	0.36	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	1.28	J	1.64	0.72	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.64	B	1.64	0.23	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.56	J	1.64	0.36	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	3.07		1.64	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorodecanesulfonic acid (PFDS)	0.37	J	1.64	0.36	ng/L	1		537 (modified)	Total/NA
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.62	J	1.64	0.49	ng/L	1		537 (modified)	Total/NA

Client Sample ID: MW-X — Lab Sample ID: 200-43678-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	7.32		1.82	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	16.3	B	1.82	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	8.07	B	1.82	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	6.43		1.82	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	11.2	B	1.82	0.43	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	3.04		1.82	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	4.55		1.82	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	1.59	J	1.82	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	2.44		1.82	0.80	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.63	J B	1.82	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	8.52		1.82	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorooctane Sulfonamide (FOSA)	0.65	J	1.82	0.40	ng/L	1		537 (modified)	Total/NA
8:2 FTS	0.77	J B	1.82	0.55	ng/L	1		537 (modified)	Total/NA

Client Sample ID: EQUIPMENT BLANK — Lab Sample ID: 200-43678-6

This Detection Summary does not include radiochemical test results.

Client Sample ID: EQUIPMENT BLANK (Continued)

Lab Sample ID: 200-43678-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid (PFBA)	0.65	J	1.80	0.40	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	0.78	J B	1.80	0.40	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid (PFHpA)	0.38	J	1.80	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	0.64	J B	1.80	0.42	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	1.03	J B	1.80	0.25	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.40	J	1.80	0.40	ng/L	1		537 (modified)	Total/NA
8:2 FTS	0.76	J B	1.80	0.54	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 200-43678-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL BUR
3535	Solid-Phase Extraction (SPE)	SW846	TAL BUR

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Client Sample ID: ERM-3

Date Collected: 05/31/18 10:50
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-1

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**7.21**		1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluoropentanoic acid (PFPeA)	**15.4**	**B**	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorohexanoic acid (PFHxA)	**8.58**	**B**	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluoroheptanoic acid (PFHpA)	**6.33**		1.79	0.26	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorooctanoic acid (PFOA)	**11.9**	**B**	1.79	0.42	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorononanoic acid (PFNA)	**2.74**		1.79	0.23	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorodecanoic acid (PFDA)	**5.12**		1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluoroundecanoic acid (PFUnA)	**1.24**	**J**	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorododecanoic acid (PFDoA)	1.79	U	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorotridecanoic Acid (PFTriA)	1.79	U	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorotetradecanoic acid (PFTeA)	1.79	U	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorobutanesulfonic acid (PFBS)	**1.29**	**J**	1.79	0.79	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorohexanesulfonic acid (PFHxS)	**2.53**	**B**	1.79	0.25	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluoroheptanesulfonic Acid (PFHpS)	**0.58**	**J**	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorooctanesulfonic acid (PFOS)	**8.76**		1.79	0.27	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorodecanesulfonic acid (PFDS)	1.79	U	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
Perfluorooctane Sulfonamide (FOSA)	**0.64**	**J**	1.79	0.40	ng/L		06/08/18 11:00	06/12/18 20:06	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	**0.68**	**J**	1.79	0.54	ng/L		06/08/18 11:00	06/12/18 20:06	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	**0.62**	**J**	1.79	0.54	ng/L		06/08/18 11:00	06/12/18 20:06	1
6:2 FTS	1.79	U	1.79	0.54	ng/L		06/08/18 11:00	06/12/18 20:06	1
8:2 FTS	**0.75**	**J B**	1.79	0.54	ng/L		06/08/18 11:00	06/12/18 20:06	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*29*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C5 PFPeA	*51*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C2 PFHxA	*71*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C4-PFHpA	*80*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C4 PFOA	*88*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C5 PFNA	*90*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C2 PFDA	*80*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C2 PFUnA	*82*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C2 PFDoA	*65*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C2-PFTeDA	*66*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C3-PFBS	*71*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
18O2 PFHxS	*80*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C4 PFOS	*94*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
13C8 FOSA	*55*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
d3-NMeFOSAA	*66*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
d5-NEtFOSAA	*69*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
M2-6:2FTS	*211*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*
M2-8:2FTS	*125*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:06*	*1*

Client Sample ID: LMS-3

Date Collected: 05/31/18 12:35
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-2

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**8.08**		1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluoropentanoic acid (PFPeA)	**18.6**	**B**	1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorohexanoic acid (PFHxA)	**12.7**	**B**	1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluoroheptanoic acid (PFHpA)	**6.34**		1.81	0.26	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorooctanoic acid (PFOA)	**16.9**	**B**	1.81	0.43	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorononanoic acid (PFNA)	**5.57**		1.81	0.24	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorodecanoic acid (PFDA)	**4.22**		1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluoroundecanoic acid (PFUnA)	**3.66**		1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorododecanoic acid (PFDoA)	1.81	U	1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorotridecanoic Acid (PFTriA)	1.81	U	1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorotetradecanoic acid (PFTeA)	1.81	U	1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorobutanesulfonic acid (PFBS)	**7.69**		1.81	0.80	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorohexanesulfonic acid (PFHxS)	**14.2**	**B**	1.81	0.25	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluoroheptanesulfonic Acid (PFHpS)	**1.45**	**J**	1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorooctanesulfonic acid (PFOS)	**26.6**		1.81	0.27	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorodecanesulfonic acid (PFDS)	1.81	U	1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
Perfluorooctane Sulfonamide (FOSA)	**0.64**	**J**	1.81	0.40	ng/L		06/08/18 11:00	06/12/18 20:22	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	**0.76**	**J**	1.81	0.54	ng/L		06/08/18 11:00	06/12/18 20:22	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	**0.63**	**J**	1.81	0.54	ng/L		06/08/18 11:00	06/12/18 20:22	1
6:2 FTS	**1.02**	**J**	1.81	0.54	ng/L		06/08/18 11:00	06/12/18 20:22	1
8:2 FTS	1.81	U	1.81	0.54	ng/L		06/08/18 11:00	06/12/18 20:22	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*22*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C5 PFPeA	*38*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C2 PFHxA	*58*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C4-PFHpA	*76*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C4 PFOA	*90*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C5 PFNA	*109*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C2 PFDA	*93*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C2 PFUnA	*90*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C2 PFDoA	*81*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C2-PFTeDA	*86*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C3-PFBS	*62*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
18O2 PFHxS	*87*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C4 PFOS	*97*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
13C8 FOSA	*72*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
d3-NMeFOSAA	*63*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
d5-NEtFOSAA	*76*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
M2-6:2FTS	*293*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*
M2-8:2FTS	*148*		*25 - 150*	*06/08/18 11:00*	*06/12/18 20:22*	*1*

Client Sample ID: LMS-4

Date Collected: 05/31/18 11:35
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-3

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**4.00**		1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluoropentanoic acid (PFPeA)	**6.17**	**B**	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorohexanoic acid (PFHxA)	**4.49**	**B**	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluoroheptanoic acid (PFHpA)	**3.95**		1.72	0.25	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorooctanoic acid (PFOA)	**9.25**	**B**	1.72	0.40	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorononanoic acid (PFNA)	**2.33**		1.72	0.22	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorodecanoic acid (PFDA)	**12.7**		1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluoroundecanoic acid (PFUnA)	**1.34**	**J**	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorododecanoic acid (PFDoA)	**0.49**	**J**	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorotridecanoic Acid (PFTriA)	1.72	U	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorotetradecanoic acid (PFTeA)	1.72	U	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorobutanesulfonic acid (PFBS)	**0.95**	**J**	1.72	0.76	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorohexanesulfonic acid (PFHxS)	**1.66**	**J B**	1.72	0.24	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluoroheptanesulfonic Acid (PFHpS)	1.72	U	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorooctanesulfonic acid (PFOS)	**6.99**		1.72	0.26	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorodecanesulfonic acid (PFDS)	**0.43**	**J**	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
Perfluorooctane Sulfonamide (FOSA)	1.72	U	1.72	0.38	ng/L		06/08/18 11:00	06/12/18 21:10	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	**0.69**	**J**	1.72	0.52	ng/L		06/08/18 11:00	06/12/18 21:10	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	1.72	U	1.72	0.52	ng/L		06/08/18 11:00	06/12/18 21:10	1
6:2 FTS	**5.00**		1.72	0.52	ng/L		06/08/18 11:00	06/12/18 21:10	1
8:2 FTS	**0.75**	**J B**	1.72	0.52	ng/L		06/08/18 11:00	06/12/18 21:10	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*43*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C5 PFPeA	*70*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C2 PFHxA	*82*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C4-PFHpA	*91*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C4 PFOA	*91*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C5 PFNA	*96*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C2 PFDA	*87*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C2 PFUnA	*80*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C2 PFDoA	*71*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C2-PFTeDA	*74*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C3-PFBS	*90*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
18O2 PFHxS	*91*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C4 PFOS	*98*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
13C8 FOSA	*59*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
d3-NMeFOSAA	*63*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
d5-NEtFOSAA	*68*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
M2-6:2FTS	*179*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*
M2-8:2FTS	*117*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:10*	*1*

Client Sample ID: MW-1

Date Collected: 05/31/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-4

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**3.89**		1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluoropentanoic acid (PFPeA)	**4.77**	**B**	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorohexanoic acid (PFHxA)	**3.38**	**B**	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluoroheptanoic acid (PFHpA)	**3.33**		1.64	0.24	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorooctanoic acid (PFOA)	**5.61**	**B**	1.64	0.39	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorononanoic acid (PFNA)	**1.28**	**J**	1.64	0.21	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorodecanoic acid (PFDA)	1.64	U	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluoroundecanoic acid (PFUnA)	**0.88**	**J**	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorododecanoic acid (PFDoA)	1.64	U	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorotridecanoic Acid (PFTriA)	1.64	U	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorotetradecanoic acid (PFTeA)	1.64	U	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorobutanesulfonic acid (PFBS)	**1.28**	**J**	1.64	0.72	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorohexanesulfonic acid (PFHxS)	**1.64**	**B**	1.64	0.23	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	**0.56**	**J**	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorooctanesulfonic acid (PFOS)	**3.07**		1.64	0.25	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorodecanesulfonic acid (PFDS)	**0.37**	**J**	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
Perfluorooctane Sulfonamide (FOSA)	1.64	U	1.64	0.36	ng/L		06/08/18 11:00	06/12/18 21:27	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	**0.62**	**J**	1.64	0.49	ng/L		06/08/18 11:00	06/12/18 21:27	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	1.64	U	1.64	0.49	ng/L		06/08/18 11:00	06/12/18 21:27	1
6:2 FTS	1.64	U	1.64	0.49	ng/L		06/08/18 11:00	06/12/18 21:27	1
8:2 FTS	1.64	U	1.64	0.49	ng/L		06/08/18 11:00	06/12/18 21:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*67*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C5 PFPeA	*53*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C2 PFHxA	*63*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C4-PFHpA	*76*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C4 PFOA	*84*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C5 PFNA	*87*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C2 PFDA	*81*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C2 PFUnA	*70*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C2 PFDoA	*61*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C2-PFTeDA	*64*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C3-PFBS	*66*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
18O2 PFHxS	*84*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C4 PFOS	*90*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
13C8 FOSA	*46*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
d3-NMeFOSAA	*56*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
d5-NEtFOSAA	*59*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
M2-6:2FTS	*234*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*
M2-8:2FTS	*141*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:27*	*1*

Client Sample ID: MW-X

Date Collected: 05/31/18 00:00
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-5

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**7.32**		1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluoropentanoic acid (PFPeA)	**16.3**	**B**	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorohexanoic acid (PFHxA)	**8.07**	**B**	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluoroheptanoic acid (PFHpA)	**6.43**		1.82	0.26	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorooctanoic acid (PFOA)	**11.2**	**B**	1.82	0.43	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorononanoic acid (PFNA)	**3.04**		1.82	0.24	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorodecanoic acid (PFDA)	**4.55**		1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluoroundecanoic acid (PFUnA)	**1.59**	**J**	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorododecanoic acid (PFDoA)	1.82	U	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorotridecanoic Acid (PFTriA)	1.82	U	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorotetradecanoic acid (PFTeA)	1.82	U	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorobutanesulfonic acid (PFBS)	**2.44**		1.82	0.80	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorohexanesulfonic acid (PFHxS)	**1.63**	**J B**	1.82	0.25	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluoroheptanesulfonic Acid (PFHpS)	1.82	U	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorooctanesulfonic acid (PFOS)	**8.52**		1.82	0.27	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorodecanesulfonic acid (PFDS)	1.82	U	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
Perfluorooctane Sulfonamide (FOSA)	**0.65**	**J**	1.82	0.40	ng/L		06/08/18 11:00	06/12/18 21:43	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	1.82	U	1.82	0.55	ng/L		06/08/18 11:00	06/12/18 21:43	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	1.82	U	1.82	0.55	ng/L		06/08/18 11:00	06/12/18 21:43	1
6:2 FTS	1.82	U	1.82	0.55	ng/L		06/08/18 11:00	06/12/18 21:43	1
8:2 FTS	**0.77**	**J B**	1.82	0.55	ng/L		06/08/18 11:00	06/12/18 21:43	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*30*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C5 PFPeA	*56*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C2 PFHxA	*74*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C4-PFHpA	*80*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C4 PFOA	*88*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C5 PFNA	*93*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C2 PFDA	*81*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C2 PFUnA	*81*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C2 PFDoA	*70*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C2-PFTeDA	*64*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C3-PFBS	*79*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
18O2 PFHxS	*82*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C4 PFOS	*92*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
13C8 FOSA	*52*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
d3-NMeFOSAA	*65*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
d5-NEtFOSAA	*66*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
M2-6:2FTS	*223*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*
M2-8:2FTS	*112*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:43*	*1*

Client Sample ID: EQUIPMENT BLANK

Date Collected: 05/31/18 13:35
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-6

Matrix: Water

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	**0.65**	**J**	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluoropentanoic acid (PFPeA)	1.80	U	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorohexanoic acid (PFHxA)	**0.78**	**J B**	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluoroheptanoic acid (PFHpA)	**0.38**	**J**	1.80	0.26	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorooctanoic acid (PFOA)	**0.64**	**J B**	1.80	0.42	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorononanoic acid (PFNA)	1.80	U	1.80	0.23	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorodecanoic acid (PFDA)	1.80	U	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluoroundecanoic acid (PFUnA)	1.80	U	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorododecanoic acid (PFDoA)	1.80	U	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorotridecanoic Acid (PFTriA)	1.80	U	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorotetradecanoic acid (PFTeA)	1.80	U	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorobutanesulfonic acid (PFBS)	1.80	U	1.80	0.79	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorohexanesulfonic acid (PFHxS)	**1.03**	**J B**	1.80	0.25	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluoroheptanesulfonic Acid (PFHpS)	**0.40**	**J**	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorooctanesulfonic acid (PFOS)	1.80	U	1.80	0.27	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorodecanesulfonic acid (PFDS)	1.80	U	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
Perfluorooctane Sulfonamide (FOSA)	1.80	U	1.80	0.40	ng/L		06/08/18 11:00	06/12/18 21:59	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	1.80	U	1.80	0.54	ng/L		06/08/18 11:00	06/12/18 21:59	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	1.80	U	1.80	0.54	ng/L		06/08/18 11:00	06/12/18 21:59	1
6:2 FTS	1.80	U	1.80	0.54	ng/L		06/08/18 11:00	06/12/18 21:59	1
8:2 FTS	**0.76**	**J B**	1.80	0.54	ng/L		06/08/18 11:00	06/12/18 21:59	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*76*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C5 PFPeA	*87*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C2 PFHxA	*82*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C4-PFHpA	*82*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C4 PFOA	*113*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C5 PFNA	*111*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C2 PFDA	*100*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C2 PFUnA	*101*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C2 PFDoA	*86*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C2-PFTeDA	*76*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C3-PFBS	*77*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
18O2 PFHxS	*74*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C4 PFOS	*99*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
13C8 FOSA	*55*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
d3-NMeFOSAA	*72*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
d5-NEtFOSAA	*77*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
M2-6:2FTS	*159*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*
M2-8:2FTS	*120*		*25 - 150*	*06/08/18 11:00*	*06/12/18 21:59*	*1*

Isotope Dilution Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 200-43678-1

Method: 537 (modified) - Fluorinated Alkyl Substances

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	PFHpA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
200-43678-1	ERM-3	29	51	71	80	88	90	80	82
200-43678-2	LMS-3	22	38	58	76	90	109	93	90
200-43678-2 MS	LMS-3	26	47	68	83	101	99	94	86
200-43678-2 MSD	LMS-3	20	42	61	77	89	104	100	85
200-43678-3	LMS-4	43	70	82	91	91	96	87	80
200-43678-4	MW-1	67	53	63	76	84	87	81	70
200-43678-5	MW-X	30	56	74	80	88	93	81	81
200-43678-6	EQUIPMENT BLANK	76	87	82	82	113	111	100	101
LCS 200-130388/2-A	Lab Control Sample	67	72	69	76	100	102	82	93
MB 200-130388/1-A	Method Blank	63	67	71	71	94	91	81	90

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFDoA (25-150)	PFTDA (25-150)	3C3-PFBS (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	-NMeFOS (25-150)	-NEtFOS (25-150)
200-43678-1	ERM-3	65	66	71	80	94	55	66	69
200-43678-2	LMS-3	81	86	62	87	97	72	63	76
200-43678-2 MS	LMS-3	83	87	71	89	99	65	71	75
200-43678-2 MSD	LMS-3	80	87	62	84	100	68	72	68
200-43678-3	LMS-4	71	74	90	91	98	59	63	68
200-43678-4	MW-1	61	64	66	84	90	46	56	59
200-43678-5	MW-X	70	64	79	82	92	52	65	66
200-43678-6	EQUIPMENT BLANK	86	76	77	74	99	55	72	77
LCS 200-130388/2-A	Lab Control Sample	80	71	73	71	94	51	73	78
MB 200-130388/1-A	Method Blank	67	61	63	68	90	41	67	75

		Percent Isotope Dilution Recovery (Acceptance Limits)	
Lab Sample ID	Client Sample ID	M262FTS (25-150)	M282FTS (25-150)
200-43678-1	ERM-3	211	125
200-43678-2	LMS-3	293	148
200-43678-2 MS	LMS-3	299	149
200-43678-2 MSD	LMS-3	318	141
200-43678-3	LMS-4	179	117
200-43678-4	MW-1	234	141
200-43678-5	MW-X	223	112
200-43678-6	EQUIPMENT BLANK	159	120
LCS 200-130388/2-A	Lab Control Sample	132	120
MB 200-130388/1-A	Method Blank	128	111

Surrogate Legend

PFBA = 13C4 PFBA
PFPeA = 13C5 PFPeA
PFHxA = 13C2 PFHxA
PFHpA = 13C4-PFHpA
PFOA = 13C4 PFOA
PFNA = 13C5 PFNA
PFDA = 13C2 PFDA
PFUnA = 13C2 PFUnA
PFDoA = 13C2 PFDoA
PFTDA = 13C2-PFTeDA
13C3-PFBS = 13C3-PFBS

Isotope Dilution Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 200-43678-1

PFHxS = 18O2 PFHxS
PFOS = 13C4 PFOS
PFOSA = 13C8 FOSA
d3-NMeFOSAA = d3-NMeFOSAA
d5-NEtFOSAA = d5-NEtFOSAA
M262FTS = M2-6:2FTS
M282FTS = M2-8:2FTS

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 200-130388/1-A
Matrix: Water
Analysis Batch: 130505

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 130388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid (PFBA)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluoropentanoic acid (PFPeA)	1.195	J	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorohexanoic acid (PFHxA)	0.849	J	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.29	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorooctanoic acid (PFOA)	0.735	J	2.00	0.47	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.26	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorodecanoic acid (PFDA)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluoroundecanoic acid (PFUnA)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorododecanoic acid (PFDoA)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorotridecanoic Acid (PFTriA)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorotetradecanoic acid (PFTeA)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.88	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorohexanesulfonic acid (PFHxS)	1.161	J	2.00	0.28	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluoroheptanesulfonic Acid (PFHpS)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	0.30	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorodecanesulfonic acid (PFDS)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
Perfluorooctane Sulfonamide (FOSA)	2.00	U	2.00	0.44	ng/L		06/08/18 11:00	06/12/18 16:20	1
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	2.00	U	2.00	0.60	ng/L		06/08/18 11:00	06/12/18 16:20	1
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	2.00	U	2.00	0.60	ng/L		06/08/18 11:00	06/12/18 16:20	1
6:2 FTS	2.00	U	2.00	0.60	ng/L		06/08/18 11:00	06/12/18 16:20	1
8:2 FTS	0.804	J	2.00	0.60	ng/L		06/08/18 11:00	06/12/18 16:20	1

Isotope Dilution	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C4 PFBA	*63*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C5 PFPeA	*67*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C2 PFHxA	*71*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C4-PFHpA	*71*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C4 PFOA	*94*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C5 PFNA	*91*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C2 PFDA	*81*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C2 PFUnA	*90*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C2 PFDoA	*67*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C2-PFTeDA	*61*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C3-PFBS	*63*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
18O2 PFHxS	*68*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C4 PFOS	*90*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
13C8 FOSA	*41*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
d3-NMeFOSAA	*67*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
d5-NEtFOSAA	*75*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
M2-6:2FTS	*128*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*
M2-8:2FTS	*111*		*25 - 150*	*06/08/18 11:00*	*06/12/18 16:20*	*1*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 200-130388/2-A
Matrix: Water
Analysis Batch: 130505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130388

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	40.0	41.41		ng/L		104	50 - 150
Perfluoropentanoic acid (PFPeA)	40.0	39.91		ng/L		100	50 - 150
Perfluorohexanoic acid (PFHxA)	40.0	40.07		ng/L		100	50 - 150
Perfluoroheptanoic acid (PFHpA)	40.0	43.03		ng/L		108	50 - 150
Perfluorooctanoic acid (PFOA)	40.0	44.15		ng/L		110	50 - 150
Perfluorononanoic acid (PFNA)	40.0	40.86		ng/L		102	50 - 150
Perfluorodecanoic acid (PFDA)	40.0	44.87		ng/L		112	50 - 150
Perfluoroundecanoic acid (PFUnA)	40.0	40.22		ng/L		101	50 - 150
Perfluorododecanoic acid (PFDoA)	40.0	43.74		ng/L		109	50 - 150
Perfluorotridecanoic Acid (PFTriA)	40.0	29.77		ng/L		74	50 - 150
Perfluorotetradecanoic acid (PFTeA)	40.0	37.59		ng/L		94	50 - 150
Perfluorobutanesulfonic acid (PFBS)	35.4	38.22		ng/L		108	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	36.4	31.27		ng/L		86	50 - 150
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.46		ng/L		104	50 - 150
Perfluorooctanesulfonic acid (PFOS)	37.1	40.18		ng/L		108	50 - 150
Perfluorodecanesulfonic acid (PFDS)	38.6	35.25		ng/L		91	50 - 150
Perfluorooctane Sulfonamide (FOSA)	40.0	36.57		ng/L		91	50 - 150
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	40.04		ng/L		100	50 - 150
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	41.71		ng/L		104	50 - 150
6:2 FTS	37.9	47.37		ng/L		125	50 - 150
8:2 FTS	38.3	38.15		ng/L		100	50 - 150

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C4 PFBA	*67*		*25 - 150*
13C5 PFPeA	*72*		*25 - 150*
13C2 PFHxA	*69*		*25 - 150*
13C4-PFHpA	*76*		*25 - 150*
13C4 PFOA	*100*		*25 - 150*
13C5 PFNA	*102*		*25 - 150*
13C2 PFDA	*82*		*25 - 150*
13C2 PFUnA	*93*		*25 - 150*
13C2 PFDoA	*80*		*25 - 150*
13C2-PFTeDA	*71*		*25 - 150*
13C3-PFBS	*73*		*25 - 150*
18O2 PFHxS	*71*		*25 - 150*
13C4 PFOS	*94*		*25 - 150*
13C8 FOSA	*51*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 200-130388/2-A
Matrix: Water
Analysis Batch: 130505

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 130388

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
d3-NMeFOSAA	*73*		*25 - 150*
d5-NEtFOSAA	*78*		*25 - 150*
M2-6:2FTS	*132*		*25 - 150*
M2-8:2FTS	*120*		*25 - 150*

Lab Sample ID: 200-43678-2 MS
Matrix: Water
Analysis Batch: 130505

Client Sample ID: LMS-3
Prep Type: Total/NA
Prep Batch: 130388

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Perfluorobutanoic acid (PFBA)	8.08		36.4	43.52		ng/L		98	40 - 160
Perfluoropentanoic acid (PFPeA)	18.6	B	36.4	59.21		ng/L		112	40 - 160
Perfluorohexanoic acid (PFHxA)	12.7	B	36.4	47.79		ng/L		97	40 - 160
Perfluoroheptanoic acid (PFHpA)	6.34		36.4	46.24		ng/L		110	40 - 160
Perfluorooctanoic acid (PFOA)	16.9	B	36.4	50.13		ng/L		91	40 - 160
Perfluorononanoic acid (PFNA)	5.57		36.4	45.74		ng/L		111	40 - 160
Perfluorodecanoic acid (PFDA)	4.22		36.4	38.23		ng/L		94	40 - 160
Perfluoroundecanoic acid (PFUnA)	3.66		36.4	43.26		ng/L		109	40 - 160
Perfluorododecanoic acid (PFDoA)	1.81	U	36.4	38.00		ng/L		105	40 - 160
Perfluorotridecanoic Acid (PFTriA)	1.81	U	36.4	36.35		ng/L		100	40 - 160
Perfluorotetradecanoic acid (PFTeA)	1.81	U	36.4	37.27		ng/L		103	40 - 160
Perfluorobutanesulfonic acid (PFBS)	7.69		32.1	48.14		ng/L		126	40 - 160
Perfluorohexanesulfonic acid (PFHxS)	14.2	B	33.1	46.24		ng/L		97	40 - 160
Perfluoroheptanesulfonic Acid (PFHpS)	1.45	J	34.6	37.52		ng/L		104	40 - 160
Perfluorooctanesulfonic acid (PFOS)	26.6		33.7	64.38		ng/L		112	40 - 160
Perfluorodecanesulfonic acid (PFDS)	1.81	U	35.0	27.00		ng/L		77	40 - 160
Perfluorooctane Sulfonamide (FOSA)	0.64	J	36.4	38.82		ng/L		105	40 - 160
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.76	J	36.4	32.60		ng/L		88	40 - 160
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	0.63	J	36.4	33.64		ng/L		91	40 - 160
6:2 FTS	1.02	J	34.5	36.11		ng/L		102	40 - 160
8:2 FTS	1.81	U	34.8	37.93		ng/L		109	40 - 160

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C4 PFBA	*26*		*25 - 150*
13C5 PFPeA	*47*		*25 - 150*
13C2 PFHxA	*68*		*25 - 150*
13C4-PFHpA	*83*		*25 - 150*
13C4 PFOA	*101*		*25 - 150*

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 200-43678-2 MS
Matrix: Water
Analysis Batch: 130505

Client Sample ID: LMS-3
Prep Type: Total/NA
Prep Batch: 130388

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C5 PFNA	*99*		*25 - 150*
13C2 PFDA	*94*		*25 - 150*
13C2 PFUnA	*86*		*25 - 150*
13C2 PFDoA	*83*		*25 - 150*
13C2-PFTeDA	*87*		*25 - 150*
13C3-PFBS	*71*		*25 - 150*
18O2 PFHxS	*89*		*25 - 150*
13C4 PFOS	*99*		*25 - 150*
13C8 FOSA	*65*		*25 - 150*
d3-NMeFOSAA	*71*		*25 - 150*
d5-NEtFOSAA	*75*		*25 - 150*
M2-6:2FTS	*299*		*25 - 150*
M2-8:2FTS	*149*		*25 - 150*

Lab Sample ID: 200-43678-2 MSD
Matrix: Water
Analysis Batch: 130505

Client Sample ID: LMS-3
Prep Type: Total/NA
Prep Batch: 130388

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perfluorobutanoic acid (PFBA)	8.08		35.6	44.73		ng/L		103	40 - 160	3	30
Perfluoropentanoic acid (PFPeA)	18.6	B	35.6	47.33		ng/L		81	40 - 160	22	30
Perfluorohexanoic acid (PFHxA)	12.7	B	35.6	46.56		ng/L		95	40 - 160	3	30
Perfluoroheptanoic acid (PFHpA)	6.34		35.6	44.15		ng/L		106	40 - 160	5	30
Perfluorooctanoic acid (PFOA)	16.9	B	35.6	53.49		ng/L		103	40 - 160	6	30
Perfluorononanoic acid (PFNA)	5.57		35.6	42.93		ng/L		105	40 - 160	6	30
Perfluorodecanoic acid (PFDA)	4.22		35.6	36.71		ng/L		91	40 - 160	4	30
Perfluoroundecanoic acid (PFUnA)	3.66		35.6	41.69		ng/L		107	40 - 160	4	30
Perfluorododecanoic acid (PFDoA)	1.81	U	35.6	34.43		ng/L		97	40 - 160	10	30
Perfluorotridecanoic Acid (PFTriA)	1.81	U	35.6	35.21		ng/L		99	40 - 160	3	30
Perfluorotetradecanoic acid (PFTeA)	1.81	U	35.6	35.91		ng/L		101	40 - 160	4	30
Perfluorobutanesulfonic acid (PFBS)	7.69		31.4	49.71		ng/L		134	40 - 160	3	30
Perfluorohexanesulfonic acid (PFHxS)	14.2	B	32.4	43.85		ng/L		92	40 - 160	5	30
Perfluoroheptanesulfonic Acid (PFHpS)	1.45	J	33.9	36.03		ng/L		102	40 - 160	4	30
Perfluorooctanesulfonic acid (PFOS)	26.6		33.0	60.84		ng/L		104	40 - 160	6	30
Perfluorodecanesulfonic acid (PFDS)	1.81	U	34.3	23.75		ng/L		69	40 - 160	13	30
Perfluorooctane Sulfonamide (FOSA)	0.64	J	35.6	34.07		ng/L		94	40 - 160	13	30
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.76	J	35.6	32.54		ng/L		89	40 - 160	0	30
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	0.63	J	35.6	34.37		ng/L		95	40 - 160	2	30

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: 200-43678-2 MSD
Matrix: Water
Analysis Batch: 130505

Client Sample ID: LMS-3
Prep Type: Total/NA
Prep Batch: 130388

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
6:2 FTS	1.02	J	33.7	36.09		ng/L		104	40 - 160	0	30
8:2 FTS	1.81	U	34.1	43.81		ng/L		129	40 - 160	14	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C4 PFBA	*20*		*25 - 150*
13C5 PFPeA	*42*		*25 - 150*
13C2 PFHxA	*61*		*25 - 150*
13C4-PFHpA	*77*		*25 - 150*
13C4 PFOA	*89*		*25 - 150*
13C5 PFNA	*104*		*25 - 150*
13C2 PFDA	*100*		*25 - 150*
13C2 PFUnA	*85*		*25 - 150*
13C2 PFDoA	*80*		*25 - 150*
13C2-PFTeDA	*87*		*25 - 150*
13C3-PFBS	*62*		*25 - 150*
18O2 PFHxS	*84*		*25 - 150*
13C4 PFOS	*100*		*25 - 150*
13C8 FOSA	*68*		*25 - 150*
d3-NMeFOSAA	*72*		*25 - 150*
d5-NEtFOSAA	*68*		*25 - 150*
M2-6:2FTS	*318*		*25 - 150*
M2-8:2FTS	*141*		*25 - 150*

Qualifiers

LCMS

Qualifier	Qualifier Description
U	Analyzed for but not detected.
B	The analyte was found in an associated blank, as well as in the sample.
J	Indicates an estimated value.

Glossary

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

QC Association Summary

Client: New York State D.E.C.
Project/Site: DEC-HICKSVILLE270 Site:130027

TestAmerica Job ID: 200-43678-1

LCMS

Prep Batch: 130388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-43678-1	ERM-3	Total/NA	Water	3535	
200-43678-2	LMS-3	Total/NA	Water	3535	
200-43678-3	LMS-4	Total/NA	Water	3535	
200-43678-4	MW-1	Total/NA	Water	3535	
200-43678-5	MW-X	Total/NA	Water	3535	
200-43678-6	EQUIPMENT BLANK	Total/NA	Water	3535	
MB 200-130388/1-A	Method Blank	Total/NA	Water	3535	
LCS 200-130388/2-A	Lab Control Sample	Total/NA	Water	3535	
200-43678-2 MS	LMS-3	Total/NA	Water	3535	
200-43678-2 MSD	LMS-3	Total/NA	Water	3535	

Analysis Batch: 130505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
200-43678-1	ERM-3	Total/NA	Water	537 (modified)	130388
200-43678-2	LMS-3	Total/NA	Water	537 (modified)	130388
200-43678-3	LMS-4	Total/NA	Water	537 (modified)	130388
200-43678-4	MW-1	Total/NA	Water	537 (modified)	130388
200-43678-5	MW-X	Total/NA	Water	537 (modified)	130388
200-43678-6	EQUIPMENT BLANK	Total/NA	Water	537 (modified)	130388
MB 200-130388/1-A	Method Blank	Total/NA	Water	537 (modified)	130388
LCS 200-130388/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	130388
200-43678-2 MS	LMS-3	Total/NA	Water	537 (modified)	130388
200-43678-2 MSD	LMS-3	Total/NA	Water	537 (modified)	130388

Client Sample ID: ERM-3
Date Collected: 05/31/18 10:50
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			130388	06/08/18 11:00	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	130505	06/12/18 20:06	BWC	TAL BUR

Client Sample ID: LMS-3
Date Collected: 05/31/18 12:35
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			130388	06/08/18 11:00	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	130505	06/12/18 20:22	BWC	TAL BUR

Client Sample ID: LMS-4
Date Collected: 05/31/18 11:35
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			130388	06/08/18 11:00	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	130505	06/12/18 21:10	BWC	TAL BUR

Client Sample ID: MW-1
Date Collected: 05/31/18 09:15
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			130388	06/08/18 11:00	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	130505	06/12/18 21:27	BWC	TAL BUR

Client Sample ID: MW-X
Date Collected: 05/31/18 00:00
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			130388	06/08/18 11:00	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	130505	06/12/18 21:43	BWC	TAL BUR

Client Sample ID: EQUIPMENT BLANK
Date Collected: 05/31/18 13:35
Date Received: 06/02/18 09:35

Lab Sample ID: 200-43678-6
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			130388	06/08/18 11:00	JM1	TAL BUR
Total/NA	Analysis	537 (modified)		1	130505	06/12/18 21:59	BWC	TAL BUR

Laboratory References:

TAL BUR = TestAmerica Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: New York State D.E.C. TestAmerica Job ID: 200-43678-1
Project/Site: DEC-HICKSVILLE270 Site:130027

Laboratory: TestAmerica Burlington

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

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	10391	04-01-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	3535	Water	6:2 FTS
537 (modified)	3535	Water	8:2 FTS
537 (modified)	3535	Water	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)
537 (modified)	3535	Water	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)
537 (modified)	3535	Water	Perfluorobutanesulfonic acid (PFBS)
537 (modified)	3535	Water	Perfluorobutanoic acid (PFBA)
537 (modified)	3535	Water	Perfluorodecanesulfonic acid (PFDS)
537 (modified)	3535	Water	Perfluorodecanoic acid (PFDA)
537 (modified)	3535	Water	Perfluorododecanoic acid (PFDoA)
537 (modified)	3535	Water	Perfluoroheptanesulfonic Acid (PFHpS)
537 (modified)	3535	Water	Perfluoroheptanoic acid (PFHpA)
537 (modified)	3535	Water	Perfluorohexanesulfonic acid (PFHxS)
537 (modified)	3535	Water	Perfluorohexanoic acid (PFHxA)
537 (modified)	3535	Water	Perfluorononanoic acid (PFNA)
537 (modified)	3535	Water	Perfluorooctane Sulfonamide (FOSA)
537 (modified)	3535	Water	Perfluorooctanesulfonic acid (PFOS)
537 (modified)	3535	Water	Perfluorooctanoic acid (PFOA)
537 (modified)	3535	Water	Perfluoropentanoic acid (PFPeA)
537 (modified)	3535	Water	Perfluorotetradecanoic acid (PFTeA)
537 (modified)	3535	Water	Perfluorotridecanoic Acid (PFTriA)
537 (modified)	3535	Water	Perfluoroundecanoic acid (PFUnA)

Laboratory: TestAmerica Edison

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11452	04-01-19

Method PFC IDA

Fluorinated Hydrocarbons by Method PFAS IDA

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): C-18 ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	PFBA #	PFPeA #	PFBS #	PFHxA #	PFHpA #	PFHxS #	M262FTS #	PFOA #
ERM-3	200-43678-1	29	51	71	71	80	80	211	88
LMS-3	200-43678-2	22	38	62	58	76	87	293	90
LMS-4	200-43678-3	43	70	90	82	91	91	179	91
MW-1	200-43678-4	67	53	66	63	76	84	234	84
MW-X	200-43678-5	30	56	79	74	80	82	223	88
EQUIPMENT BLANK	200-43678-6	76	87	77	82	82	74	159	113
	MB 200-130388/1-A	63	67	63	71	71	68	128	94
	LCS 200-130388/2-A	67	72	73	69	76	71	132	100
LMS-3 MS	200-43678-2 MS	26	47	71	68	83	89	299	101
LMS-3 MSD	200-43678-2 MSD	20	42	62	61	77	84	318	89

	QC LIMITS
PFBA = 13C4 PFBA	25-150
PFPeA = 13C5 PFPeA	25-150
PFBS = 13C3-PFBS	25-150
PFHxA = 13C2 PFHxA	25-150
PFHpA = 13C4-PFHpA	25-150
PFHxS = 18O2 PFHxS	25-150
M262FTS = M2-6:2FTS	25-150
PFOA = 13C4 PFOA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): C-18 ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	PFNA #	PFOS #	M282FTS #	PFDA #	d3NMFOS #	d5NEFOS #	PFUnA #	PFOSA #
ERM-3	200-43678-1	90	94	125	80	66	69	82	55
LMS-3	200-43678-2	109	97	148	93	63	76	90	72
LMS-4	200-43678-3	96	98	117	87	63	68	80	59
MW-1	200-43678-4	87	90	141	81	56	59	70	46
MW-X	200-43678-5	93	92	112	81	65	66	81	52
EQUIPMENT BLANK	200-43678-6	111	99	120	100	72	77	101	55
	MB 200-130388/1-A	91	90	111	81	67	75	90	41
	LCS 200-130388/2-A	102	94	120	82	73	78	93	51
LMS-3 MS	200-43678-2 MS	99	99	149	94	71	75	86	65
LMS-3 MSD	200-43678-2 MSD	104	100	141	100	72	68	85	68

	QC LIMITS
PFNA = 13C5 PFNA	25-150
PFOS = 13C4 PFOS	25-150
M282FTS = M2-8:2FTS	25-150
PFDA = 13C2 PFDA	25-150
d3NMFOS = d3-NMeFOSAA	25-150
d5NEFOS = d5-NEtFOSAA	25-150
PFUnA = 13C2 PFUnA	25-150
PFOSA = 13C8 FOSA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM II
LCMS SURROGATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): C-18 ID: 4.6 (mm)

Client Sample ID	Lab Sample ID	PFDoA #	PFTDA #
ERM-3	200-43678-1	65	66
LMS-3	200-43678-2	81	86
LMS-4	200-43678-3	71	74
MW-1	200-43678-4	61	64
MW-X	200-43678-5	70	64
EQUIPMENT BLANK	200-43678-6	86	76
	MB 200-130388/1-A	67	61
	LCS 200-130388/2-A	80	71
LMS-3 MS	200-43678-2 MS	83	87
LMS-3 MSD	200-43678-2 MSD	80	87

	QC LIMITS
PFDoA = 13C2 PFDoA	25-150
PFTDA = 13C2-PFTeDA	25-150

Column to be used to flag recovery values

FORM II 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PF061218A32.d

Lab ID: LCS 200-130388/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	40.0	41.41	104	50-150	
Perfluoropentanoic acid (PFPeA)	40.0	39.91	100	50-150	
Perfluorohexanoic acid (PFHxA)	40.0	40.07	100	50-150	
Perfluoroheptanoic acid (PFHpA)	40.0	43.03	108	50-150	
Perfluorooctanoic acid (PFOA)	40.0	44.15	110	50-150	
Perfluorononanoic acid (PFNA)	40.0	40.86	102	50-150	
Perfluorodecanoic acid (PFDA)	40.0	44.87	112	50-150	
Perfluoroundecanoic acid (PFUnA)	40.0	40.22	101	50-150	
Perfluorododecanoic acid (PFDoA)	40.0	43.74	109	50-150	
Perfluorotridecanoic Acid (PFTriA)	40.0	29.77	74	50-150	
Perfluorotetradecanoic acid (PFTeA)	40.0	37.59	94	50-150	
Perfluorobutanesulfonic acid (PFBS)	35.4	38.22	108	50-150	
Perfluorohexanesulfonic acid (PFHxS)	36.4	31.27	86	50-150	
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	39.46	104	50-150	
Perfluorooctanesulfonic acid (PFOS)	37.1	40.18	108	50-150	
Perfluorodecanesulfonic acid (PFDS)	38.6	35.25	91	50-150	
Perfluorooctane Sulfonamide (FOSA)	40.0	36.57	91	50-150	
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.0	40.04	100	50-150	
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	40.0	41.71	104	50-150	
6:2 FTS	37.9	47.37	125	50-150	
8:2 FTS	38.3	38.15	100	50-150	
13C4 PFBA	100	67.40	67	25-150	
13C5 PFPeA	100	72.27	72	25-150	
13C2 PFHxA	100	68.95	69	25-150	
13C4-PFHpA	100	75.60	76	25-150	
13C4 PFOA	100	100.4	100	25-150	
13C5 PFNA	100	101.7	102	25-150	
13C2 PFDA	100	82.32	82	25-150	
13C2 PFUnA	100	92.96	93	25-150	
13C2 PFDoA	100	79.75	80	25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PF061218A32.d

Lab ID: LCS 200-130388/2-A Client ID:

COMPOUND	SPIKE ADDED (ng/L)	LCS CONCENTRATION (ng/L)	LCS % REC	QC LIMITS REC	#
13C2-PFTeDA	100	70.63	71	25-150	
13C3-PFBS	93.0	67.92	73	25-150	
18O2 PFHxS	94.6	66.89	71	25-150	
13C4 PFOS	95.6	89.60	94	25-150	
13C8 FOSA	100	51.43	51	25-150	
d3-NMeFOSAA	100	72.86	73	25-150	
d5-NEtFOSAA	100	77.94	78	25-150	
M2-6:2FTS	95.0	125.4	132	25-150	
M2-8:2FTS	95.8	114.7	120	25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PF061218A47.d

Lab ID: 200-43678-2 MS Client ID: LMS-3 MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	36.4	8.08	43.52	98	40-160	
Perfluoropentanoic acid (PFPeA)	36.4	18.6	59.21	112	40-160	
Perfluorohexanoic acid (PFHxA)	36.4	12.7	47.79	97	40-160	
Perfluoroheptanoic acid (PFHpA)	36.4	6.34	46.24	110	40-160	
Perfluorooctanoic acid (PFOA)	36.4	16.9	50.13	91	40-160	
Perfluorononanoic acid (PFNA)	36.4	5.57	45.74	111	40-160	
Perfluorodecanoic acid (PFDA)	36.4	4.22	38.23	94	40-160	
Perfluoroundecanoic acid (PFUnA)	36.4	3.66	43.26	109	40-160	
Perfluorododecanoic acid (PFDoA)	36.4	1.81 U	38.00	105	40-160	
Perfluorotridecanoic Acid (PFTriA)	36.4	1.81 U	36.35	100	40-160	
Perfluorotetradecanoic acid (PFTeA)	36.4	1.81 U	37.27	103	40-160	
Perfluorobutanesulfonic acid (PFBS)	32.1	7.69	48.14	126	40-160	
Perfluorohexanesulfonic acid (PFHxS)	33.1	14.2	46.24	97	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	34.6	1.45 J	37.52	104	40-160	
Perfluorooctanesulfonic acid (PFOS)	33.7	26.6	64.38	112	40-160	
Perfluorodecanesulfonic acid (PFDS)	35.0	1.81 U	27.00	77	40-160	
Perfluorooctane Sulfonamide (FOSA)	36.4	0.64 J	38.82	105	40-160	
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	36.4	0.76 J	32.60	88	40-160	
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	36.4	0.63 J	33.64	91	40-160	
6:2 FTS	34.5	1.02 J	36.11	102	40-160	
8:2 FTS	34.8	1.81 U	37.93	109	40-160	
13C4 PFBA	90.9	19.5	23.35	26	25-150	
13C5 PFPeA	90.9	34.5	42.95	47	25-150	
13C2 PFHxA	90.9	52.6	62.04	68	25-150	
13C4-PFHpA	90.9	68.8	75.86	83	25-150	
13C4 PFOA	90.9	81.2	91.46	101	25-150	
13C5 PFNA	90.9	98.5	90.28	99	25-150	
13C2 PFDA	90.9	83.9	85.02	94	25-150	
13C2 PFUnA	90.9	81.7	78.60	86	25-150	
13C2 PFDoA	90.9	73.1	75.11	83	25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PF061218A47.d

Lab ID: 200-43678-2 MS Client ID: LMS-3 MS

COMPOUND	SPIKE ADDED (ng/L)	SAMPLE CONCENTRATION (ng/L)	MS CONCENTRATION (ng/L)	MS % REC	QC LIMITS REC	#
13C2-PFTeDA	90.9	77.6	78.99	87	25-150	
13C3-PFBS	84.5	52.0	60.11	71	25-150	
18O2 PFHxS	86.0	74.4	76.12	89	25-150	
13C4 PFOS	86.9	83.9	85.59	99	25-150	
13C8 FOSA	90.9	65.5	59.47	65	25-150	
d3-NMeFOSAA	90.9	57.4	64.34	71	25-150	
d5-NEtFOSAA	90.9	68.4	67.78	75	25-150	
M2-6:2FTS	86.3	252	258.4	299	25-150	
M2-8:2FTS	87.1	129	129.7	149	25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PF061218A48.d

Lab ID: 200-43678-2 MSD Client ID: LMS-3 MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Perfluorobutanoic acid (PFBA)	35.6	44.73	103	3	30	40-160	
Perfluoropentanoic acid (PFPeA)	35.6	47.33	81	22	30	40-160	
Perfluorohexanoic acid (PFHxA)	35.6	46.56	95	3	30	40-160	
Perfluoroheptanoic acid (PFHpA)	35.6	44.15	106	5	30	40-160	
Perfluorooctanoic acid (PFOA)	35.6	53.49	103	6	30	40-160	
Perfluorononanoic acid (PFNA)	35.6	42.93	105	6	30	40-160	
Perfluorodecanoic acid (PFDA)	35.6	36.71	91	4	30	40-160	
Perfluoroundecanoic acid (PFUnA)	35.6	41.69	107	4	30	40-160	
Perfluorododecanoic acid (PFDoA)	35.6	34.43	97	10	30	40-160	
Perfluorotridecanoic Acid (PFTriA)	35.6	35.21	99	3	30	40-160	
Perfluorotetradecanoic acid (PFTeA)	35.6	35.91	101	4	30	40-160	
Perfluorobutanesulfonic acid (PFBS)	31.4	49.71	134	3	30	40-160	
Perfluorohexanesulfonic acid (PFHxS)	32.4	43.85	92	5	30	40-160	
Perfluoroheptanesulfonic Acid (PFHpS)	33.9	36.03	102	4	30	40-160	
Perfluorooctanesulfonic acid (PFOS)	33.0	60.84	104	6	30	40-160	
Perfluorodecanesulfonic acid (PFDS)	34.3	23.75	69	13	30	40-160	
Perfluorooctane Sulfonamide (FOSA)	35.6	34.07	94	13	30	40-160	
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	35.6	32.54	89	0	30	40-160	
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	35.6	34.37	95	2	30	40-160	
6:2 FTS	33.7	36.09	104	0	30	40-160	
8:2 FTS	34.1	43.81	129	14	30	40-160	
13C4 PFBA	88.9	17.86	20			25-150	
13C5 PFPeA	88.9	37.44	42			25-150	
13C2 PFHxA	88.9	54.26	61			25-150	
13C4-PFHpA	88.9	68.41	77			25-150	
13C4 PFOA	88.9	79.33	89			25-150	
13C5 PFNA	88.9	92.87	104			25-150	
13C2 PFDA	88.9	89.27	100			25-150	
13C2 PFUnA	88.9	75.26	85			25-150	
13C2 PFDoA	88.9	71.36	80			25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM III
LCMS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Matrix: Water Level: Low Lab File ID: PF061218A48.d

Lab ID: 200-43678-2 MSD Client ID: LMS-3 MSD

COMPOUND	SPIKE ADDED (ng/L)	MSD CONCENTRATION (ng/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
13C2-PFTeDA	88.9	77.25	87			25-150	
13C3-PFBS	82.7	51.06	62			25-150	
18O2 PFHxS	84.1	70.88	84			25-150	
13C4 PFOS	85.0	85.18	100			25-150	
13C8 FOSA	88.9	60.04	68			25-150	
d3-NMeFOSAA	88.9	64.19	72			25-150	
d5-NEtFOSAA	88.9	60.83	68			25-150	
M2-6:2FTS	84.5	268.9	318			25-150	
M2-8:2FTS	85.2	120.5	141			25-150	

Column to be used to flag recovery and RPD values

FORM III 537 (modified)

FORM IV
LCMS METHOD BLANK SUMMARY

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab File ID: PF061218A31.d Lab Sample ID: MB 200-130388/1-A

Matrix: Water Date Extracted: 06/08/2018 11:00

Instrument ID: LC410 Date Analyzed: 06/12/2018 16:20

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 200-130388/2-A	PF061218A32.d	06/12/2018 16:36
ERM-3	200-43678-1	PF061218A45.d	06/12/2018 20:06
LMS-3	200-43678-2	PF061218A46.d	06/12/2018 20:22
LMS-3 MS	200-43678-2 MS	PF061218A47.d	06/12/2018 20:38
LMS-3 MSD	200-43678-2 MSD	PF061218A48.d	06/12/2018 20:54
LMS-4	200-43678-3	PF061218A49.d	06/12/2018 21:10
MW-1	200-43678-4	PF061218A50.d	06/12/2018 21:27
MW-X	200-43678-5	PF061218A51.d	06/12/2018 21:43
EQUIPMENT BLANK	200-43678-6	PF061218A52.d	06/12/2018 21:59

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: ERM-3 | Lab Sample ID: 200-43678-1

Matrix: Water | Lab File ID: PF061218A45.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 10:50

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 279.8(mL) | Date Analyzed: 06/12/2018 20:06

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	7.21		1.79	0.40
2706-90-3	Perfluoropentanoic acid (PFPeA)	15.4	B	1.79	0.40
307-24-4	Perfluorohexanoic acid (PFHxA)	8.58	B	1.79	0.40
375-85-9	Perfluoroheptanoic acid (PFHpA)	6.33		1.79	0.26
335-67-1	Perfluorooctanoic acid (PFOA)	11.9	B	1.79	0.42
375-95-1	Perfluorononanoic acid (PFNA)	2.74		1.79	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	5.12		1.79	0.40
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.24	J	1.79	0.40
307-55-1	Perfluorododecanoic acid (PFDoA)	1.79	U	1.79	0.40
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	1.79	U	1.79	0.40
376-06-7	Perfluorotetradecanoic acid (PFTeA)	1.79	U	1.79	0.40
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.29	J	1.79	0.79
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	2.53	B	1.79	0.25
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	0.58	J	1.79	0.40
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	8.76		1.79	0.27
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.79	U	1.79	0.40
754-91-6	Perfluorooctane Sulfonamide (FOSA)	0.64	J	1.79	0.40
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.68	J	1.79	0.54
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	0.62	J	1.79	0.54
27619-97-2	6:2 FTS	1.79	U	1.79	0.54
39108-34-4	8:2 FTS	0.75	J B	1.79	0.54

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: ERM-3 | Lab Sample ID: 200-43678-1

Matrix: Water | Lab File ID: PF061218A45.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 10:50

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 279.8(mL) | Date Analyzed: 06/12/2018 20:06

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	29		25-150
STL01893	13C5 PFPeA	51		25-150
STL00993	13C2 PFHxA	71		25-150
STL01892	13C4-PFHpA	80		25-150
STL00990	13C4 PFOA	88		25-150
STL00995	13C5 PFNA	90		25-150
STL00996	13C2 PFDA	80		25-150
STL00997	13C2 PFUnA	82		25-150
STL00998	13C2 PFDoA	65		25-150
STL02116	13C2-PFTeDA	66		25-150
STL02337	13C3-PFBS	71		25-150
STL00994	18O2 PFHxS	80		25-150
STL00991	13C4 PFOS	94		25-150
STL01056	13C8 FOSA	55		25-150
STL02118	d3-NMeFOSAA	66		25-150
STL02117	d5-NEtFOSAA	69		25-150
STL02279	M2-6:2FTS	211		25-150
STL02280	M2-8:2FTS	125		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d
Lims ID: 200-43678-A-1-A
Client ID: ERM-3
Sample Type: Client
Inject. Date: 12-Jun-2018 20:06:34 ALS Bottle#: 0 Worklist Smp#: 45
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-045 678-1
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:20:42 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 13-Jun-2018 10:22:29

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.351	2.382	-0.031	1.000	4572	4.04			12.3	M
D 1 13C4 PFBA										M
216.9 > 171.5	2.351	2.392	-0.041	1.000	78808	14.6		29.2	52.1	M
D 4 13C5-PFPeA										
267.7 > 222.6	2.791	2.818	-0.027	1.000	200159	25.3		50.6	393	
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.791	2.834	-0.043	1.000	42012	8.64			29.4	M
D 5 13C3-PFBS										
302.0 > 79.8	2.867	2.900	-0.033	1.000	172591	32.9		70.9	123	
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.949	2.900	0.049	1.029	2251	0.7198			1.7	M
7 Perfluorohexanoic acid										
312.8 > 268.6	3.250	3.300	-0.050	1.000	33330	4.80			56.3	
D 8 13C2 PFHxA										
314.8 > 269.6	3.250	3.300	-0.050	1.000	329516	35.6		71.2	2467	
9 Perfluoroheptanoic acid										
362.9 > 318.8	3.815	3.882	-0.067	1.000	31251	3.54			25.9	
D 10 13C4-PFHpA										
366.9 > 321.8	3.815	3.882	-0.067	1.000	422735	39.8		79.6	580	
D 12 18O2 PFHxS										M
402.9 > 83.8	3.848	3.914	-0.066	1.000	188985	37.7		79.8	244	M
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.882	3.919	-0.037	1.009	4102	1.42			6.0	M
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.430	4.486	-0.056	0.992	377	-0.0794			2.4	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.468	4.546	-0.078	1.000	140675	100.1		211	559	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.532	4.601	-0.069	1.000	359135	44.2		88.4	625	
* 17 13C2-PFOA										
414.9 > 369.8	4.532	4.601	-0.069		426897	50.0			3179	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.532	4.615	-0.083	1.000	53482	6.64			93.0	
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.546	4.642	-0.096	0.852	671	0.3245			3.2	M
D 19 13C5 PFNA										
467.8 > 422.8	5.328	5.422	-0.094	1.000	483638	45.2		90.4	1774	
20 Perfluorononanoic acid										
462.8 > 418.8	5.334	5.422	-0.088	1.001	12950	1.53			41.8	
22 Perfluorooctane sulfonic acid										a
498.8 > 79.8	5.044	5.434	-0.390	0.946	27666	4.90			38.9	a
D 21 13C4 PFOS										
502.8 > 79.8	5.334	5.440	-0.106	1.000	244961	45.2		94.5	1642	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	5.863	6.070	-0.207	0.962	228	0.4199			3.3	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	174624	60.0		125	1265	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.118	6.227	-0.109	1.000	34942	2.87			185	
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	623029	40.0		79.9	7006	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	108042	32.9		65.8	947	
28 N-methyl perfluorooctane sulfonami										M
569.8 > 418.8	6.494	6.602	-0.108	1.003	56	0.3833			0.3	M
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.846	6.959	-0.113	1.000	96394	34.3		68.6	1746	
30 N-ethyl perfluorooctane sulfonamid										M
583.9 > 418.8	6.832	6.973	-0.141	0.998	105	0.3464			2.8	M
31 Perfluorodecane Sulfonic acid										M
598.8 > 79.8	6.917	6.973	-0.056	1.297	114	0.0729			1.3	M
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.874	6.987	-0.113	0.998	8328	0.6954			129	
D 33 13C2 PFUnA										
564.8 > 519.8	6.888	6.987	-0.099	1.000	587894	41.2		82.5	8098	
34 Perfluorooctane Sulfonamide										M
497.8 > 77.8	7.079	7.079	0.0	1.000	254	0.3602			2.6	M
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	332153	27.7		55.4	4796	
D 36 13C2 PFDoA										
614.8 > 569.6	7.586	7.684	-0.098	1.000	561349	32.6		65.2	1209	
37 Perfluorododecanoic acid										M
612.8 > 568.6	7.519	7.684	-0.165	0.991	492	0.1084			3.6	M
38 Perfluorotridecanoic acid										M
662.8 > 618.6	8.325	8.294	0.031	1.097	34	0.0395			1.1	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 39 13C2-PFTeDA										
714.8 > 669.6	8.736	8.855	-0.119	1.000	572033	32.8		65.5	1044	
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.736	8.862	-0.126	1.000	205	-0.1557			4.5	M

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:20:50 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d

Injection Date: 12-Jun-2018 20:06:34 Instrument ID: LC410

Lims ID: 200-43678-A-1-A Lab Sample ID: 200-43678-1

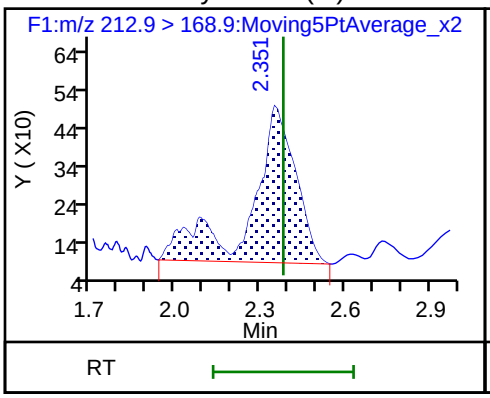
Client ID: ERM-3

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 45

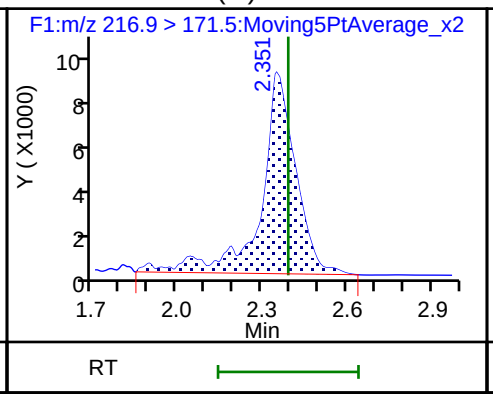
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

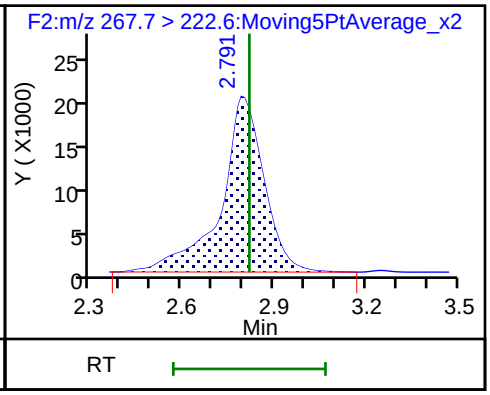
2 Perfluorobutyric acid (M)



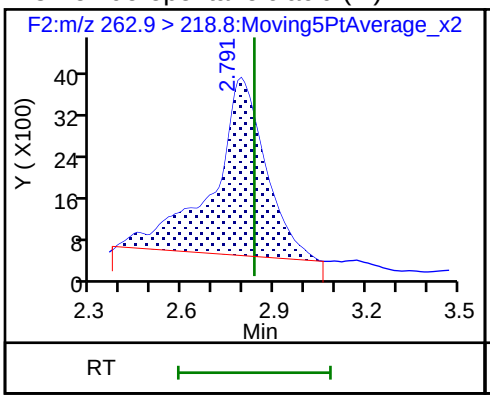
D 1 13C4 PFBA (M)



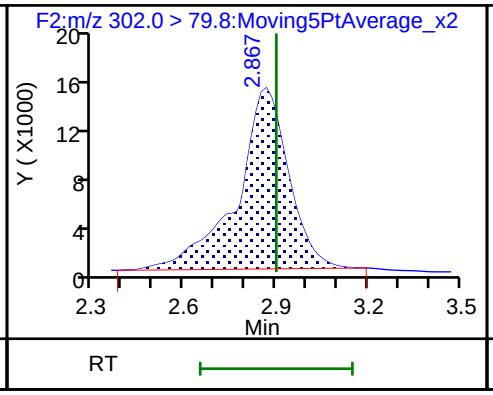
D 4 13C5-PFPeA



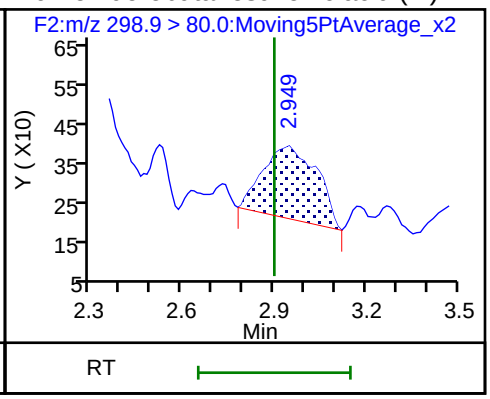
3 Perfluoropentanoic acid (M)



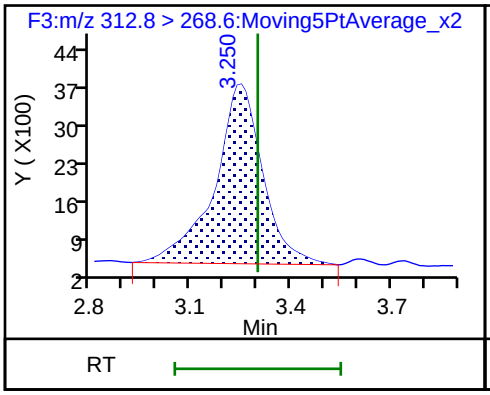
D 5 13C3-PFBS



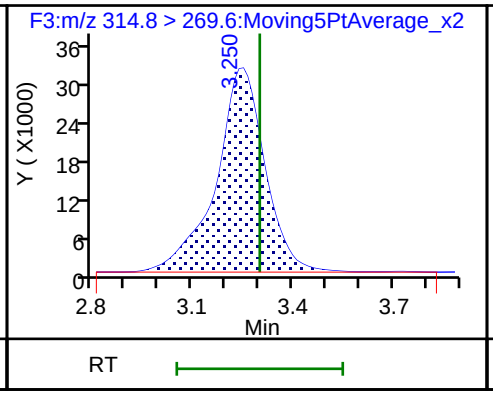
6 Perfluorobutanesulfonic acid (M)



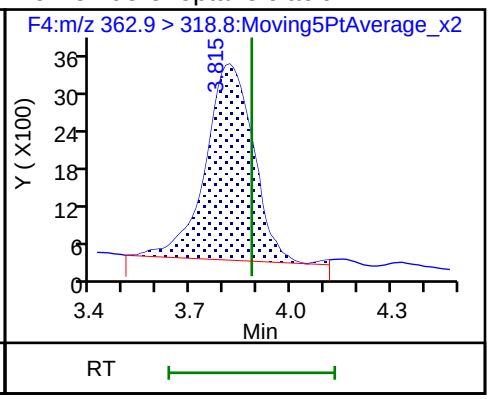
7 Perfluorohexanoic acid



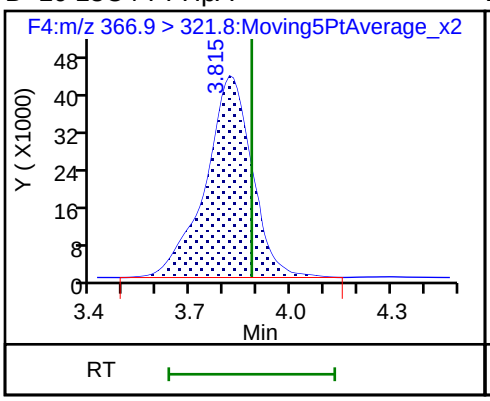
D 8 13C2 PFHxA



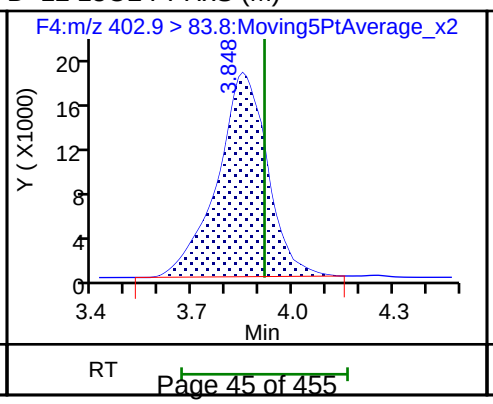
9 Perfluoroheptanoic acid



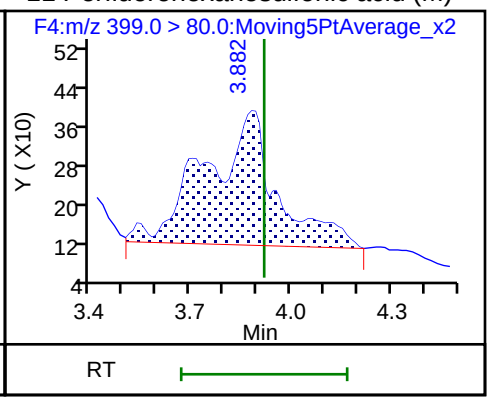
D 10 13C4-PFHpA



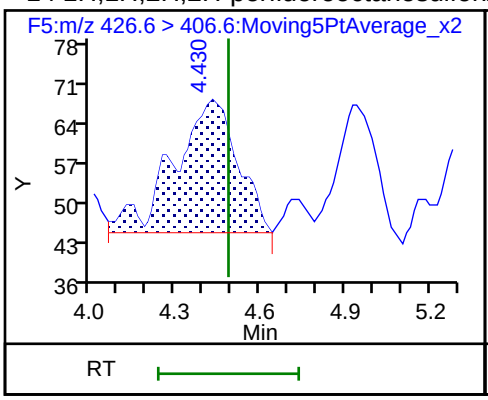
D 12 18O2 PFHxS (M)



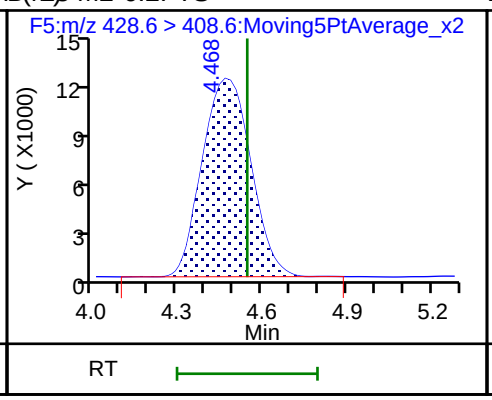
11 Perfluorohexanesulfonic acid (M)



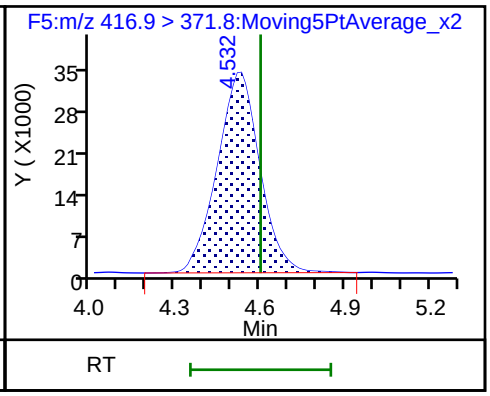
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



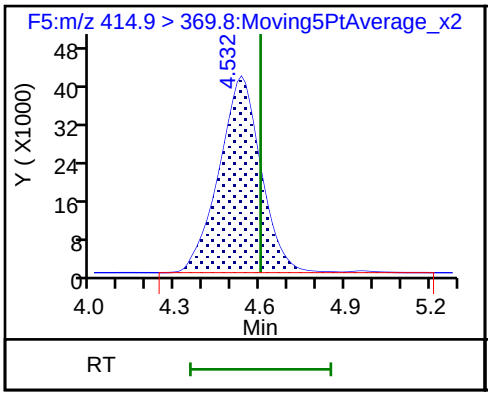
D 13 M2-6:2FTS



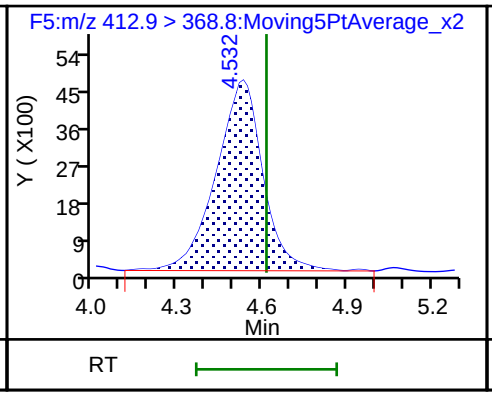
D 16 13C4 PFOA



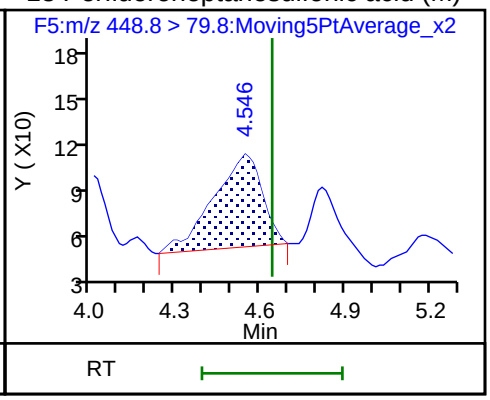
* 17 13C2-PFOA



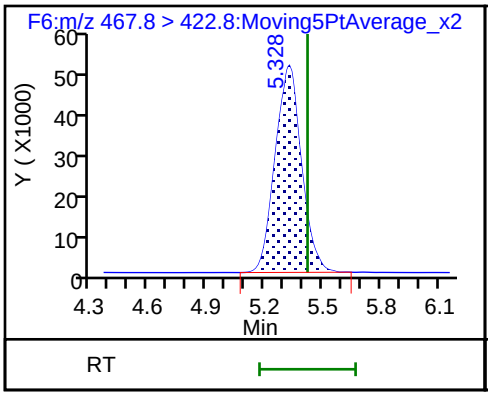
15 Perfluorooctanoic acid



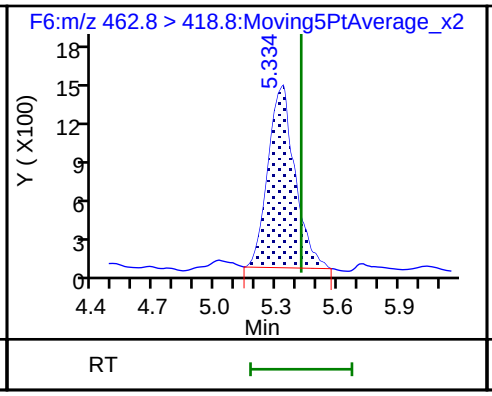
18 Perfluoroheptanesulfonic acid (M)



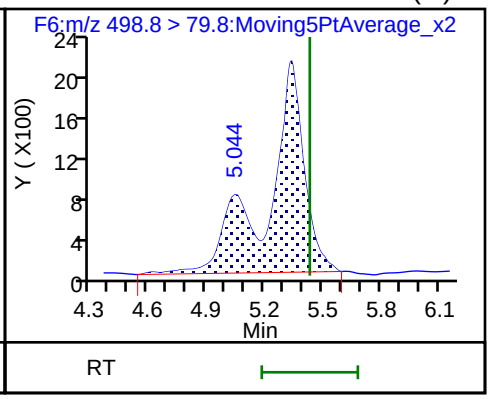
D 19 13C5 PFNA



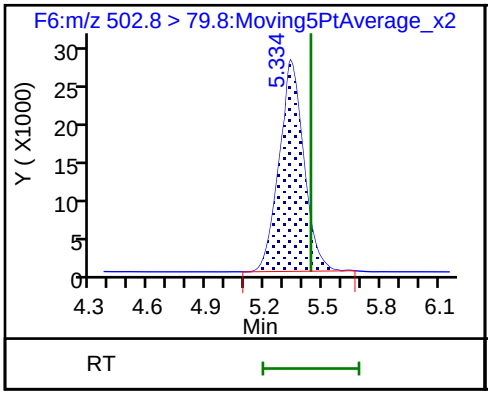
20 Perfluorononanoic acid



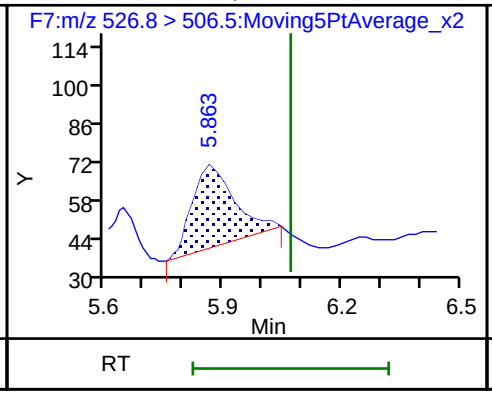
22 Perfluorooctane sulfonic acid (M)



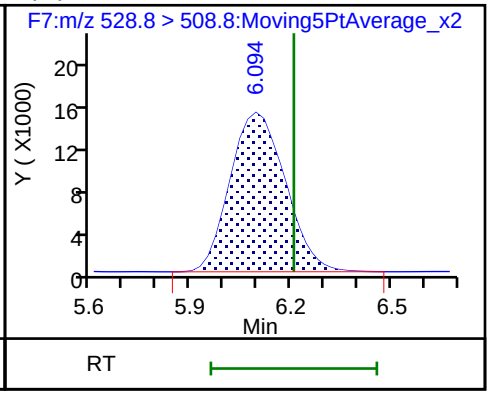
D 21 13C4 PFOS



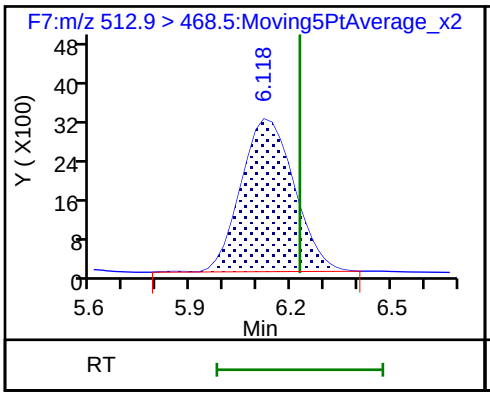
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



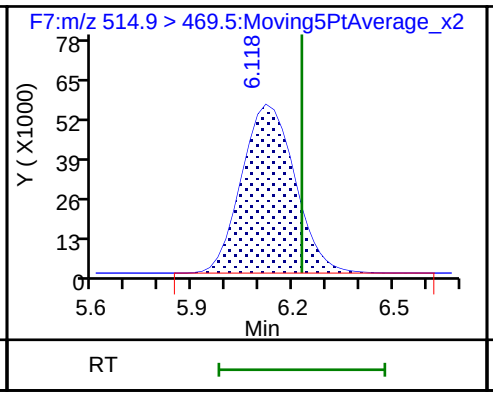
D 24 M2-8:2FTS



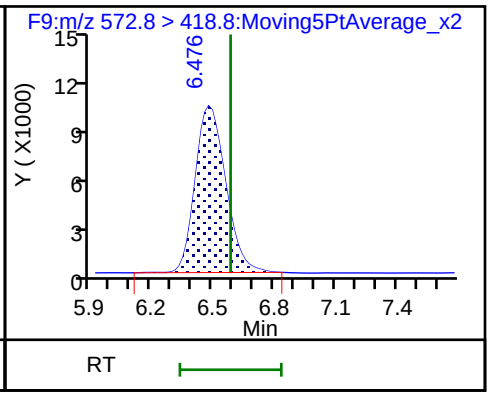
25 Perfluorodecanoic acid



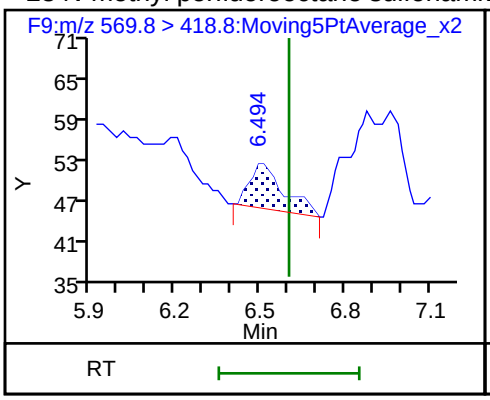
D 26 13C2 PFDA



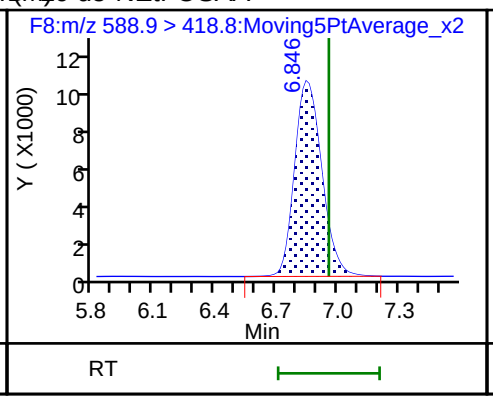
D 27 d3-NMeFOSAA



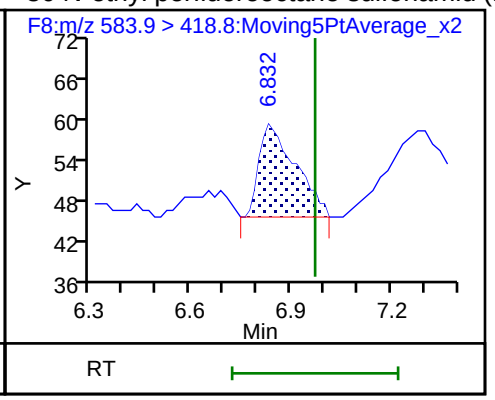
28 N-methyl perfluorooctane sulfonamid (M)



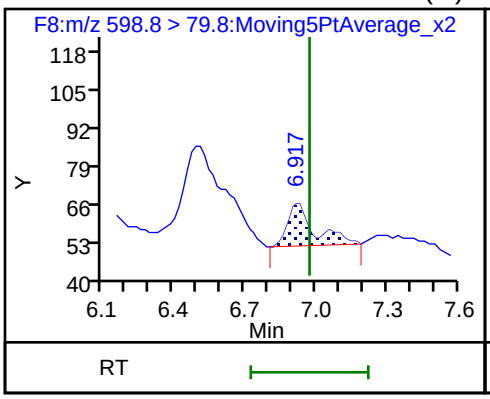
D 29 d5-NEtFOSAA



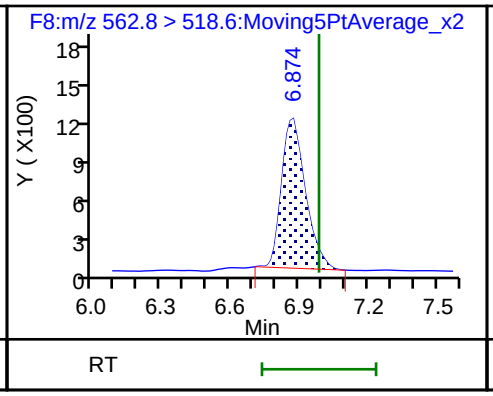
30 N-ethyl perfluorooctane sulfonamid (M)



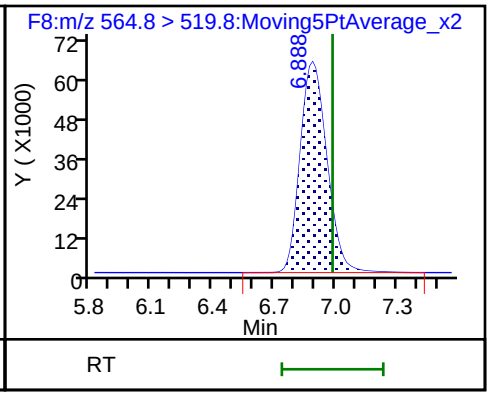
31 Perfluorodecane Sulfonic acid (M)



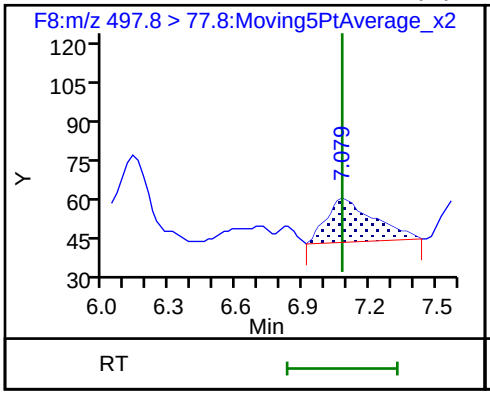
32 Perfluoroundecanoic acid



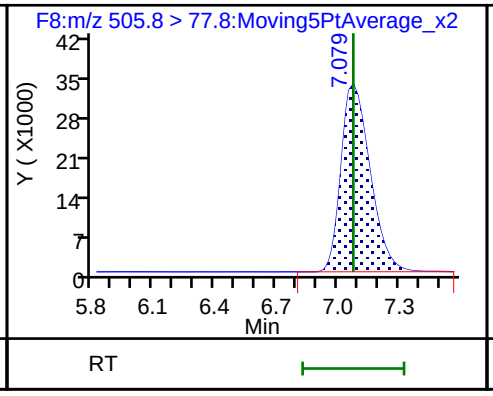
D 33 13C2 PFUnA



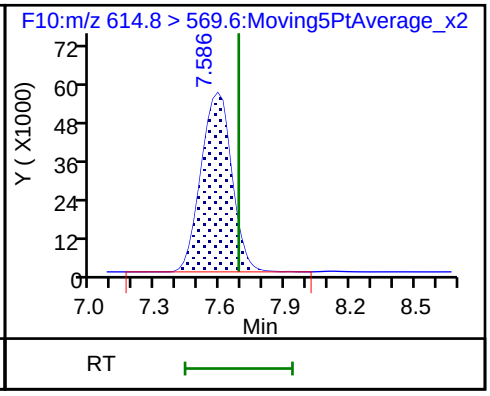
34 Perfluorooctane Sulfonamide (M)



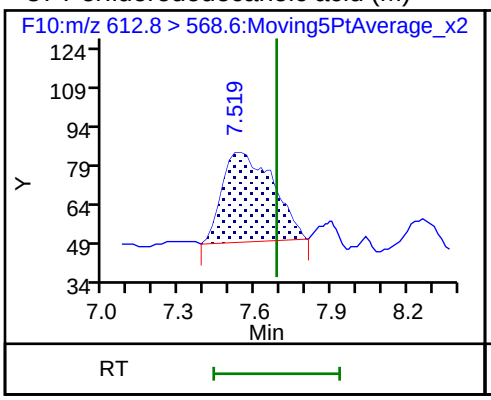
D 35 13C8 FOSA



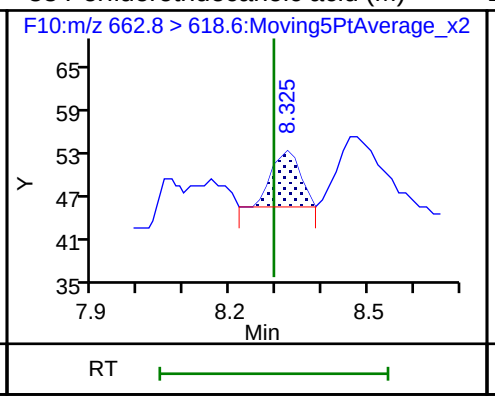
D 36 13C2 PFDoA



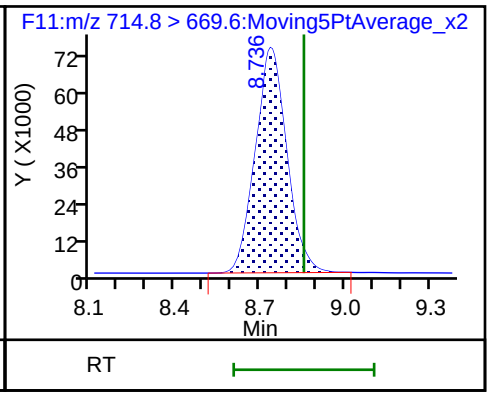
37 Perfluorododecanoic acid (M)



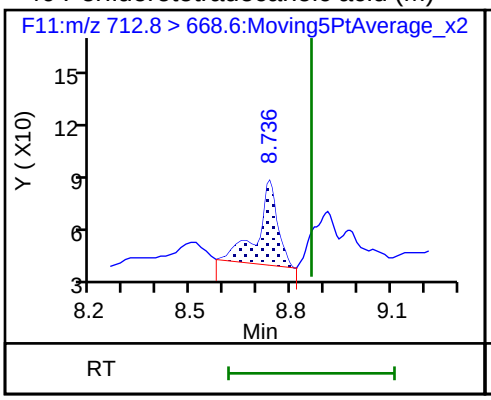
38 Perfluorotridecanoic acid (M)



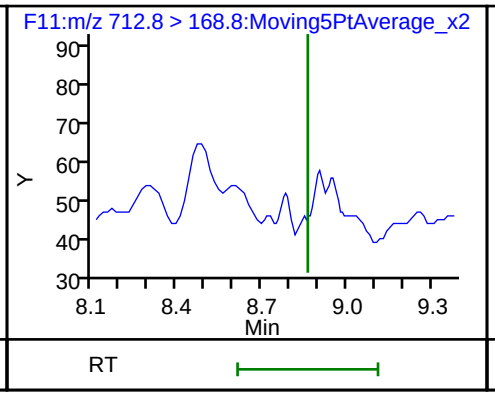
D 39 13C2-PFTeDA



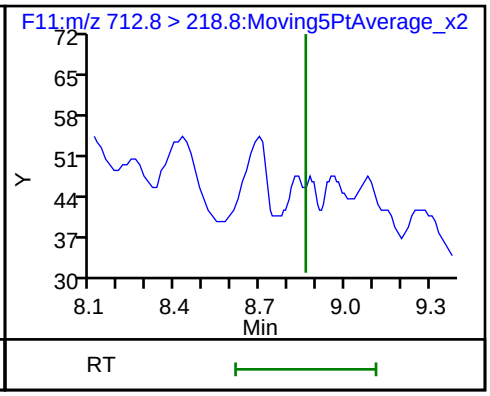
40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

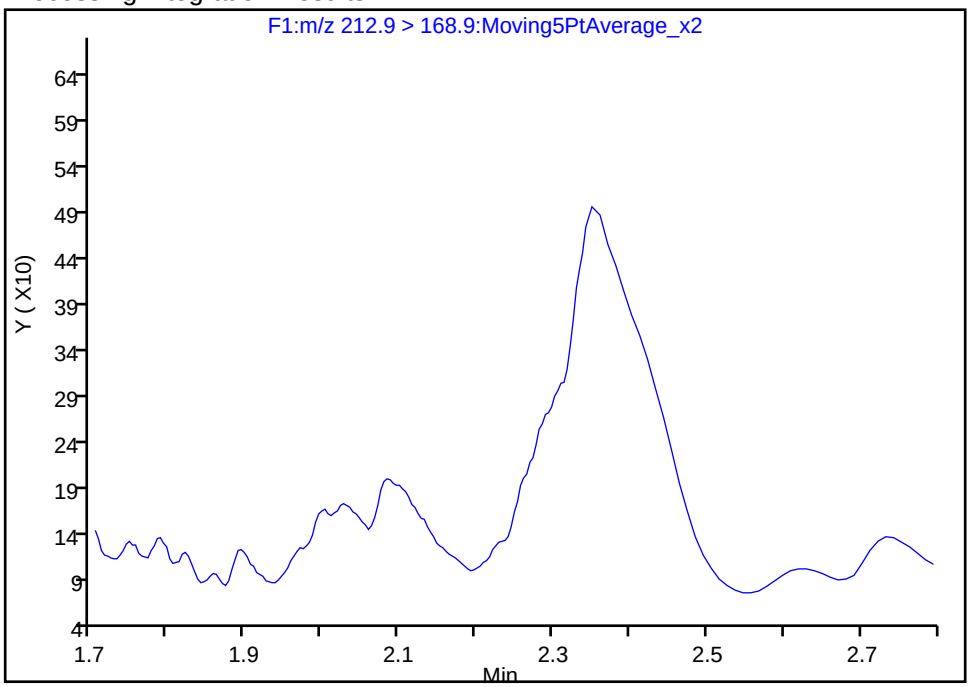
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

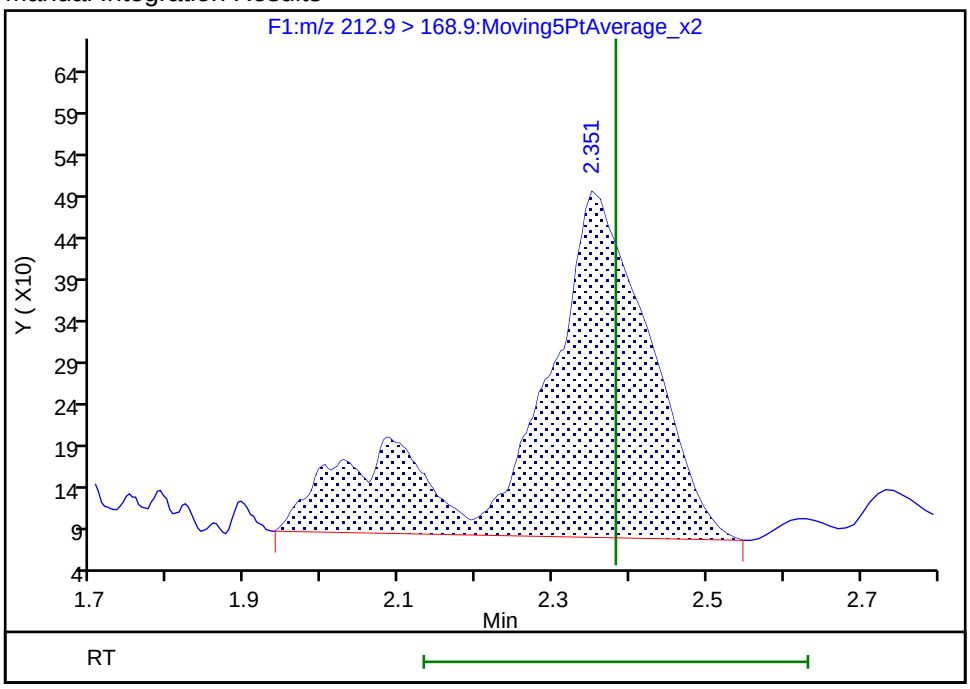
Not Detected
Expected RT: 2.38

Processing Integration Results



Manual Integration Results

RT: 2.35
Area: 4572
Amount: 4.035261
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:01:53
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

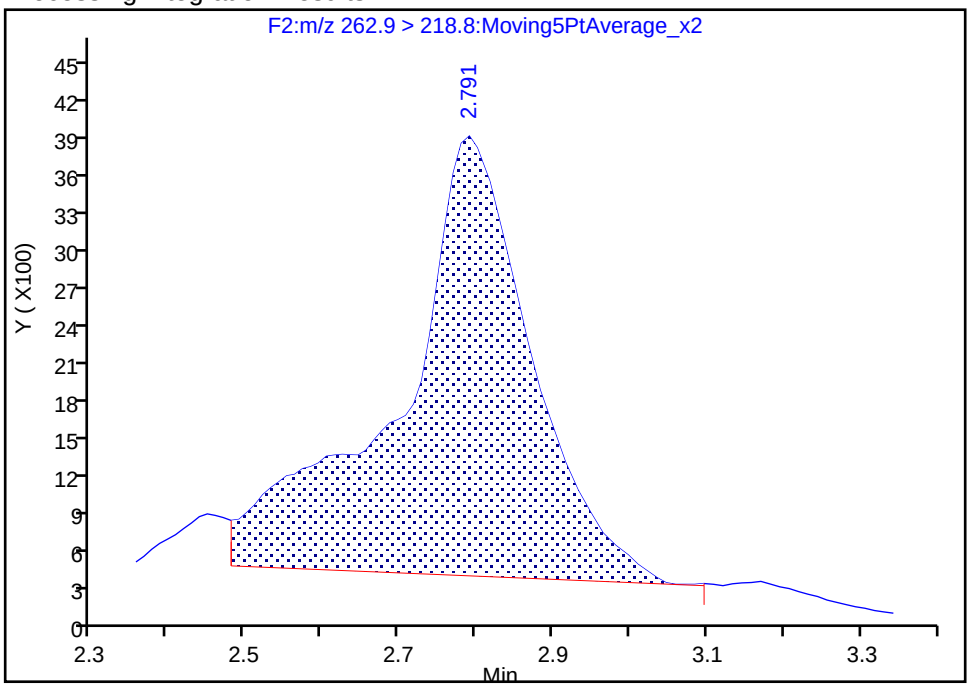
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

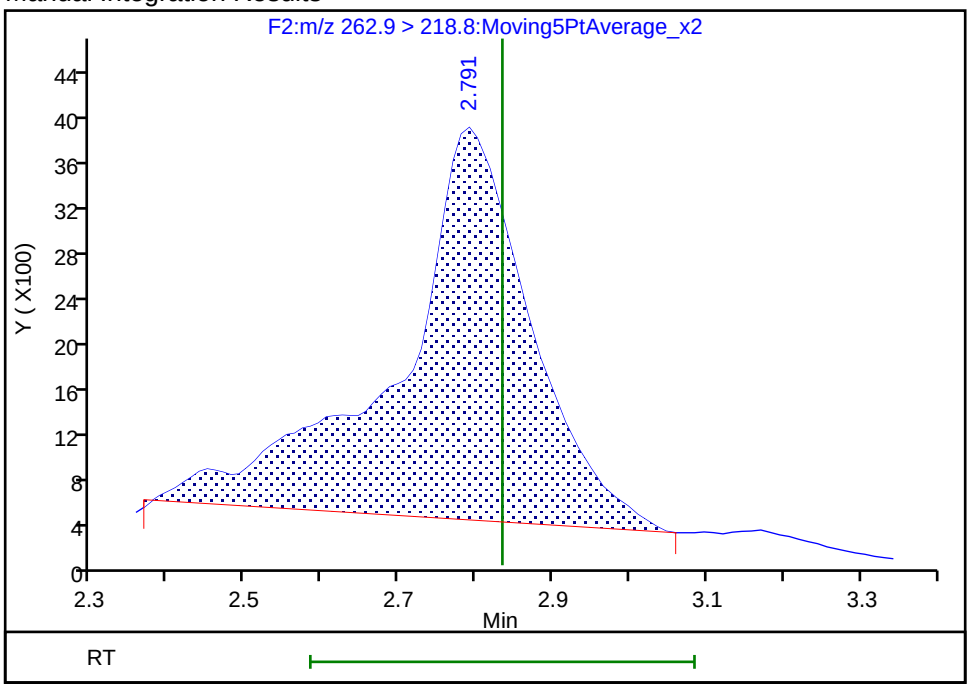
Processing Integration Results

RT: 2.79
Area: 42450
Amount: 8.727517
Amount Units: ng/ml



Manual Integration Results

RT: 2.79
Area: 42012
Amount: 8.639291
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 17:59:55

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

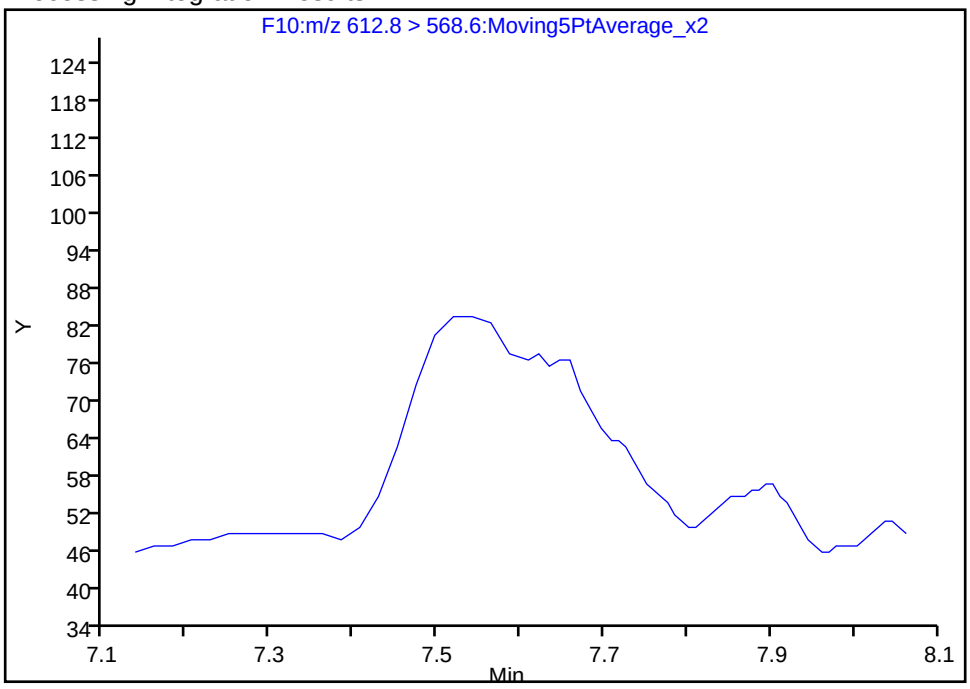
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

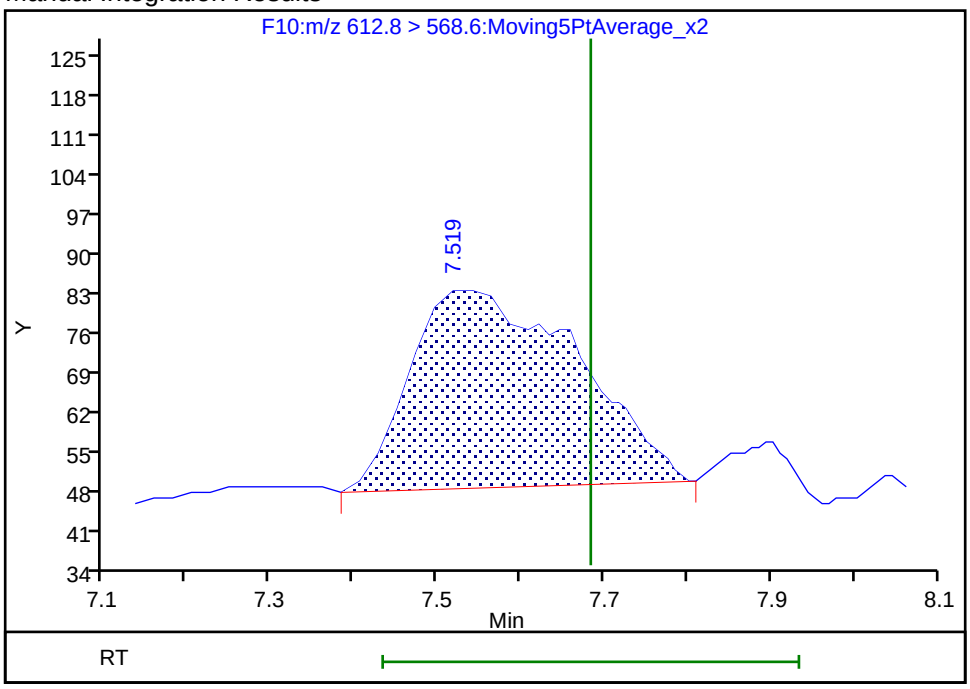
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.52
Area: 492
Amount: 0.108400
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:00:58
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

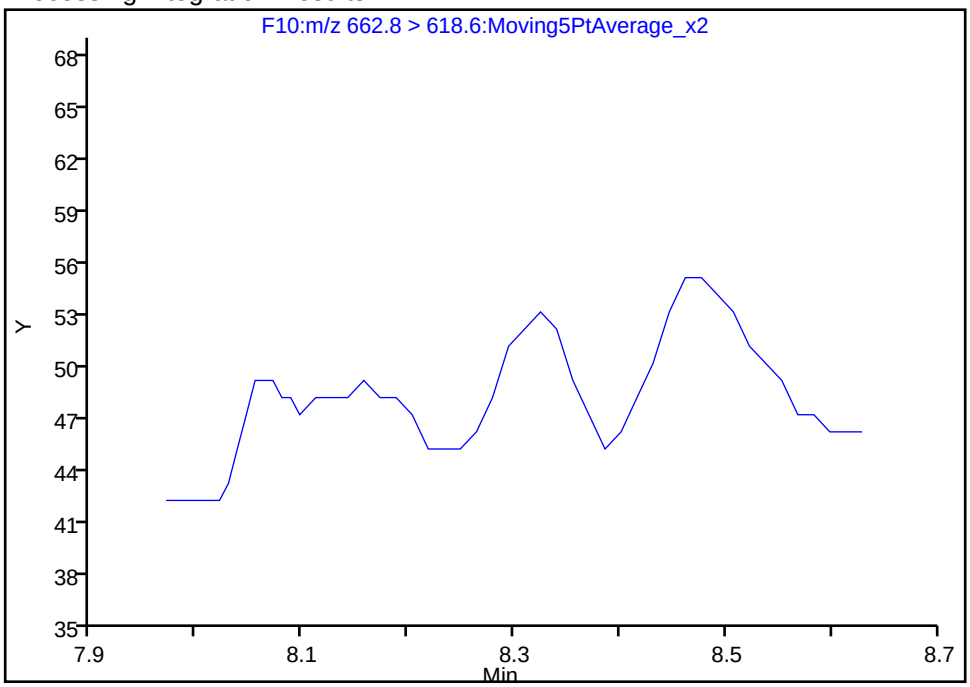
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

38 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

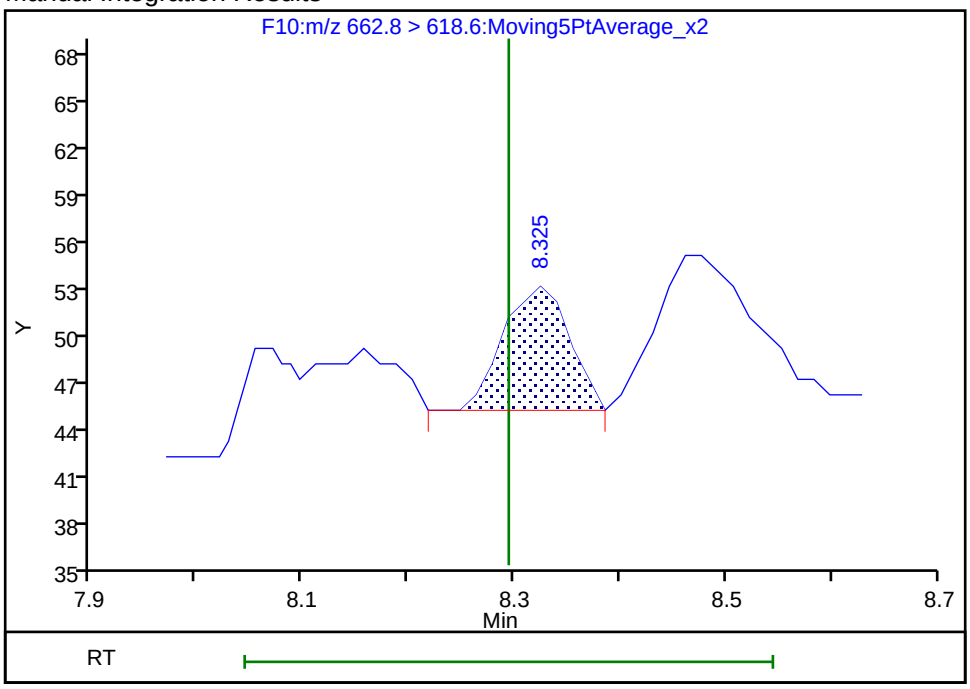
Not Detected
Expected RT: 8.29

Processing Integration Results



Manual Integration Results

RT: 8.32
Area: 34
Amount: 0.039545
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:00:54
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

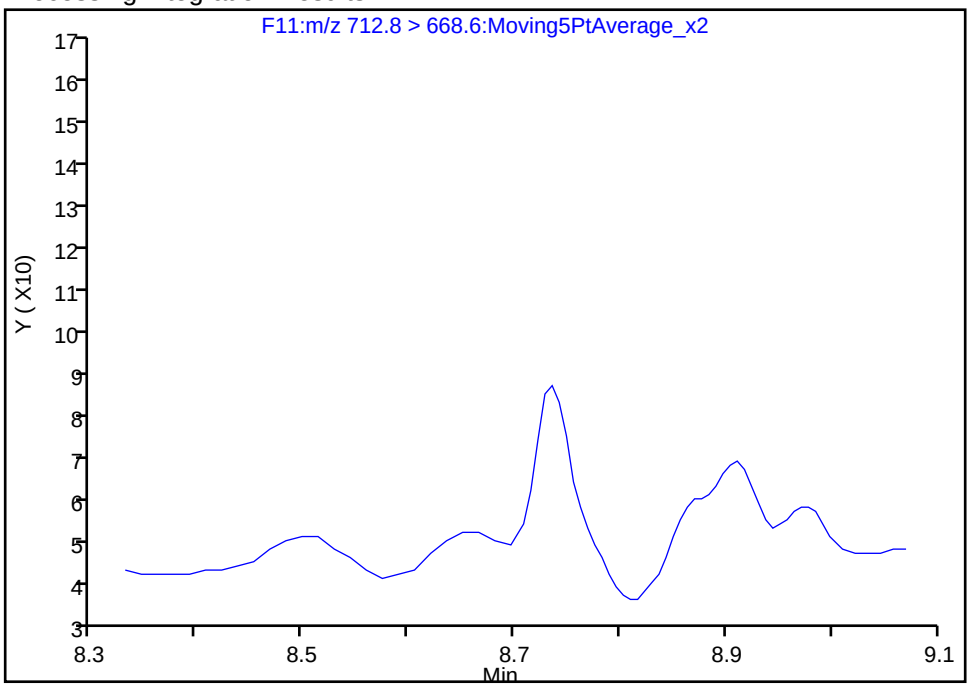
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

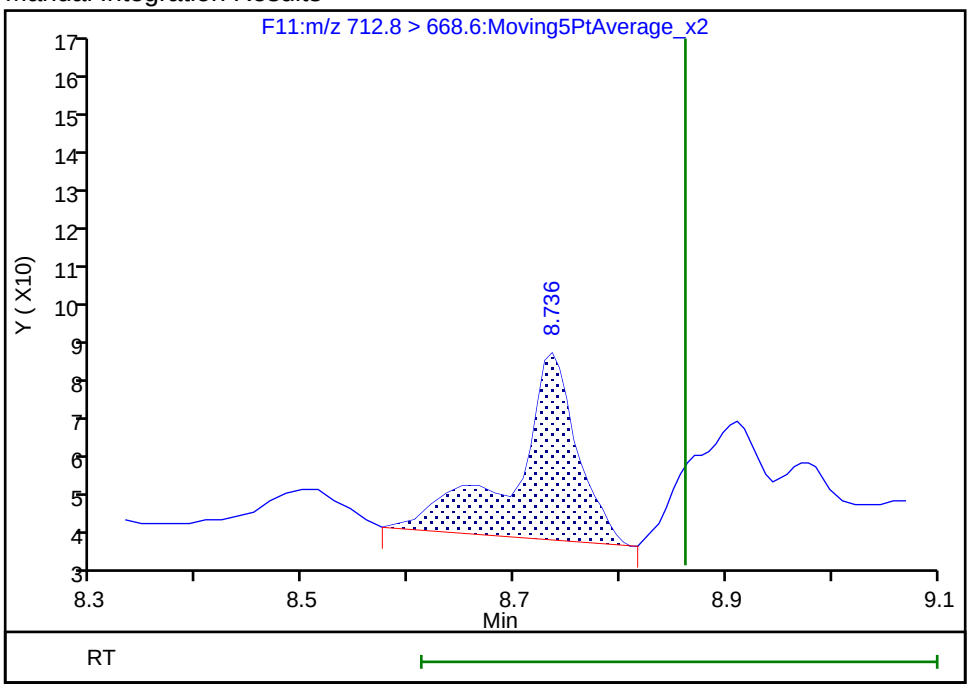
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.74
Area: 205
Amount: -0.155671
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:00:49
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

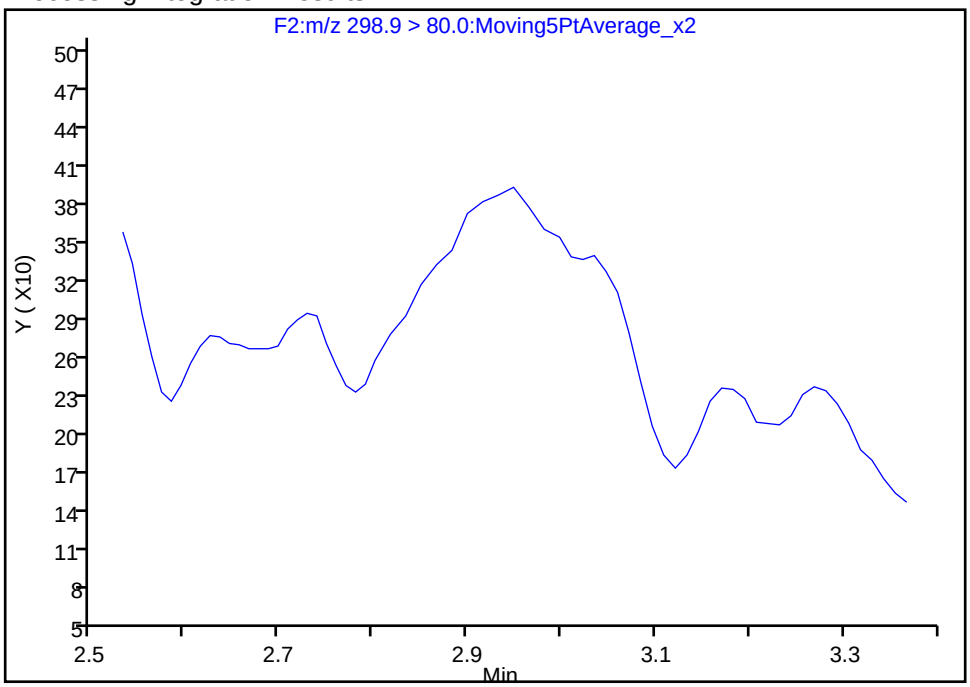
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

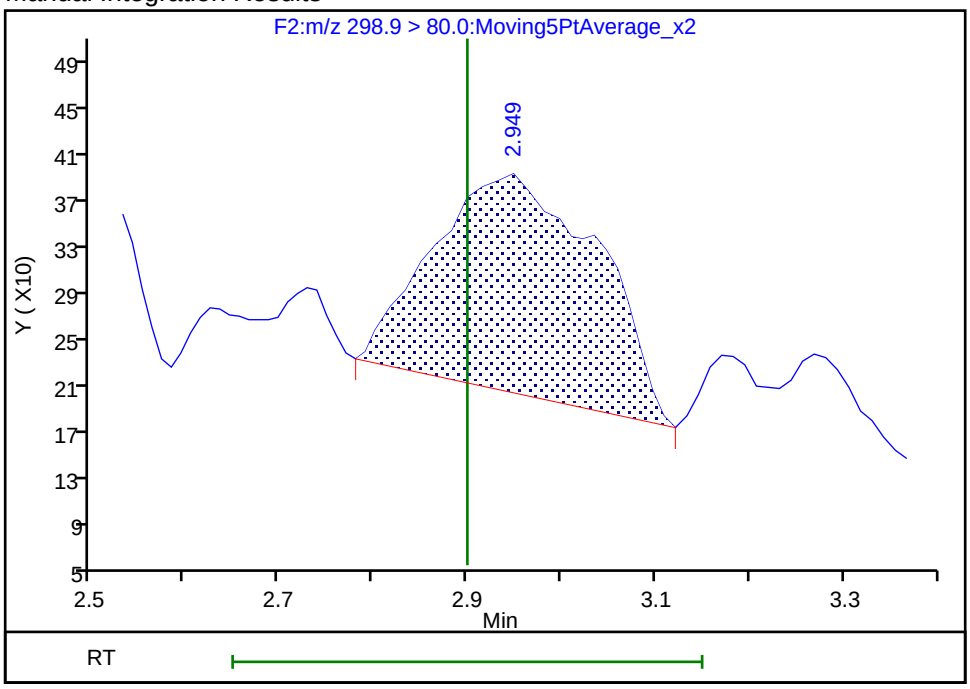
Not Detected
Expected RT: 2.90

Processing Integration Results



Manual Integration Results

RT: 2.95
Area: 2251
Amount: 0.719838
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:01:44
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

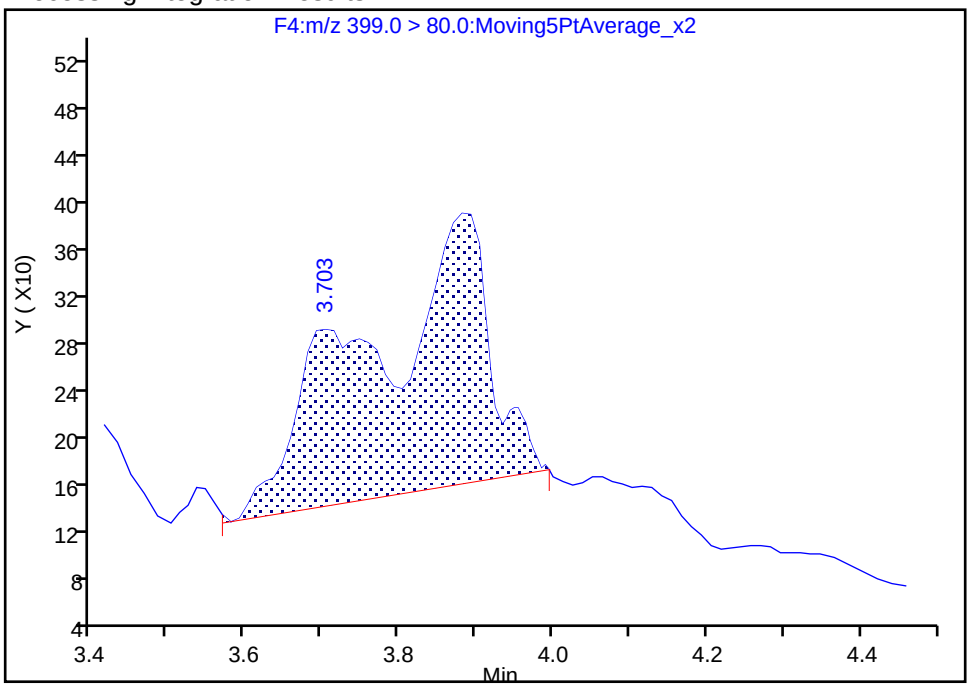
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

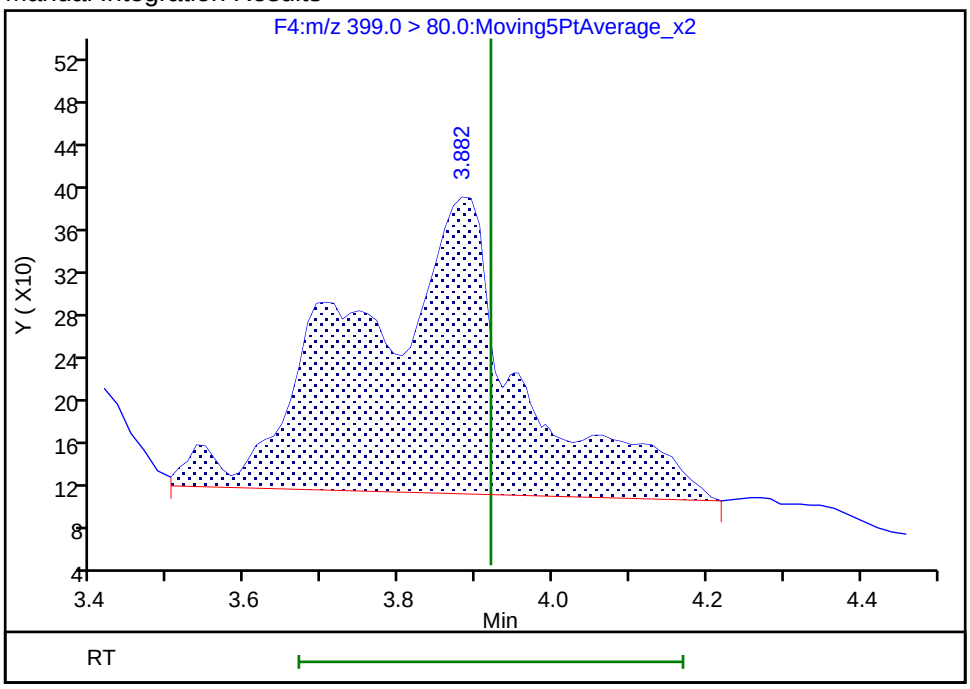
Processing Integration Results

RT: 3.70
Area: 2528
Amount: 1.027150
Amount Units: ng/ml



Manual Integration Results

RT: 3.88
Area: 4102
Amount: 1.415825
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:00:06

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

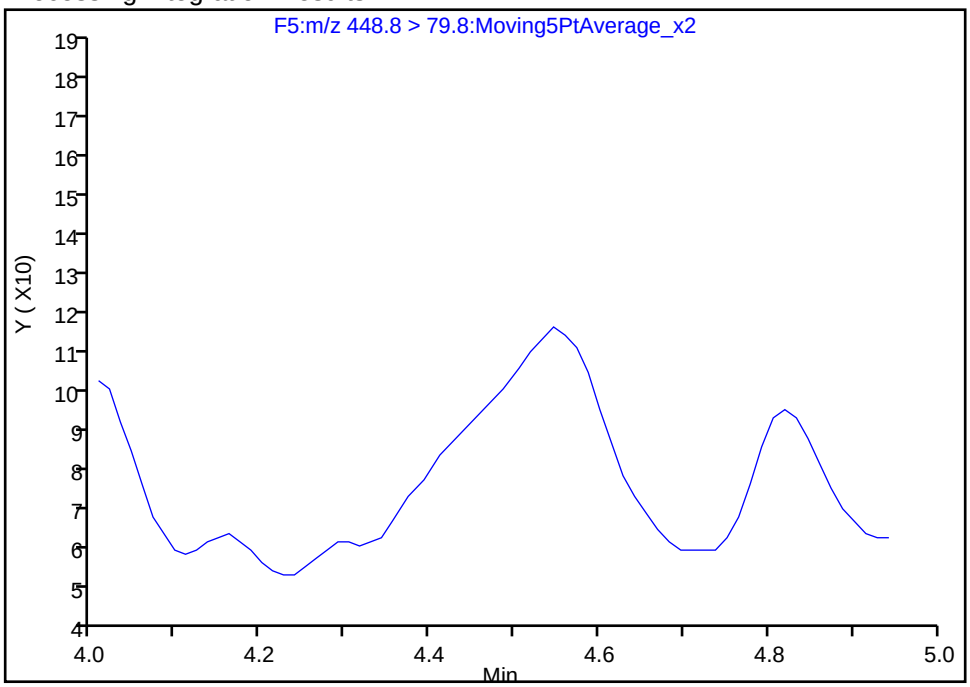
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

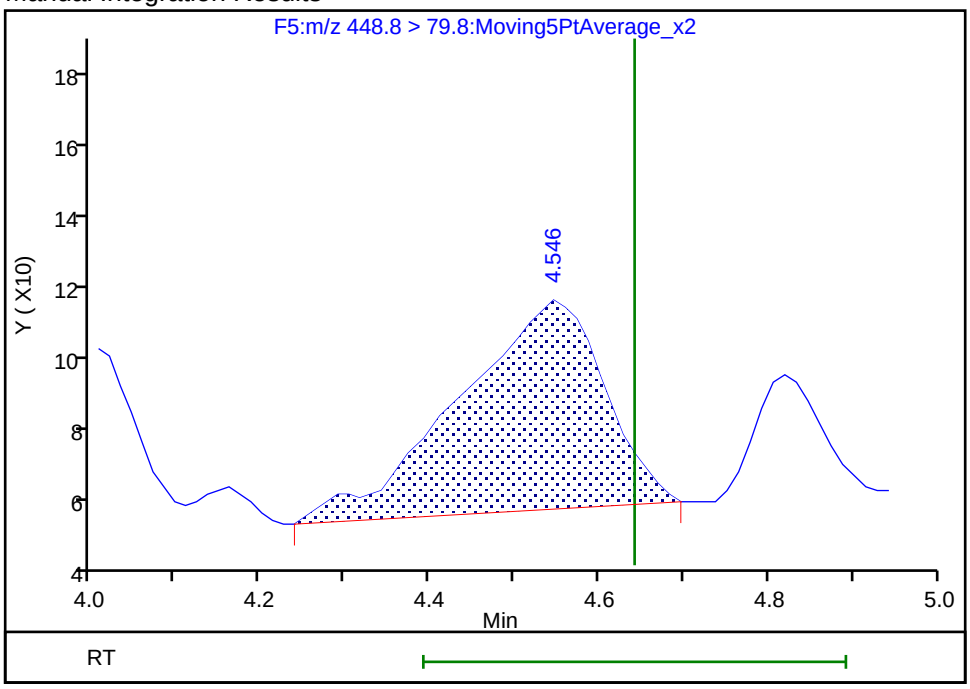
Not Detected
Expected RT: 4.64

Processing Integration Results



Manual Integration Results

RT: 4.55
Area: 671
Amount: 0.324481
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:01:31
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

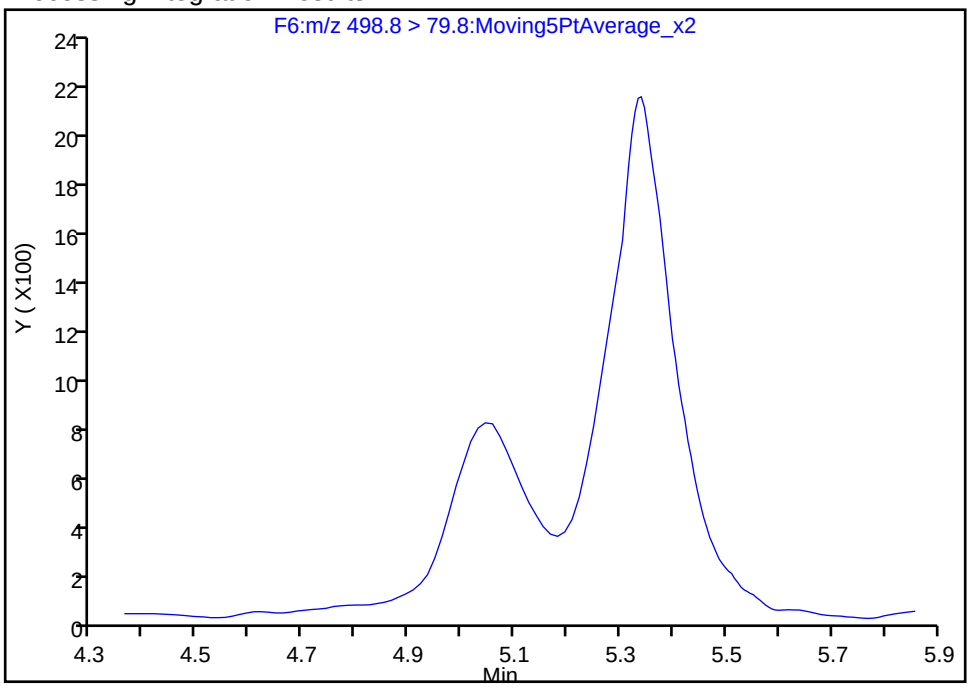
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F6:MRM		

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

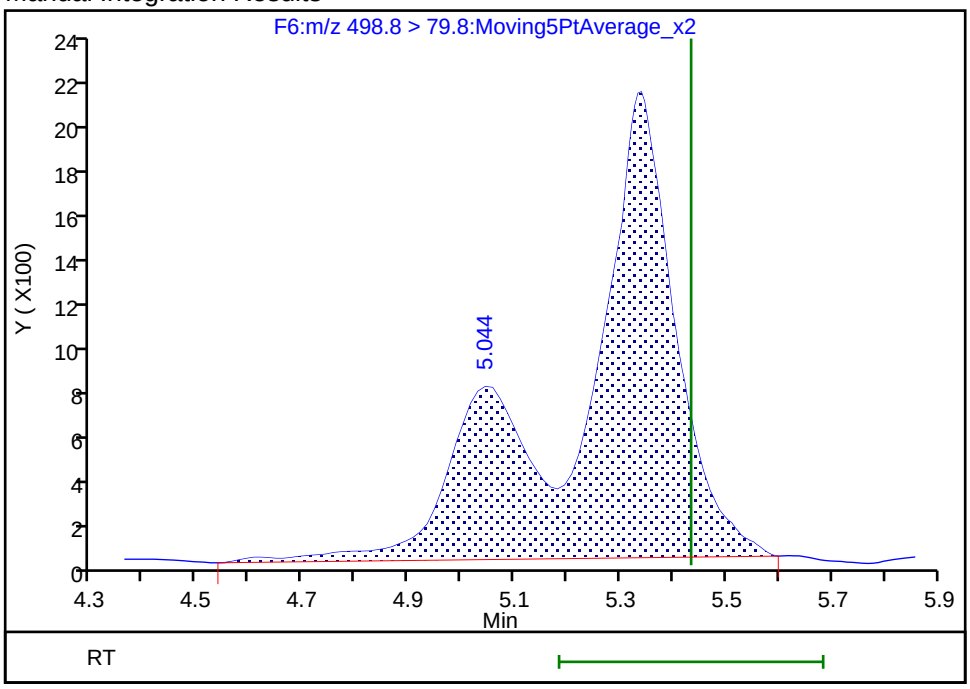
Not Detected
Expected RT: 5.43

Processing Integration Results



Manual Integration Results

RT: 5.04
Area: 27666
Amount: 4.904174
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:22:22
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

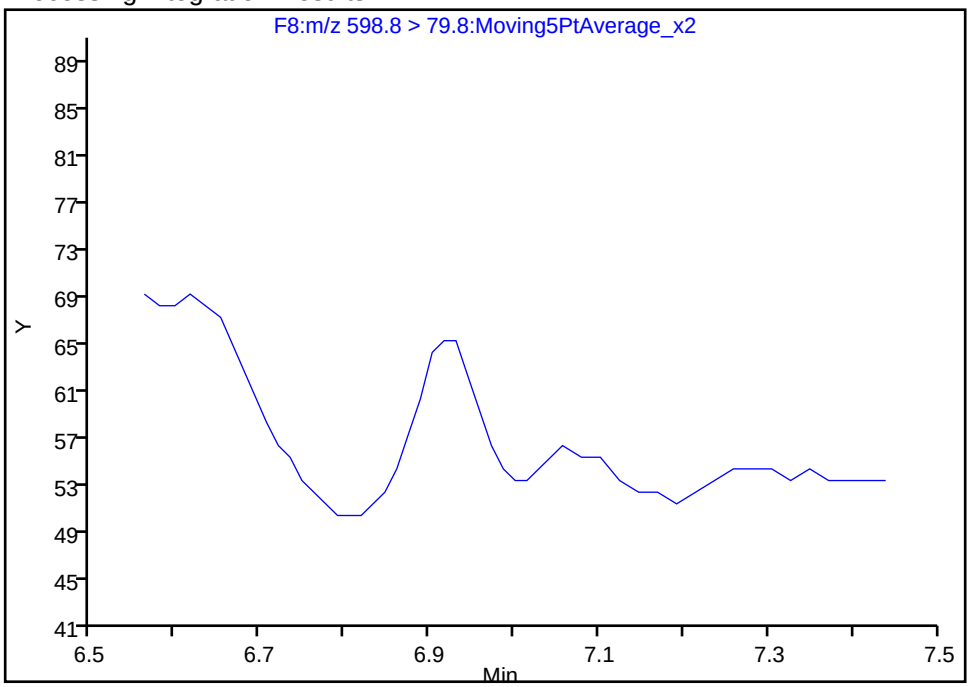
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

31 Perfluorodecane Sulfonic acid, CAS: 335-77-3

Signal: 1

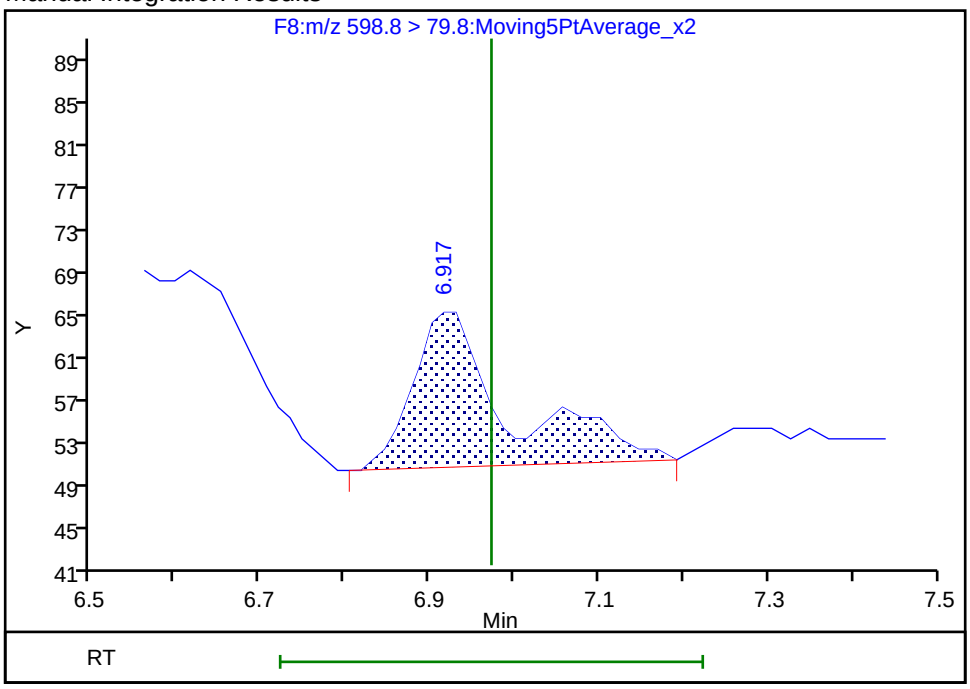
Not Detected
Expected RT: 6.97

Processing Integration Results



Manual Integration Results

RT: 6.92
Area: 114
Amount: 0.072923
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:01:10
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

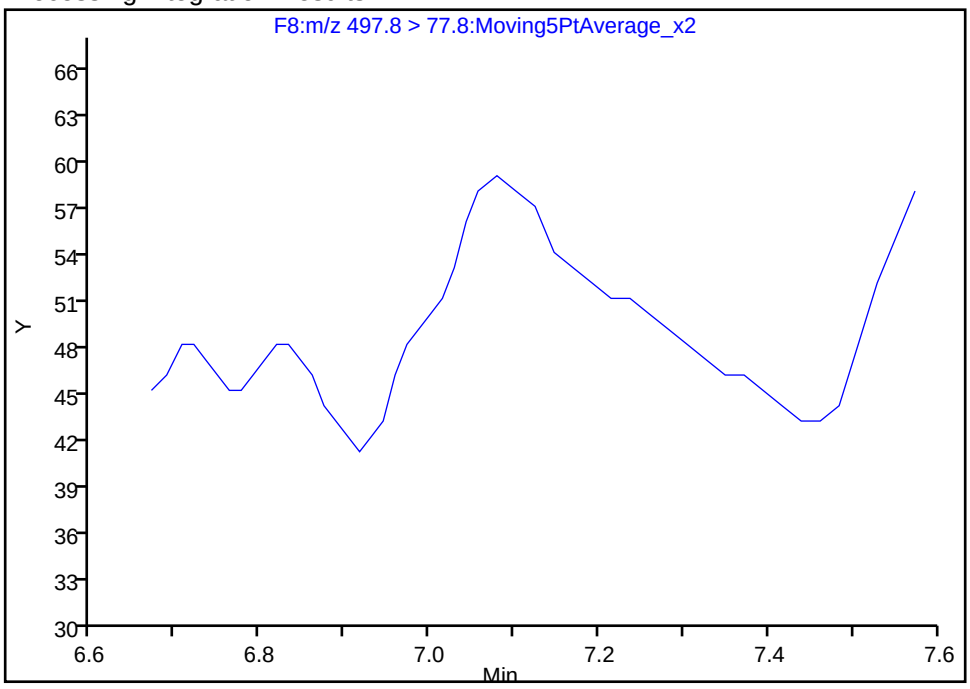
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

34 Perfluorooctane Sulfonamide, CAS: 754-91-6

Signal: 1

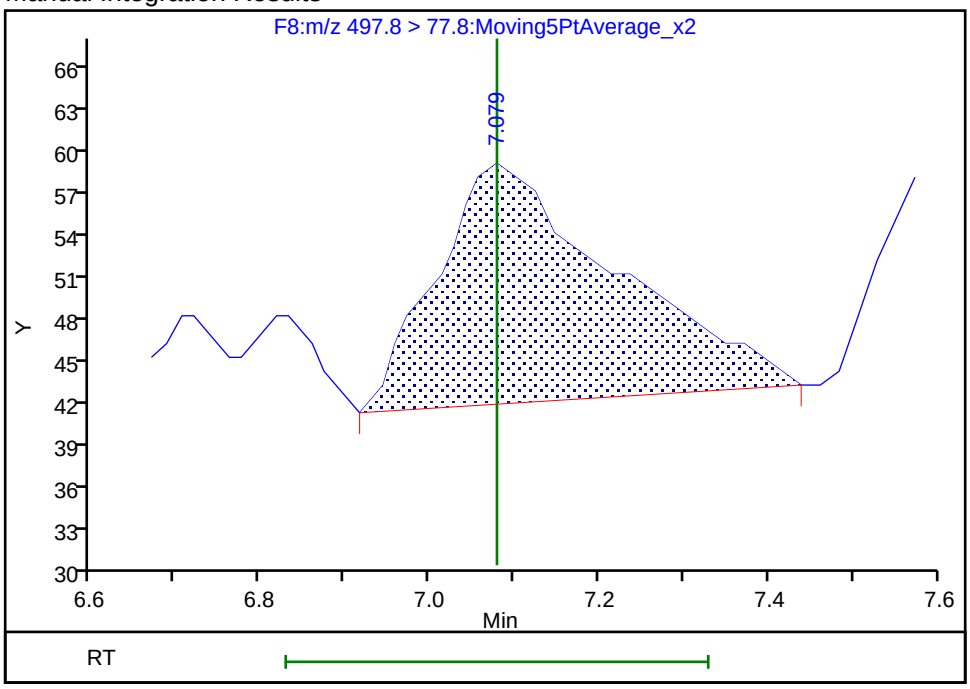
Not Detected
Expected RT: 7.08

Processing Integration Results



Manual Integration Results

RT: 7.08
Area: 254
Amount: 0.360195
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:01:03
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

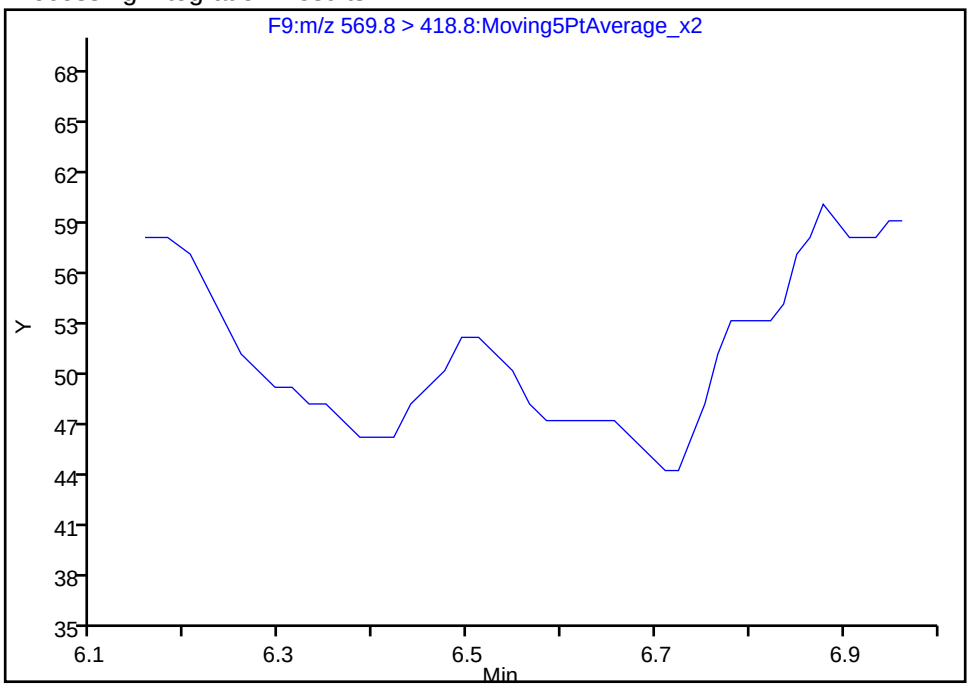
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F9:MRM		

28 N-methyl perfluorooctane sulfonamidoacetic a, CAS: 2355-31-9

Signal: 1

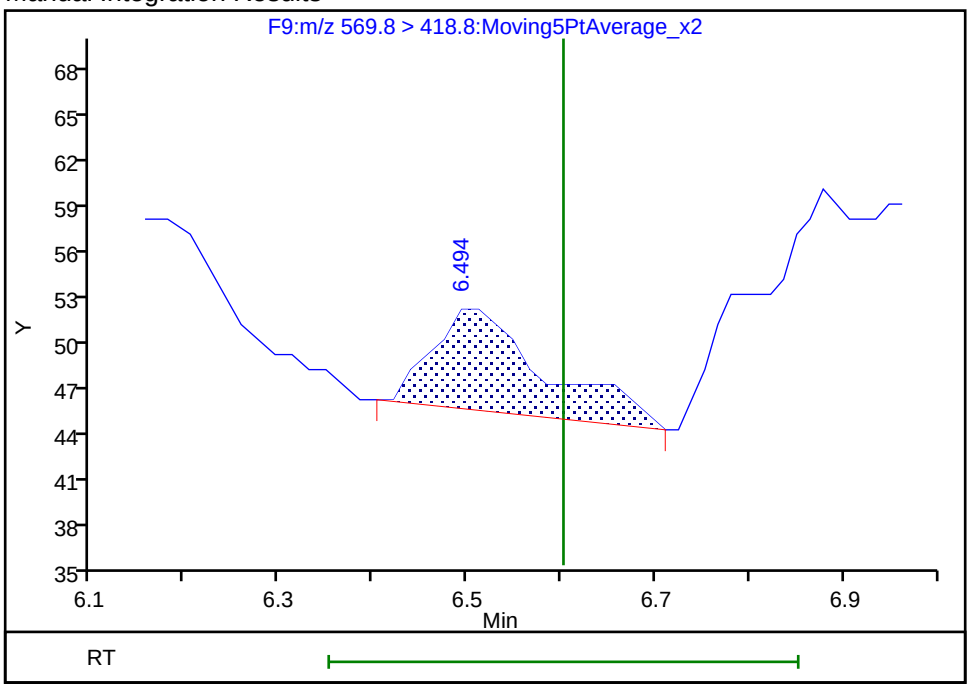
Not Detected
Expected RT: 6.60

Processing Integration Results



Manual Integration Results

RT: 6.49
Area: 56
Amount: 0.383317
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:01:18
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

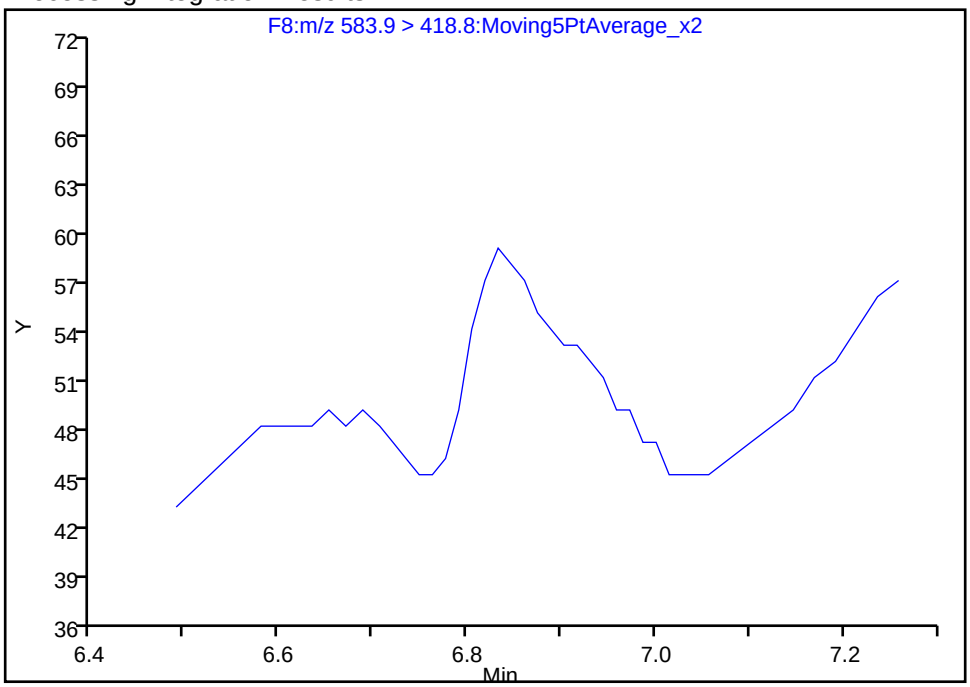
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

30 N-ethyl perfluorooctane sulfonamidoacetic ac, CAS: 2991-50-6

Signal: 1

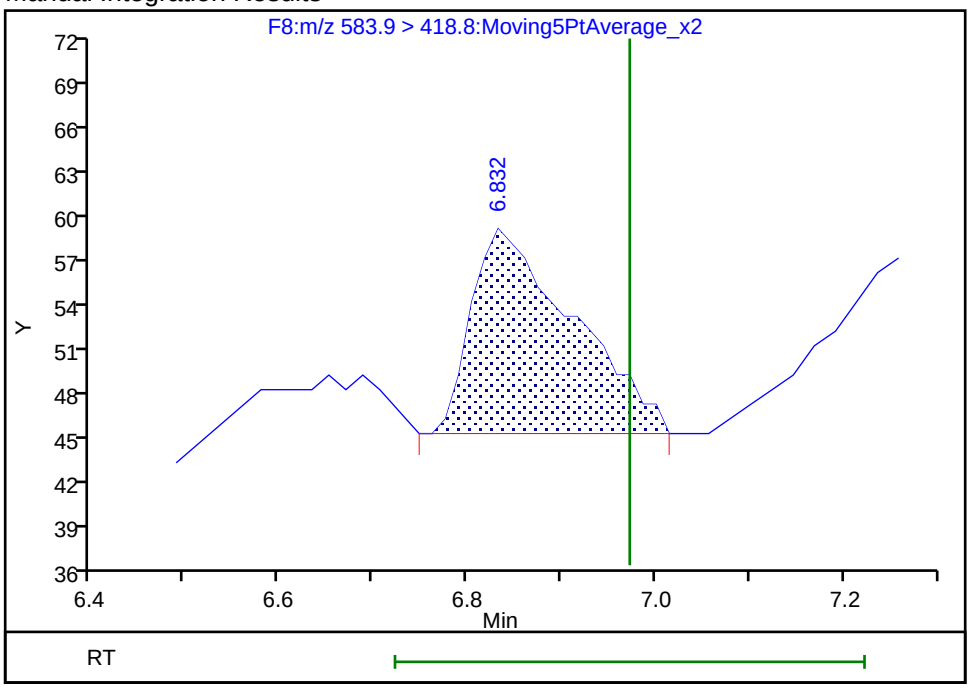
Not Detected
Expected RT: 6.97

Processing Integration Results



Manual Integration Results

RT: 6.83
Area: 105
Amount: 0.346434
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:01:13
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

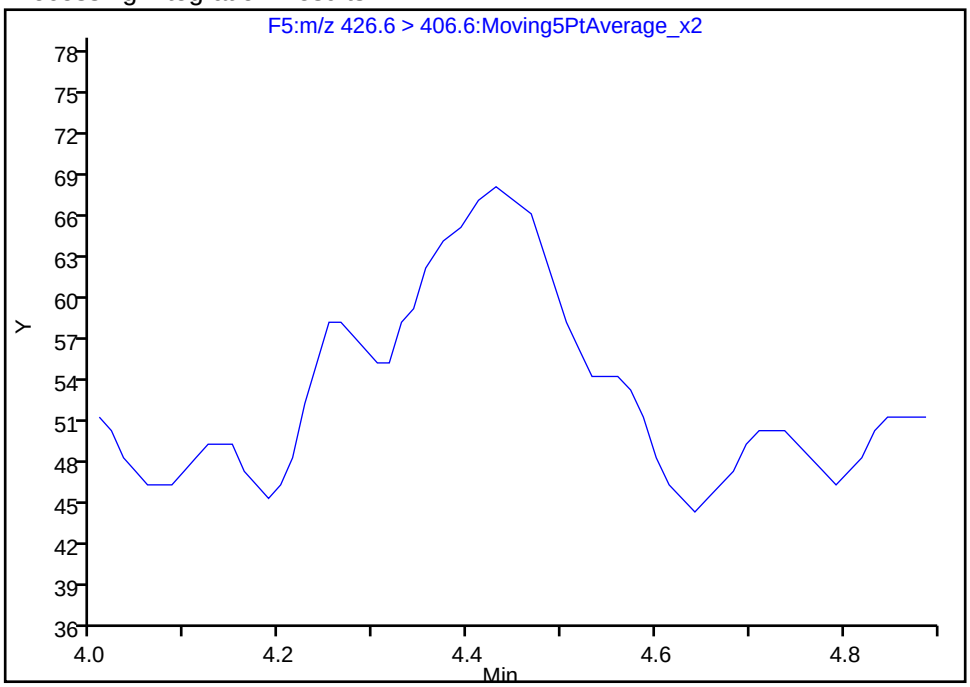
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

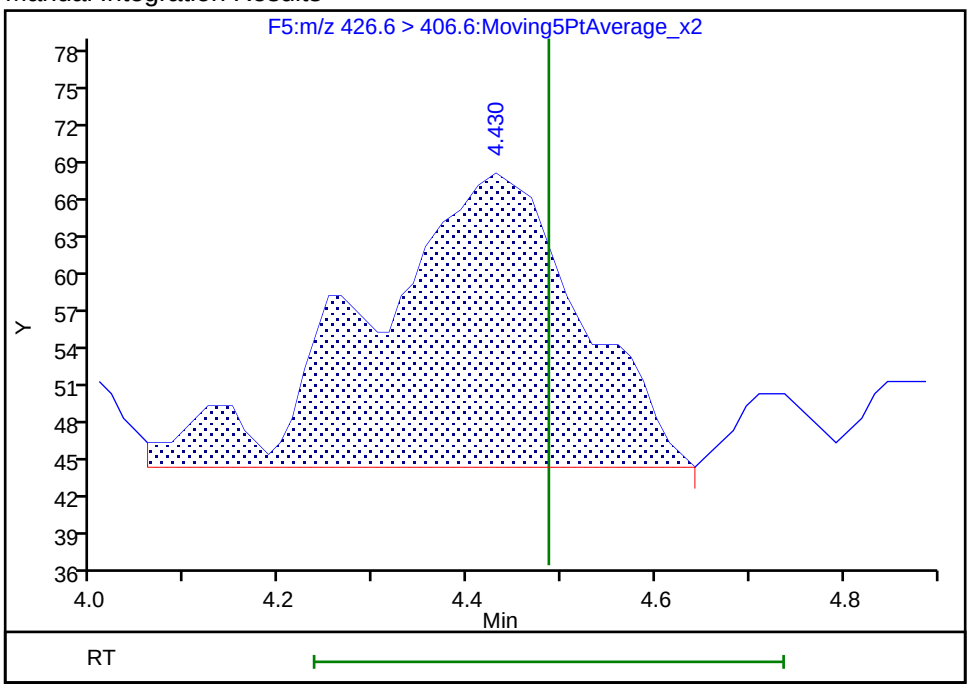
Not Detected
Expected RT: 4.49

Processing Integration Results



Manual Integration Results

RT: 4.43
Area: 377
Amount: -0.079352
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:20:39
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

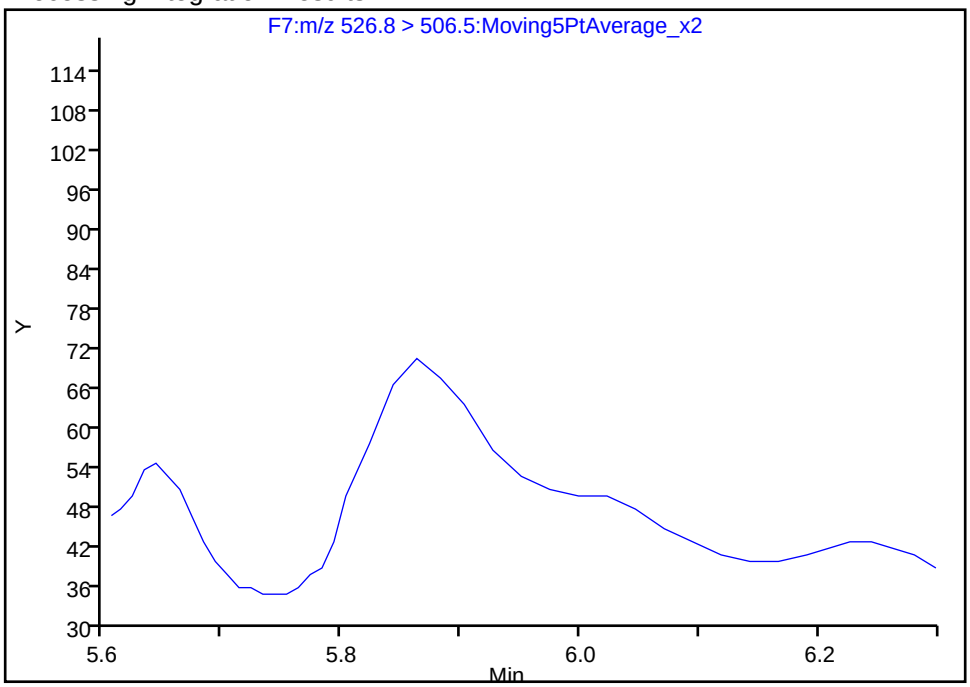
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F7:MRM		

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

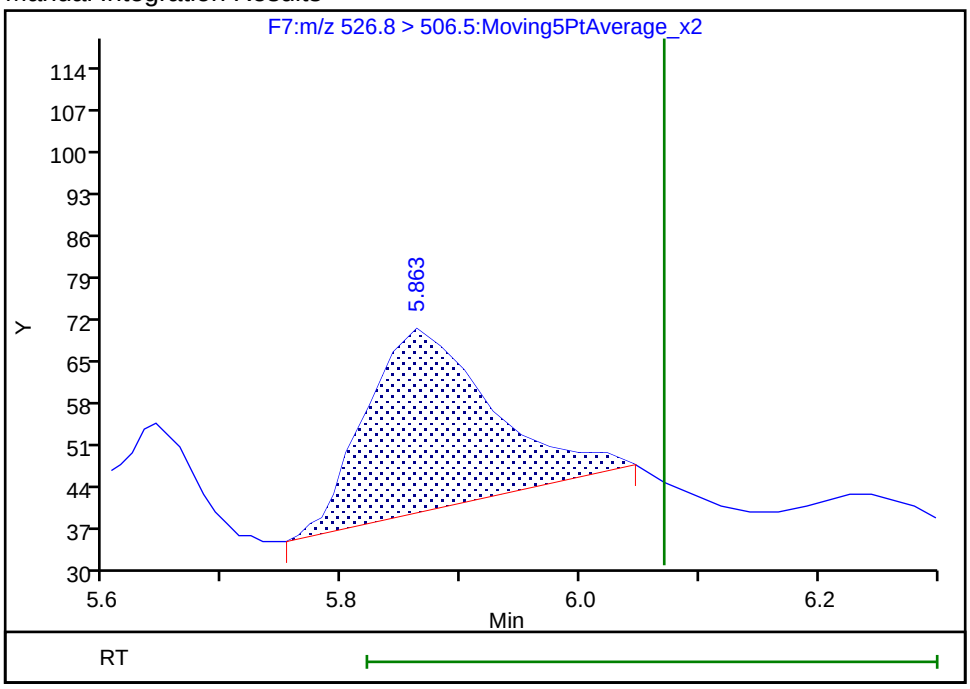
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 5.86
Area: 228
Amount: 0.419878
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:20:41
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

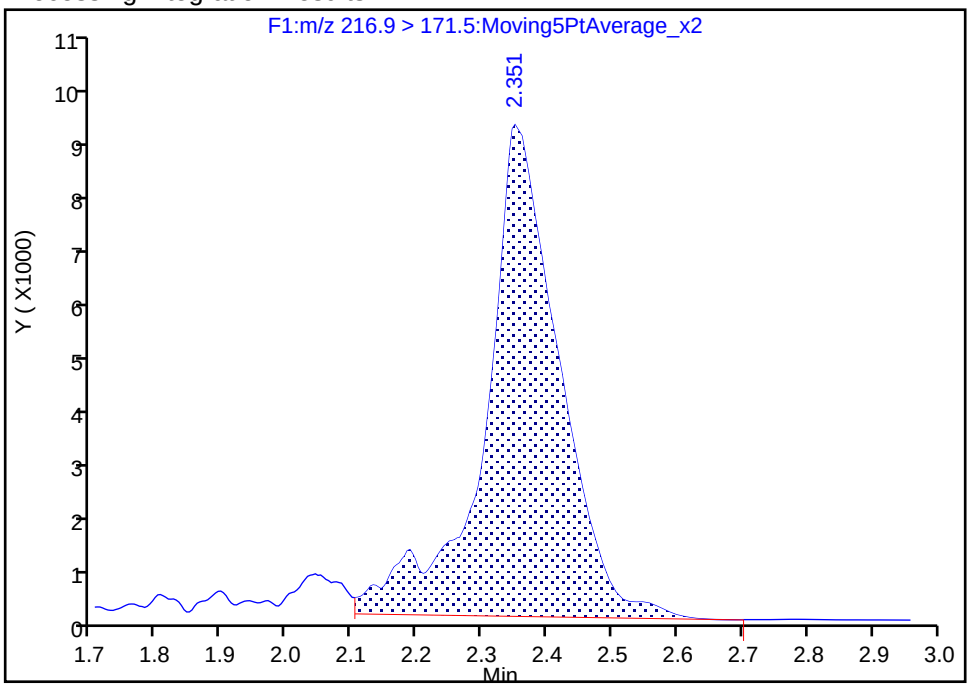
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

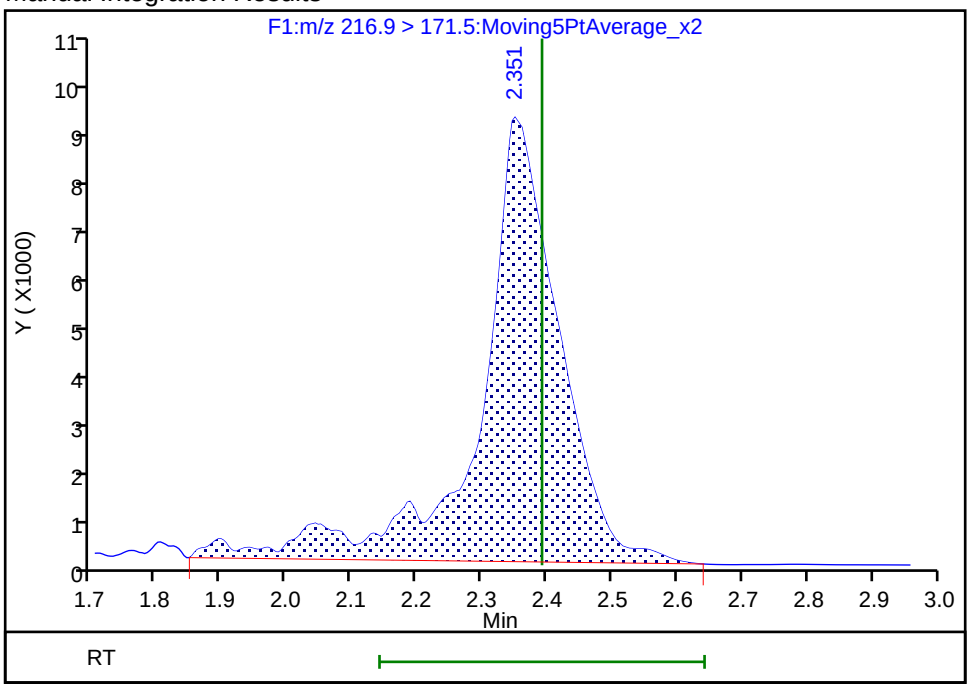
Processing Integration Results

RT: 2.35
Area: 73392
Amount: 13.602557
Amount Units: ng/ml



Manual Integration Results

RT: 2.35
Area: 78808
Amount: 14.606365
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 17:59:50

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

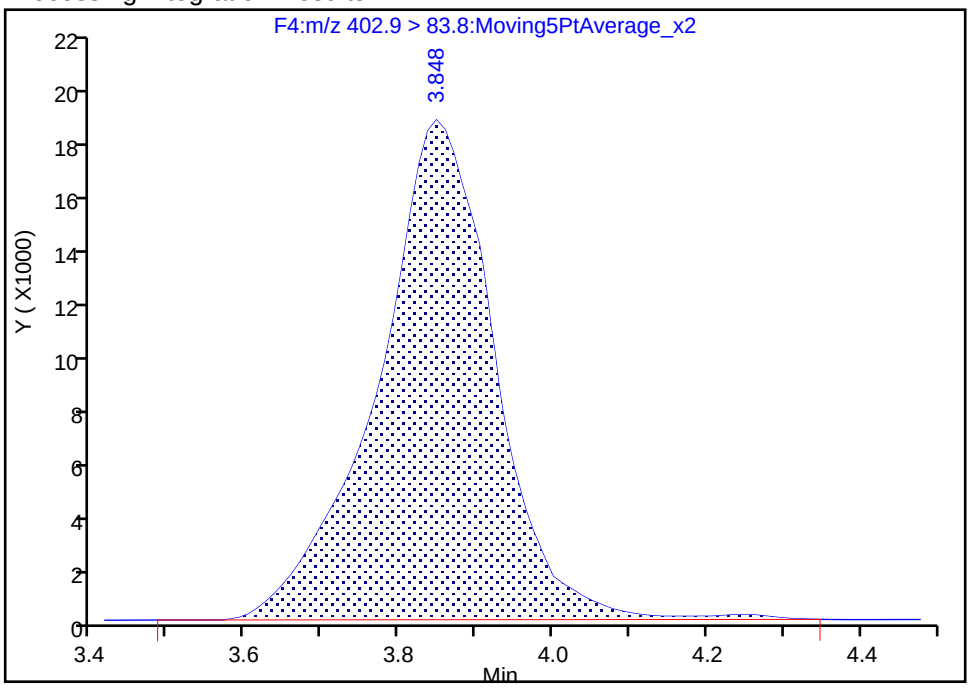
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

D 12 18O2 PFHxS, CAS: STL00994

Signal: 1

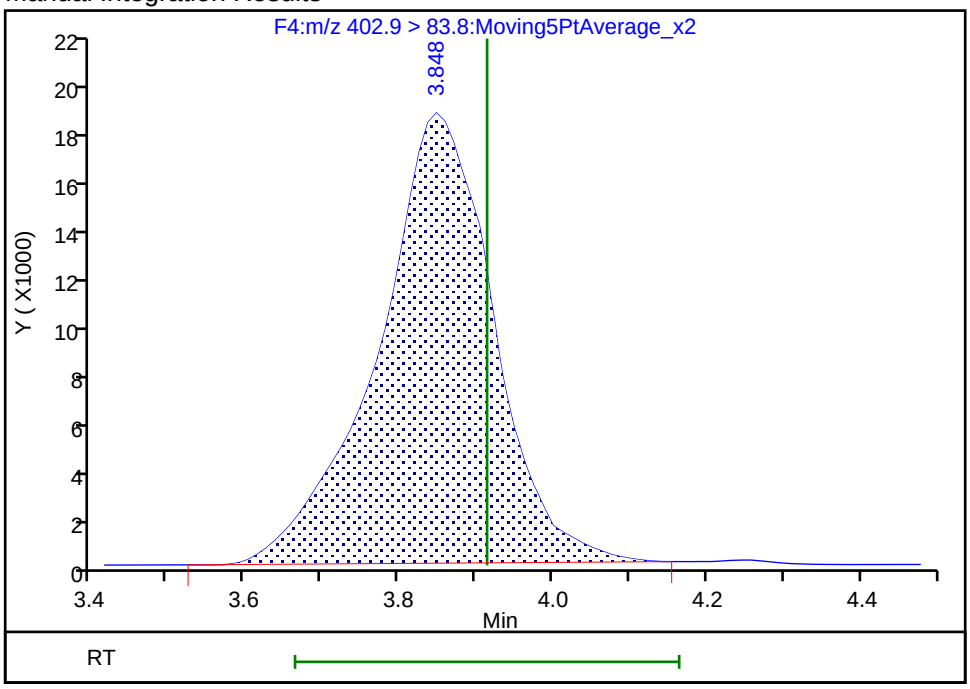
Processing Integration Results

RT: 3.85
Area: 192359
Amount: 38.403188
Amount Units: ng/ml



Manual Integration Results

RT: 3.85
Area: 188985
Amount: 37.729592
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:00:11

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: LMS-3 | Lab Sample ID: 200-43678-2

Matrix: Water | Lab File ID: PF061218A46.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 12:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 276.2(mL) | Date Analyzed: 06/12/2018 20:22

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	8.08		1.81	0.40
2706-90-3	Perfluoropentanoic acid (PFPeA)	18.6	B	1.81	0.40
307-24-4	Perfluorohexanoic acid (PFHxA)	12.7	B	1.81	0.40
375-85-9	Perfluoroheptanoic acid (PFHpA)	6.34		1.81	0.26
335-67-1	Perfluorooctanoic acid (PFOA)	16.9	B	1.81	0.43
375-95-1	Perfluorononanoic acid (PFNA)	5.57		1.81	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	4.22		1.81	0.40
2058-94-8	Perfluoroundecanoic acid (PFUnA)	3.66		1.81	0.40
307-55-1	Perfluorododecanoic acid (PFDoA)	1.81	U	1.81	0.40
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	1.81	U	1.81	0.40
376-06-7	Perfluorotetradecanoic acid (PFTeA)	1.81	U	1.81	0.40
375-73-5	Perfluorobutanesulfonic acid (PFBS)	7.69		1.81	0.80
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	14.2	B	1.81	0.25
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	1.45	J	1.81	0.40
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	26.6		1.81	0.27
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.81	U	1.81	0.40
754-91-6	Perfluorooctane Sulfonamide (FOSA)	0.64	J	1.81	0.40
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.76	J	1.81	0.54
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	0.63	J	1.81	0.54
27619-97-2	6:2 FTS	1.02	J	1.81	0.54
39108-34-4	8:2 FTS	1.81	U	1.81	0.54

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: LMS-3 | Lab Sample ID: 200-43678-2

Matrix: Water | Lab File ID: PF061218A46.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 12:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 276.2(mL) | Date Analyzed: 06/12/2018 20:22

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	22		25-150
STL01893	13C5 PFPeA	38		25-150
STL00993	13C2 PFHxA	58		25-150
STL01892	13C4-PFHpA	76		25-150
STL00990	13C4 PFOA	90		25-150
STL00995	13C5 PFNA	109		25-150
STL00996	13C2 PFDA	93		25-150
STL00997	13C2 PFUnA	90		25-150
STL00998	13C2 PFDoA	81		25-150
STL02116	13C2-PFTeDA	86		25-150
STL02337	13C3-PFBS	62		25-150
STL00994	18O2 PFHxS	87		25-150
STL00991	13C4 PFOS	97		25-150
STL01056	13C8 FOSA	72		25-150
STL02118	d3-NMeFOSAA	63		25-150
STL02117	d5-NEtFOSAA	76		25-150
STL02279	M2-6:2FTS	293		25-150
STL02280	M2-8:2FTS	148		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d
Lims ID: 200-43678-A-2-A
Client ID: LMS-3
Sample Type: Client
Inject. Date: 12-Jun-2018 20:22:40 ALS Bottle#: 0 Worklist Smp#: 46
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-046 2
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:21:32 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 20-Jun-2018 18:04:33

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.343	2.382	-0.039	0.997	3493	4.46			9.1	M
D 1 13C4 PFBA										M
216.9 > 171.5	2.351	2.392	-0.041	1.000	54276	10.8		21.6	70.3	M
D 4 13C5-PFPeA										M
267.7 > 222.6	2.781	2.818	-0.037	1.000	140731	19.1		38.1	237	M
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.770	2.834	-0.064	0.996	35221	10.3			9.3	M
D 5 13C3-PFBS										M
302.0 > 79.8	2.834	2.900	-0.066	1.000	140103	28.7		61.7	88.6	M
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.850	2.900	-0.050	1.006	10786	4.25			3.7	M
7 Perfluorohexanoic acid										M
312.8 > 268.6	3.226	3.300	-0.074	1.000	37770	7.00			21.3	M
D 8 13C2 PFHxA										
314.8 > 269.6	3.226	3.300	-0.074	1.000	250413	29.0		58.1	2088	
9 Perfluoroheptanoic acid										
362.9 > 318.8	3.804	3.882	-0.078	1.003	27467	3.50			12.6	
D 10 13C4-PFHpA										
366.9 > 321.8	3.793	3.882	-0.089	1.000	376160	38.0		76.0	1047	
D 12 18O2 PFHxS										
402.9 > 83.8	3.848	3.914	-0.066	1.000	191775	41.1		86.9	1602	
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.837	3.919	-0.082	0.997	31373	7.86			47.1	M
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.468	4.486	-0.018	1.004	2980	0.5624			49.6	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.449	4.546	-0.097	1.000	182302	139.2		293	674	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.505	4.601	-0.096	1.000	339804	44.9		89.7	953	
* 17 13C2-PFOA										
414.9 > 369.8	4.519	4.601	-0.082		397845	50.0			1288	
15 Perfluorooctanoic acid										M
412.9 > 368.8	4.519	4.615	-0.096	1.003	71641	9.33			93.8	M
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.519	4.642	-0.123	0.848	2894	0.8024			16.8	M
D 19 13C5 PFNA										
467.8 > 422.8	5.310	5.422	-0.112	1.000	542359	54.4		109	1867	
20 Perfluorononanoic acid										
462.8 > 418.8	5.304	5.422	-0.118	0.999	31106	3.08			97.8	
22 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.334	5.434	-0.100	1.001	79927	14.7			614	M
D 21 13C4 PFOS										
502.8 > 79.8	5.328	5.440	-0.112	1.000	234319	46.4		97.0	1622	
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	192559	71.0		148	4014	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.118	6.227	-0.109	1.000	30257	2.33			48.4	
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	673097	46.3		92.7	3012	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	97125	31.7		63.5	413	
28 N-methyl perfluorooctane sulfonami										M
569.8 > 418.8	6.439	6.602	-0.163	0.994	142	0.4199			0.9	M
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.832	6.959	-0.127	1.000	98983	37.8		75.6	1209	
30 N-ethyl perfluorooctane sulfonamid										M
583.9 > 418.8	6.903	6.973	-0.070	1.010	116	0.3501			4.2	M
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.874	6.987	-0.113	1.000	26271	2.02			355	
D 33 13C2 PFUnA										
564.8 > 519.8	6.874	6.987	-0.113	1.000	599884	45.1		90.3	7162	
34 Perfluorooctane Sulfonamide										M
497.8 > 77.8	7.079	7.079	0.0	1.000	250	0.3533			3.0	M
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	403810	36.2		72.3	3398	
D 36 13C2 PFDoA										
614.8 > 569.6	7.564	7.684	-0.120	1.000	648275	40.4		80.8	5823	
37 Perfluorododecanoic acid										M
612.8 > 568.6	7.542	7.684	-0.142	0.997	557	0.1075			6.4	M
38 Perfluorotridecanoic acid										M
662.8 > 618.6	8.127	8.294	-0.167	1.074	197	0.0517			4.0	M
D 39 13C2-PFTeDA										
714.8 > 669.6	8.729	8.855	-0.126	1.000	697591	42.9		85.7	2536	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.697	8.862	-0.165	0.996	412	-0.1428			9.4	M
712.8 > 168.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			
712.8 > 218.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:21:41 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d

Injection Date: 12-Jun-2018 20:22:40 Instrument ID: LC410

Lims ID: 200-43678-A-2-A Lab Sample ID: 200-43678-2

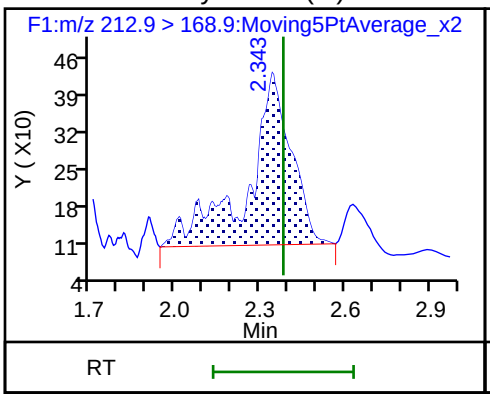
Client ID: LMS-3

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 46

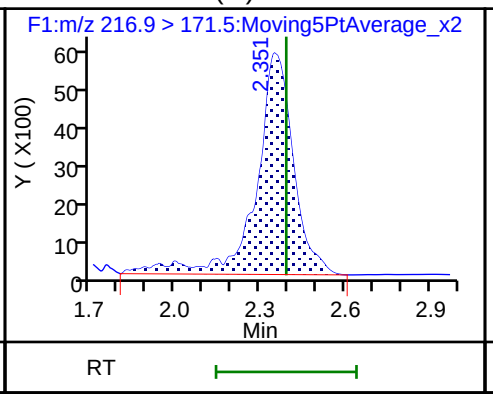
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

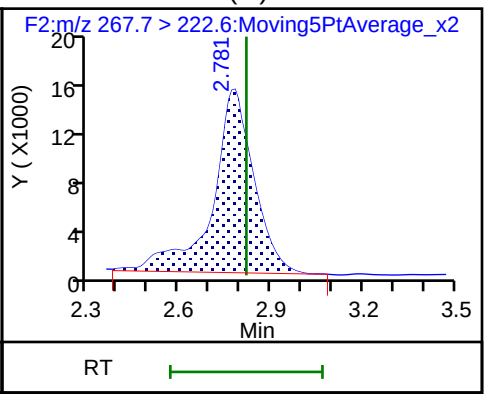
2 Perfluorobutyric acid (M)



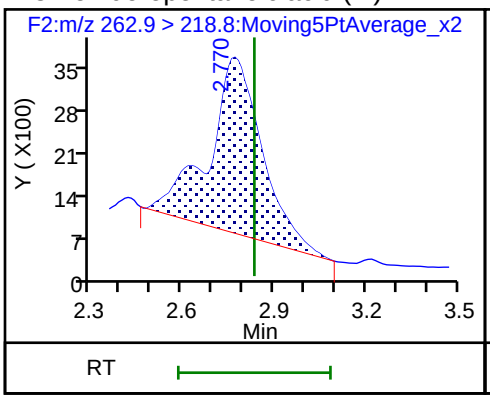
D 1 13C4 PFBA (M)



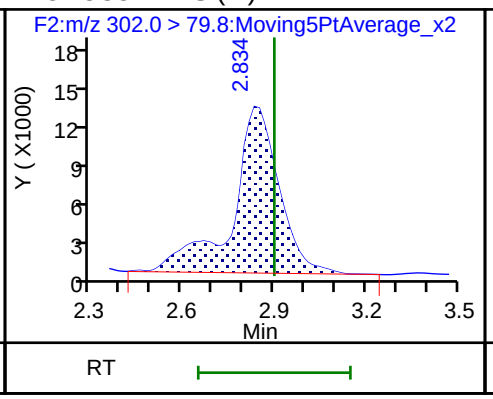
D 4 13C5-PFPeA (M)



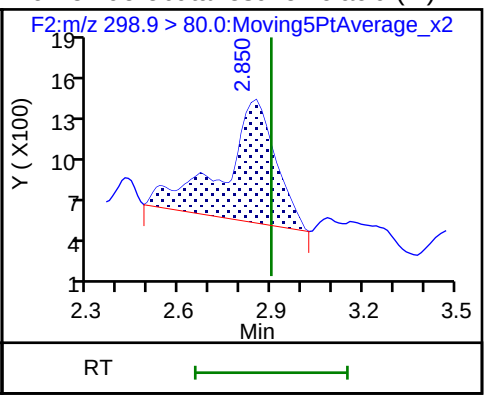
3 Perfluoropentanoic acid (M)



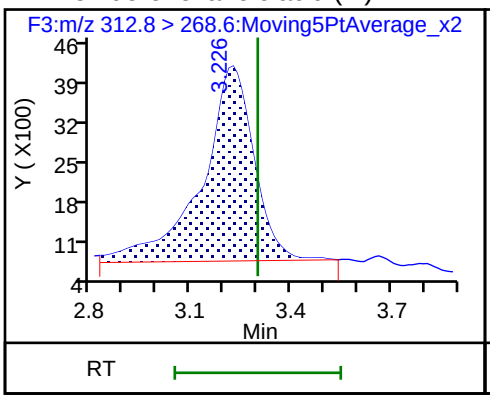
D 5 13C3-PFBS (M)



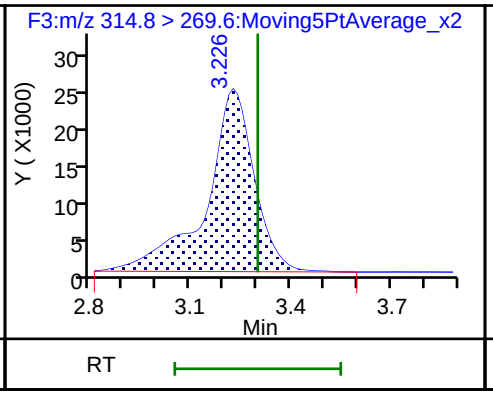
6 Perfluorobutanesulfonic acid (M)



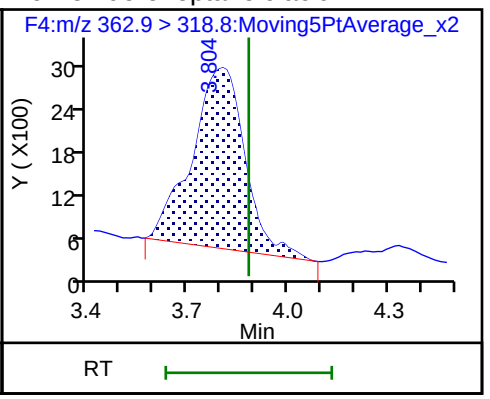
7 Perfluorohexanoic acid (M)



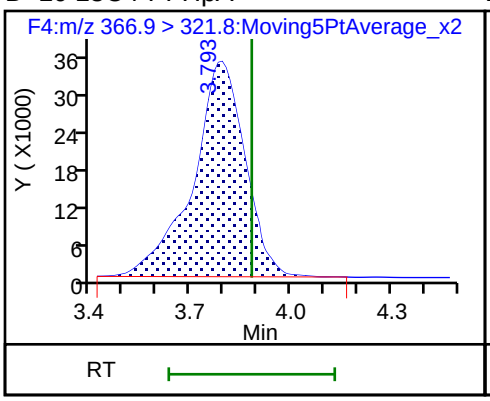
D 8 13C2 PFHxA



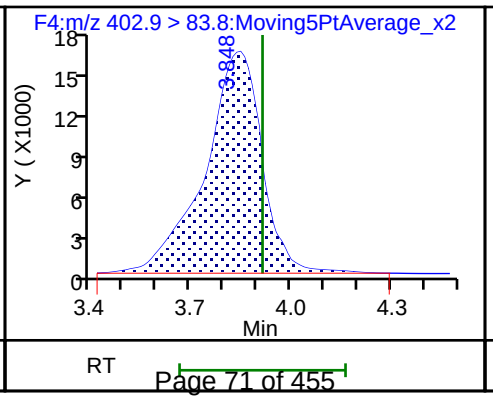
9 Perfluoroheptanoic acid



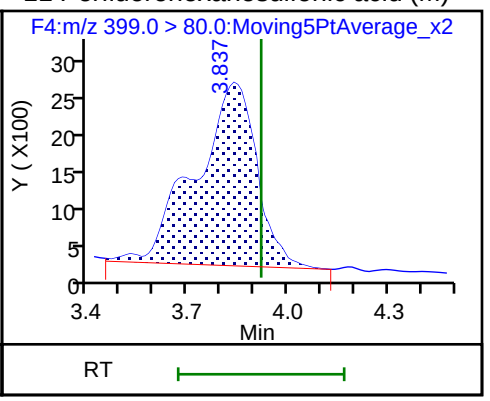
D 10 13C4-PFHpA



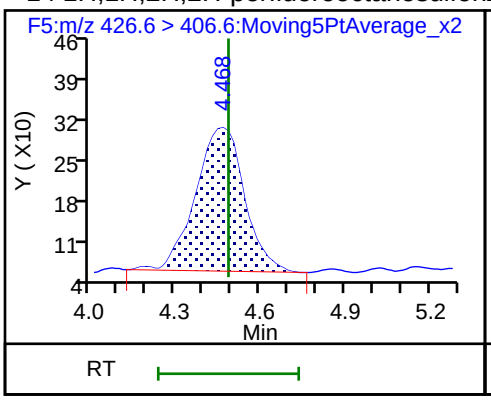
D 12 18O2 PFHxS



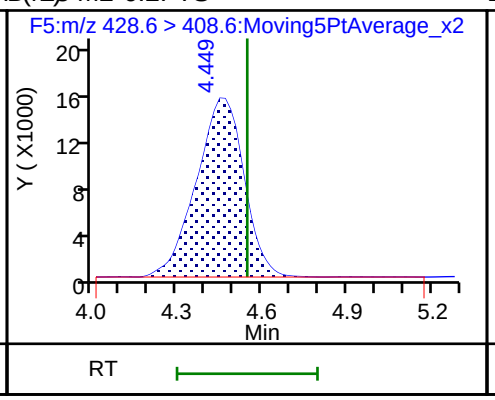
11 Perfluorohexanesulfonic acid (M)



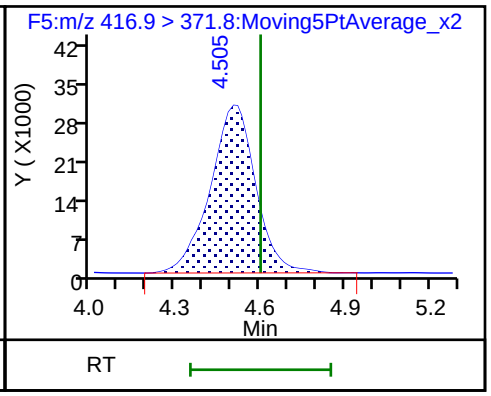
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



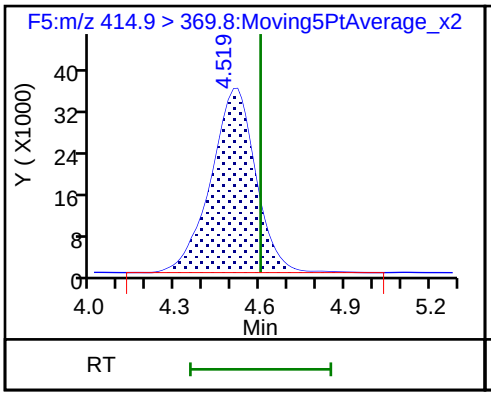
D 13 M2-6:2FTS



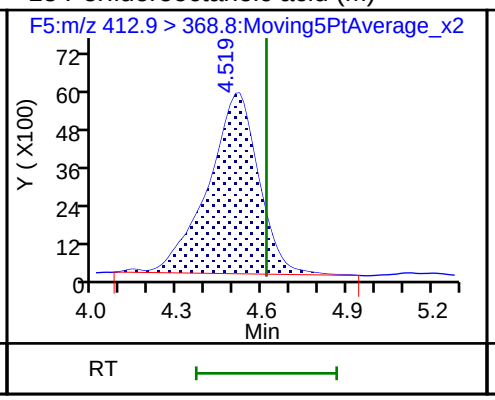
D 16 13C4 PFOA



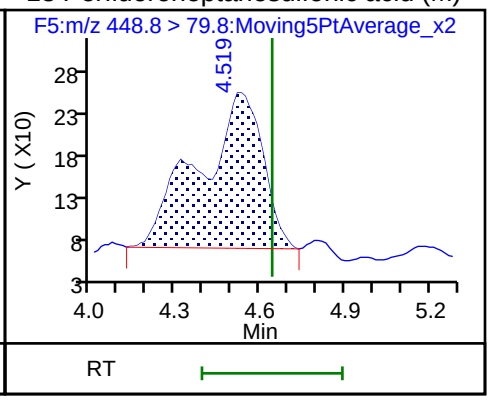
* 17 13C2-PFOA



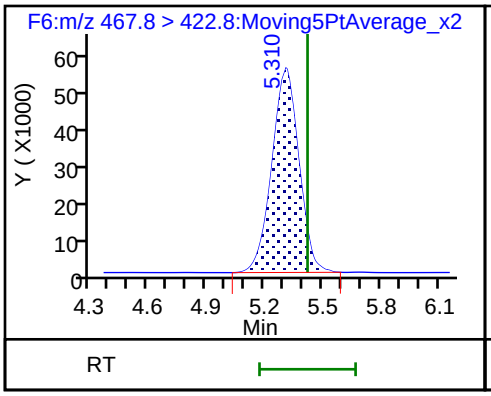
15 Perfluorooctanoic acid (M)



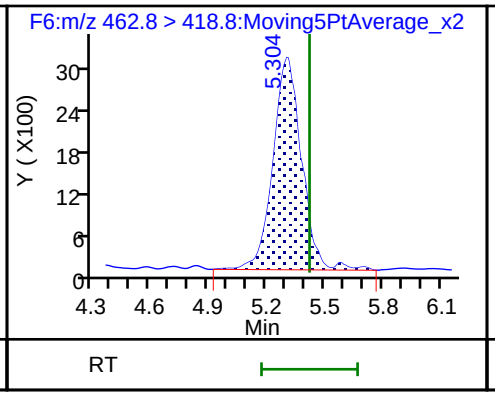
18 Perfluoroheptanesulfonic acid (M)



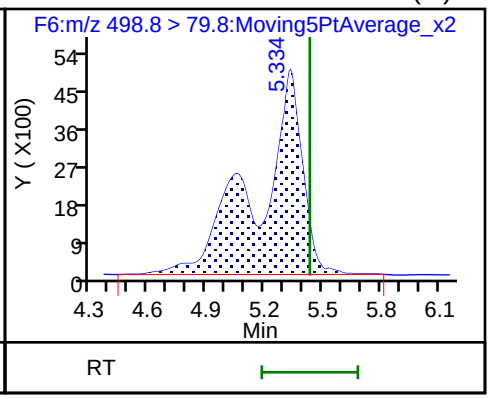
D 19 13C5 PFNA



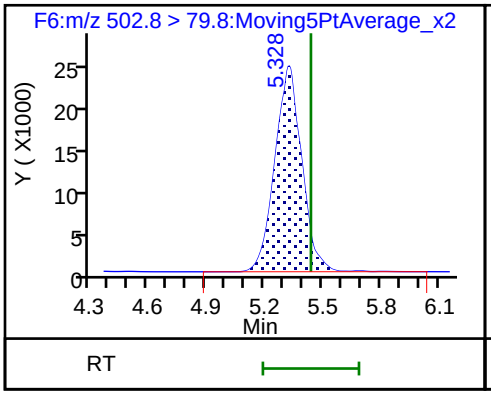
20 Perfluorononanoic acid



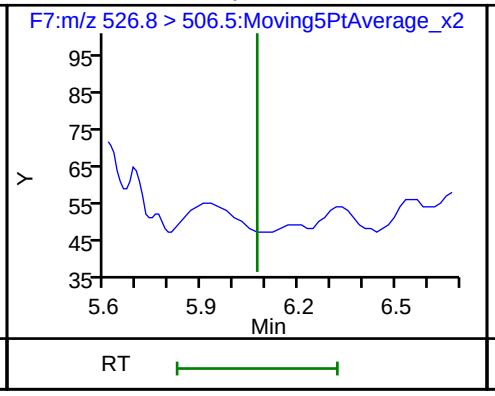
22 Perfluorooctane sulfonic acid (M)



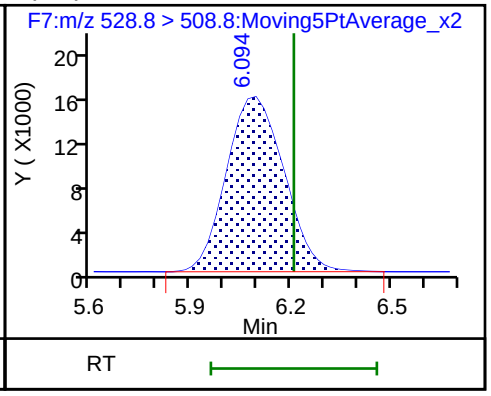
D 21 13C4 PFOS



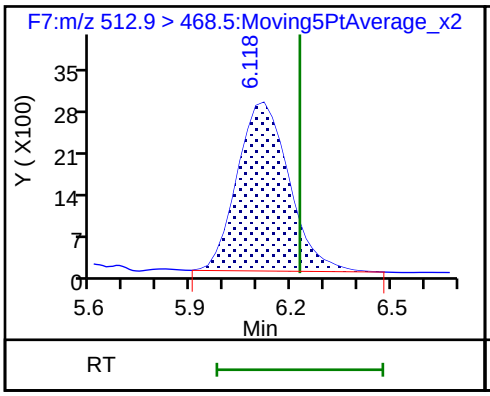
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



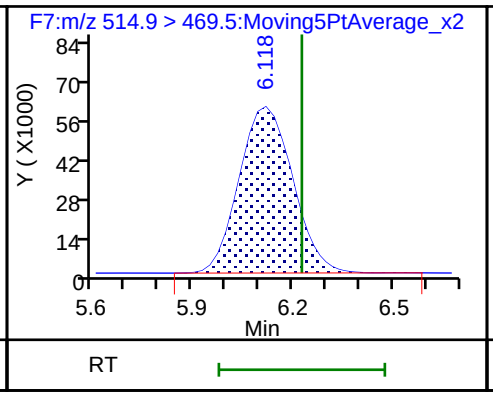
D 24 M2-8:2FTS



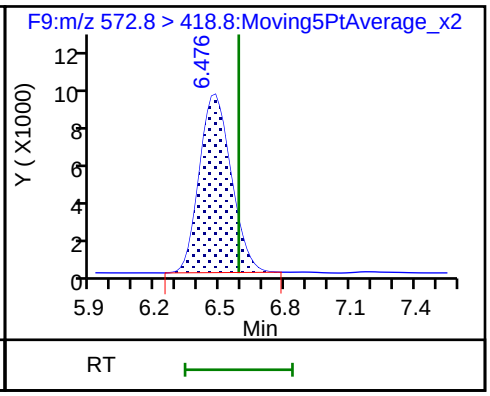
25 Perfluorodecanoic acid



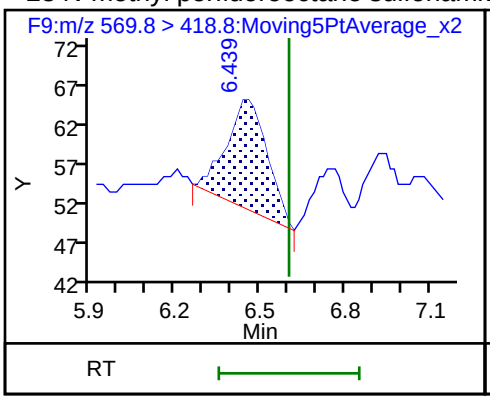
D 26 13C2 PFDA



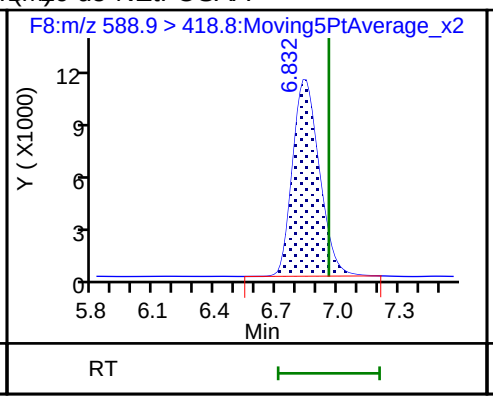
D 27 d3-NMeFOSAA



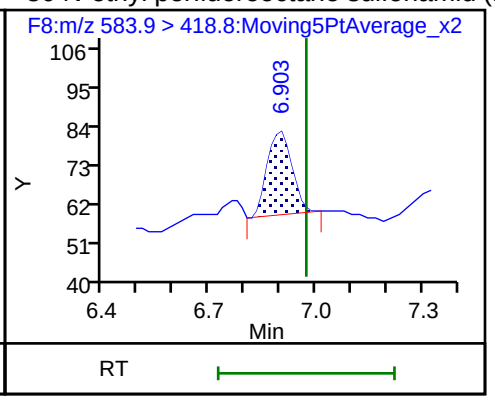
28 N-methyl perfluorooctane sulfonamid (M)



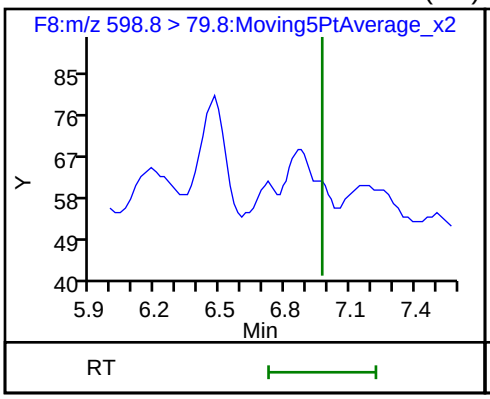
D 29 d5-NEtFOSAA



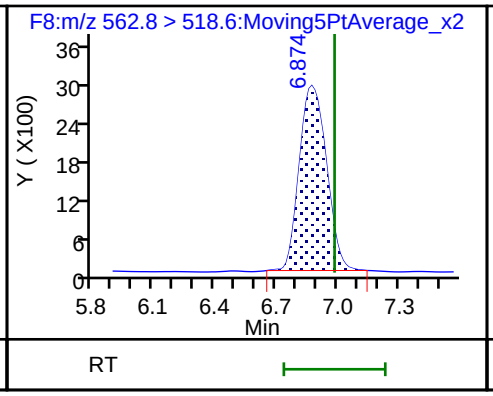
30 N-ethyl perfluorooctane sulfonamid (M)



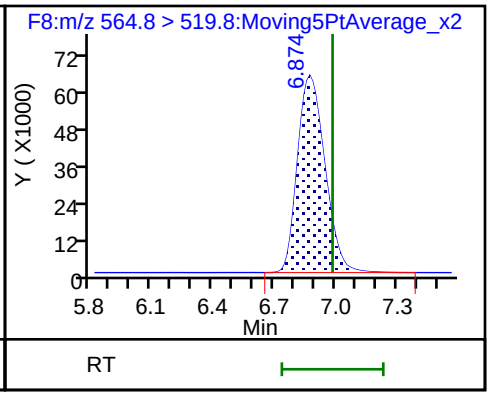
31 Perfluorodecane Sulfonic acid (ND)



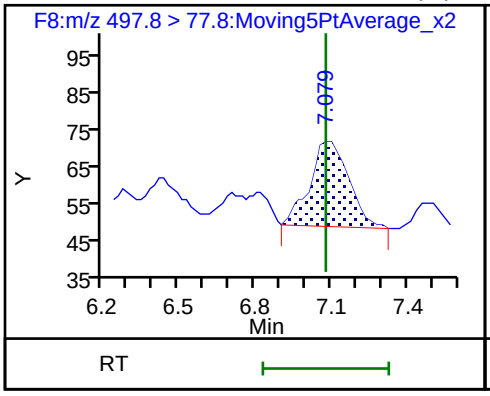
32 Perfluoroundecanoic acid



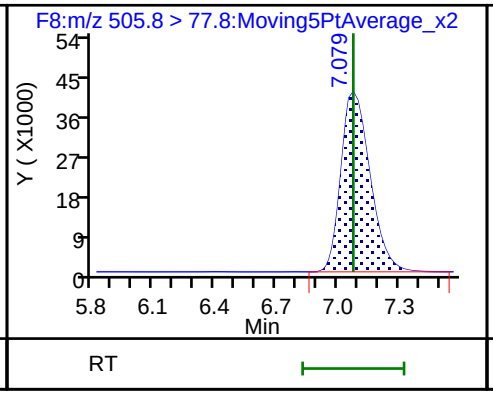
D 33 13C2 PFUnA



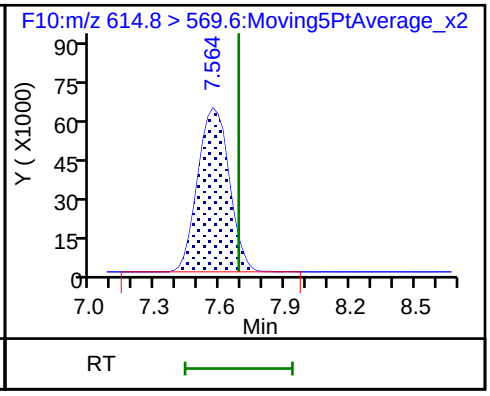
34 Perfluorooctane Sulfonamide (M)



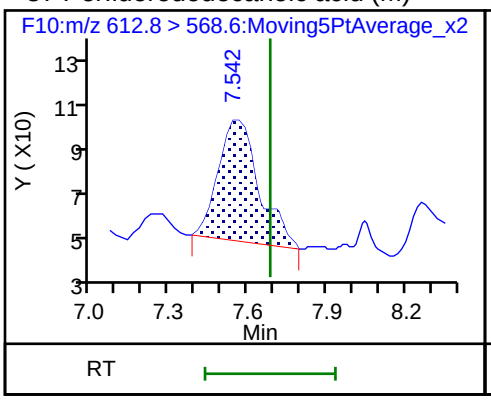
D 35 13C8 FOSA



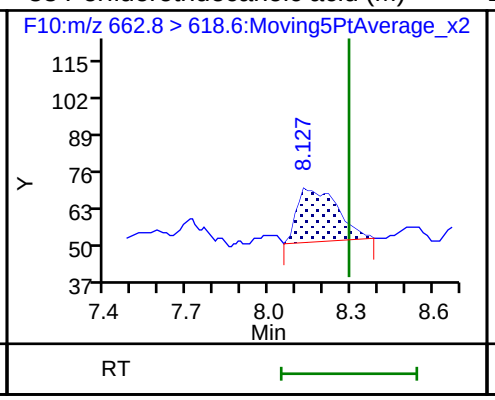
D 36 13C2 PFDoA



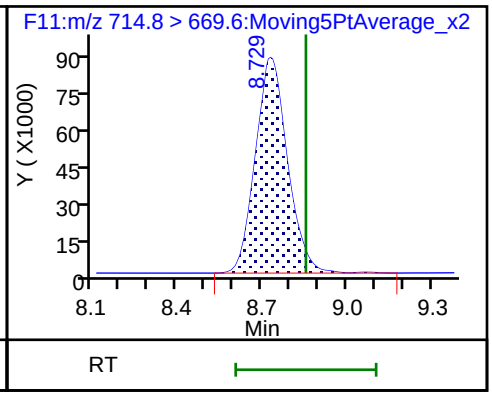
37 Perfluorododecanoic acid (M)



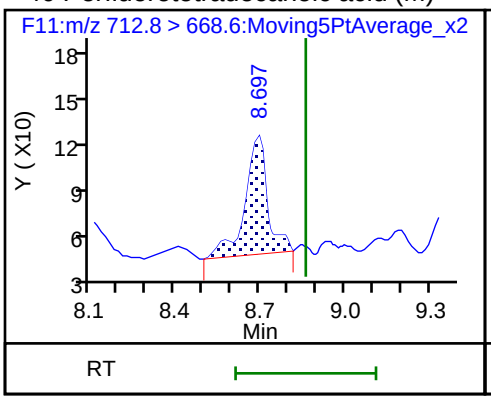
38 Perfluorotridecanoic acid (M)



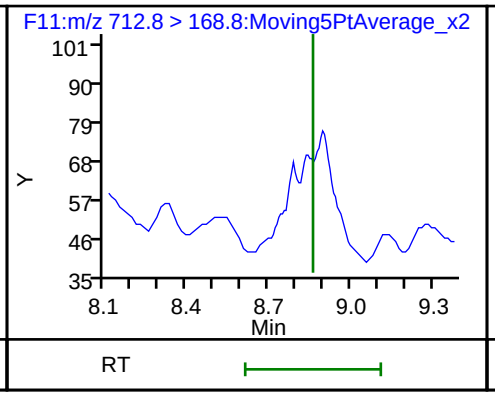
D 39 13C2-PFTeDA



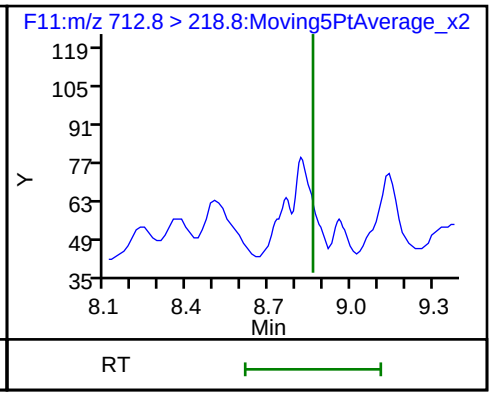
40 Perfluorotetradecanoic acid (M)



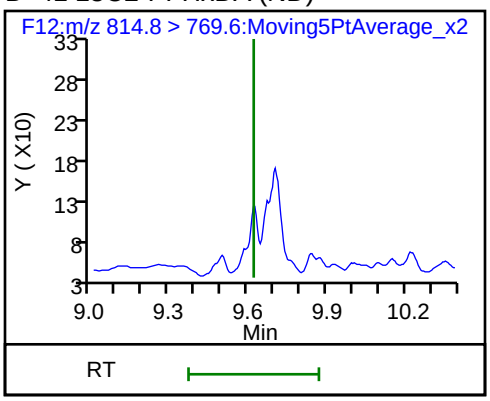
40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



D 41 13C2-PFHxDA (ND)



Manual Integration/User Assign Peak Report

TestAmerica Burlington

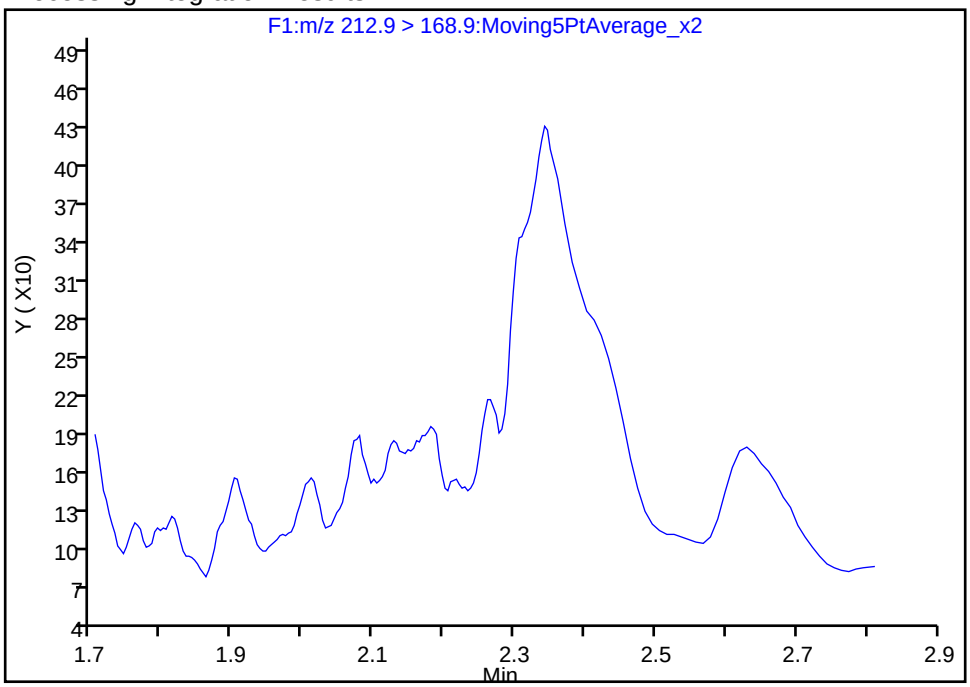
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

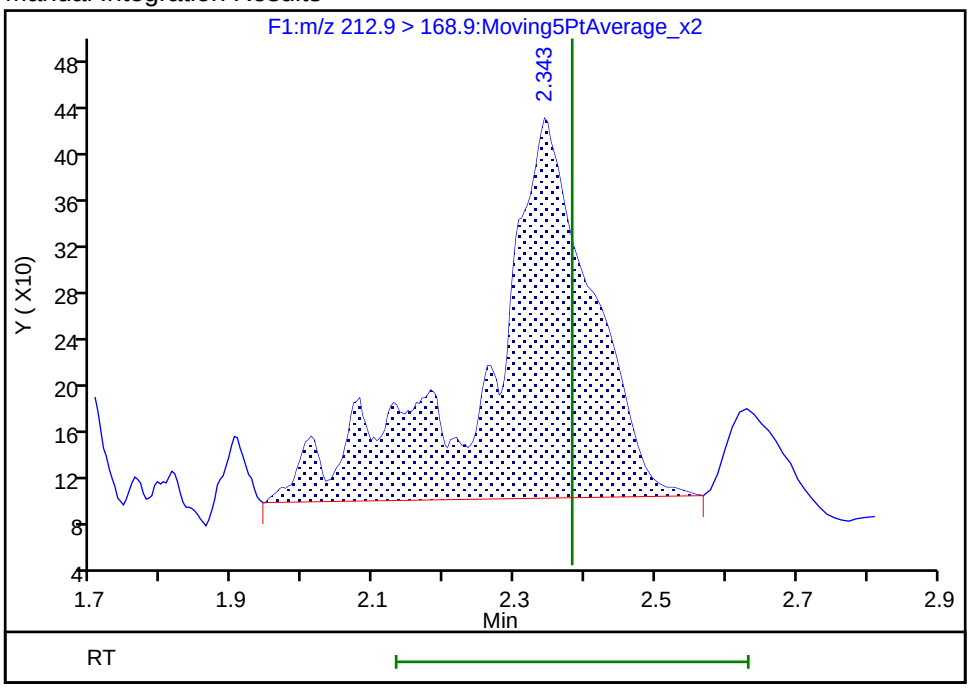
Not Detected
Expected RT: 2.38

Processing Integration Results



Manual Integration Results

RT: 2.34
Area: 3493
Amount: 4.462816
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:04:29
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

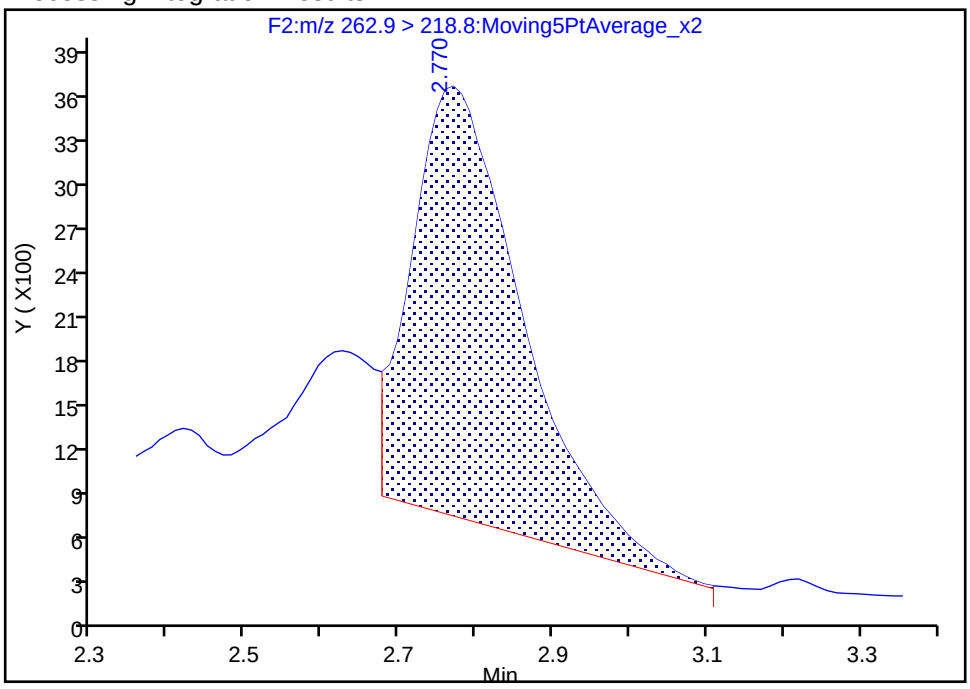
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

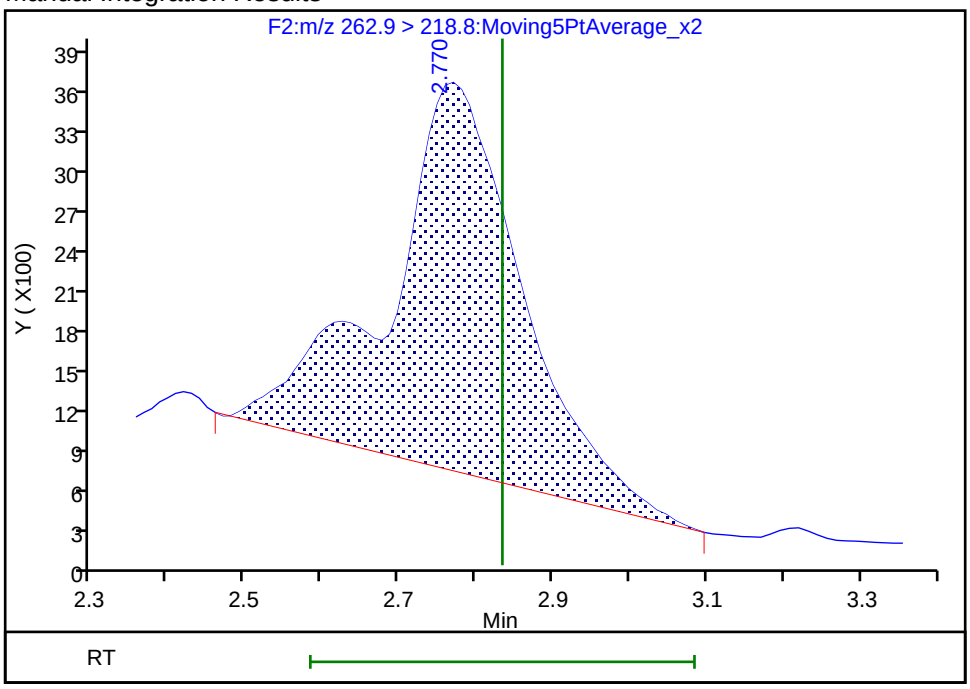
Processing Integration Results

RT: 2.77
Area: 28915
Amount: 9.369117
Amount Units: ng/ml



Manual Integration Results

RT: 2.77
Area: 35221
Amount: 10.267273
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:02:31

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

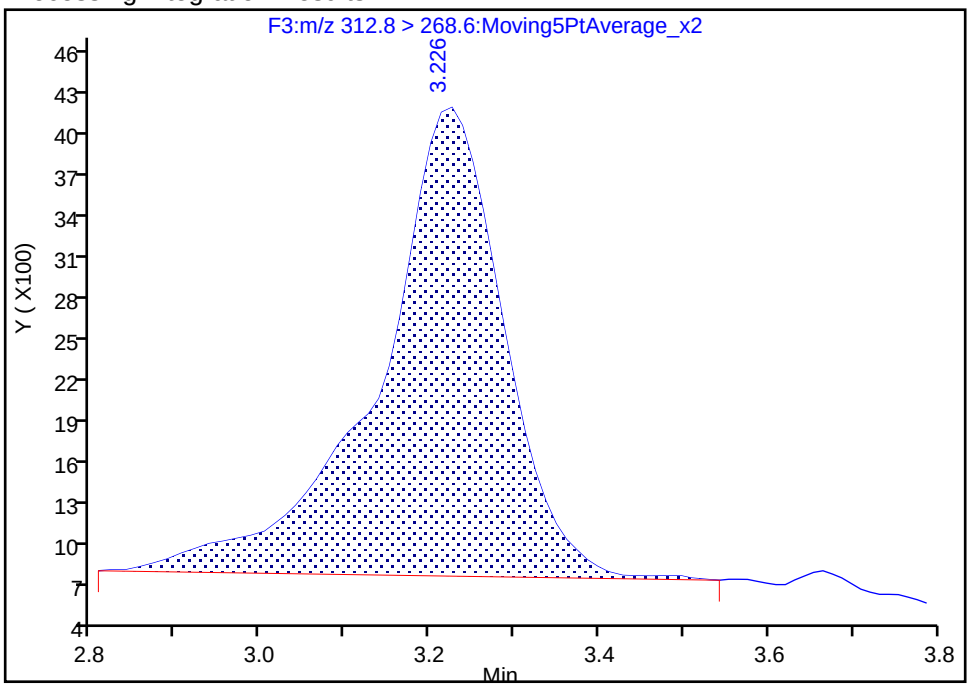
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F3:MRM		

7 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

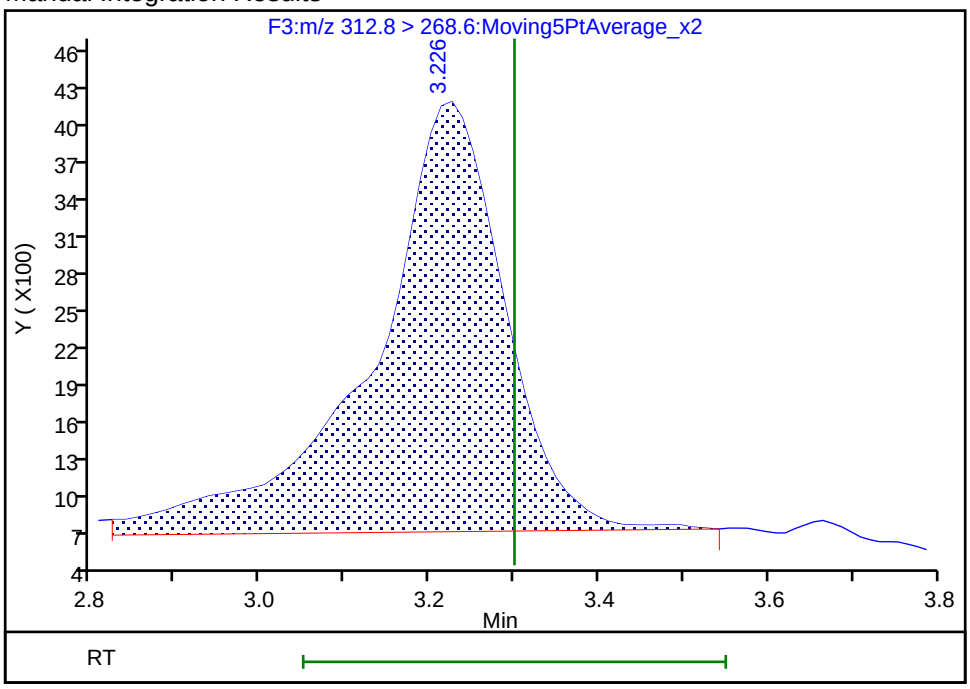
Processing Integration Results

RT: 3.23
Area: 35495
Amount: 6.596860
Amount Units: ng/ml



Manual Integration Results

RT: 3.23
Area: 37770
Amount: 6.998652
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:02:50

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

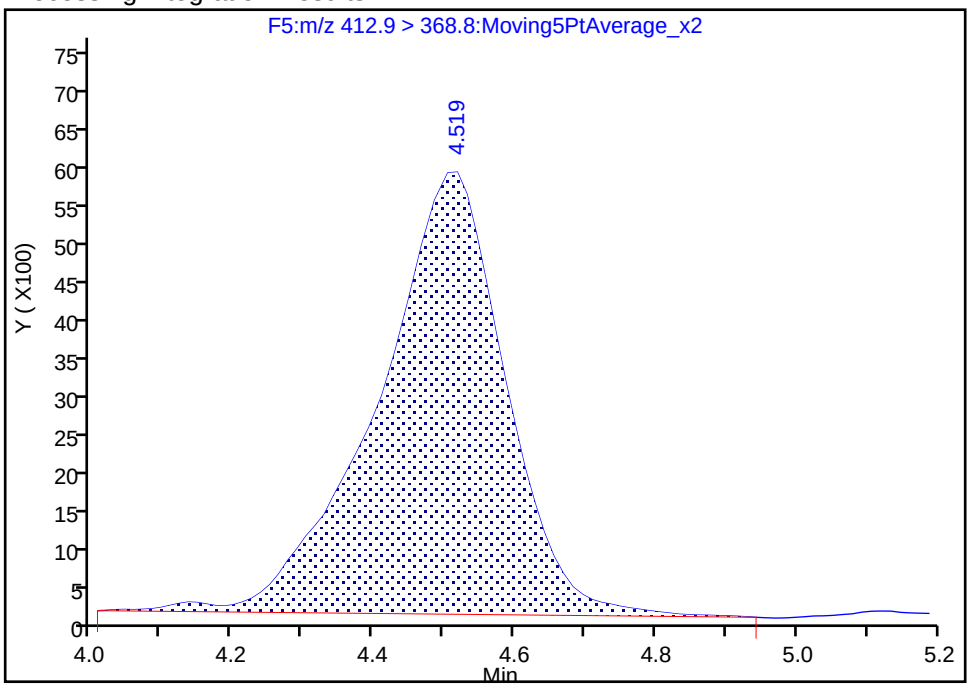
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

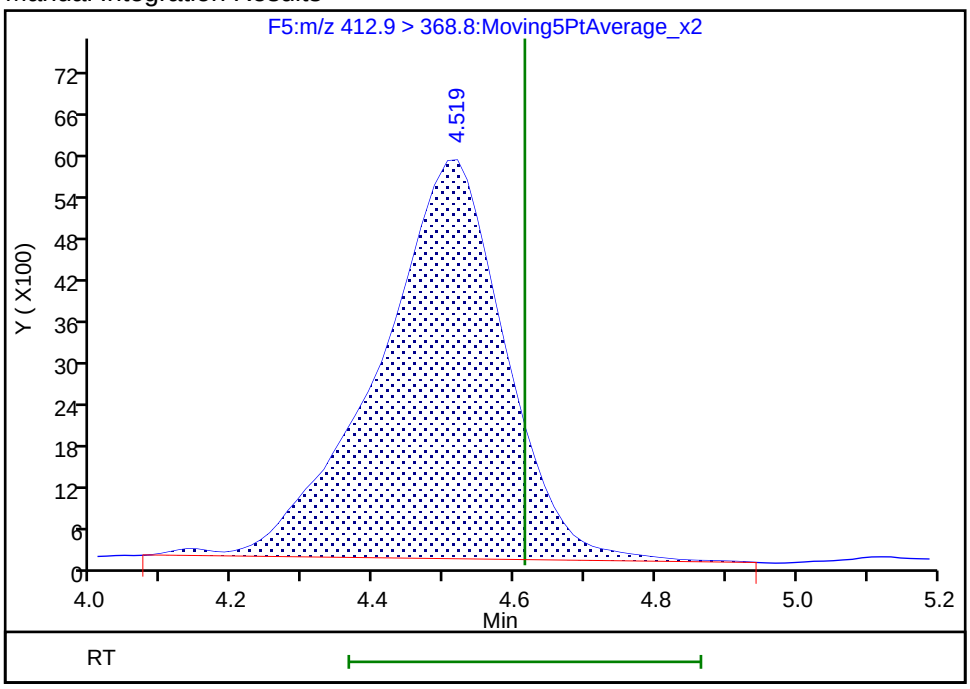
Processing Integration Results

RT: 4.52
Area: 72444
Amount: 9.433694
Amount Units: ng/ml



Manual Integration Results

RT: 4.52
Area: 71641
Amount: 9.330999
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:03:09

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

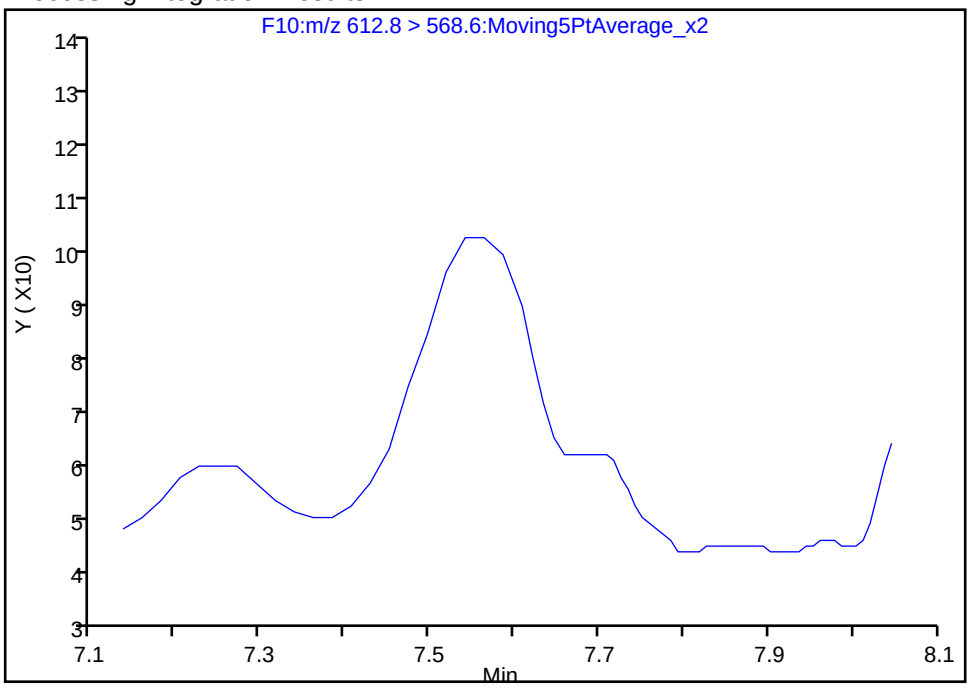
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

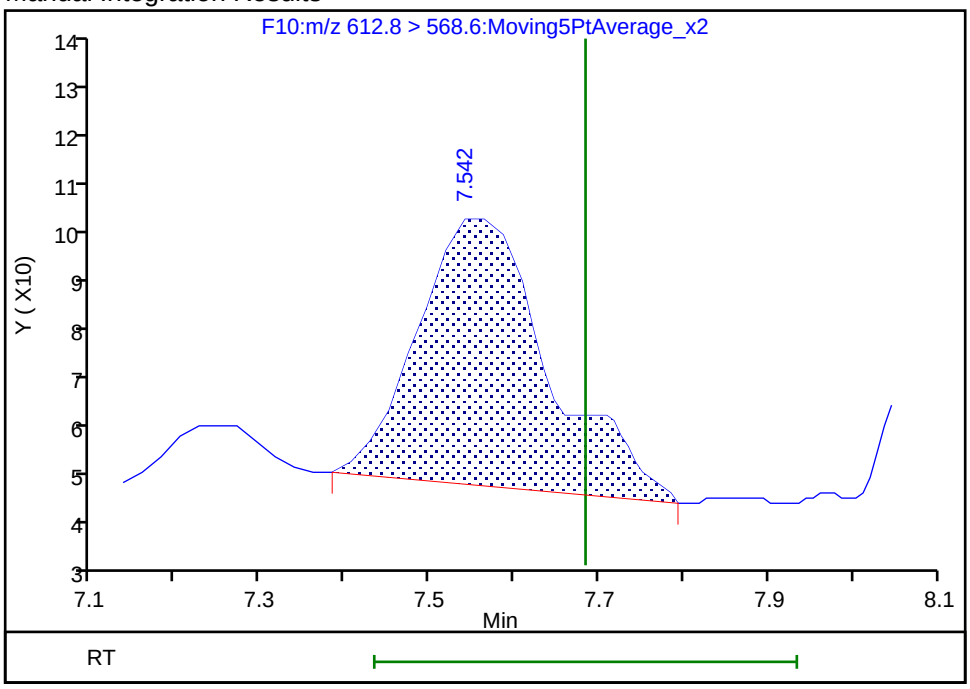
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.54
Area: 557
Amount: 0.107491
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:03:58
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

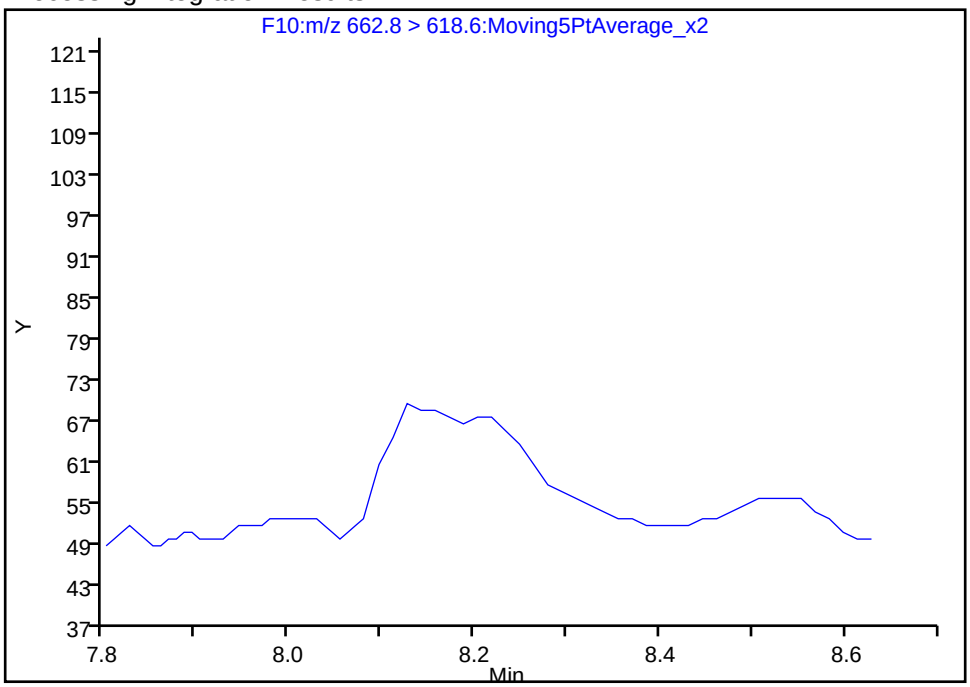
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

38 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

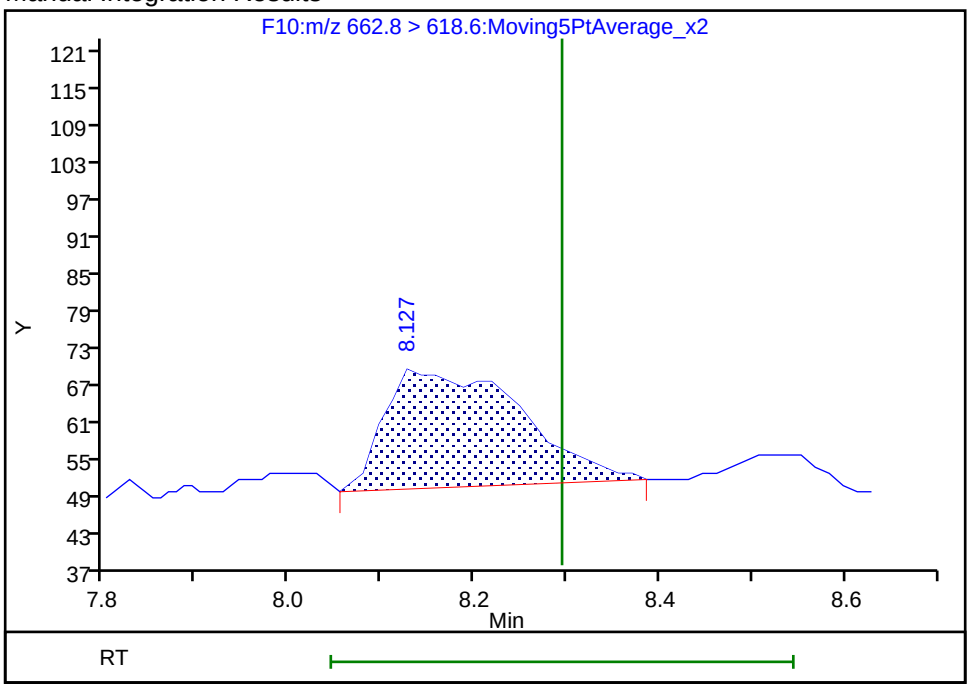
Not Detected
Expected RT: 8.29

Processing Integration Results



Manual Integration Results

RT: 8.13
Area: 197
Amount: 0.051654
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:03:55
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

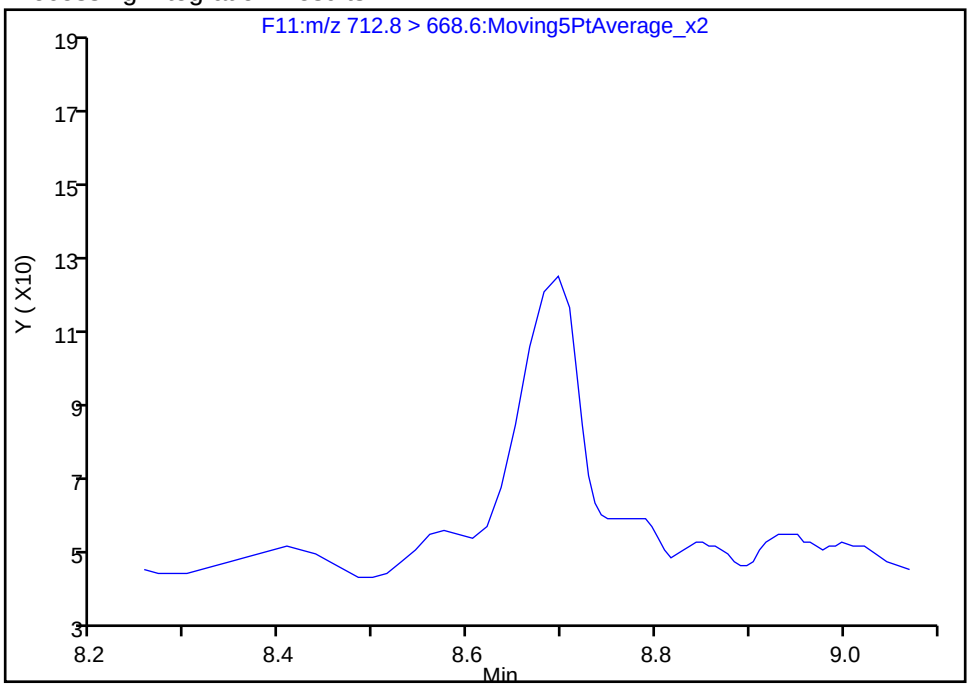
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

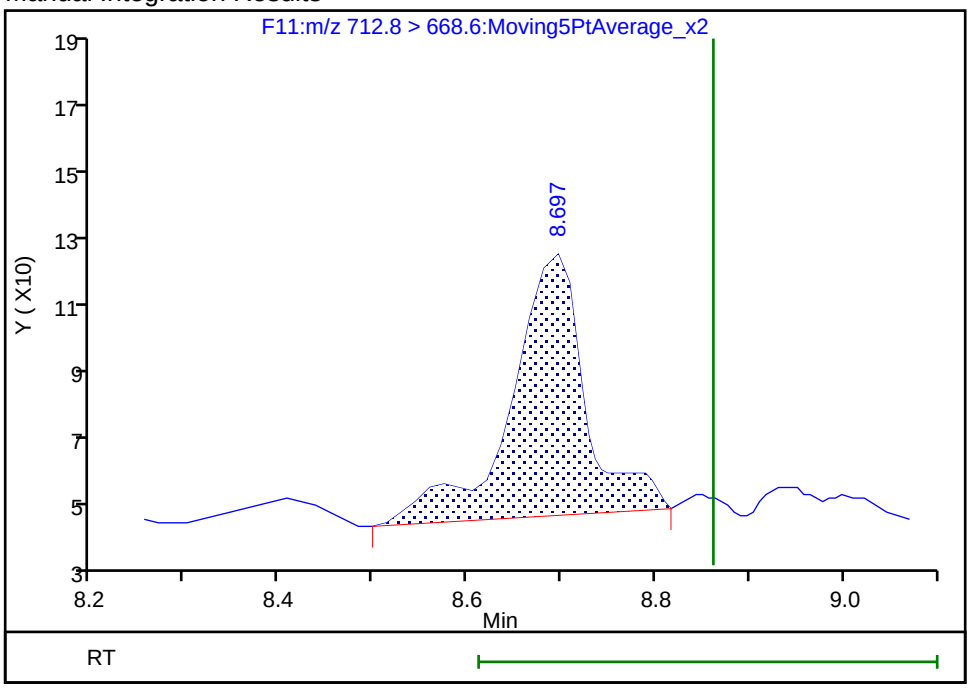
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.70
Area: 412
Amount: -0.142754
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:03:49
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

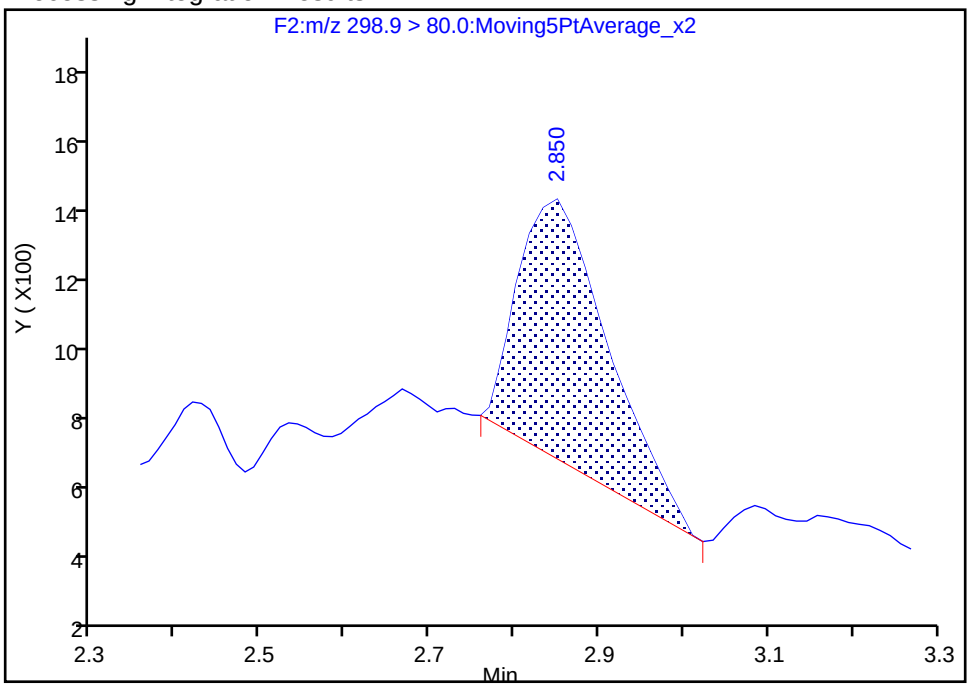
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

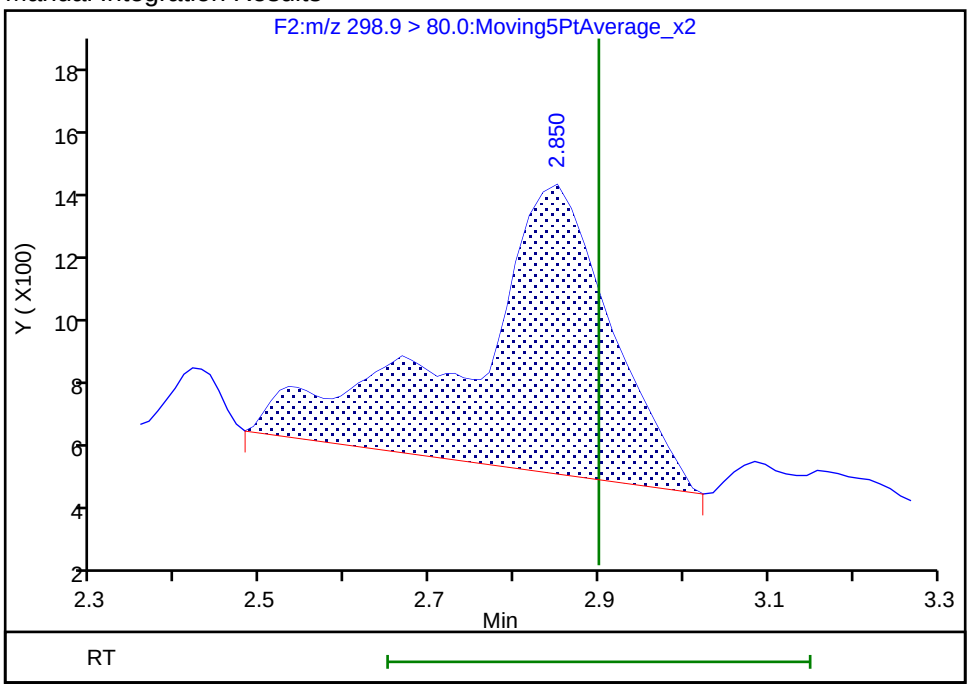
Processing Integration Results

RT: 2.85
Area: 5434
Amount: 2.140669
Amount Units: ng/ml



Manual Integration Results

RT: 2.85
Area: 10786
Amount: 4.249035
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:02:46

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

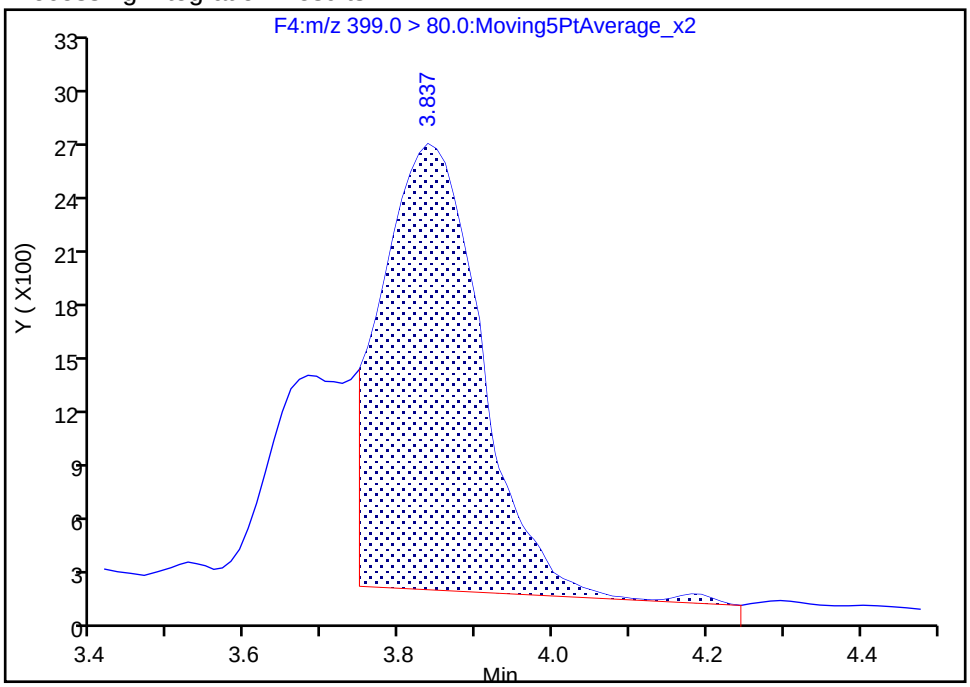
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

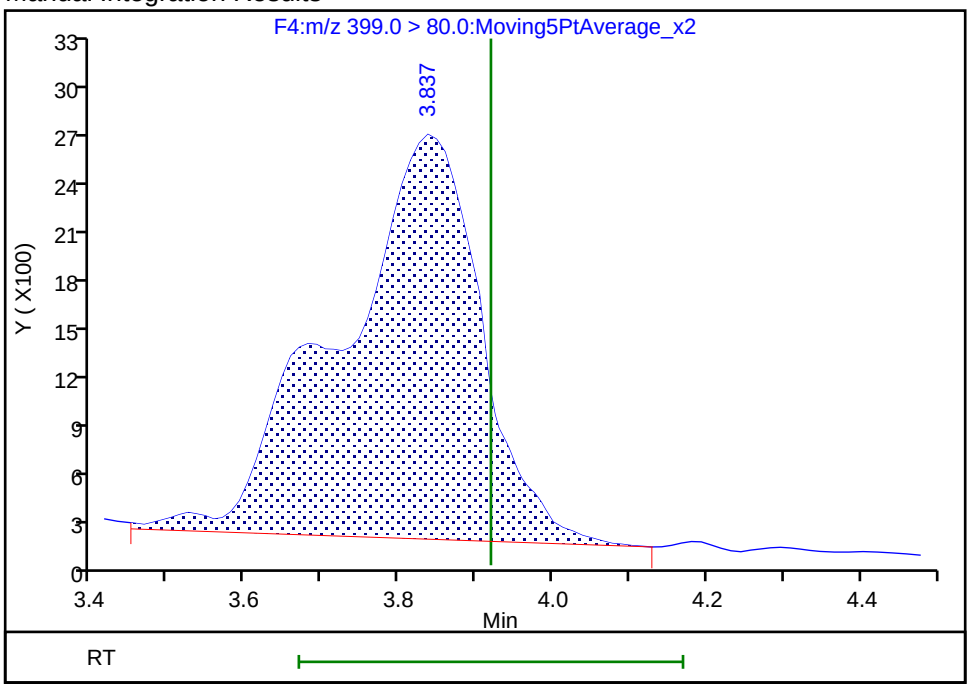
Processing Integration Results

RT: 3.84
Area: 22165
Amount: 5.676551
Amount Units: ng/ml



Manual Integration Results

RT: 3.84
Area: 31373
Amount: 7.855853
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:02:56

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

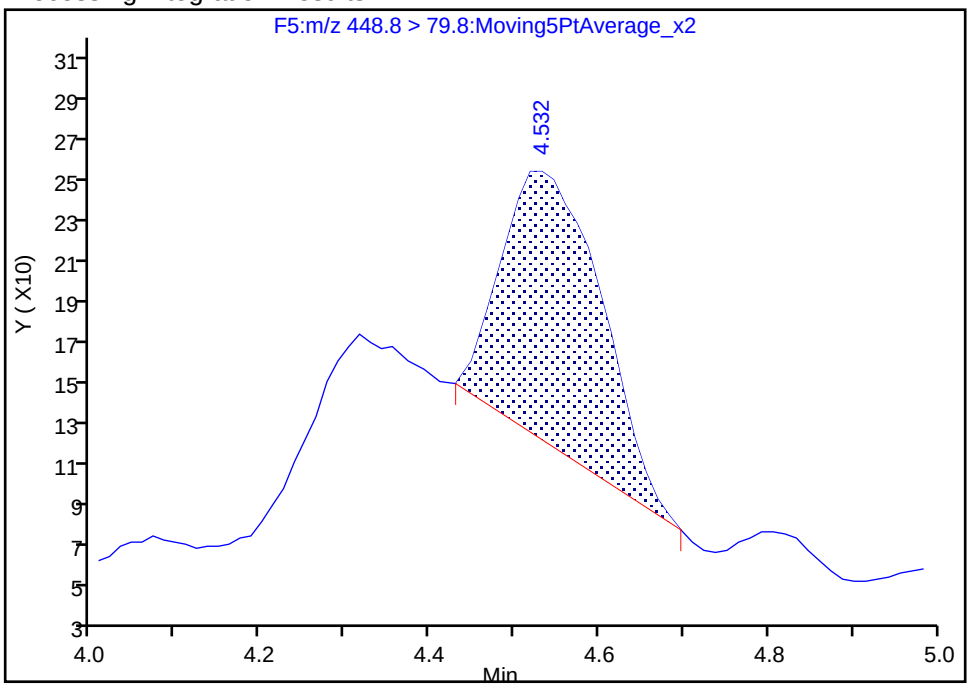
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

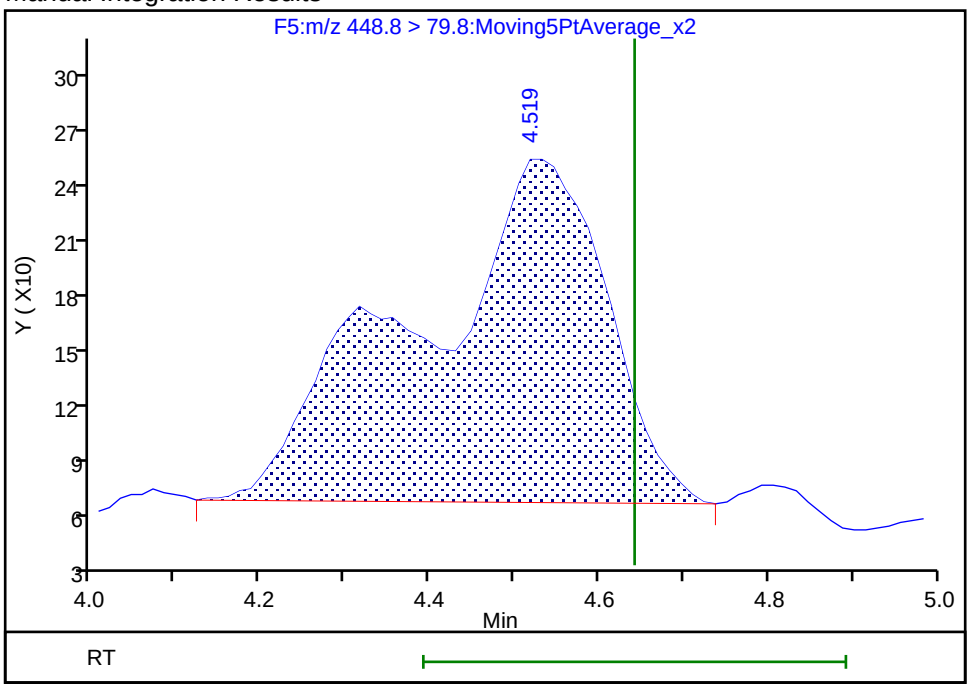
Processing Integration Results

RT: 4.53
Area: 1088
Amount: 0.419152
Amount Units: ng/ml



Manual Integration Results

RT: 4.52
Area: 2894
Amount: 0.802378
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:03:15

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

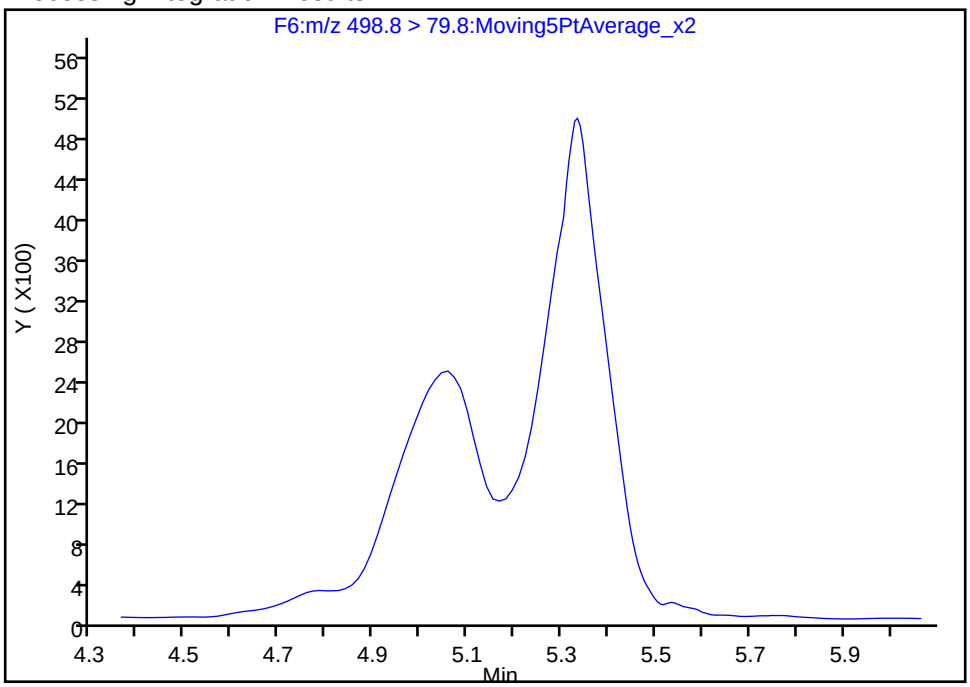
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F6:MRM		

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

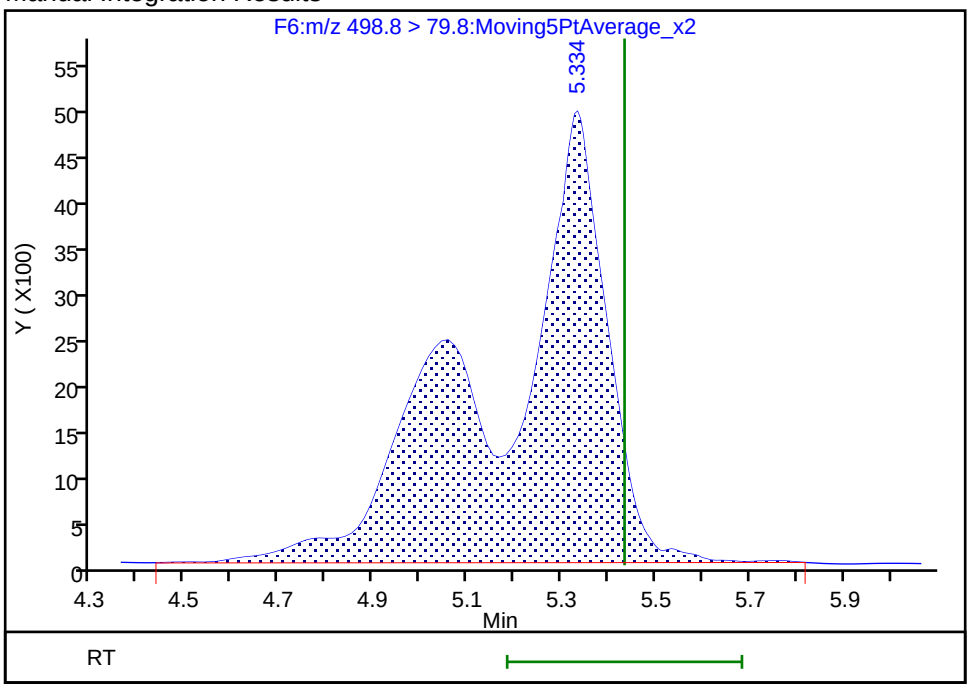
Not Detected
Expected RT: 5.43

Processing Integration Results



Manual Integration Results

RT: 5.33
Area: 79927
Amount: 14.707656
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:03:23
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

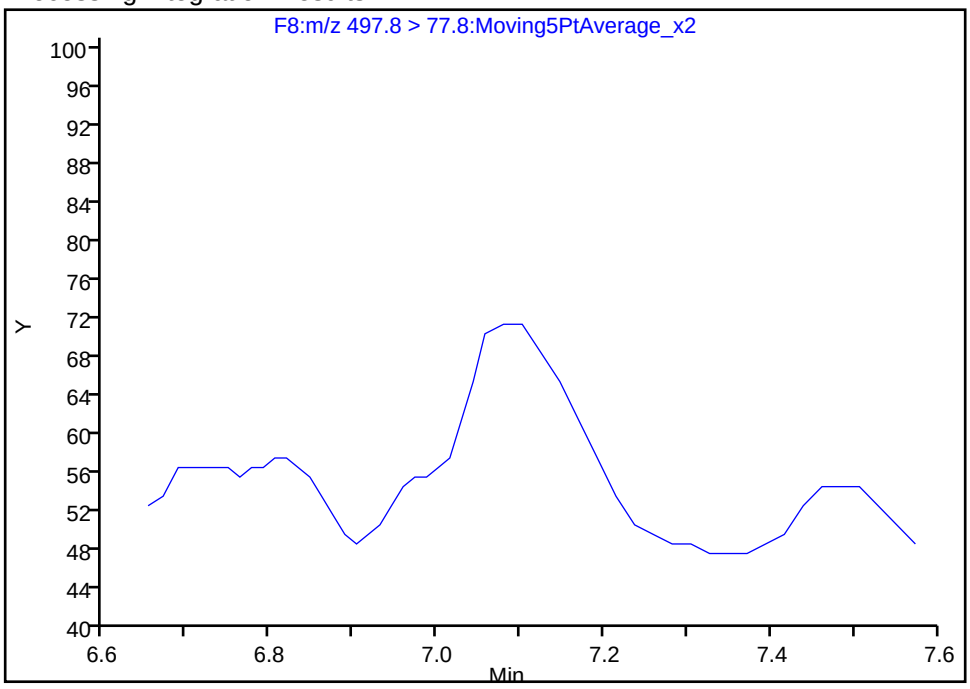
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

34 Perfluorooctane Sulfonamide, CAS: 754-91-6

Signal: 1

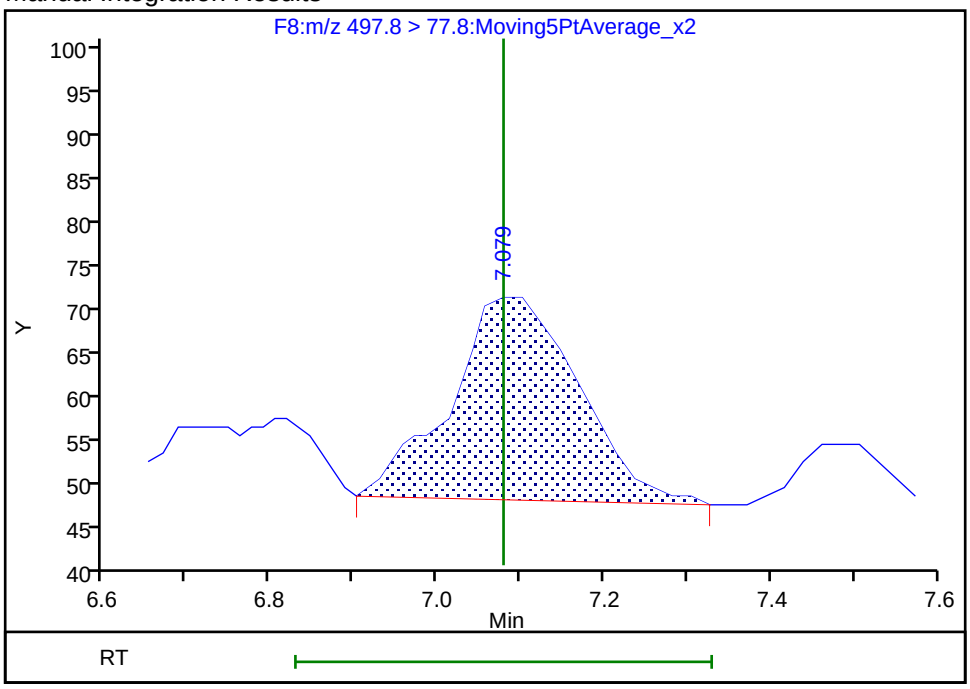
Not Detected
Expected RT: 7.08

Processing Integration Results



Manual Integration Results

RT: 7.08
Area: 250
Amount: 0.353260
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:04:03
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d

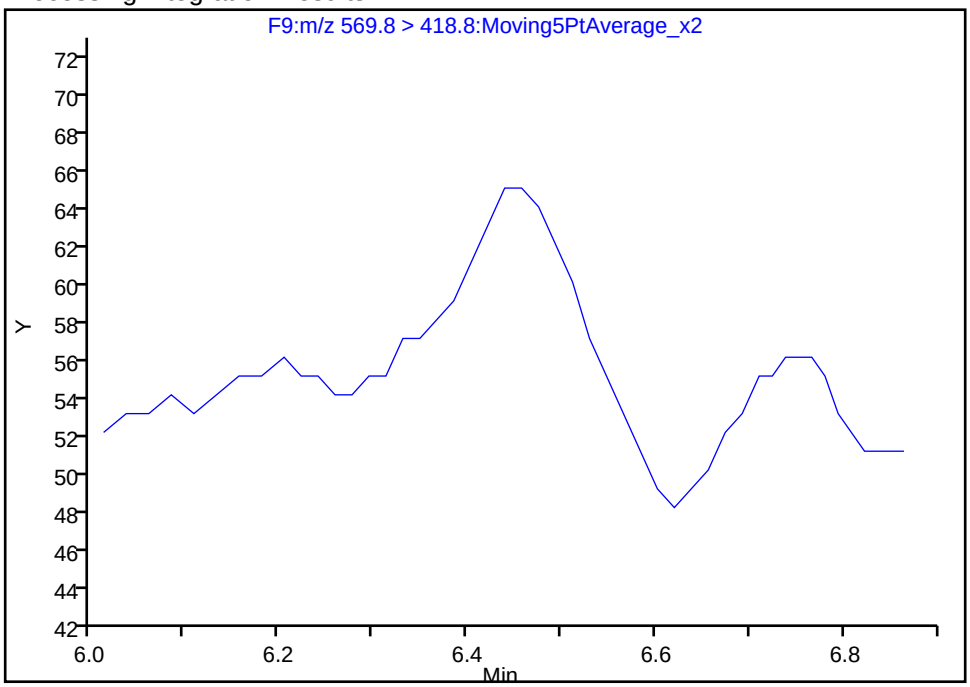
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F9:MRM		

28 N-methyl perfluorooctane sulfonamidoacetic a, CAS: 2355-31-9

Signal: 1

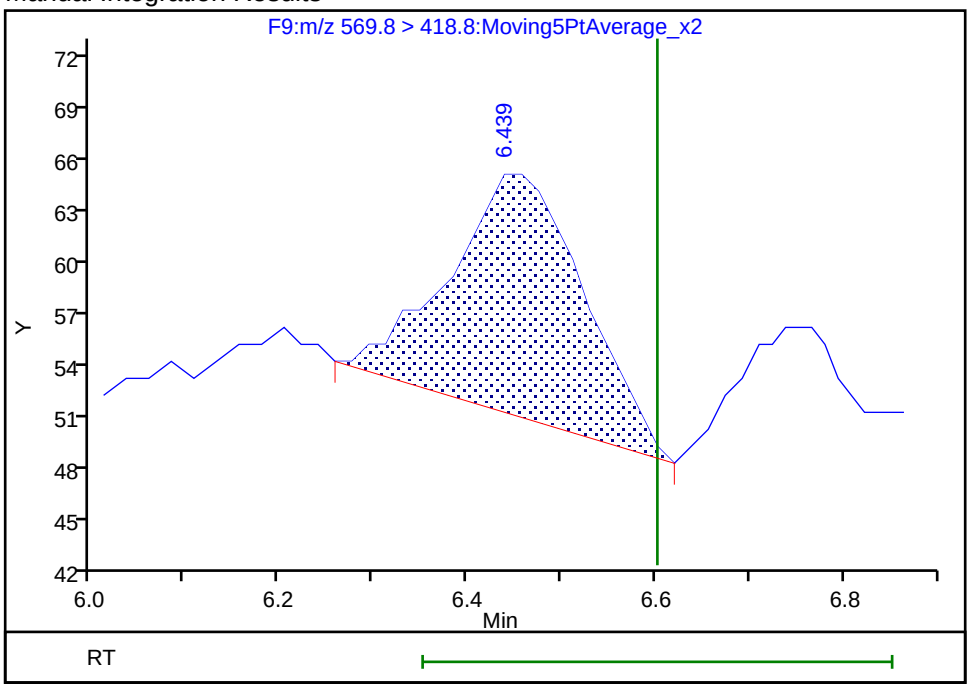
Not Detected
Expected RT: 6.60

Processing Integration Results



Manual Integration Results

RT: 6.44
Area: 142
Amount: 0.419934
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:04:13
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

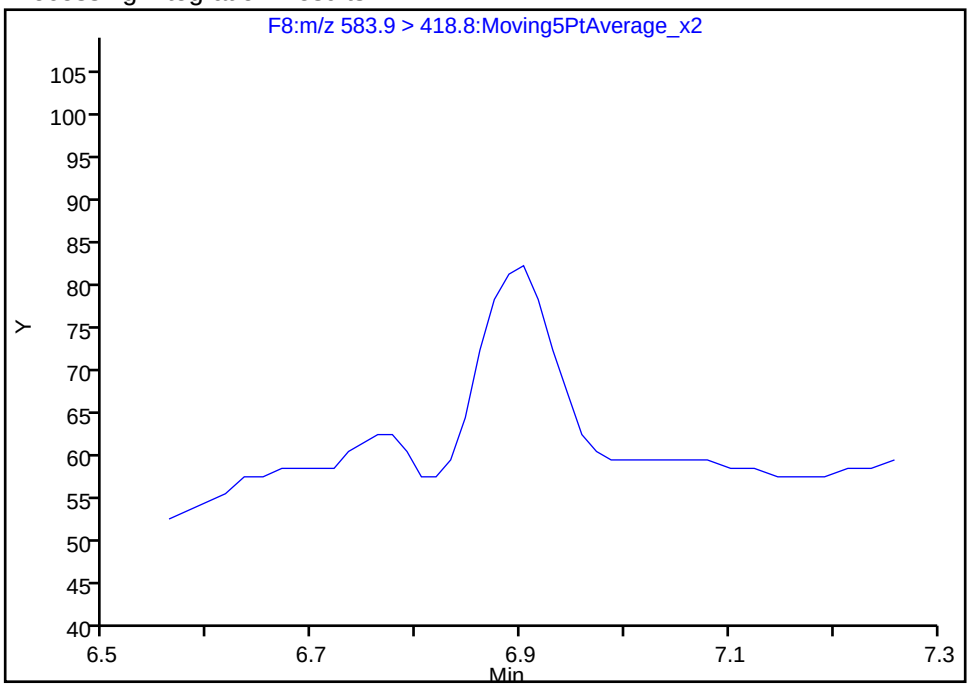
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

30 N-ethyl perfluorooctane sulfonamidoacetic ac, CAS: 2991-50-6

Signal: 1

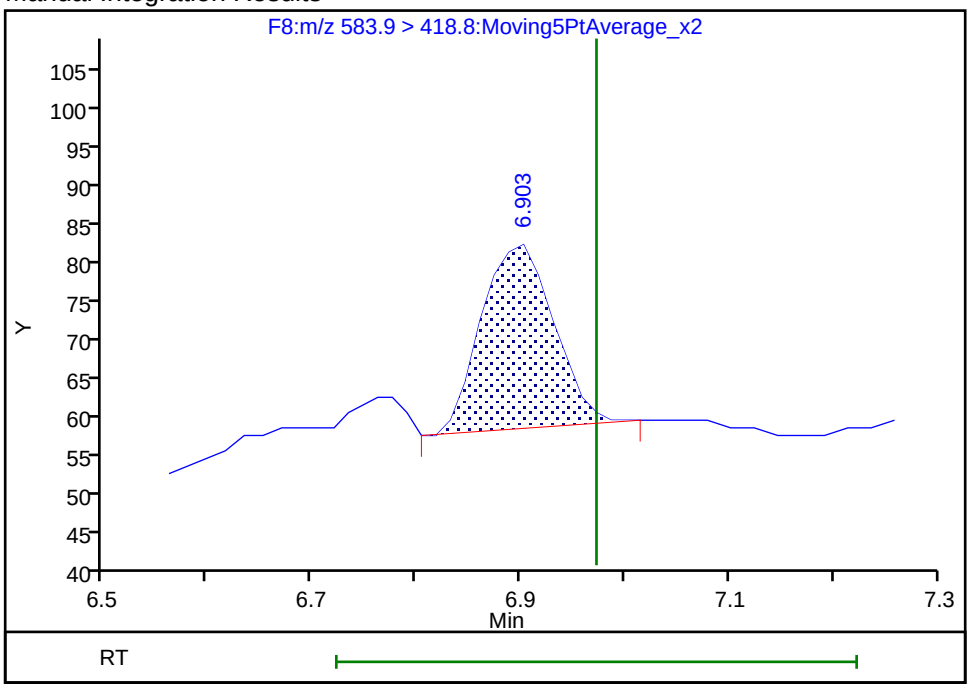
Not Detected
Expected RT: 6.97

Processing Integration Results



Manual Integration Results

RT: 6.90
Area: 116
Amount: 0.350088
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:04:09
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d

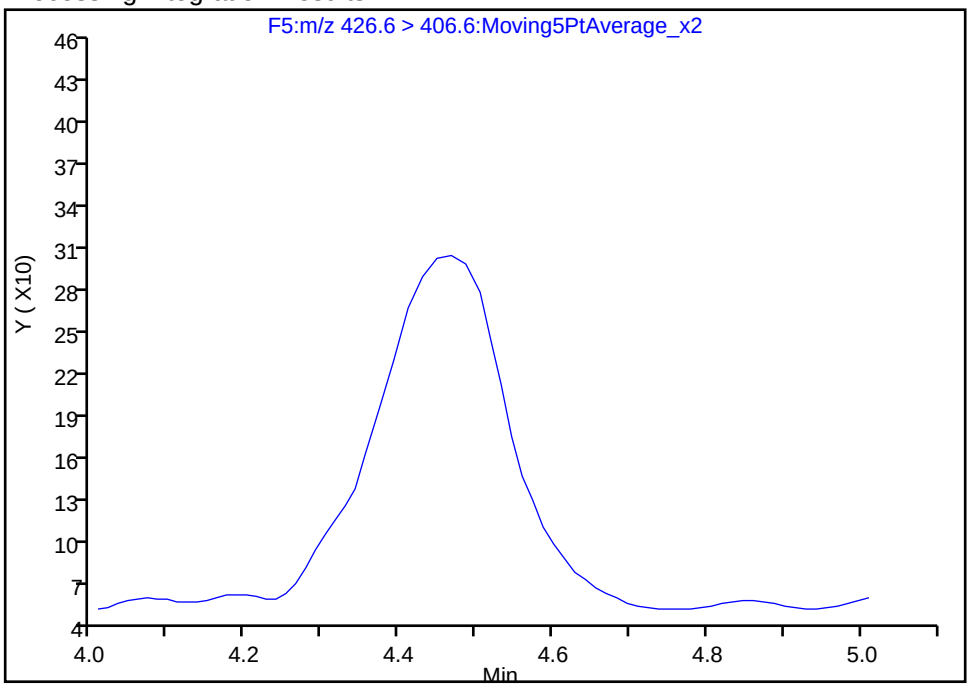
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

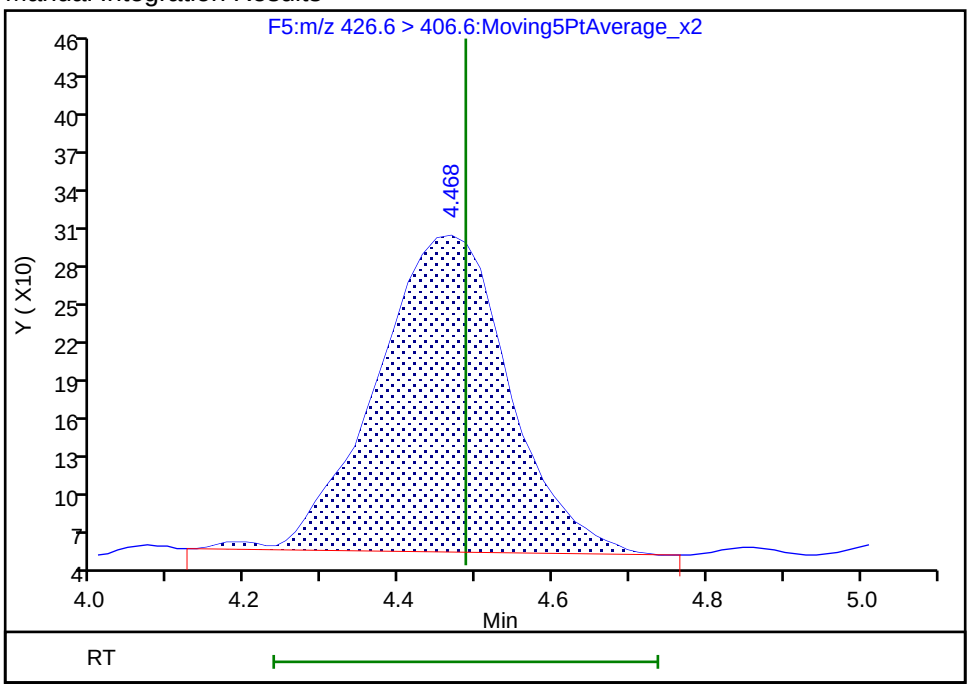
Not Detected
Expected RT: 4.49

Processing Integration Results



Manual Integration Results

RT: 4.47
Area: 2980
Amount: 0.562367
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:21:27
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

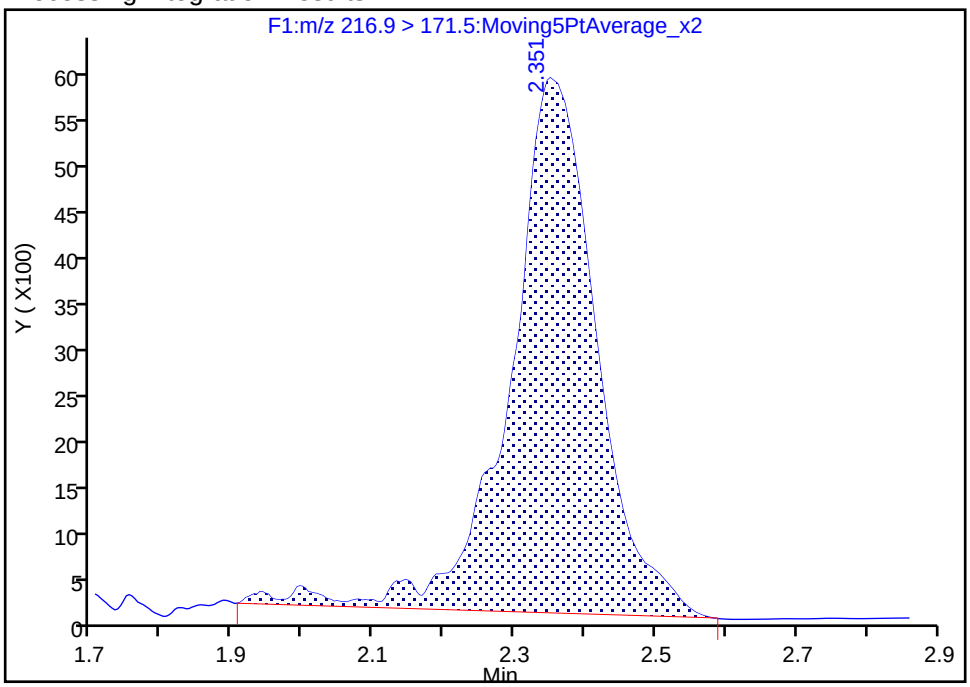
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

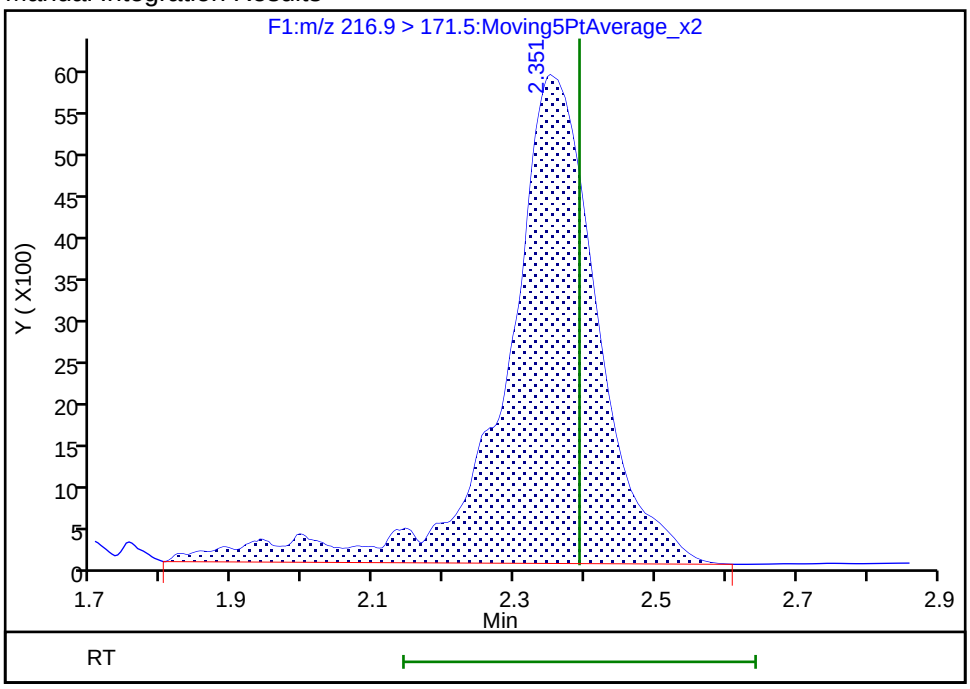
Processing Integration Results

RT: 2.35
Area: 50263
Amount: 9.996074
Amount Units: ng/ml



Manual Integration Results

RT: 2.35
Area: 54276
Amount: 10.794161
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:02:26

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

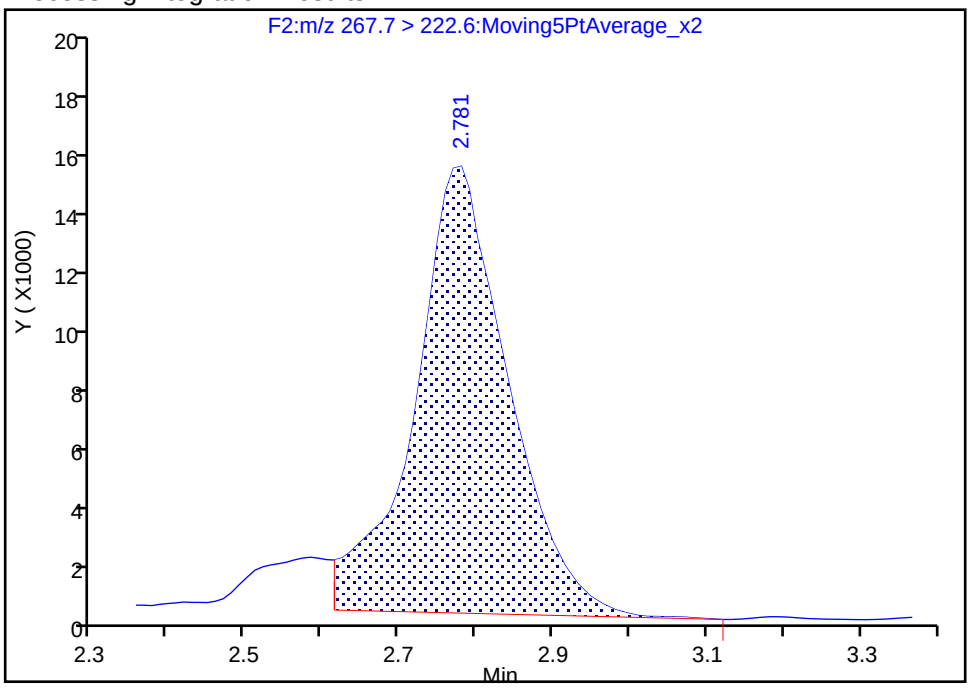
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d				
Injection Date:	12-Jun-2018 20:22:40	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-A	Lab Sample ID:	200-43678-2		
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	46
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

D 4 13C5-PFPeA, CAS: STL01893

Signal: 1

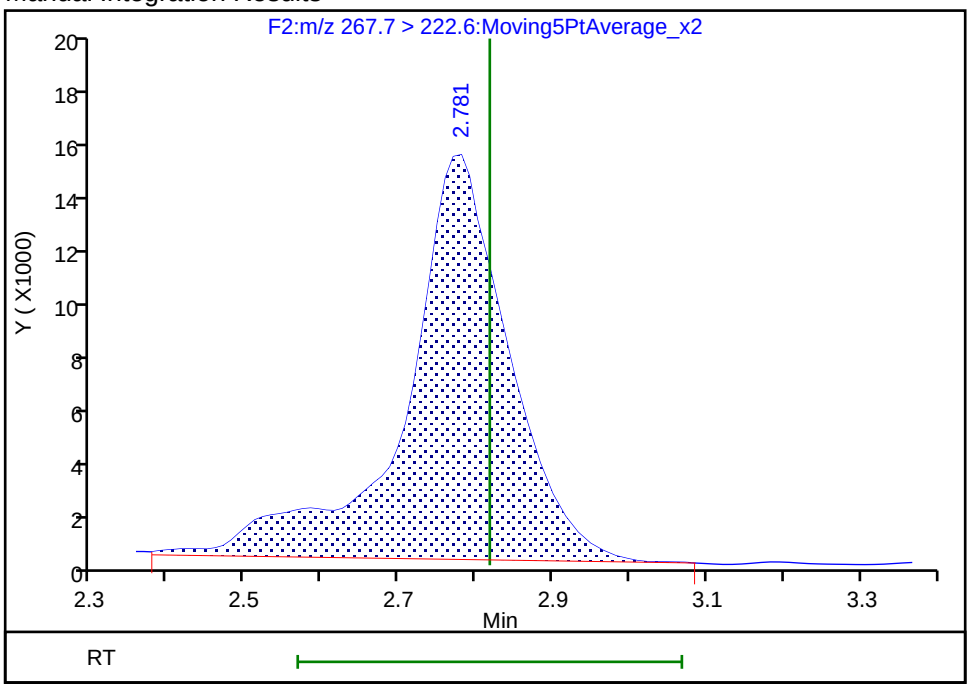
Processing Integration Results

RT: 2.78
Area: 126823
Amount: 17.186025
Amount Units: ng/ml



Manual Integration Results

RT: 2.78
Area: 140731
Amount: 19.070725
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:02:35

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington

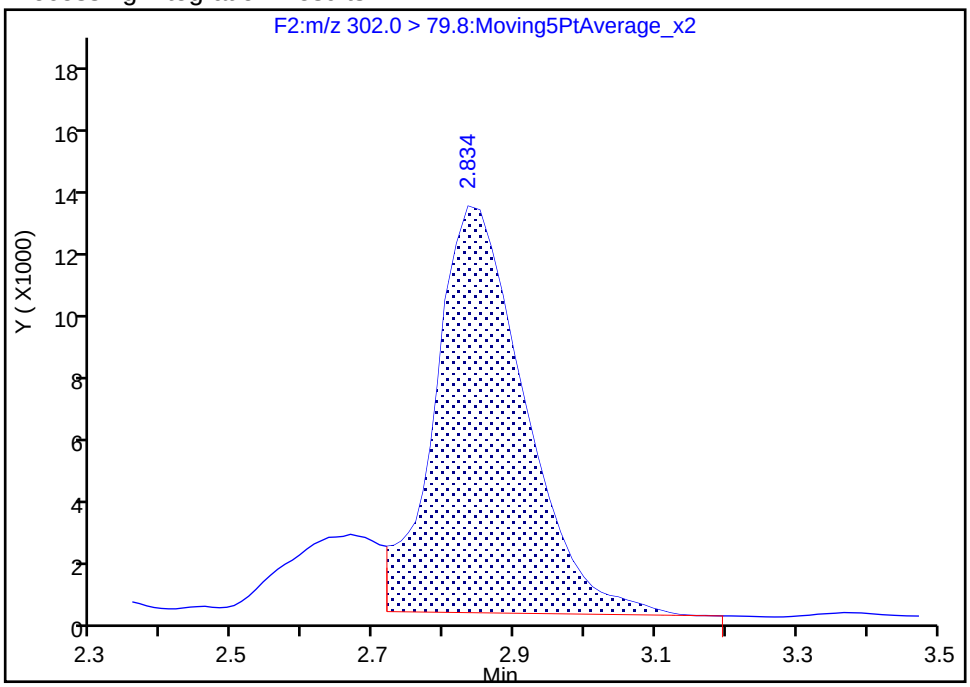
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A46.d
Injection Date: 12-Jun-2018 20:22:40 Instrument ID: LC410
Lims ID: 200-43678-A-2-A Lab Sample ID: 200-43678-2
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 46
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

D 5 13C3-PFBS, CAS: STL02337

Signal: 1

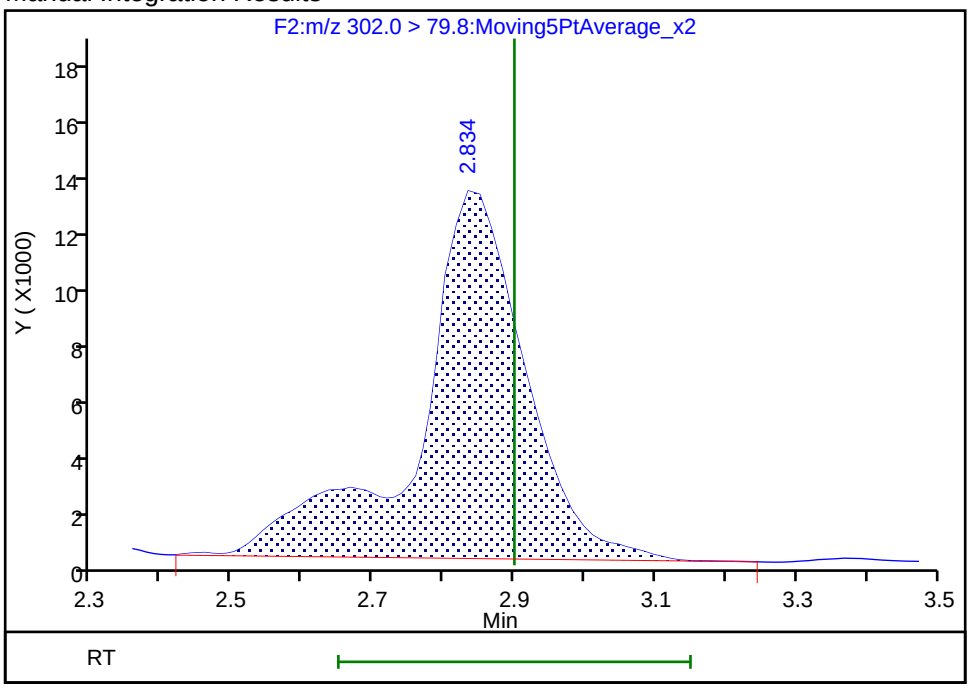
Processing Integration Results

RT: 2.83
Area: 116930
Amount: 23.952936
Amount Units: ng/ml



Manual Integration Results

RT: 2.83
Area: 140103
Amount: 28.699891
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:02:40
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: LMS-4 | Lab Sample ID: 200-43678-3

Matrix: Water | Lab File ID: PF061218A49.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 11:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 290.9(mL) | Date Analyzed: 06/12/2018 21:10

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	4.00		1.72	0.38
2706-90-3	Perfluoropentanoic acid (PFPeA)	6.17	B	1.72	0.38
307-24-4	Perfluorohexanoic acid (PFHxA)	4.49	B	1.72	0.38
375-85-9	Perfluoroheptanoic acid (PFHpA)	3.95		1.72	0.25
335-67-1	Perfluorooctanoic acid (PFOA)	9.25	B	1.72	0.40
375-95-1	Perfluorononanoic acid (PFNA)	2.33		1.72	0.22
335-76-2	Perfluorodecanoic acid (PFDA)	12.7		1.72	0.38
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.34	J	1.72	0.38
307-55-1	Perfluorododecanoic acid (PFDoA)	0.49	J	1.72	0.38
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	1.72	U	1.72	0.38
376-06-7	Perfluorotetradecanoic acid (PFTeA)	1.72	U	1.72	0.38
375-73-5	Perfluorobutanesulfonic acid (PFBS)	0.95	J	1.72	0.76
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.66	J B	1.72	0.24
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	1.72	U	1.72	0.38
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	6.99		1.72	0.26
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.43	J	1.72	0.38
754-91-6	Perfluorooctane Sulfonamide (FOSA)	1.72	U	1.72	0.38
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.69	J	1.72	0.52
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	1.72	U	1.72	0.52
27619-97-2	6:2 FTS	5.00		1.72	0.52
39108-34-4	8:2 FTS	0.75	J B	1.72	0.52

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: LMS-4 | Lab Sample ID: 200-43678-3

Matrix: Water | Lab File ID: PF061218A49.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 11:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 290.9(mL) | Date Analyzed: 06/12/2018 21:10

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	43		25-150
STL01893	13C5 PFPeA	70		25-150
STL00993	13C2 PFHxA	82		25-150
STL01892	13C4-PFHpA	91		25-150
STL00990	13C4 PFOA	91		25-150
STL00995	13C5 PFNA	96		25-150
STL00996	13C2 PFDA	87		25-150
STL00997	13C2 PFUnA	80		25-150
STL00998	13C2 PFDoA	71		25-150
STL02116	13C2-PFTeDA	74		25-150
STL02337	13C3-PFBS	90		25-150
STL00994	18O2 PFHxS	91		25-150
STL00991	13C4 PFOS	98		25-150
STL01056	13C8 FOSA	59		25-150
STL02118	d3-NMeFOSAA	63		25-150
STL02117	d5-NEtFOSAA	68		25-150
STL02279	M2-6:2FTS	179		25-150
STL02280	M2-8:2FTS	117		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d
Lims ID: 200-43678-A-3-A
Client ID: LMS-4
Sample Type: Client
Inject. Date: 12-Jun-2018 21:10:57 ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-049 3
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:23:23 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 13-Jun-2018 10:23:17

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.361	2.382	-0.021	0.996	3500	2.33			8.3	M
D 1 13C4 PFBA										M
216.9 > 171.5	2.371	2.392	-0.021	1.000	106976	21.4		42.7	136	M
D 4 13C5-PFPeA										
267.7 > 222.6	2.801	2.818	-0.017	1.000	258021	35.1		70.2	1495	
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.818	2.834	-0.016	1.006	21825	3.59			22.1	M
D 5 13C3-PFBS										
302.0 > 79.8	2.883	2.900	-0.017	1.000	203148	41.8		89.9	938	
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.867	2.900	-0.033	0.994	2026	0.5504			2.1	M
7 Perfluorohexanoic acid										
312.8 > 268.6	3.263	3.300	-0.037	1.004	18182	2.61			37.6	
D 8 13C2 PFHxA										
314.8 > 269.6	3.250	3.300	-0.050	1.000	351818	41.0		81.9	1598	
9 Perfluoroheptanoic acid										M
362.9 > 318.8	3.826	3.882	-0.056	1.000	20868	2.30			25.5	M
D 10 13C4-PFHpA										
366.9 > 321.8	3.826	3.882	-0.056	1.000	446301	45.3		90.5	959	
D 12 18O2 PFHxS										
402.9 > 83.8	3.859	3.914	-0.055	1.000	199231	42.9		90.6	297	
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.871	3.919	-0.048	1.003	2359	0.9681			11.7	M
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.486	4.486	0.0	1.000	7368	2.91			121	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.486	4.546	-0.060	1.000	111110	85.2		179	1304	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.532	4.601	-0.069	1.000	343993	45.6		91.2	3357	
* 17 13C2-PFOA										
414.9 > 369.8	4.532	4.601	-0.069		396220	50.0			936	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.532	4.615	-0.083	1.000	41262	5.38			86.9	
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.411	4.642	-0.231	0.826	138	0.2173			1.3	M
D 19 13C5 PFNA										
467.8 > 422.8	5.334	5.422	-0.088	1.000	475178	47.9		95.7	1331	
20 Perfluorononanoic acid										M
462.8 > 418.8	5.340	5.422	-0.082	1.001	11076	1.36			59.9	M
22 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.346	5.434	-0.088	1.001	22120	4.07			150	M
D 21 13C4 PFOS										
502.8 > 79.8	5.340	5.440	-0.100	1.000	236757	47.0		98.4	578	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.118	6.070	0.048	1.000	240	0.4356			2.4	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.118	6.209	-0.091	1.000	150671	55.8		117	1661	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.143	6.227	-0.084	1.000	93954	7.39			1441	
D 26 13C2 PFDA										
514.9 > 469.5	6.143	6.227	-0.084	1.000	626383	43.3		86.6	3442	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	96546	31.7		63.3	928	
28 N-methyl perfluorooctane sulfonami										M
569.8 > 418.8	6.476	6.602	-0.126	1.000	93	0.4006			0.7	M
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.861	6.959	-0.098	1.000	88232	33.8		67.6	862	
31 Perfluorodecane Sulfonic acid										M
598.8 > 79.8	6.874	6.973	-0.099	1.287	1043	0.2516			15.0	M
32 Perfluoroundecanoic acid										M
562.8 > 518.6	6.917	6.987	-0.070	1.004	8511	0.7820			160	M
D 33 13C2 PFUnA										
564.8 > 519.8	6.889	6.987	-0.098	1.000	528657	40.0		79.9	4327	
D 35 13C8 FOSA										M
505.8 > 77.8	7.079	7.079	0.0	1.000	326849	29.4		58.8	4704	M
D 36 13C2 PFDoA										
614.8 > 569.6	7.586	7.684	-0.098	1.000	564324	35.3		70.6	4507	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.586	7.684	-0.098	1.000	2391	0.2855			57.0	
38 Perfluorotridecanoic acid										M
662.8 > 618.6	8.264	8.294	-0.030	1.089	346	0.0670			7.0	M
D 39 13C2-PFTeDA										
714.8 > 669.6	8.742	8.855	-0.113	1.000	596101	36.8		73.5	5120	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.749	8.862	-0.113	1.001	442	-0.1344			10.3	M
712.8 > 168.8	8.756	8.862	-0.106	1.002	110		4.02(0.00-0.00)		4.3	M
712.8 > 218.8	8.817	8.862	-0.045	1.008	86		5.14(0.00-0.00)		2.1	M

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:23:26 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d

Injection Date: 12-Jun-2018 21:10:57 Instrument ID: LC410

Lims ID: 200-43678-A-3-A Lab Sample ID: 200-43678-3

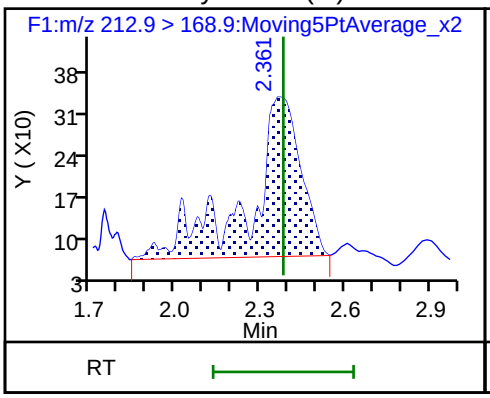
Client ID: LMS-4

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 49

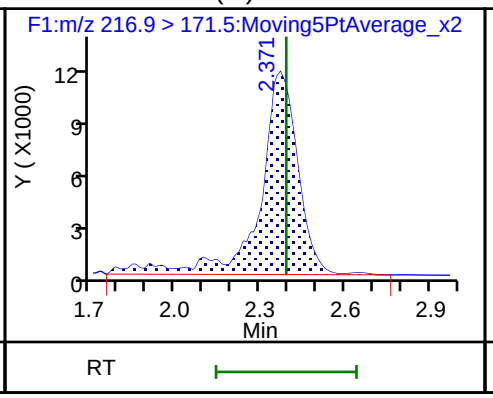
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

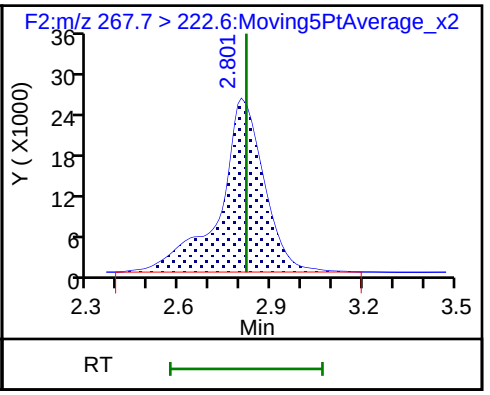
2 Perfluorobutyric acid (M)



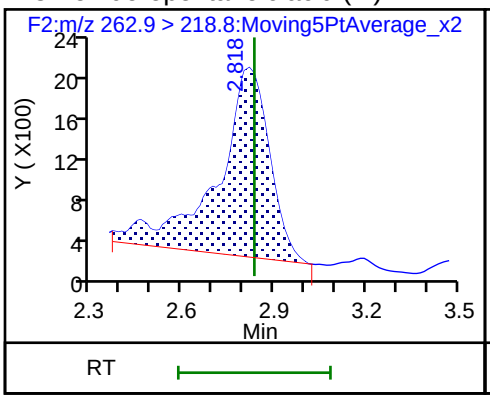
D 1 13C4 PFBA (M)



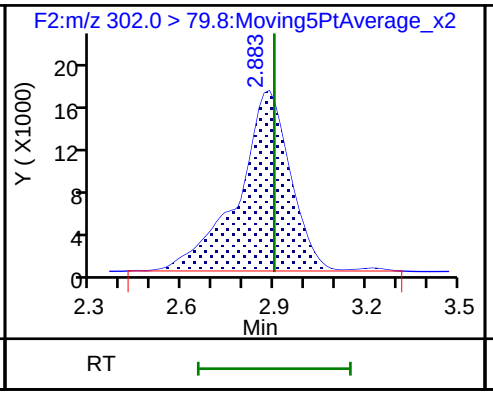
D 4 13C5-PFPeA



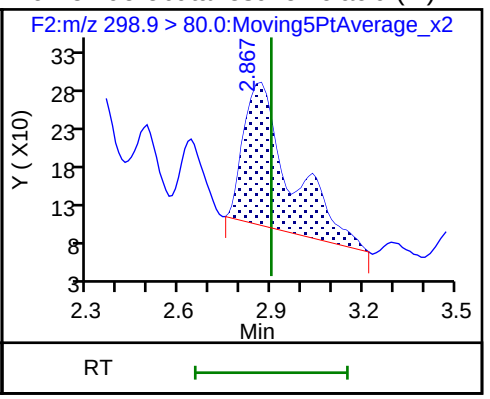
3 Perfluoropentanoic acid (M)



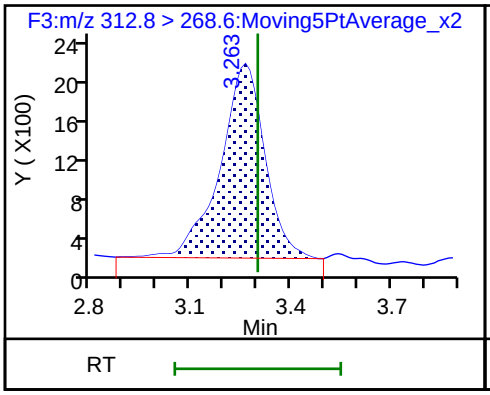
D 5 13C3-PFBS



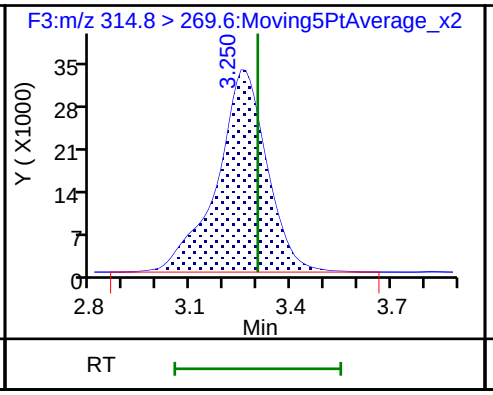
6 Perfluorobutanesulfonic acid (M)



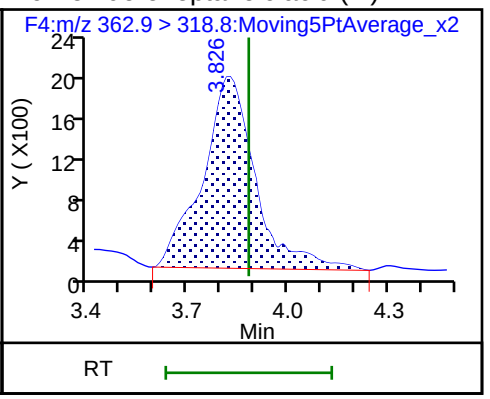
7 Perfluorohexanoic acid



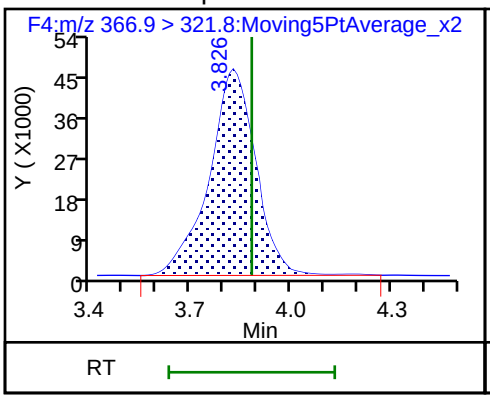
D 8 13C2 PFHxA



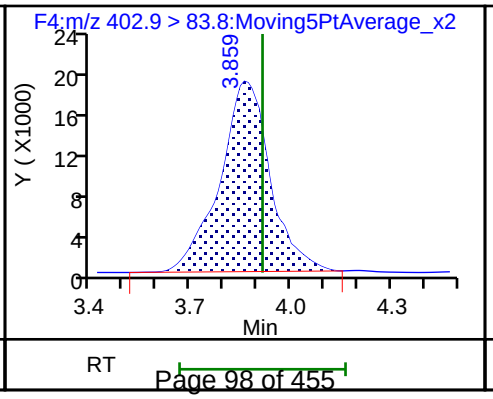
9 Perfluoroheptanoic acid (M)



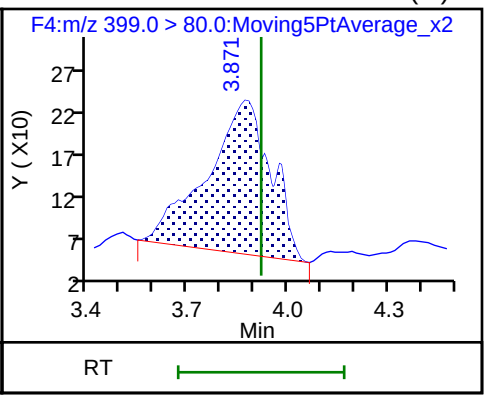
D 10 13C4-PFHpA



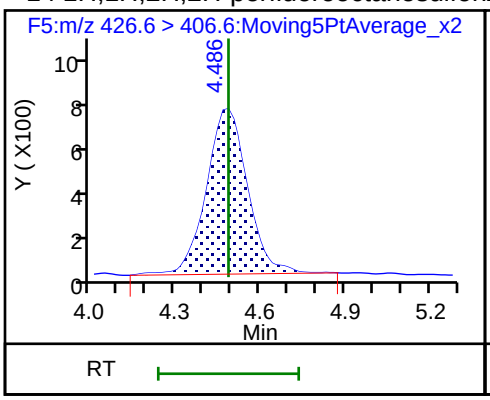
D 12 18O2 PFHxS



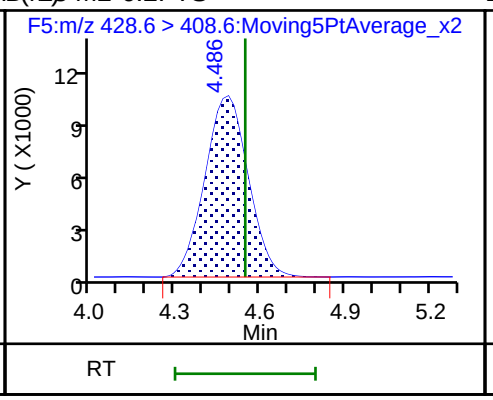
11 Perfluorohexanesulfonic acid (M)



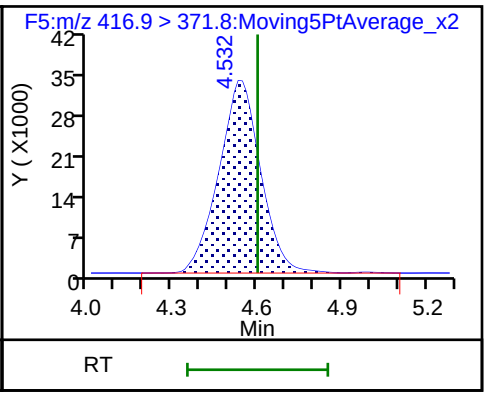
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



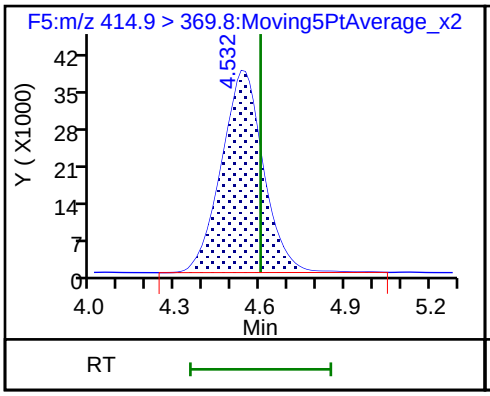
D 13 M2-6:2FTS



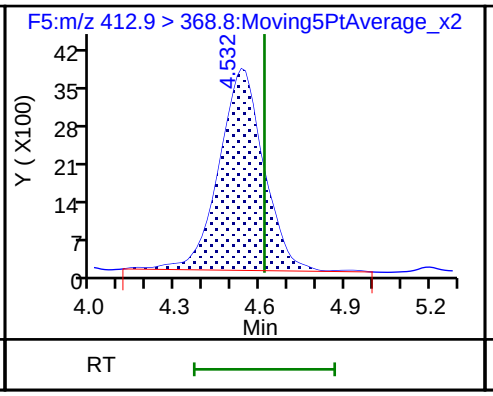
D 16 13C4 PFOA



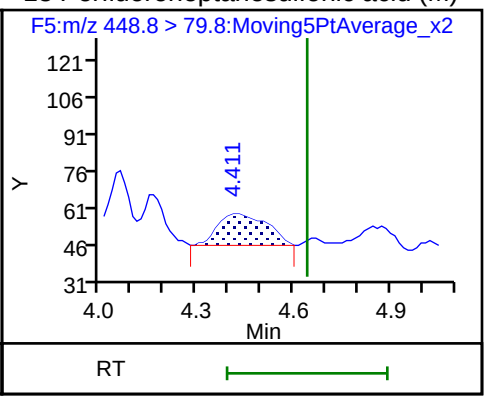
* 17 13C2-PFOA



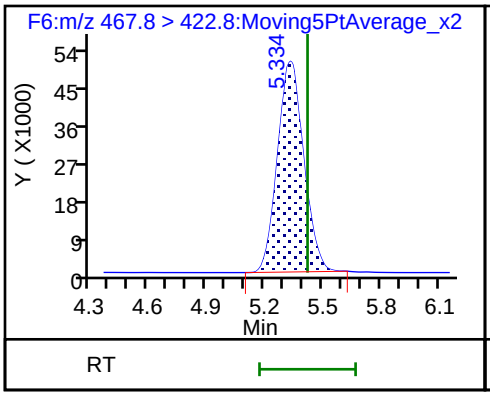
15 Perfluorooctanoic acid



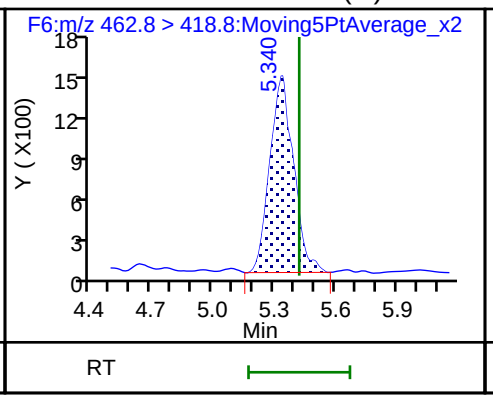
18 Perfluoroheptanesulfonic acid (M)



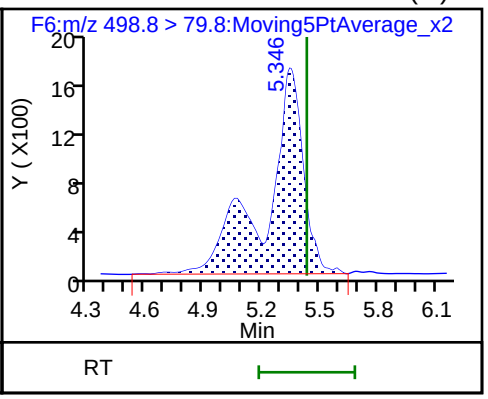
D 19 13C5 PFNA



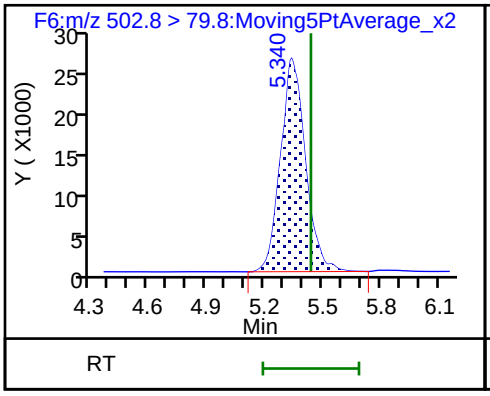
20 Perfluorononanoic acid (M)



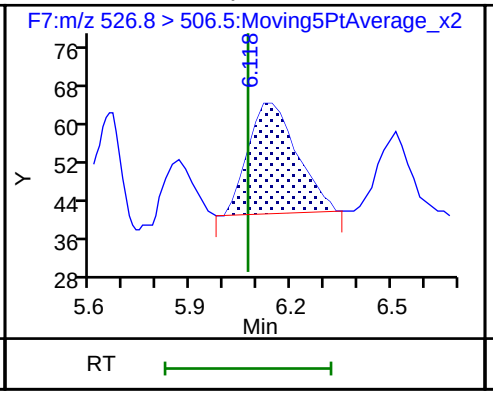
22 Perfluorooctane sulfonic acid (M)



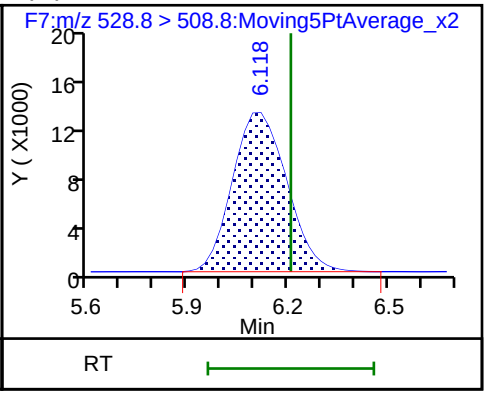
D 21 13C4 PFOS



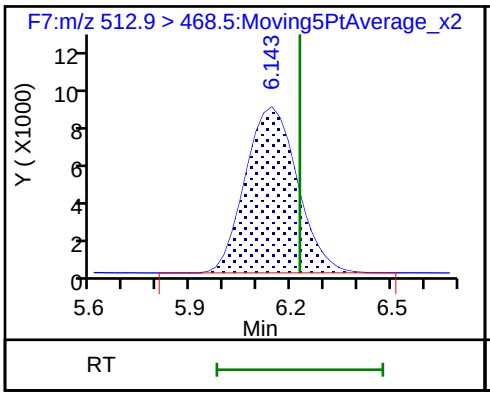
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



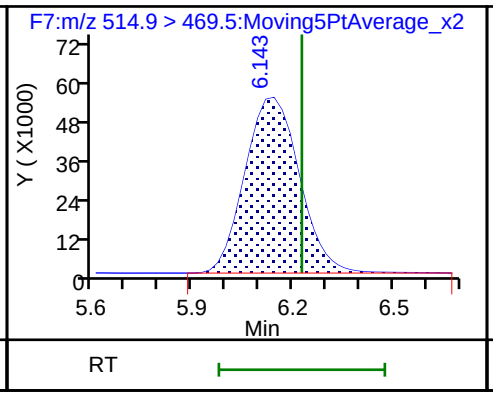
D 24 M2-8:2FTS



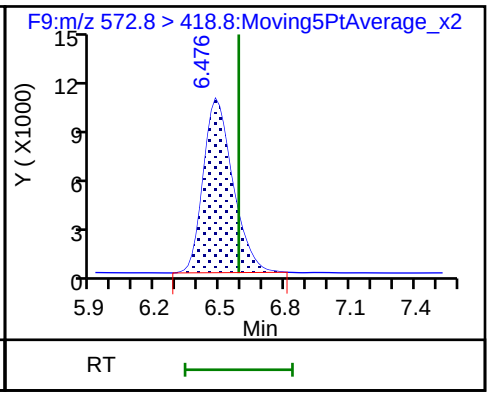
25 Perfluorodecanoic acid



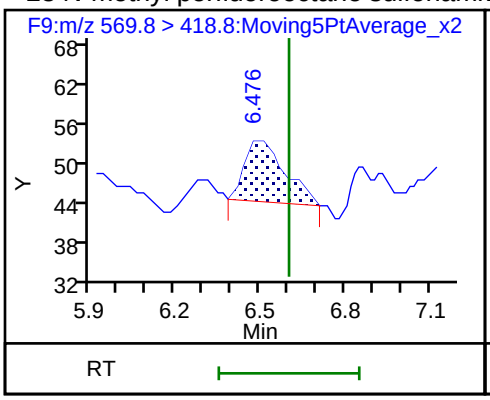
D 26 13C2 PFDA



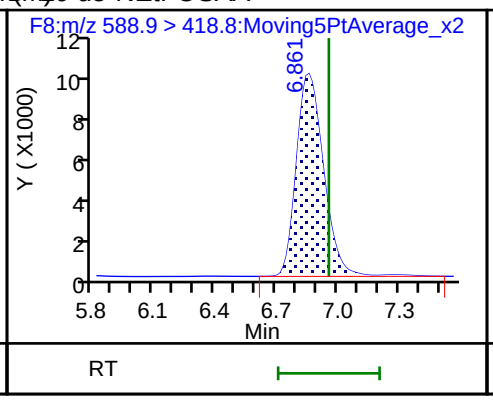
D 27 d3-NMeFOSAA



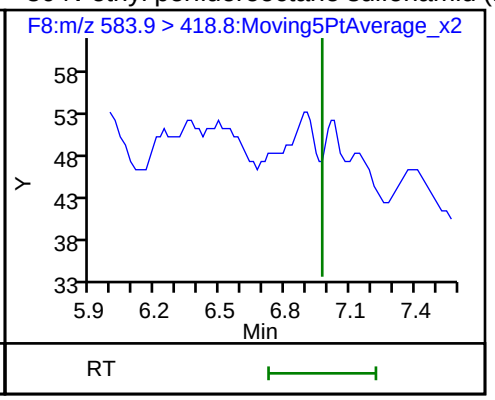
28 N-methyl perfluorooctane sulfonamid (M)



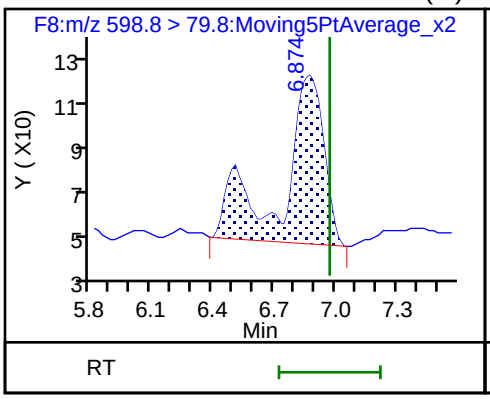
D 29 d5-NEtFOSAA



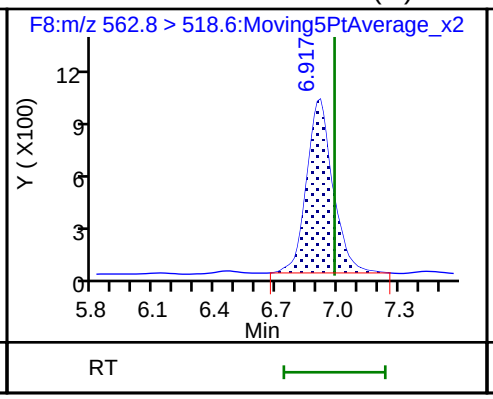
30 N-ethyl perfluorooctane sulfonamid (ND)



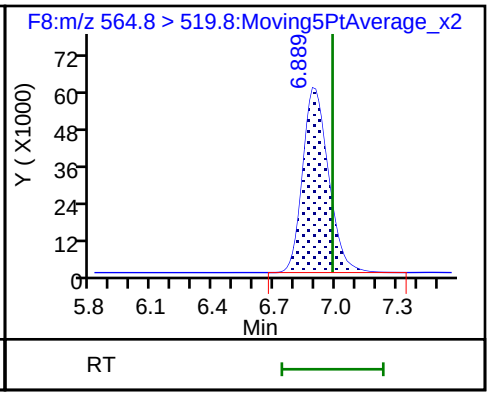
31 Perfluorodecane Sulfonic acid (M)



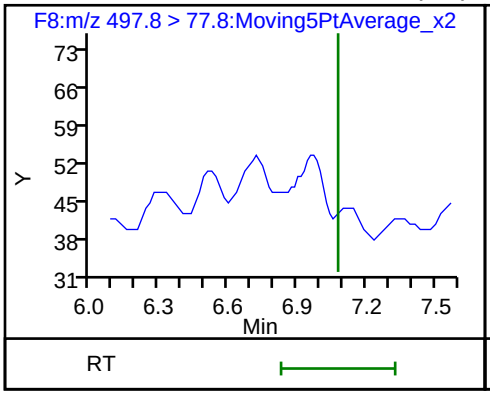
32 Perfluoroundecanoic acid (M)



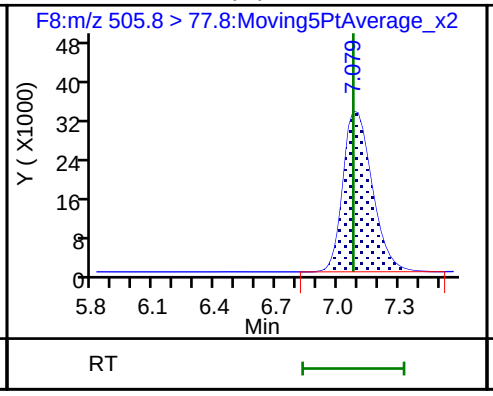
D 33 13C2 PFUnA



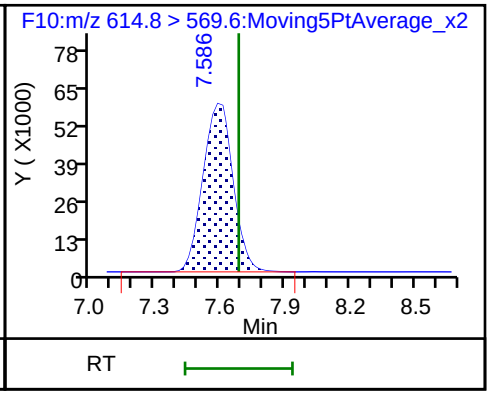
34 Perfluorooctane Sulfonamide (ND)



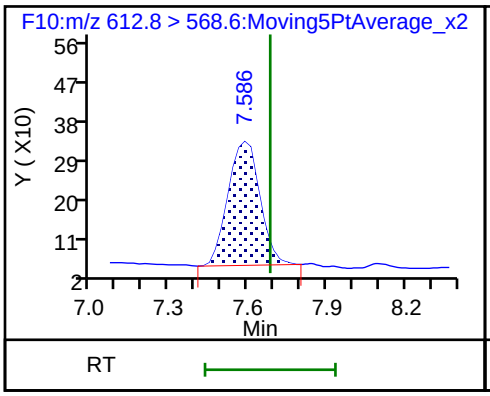
D 35 13C8 FOSA (M)



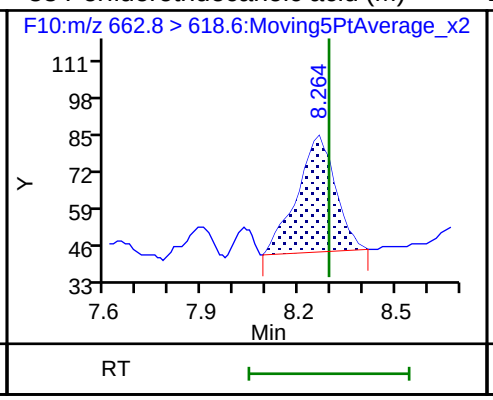
D 36 13C2 PFDoA



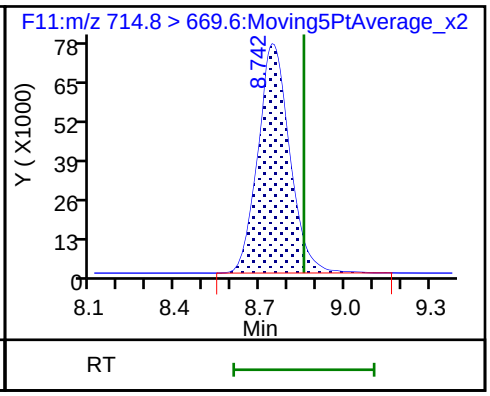
37 Perfluorododecanoic acid



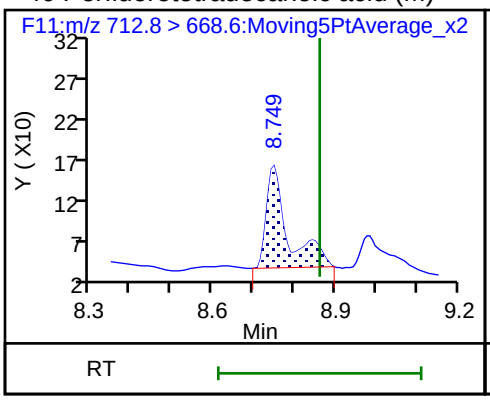
38 Perfluorotridecanoic acid (M)



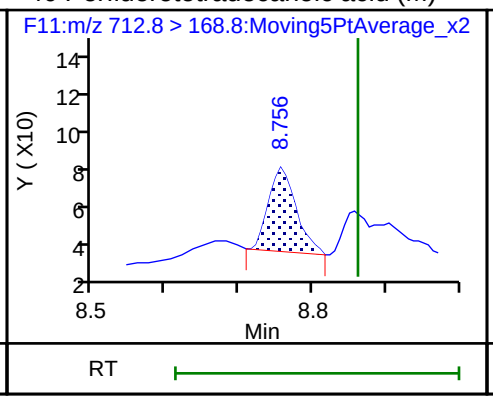
D 39 13C2-PFTeDA



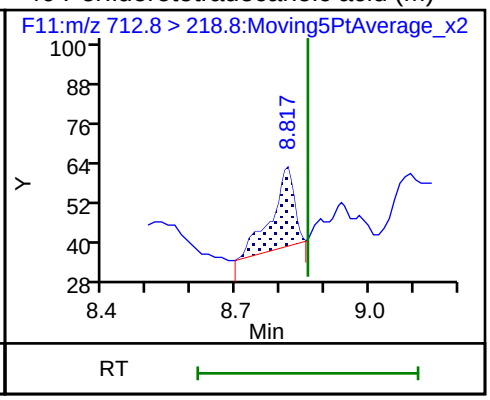
40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid (M)



Manual Integration/User Assign Peak Report

TestAmerica Burlington

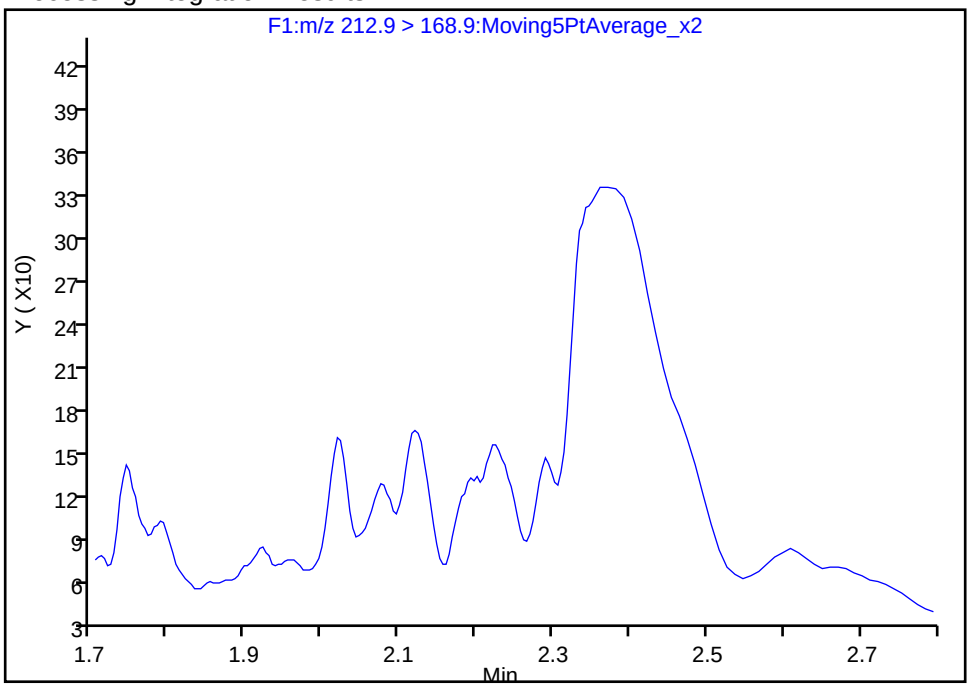
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

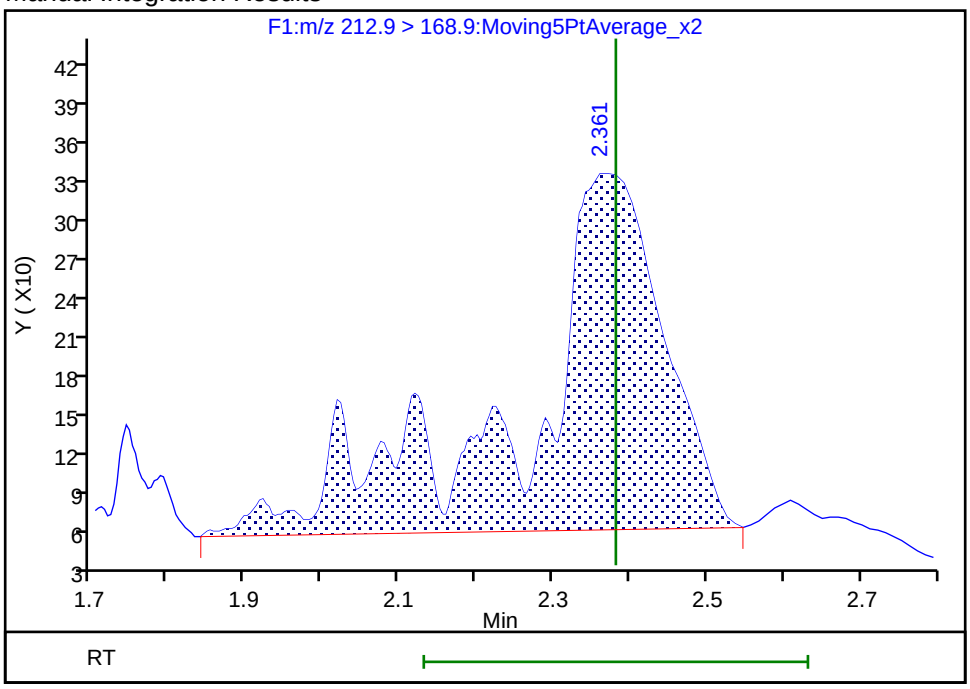
Not Detected
Expected RT: 2.38

Processing Integration Results



Manual Integration Results

RT: 2.36
Area: 3500
Amount: 2.329798
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:11:27
Audit Action: Manually Integrated Audit Reason: Missed Peak

TestAmerica Burlington

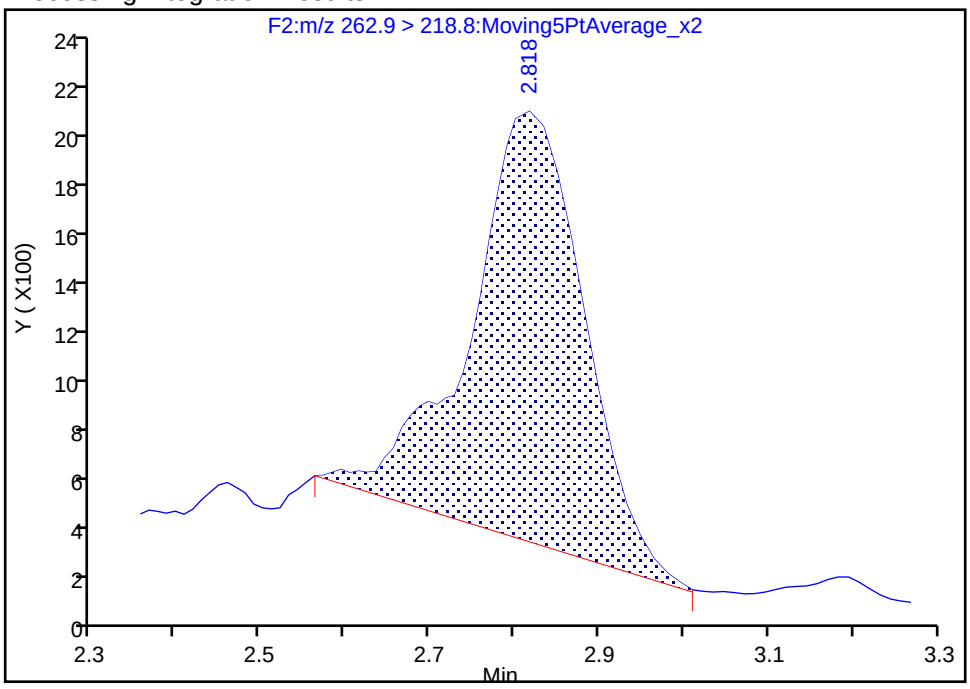
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d
Injection Date: 12-Jun-2018 21:10:57 Instrument ID: LC410
Lims ID: 200-43678-A-3-A Lab Sample ID: 200-43678-3
Client ID: LMS-4
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

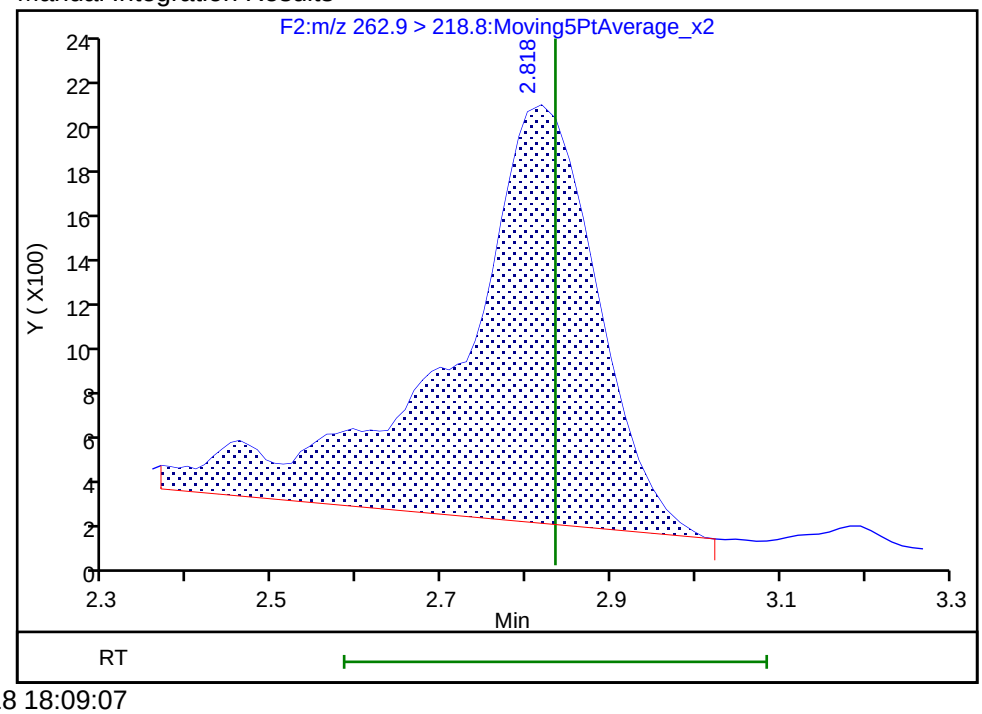
Processing Integration Results

RT: 2.82
Area: 15952
Amount: 2.669477
Amount Units: ng/ml



Manual Integration Results

RT: 2.82
Area: 21825
Amount: 3.587181
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:09:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

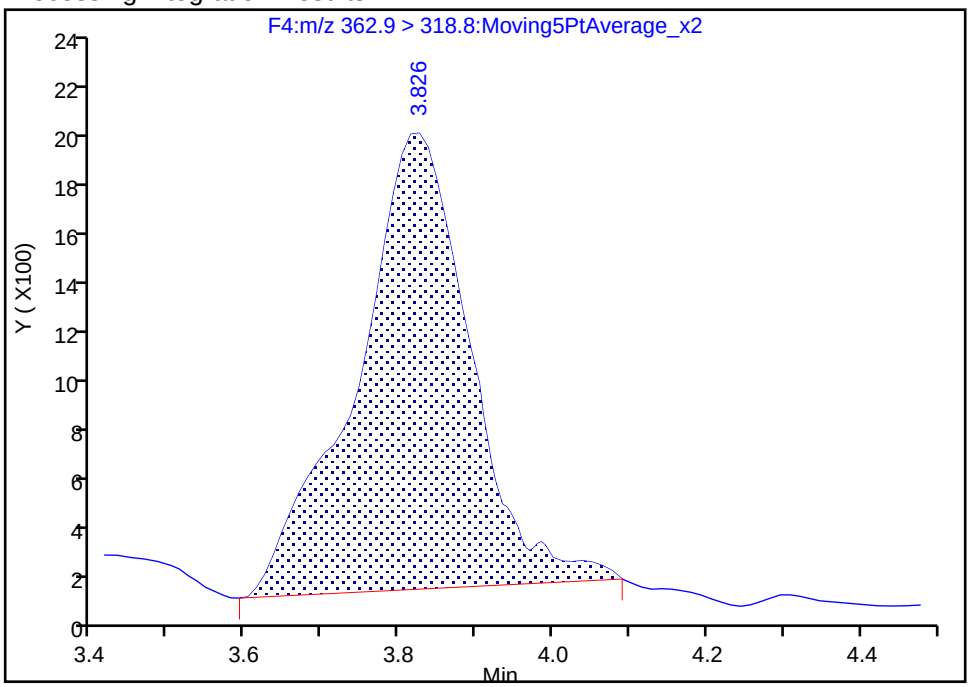
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

9 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

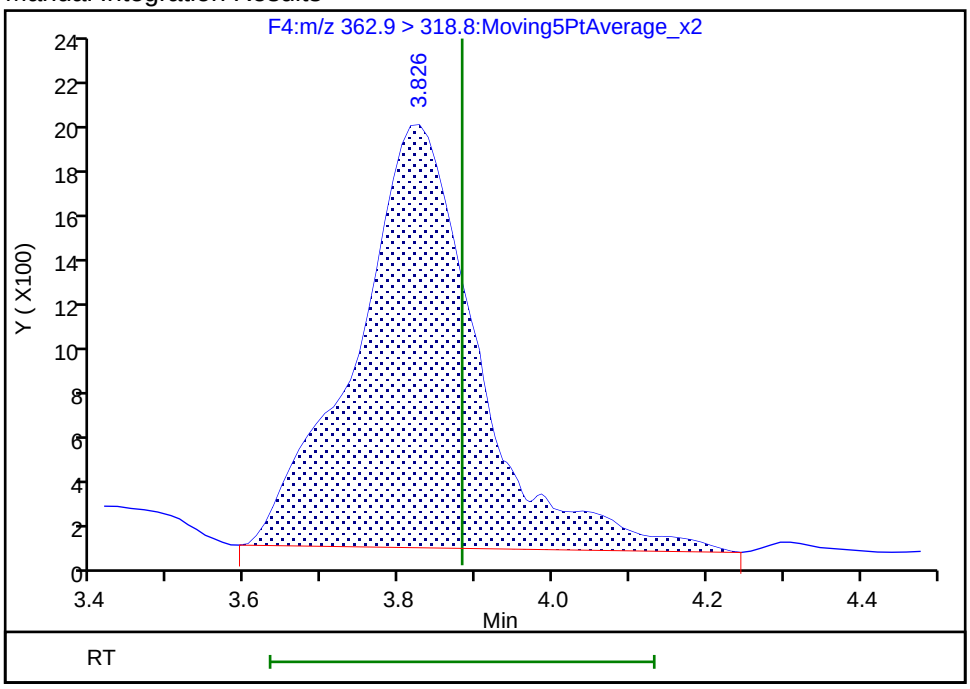
Processing Integration Results

RT: 3.83
Area: 18875
Amount: 2.094338
Amount Units: ng/ml



Manual Integration Results

RT: 3.83
Area: 20868
Amount: 2.298790
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:09:16

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

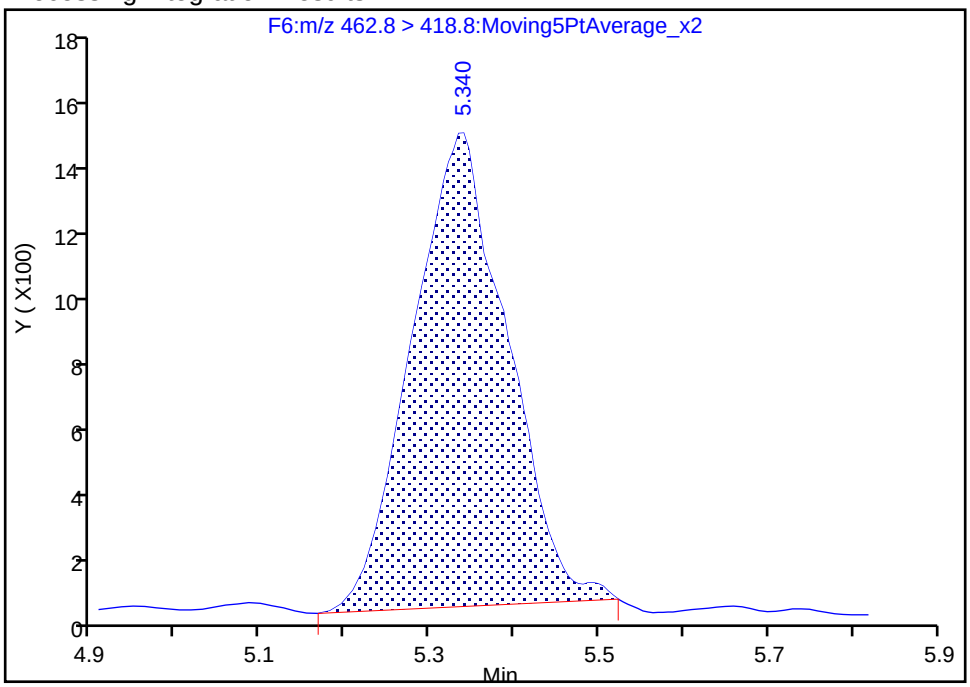
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F6:MRM		

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

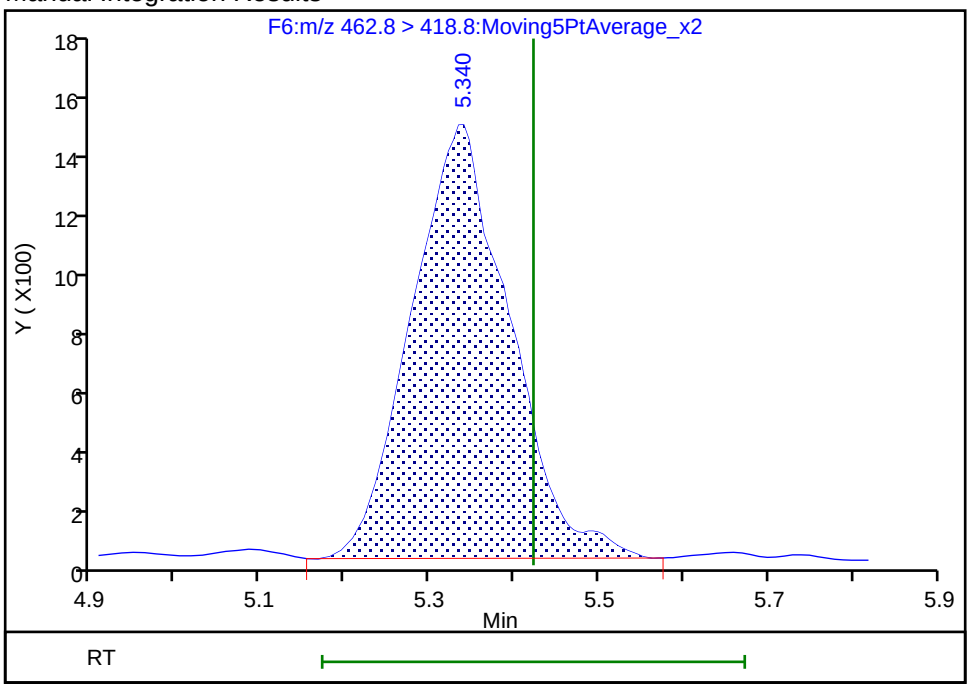
Processing Integration Results

RT: 5.34
Area: 10644
Amount: 1.310897
Amount Units: ng/ml



Manual Integration Results

RT: 5.34
Area: 11076
Amount: 1.356799
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:09:26

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

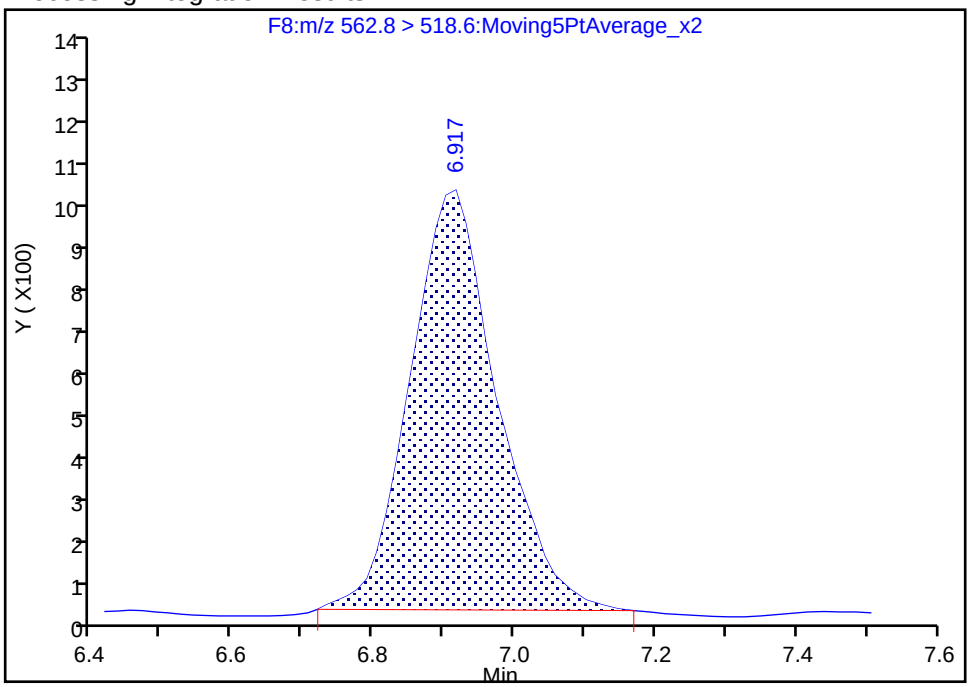
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d
Injection Date: 12-Jun-2018 21:10:57 Instrument ID: LC410
Lims ID: 200-43678-A-3-A Lab Sample ID: 200-43678-3
Client ID: LMS-4
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

32 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

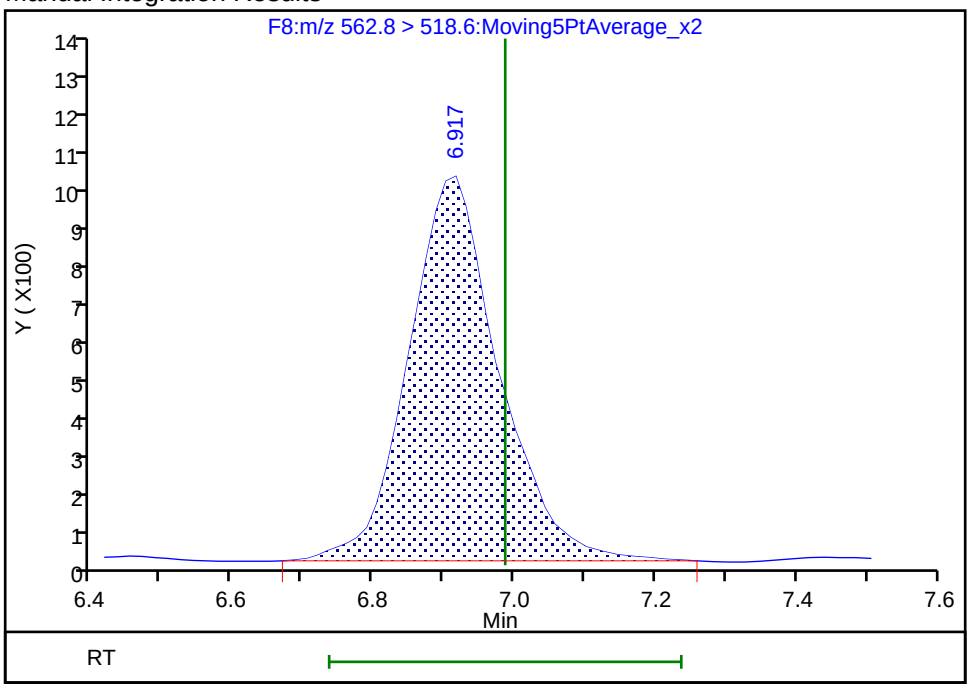
Processing Integration Results

RT: 6.92
Area: 8134
Amount: 0.750033
Amount Units: ng/ml



Manual Integration Results

RT: 6.92
Area: 8511
Amount: 0.781972
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:09:46
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

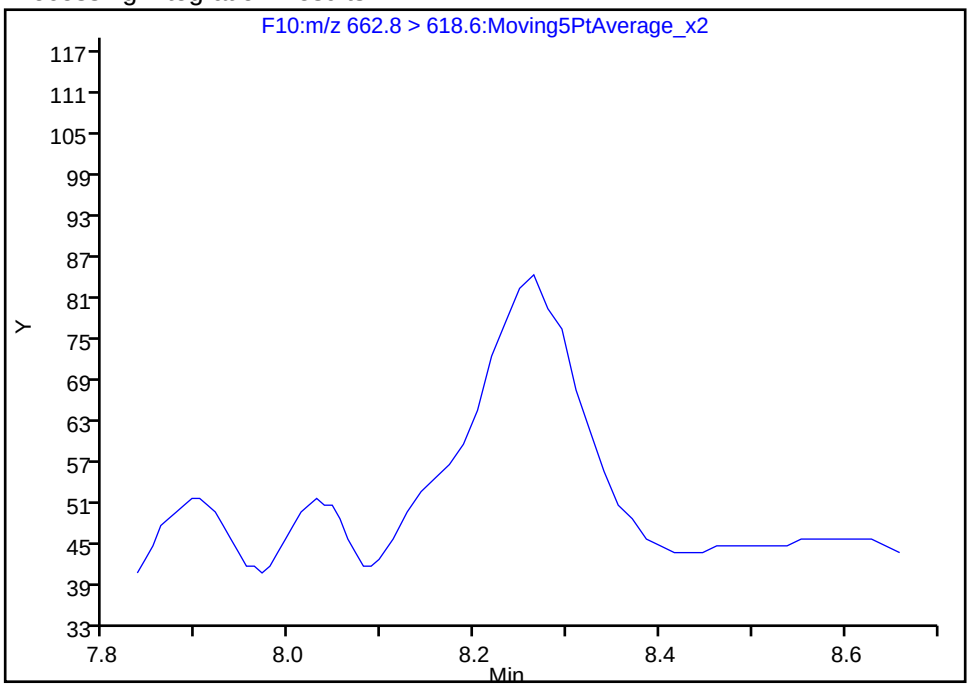
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

38 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

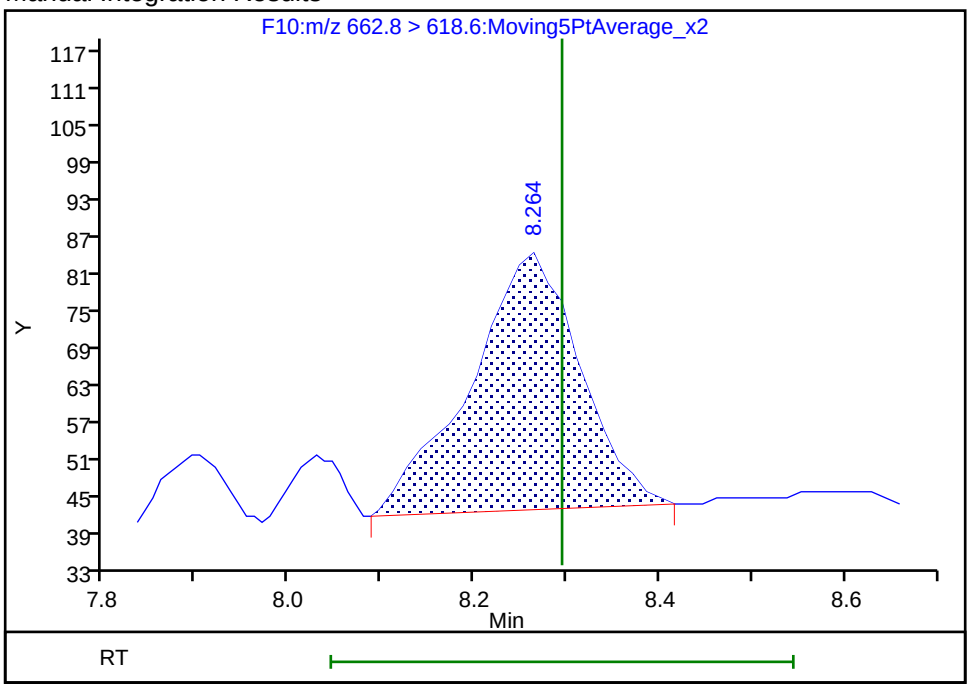
Not Detected
Expected RT: 8.29

Processing Integration Results



Manual Integration Results

RT: 8.26
Area: 346
Amount: 0.067044
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:10:17
Audit Action: Manually Integrated Audit Reason: Missed Peak

TestAmerica Burlington

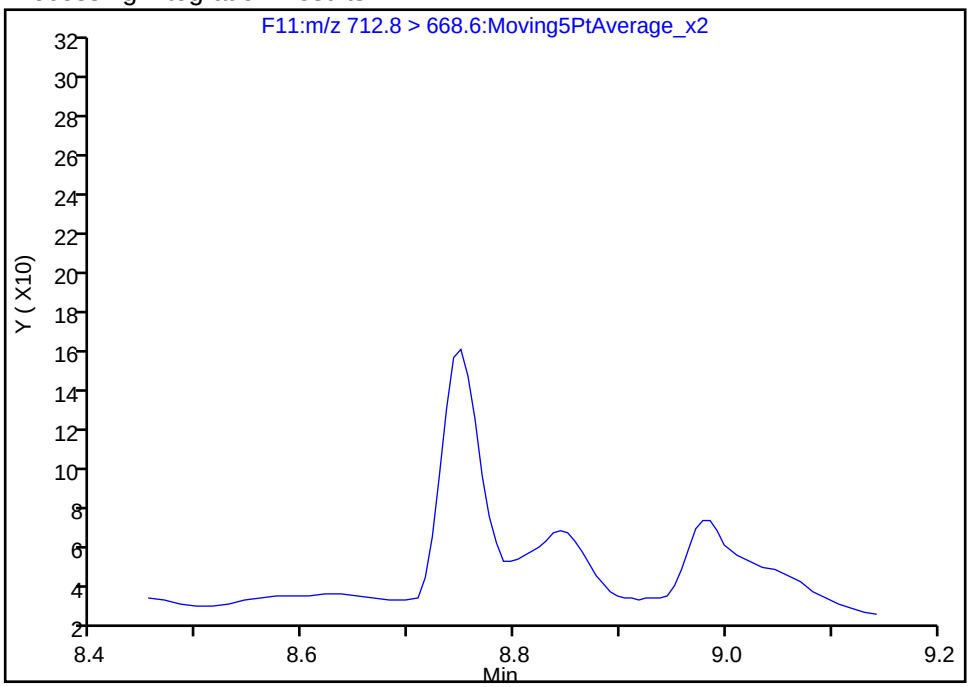
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

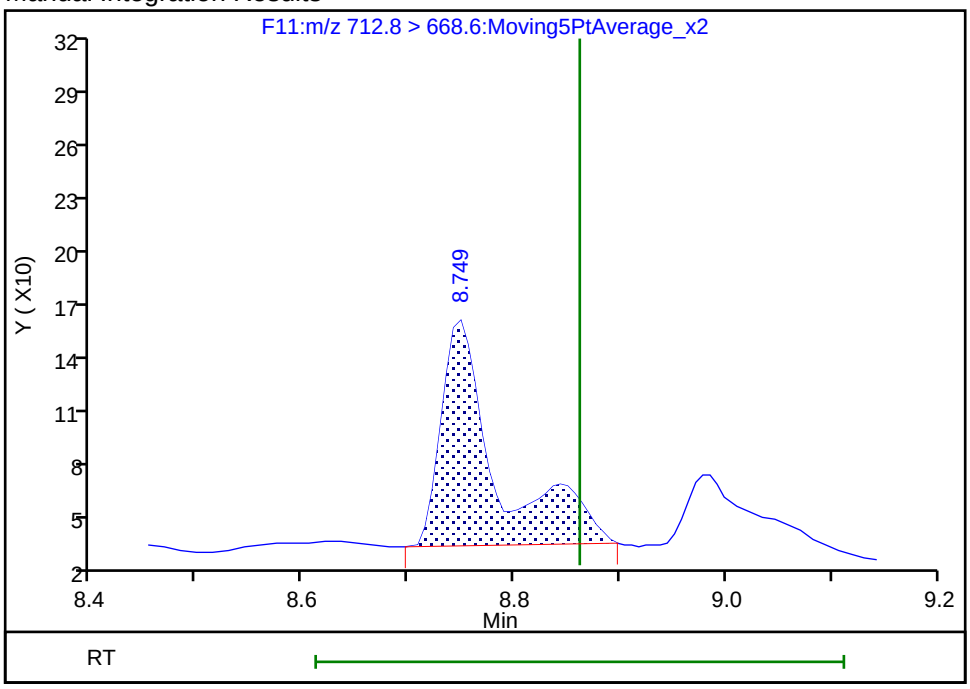
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.75
Area: 442
Amount: -0.134362
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:10:03
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d

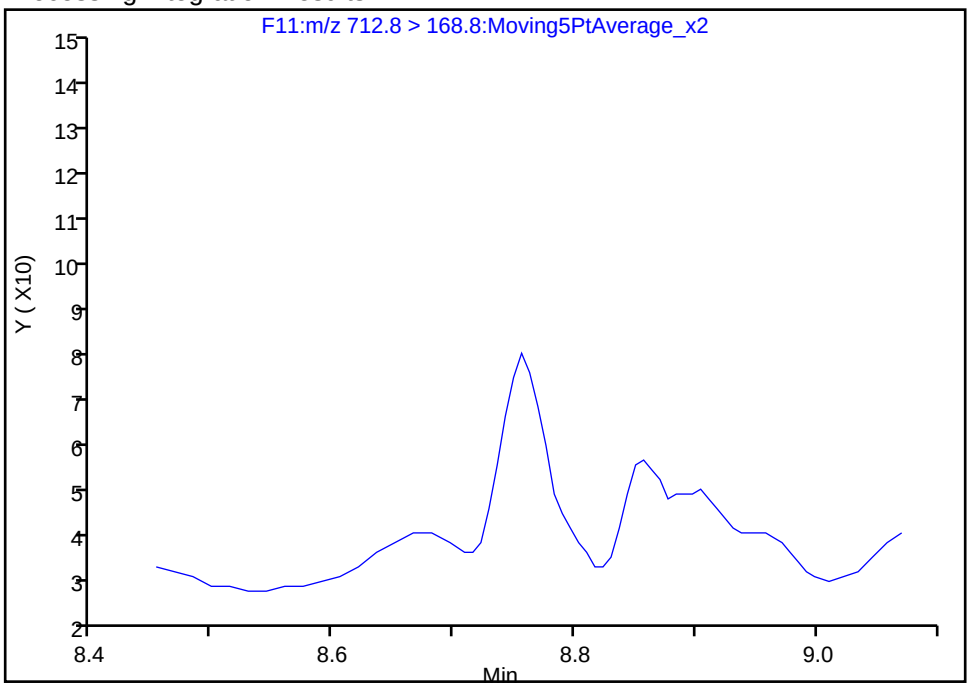
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

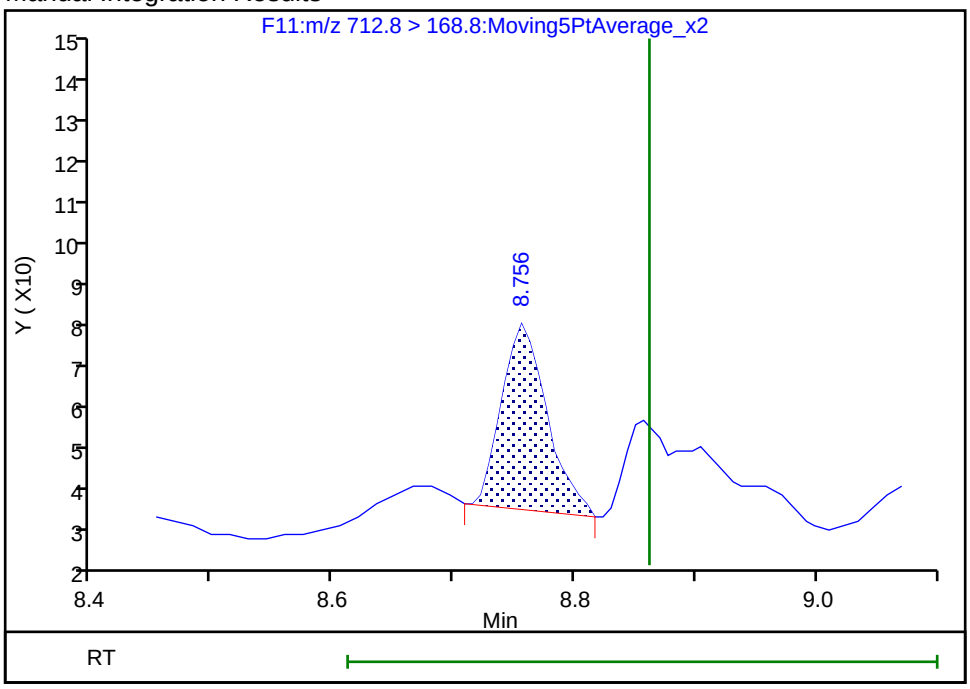
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.76
Area: 110
Amount: -0.134362
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:10:07
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

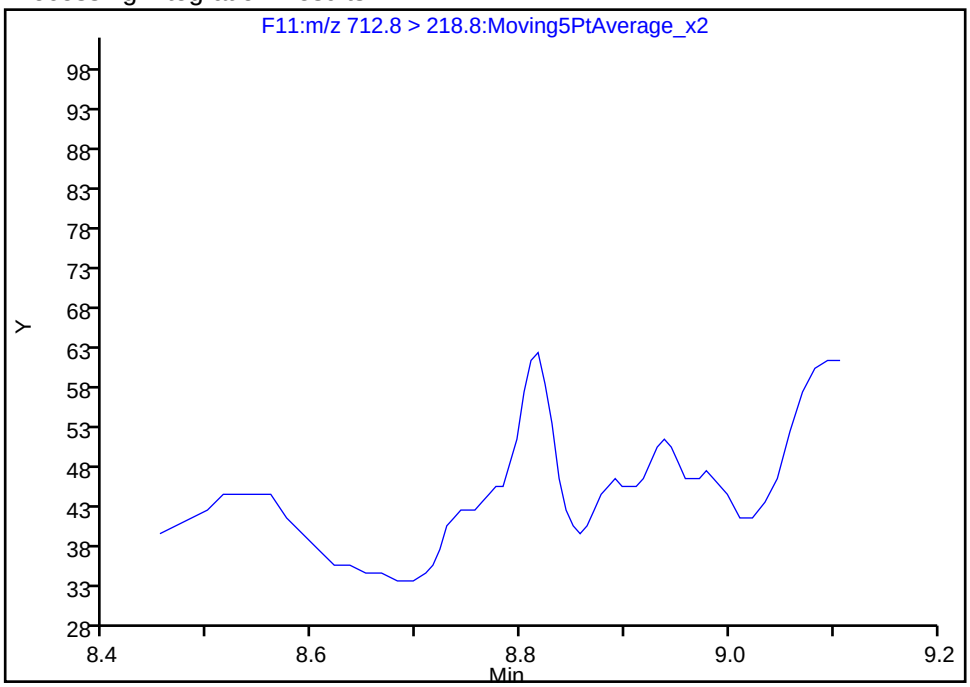
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 3

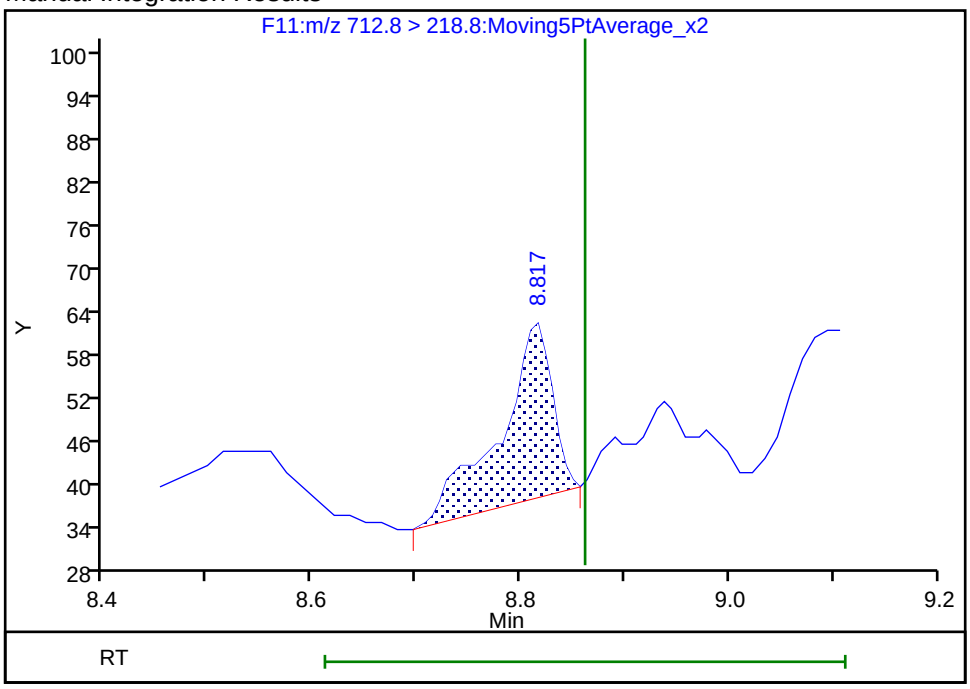
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.82
Area: 86
Amount: -0.134362
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:10:09
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

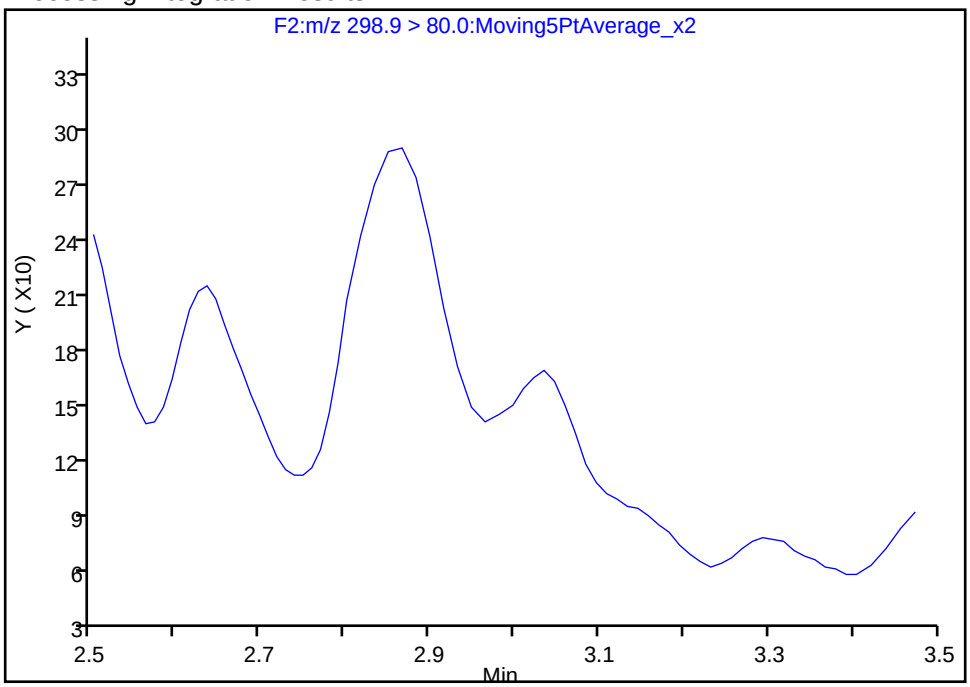
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

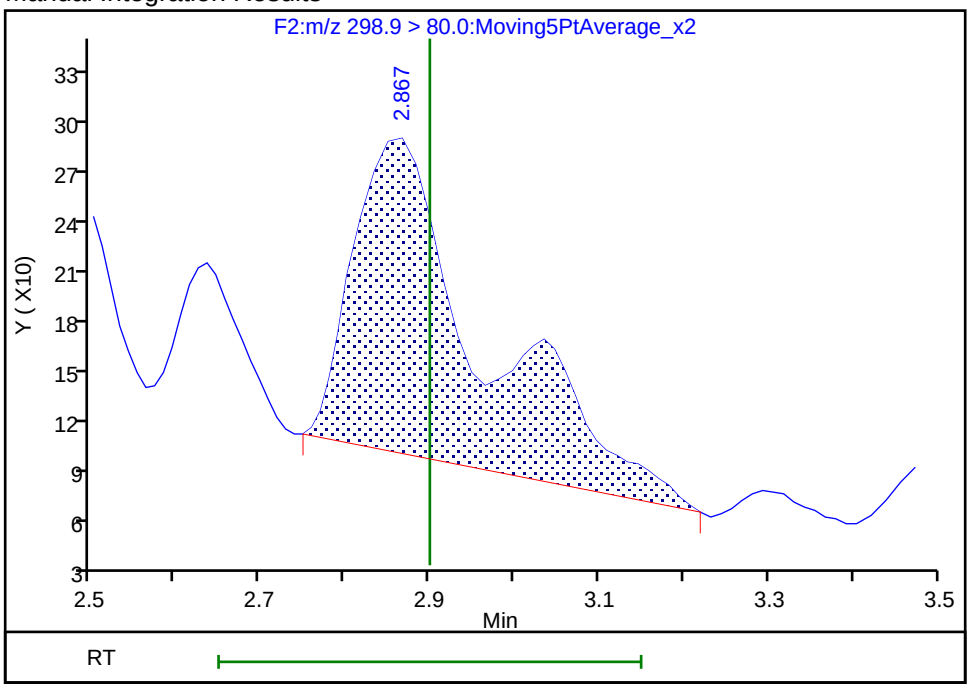
Not Detected
Expected RT: 2.90

Processing Integration Results



Manual Integration Results

RT: 2.87
Area: 2026
Amount: 0.550433
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:11:14
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

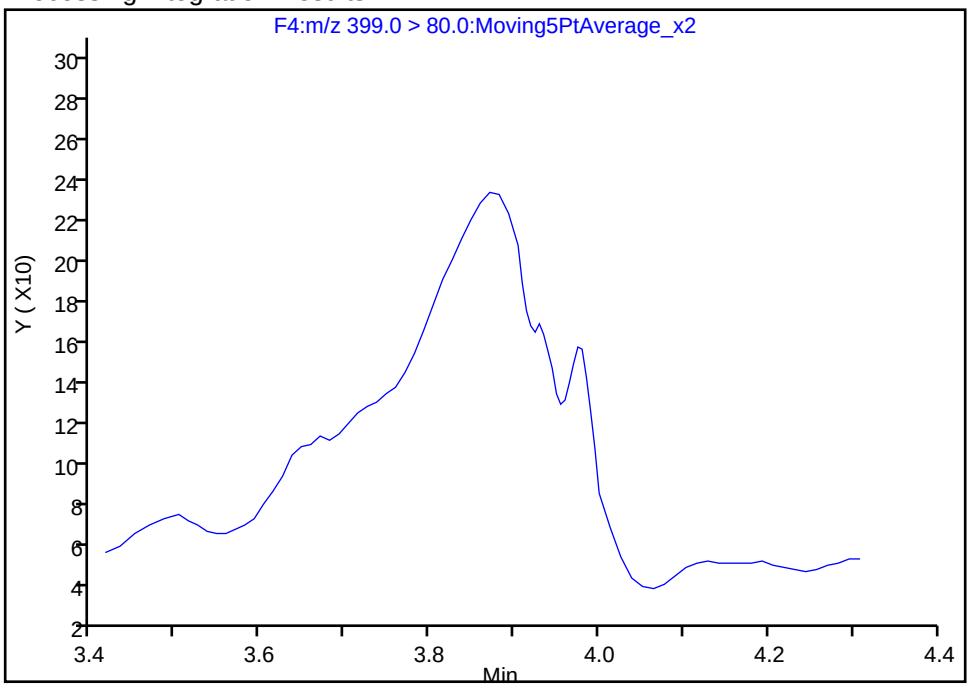
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

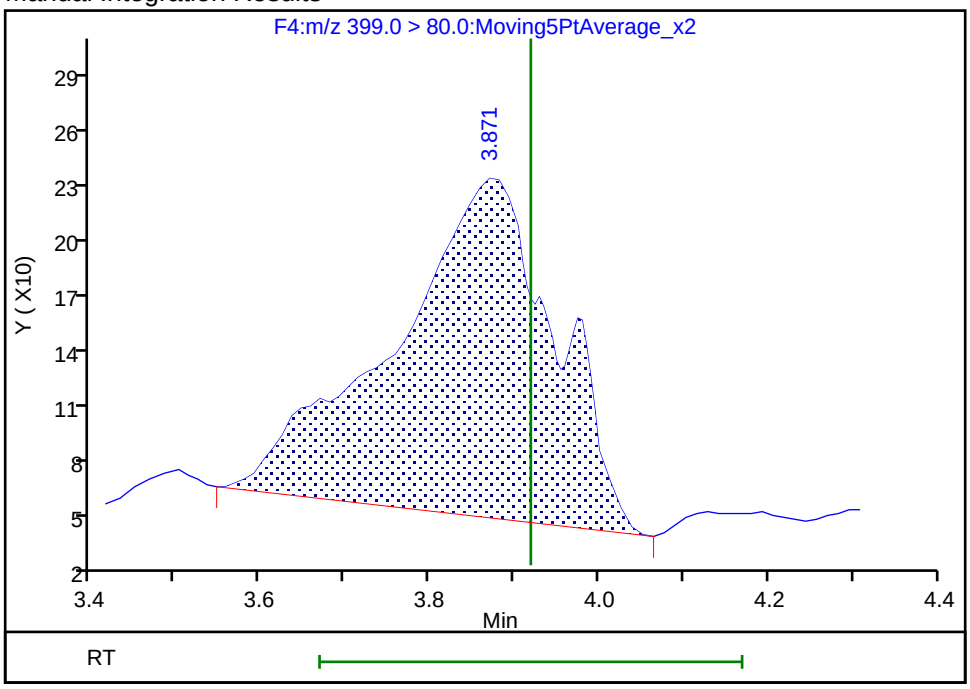
Not Detected
Expected RT: 3.92

Processing Integration Results



Manual Integration Results

RT: 3.87
Area: 2359
Amount: 0.968074
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:11:06
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

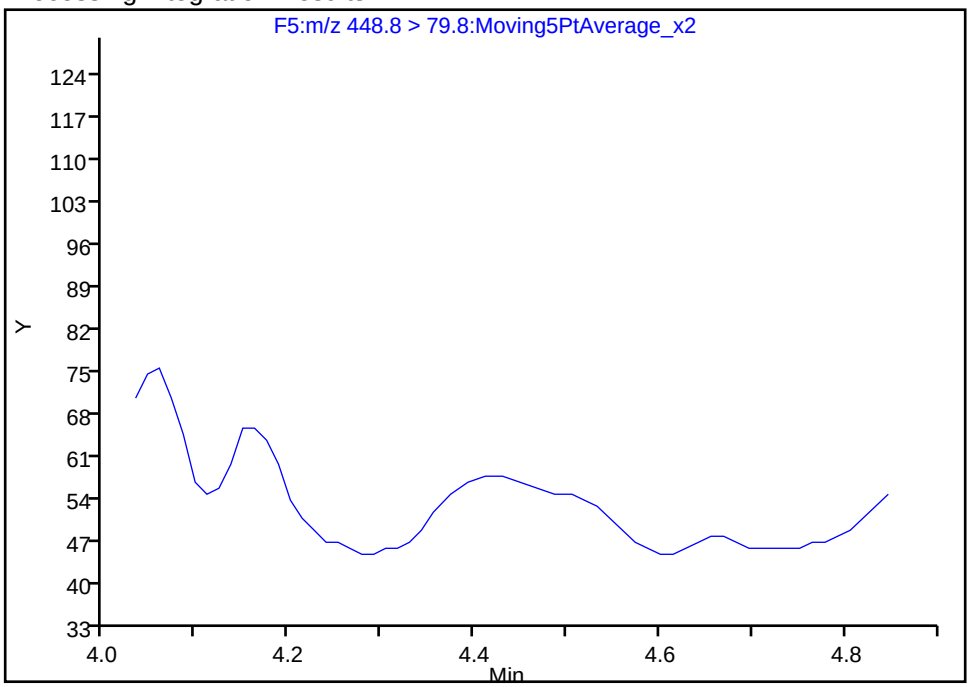
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

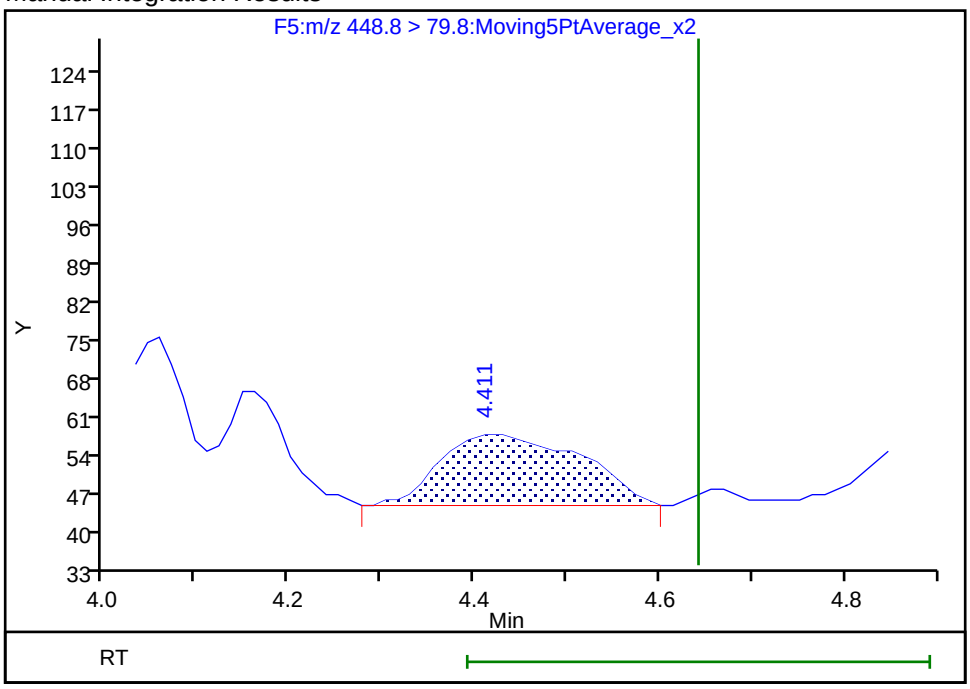
Not Detected
Expected RT: 4.64

Processing Integration Results



Manual Integration Results

RT: 4.41
Area: 138
Amount: 0.217264
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:10:53
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

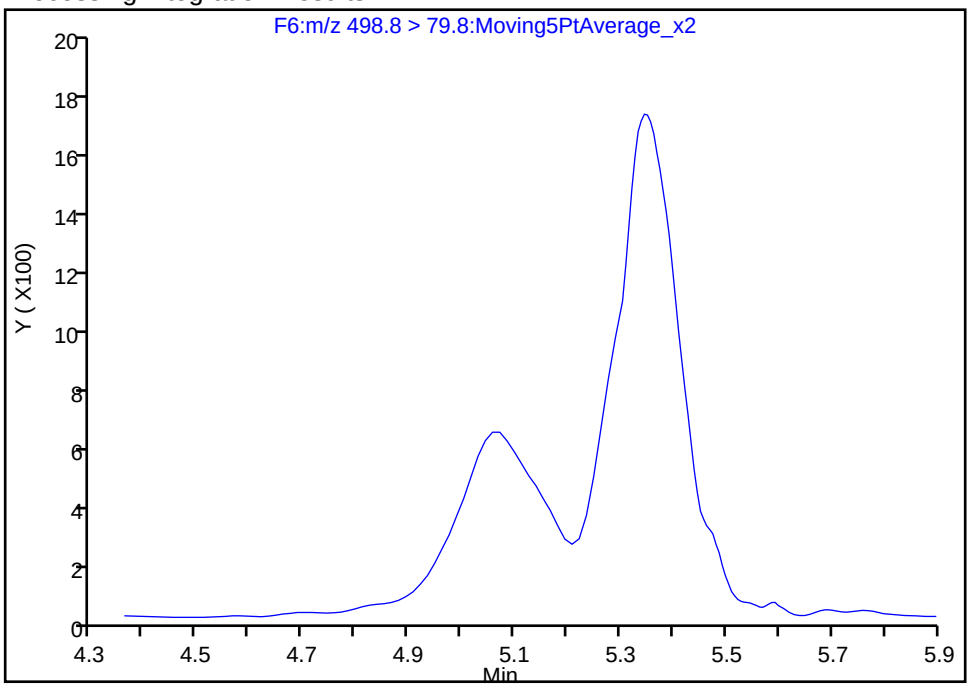
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F6:MRM		

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

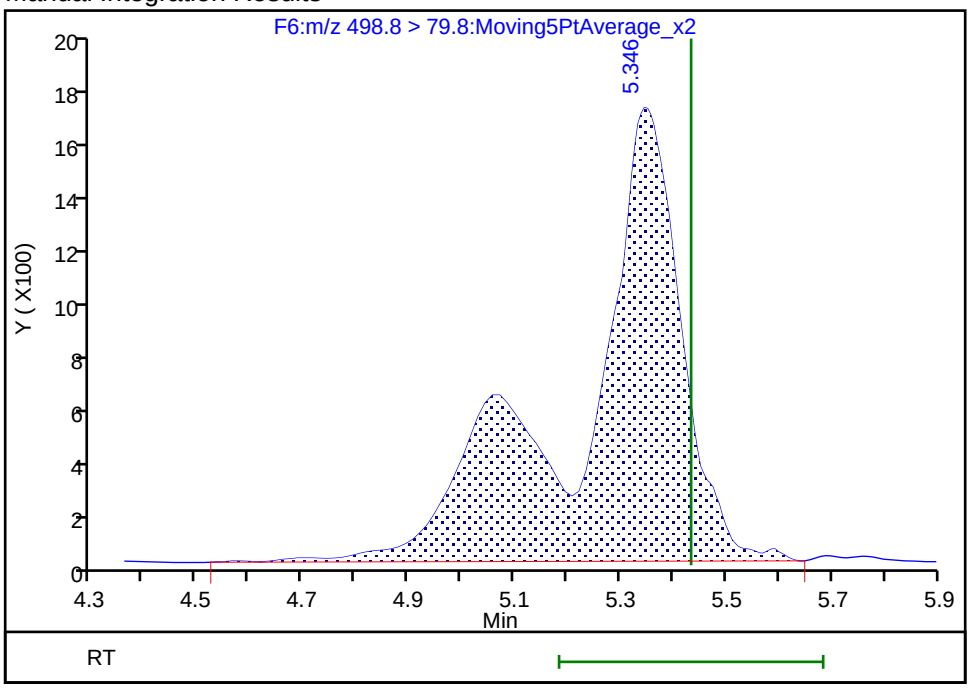
Processing Integration Results

Not Detected
Expected RT: 5.43



Manual Integration Results

RT: 5.35
Area: 22120
Amount: 4.065832
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:09:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

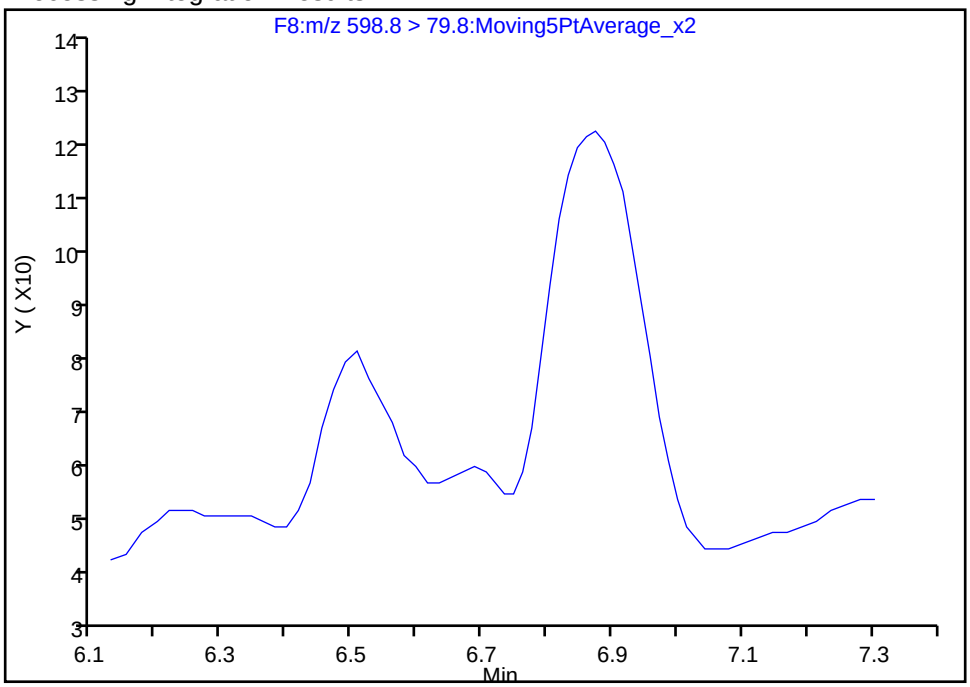
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

31 Perfluorodecane Sulfonic acid, CAS: 335-77-3

Signal: 1

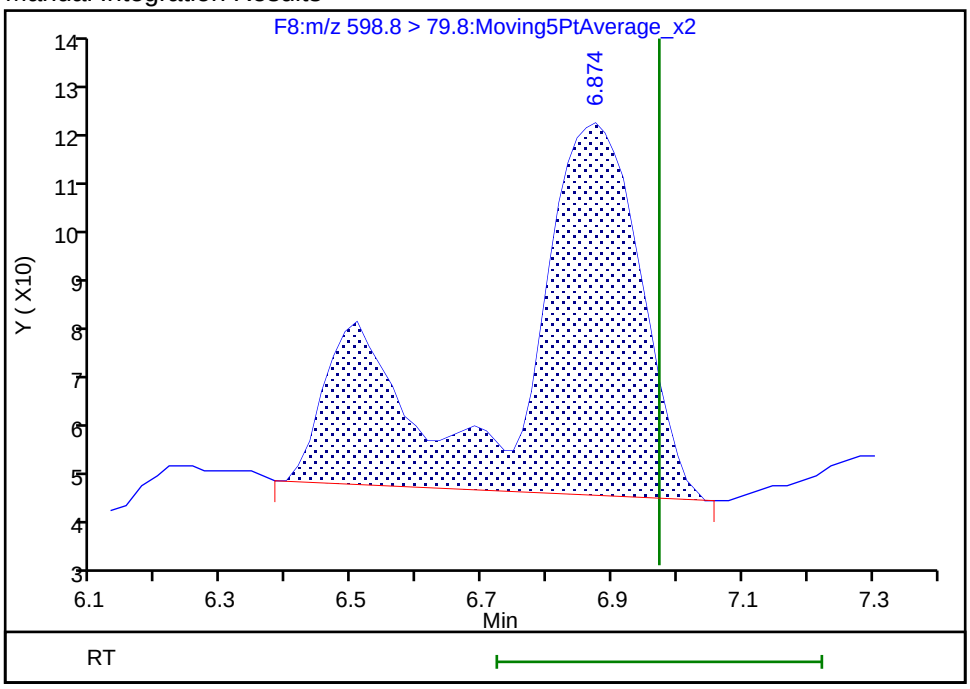
Not Detected
Expected RT: 6.97

Processing Integration Results



Manual Integration Results

RT: 6.87
Area: 1043
Amount: 0.251600
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:10:30
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

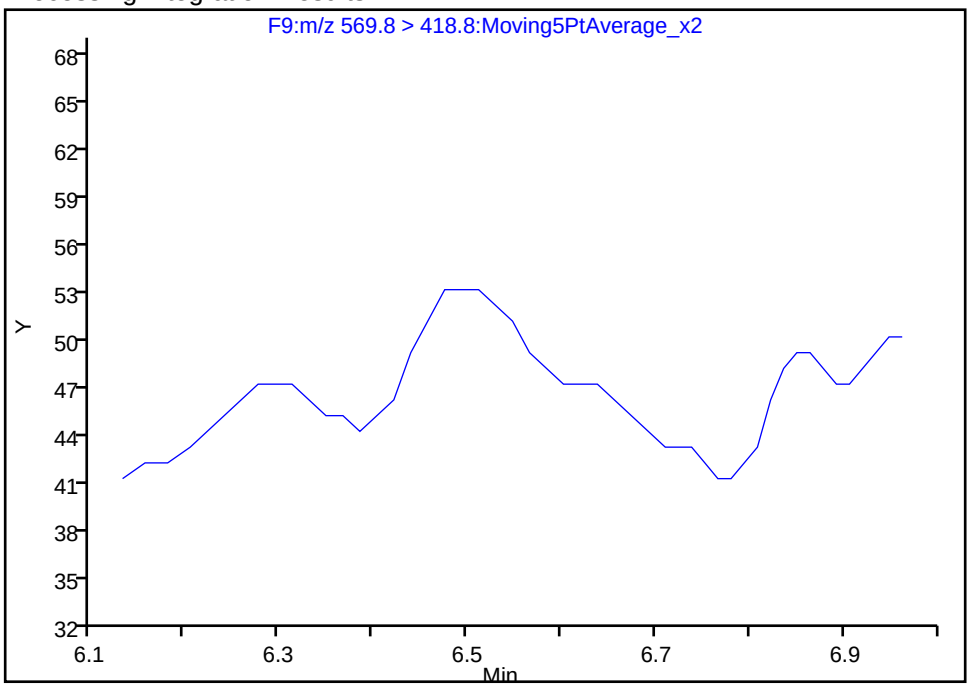
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F9:MRM		

28 N-methyl perfluorooctane sulfonamidoacetic a, CAS: 2355-31-9

Signal: 1

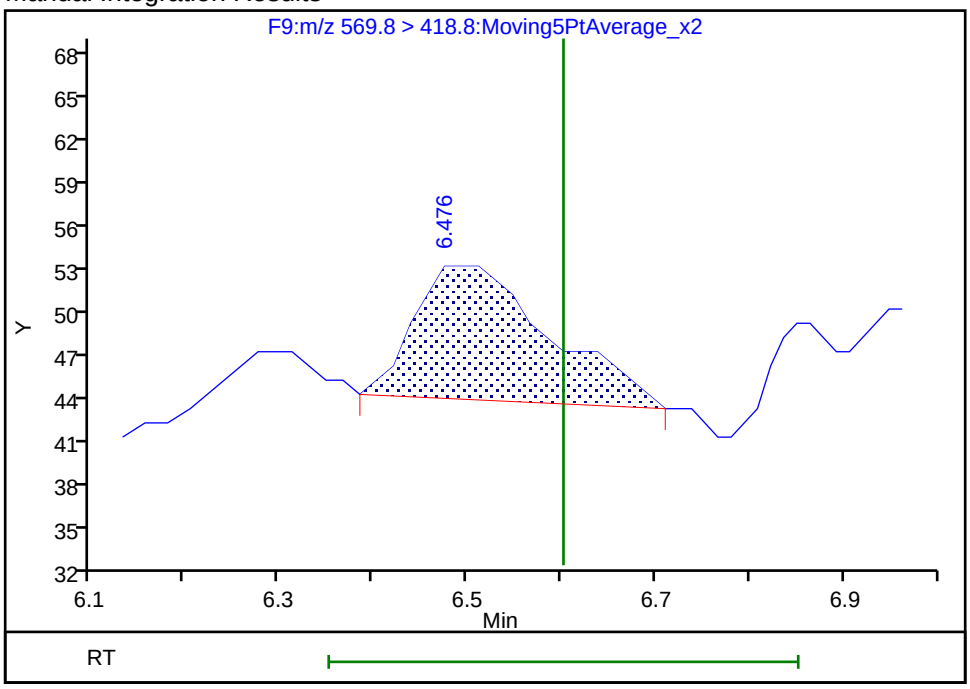
Processing Integration Results

Not Detected
Expected RT: 6.60



Manual Integration Results

RT: 6.48
Area: 93
Amount: 0.400582
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:10:41
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

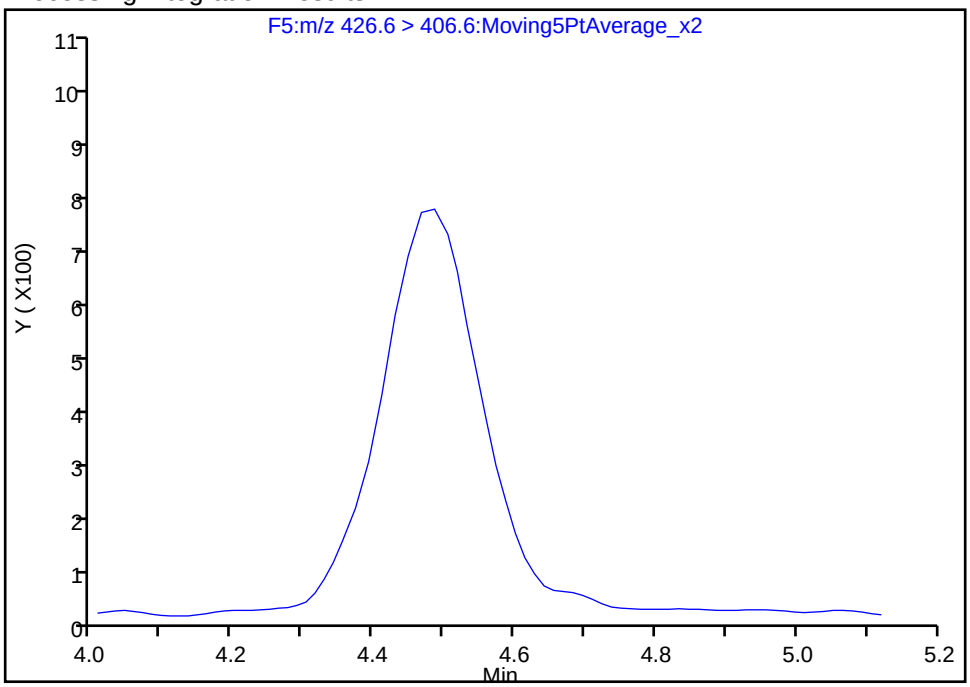
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

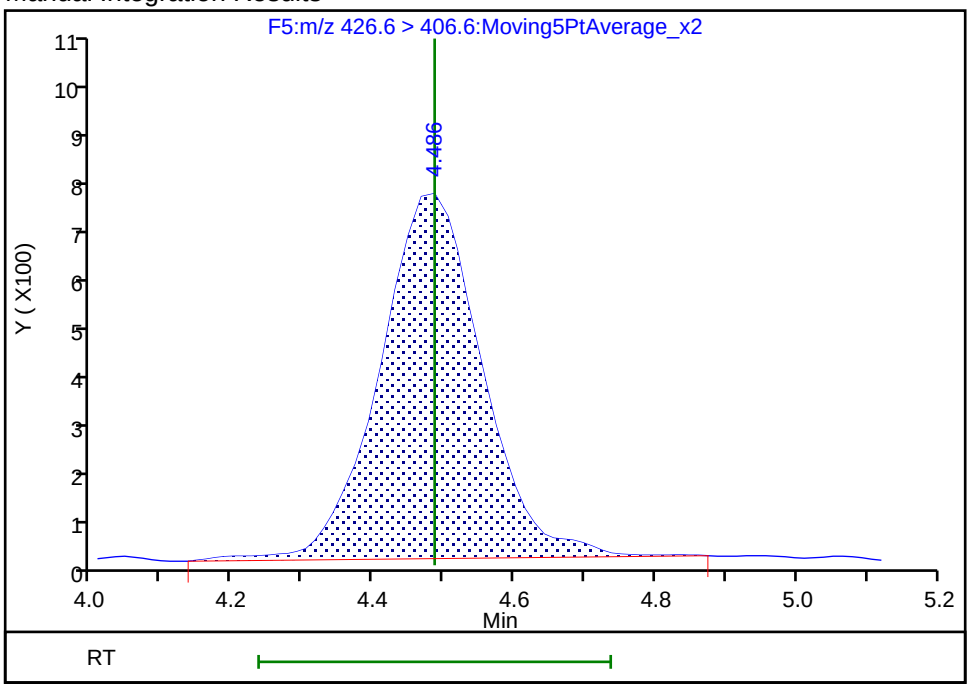
Not Detected
Expected RT: 4.49

Processing Integration Results



Manual Integration Results

RT: 4.49
Area: 7368
Amount: 2.908547
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:23:19
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d

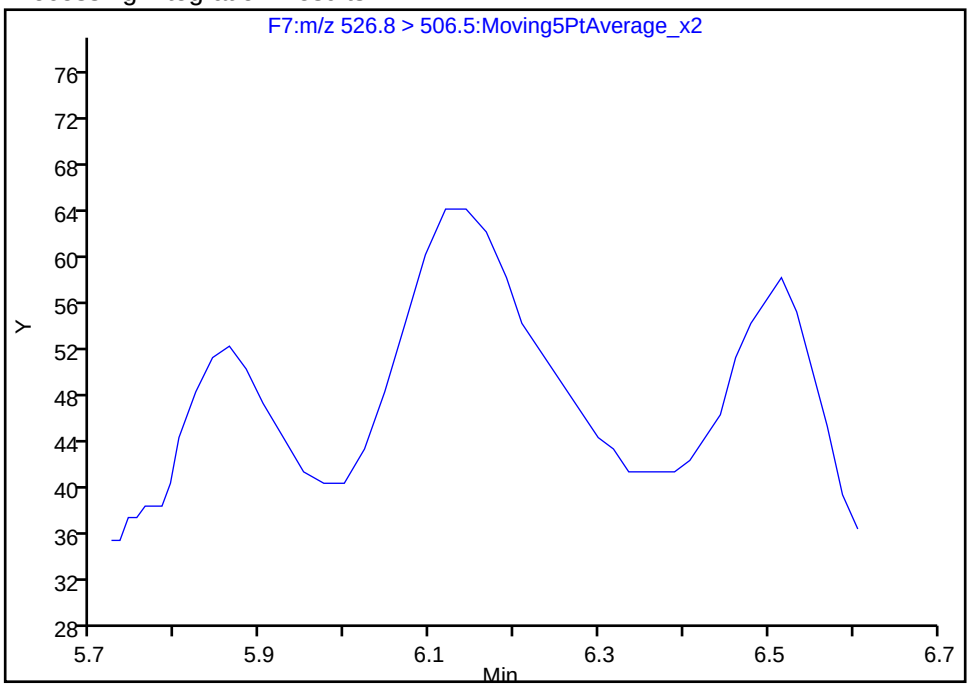
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F7:MRM		

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

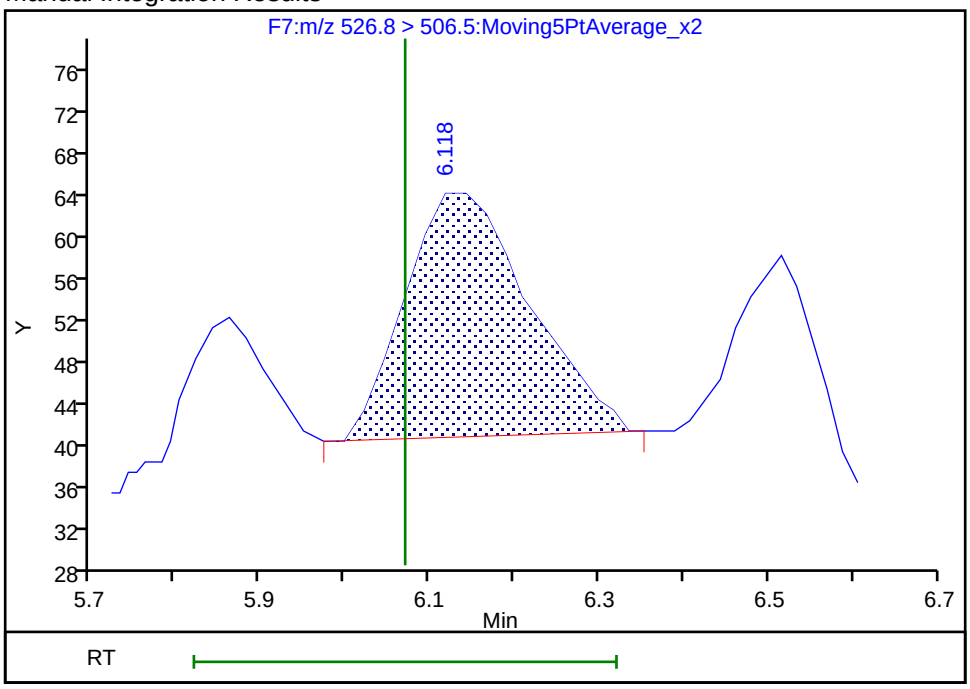
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.12
Area: 240
Amount: 0.435563
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:23:21
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

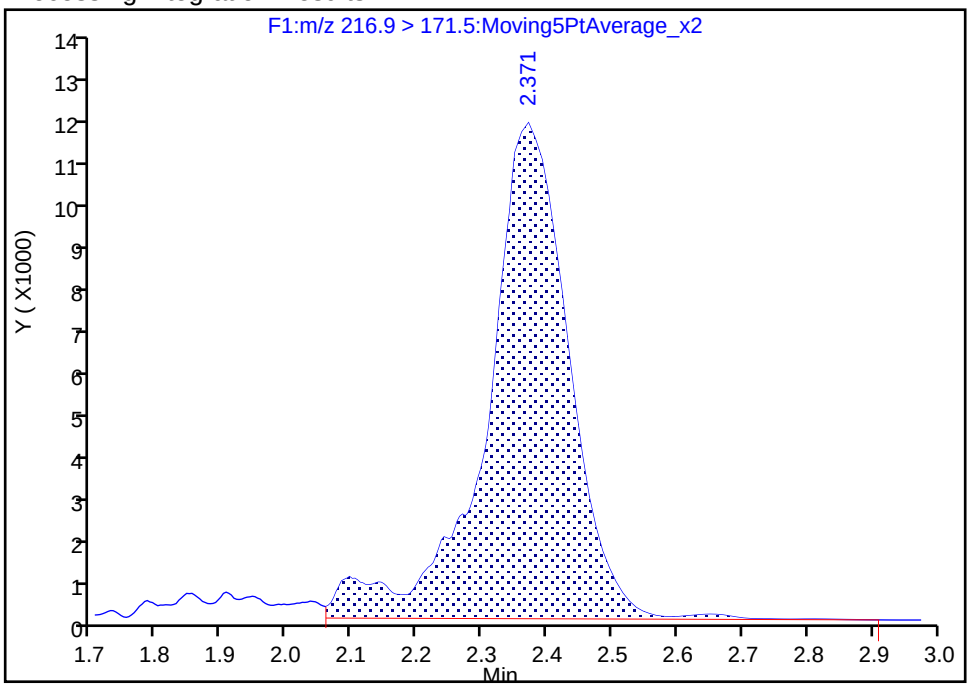
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d				
Injection Date:	12-Jun-2018 21:10:57	Instrument ID:	LC410		
Lims ID:	200-43678-A-3-A	Lab Sample ID:	200-43678-3		
Client ID:	LMS-4				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	49
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

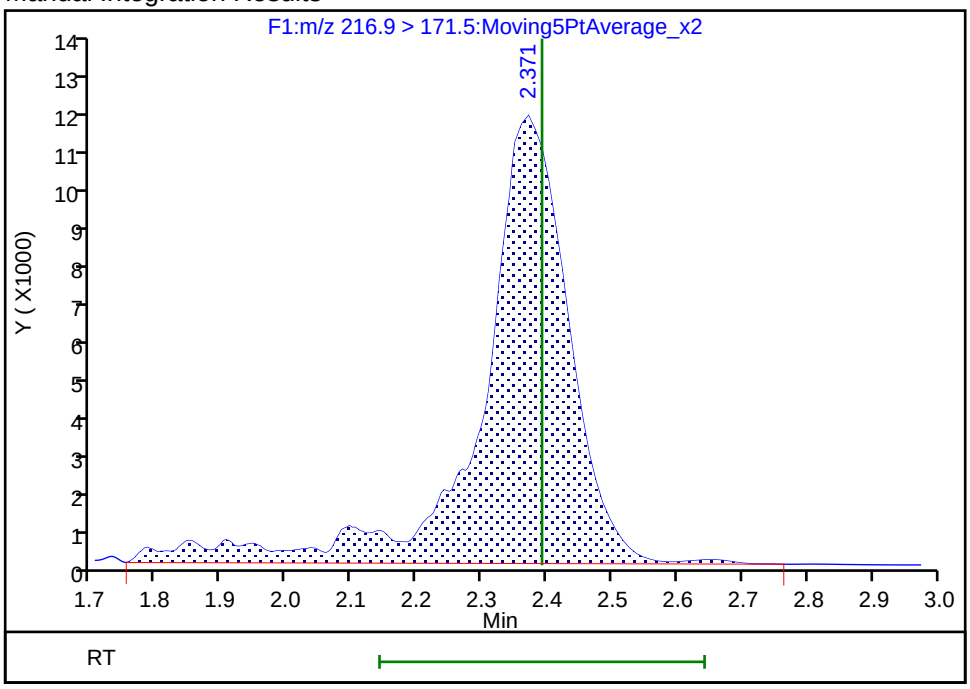
Processing Integration Results

RT: 2.37
Area: 100655
Amount: 20.099900
Amount Units: ng/ml



Manual Integration Results

RT: 2.37
Area: 106976
Amount: 21.362147
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:09:00

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

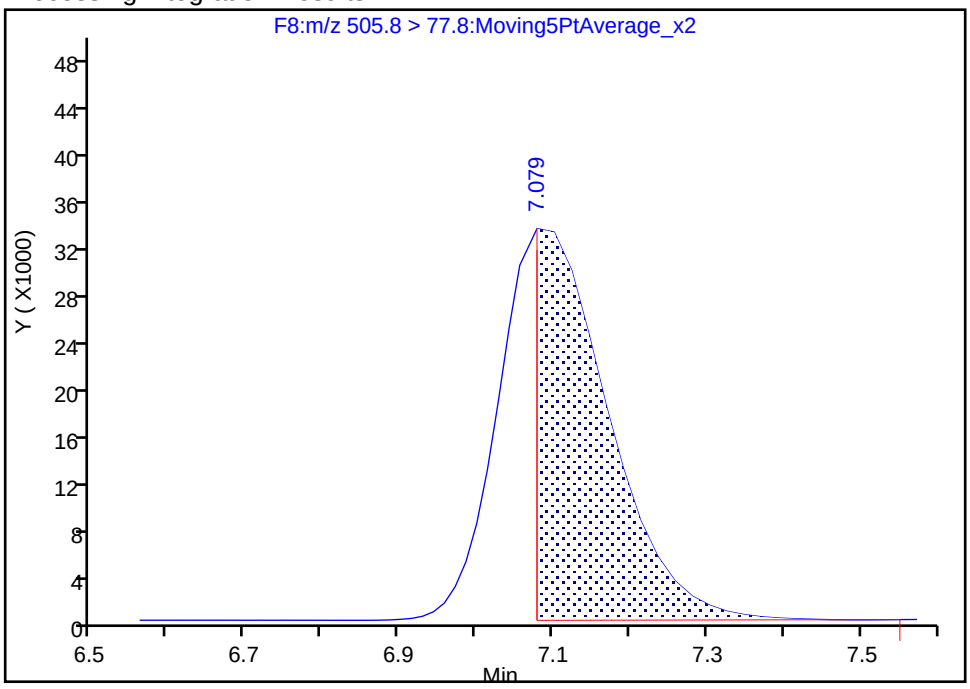
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A49.d
Injection Date: 12-Jun-2018 21:10:57 Instrument ID: LC410
Lims ID: 200-43678-A-3-A Lab Sample ID: 200-43678-3
Client ID: LMS-4
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 49
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

D 35 13C8 FOSA, CAS: STL01056

Signal: 1

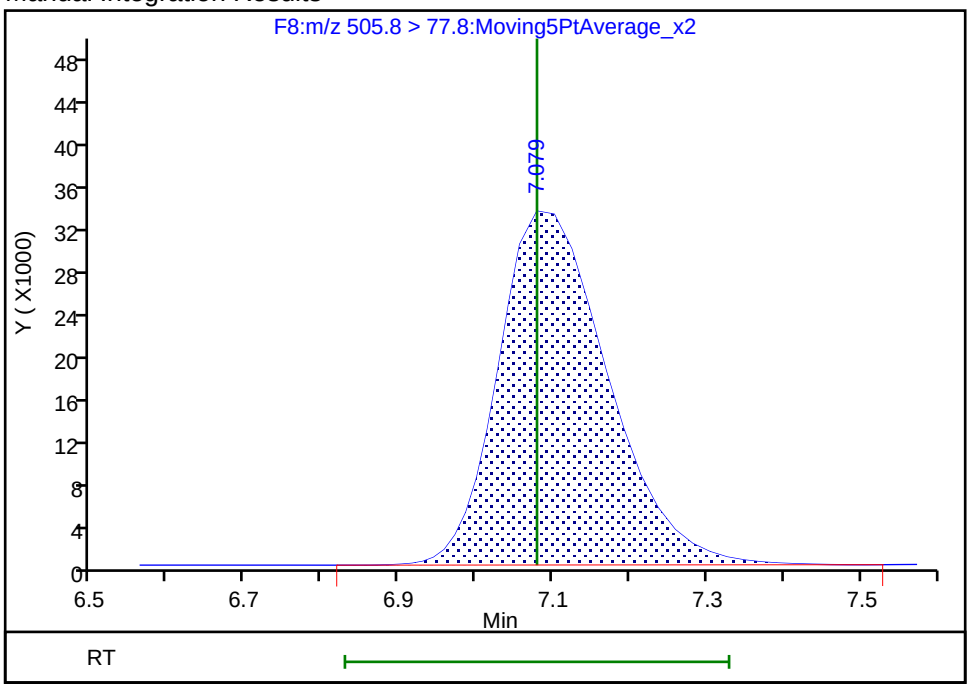
Processing Integration Results

RT: 7.08
Area: 209794
Amount: 18.864075
Amount Units: ng/ml



Manual Integration Results

RT: 7.08
Area: 326849
Amount: 29.389326
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:09:51
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: MW-1 | Lab Sample ID: 200-43678-4

Matrix: Water | Lab File ID: PF061218A50.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 09:15

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 304.5(mL) | Date Analyzed: 06/12/2018 21:27

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	3.89		1.64	0.36
2706-90-3	Perfluoropentanoic acid (PFPeA)	4.77	B	1.64	0.36
307-24-4	Perfluorohexanoic acid (PFHxA)	3.38	B	1.64	0.36
375-85-9	Perfluoroheptanoic acid (PFHpA)	3.33		1.64	0.24
335-67-1	Perfluorooctanoic acid (PFOA)	5.61	B	1.64	0.39
375-95-1	Perfluorononanoic acid (PFNA)	1.28	J	1.64	0.21
335-76-2	Perfluorodecanoic acid (PFDA)	1.64	U	1.64	0.36
2058-94-8	Perfluoroundecanoic acid (PFUnA)	0.88	J	1.64	0.36
307-55-1	Perfluorododecanoic acid (PFDoA)	1.64	U	1.64	0.36
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	1.64	U	1.64	0.36
376-06-7	Perfluorotetradecanoic acid (PFTeA)	1.64	U	1.64	0.36
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.28	J	1.64	0.72
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.64	B	1.64	0.23
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	0.56	J	1.64	0.36
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	3.07		1.64	0.25
335-77-3	Perfluorodecanesulfonic acid (PFDS)	0.37	J	1.64	0.36
754-91-6	Perfluorooctane Sulfonamide (FOSA)	1.64	U	1.64	0.36
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	0.62	J	1.64	0.49
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	1.64	U	1.64	0.49
27619-97-2	6:2 FTS	1.64	U	1.64	0.49
39108-34-4	8:2 FTS	1.64	U	1.64	0.49

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: MW-1 | Lab Sample ID: 200-43678-4

Matrix: Water | Lab File ID: PF061218A50.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 09:15

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 304.5(mL) | Date Analyzed: 06/12/2018 21:27

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	67		25-150
STL01893	13C5 PFPeA	53		25-150
STL00993	13C2 PFHxA	63		25-150
STL01892	13C4-PFHpA	76		25-150
STL00990	13C4 PFOA	84		25-150
STL00995	13C5 PFNA	87		25-150
STL00996	13C2 PFDA	81		25-150
STL00997	13C2 PFUnA	70		25-150
STL00998	13C2 PFDoA	61		25-150
STL02116	13C2-PFTeDA	64		25-150
STL02337	13C3-PFBS	66		25-150
STL00994	18O2 PFHxS	84		25-150
STL00991	13C4 PFOS	90		25-150
STL01056	13C8 FOSA	46		25-150
STL02118	d3-NMeFOSAA	56		25-150
STL02117	d5-NEtFOSAA	59		25-150
STL02279	M2-6:2FTS	234		25-150
STL02280	M2-8:2FTS	141		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d
Lims ID: 200-43678-A-4-A
Client ID: MW-1
Sample Type: Client
Inject. Date: 12-Jun-2018 21:27:03 ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-050 4
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:23:51 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 13-Jun-2018 13:10:09

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.382	2.382	0.0	1.009	6757	2.37			8.4	M
D 1 13C4 PFBA										M
216.9 > 171.5	2.361	2.392	-0.031	1.000	202976	33.5		67.0	233	M
D 4 13C5-PFPeA										M
267.7 > 222.6	2.791	2.818	-0.027	1.000	237318	26.7		53.4	322	M
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.791	2.834	-0.043	1.000	16046	2.90			13.4	M
D 5 13C3-PFBS										M
302.0 > 79.8	2.867	2.900	-0.033	1.000	179857	30.6		65.8	106	M
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.900	2.900	0.0	1.011	2540	0.7794			3.4	M
7 Perfluorohexanoic acid										
312.8 > 268.6	3.251	3.300	-0.049	1.000	12833	2.06			17.2	
D 8 13C2 PFHxA										
314.8 > 269.6	3.251	3.300	-0.049	1.000	328321	31.6		63.2	974	
9 Perfluoroheptanoic acid										M
362.9 > 318.8	3.793	3.882	-0.089	0.994	18544	2.03			18.0	M
D 10 13C4-PFHpA										
366.9 > 321.8	3.815	3.882	-0.067	1.000	453413	38.0		76.0	2755	
D 12 18O2 PFHxS										
402.9 > 83.8	3.860	3.914	-0.054	1.000	222106	39.5		83.5	3558	
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.909	3.919	-0.010	1.013	2769	1.00			4.9	M
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.412	4.486	-0.074	0.987	94	-0.1800			2.0	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.468	4.546	-0.078	1.000	175273	111.1		234	1202	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.519	4.601	-0.082	1.000	381423	41.8		83.6	1027	
* 17 13C2-PFOA										
414.9 > 369.8	4.519	4.601	-0.082		479271	50.0			841	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.505	4.615	-0.110	0.997	28505	3.42			23.5	
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.505	4.642	-0.137	0.845	807	0.3423			4.2	M
D 19 13C5 PFNA										
467.8 > 422.8	5.316	5.422	-0.106	1.000	522444	43.5		87.0	3179	
20 Perfluorononanoic acid										M
462.8 > 418.8	5.277	5.422	-0.145	0.993	6176	0.7768			12.0	M
22 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.340	5.434	-0.094	1.001	11029	1.87			47.1	M
D 21 13C4 PFOS										
502.8 > 79.8	5.334	5.440	-0.106	1.000	260606	42.8		89.5	748	
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	220045	67.4		141	2656	
25 Perfluorodecanoic acid										M
512.9 > 468.5	6.227	6.227	0.0	1.018	411	0.1935			3.4	M
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	710269	40.6		81.2	5061	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	102535	27.8		55.6	790	
28 N-methyl perfluorooctane sulfonami										M
569.8 > 418.8	6.512	6.602	-0.090	1.006	37	0.3772			0.6	M
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.847	6.959	-0.112	1.000	93408	29.6		59.2	1681	
31 Perfluorodecane Sulfonic acid										M
598.8 > 79.8	6.861	6.973	-0.112	1.286	1013	0.2281			15.7	M
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.903	6.987	-0.084	1.002	5924	0.5329			71.3	
D 33 13C2 PFUnA										
564.8 > 519.8	6.889	6.987	-0.098	1.000	562130	35.1		70.2	7495	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	311744	23.2		46.3	1811	
D 36 13C2 PFDoA										
614.8 > 569.6	7.586	7.684	-0.098	1.000	586492	30.3		60.7	2635	
37 Perfluorododecanoic acid										M
612.8 > 568.6	7.726	7.684	0.042	1.018	430	0.1008			4.6	M
38 Perfluorotridecanoic acid										M
662.8 > 618.6	8.340	8.294	0.046	1.099	111	0.0459			2.4	M
D 39 13C2-PFTeDA										
714.8 > 669.6	8.747	8.855	-0.108	1.000	628431	32.0		64.1	962	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.734	8.862	-0.128	0.998	149	-0.1624			5.5	M
712.8 > 168.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			
712.8 > 218.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:23:57 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d

Injection Date: 12-Jun-2018 21:27:03 Instrument ID: LC410

Lims ID: 200-43678-A-4-A Lab Sample ID: 200-43678-4

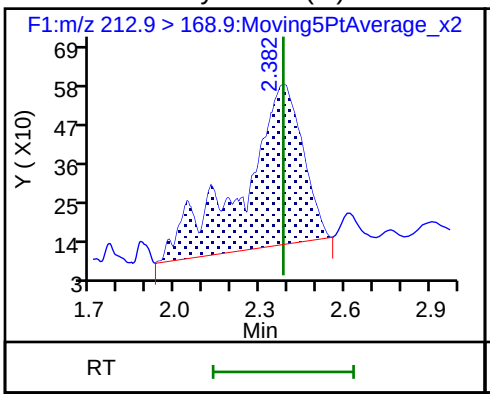
Client ID: MW-1

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 50

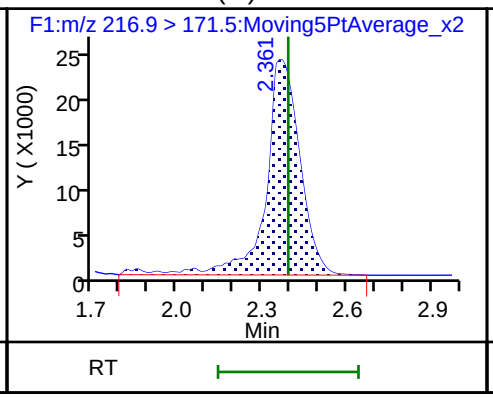
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

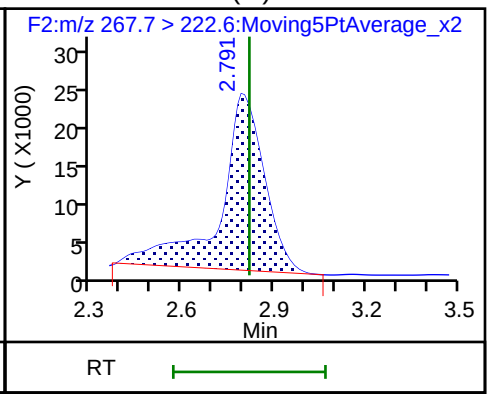
2 Perfluorobutyric acid (M)



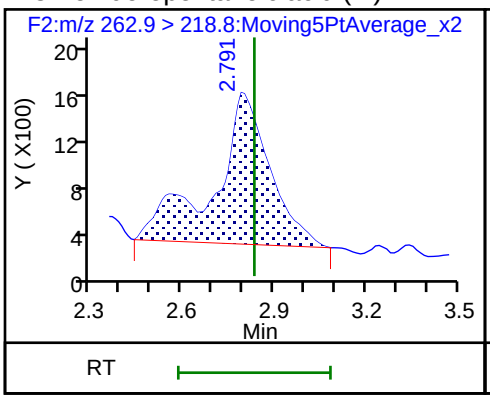
D 1 13C4 PFBA (M)



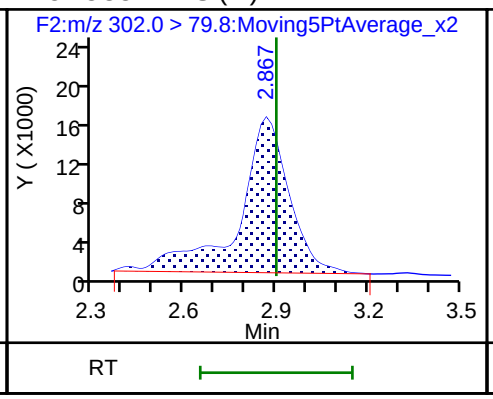
D 4 13C5-PFPeA (M)



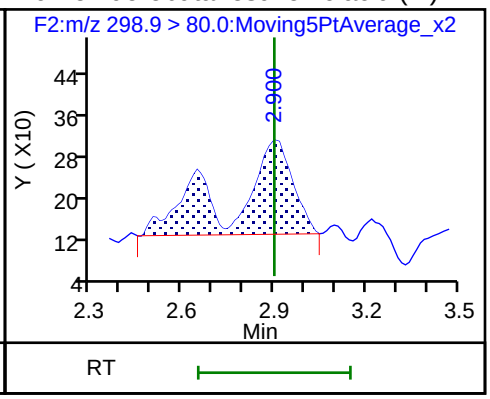
3 Perfluoropentanoic acid (M)



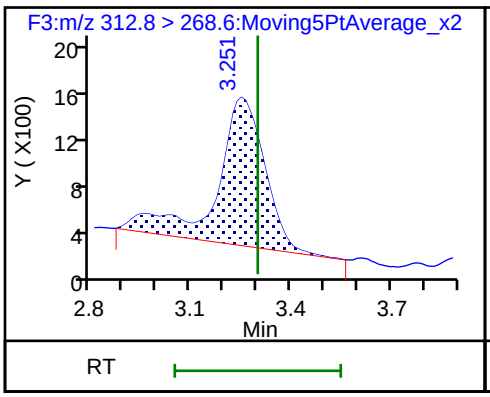
D 5 13C3-PFBS (M)



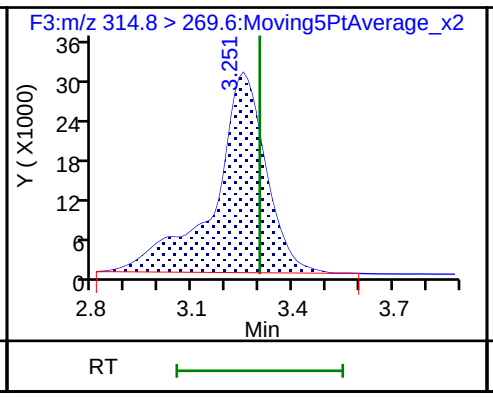
6 Perfluorobutanesulfonic acid (M)



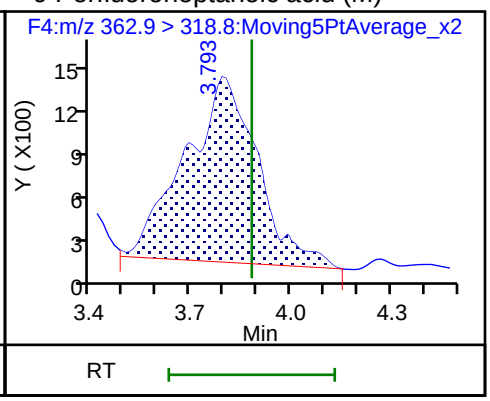
7 Perfluorohexanoic acid



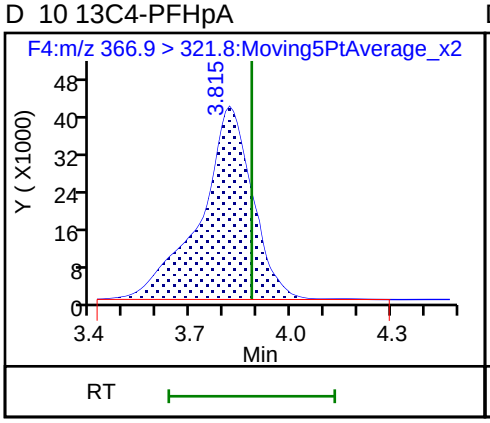
D 8 13C2 PFHxA



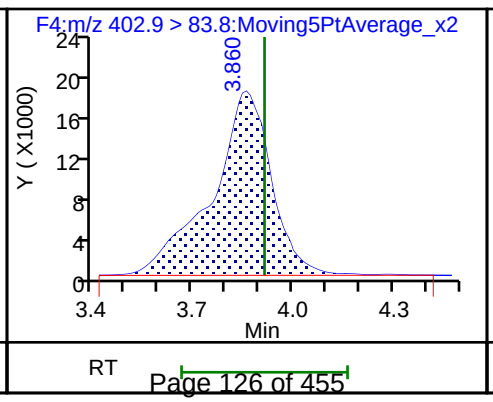
9 Perfluoroheptanoic acid (M)



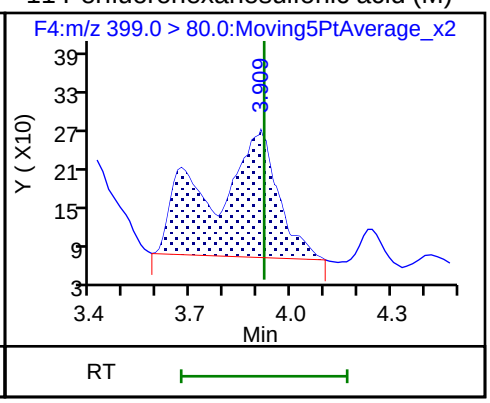
D 10 13C4-PFHpA



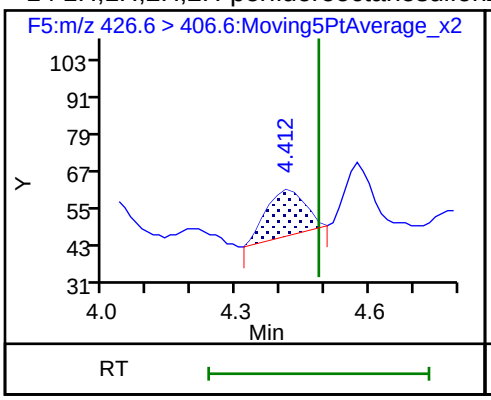
D 12 18O2 PFHxS



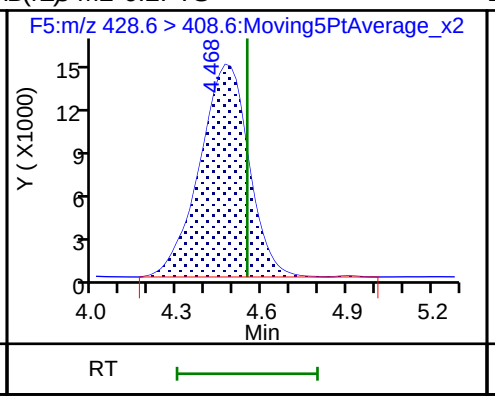
11 Perfluorohexanesulfonic acid (M)



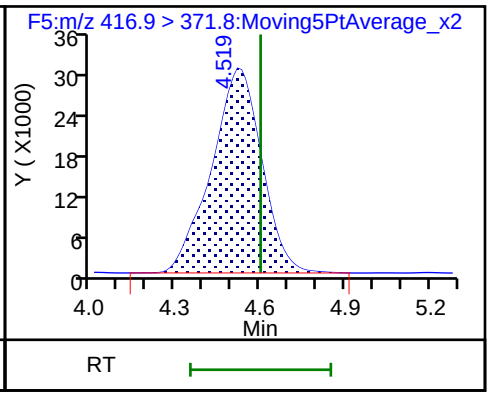
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



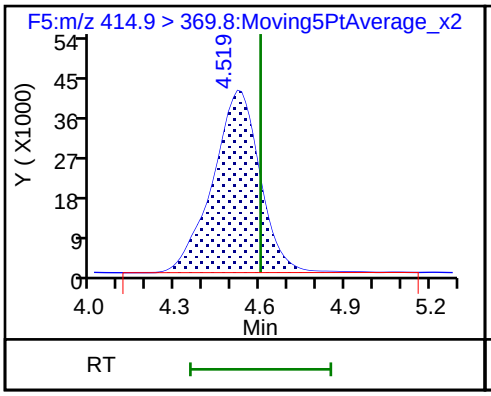
D 13 M2-6:2FTS



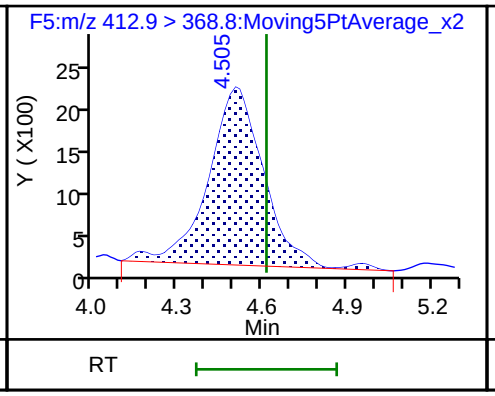
D 16 13C4 PFOA



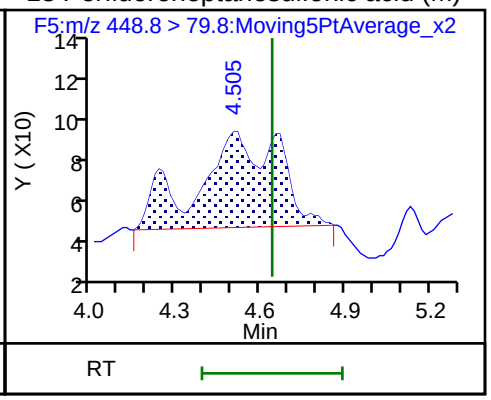
* 17 13C2-PFOA



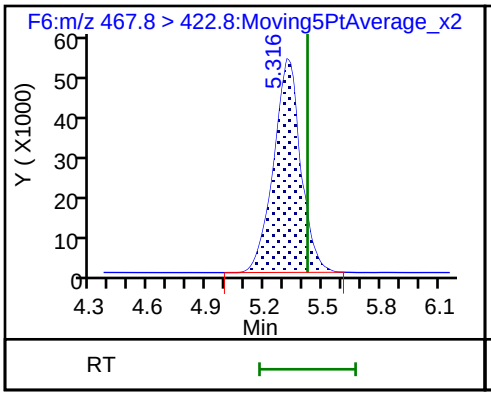
15 Perfluorooctanoic acid



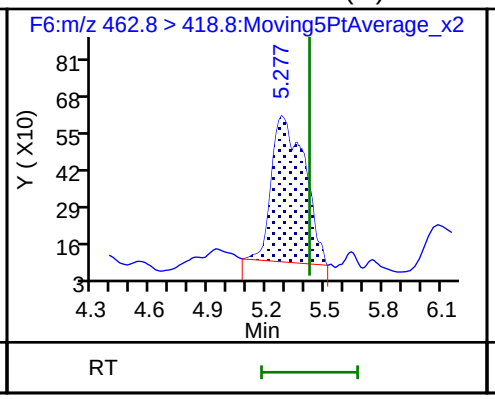
18 Perfluoroheptanesulfonic acid (M)



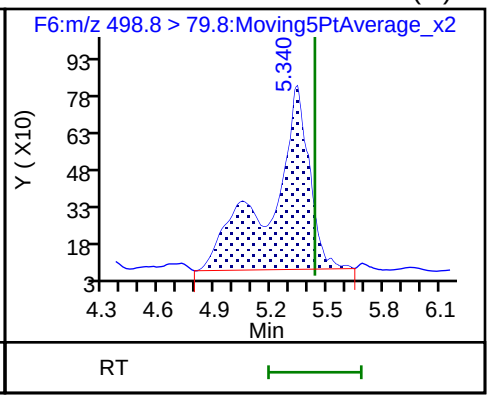
D 19 13C5 PFNA



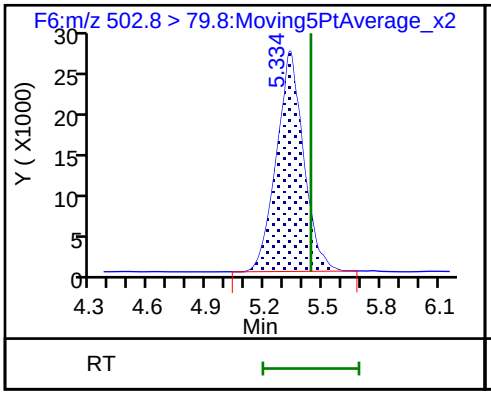
20 Perfluorononanoic acid (M)



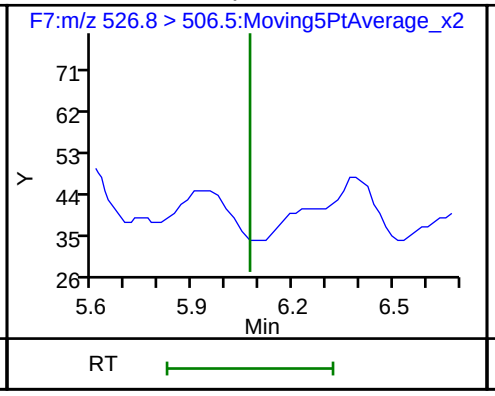
22 Perfluorooctane sulfonic acid (M)



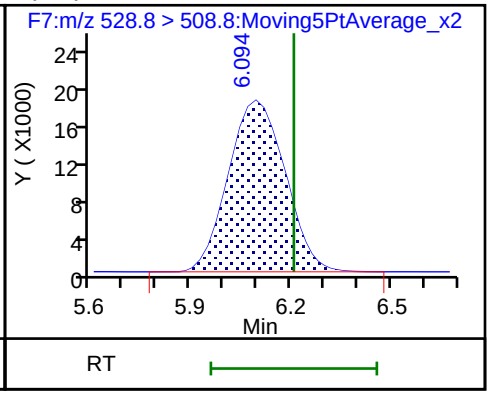
D 21 13C4 PFOS



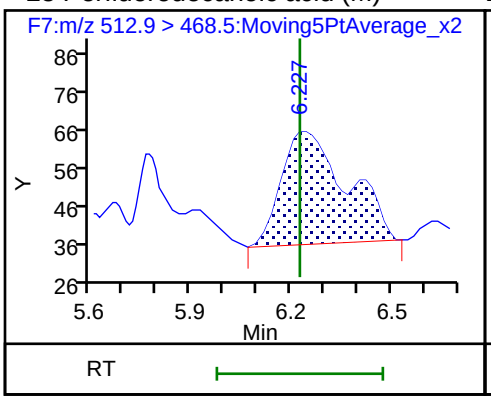
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



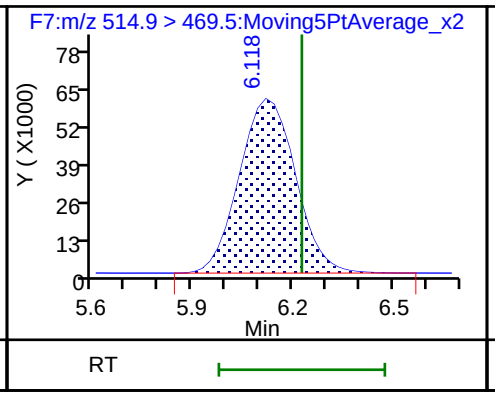
D 24 M2-8:2FTS



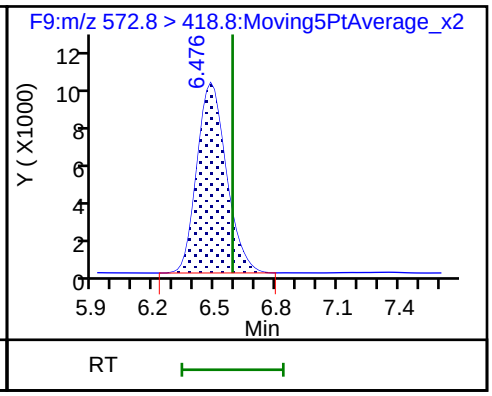
25 Perfluorodecanoic acid (M)



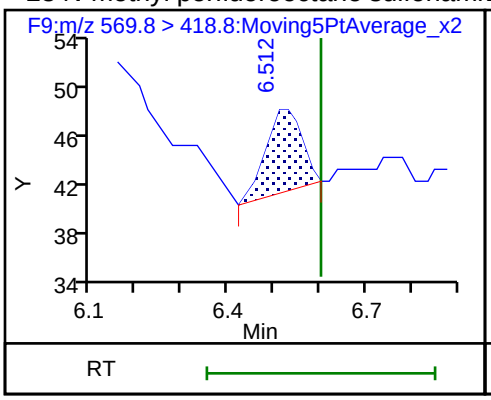
D 26 13C2 PFDA



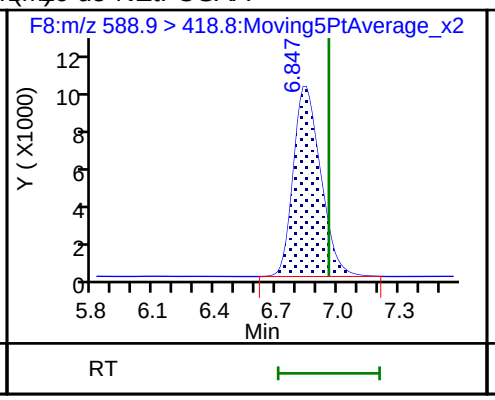
D 27 d3-NMeFOSAA



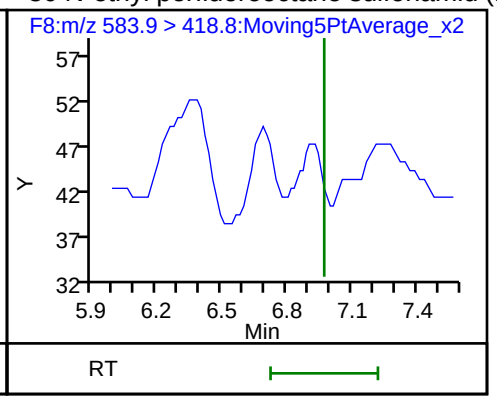
28 N-methyl perfluorooctane sulfonamid (M)



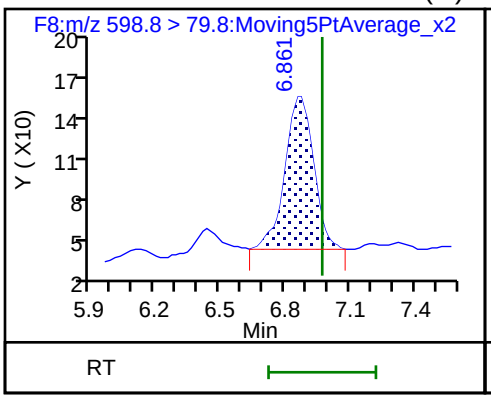
D 29 d5-NEtFOSAA



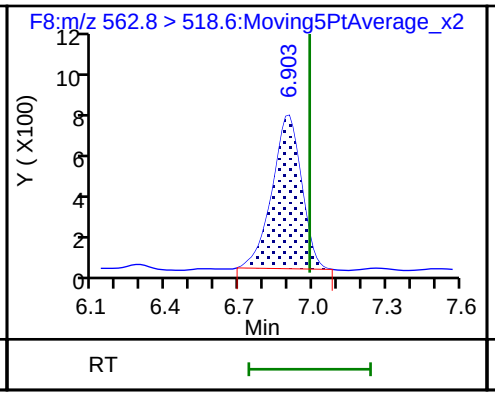
30 N-ethyl perfluorooctane sulfonamid (ND)



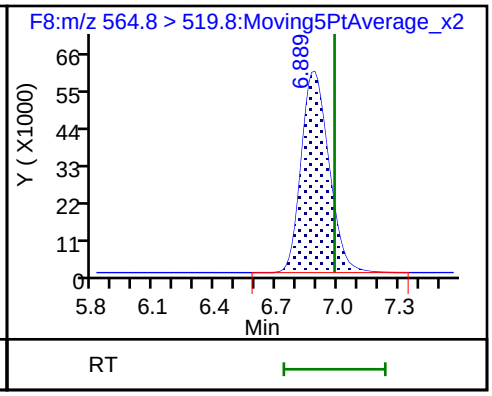
31 Perfluorodecane Sulfonic acid (M)



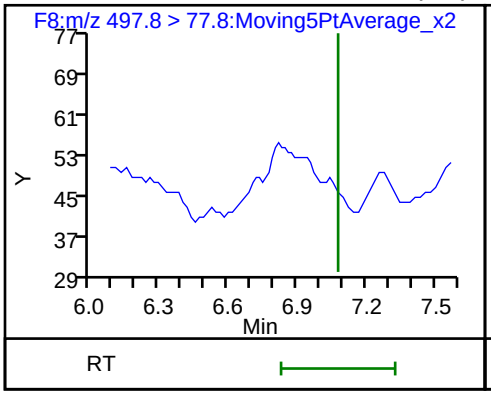
32 Perfluoroundecanoic acid



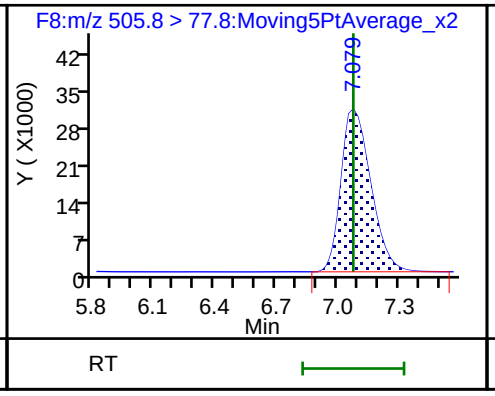
D 33 13C2 PFUnA



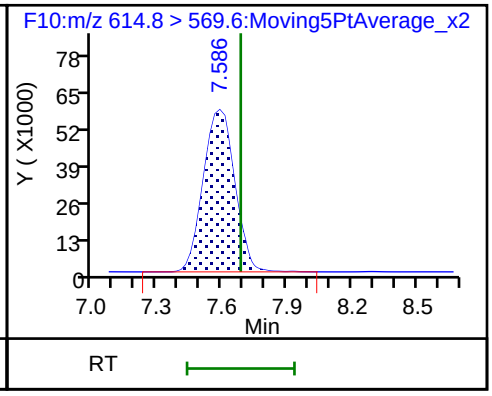
34 Perfluorooctane Sulfonamide (ND)



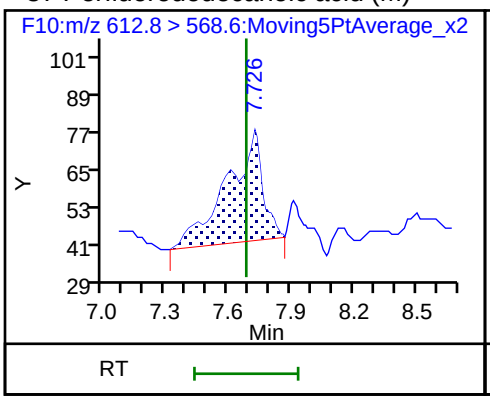
D 35 13C8 FOSA



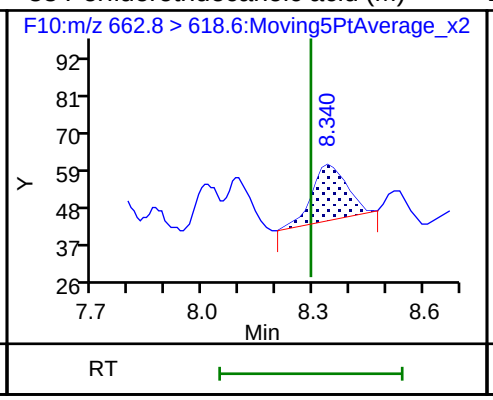
D 36 13C2 PFDoA



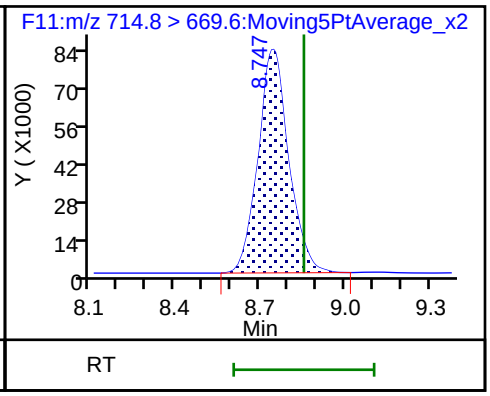
37 Perfluorododecanoic acid (M)



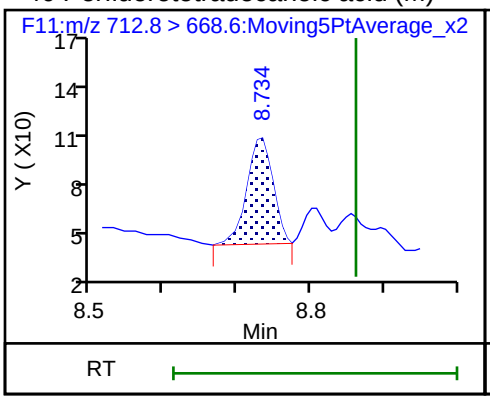
38 Perfluorotridecanoic acid (M)



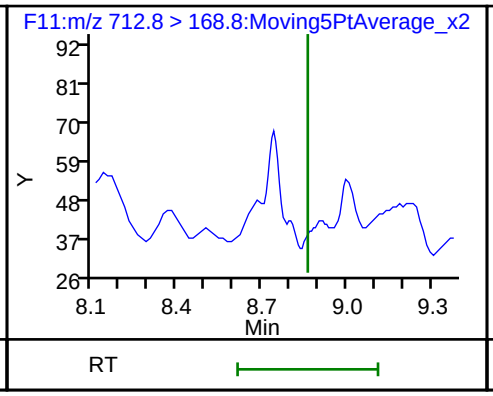
D 39 13C2-PFTeDA



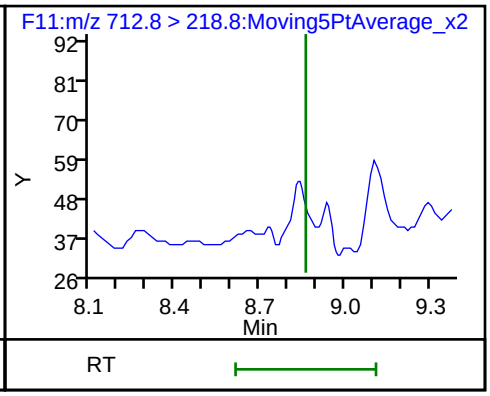
40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

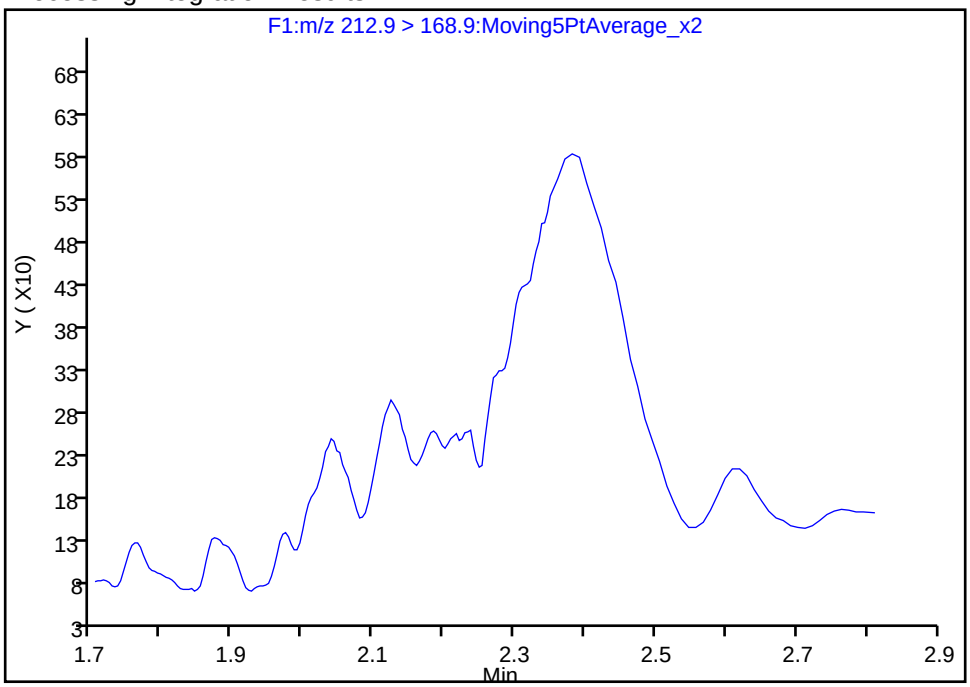
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

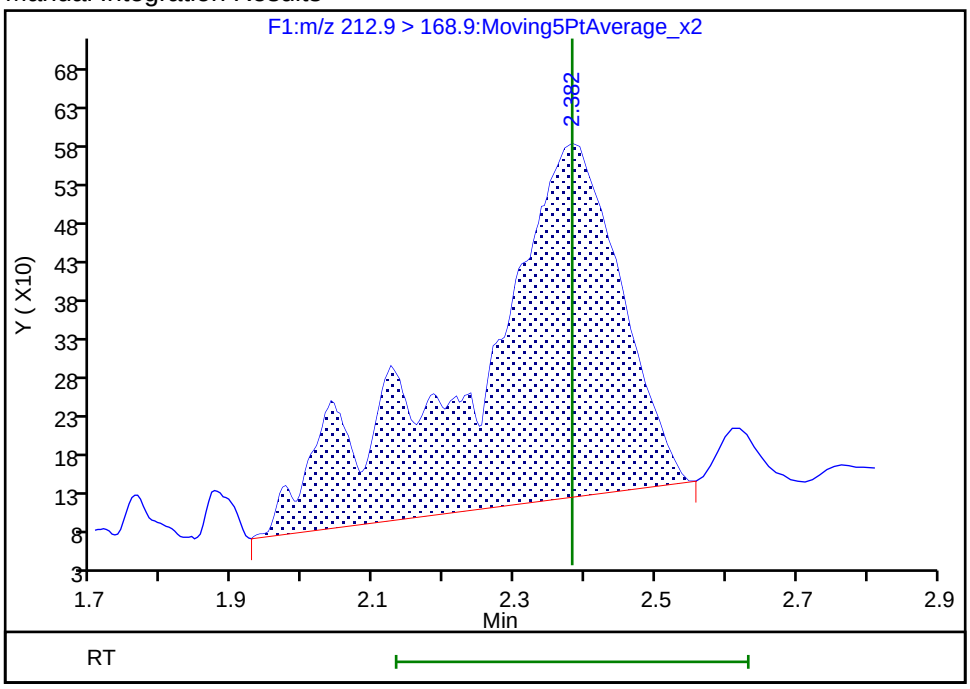
Not Detected
Expected RT: 2.38

Processing Integration Results



Manual Integration Results

RT: 2.38
Area: 6757
Amount: 2.368363
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:13:54
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

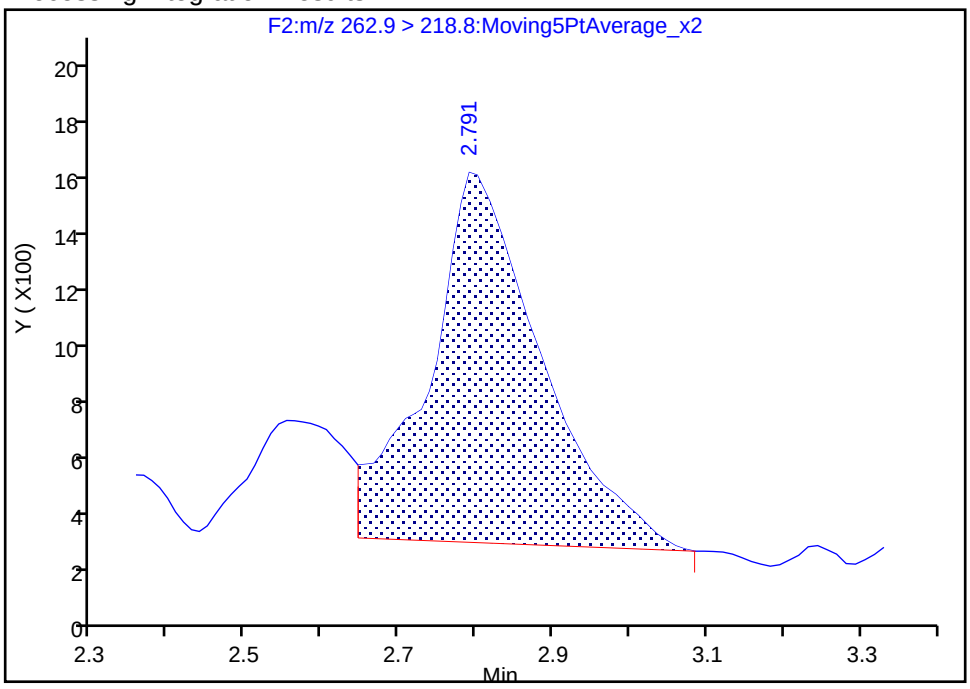
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

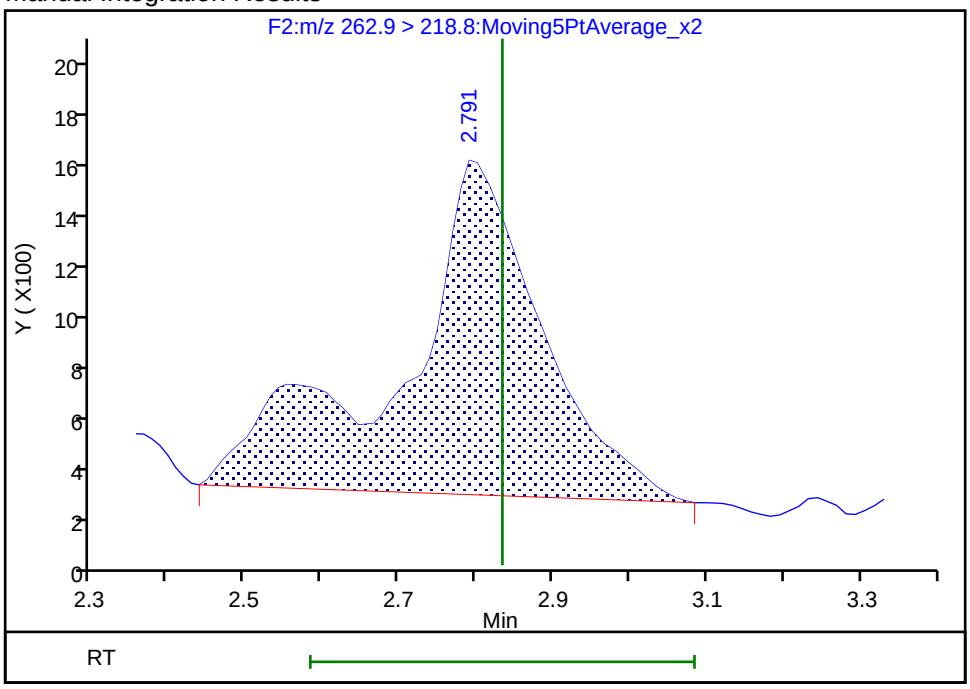
Processing Integration Results

RT: 2.79
Area: 12816
Amount: 2.814354
Amount Units: ng/ml



Manual Integration Results

RT: 2.79
Area: 16046
Amount: 2.902897
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:11:53

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

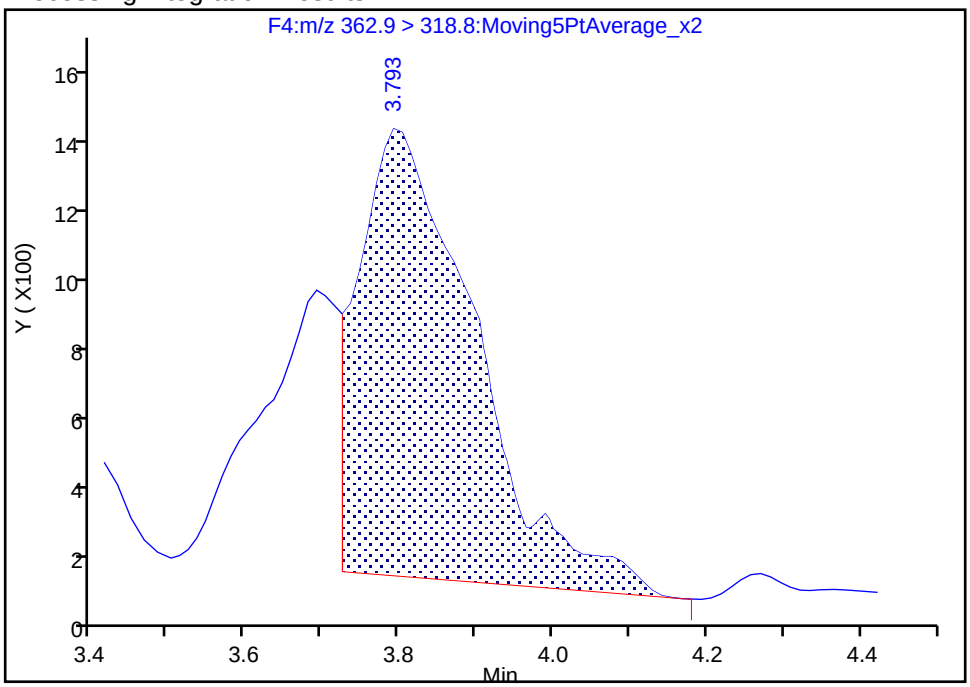
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

9 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

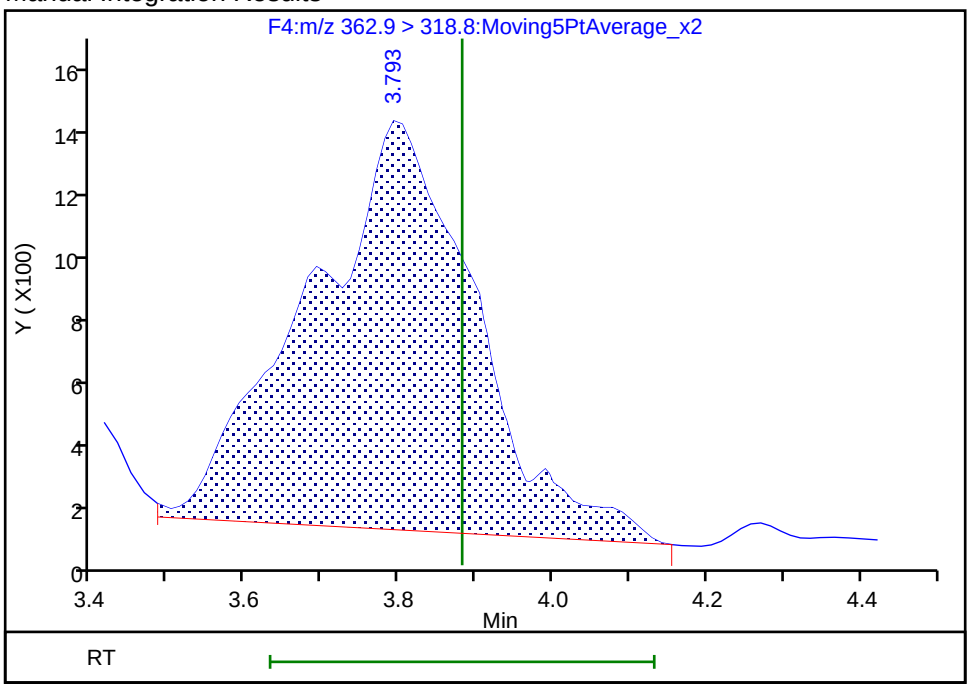
Processing Integration Results

RT: 3.79
Area: 12789
Amount: 1.449428
Amount Units: ng/ml



Manual Integration Results

RT: 3.79
Area: 18544
Amount: 2.030543
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:12:07

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

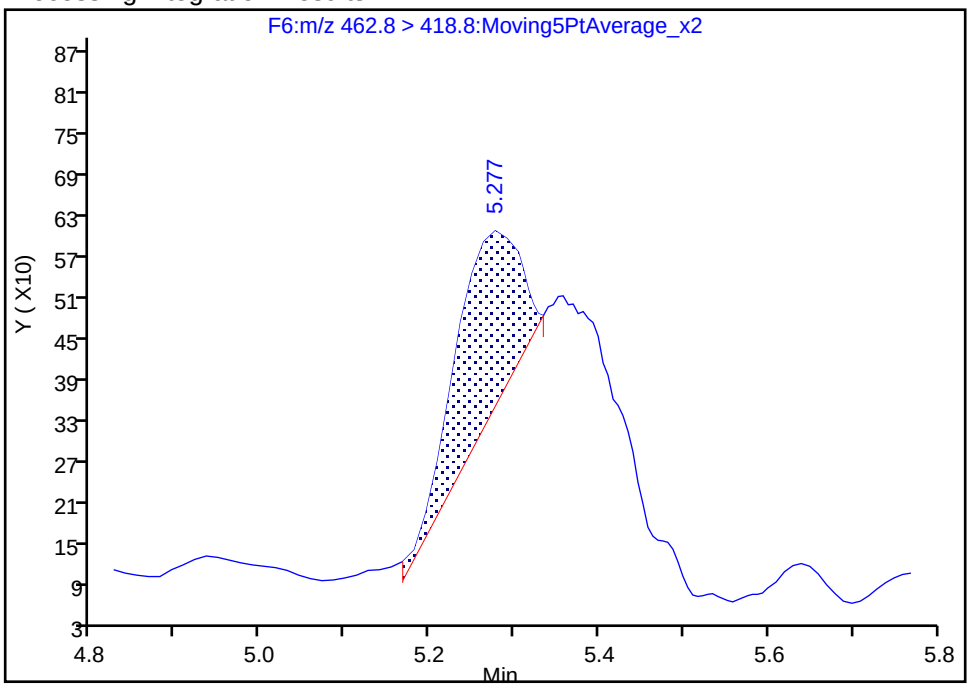
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F6:MRM		

20 Perfluorononanoic acid, CAS: 375-95-1

Signal: 1

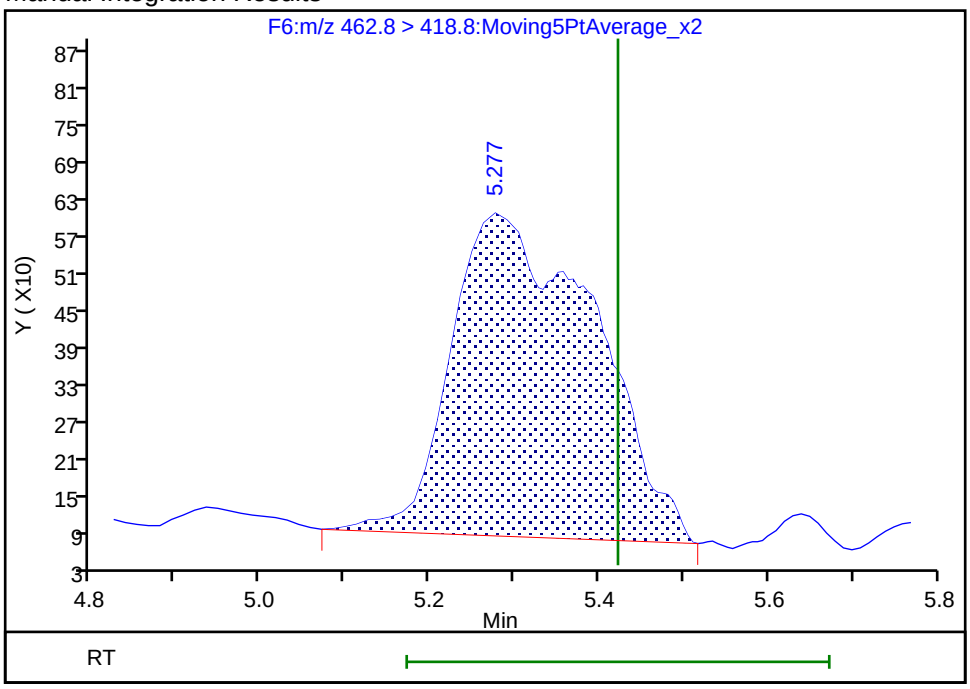
Processing Integration Results

RT: 5.28
Area: 1423
Amount: 0.317439
Amount Units: ng/ml



Manual Integration Results

RT: 5.28
Area: 6176
Amount: 0.776779
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:12:26

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

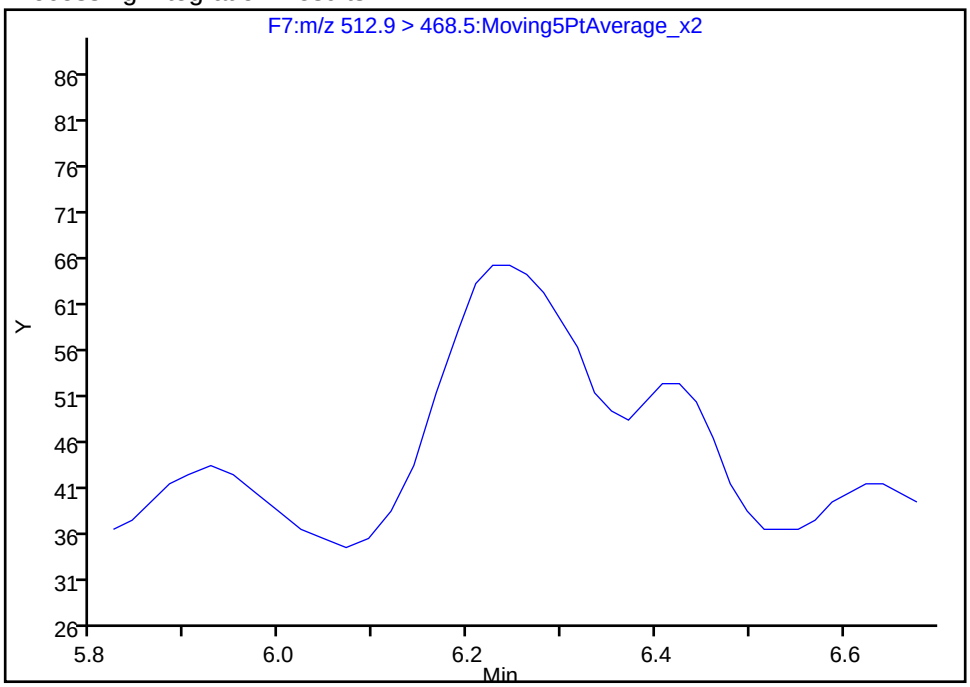
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F7:MRM		

25 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

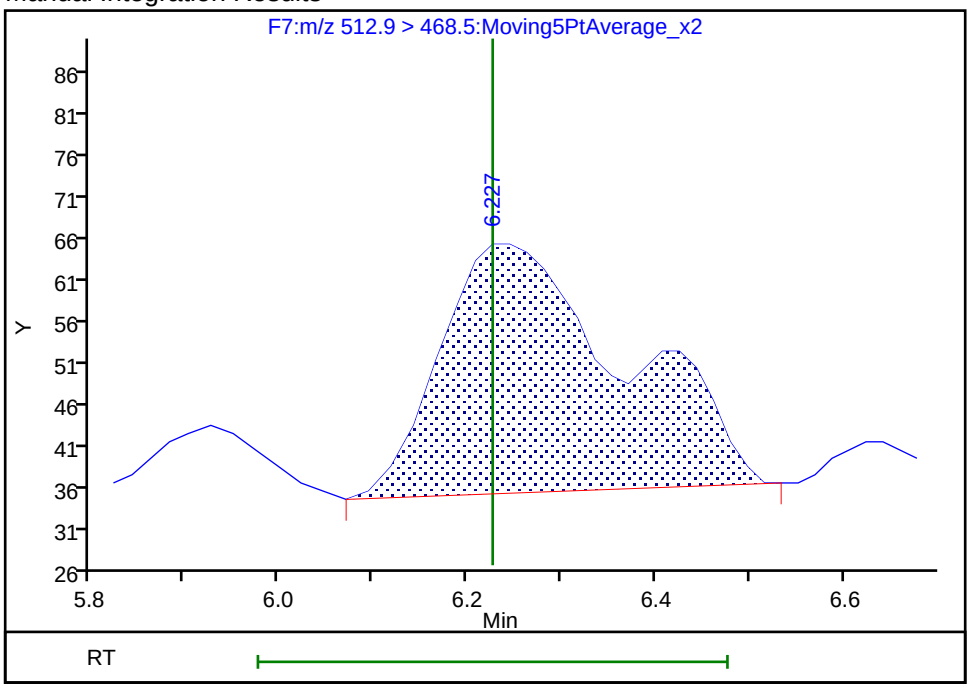
Not Detected
Expected RT: 6.23

Processing Integration Results



Manual Integration Results

RT: 6.23
Area: 411
Amount: 0.193474
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:13:21
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

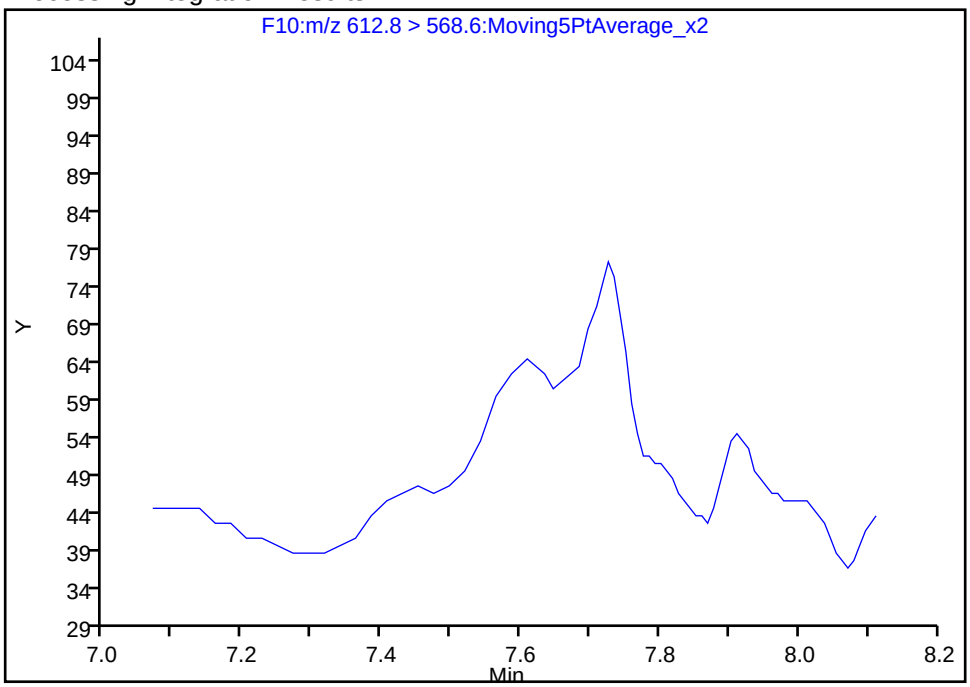
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

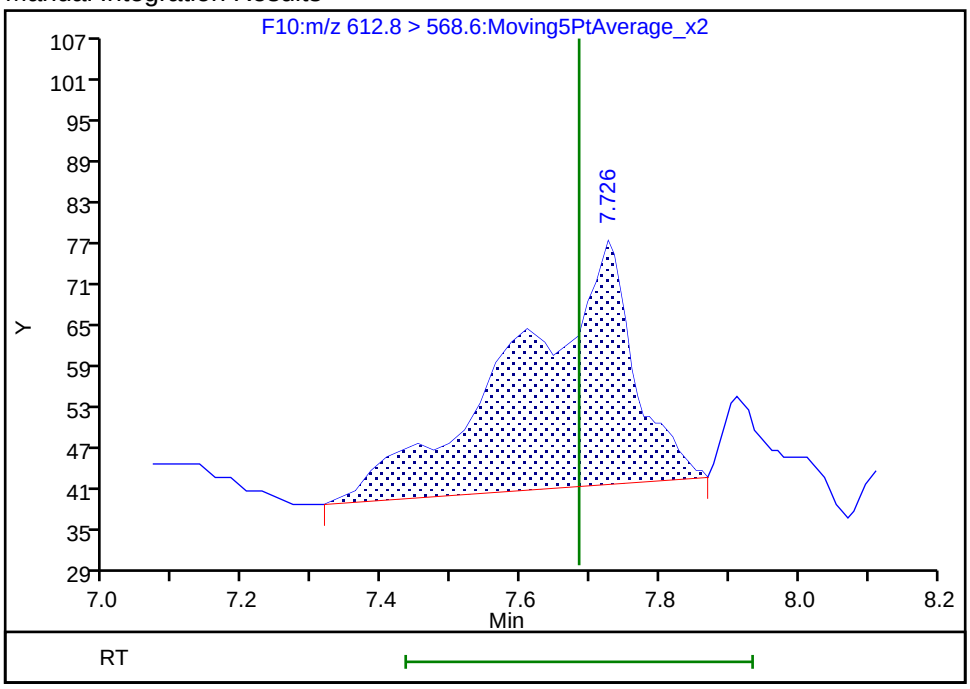
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.73
Area: 430
Amount: 0.100850
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:13:04
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

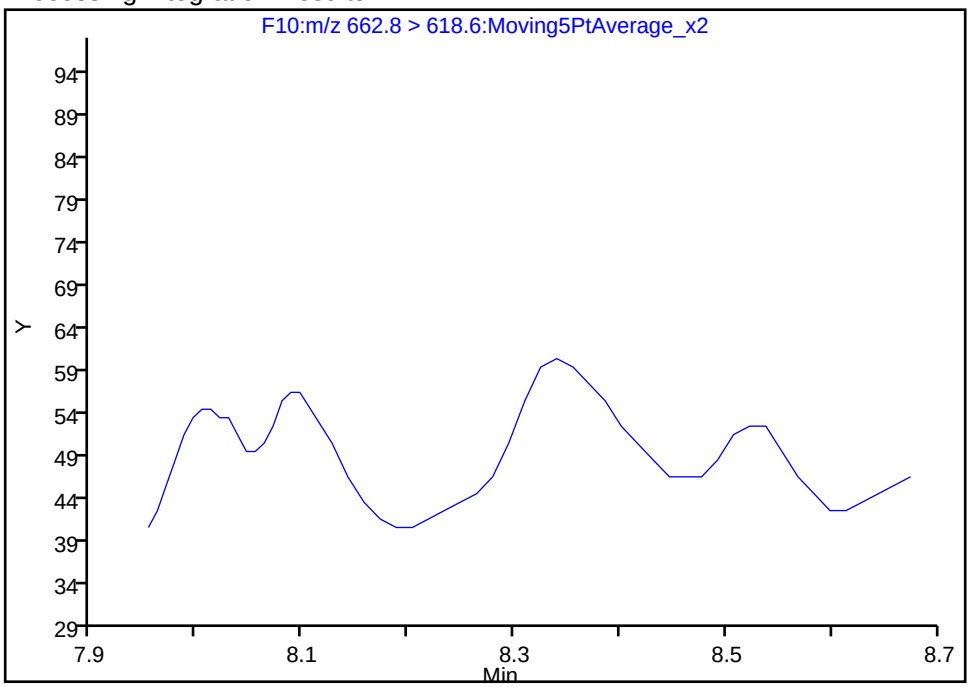
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

38 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

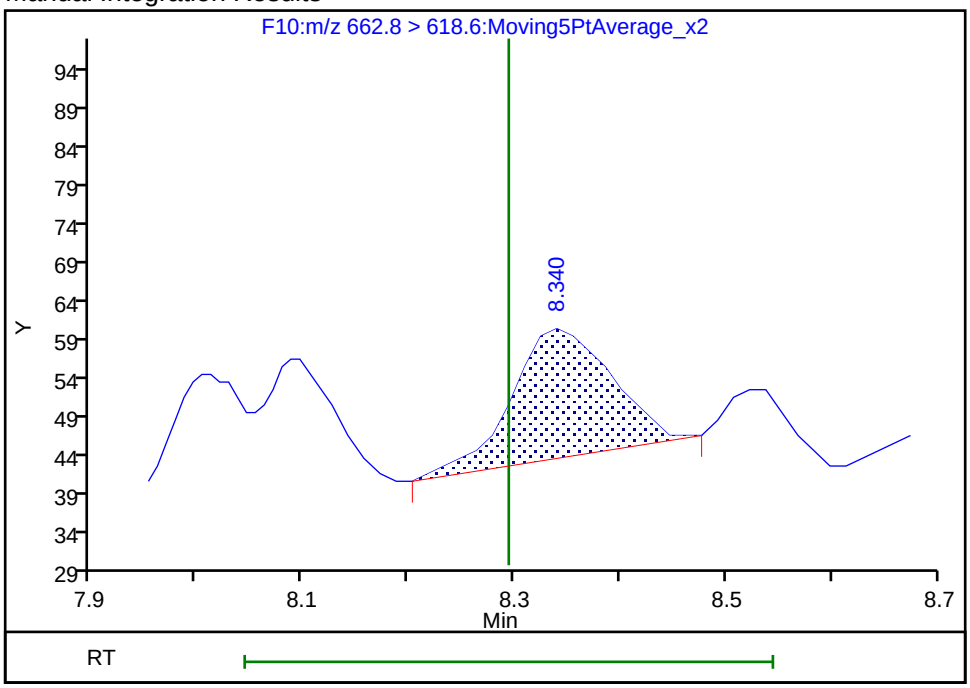
Not Detected
Expected RT: 8.29

Processing Integration Results



Manual Integration Results

RT: 8.34
Area: 111
Amount: 0.045950
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:13:00
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

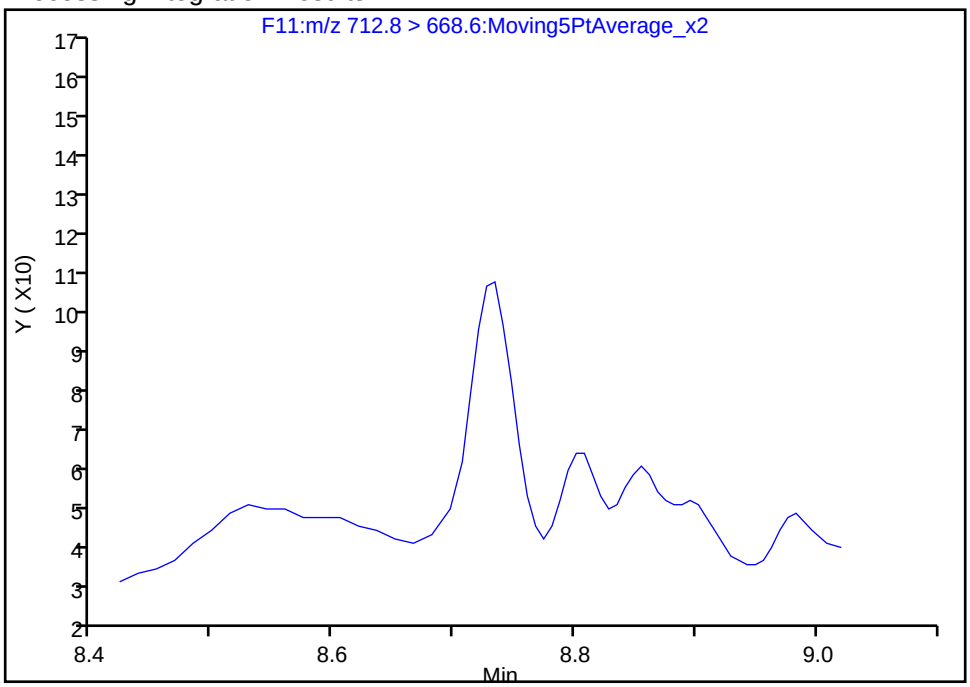
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

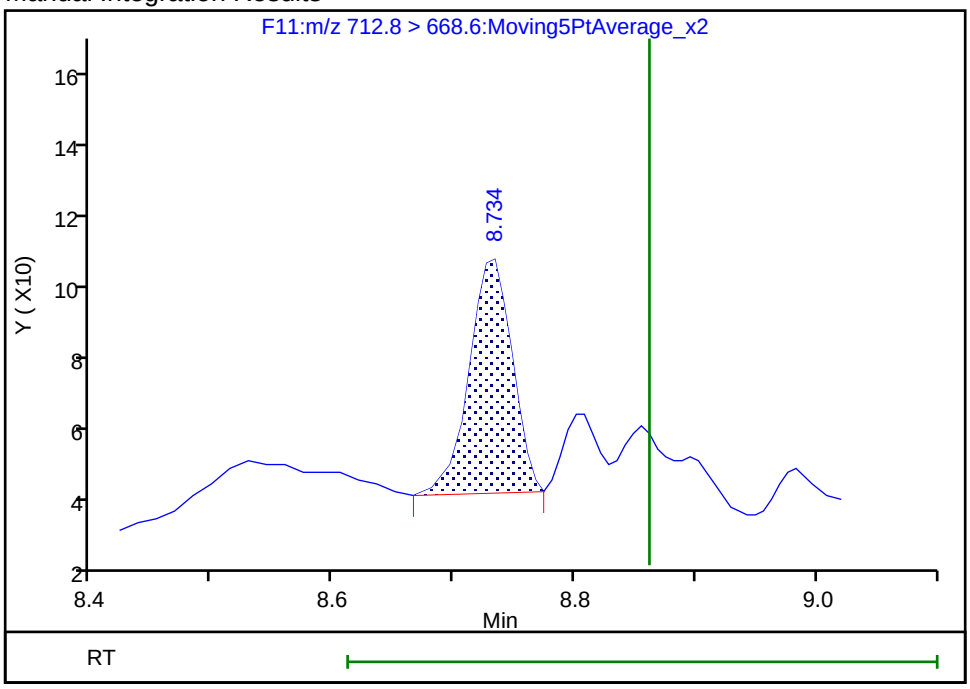
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.73
Area: 149
Amount: -0.162416
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:12:54
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

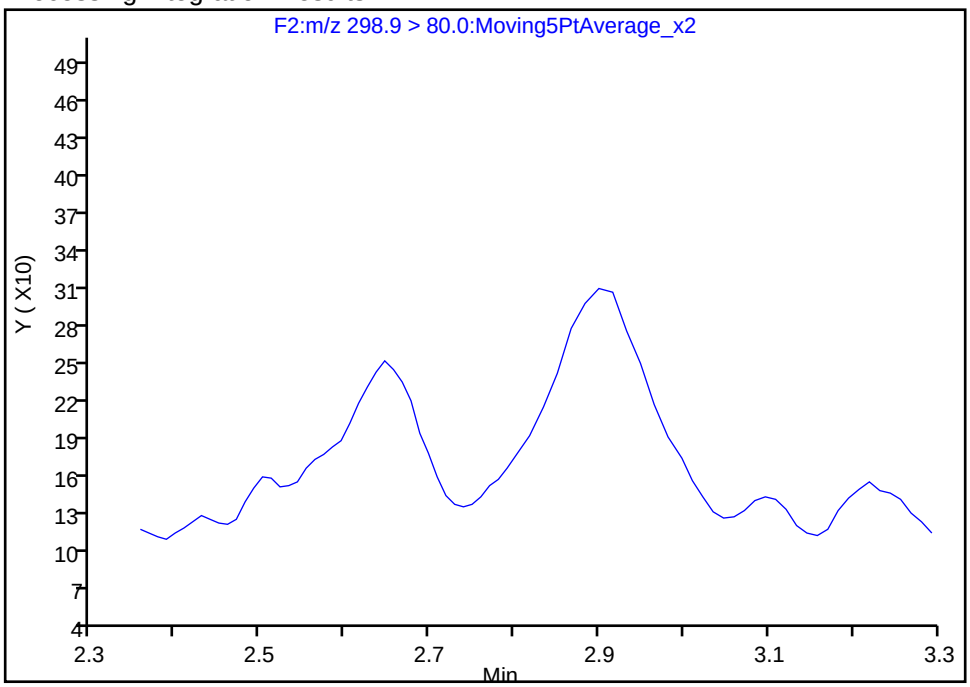
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

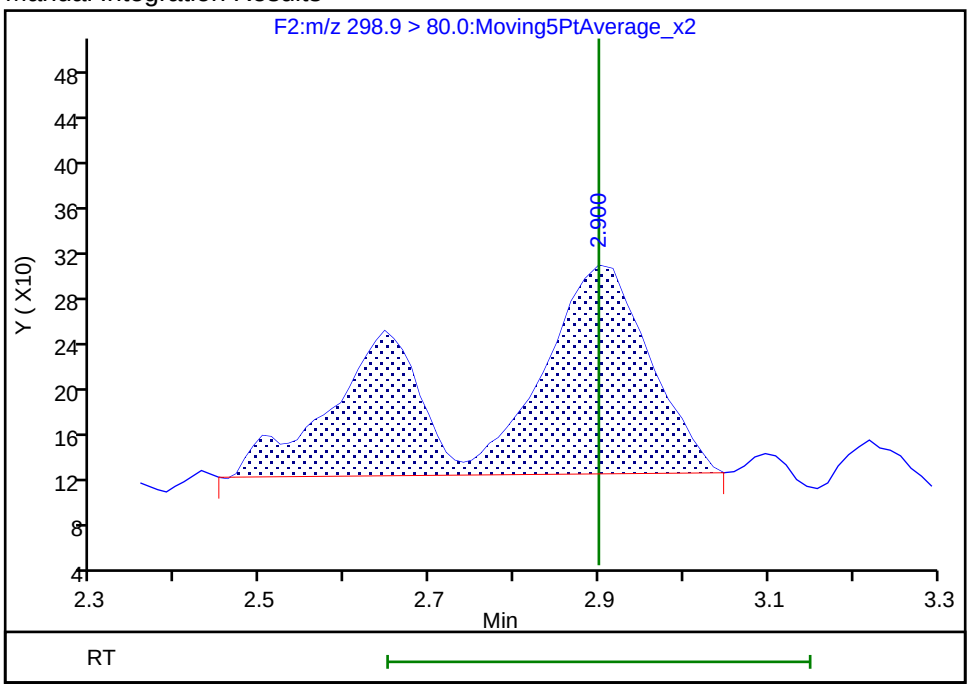
Not Detected
Expected RT: 2.90

Processing Integration Results



Manual Integration Results

RT: 2.90
Area: 2540
Amount: 0.779442
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:13:46
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d

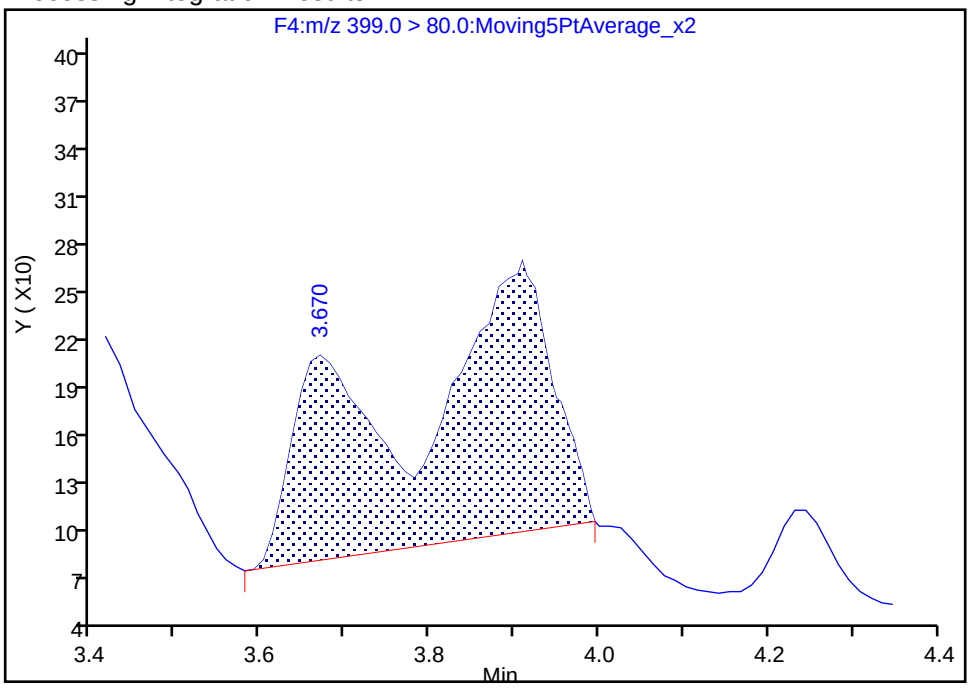
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

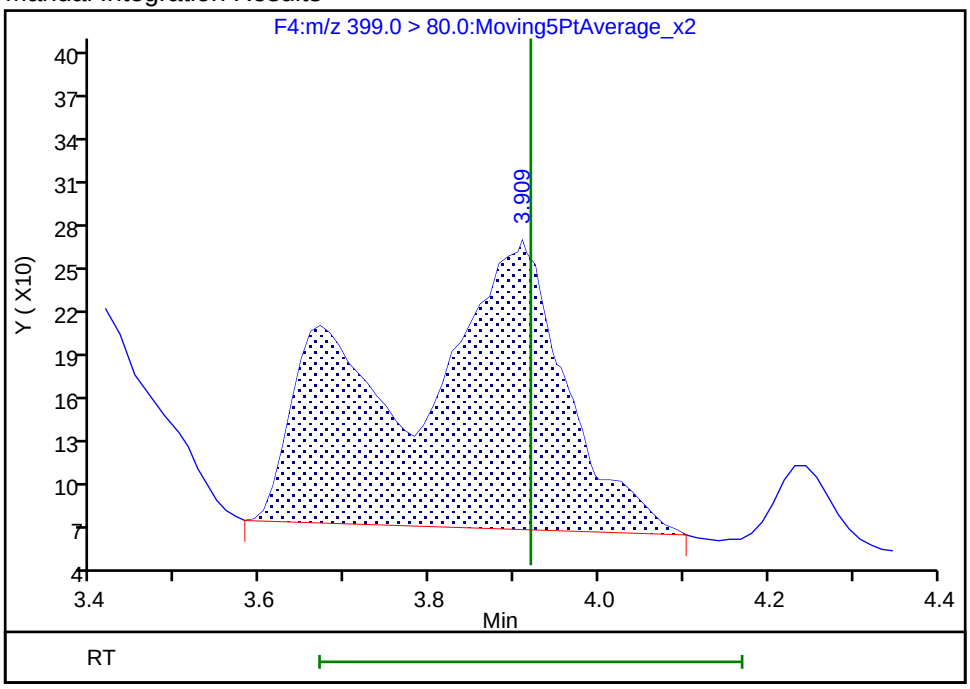
Processing Integration Results

RT: 3.67
Area: 2148
Amount: 0.869605
Amount Units: ng/ml



Manual Integration Results

RT: 3.91
Area: 2769
Amount: 0.996509
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:12:12

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

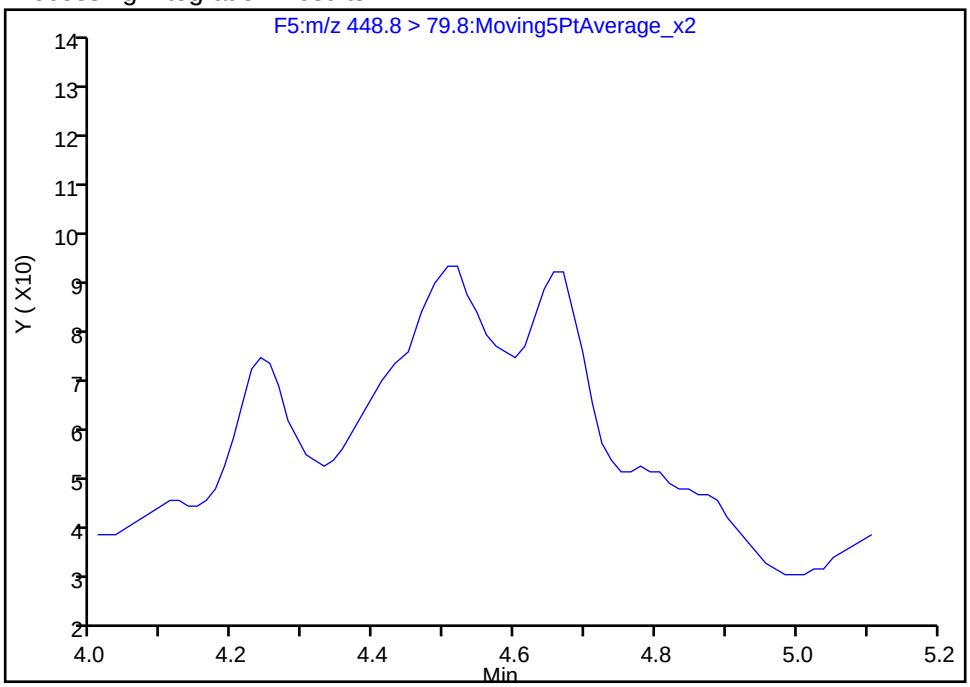
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

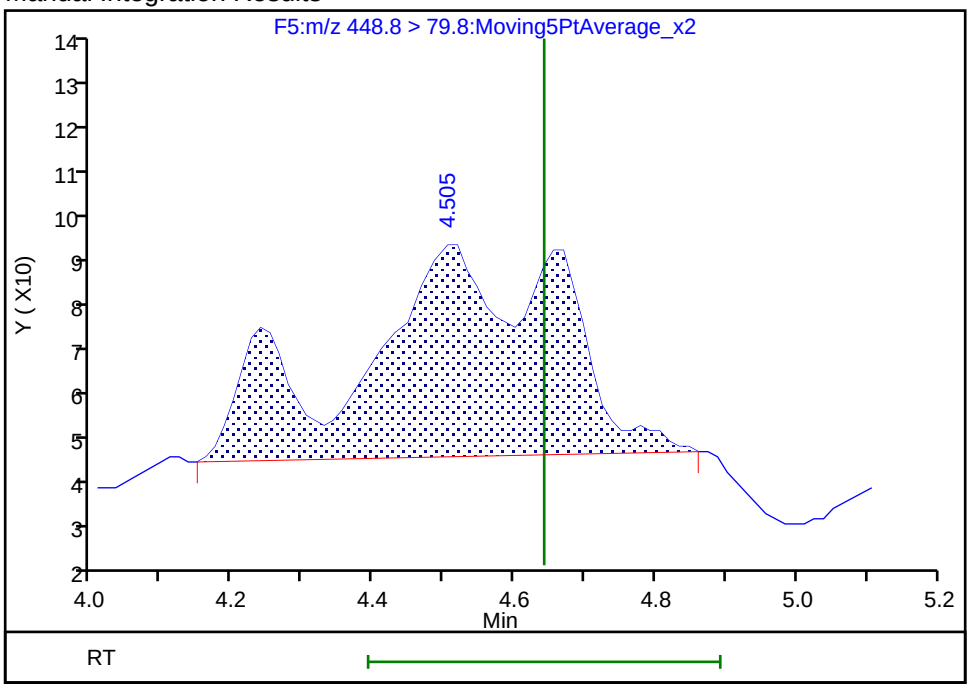
Not Detected
Expected RT: 4.64

Processing Integration Results



Manual Integration Results

RT: 4.51
Area: 807
Amount: 0.342252
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:13:30
Audit Action: Manually Integrated Audit Reason: Missed Peak

TestAmerica Burlington

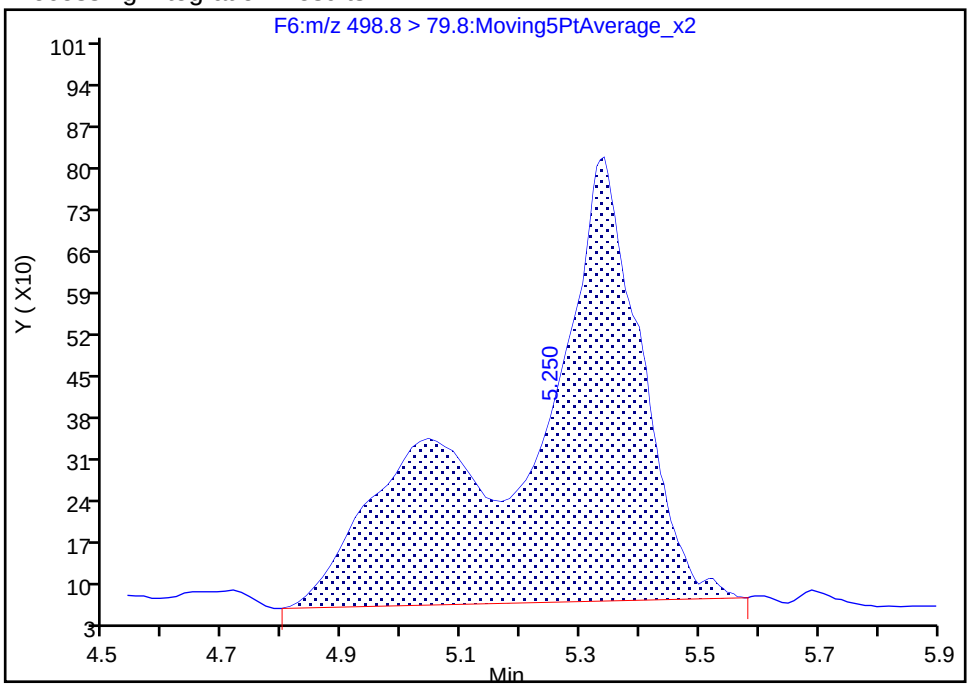
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F6:MRM		

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

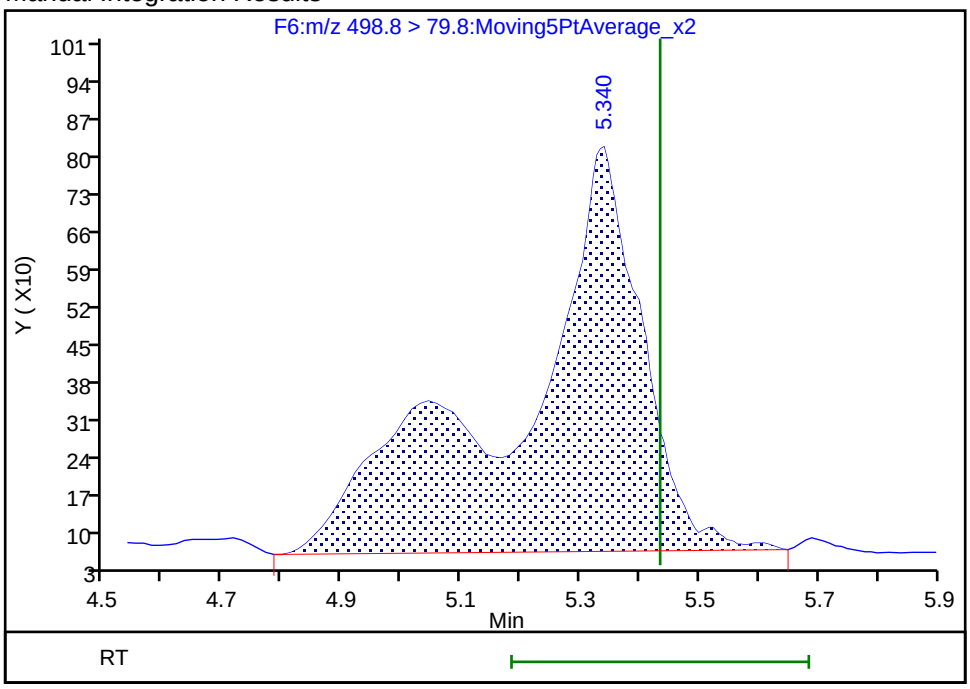
Processing Integration Results

RT: 5.25
Area: 10771
Amount: 1.827313
Amount Units: ng/ml



Manual Integration Results

RT: 5.34
Area: 11029
Amount: 1.869850
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:12:32
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

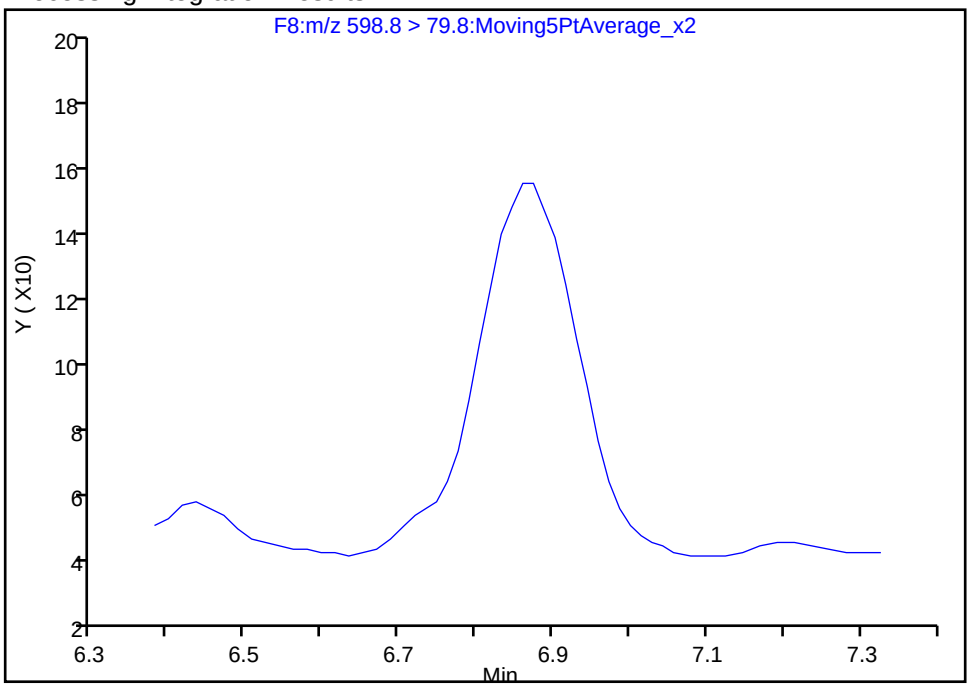
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

31 Perfluorodecane Sulfonic acid, CAS: 335-77-3

Signal: 1

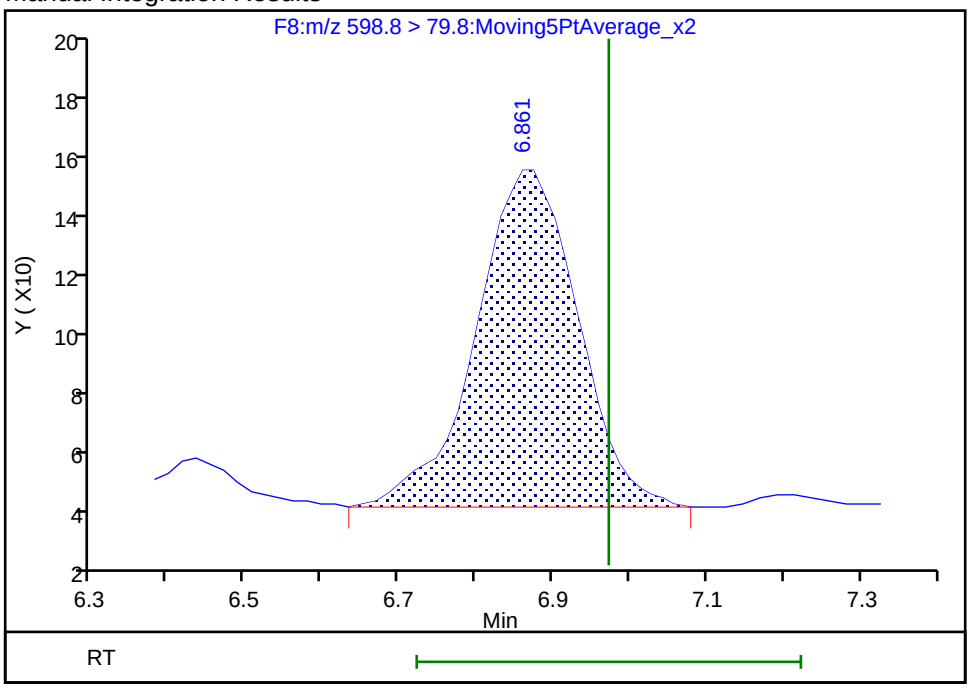
Not Detected
Expected RT: 6.97

Processing Integration Results



Manual Integration Results

RT: 6.86
Area: 1013
Amount: 0.228096
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:13:11
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

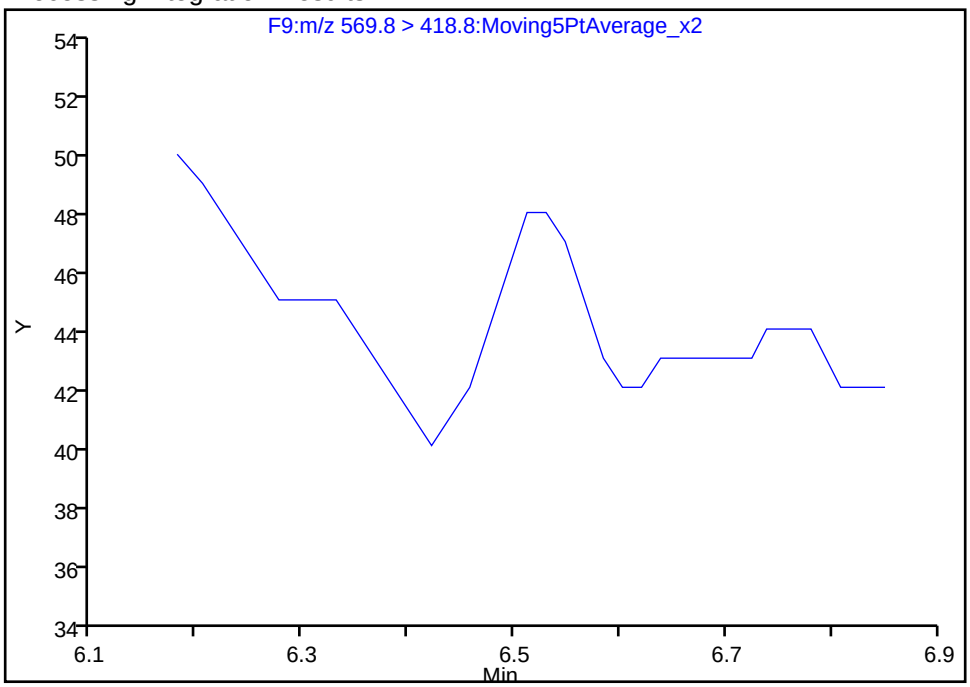
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F9:MRM		

28 N-methyl perfluorooctane sulfonamidoacetic a, CAS: 2355-31-9

Signal: 1

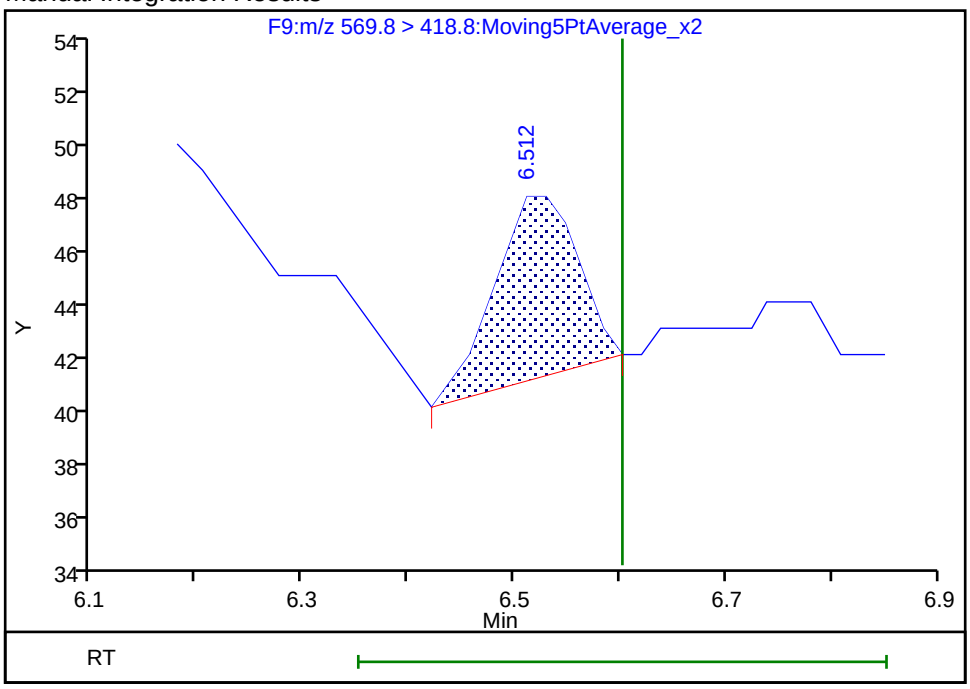
Not Detected
Expected RT: 6.60

Processing Integration Results



Manual Integration Results

RT: 6.51
Area: 37
Amount: 0.377208
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:13:16
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d

Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

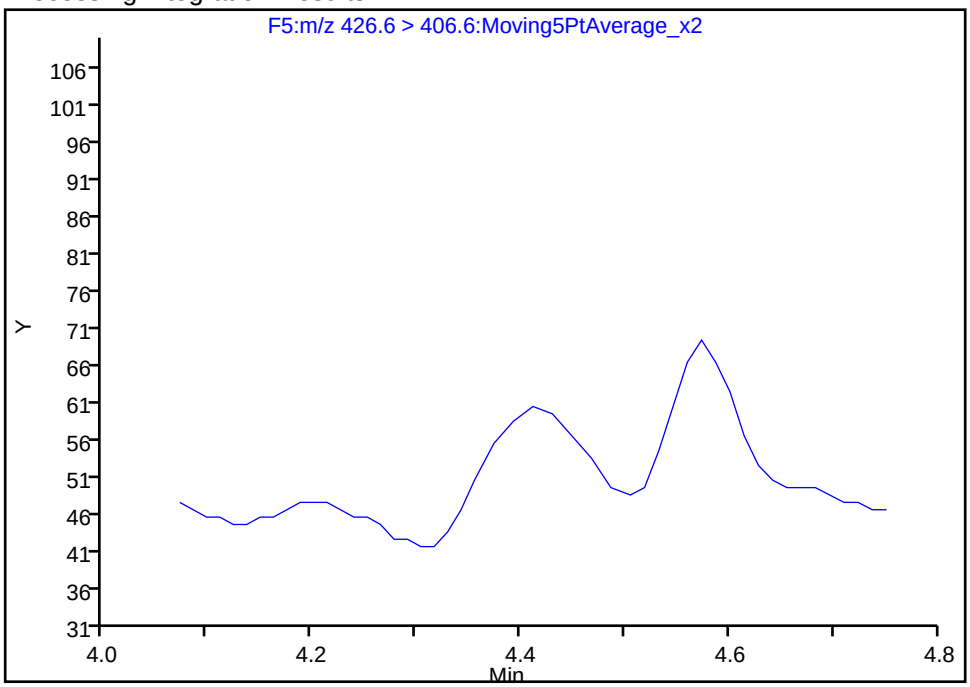
14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

Not Detected

Expected RT: 4.49

Processing Integration Results



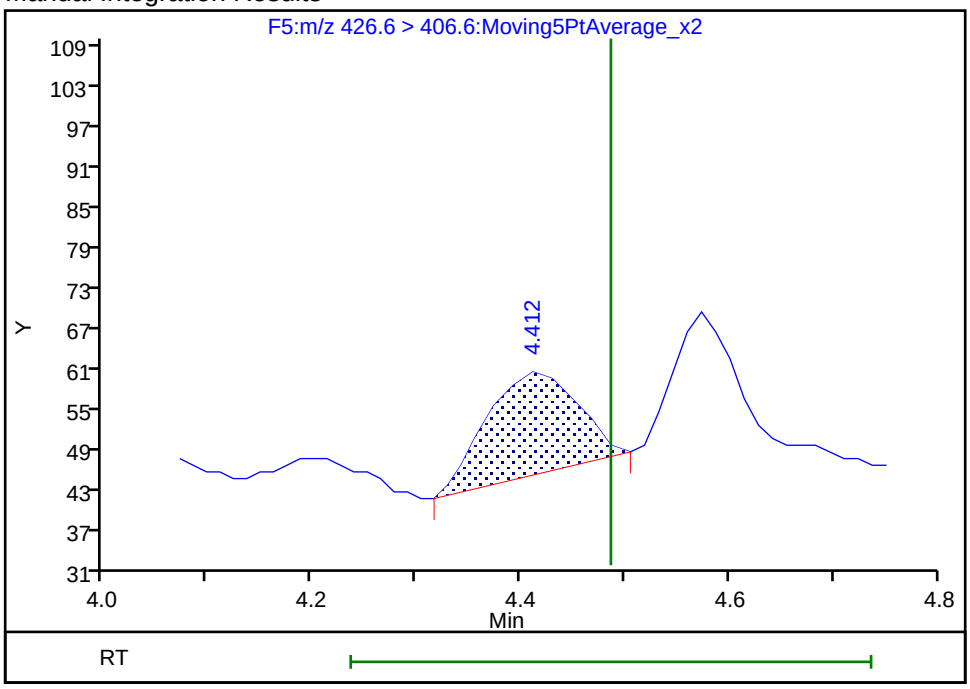
Manual Integration Results

RT: 4.41

Area: 94

Amount: -0.180007

Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:23:48

Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

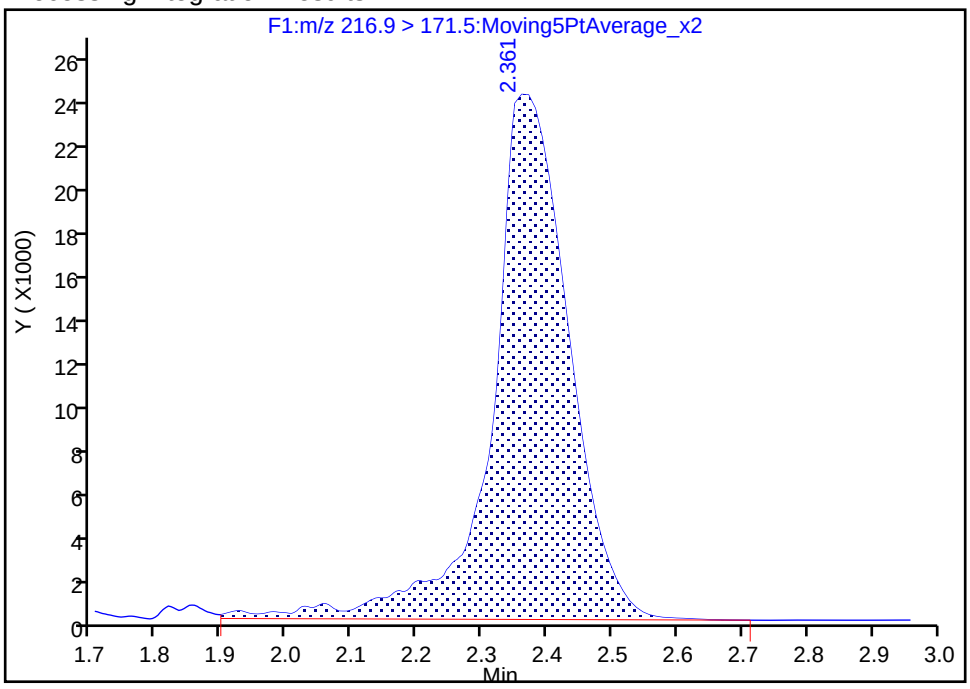
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d
Injection Date: 12-Jun-2018 21:27:03 Instrument ID: LC410
Lims ID: 200-43678-A-4-A Lab Sample ID: 200-43678-4
Client ID: MW-1
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 50
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

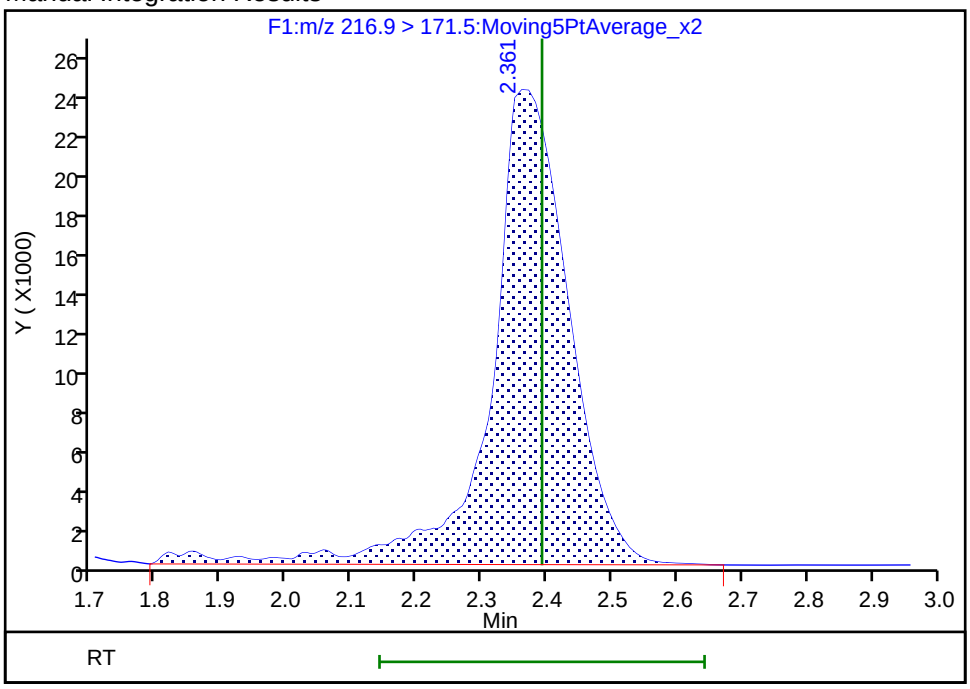
Processing Integration Results

RT: 2.36
Area: 199866
Amount: 32.995348
Amount Units: ng/ml



Manual Integration Results

RT: 2.36
Area: 202976
Amount: 33.508770
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:11:47
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

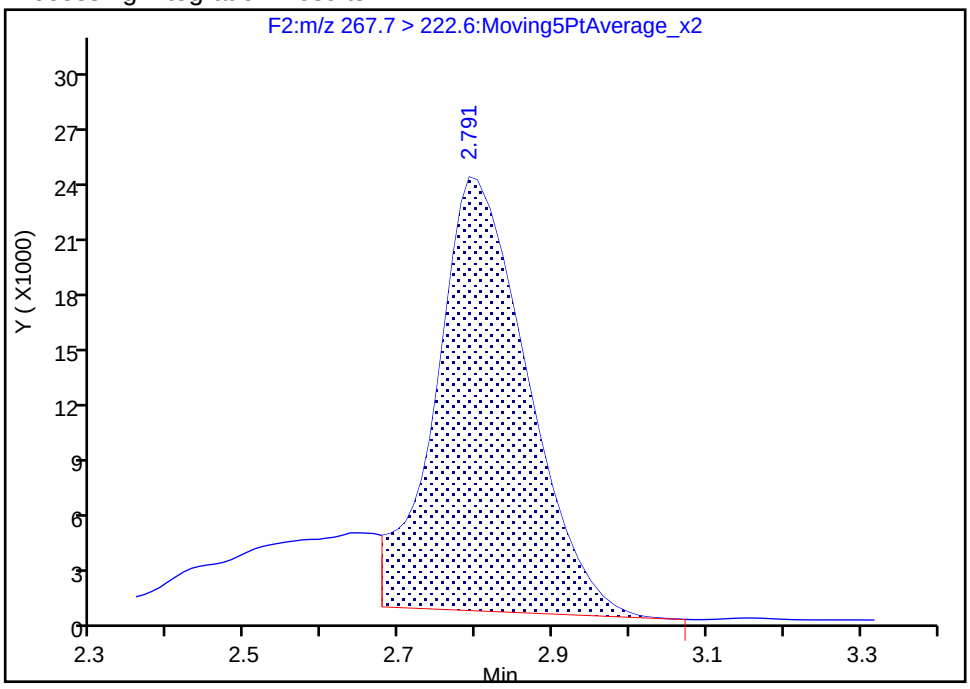
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d				
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410		
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4		
Client ID:	MW-1				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

D 4 13C5-PFPeA, CAS: STL01893

Signal: 1

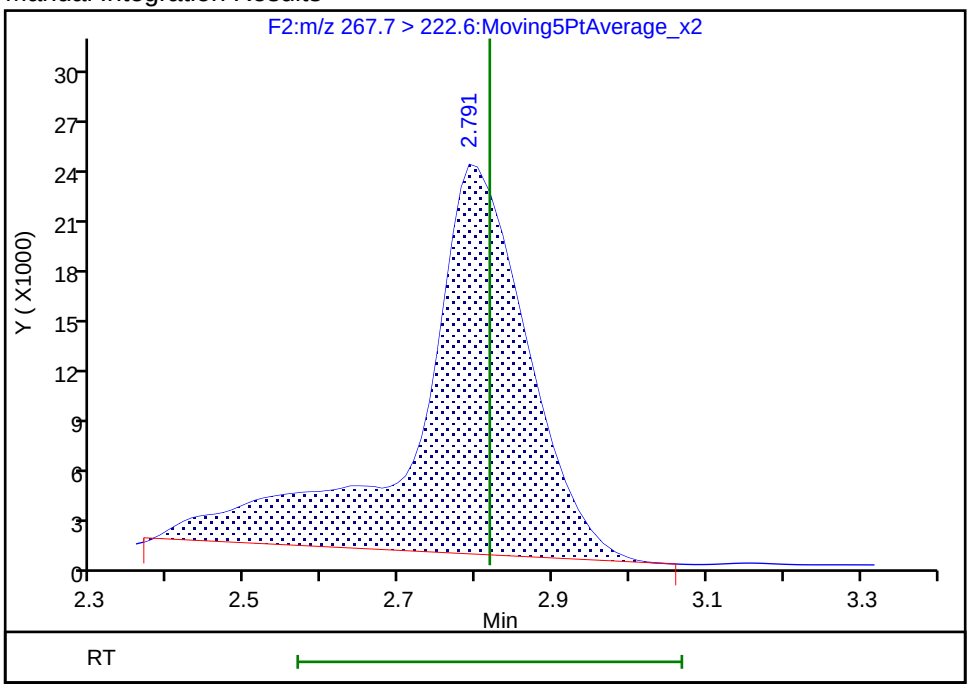
Processing Integration Results

RT: 2.79
Area: 195910
Amount: 22.037726
Amount Units: ng/ml



Manual Integration Results

RT: 2.79
Area: 237318
Amount: 26.695672
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:11:57

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A50.d

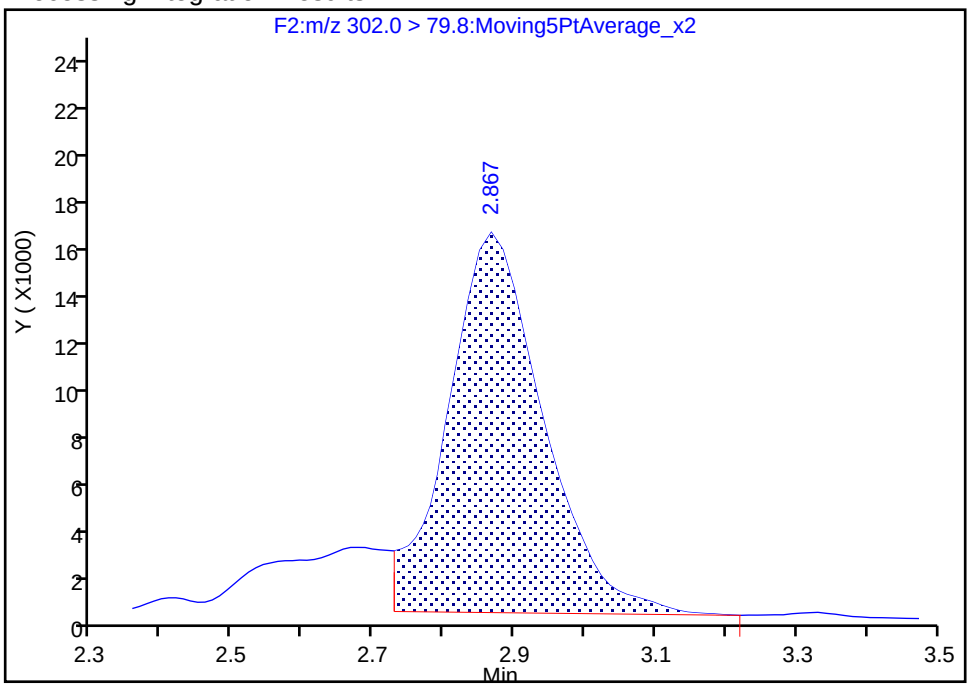
Injection Date:	12-Jun-2018 21:27:03	Instrument ID:	LC410
Lims ID:	200-43678-A-4-A	Lab Sample ID:	200-43678-4
Client ID:	MW-1		
Operator ID:	BC	ALS Bottle#:	0 Worklist Smp#: 50
Injection Vol:	20.0 ul	Dil. Factor:	1.0000
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL
Column:		Detector	F2:MRM

D 5 13C3-PFBS, CAS: STL02337

Signal: 1

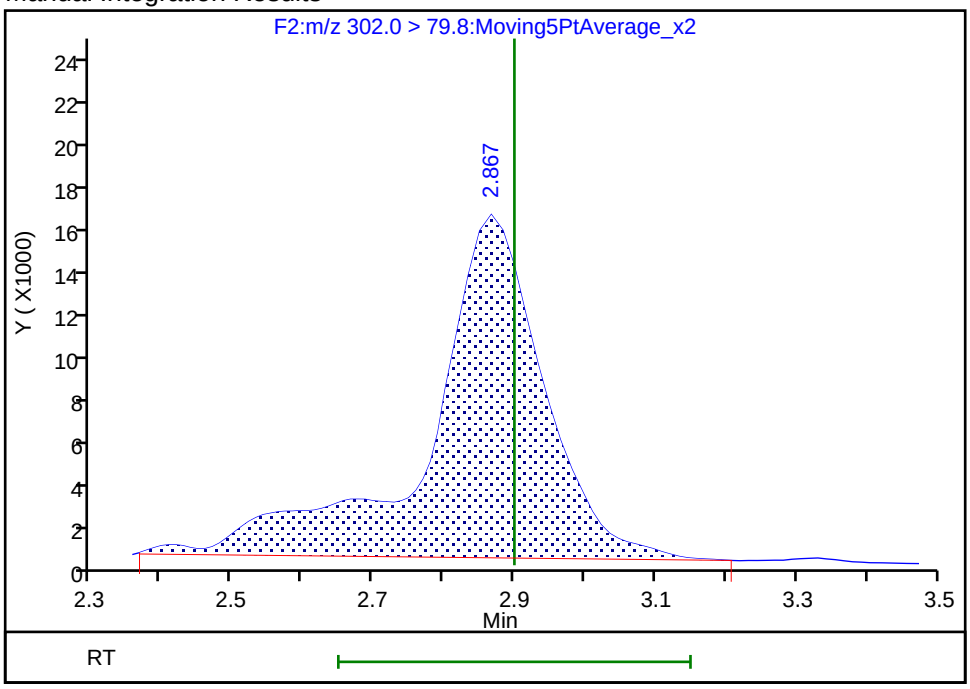
Processing Integration Results

RT: 2.87
Area: 147866
Amount: 25.143972
Amount Units: ng/ml



Manual Integration Results

RT: 2.87
Area: 179857
Amount: 30.583903
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:12:01

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: MW-X | Lab Sample ID: 200-43678-5

Matrix: Water | Lab File ID: PF061218A51.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 00:00

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 275.1(mL) | Date Analyzed: 06/12/2018 21:43

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	7.32		1.82	0.40
2706-90-3	Perfluoropentanoic acid (PFPeA)	16.3	B	1.82	0.40
307-24-4	Perfluorohexanoic acid (PFHxA)	8.07	B	1.82	0.40
375-85-9	Perfluoroheptanoic acid (PFHpA)	6.43		1.82	0.26
335-67-1	Perfluorooctanoic acid (PFOA)	11.2	B	1.82	0.43
375-95-1	Perfluorononanoic acid (PFNA)	3.04		1.82	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	4.55		1.82	0.40
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.59	J	1.82	0.40
307-55-1	Perfluorododecanoic acid (PFDoA)	1.82	U	1.82	0.40
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	1.82	U	1.82	0.40
376-06-7	Perfluorotetradecanoic acid (PFTeA)	1.82	U	1.82	0.40
375-73-5	Perfluorobutanesulfonic acid (PFBS)	2.44		1.82	0.80
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.63	J B	1.82	0.25
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	1.82	U	1.82	0.40
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	8.52		1.82	0.27
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.82	U	1.82	0.40
754-91-6	Perfluorooctane Sulfonamide (FOSA)	0.65	J	1.82	0.40
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	1.82	U	1.82	0.55
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	1.82	U	1.82	0.55
27619-97-2	6:2 FTS	1.82	U	1.82	0.55
39108-34-4	8:2 FTS	0.77	J B	1.82	0.55

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: MW-X | Lab Sample ID: 200-43678-5

Matrix: Water | Lab File ID: PF061218A51.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 00:00

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 275.1(mL) | Date Analyzed: 06/12/2018 21:43

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	30		25-150
STL01893	13C5 PFPeA	56		25-150
STL00993	13C2 PFHxA	74		25-150
STL01892	13C4-PFHpA	80		25-150
STL00990	13C4 PFOA	88		25-150
STL00995	13C5 PFNA	93		25-150
STL00996	13C2 PFDA	81		25-150
STL00997	13C2 PFUnA	81		25-150
STL00998	13C2 PFDoA	70		25-150
STL02116	13C2-PFTeDA	64		25-150
STL02337	13C3-PFBS	79		25-150
STL00994	18O2 PFHxS	82		25-150
STL00991	13C4 PFOS	92		25-150
STL01056	13C8 FOSA	52		25-150
STL02118	d3-NMeFOSAA	65		25-150
STL02117	d5-NEtFOSAA	66		25-150
STL02279	M2-6:2FTS	223		25-150
STL02280	M2-8:2FTS	112		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d
Lims ID: 200-43678-A-5-A
Client ID: MW-X
Sample Type: Client
Inject. Date: 12-Jun-2018 21:43:10 ALS Bottle#: 0 Worklist Smp#: 51
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-051 5
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:24:21 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 13-Jun-2018 10:25:26

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.382	2.382	0.0	1.004	4489	4.03			9.2	M
D 1 13C4 PFBA										
216.9 > 171.5	2.371	2.392	-0.021	1.000	77557	15.2		30.5	44.9	
D 4 13C5-PFPeA										
267.7 > 222.6	2.791	2.818	-0.027	1.000	209844	28.1		56.2	412	
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.801	2.834	-0.033	1.004	45823	8.98			35.7	M
D 5 13C3-PFBS										
302.0 > 79.8	2.867	2.900	-0.033	1.000	182530	37.0		79.5	187	
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.850	2.900	-0.050	0.994	4448	1.34			3.4	M
7 Perfluorohexanoic acid										
312.8 > 268.6	3.250	3.300	-0.050	1.000	29988	4.44			35.7	
D 8 13C2 PFHxA										
314.8 > 269.6	3.250	3.300	-0.050	1.000	322523	37.0		74.0	1735	
9 Perfluoroheptanoic acid										M
362.9 > 318.8	3.815	3.882	-0.067	1.000	29582	3.54			34.3	M
D 10 13C4-PFHpA										
366.9 > 321.8	3.815	3.882	-0.067	1.000	400450	40.0		80.0	1289	
D 12 18O2 PFHxS										
402.9 > 83.8	3.859	3.914	-0.055	1.000	182848	38.7		81.9	519	
11 Perfluorohexanesulfonic acid										
399.0 > 80.0	3.670	3.919	-0.249	0.951	1886	0.8988			2.5	
D 13 M2-6:2FTS										
428.6 > 408.6	4.486	4.546	-0.060	1.000	140499	106.0		223	1462	
D 16 13C4 PFOA										
416.9 > 371.8	4.532	4.601	-0.069	1.000	335974	43.8		87.7	773	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 17 13C2-PFOA										
414.9 > 369.8	4.532	4.601	-0.069		402467	50.0			3005	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.532	4.615	-0.083	1.000	46128	6.14			76.7	
D 19 13C5 PFNA										
467.8 > 422.8	5.322	5.422	-0.100	1.000	469186	46.5		93.0	3660	
20 Perfluorononanoic acid										
462.8 > 418.8	5.340	5.422	-0.082	1.003	13895	1.68			59.0	
22 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.328	5.434	-0.106	0.996	24320	4.69			146	M
D 21 13C4 PFOS										
502.8 > 79.8	5.352	5.440	-0.088	1.000	225470	44.1		92.3	1832	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.190	6.070	0.120	1.016	199	0.4224			1.4	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	147255	53.7		112	1479	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.143	6.227	-0.084	1.004	28739	2.50			126	
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	591792	40.3		80.5	4482	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	100539	32.5		64.9	2080	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.847	6.959	-0.112	1.000	87772	33.1		66.3	710	
31 Perfluorodecane Sulfonic acid										M
598.8 > 79.8	6.472	6.973	-0.501	1.209	534	0.1592			7.8	M
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.889	6.987	-0.098	1.000	9879	0.8723			101	
D 33 13C2 PFUnA										
564.8 > 519.8	6.889	6.987	-0.098	1.000	545309	40.6		81.1	4905	
34 Perfluorooctane Sulfonamide										M
497.8 > 77.8	7.029	7.079	-0.050	0.993	212	0.3584			5.8	M
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	291785	25.8		51.7	4943	
D 36 13C2 PFDoA										
614.8 > 569.6	7.564	7.684	-0.120	1.000	569511	35.1		70.2	7311	
37 Perfluorododecanoic acid										M
612.8 > 568.6	7.634	7.684	-0.050	1.009	259	0.0862			3.0	M
38 Perfluorotridecanoic acid										M
662.8 > 618.6	8.188	8.294	-0.106	1.082	241	0.0576			2.2	M
D 39 13C2-PFTeDA										
714.8 > 669.6	8.736	8.855	-0.119	1.000	525467	31.9		63.8	1656	
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.742	8.862	-0.120	1.001	756	-0.0956			19.4	M
712.8 > 168.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			
712.8 > 218.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:24:25 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d

Injection Date: 12-Jun-2018 21:43:10 Instrument ID: LC410

Lims ID: 200-43678-A-5-A Lab Sample ID: 200-43678-5

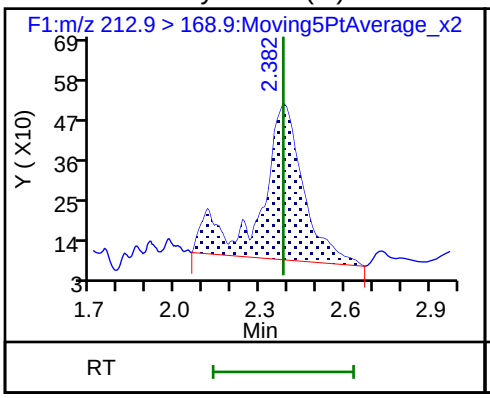
Client ID: MW-X

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 51

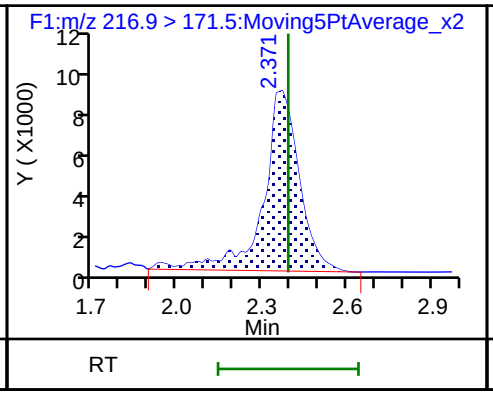
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

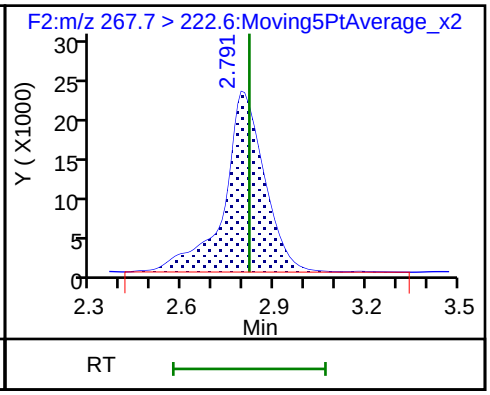
2 Perfluorobutyric acid (M)



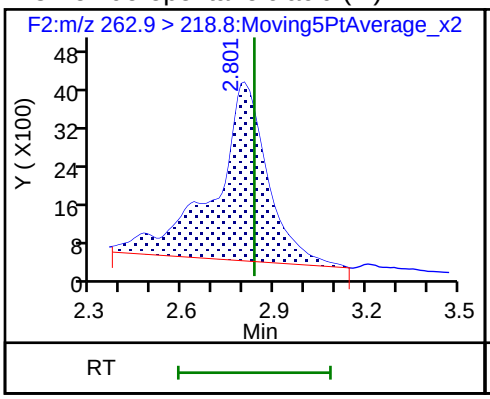
D 1 13C4 PFBA



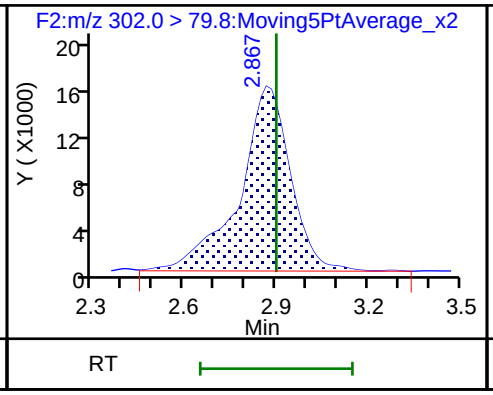
D 4 13C5-PFPeA



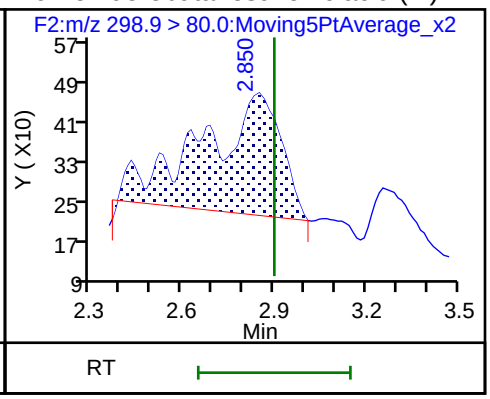
3 Perfluoropentanoic acid (M)



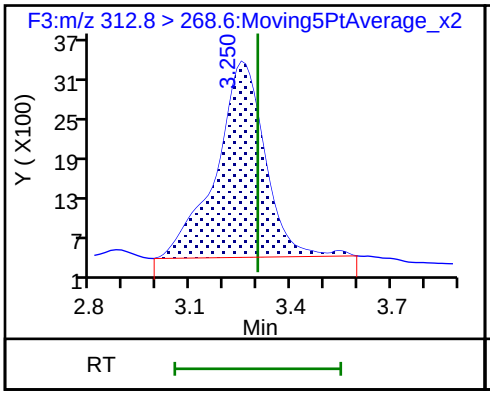
D 5 13C3-PFBS



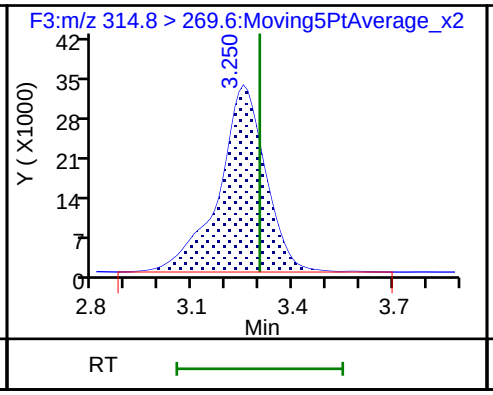
6 Perfluorobutanesulfonic acid (M)



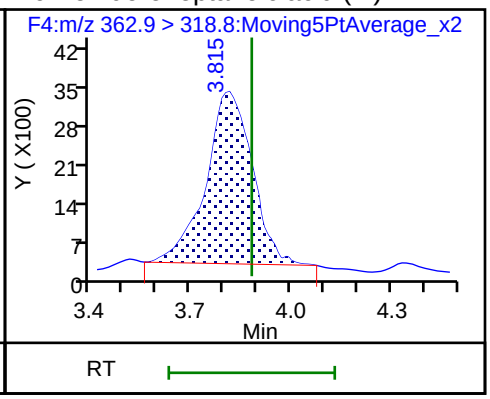
7 Perfluorohexanoic acid



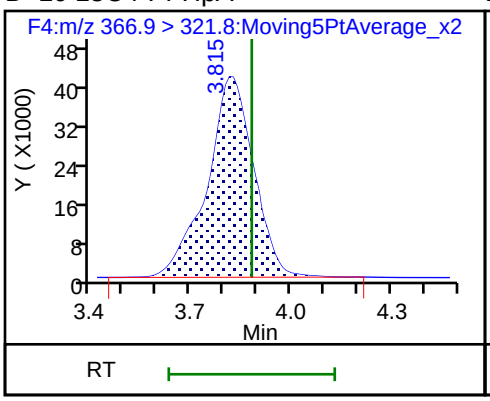
D 8 13C2 PFHxA



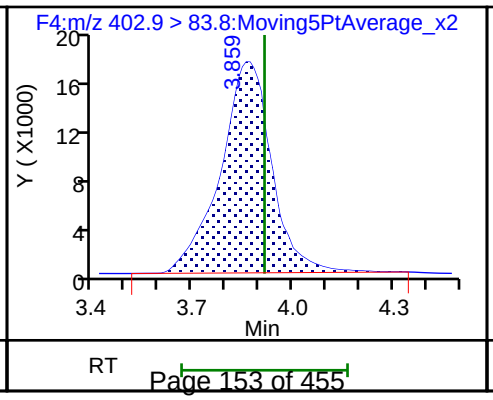
9 Perfluoroheptanoic acid (M)



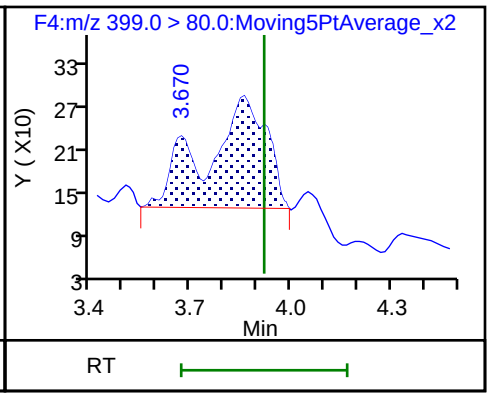
D 10 13C4-PFHpA



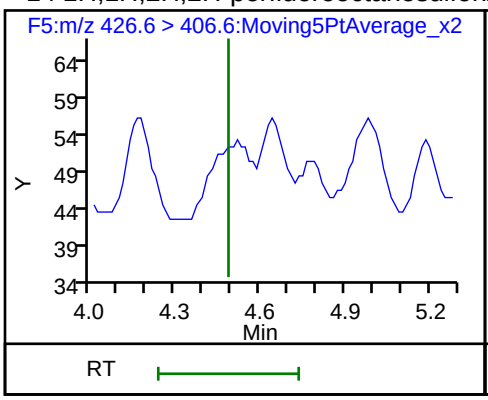
D 12 18O2 PFHxS



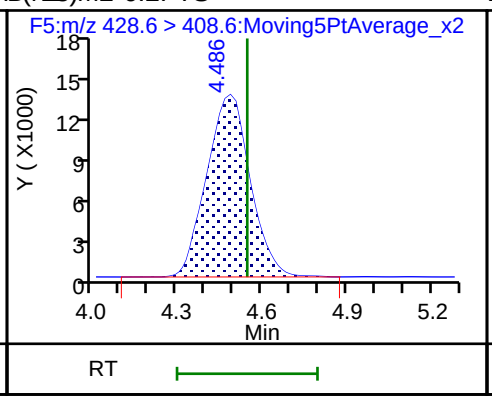
11 Perfluorohexanesulfonic acid



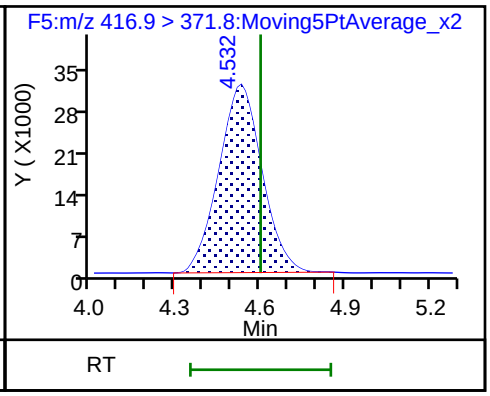
14 1H,1H,2H,2H-perfluorooctanesulfonic (M2)



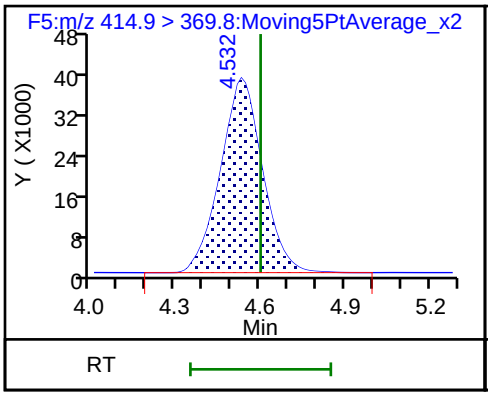
D 13 M2-6:2FTS



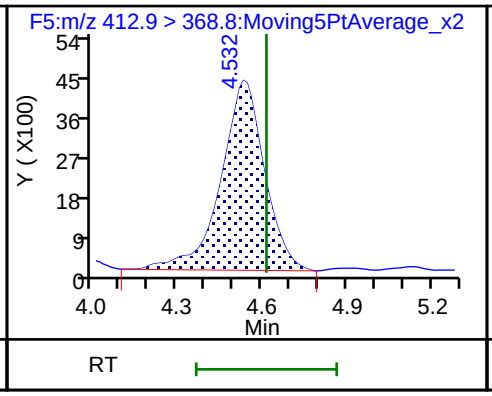
D 16 13C4 PFOA



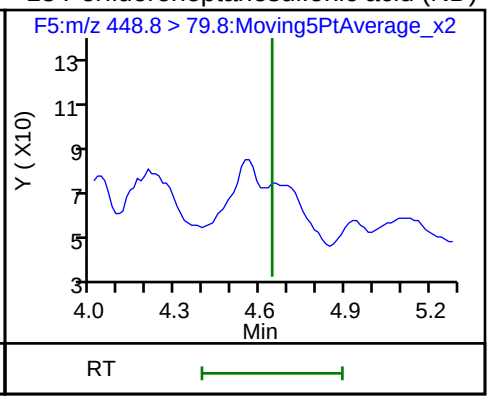
* 17 13C2-PFOA



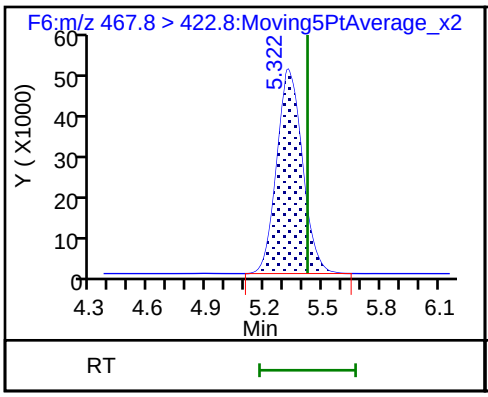
15 Perfluorooctanoic acid



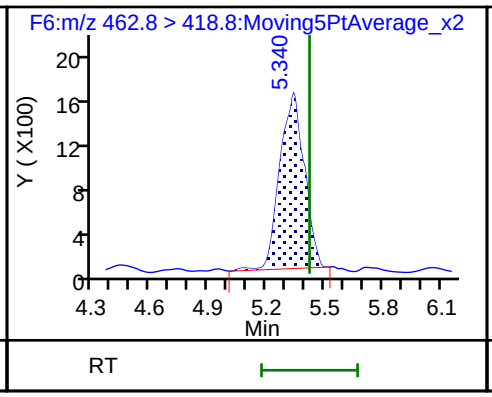
18 Perfluoroheptanesulfonic acid (ND)



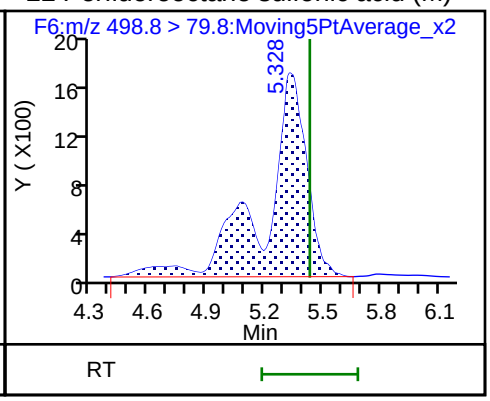
D 19 13C5 PFNA



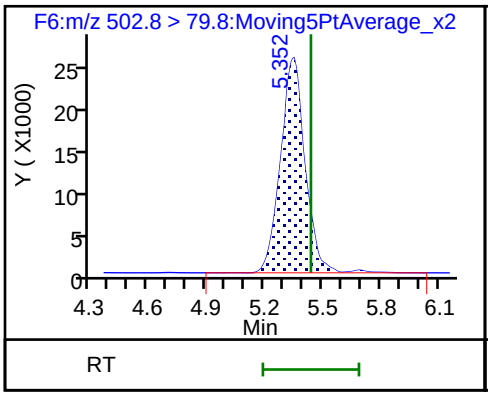
20 Perfluorononanoic acid



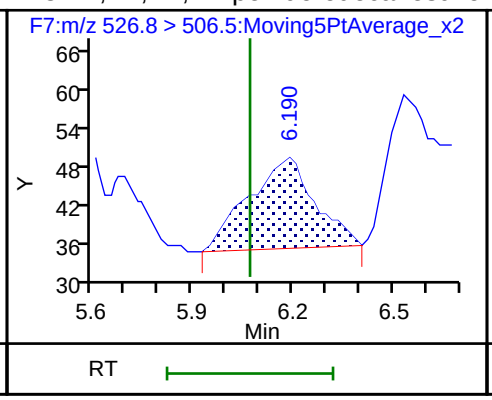
22 Perfluorooctane sulfonic acid (M)



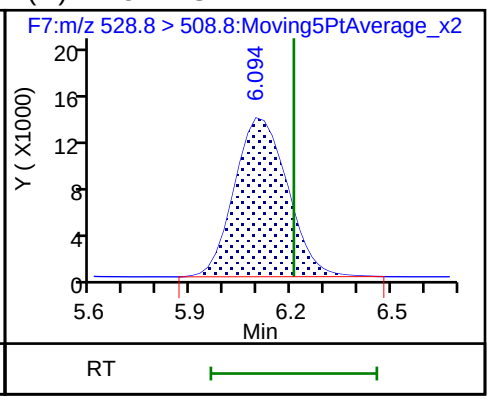
D 21 13C4 PFOS



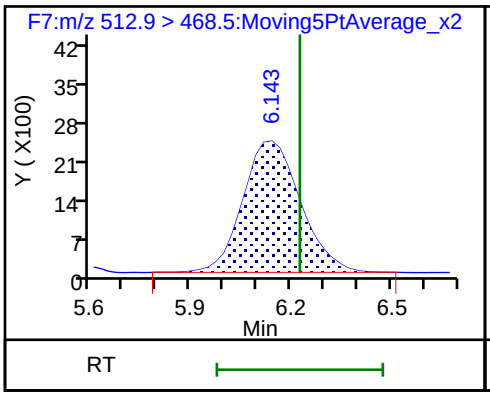
23 1H,1H,2H,2H-perfluorodecanesulfonic (M2)



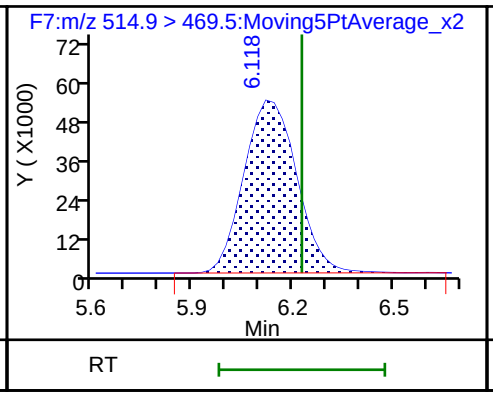
D 24 M2-8:2FTS



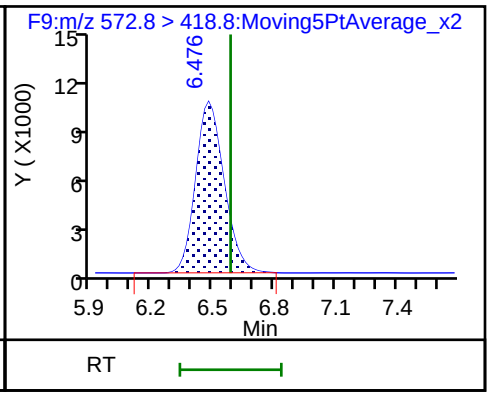
25 Perfluorodecanoic acid



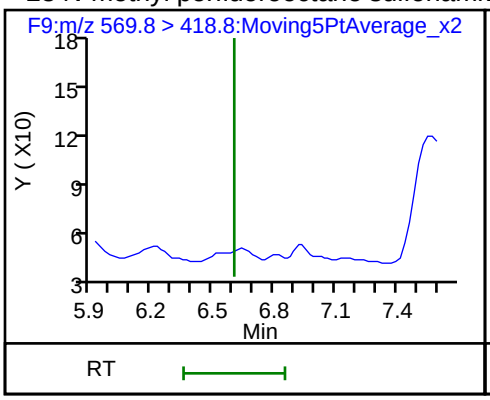
D 26 13C2 PFDA



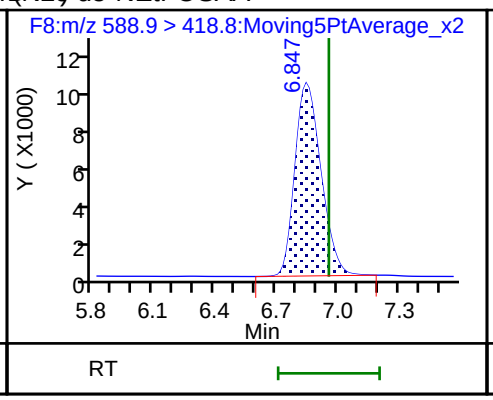
D 27 d3-NMeFOSAA



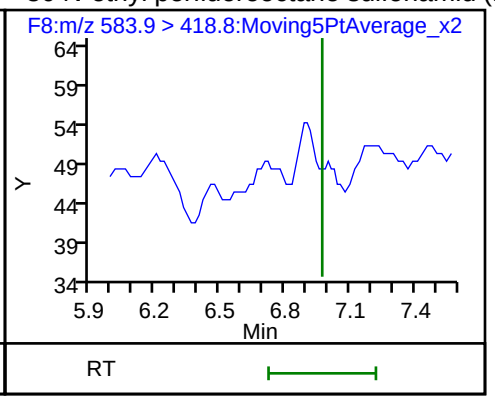
28 N-methyl perfluorooctane sulfonamid (ND)



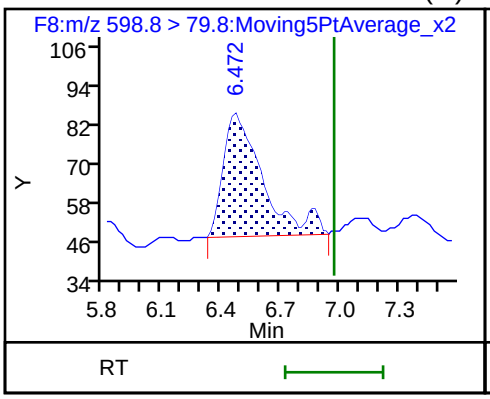
D 29 d5-NEtFOSAA



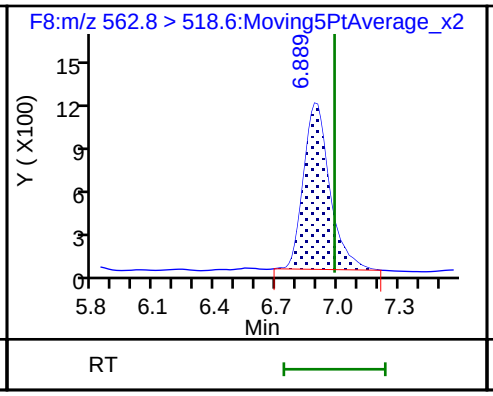
30 N-ethyl perfluorooctane sulfonamid (ND)



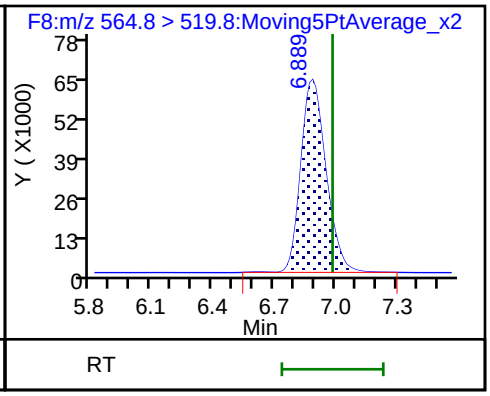
31 Perfluorodecane Sulfonic acid (M)



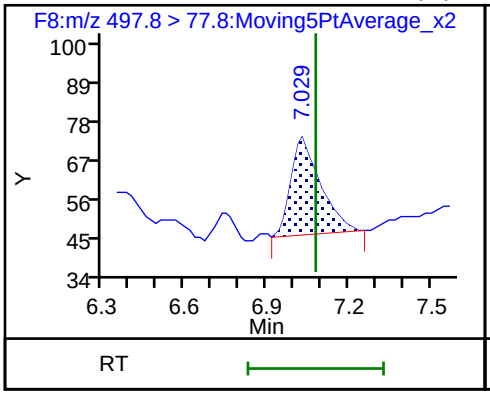
32 Perfluoroundecanoic acid



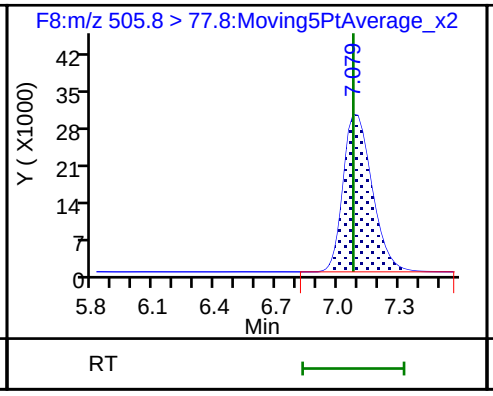
D 33 13C2 PFUnA



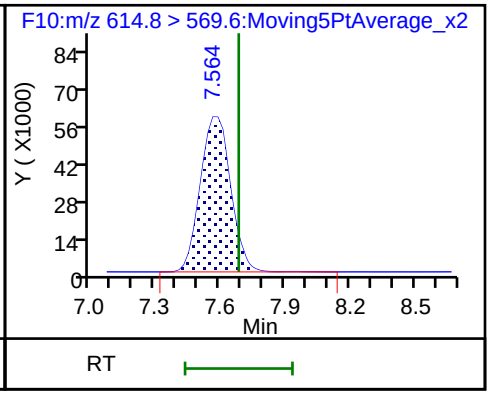
34 Perfluorooctane Sulfonamide (M)



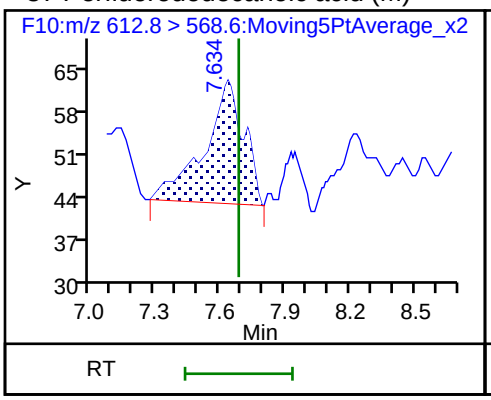
D 35 13C8 FOSA



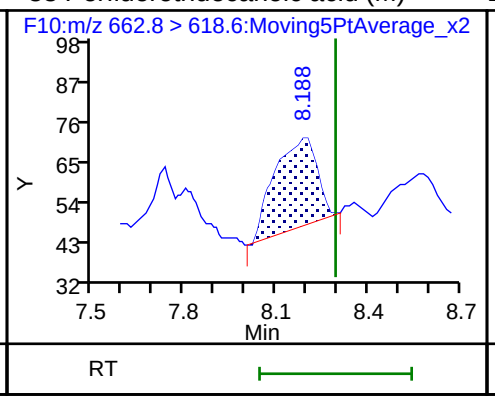
D 36 13C2 PFDoA



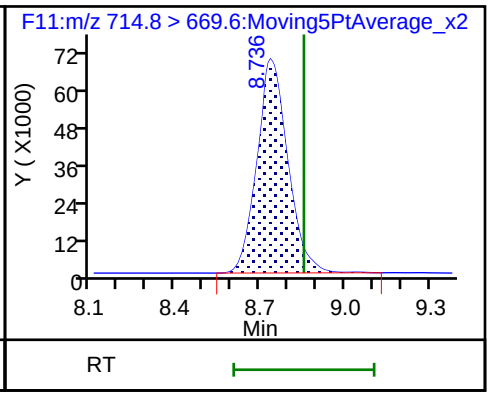
37 Perfluorododecanoic acid (M)



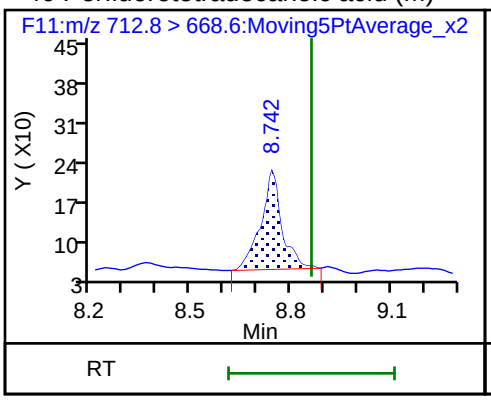
38 Perfluorotridecanoic acid (M)



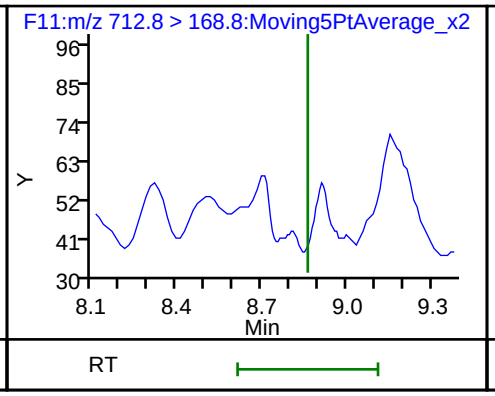
D 39 13C2-PFTeDA



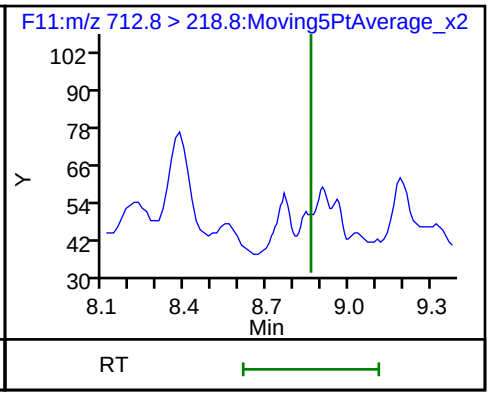
40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d

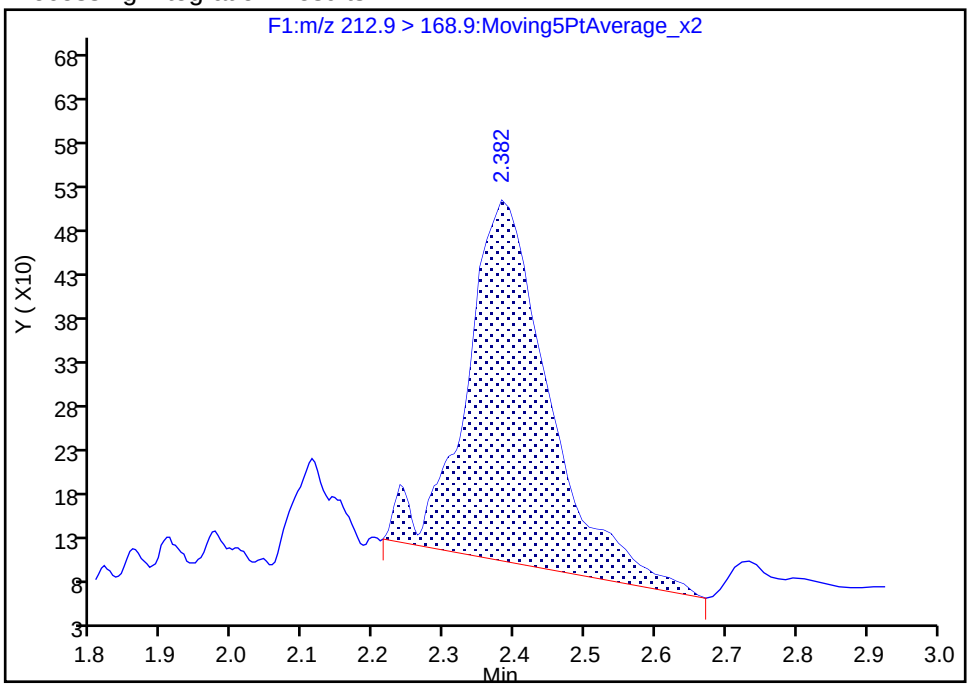
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

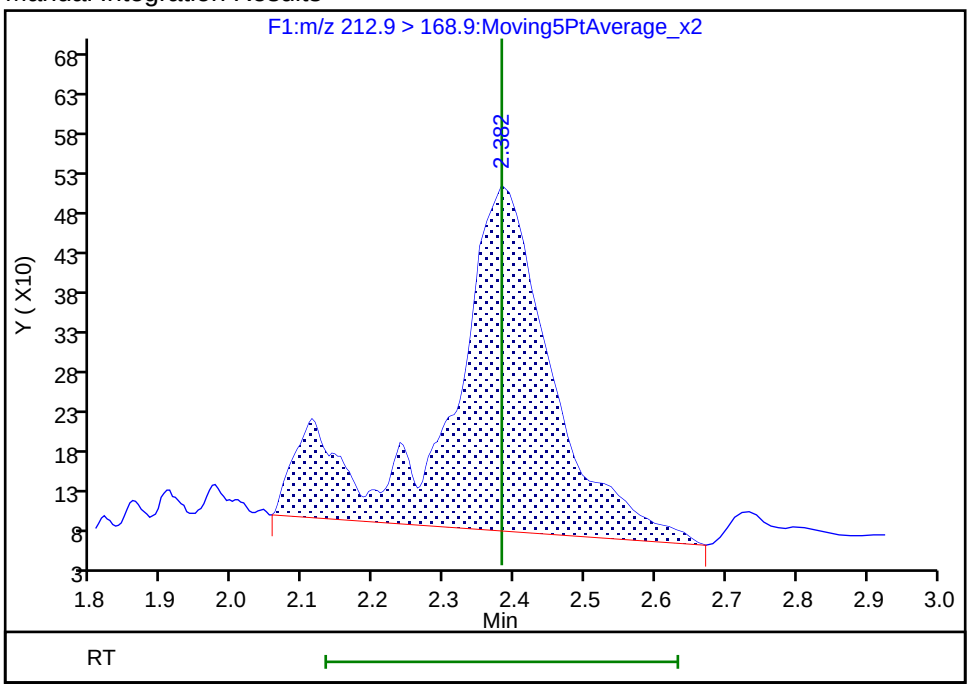
Processing Integration Results

RT: 2.38
Area: 3349
Amount: 3.035230
Amount Units: ng/ml



Manual Integration Results

RT: 2.38
Area: 4489
Amount: 4.026200
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:14:20

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

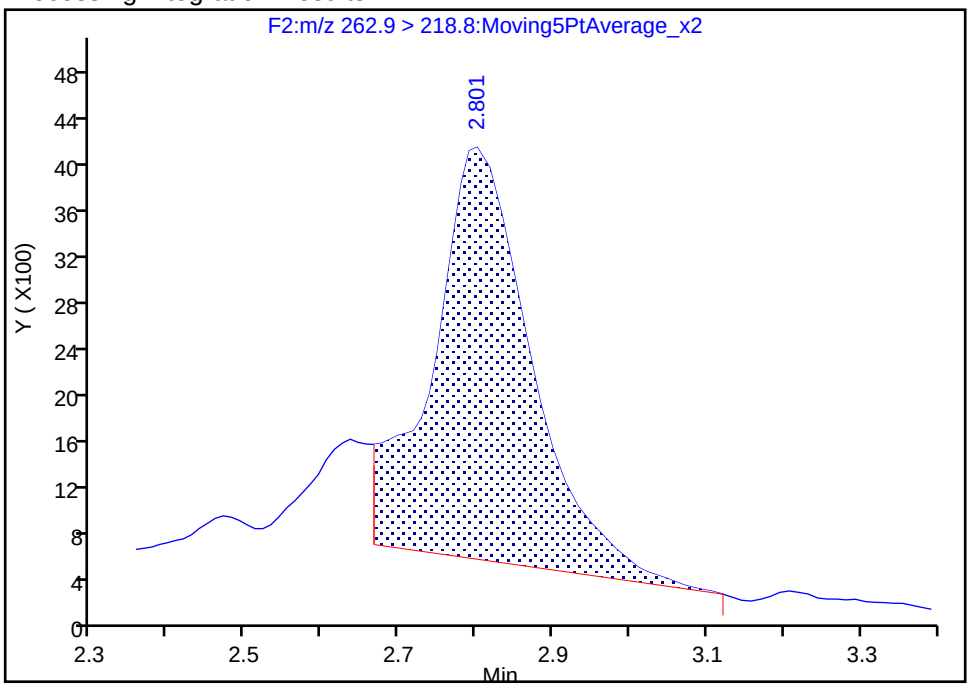
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

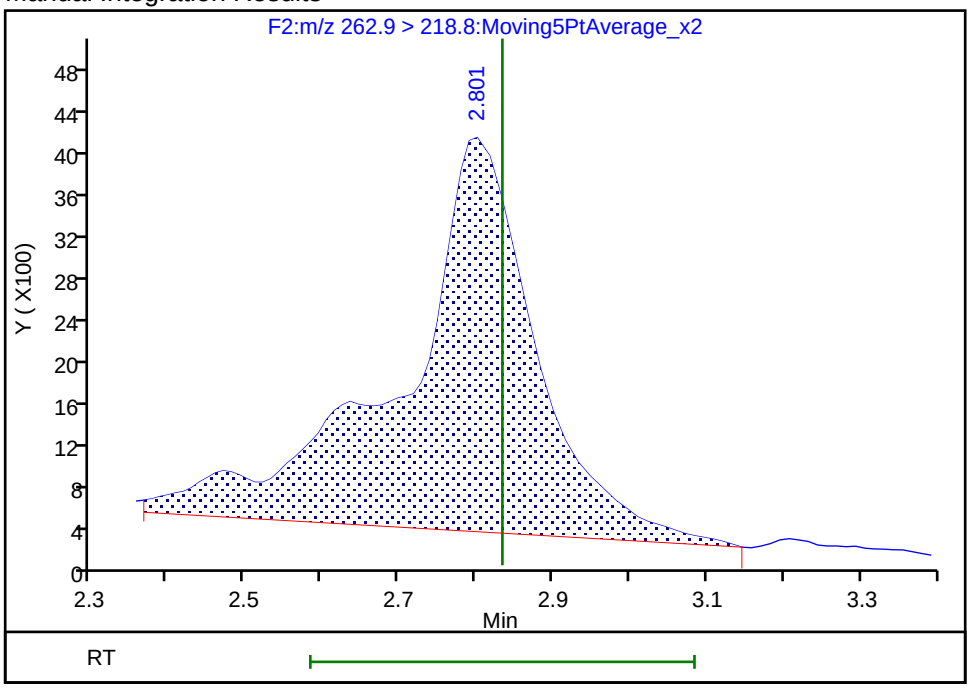
Processing Integration Results

RT: 2.80
Area: 31690
Amount: 6.265529
Amount Units: ng/ml



Manual Integration Results

RT: 2.80
Area: 45823
Amount: 8.980939
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:16:35

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

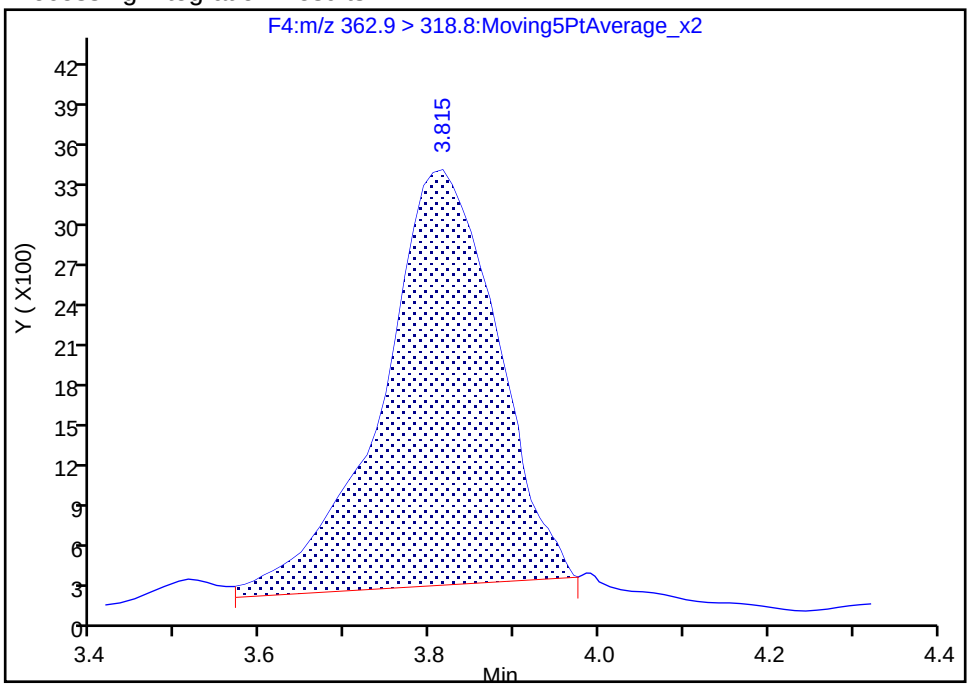
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

9 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

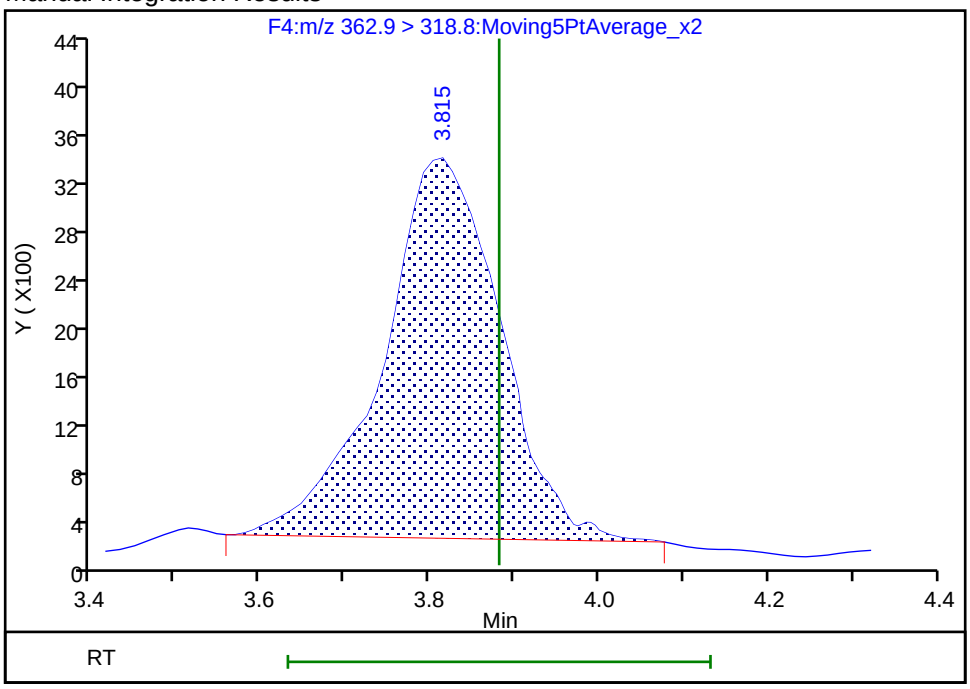
Processing Integration Results

RT: 3.81
Area: 28796
Amount: 3.450316
Amount Units: ng/ml



Manual Integration Results

RT: 3.81
Area: 29582
Amount: 3.540180
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:16:55

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

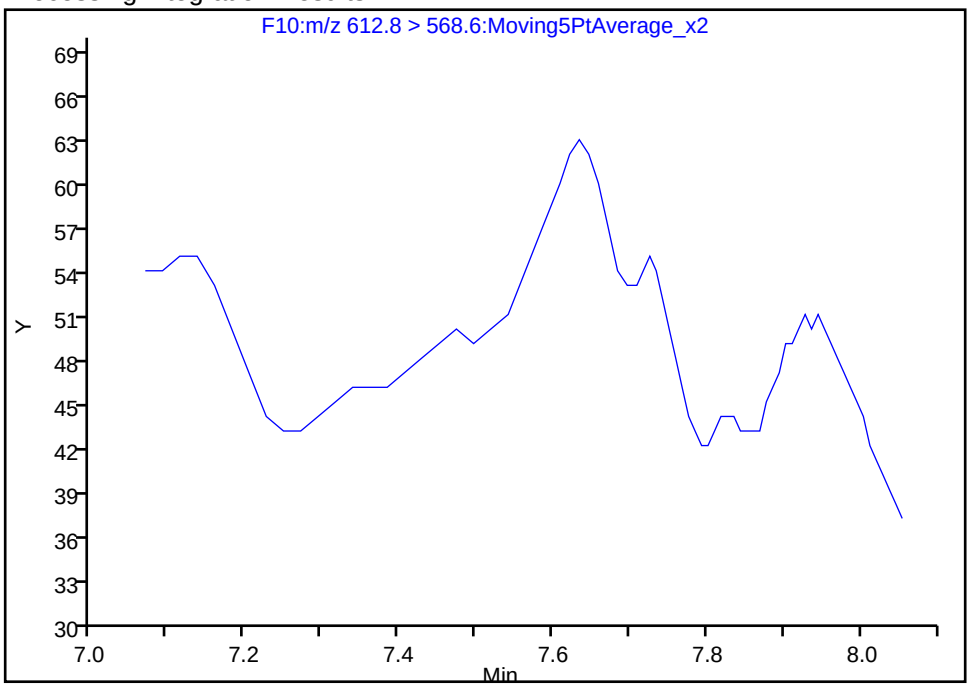
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

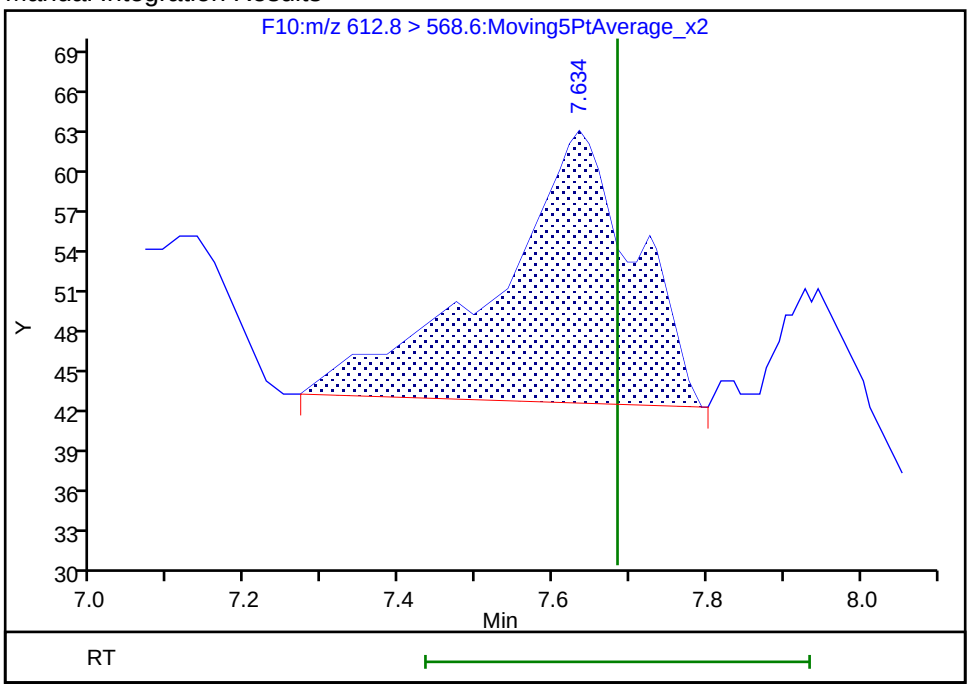
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.63
Area: 259
Amount: 0.086180
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:17:42
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

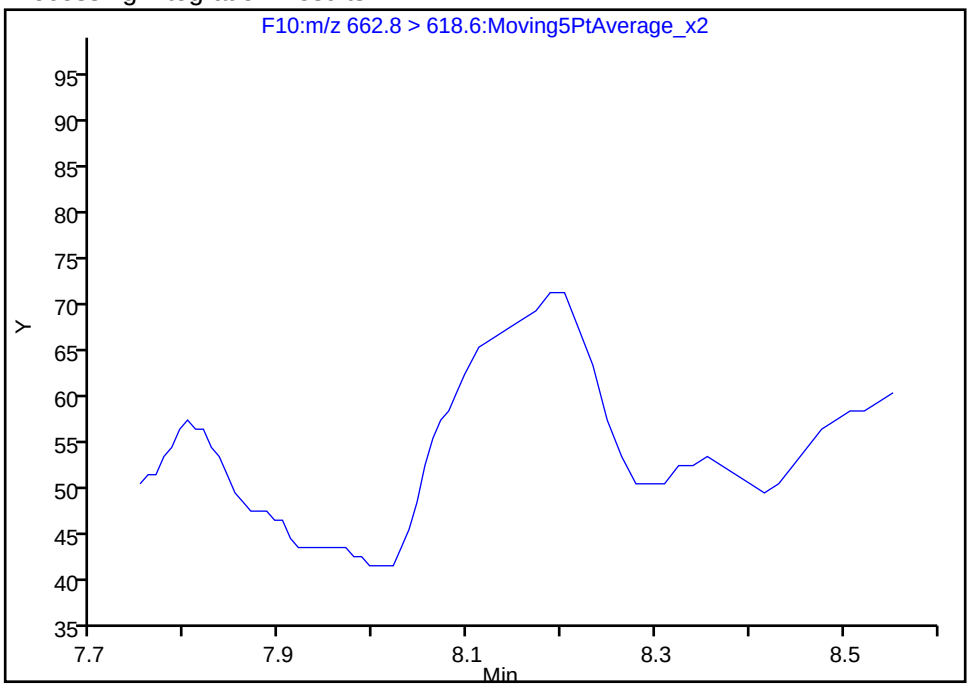
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

38 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

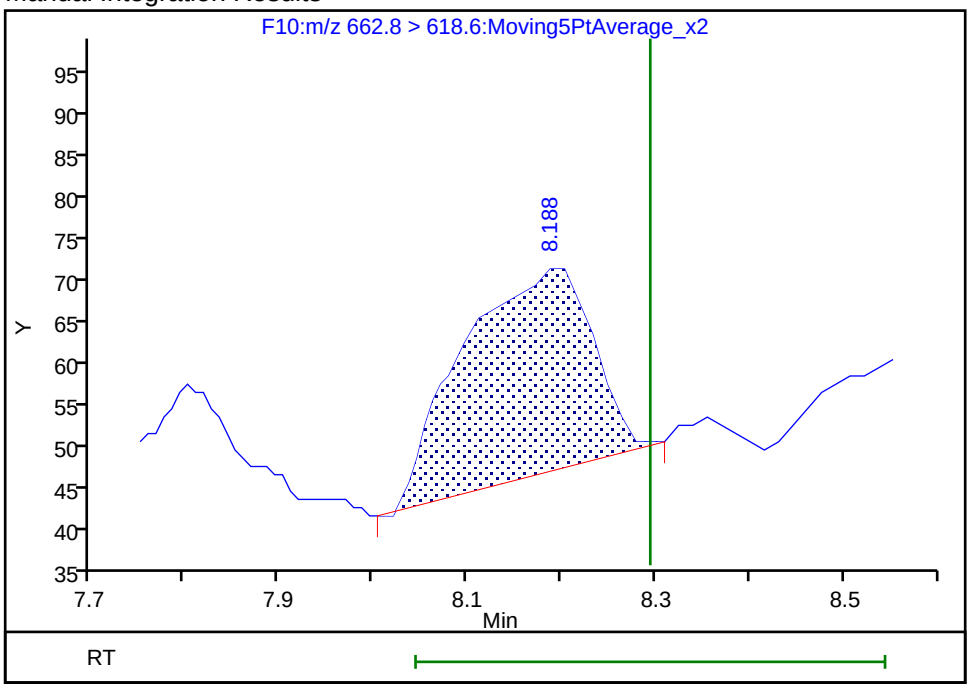
Not Detected
Expected RT: 8.29

Processing Integration Results



Manual Integration Results

RT: 8.19
Area: 241
Amount: 0.057591
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:17:37
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

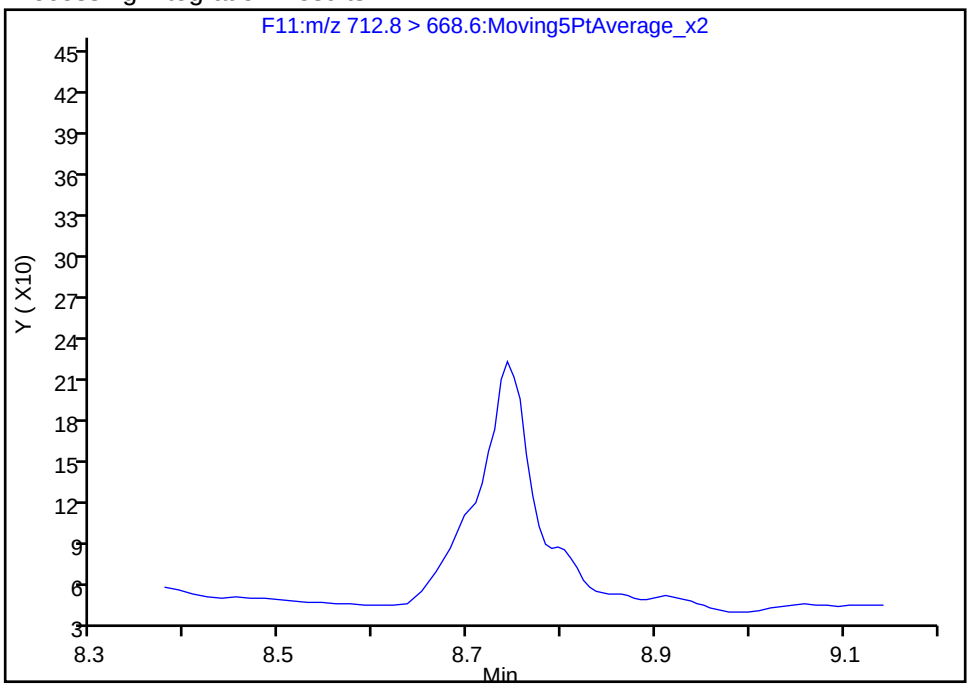
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

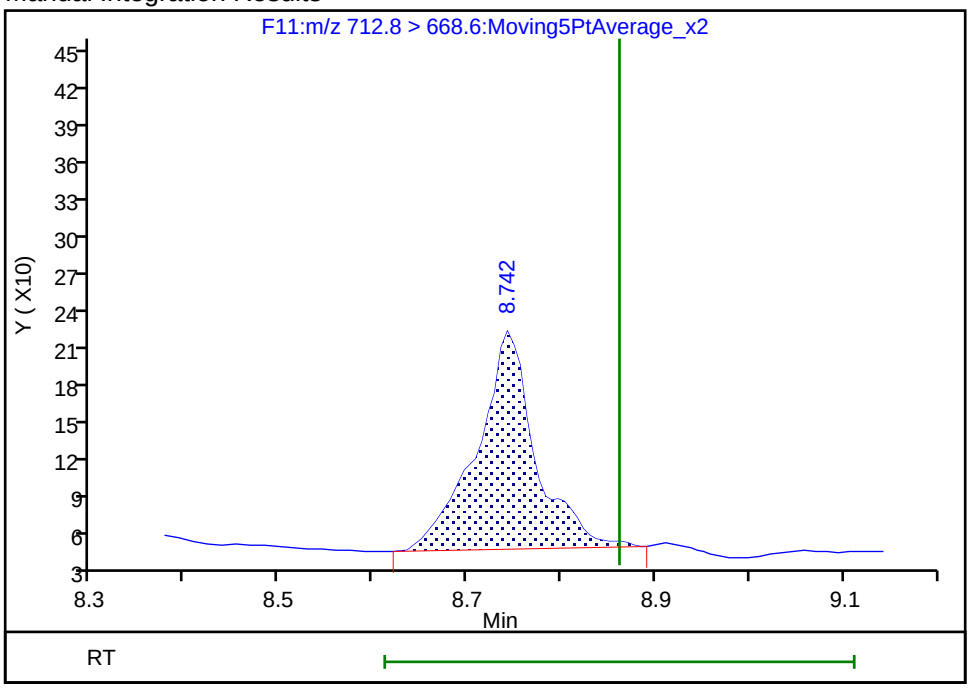
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.74
Area: 756
Amount: -0.095582
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:17:32
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

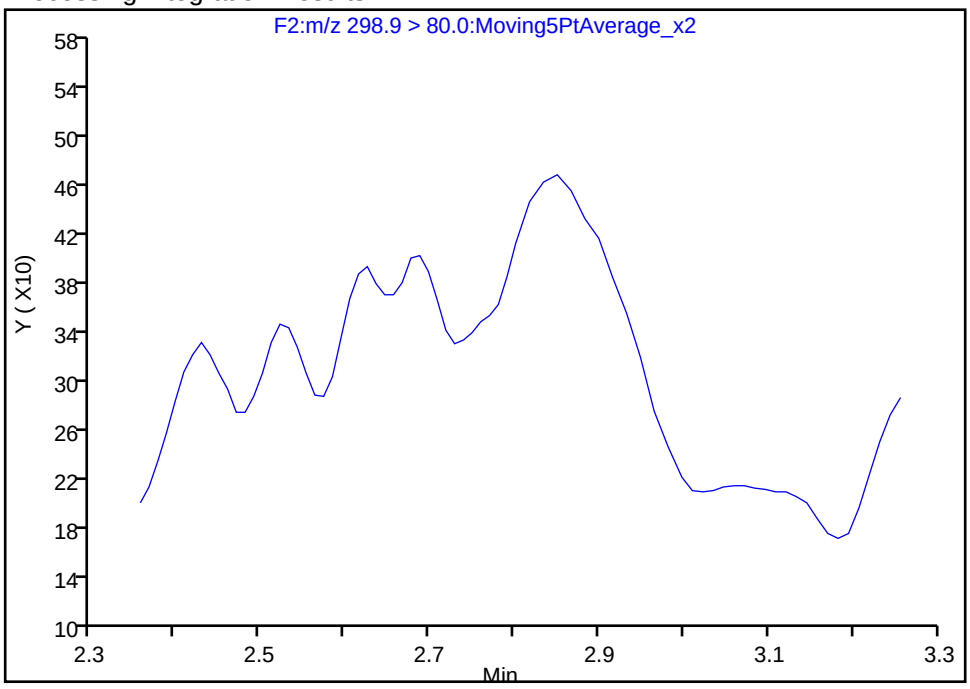
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

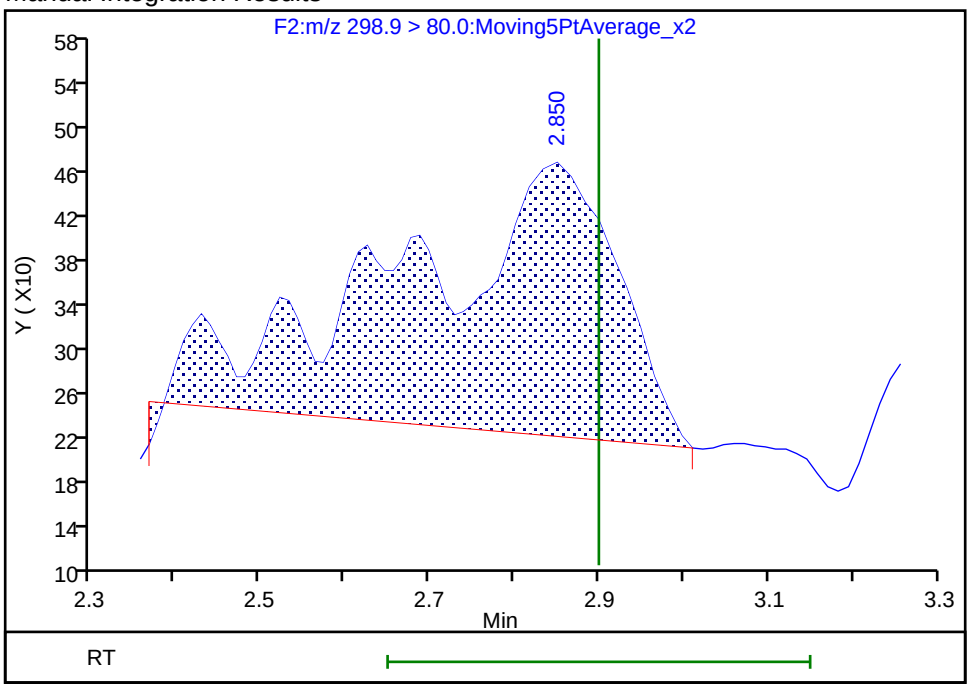
Not Detected
Expected RT: 2.90

Processing Integration Results



Manual Integration Results

RT: 2.85
Area: 4448
Amount: 1.344955
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:18:23
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

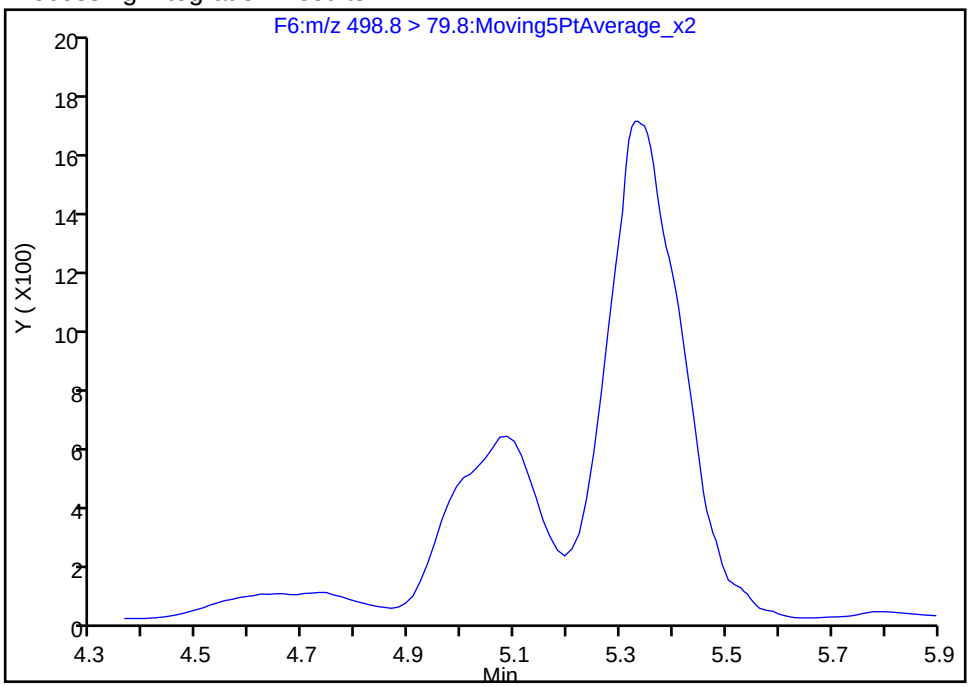
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F6:MRM		

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

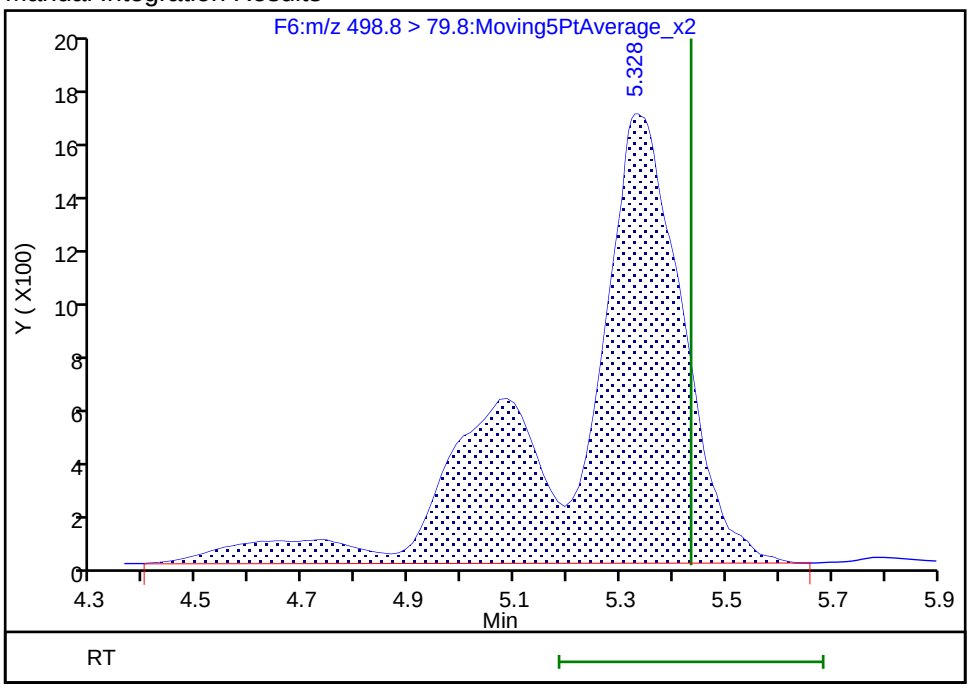
Not Detected
Expected RT: 5.43

Processing Integration Results



Manual Integration Results

RT: 5.33
Area: 24320
Amount: 4.686037
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:18:06
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

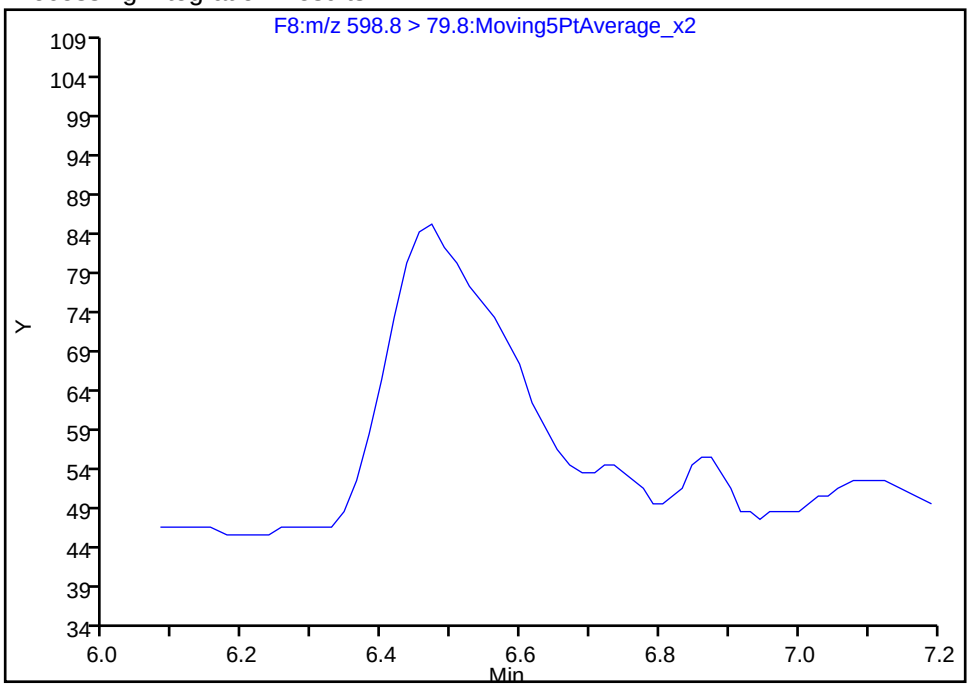
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

31 Perfluorodecane Sulfonic acid, CAS: 335-77-3

Signal: 1

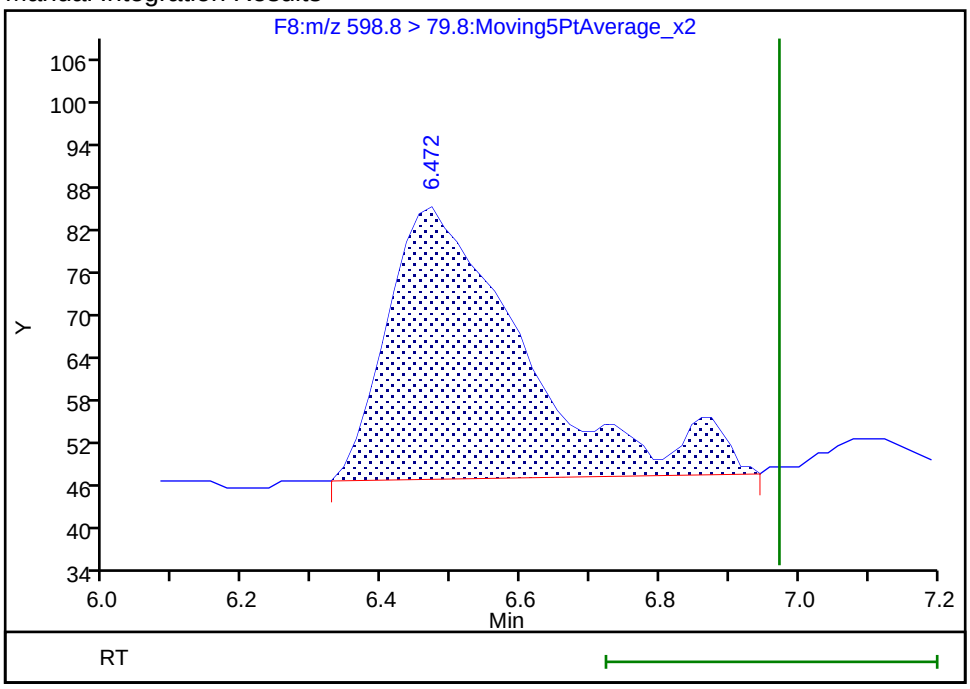
Not Detected
Expected RT: 6.97

Processing Integration Results



Manual Integration Results

RT: 6.47
Area: 534
Amount: 0.159224
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:17:52
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

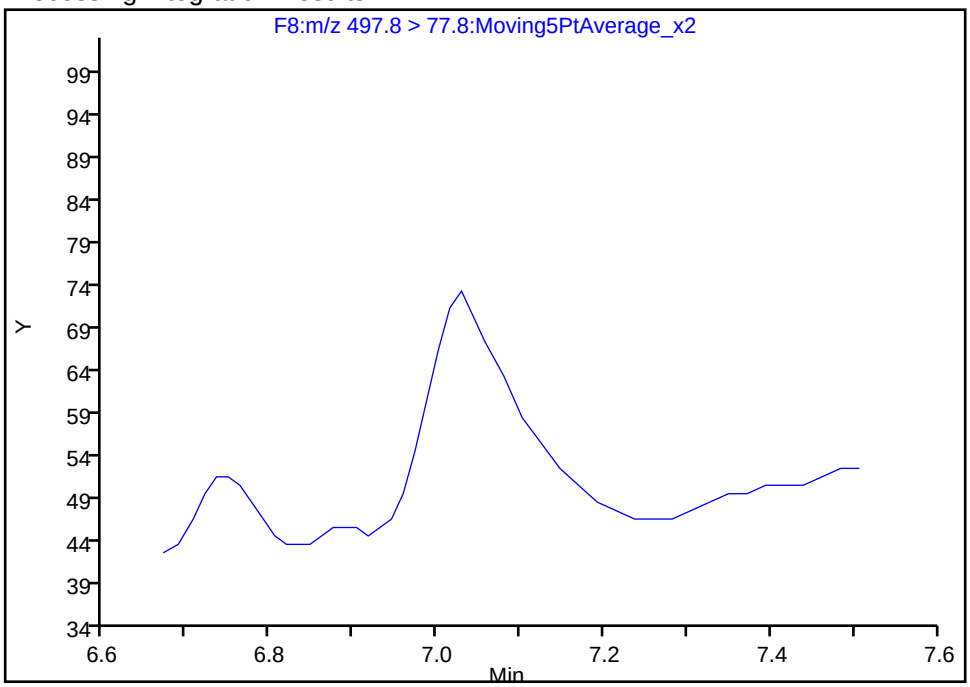
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

34 Perfluorooctane Sulfonamide, CAS: 754-91-6

Signal: 1

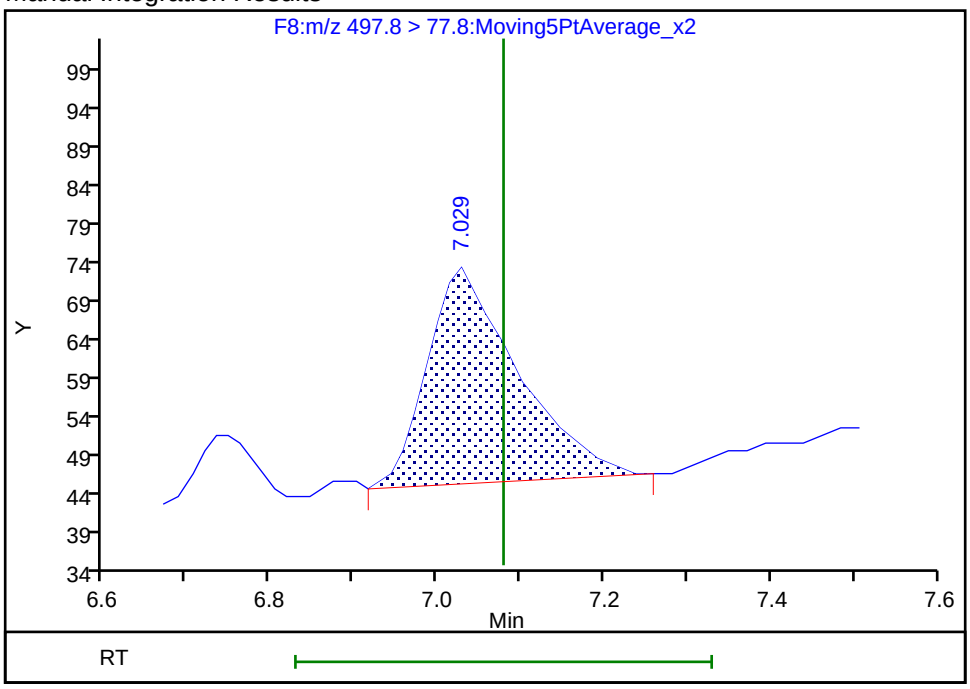
Not Detected
Expected RT: 7.08

Processing Integration Results



Manual Integration Results

RT: 7.03
Area: 212
Amount: 0.358378
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:17:47
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

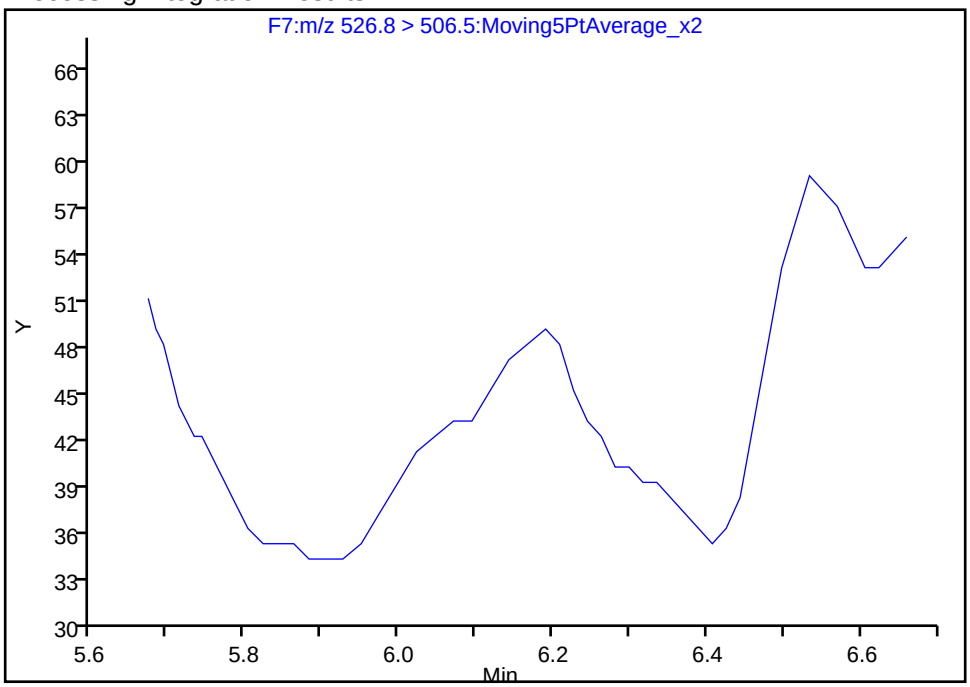
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d				
Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F7:MRM		

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

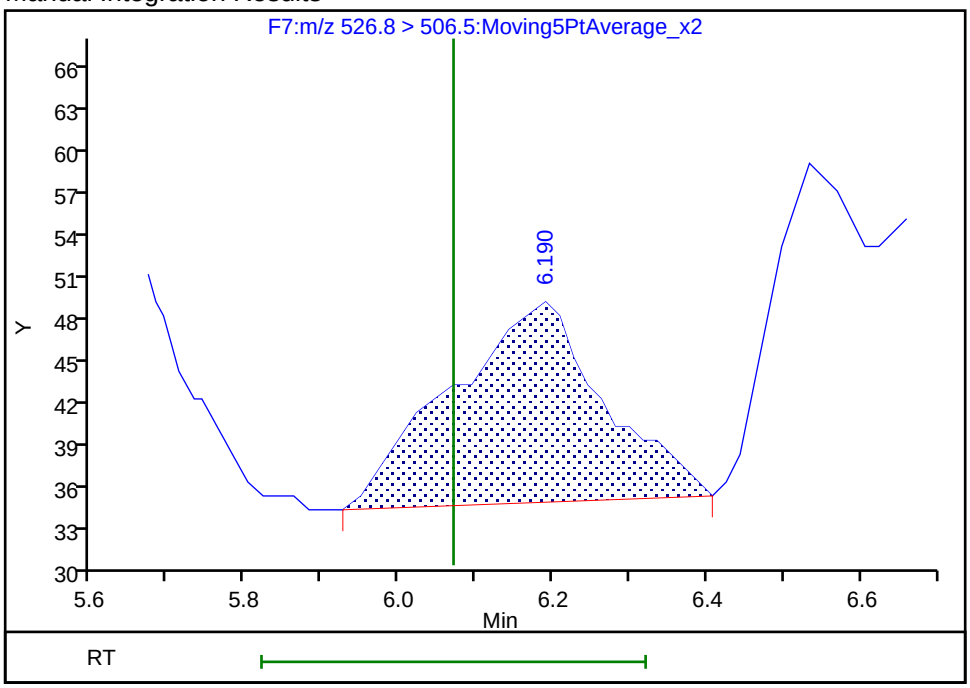
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.19
Area: 199
Amount: 0.422376
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:24:19
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: EQUIPMENT BLANK | Lab Sample ID: 200-43678-6

Matrix: Water | Lab File ID: PF061218A52.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 13:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 278.5(mL) | Date Analyzed: 06/12/2018 21:59

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	0.65	J	1.80	0.40
2706-90-3	Perfluoropentanoic acid (PFPeA)	1.80	U	1.80	0.40
307-24-4	Perfluorohexanoic acid (PFHxA)	0.78	J B	1.80	0.40
375-85-9	Perfluoroheptanoic acid (PFHpA)	0.38	J	1.80	0.26
335-67-1	Perfluorooctanoic acid (PFOA)	0.64	J B	1.80	0.42
375-95-1	Perfluorononanoic acid (PFNA)	1.80	U	1.80	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	1.80	U	1.80	0.40
2058-94-8	Perfluoroundecanoic acid (PFUnA)	1.80	U	1.80	0.40
307-55-1	Perfluorododecanoic acid (PFDoA)	1.80	U	1.80	0.40
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	1.80	U	1.80	0.40
376-06-7	Perfluorotetradecanoic acid (PFTeA)	1.80	U	1.80	0.40
375-73-5	Perfluorobutanesulfonic acid (PFBS)	1.80	U	1.80	0.79
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.03	J B	1.80	0.25
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	0.40	J	1.80	0.40
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	1.80	U	1.80	0.27
335-77-3	Perfluorodecanesulfonic acid (PFDS)	1.80	U	1.80	0.40
754-91-6	Perfluorooctane Sulfonamide (FOSA)	1.80	U	1.80	0.40
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	1.80	U	1.80	0.54
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	1.80	U	1.80	0.54
27619-97-2	6:2 FTS	1.80	U	1.80	0.54
39108-34-4	8:2 FTS	0.76	J B	1.80	0.54

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: EQUIPMENT BLANK | Lab Sample ID: 200-43678-6

Matrix: Water | Lab File ID: PF061218A52.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 13:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 278.5(mL) | Date Analyzed: 06/12/2018 21:59

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	76		25-150
STL01893	13C5 PFPeA	87		25-150
STL00993	13C2 PFHxA	82		25-150
STL01892	13C4-PFHpA	82		25-150
STL00990	13C4 PFOA	113		25-150
STL00995	13C5 PFNA	111		25-150
STL00996	13C2 PFDA	100		25-150
STL00997	13C2 PFUnA	101		25-150
STL00998	13C2 PFDoA	86		25-150
STL02116	13C2-PFTeDA	76		25-150
STL02337	13C3-PFBS	77		25-150
STL00994	18O2 PFHxS	74		25-150
STL00991	13C4 PFOS	99		25-150
STL01056	13C8 FOSA	55		25-150
STL02118	d3-NMeFOSAA	72		25-150
STL02117	d5-NEtFOSAA	77		25-150
STL02279	M2-6:2FTS	159		25-150
STL02280	M2-8:2FTS	120		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d
Lims ID: 200-43678-A-6-A
Client ID: EQUIPMENT BLANK
Sample Type: Client
Inject. Date: 12-Jun-2018 21:59:15 ALS Bottle#: 0 Worklist Smp#: 52
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-052 6
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:24:54 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 13-Jun-2018 10:23:46

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.250	2.382	-0.132	0.953	667	0.3596			1.9	M
D 1 13C4 PFBA										
216.9 > 171.5	2.361	2.392	-0.031	1.000	190866	38.2		76.5	535	
D 4 13C5-PFPeA										M
267.7 > 222.6	2.791	2.818	-0.027	1.000	318974	43.5		87.1	296	M
D 5 13C3-PFBS										M
302.0 > 79.8	2.883	2.900	-0.017	1.000	173722	35.8		77.1	225	M
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.851	2.900	-0.049	0.989	333	0.1058			5.0	M
7 Perfluorohexanoic acid										M
312.8 > 268.6	3.238	3.300	-0.062	0.996	868	0.4372			7.8	M
D 8 13C2 PFHxA										M
314.8 > 269.6	3.250	3.300	-0.050	1.000	351685	41.1		82.2	329	M
9 Perfluoroheptanoic acid										M
362.9 > 318.8	3.934	3.882	0.052	1.028	481	0.2125			5.8	M
D 10 13C4-PFHpA										M
366.9 > 321.8	3.826	3.882	-0.056	1.000	404169	41.1		82.2	168	M
D 12 18O2 PFHxS										M
402.9 > 83.8	3.859	3.914	-0.055	1.000	161992	34.9		73.9	111	M
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.726	3.919	-0.193	0.965	519	0.5761			4.3	M
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.486	4.486	0.0	1.000	308	-0.0584			6.0	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.486	4.546	-0.060	1.000	98540	75.8		159	625	
D 16 13C4 PFOA										
416.9 > 371.8	4.532	4.601	-0.069	1.000	423346	56.3		113	882	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 17 13C2-PFOA										
414.9 > 369.8	4.532	4.601	-0.069		395035	50.0			8241	
15 Perfluorooctanoic acid										M
412.9 > 368.8	4.505	4.615	-0.110	0.994	1834	0.3572			12.0	M
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.861	4.642	0.219	0.909	167	0.2232			3.5	M
D 19 13C5 PFNA										
467.8 > 422.8	5.322	5.422	-0.100	1.000	551682	55.7		111	2007	
D 21 13C4 PFOS										
502.8 > 79.8	5.346	5.440	-0.094	1.000	237721	47.4		99.1	2455	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.190	6.070	0.120	1.016	219	0.4260			1.8	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	154528	57.4		120	2247	
25 Perfluorodecanoic acid										M
512.9 > 468.5	6.167	6.227	-0.060	1.008	63	0.1698			1.8	M
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	724871	50.2		100	8374	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	110038	36.2		72.4	1110	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.847	6.959	-0.112	1.000	99855	38.4		76.8	635	
32 Perfluoroundecanoic acid										M
562.8 > 518.6	6.903	6.987	-0.084	1.004	1852	0.1851			23.1	M
D 33 13C2 PFUnA										
564.8 > 519.8	6.875	6.987	-0.112	1.000	667917	50.6		101	10226	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	302221	27.3		54.5	2556	
D 36 13C2 PFDoA										
614.8 > 569.6	7.586	7.684	-0.098	1.000	687382	43.2		86.3	3102	
37 Perfluorododecanoic acid										M
612.8 > 568.6	7.542	7.684	-0.142	0.994	209	0.0782			1.6	M
38 Perfluorotridecanoic acid										M
662.8 > 618.6	8.142	8.294	-0.152	1.073	392	0.0649			7.3	M
D 39 13C2-PFTeDA										
714.8 > 669.6	8.727	8.855	-0.128	1.000	611470	37.8		75.7	2892	
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.781	8.862	-0.081	1.006	643	-0.1171			12.8	M
712.8 > 168.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			
712.8 > 218.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:24:58 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d

Injection Date: 12-Jun-2018 21:59:15 Instrument ID: LC410

Lims ID: 200-43678-A-6-A Lab Sample ID: 200-43678-6

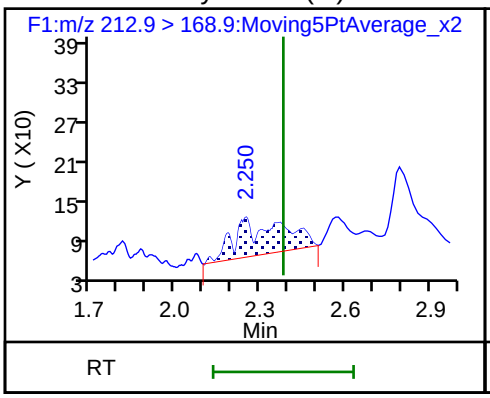
Client ID: EQUIPMENT BLANK

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 52

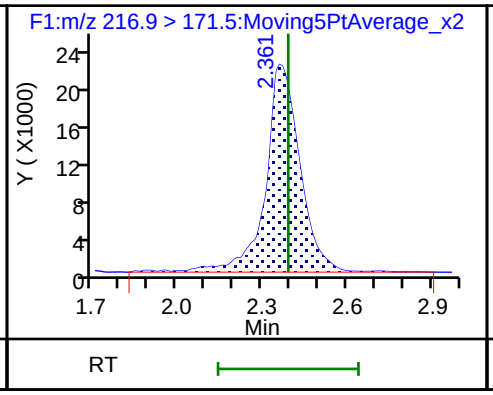
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

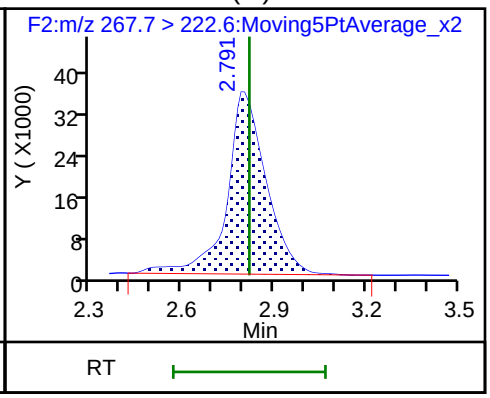
2 Perfluorobutyric acid (M)



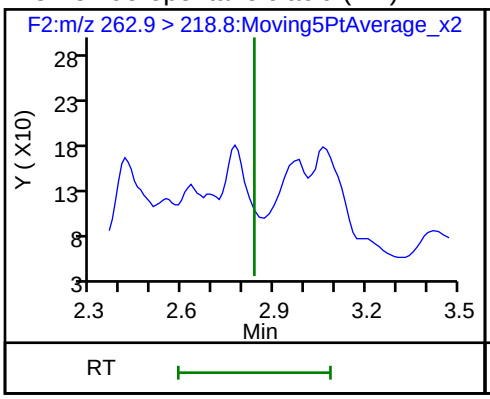
D 1 13C4 PFBA



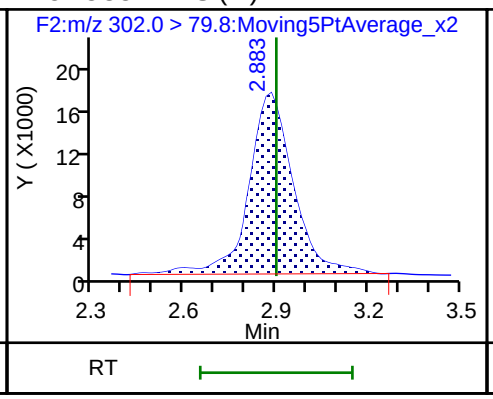
D 4 13C5-PFPeA (M)



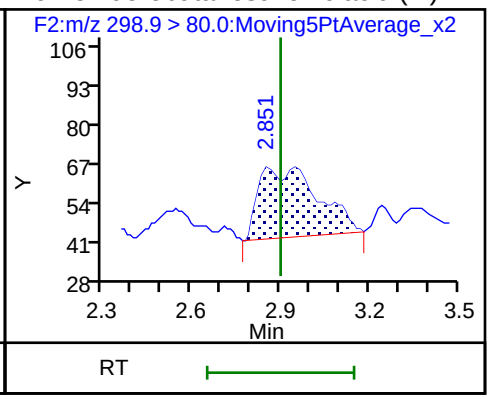
3 Perfluoropentanoic acid (ND)



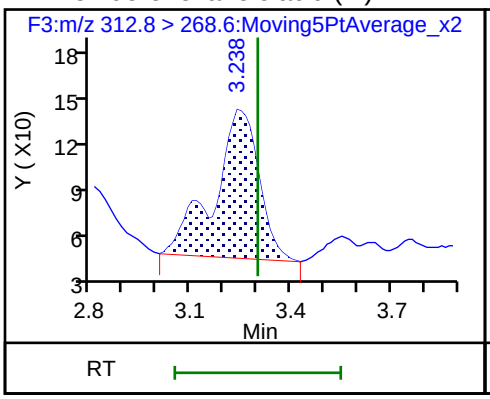
D 5 13C3-PFBS (M)



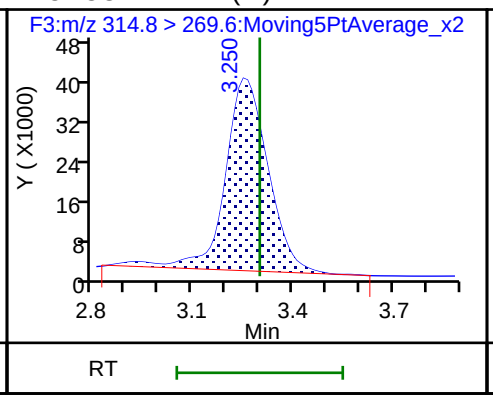
6 Perfluorobutanesulfonic acid (M)



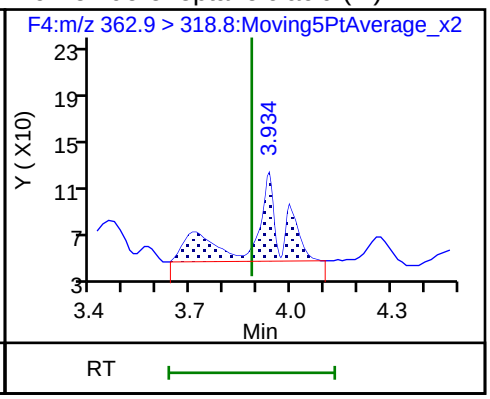
7 Perfluorohexanoic acid (M)



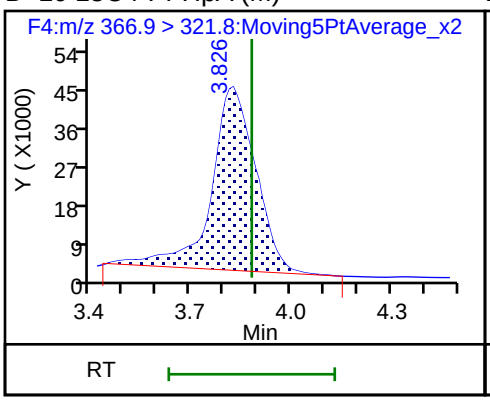
D 8 13C2 PFHxA (M)



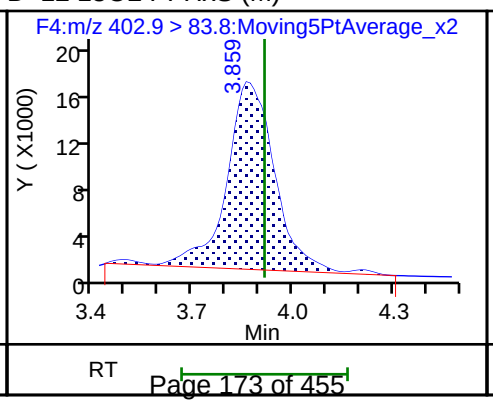
9 Perfluoroheptanoic acid (M)



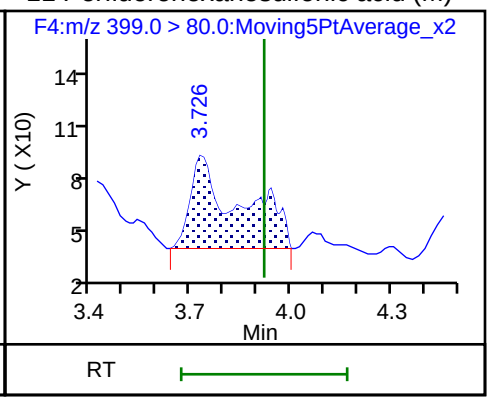
D 10 13C4-PFHpA (M)



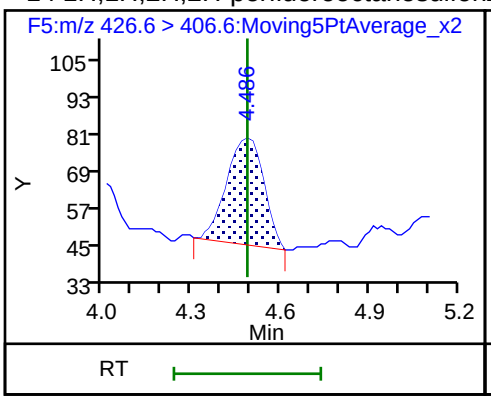
D 12 18O2 PFHxS (M)



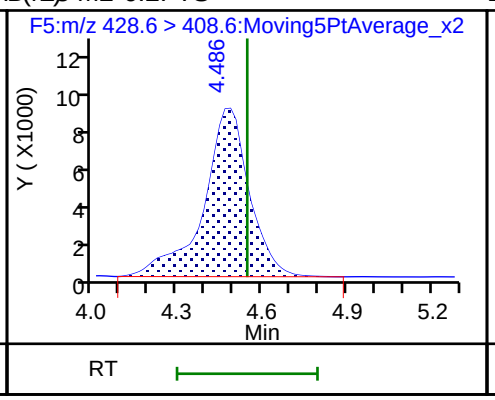
11 Perfluorohexanesulfonic acid (M)



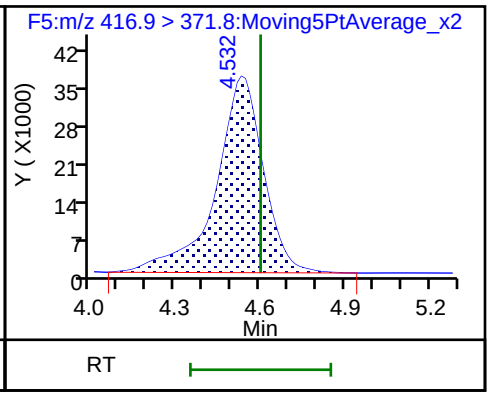
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



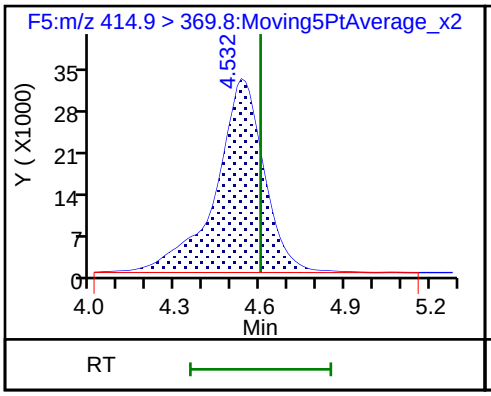
D 13 M2-6:2FTS



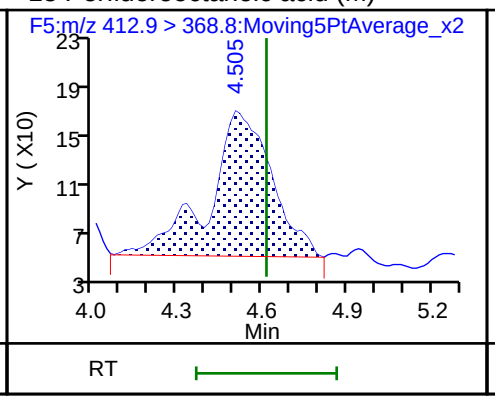
D 16 13C4 PFOA



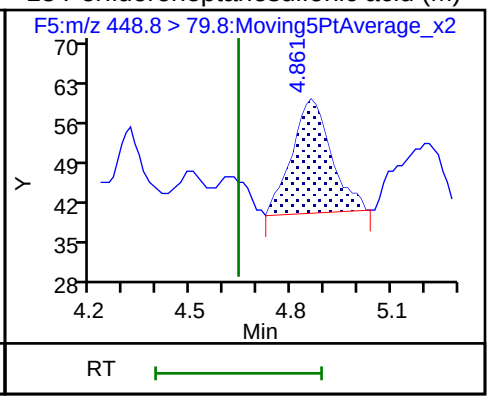
* 17 13C2-PFOA



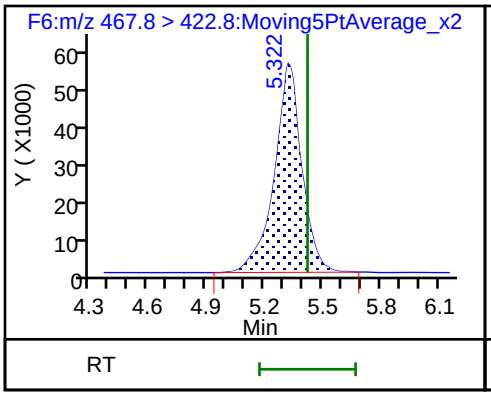
15 Perfluorooctanoic acid (M)



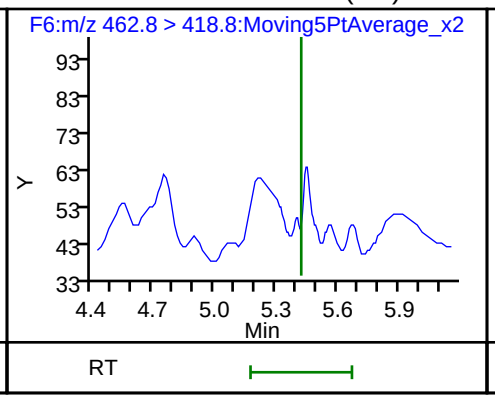
18 Perfluoroheptanesulfonic acid (M)



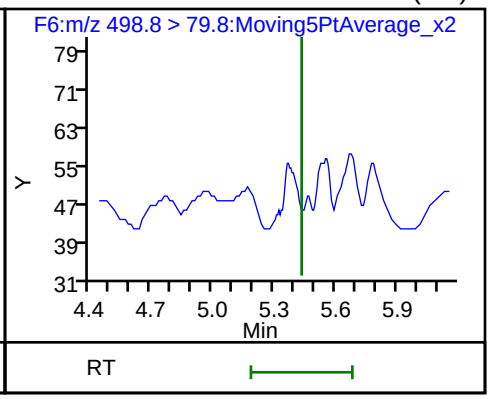
D 19 13C5 PFNA



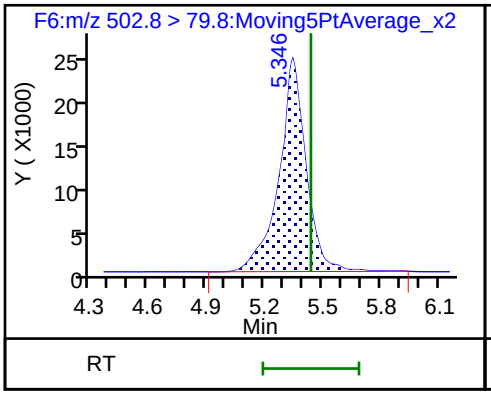
20 Perfluorononanoic acid (ND)



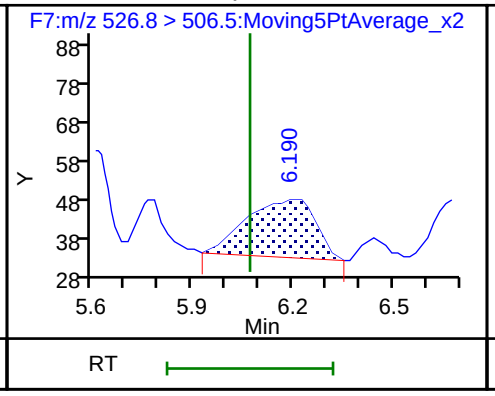
22 Perfluorooctane sulfonic acid (ND)



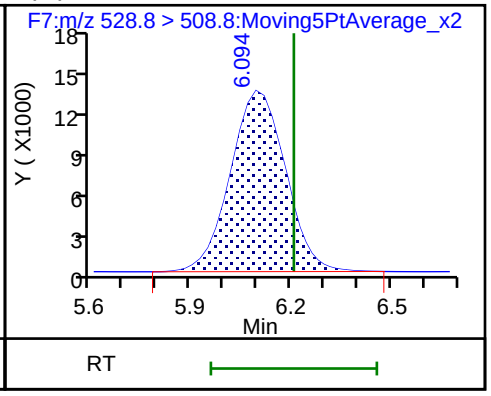
D 21 13C4 PFOS



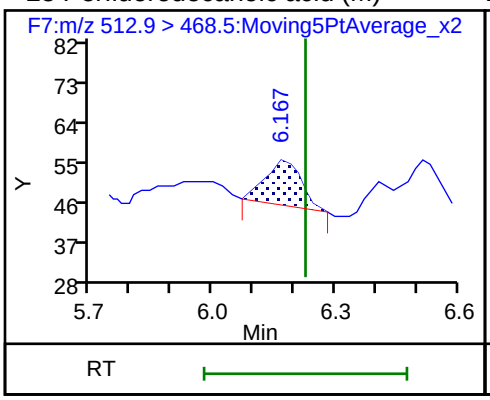
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



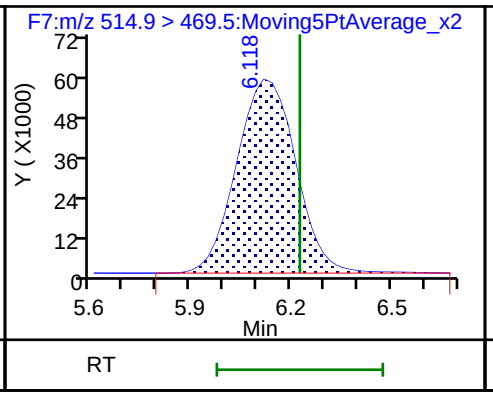
D 24 M2-8:2FTS



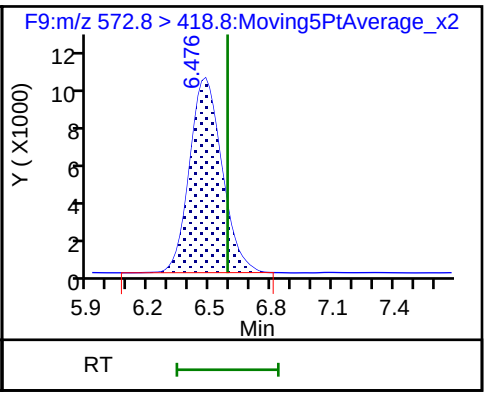
25 Perfluorodecanoic acid (M)



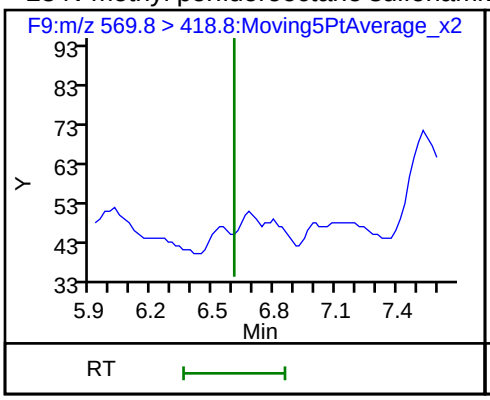
D 26 13C2 PFDA



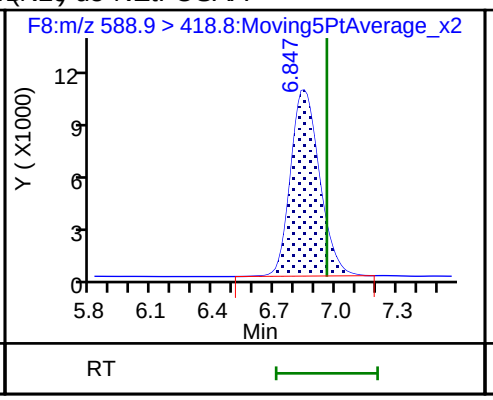
D 27 d3-NMeFOSAA



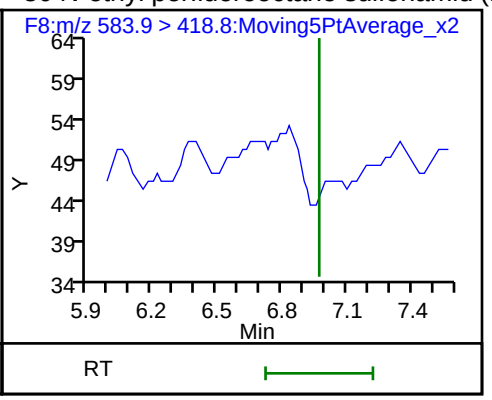
28 N-methyl perfluorooctane sulfonamid (ND)



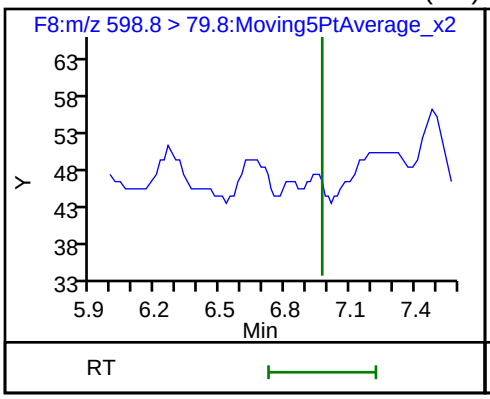
D 29 d5-NEtFOSAA



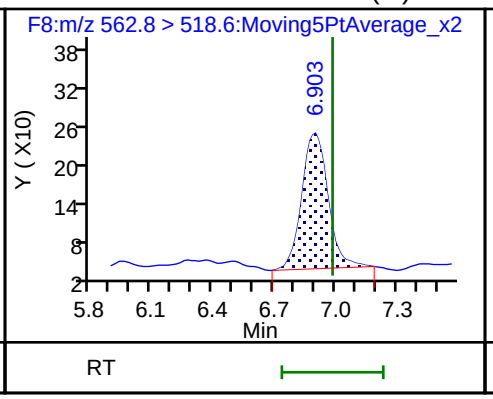
30 N-ethyl perfluorooctane sulfonamid (ND)



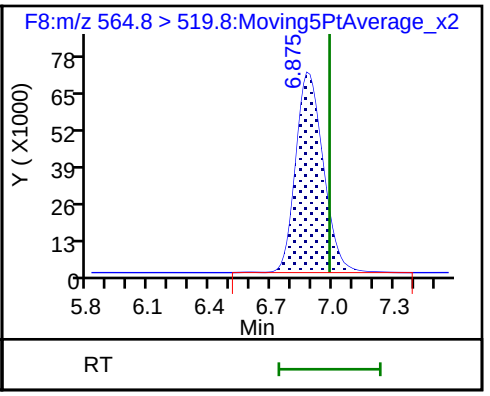
31 Perfluorodecane Sulfonic acid (ND)



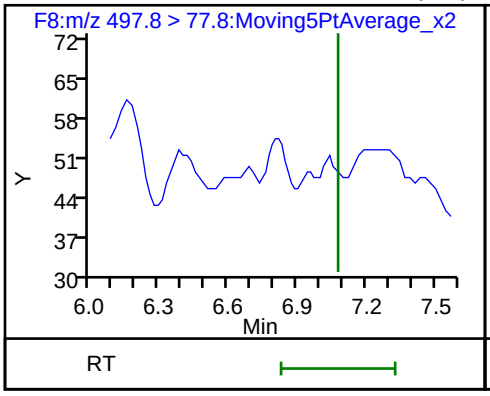
32 Perfluoroundecanoic acid (M)



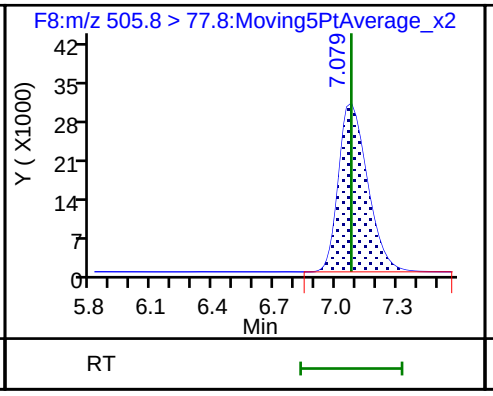
D 33 13C2 PFUnA



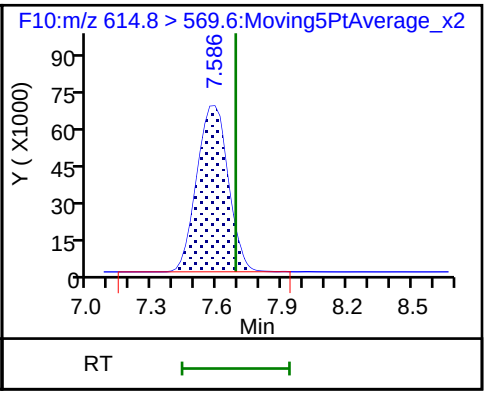
34 Perfluorooctane Sulfonamide (ND)



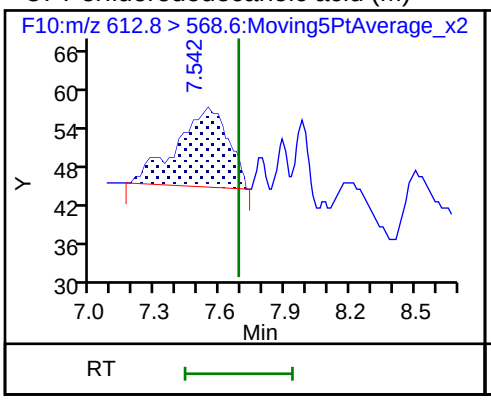
D 35 13C8 FOSA



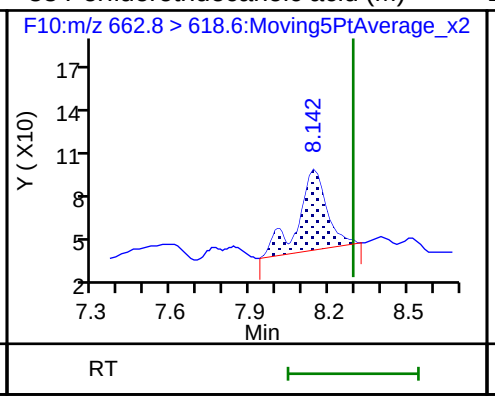
D 36 13C2 PFDoA



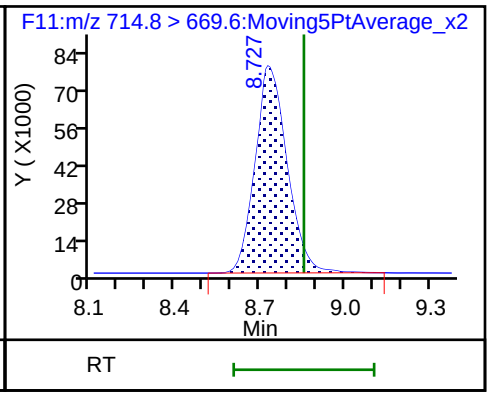
37 Perfluorododecanoic acid (M)



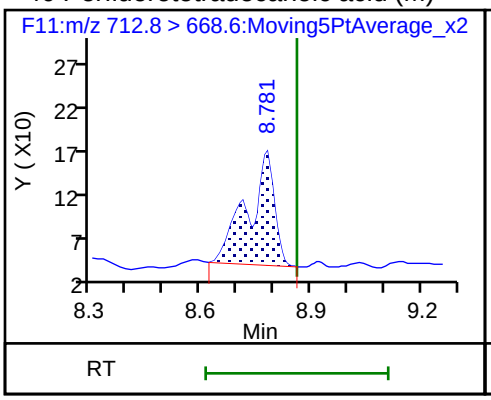
38 Perfluorotridecanoic acid (M)



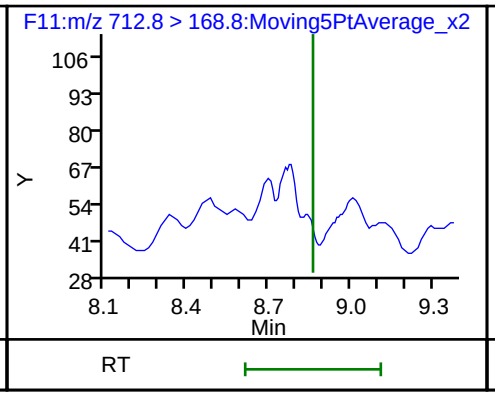
D 39 13C2-PFTeDA



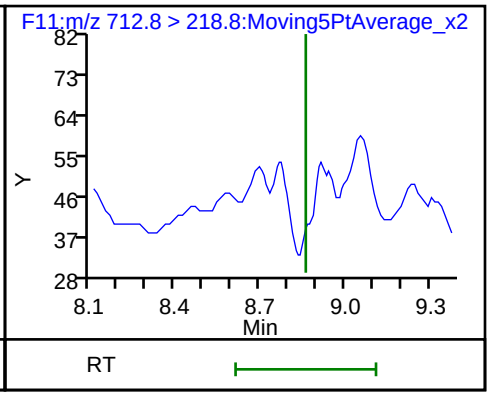
40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

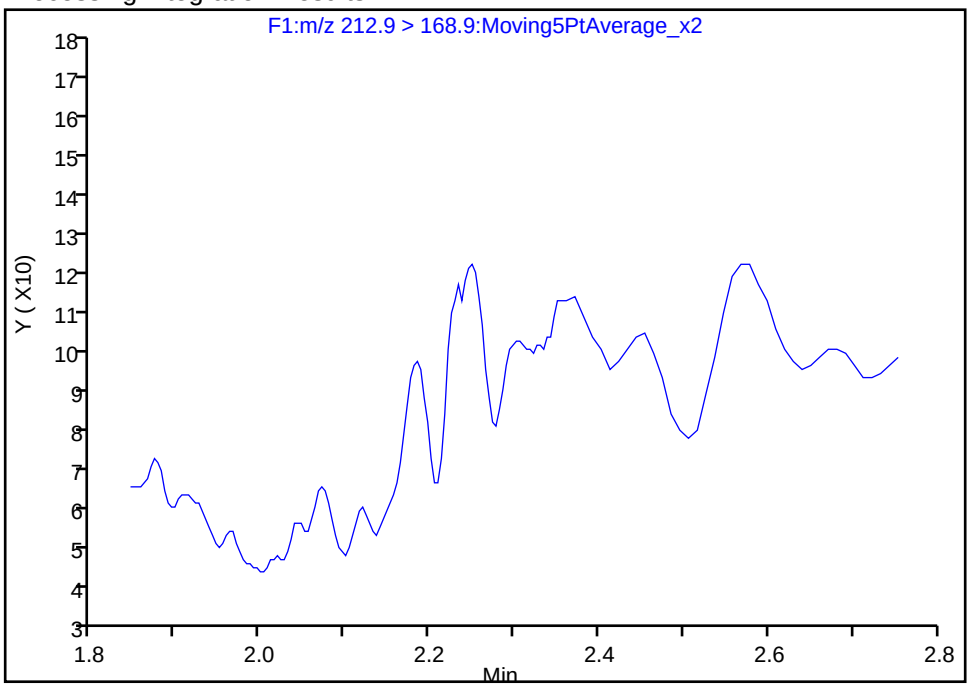
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F1:MRM		

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

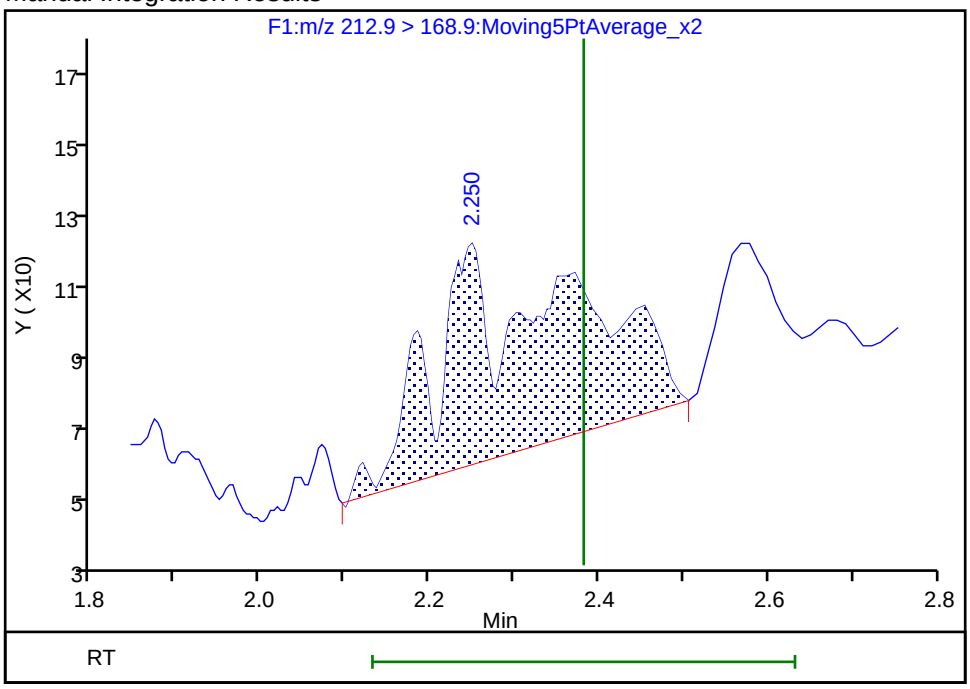
Not Detected
Expected RT: 2.38

Processing Integration Results



Manual Integration Results

RT: 2.25
Area: 667
Amount: 0.359636
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:20:52
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

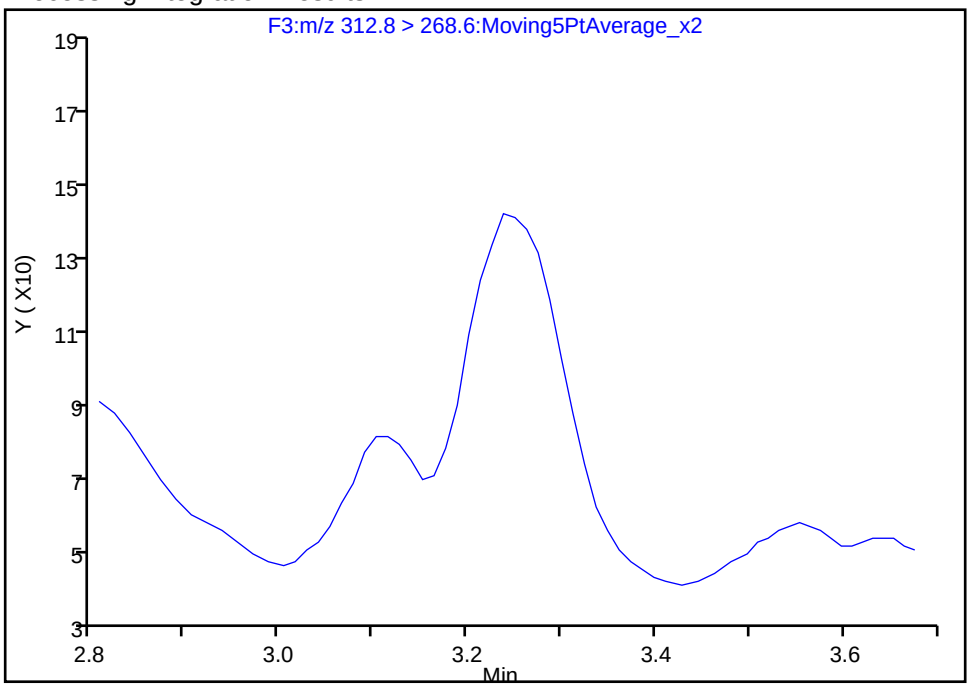
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F3:MRM		

7 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

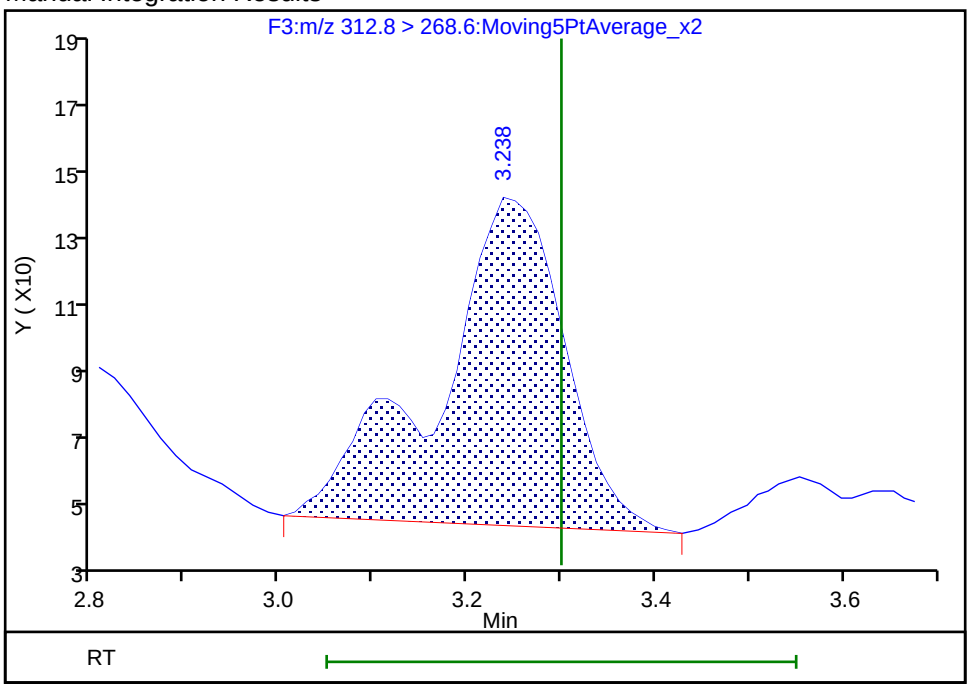
Not Detected
Expected RT: 3.30

Processing Integration Results



Manual Integration Results

RT: 3.24
Area: 868
Amount: 0.437173
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:20:42
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

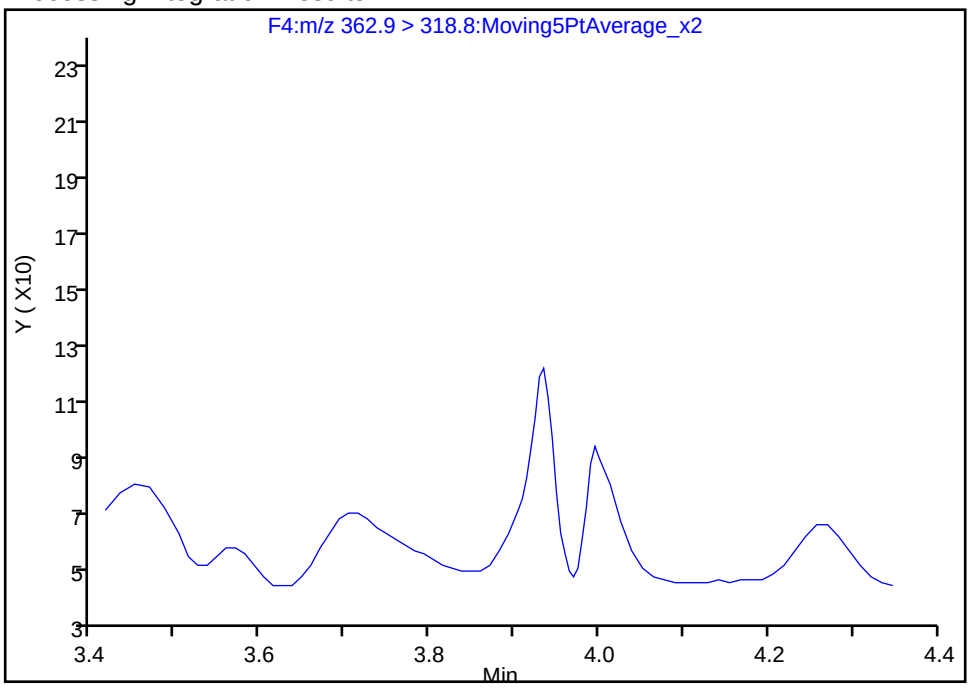
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

9 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

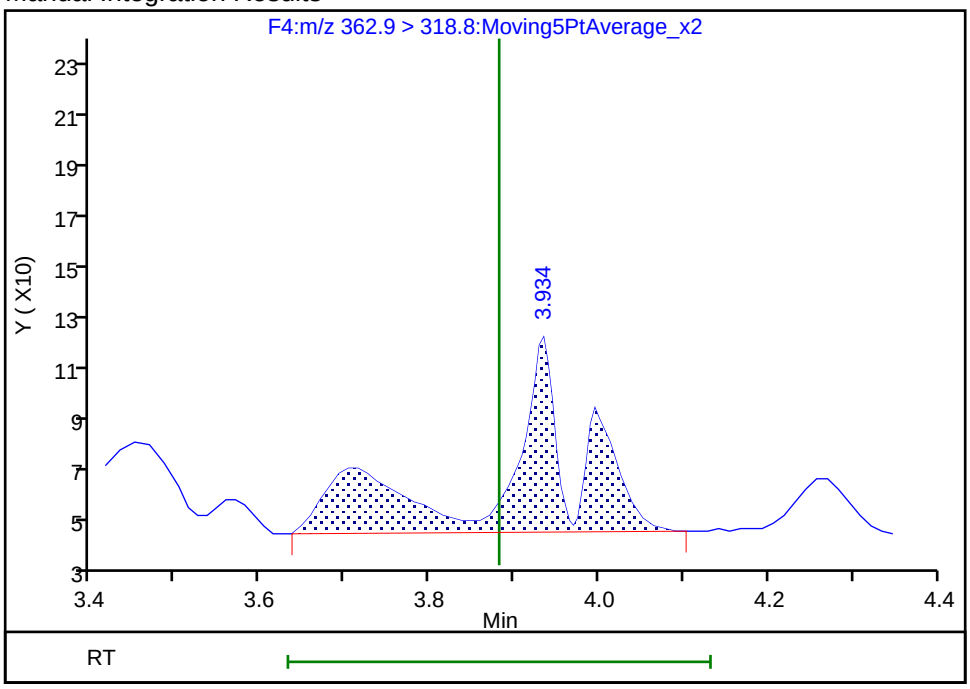
Not Detected
Expected RT: 3.88

Processing Integration Results



Manual Integration Results

RT: 3.93
Area: 481
Amount: 0.212535
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:20:38
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

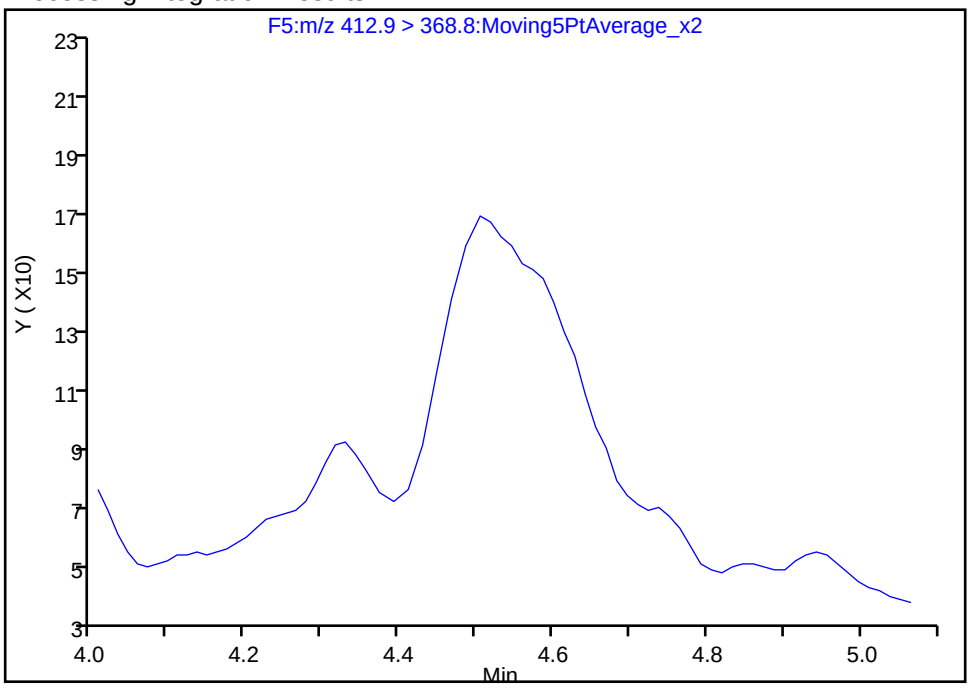
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

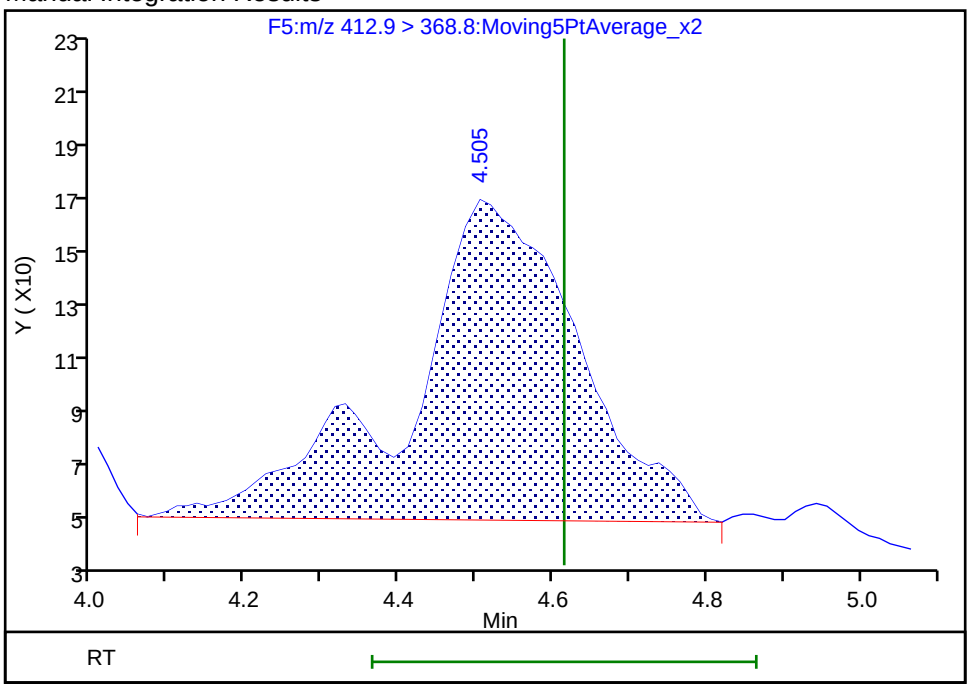
Not Detected
Expected RT: 4.61

Processing Integration Results



Manual Integration Results

RT: 4.51
Area: 1834
Amount: 0.357199
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:20:26
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

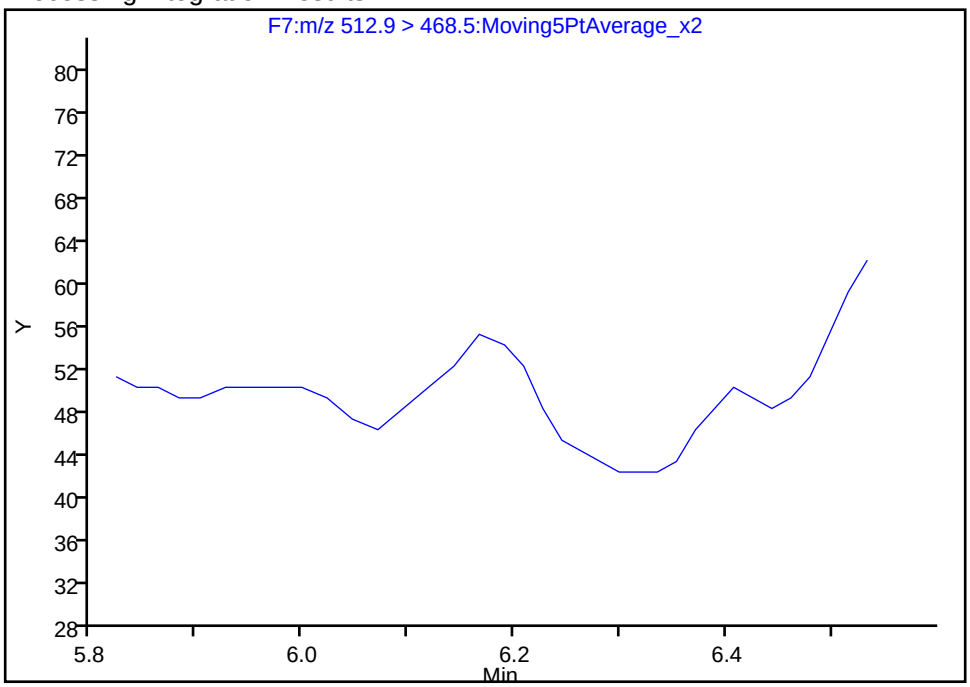
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F7:MRM		

25 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

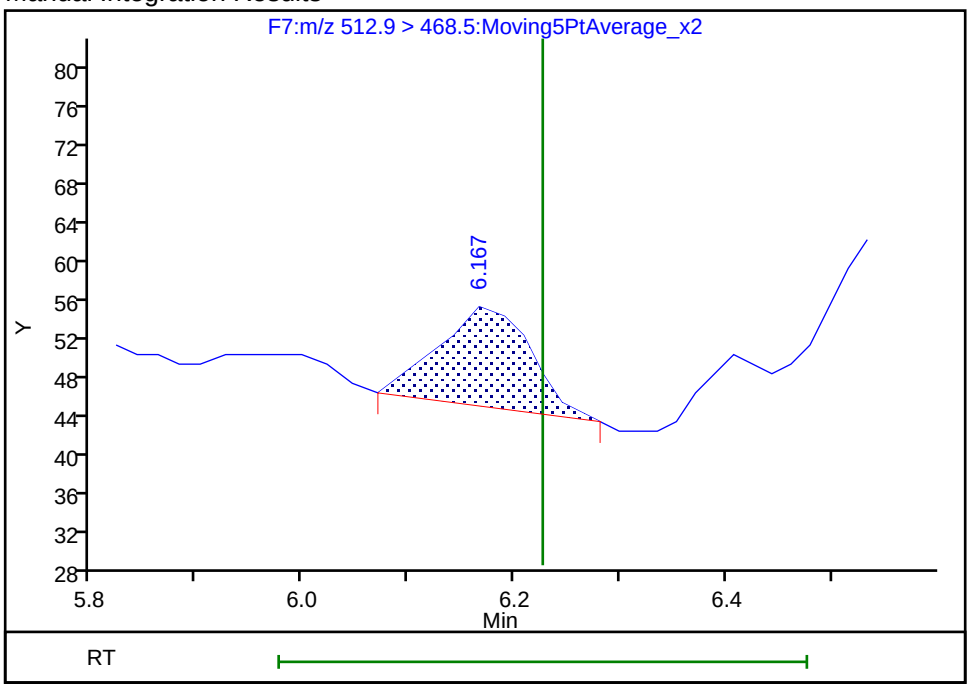
Not Detected
Expected RT: 6.23

Processing Integration Results



Manual Integration Results

RT: 6.17
Area: 63
Amount: 0.169794
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:20:13
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

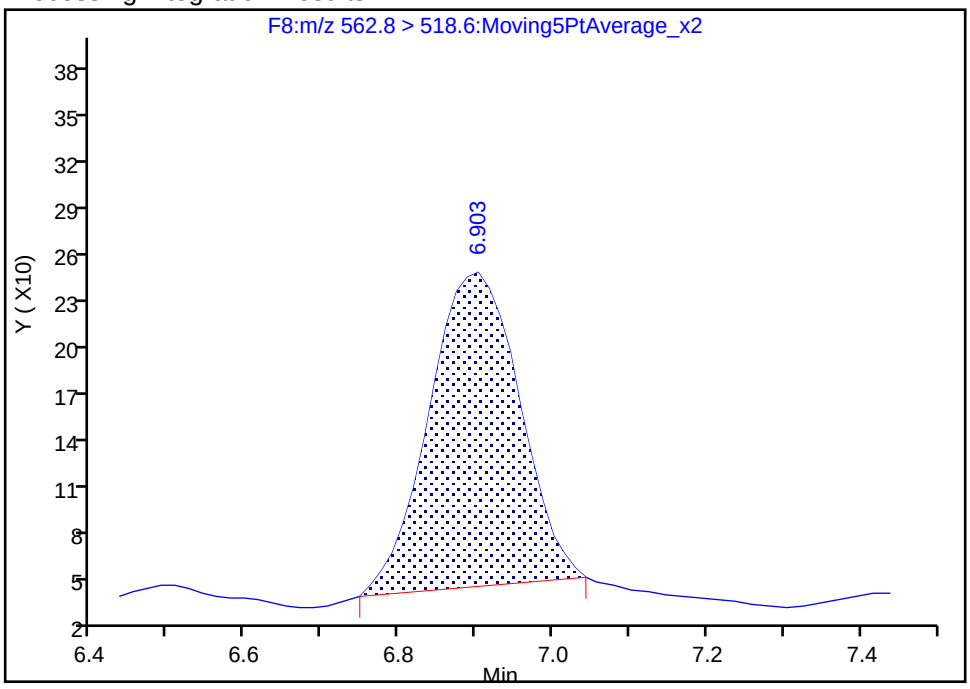
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F8:MRM		

32 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

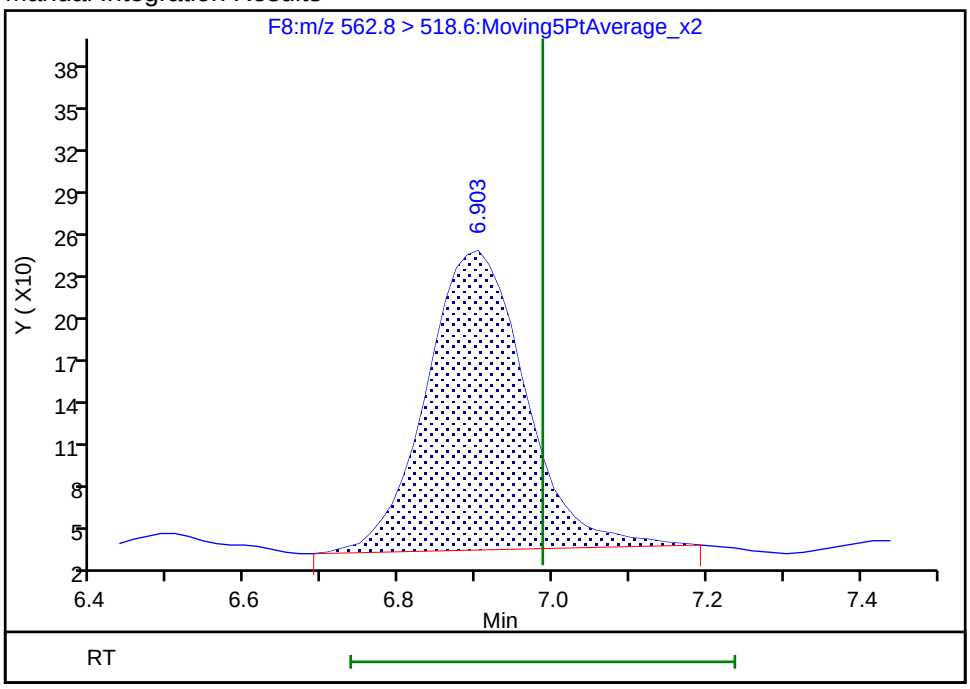
Processing Integration Results

RT: 6.90
Area: 1605
Amount: 0.168558
Amount Units: ng/ml



Manual Integration Results

RT: 6.90
Area: 1852
Amount: 0.185121
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:35

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

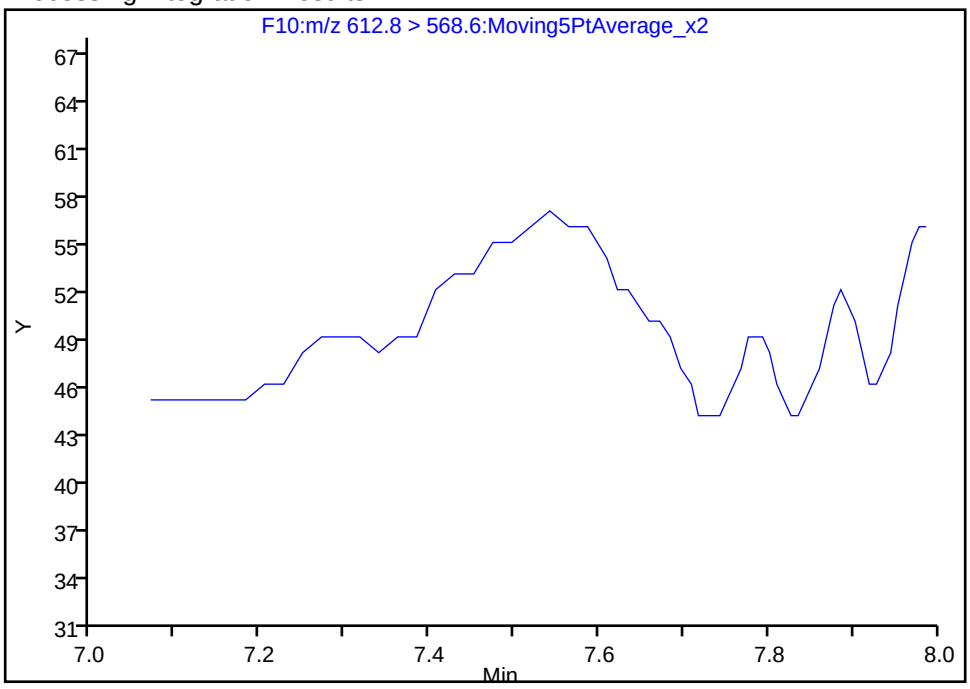
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

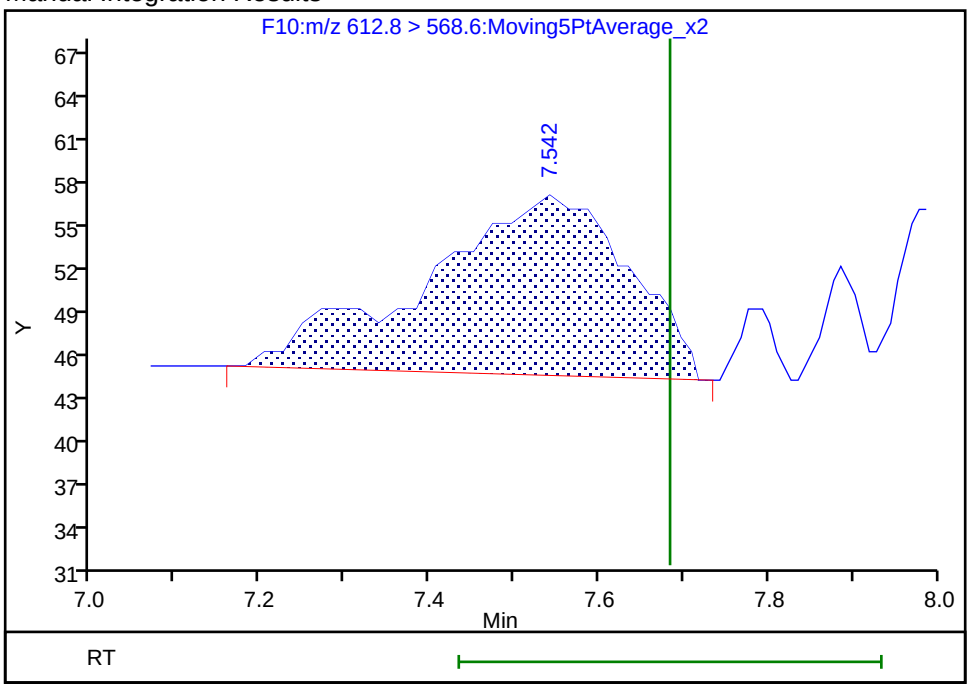
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.54
Area: 209
Amount: 0.078238
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:59
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

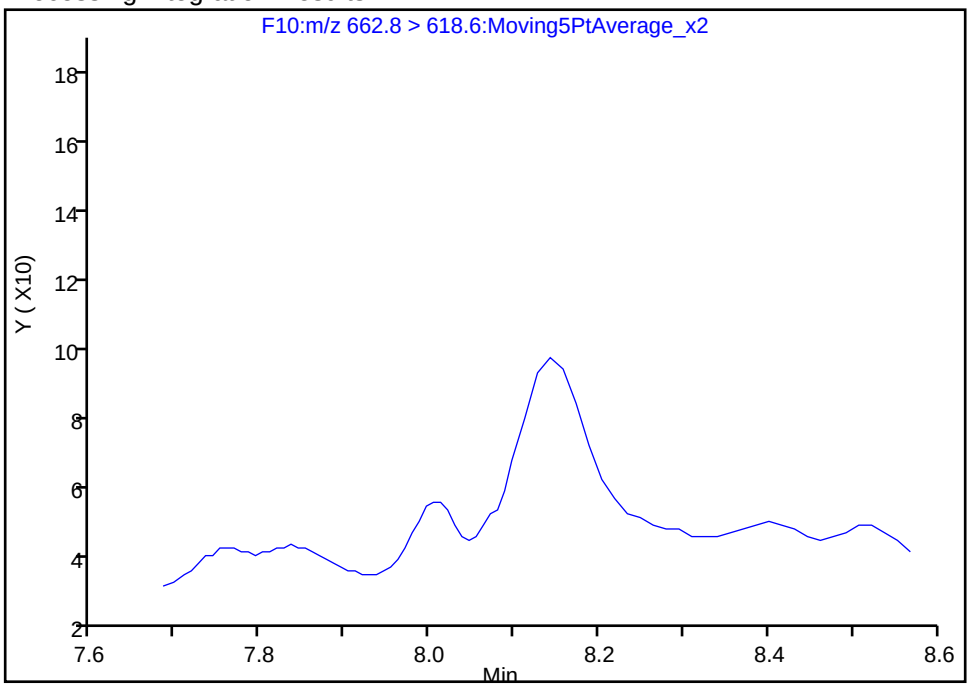
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F10:MRM		

38 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

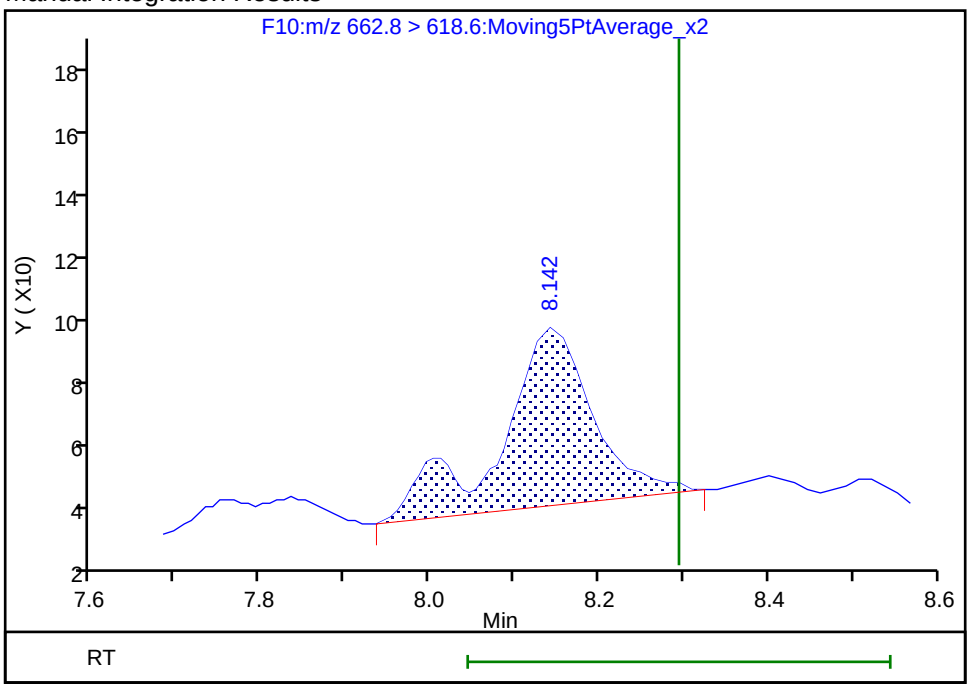
Not Detected
Expected RT: 8.29

Processing Integration Results



Manual Integration Results

RT: 8.14
Area: 392
Amount: 0.064912
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:55
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

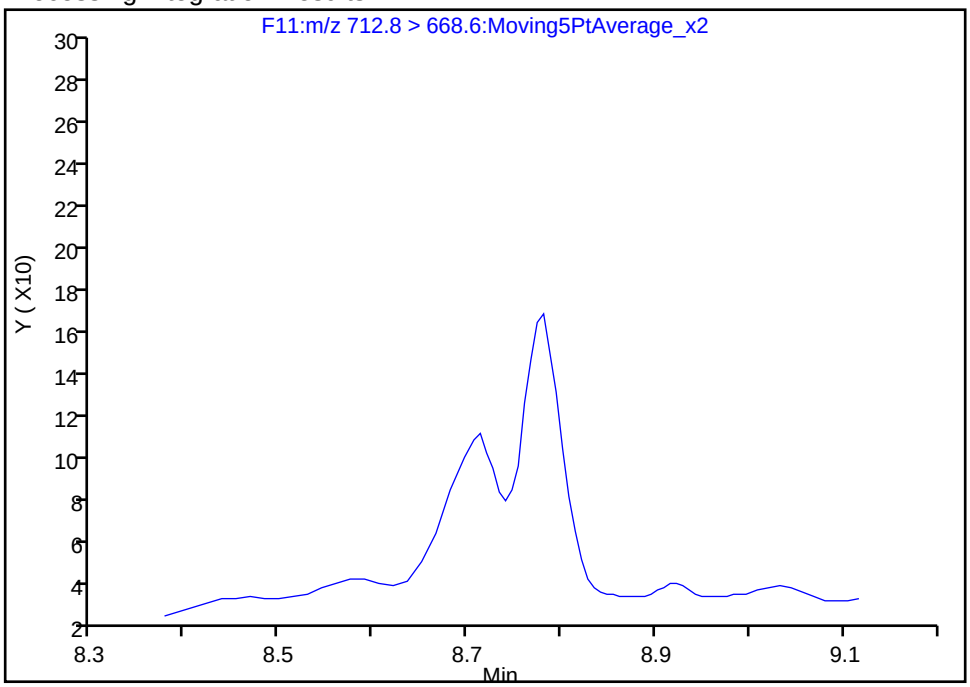
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

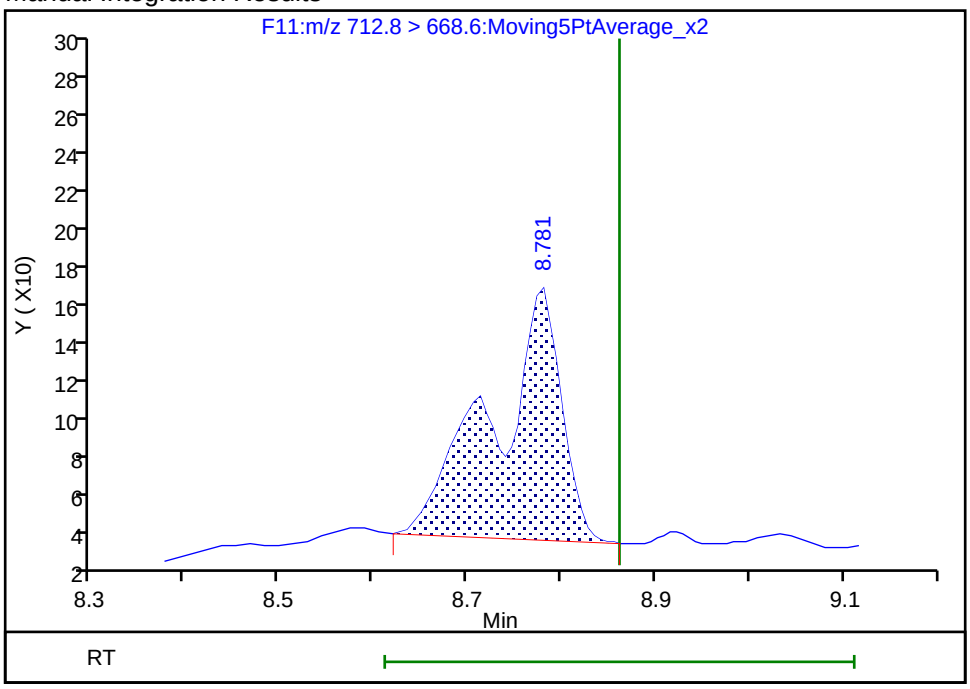
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.78
Area: 643
Amount: -0.117116
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:50
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

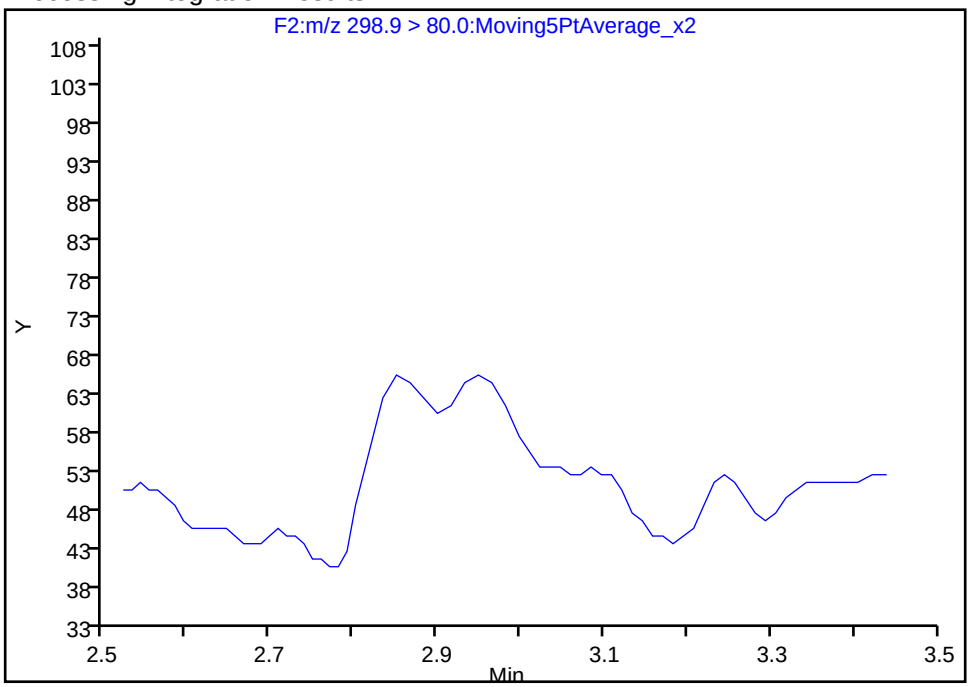
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

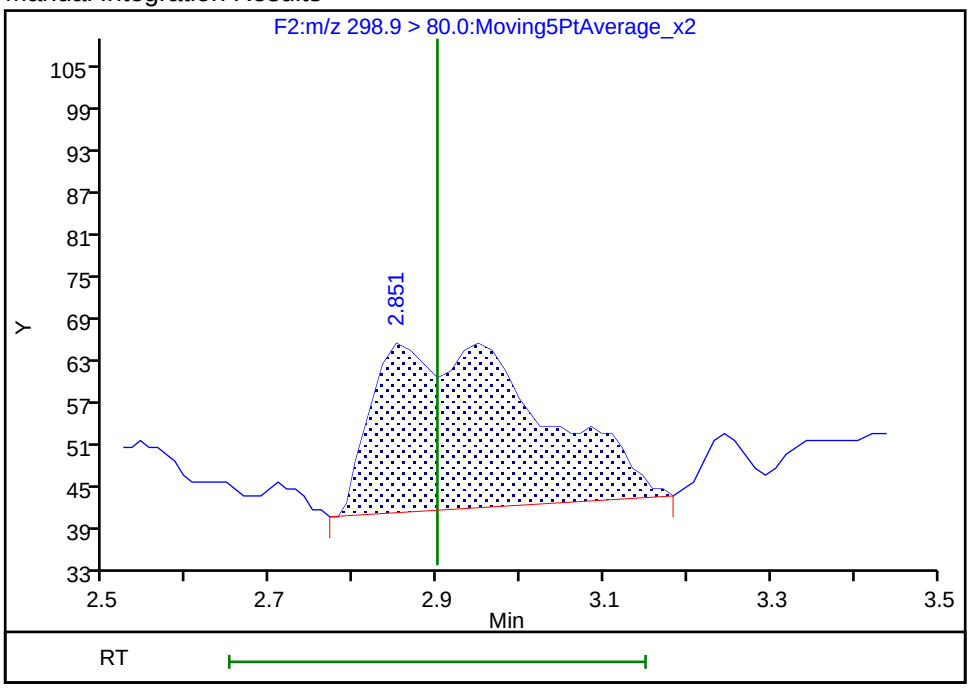
Not Detected
Expected RT: 2.90

Processing Integration Results



Manual Integration Results

RT: 2.85
Area: 333
Amount: 0.105795
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:20:46
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

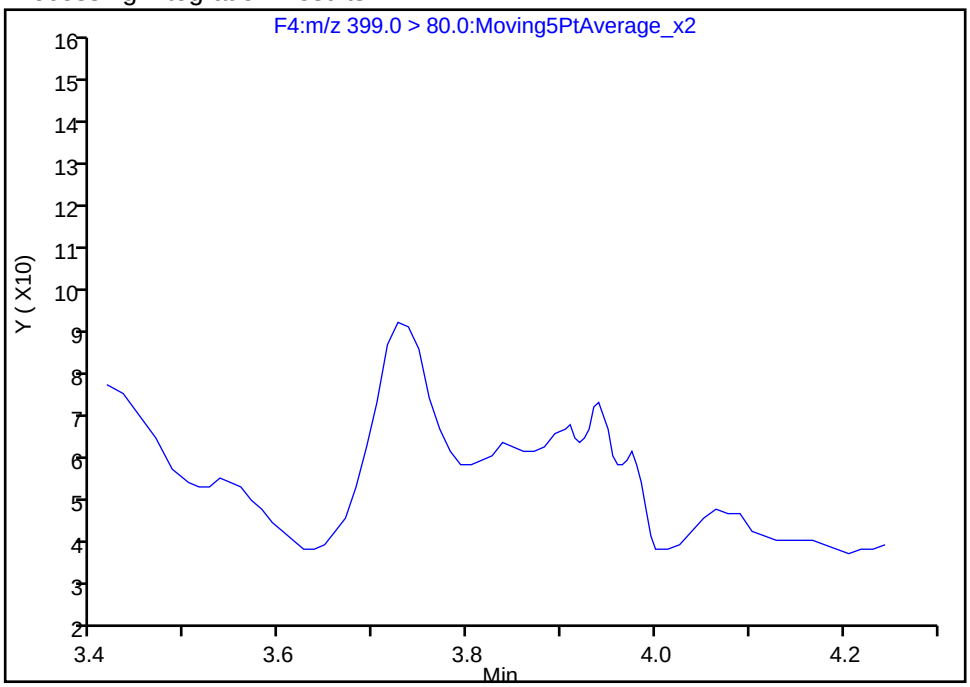
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

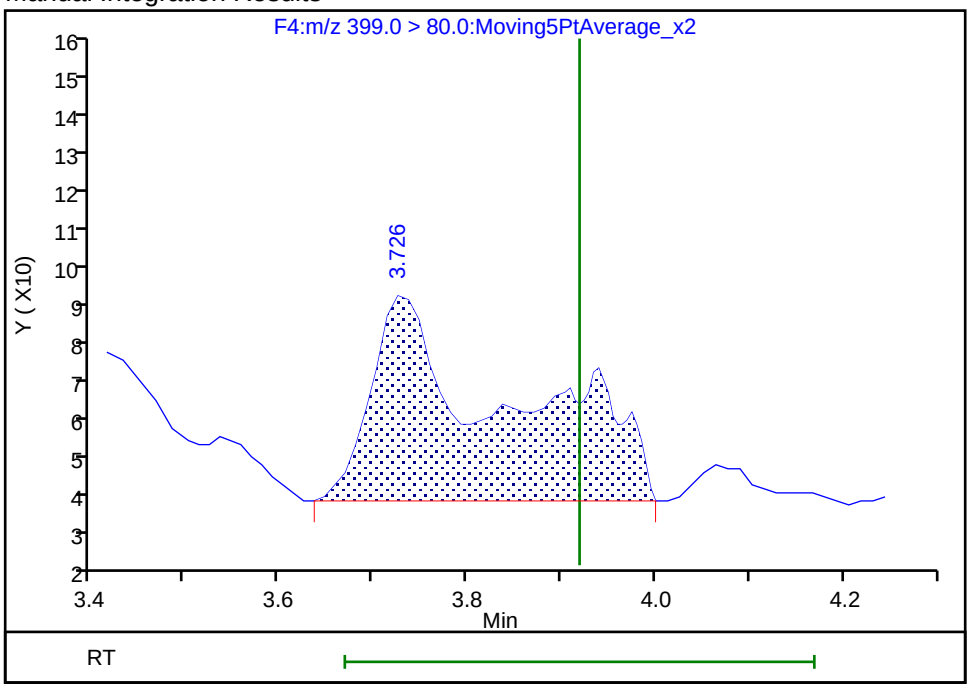
Not Detected
Expected RT: 3.92

Processing Integration Results



Manual Integration Results

RT: 3.73
Area: 519
Amount: 0.576070
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:20:34
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

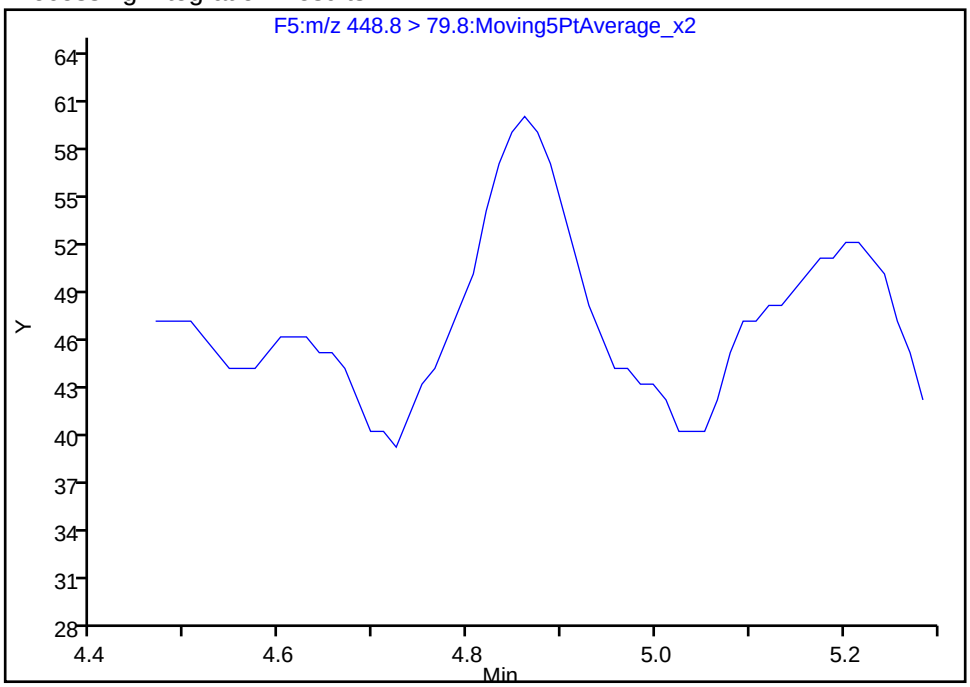
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

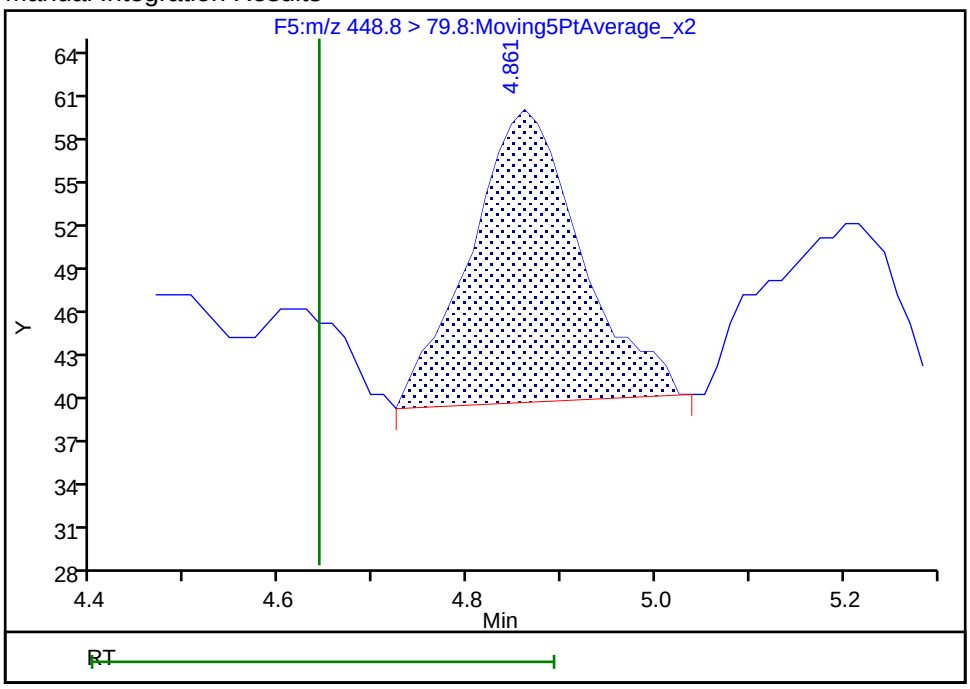
Not Detected
Expected RT: 4.64

Processing Integration Results



Manual Integration Results

RT: 4.86
Area: 167
Amount: 0.223212
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:20:21
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d

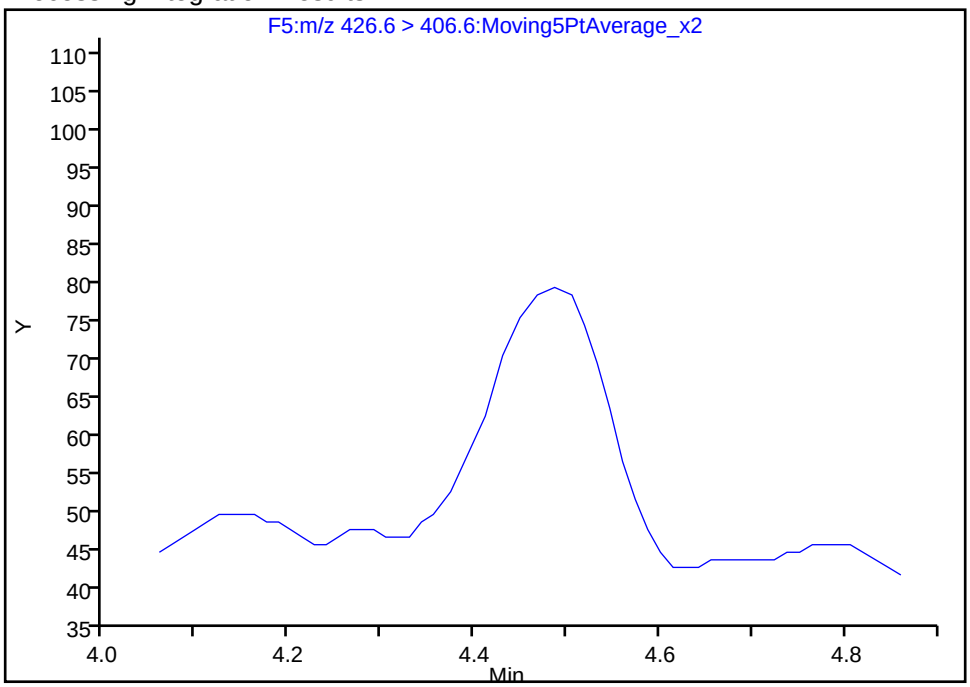
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F5:MRM		

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

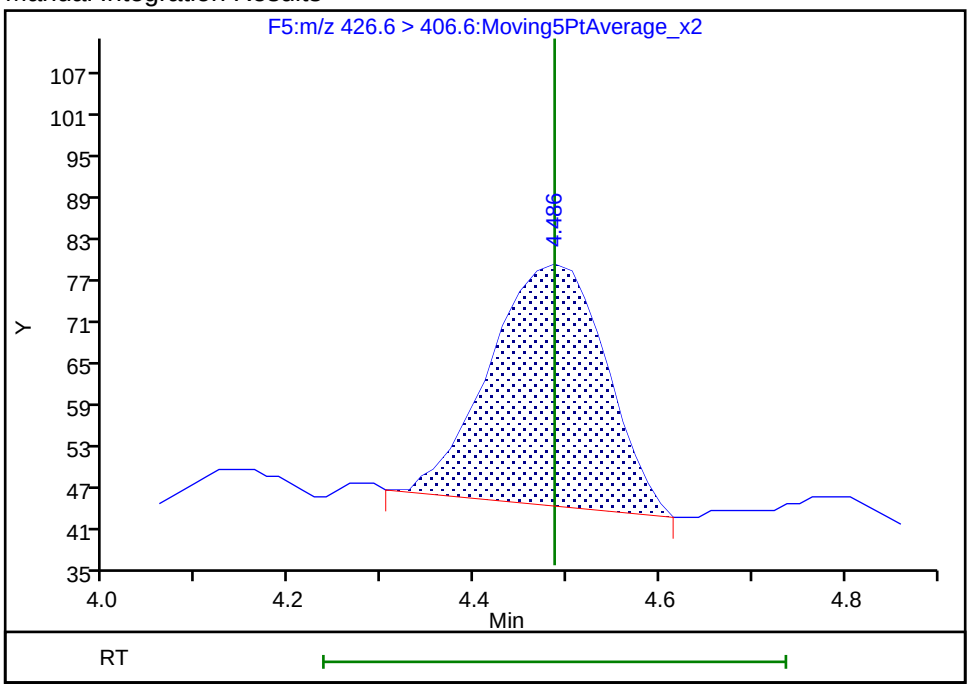
Not Detected
Expected RT: 4.49

Processing Integration Results



Manual Integration Results

RT: 4.49
Area: 308
Amount: -0.058424
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:24:50
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d

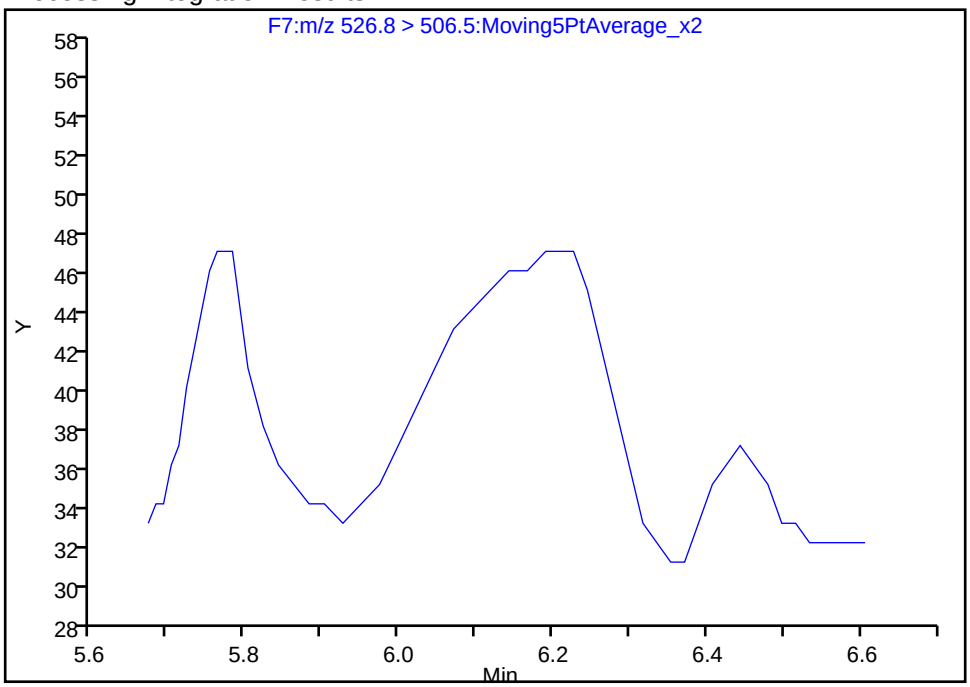
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F7:MRM		

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

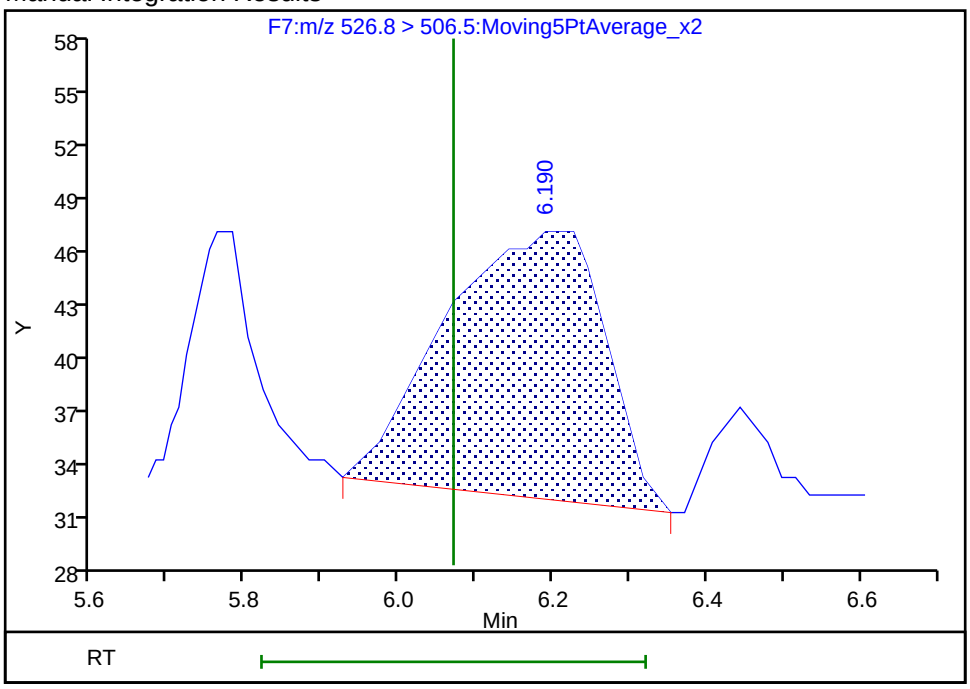
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.19
Area: 219
Amount: 0.425970
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:24:52
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

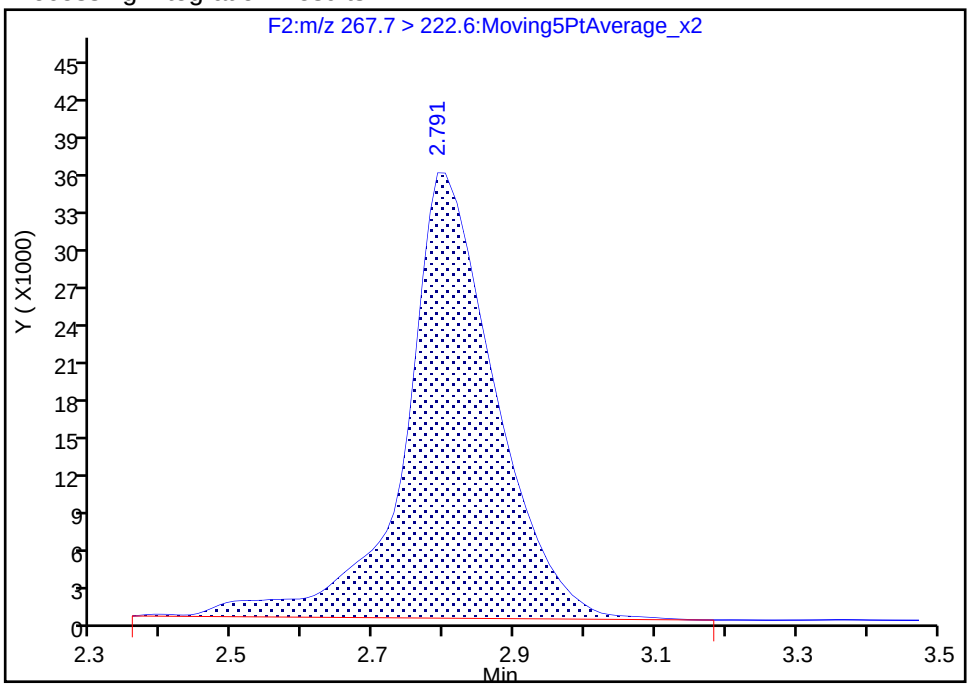
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

D 4 13C5-PFPeA, CAS: STL01893

Signal: 1

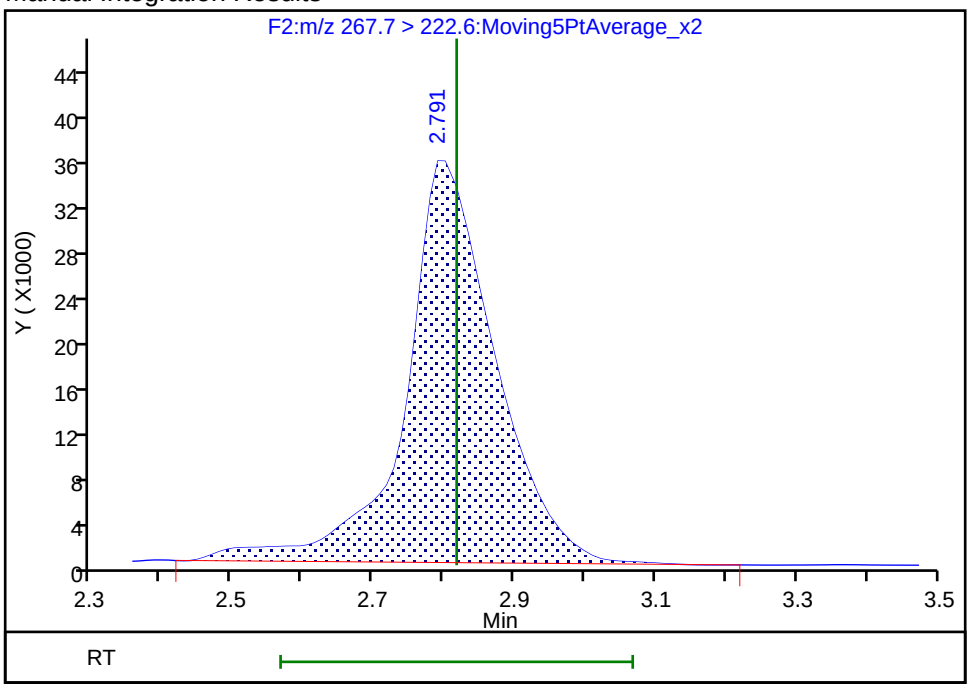
Processing Integration Results

RT: 2.79
Area: 322222
Amount: 43.975516
Amount Units: ng/ml



Manual Integration Results

RT: 2.79
Area: 318974
Amount: 43.532242
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:00

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

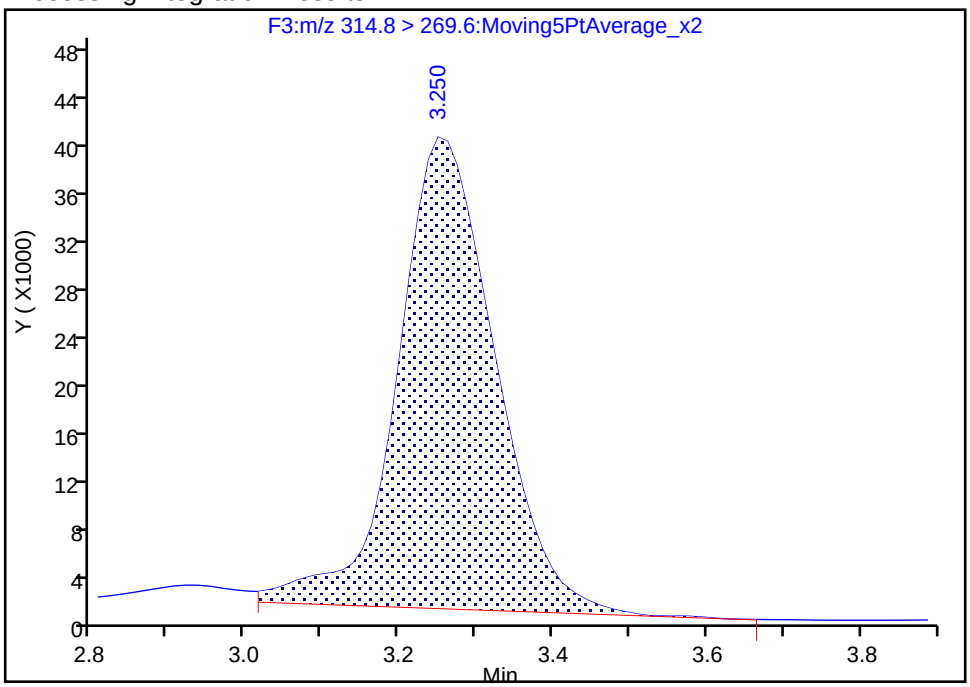
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F3:MRM		

D 8 13C2 PFHxA, CAS: STL00993

Signal: 1

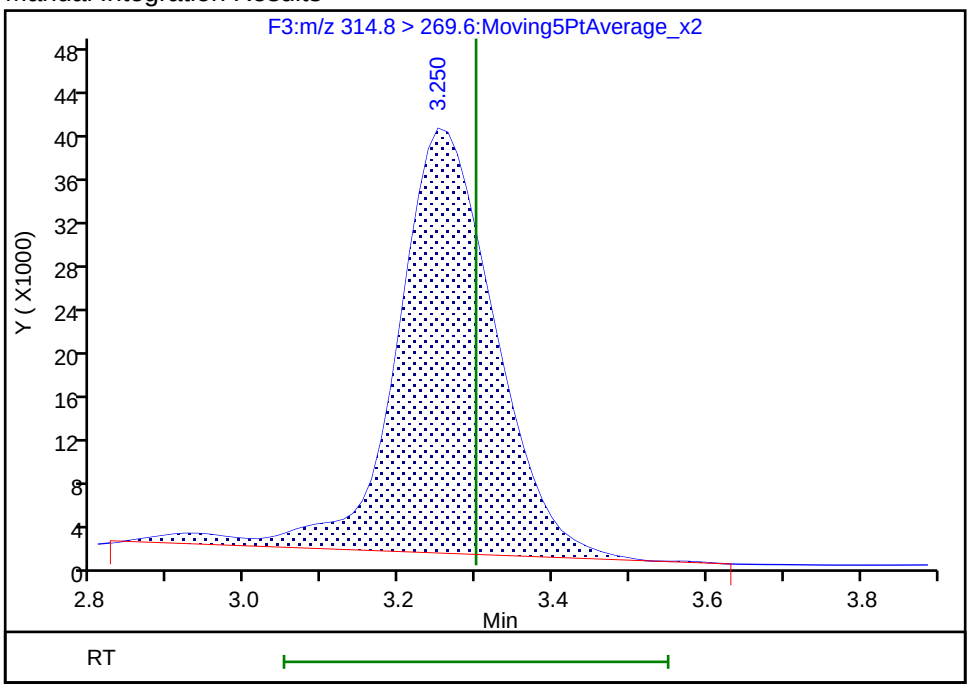
Processing Integration Results

RT: 3.25
Area: 348853
Amount: 40.747271
Amount Units: ng/ml



Manual Integration Results

RT: 3.25
Area: 351685
Amount: 41.078059
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:09

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

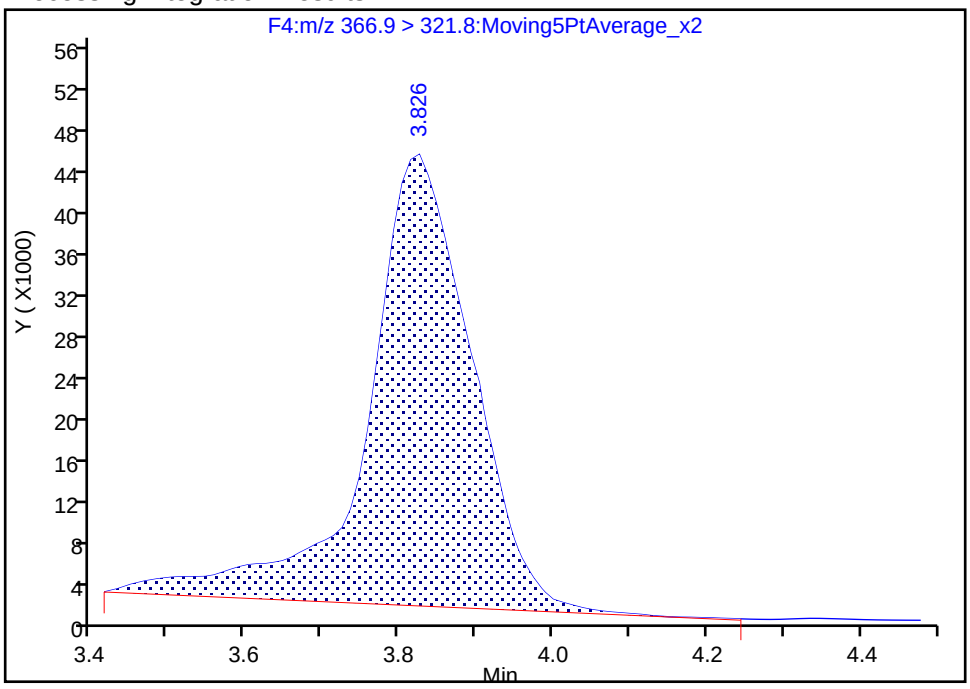
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

D 10 13C4-PFHpA, CAS: STL01892

Signal: 1

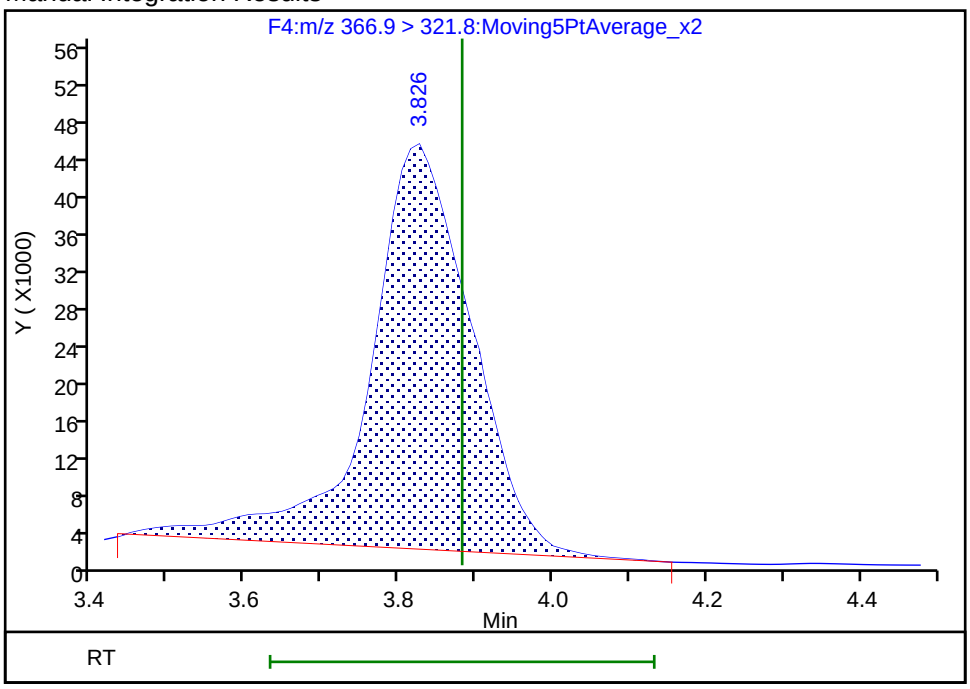
Processing Integration Results

RT: 3.83
Area: 419915
Amount: 42.722949
Amount Units: ng/ml



Manual Integration Results

RT: 3.83
Area: 404169
Amount: 41.120921
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:13

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

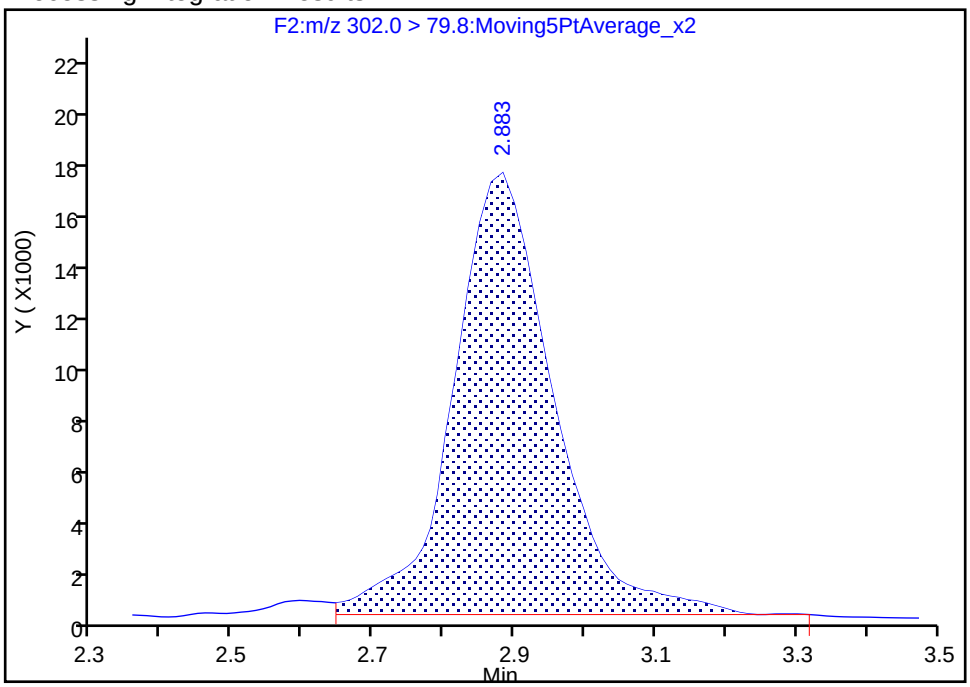
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

D 5 13C3-PFBS, CAS: STL02337

Signal: 1

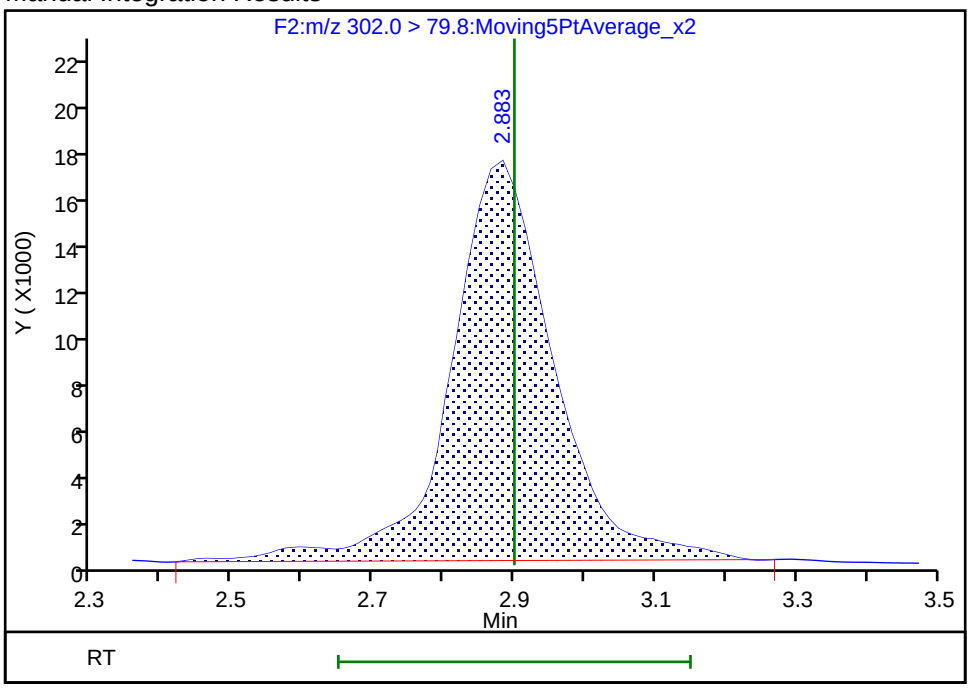
Processing Integration Results

RT: 2.88
Area: 168973
Amount: 34.860086
Amount Units: ng/ml



Manual Integration Results

RT: 2.88
Area: 173722
Amount: 35.839831
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:04

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

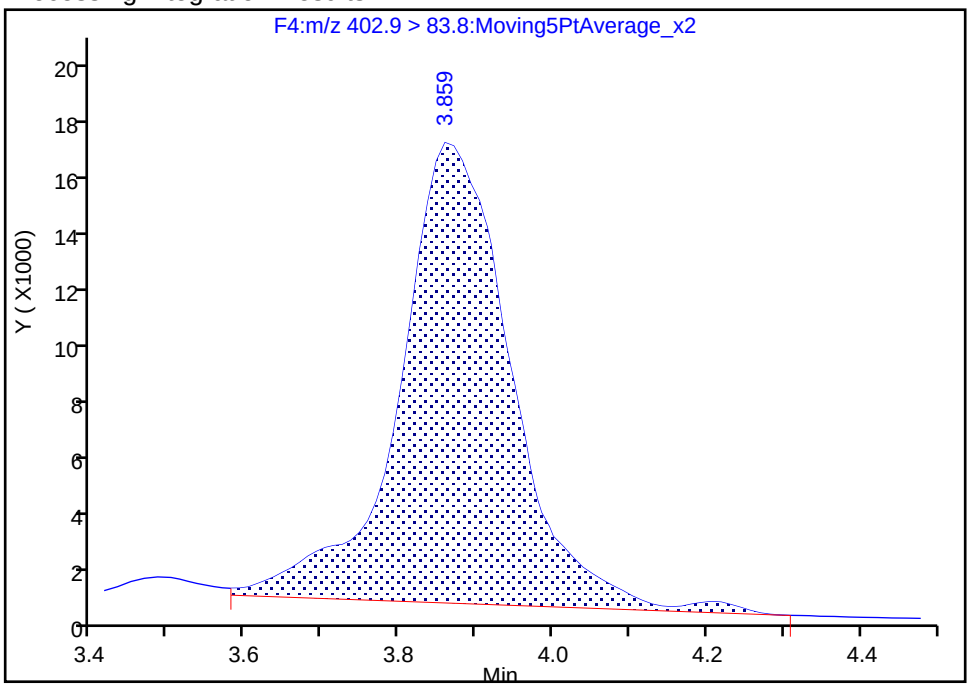
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A52.d				
Injection Date:	12-Jun-2018 21:59:15	Instrument ID:	LC410		
Lims ID:	200-43678-A-6-A	Lab Sample ID:	200-43678-6		
Client ID:	EQUIPMENT BLANK				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	52
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F4:MRM		

D 12 18O2 PFHxS, CAS: STL00994

Signal: 1

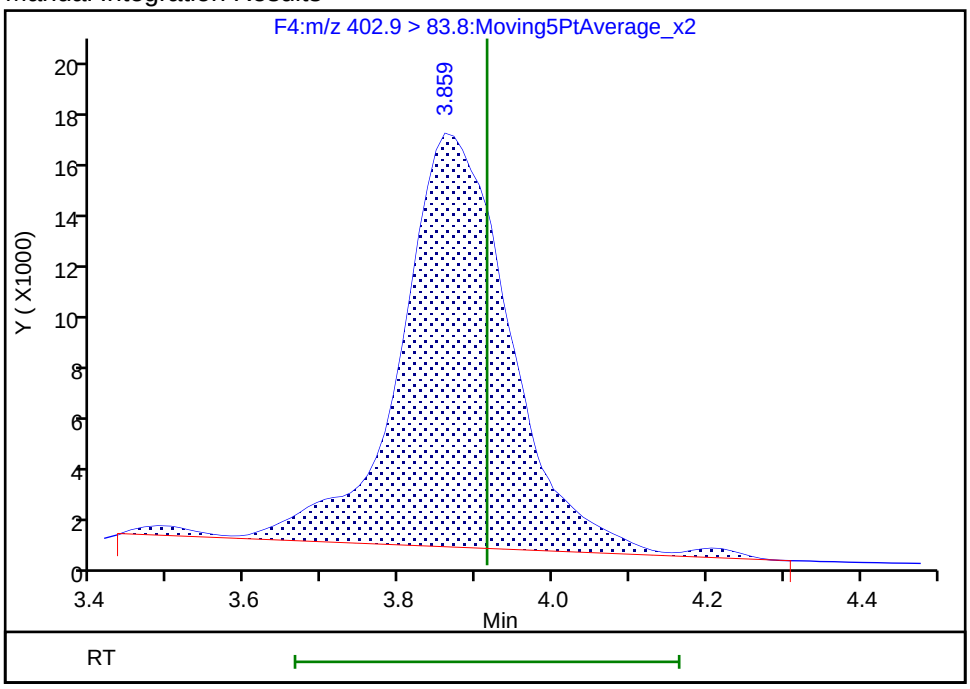
Processing Integration Results

RT: 3.86
Area: 163977
Amount: 35.377345
Amount Units: ng/ml



Manual Integration Results

RT: 3.86
Area: 161992
Amount: 34.949089
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:19:17

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-43678-1 Analy Batch No.: 130333

SDG No.:

Instrument ID: LC410 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/06/2018 18:01 Calibration End Date: 06/06/2018 19:22 Calibration ID: 39569

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-130333/6	PF060618A06.d
Level 2	IC 200-130333/7	PF060618A07.d
Level 3	IC 200-130333/8	PF060618A08.d
Level 4	IC 200-130333/9	PF060618A09.d
Level 5	IC 200-130333/10	PF060618A10.d
Level 6	IC 200-130333/11	PF060618A11.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perfluorobutanoic acid (PFBA)	0.8592 0.7574	0.6604	0.6166	0.6921	0.7008	L1ID	-0.092	0.7416							0.9980		0.9900
Perfluoropentanoic acid (PFPeA)	1.2313 1.2690	1.2117	0.9995	1.2004	1.1397	L1ID	-0.219	1.2401							0.9980		0.9900
Perfluorobutanesulfonic acid (PFBS)	0.9859 +++++	0.7449	0.7833	0.8474	0.8512	AveID		0.8425				10.9		35.0			
Perfluorohexanoic acid (PFHxA)	0.9974 1.1733	1.0419	0.8731	1.0671	0.9724	L1ID	-0.371	1.1306							0.9950		0.9900
Perfluoroheptanoic acid (PFHpA)	0.9454 1.1556	1.0139	0.8988	1.0928	1.1398	L2ID	-0.173	1.0921							0.9920		0.9900
Perfluorohexanesulfonic acid (PFHxS)	0.8672 1.0871	0.7965	0.8257	0.9099	0.8910	L1ID	-0.449	1.0421							0.9930		0.9900
6:2 FTS	0.9168 1.0092	1.2565	1.1657	1.1352	0.9748	L1ID	0.2076	1.0116							0.9980		0.9900
Perfluorooctanoic acid (PFOA)	1.3280 1.1835	0.9528	0.9542	1.1003	1.0397	L1ID	-0.194	1.1506							0.9970		0.9900
Perfluoroheptanesulfonic Acid (PFHpS)	1.1457 0.9546	0.5369	0.8092	1.0096	0.9746	L1ID	-0.181	0.9614							0.9980		0.9900
Perfluorononanoic acid (PFNA)	0.8355 1.0829	0.8821	0.8898	0.9594	0.9758	L2ID	-0.178	0.9903							0.9960		0.9900
Perfluorooctanesulfonic acid (PFOS)	1.0963 1.1844	1.0530	0.9232	1.1790	1.1296	L2ID	-0.057	1.1125							0.9900		0.9900
8:2 FTS	0.3636 +++++	0.7089	1.0666	0.8126	0.8691	L1ID	-0.306	0.8771							0.9920		0.9900
Perfluorodecanoic acid (PFDA)	0.8581 1.1107	0.9888	0.9521	1.0646	0.9504	L2ID	-0.172	1.0383							0.9950		0.9900
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	1.1521 1.3511	1.1114	1.0179	1.2224	1.0463	L1ID	-0.468	1.2887							0.9910		0.9900
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	0.7537 1.2083	1.0788	0.9705	1.1440	1.0307	L2ID	-0.337	1.1308							0.9910		0.9900

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-43678-1 Analy Batch No.: 130333

SDG No.:

Instrument ID: LC410 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/06/2018 18:01 Calibration End Date: 06/06/2018 19:22 Calibration ID: 39569

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Perfluorodecanesulfonic acid (PFDS)	1.0522 1.1113	0.9587	0.9157	1.1243	1.0614	L2ID	-0.055	1.0540							0.9920		0.9900
Perfluoroundecanoic acid (PFUnA)	1.0535 1.1739	1.1134	0.9948	1.1256	1.1164	L2ID	-0.068	1.1164							0.9960		0.9900
Perfluorooctane Sulfonamide (FOSA)	1.0403 1.0659	0.7639	0.8441	0.9741	1.0078	L1ID	-0.340	1.0499							0.9990		0.9900
Perfluorododecanoic acid (PFDoA)	0.9574 0.9704	0.7851	0.9257	0.9656	0.9843	L2ID	-0.059	0.9489							0.9920		0.9900
Perfluorotridecanoic Acid (PFTriA)	0.9940 0.9915	0.9360	0.9826	1.0431	1.0160	L2ID	-0.037	1.0047							0.9990		0.9900
Perfluorotetradecanoic acid (PFTeA)	1.1123 0.9816	0.9088	0.8204	0.9014	0.9495	L2ID	0.1579	0.8990							0.9900		0.9900
13C4 PFBA	0.6719 0.6541	0.6594	0.5982	0.6151	0.5929	Ave		0.6319				5.4		30.0			
13C5 PFPeA	0.9730 0.8949	0.9457	0.9279	0.8998	0.9232	Ave		0.9274				3.1		30.0			
13C3-PFBS	0.6299 0.5686	0.6364	0.6119	0.6218	0.6124	Ave		0.6135				3.9		30.0			
13C2 PFHxA	1.0841 1.0751	1.0770	1.1058	1.0641	1.0957	Ave		1.0836				1.4		30.0			
13C4-PFHpA	1.2755 1.1494	1.3682	1.2807	1.2326	1.1579	Ave		1.2440				6.7		30.0			
18O2 PFHxS	0.5929 0.5575	0.6217	0.5661	0.5815	0.6001	Ave		0.5867				4.0		30.0			
M2-6:2FTS	0.1722 0.1913	0.1720	0.1313	0.1495	0.1715	Ave		0.1646				12.8		30.0			
13C4 PFOA	0.9593 0.8197	1.1055	0.9795	0.9544	0.8937	Ave		0.9520				10.0		30.0			
13C5 PFNA	1.3130 1.1323	1.3606	1.2830	1.2769	1.1531	Ave		1.2531				7.2		30.0			
13C4 PFOS	0.6040 0.6706	0.6622	0.6440	0.6140	0.6166	Ave		0.6352				4.4		30.0			
M2-8:2FTS	0.3512 0.4273	0.3366	0.2716	0.3026	0.3547	Ave		0.3407				15.6		30.0			
13C2 PFDA	1.8870 1.7905	1.9715	1.7446	1.7422	1.8202	Ave		1.8260				4.9		30.0			
d3-NMeFOSAA	0.3773 0.3908	0.3987	0.3649	0.3590	0.4171	Ave		0.3847				5.7		30.0			
d5-NEtFOSAA	0.3488 0.2781	0.3726	0.3523	0.3067	0.3165	Ave		0.3292				10.6		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Burlington Job No.: 200-43678-1 Analy Batch No.: 130333

SDG No.:

Instrument ID: LC410 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/06/2018 18:01 Calibration End Date: 06/06/2018 19:22 Calibration ID: 39569

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
13C2 PFUnA	1.7882 1.3859	1.9628	1.6985	1.6425	1.5412	Ave		1.6698				11.9		30.0			
13C8 FOSA	1.3434 1.4583	1.4918	1.3869	1.3757	1.3645	Ave		1.4034				4.2		30.0			
13C2 PFDoA	1.9140 2.1550	2.3182	1.8897	1.9360	1.8847	Ave		2.0163				8.9		30.0			
13C2-PFTeDA	1.9431 2.0701	2.4056	1.9620	2.0047	1.8891	Ave		2.0458				9.1		30.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-43678-1 Analy Batch No.: 130333

SDG No.:

Instrument ID: LC410 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/06/2018 18:01 Calibration End Date: 06/06/2018 19:22 Calibration ID: 39569

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 200-130333/6	PF060618A06.d
Level 2	IC 200-130333/7	PF060618A07.d
Level 3	IC 200-130333/8	PF060618A08.d
Level 4	IC 200-130333/9	PF060618A09.d
Level 5	IC 200-130333/10	PF060618A10.d
Level 6	IC 200-130333/11	PF060618A11.d

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perfluorobutanoic acid (PFBA)		L1ID	3426 537847	6138	14208	66031	149170	1.00 200	2.00	5.00	20.0	50.0
Perfluoropentanoic acid (PFPeA)		L1ID	7110 1232903	16151	35724	167518	377752	1.00 200	2.00	5.00	20.0	50.0
Perfluorobutanesulfonic acid (PFBS)		AveID	3258 +++++	5906	16318	72247	165434	0.884 +++++	1.77	4.42	17.7	44.2
Perfluorohexanoic acid (PFHxA)		L1ID	6417 1369452	15816	37186	176105	382484	1.00 200	2.00	5.00	20.0	50.0
Perfluoroheptanoic acid (PFHpA)		L2ID	7156 1441979	19553	44333	208918	473780	1.00 200	2.00	5.00	20.0	50.0
Perfluorohexanesulfonic acid (PFHxS)		L1ID	2777 598777	6351	16384	74684	174695	0.910 182	1.82	4.55	18.2	45.5
6:2 FTS		L1ID	888 198742	2888	5589	24958	56894	0.948 190	1.90	4.74	19.0	47.4
Perfluorooctanoic acid (PFOA)		L1ID	7560 1053154	14847	35998	162873	333572	1.00 200	2.00	5.00	20.0	50.0
Perfluoroheptanesulfonic Acid (PFHpS)		L1ID	3910 661640	4771	19107	91527	205369	0.952 190	1.90	4.76	19.0	47.6
Perfluorononanoic acid (PFNA)		L2ID	6510 1331168	16917	43971	190008	403969	1.00 200	2.00	5.00	20.0	50.0
Perfluorooctanesulfonic acid (PFOS)		L2ID	3647 800189	9121	21248	104190	232025	0.928 186	1.86	4.64	18.6	46.4
8:2 FTS		L1ID	726 +++++	3222	10689	36540	106028	0.958 +++++	1.92	4.79	19.2	47.9
Perfluorodecanoic acid (PFDA)		L2ID	9609 2159035	27477	63974	287661	621045	1.00 200	2.00	5.00	20.0	50.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)		L1ID	2580 573266	6246	14308	68069	156674	1.00 200	2.00	5.00	20.0	50.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)		L2ID	1560 364870	5666	13167	54421	117127	1.00 200	2.00	5.00	20.0	50.0
Perfluorodecanesulfonic acid (PFDS)		L2ID	3636 779948	8626	21895	103213	226488	0.964 193	1.93	4.82	19.3	48.2

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-43678-1 Analy Batch No.: 130333

SDG No.:

Instrument ID: LC410 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/06/2018 18:01 Calibration End Date: 06/06/2018 19:22 Calibration ID: 39569

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Perfluoroundecanoic acid (PFUnA)		L2ID	11180 1766235	30803	65079	286757	617692	1.00 200	2.00	5.00	20.0	50.0
Perfluorooctane Sulfonamide (FOSA)		L1ID	8294 1687455	16062	45088	207840	493661	1.00 200	2.00	5.00	20.0	50.0
Perfluorododecanoic acid (PFDoA)		L2ID	10875 2270316	25653	67376	289946	665965	1.00 200	2.00	5.00	20.0	50.0
Perfluorotridecanoic Acid (PFTriA)		L2ID	11290 2319717	30584	71516	313218	687420	1.00 200	2.00	5.00	20.0	50.0
Perfluorotetradecanoic acid (PFTeA)		L2ID	12827 2206162	30814	61999	280269	643890	1.00 200	2.00	5.00	20.0	50.0
13C4 PFBA	13PFOA	Ave	199381 177535	232354	230409	238511	212844	50.0 50.0	50.0	50.0	50.0	50.0
13C5 PFPeA	13PFOA	Ave	288718 242890	333242	357406	348889	331442	50.0 50.0	50.0	50.0	50.0	50.0
13C3-PFBS	13PFOA	Ave	173828 143537	208538	219178	224244	204473	46.5 46.5	46.5	46.5	46.5	46.5
13C2 PFHxA	13PFOA	Ave	321685 291789	379512	425909	412593	393360	50.0 50.0	50.0	50.0	50.0	50.0
13C4-PFHpA	13PFOA	Ave	378473 311962	482116	493271	477962	415670	50.0 50.0	50.0	50.0	50.0	50.0
18O2 PFHxS	13PFOA	Ave	166444 143153	207237	206281	213321	203817	47.3 47.3	47.3	47.3	47.3	47.3
M2-6:2FTS	13PFOA	Ave	48529 49338	57583	48047	55080	58485	47.5 47.5	47.5	47.5	47.5	47.5
13C4 PFOA	13PFOA	Ave	284648 222469	389557	377268	370077	320845	50.0 50.0	50.0	50.0	50.0	50.0
13C5 PFNA	13PFOA	Ave	389593 307327	479444	494157	495131	413969	50.0 50.0	50.0	50.0	50.0	50.0
13C4 PFOS	13PFOA	Ave	171353 173996	223075	237113	227604	211611	47.8 47.8	47.8	47.8	47.8	47.8
M2-8:2FTS	13PFOA	Ave	99843 111104	113621	100213	112421	121996	47.9 47.9	47.9	47.9	47.9	47.9
13C2 PFDA	13PFOA	Ave	559915 485959	694712	671932	675541	653436	50.0 50.0	50.0	50.0	50.0	50.0
d3-NMeFOSAA	13PFOA	Ave	111970 106077	140494	140563	139215	149736	50.0 50.0	50.0	50.0	50.0	50.0
d5-NEtFOSAA	13PFOA	Ave	103487 75494	131307	135676	118926	113634	50.0 50.0	50.0	50.0	50.0	50.0
13C2 PFUnA	13PFOA	Ave	530613 376162	691628	654180	636874	553283	50.0 50.0	50.0	50.0	50.0	50.0
13C8 FOSA	13PFOA	Ave	398621 395800	525681	534185	533440	489846	50.0 50.0	50.0	50.0	50.0	50.0

FORM VI
LCMS BY ISOTOPIC DILUTION - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Burlington Job No.: 200-43678-1 Analy Batch No.: 130333

SDG No.:

Instrument ID: LC410 GC Column: C-18 ID: 4.6(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/06/2018 18:01 Calibration End Date: 06/06/2018 19:22 Calibration ID: 39569

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/ML)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
13C2 PFDoA	13PF OA	Ave	567931 584909	816892	727823	750706	676599	50.0 50.0	50.0	50.0	50.0	50.0
13C2-PFTeDA	13PF OA	Ave	576579 561860	847687	755676	777332	678162	50.0 50.0	50.0	50.0	50.0	50.0

Curve Type Legend:

Ave = Average ISTD
AveID = Average isotope dilution
L1ID = Linear 1/conc IsoDil
L2ID = Linear 1/conc^2 IsoDil

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 06-Jun-2018 18:01:31 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030801-006 IC 1
Misc. Info.: PFAS21 060618A ICAL
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 08-Jun-2018 09:03:24 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: chirgwinb Date: 07-Jun-2018 08:17:40

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 2 13C4 PFBA										
216.9 > 171.5	2.347	2.341	0.006	1.000	199381	53.2		106	316	
1 Perfluorobutyric acid										M
212.9 > 168.9	2.351	2.345	0.006	1.002	3426	1.28		128	18.3	M
D 3 13C5-PFPeA										
267.7 > 222.6	2.781	2.770	0.011	1.000	288718	52.5		105	2922	
4 Perfluoropentanoic acid										M
262.9 > 218.8	2.781	2.770	0.011	1.000	7110	1.17		117	24.0	M
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.850	2.845	0.005	1.000	3258	1.03		117	55.1	M
D 5 13C3-PFBS										
302.0 > 79.8	2.850	2.845	0.005	1.000	173828	47.7		103	1136	
8 Perfluorohexanoic acid										
312.8 > 268.6	3.214	3.209	0.005	1.000	6417	1.21		121	129	
D 7 13C2 PFHxA										
314.8 > 269.6	3.214	3.211	0.003	1.000	321685	50.0		100	1278	
D 10 13C4-PFHpA										
366.9 > 321.8	3.759	3.759	0.0	1.000	378473	51.3		103	479	
11 Perfluoroheptanoic acid										
362.9 > 318.8	3.782	3.759	0.023	1.006	7156	1.02		102	165	
12 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.815	3.808	0.007	1.000	2777	1.19		131	15.7	M
D 13 18O2 PFHxS										
402.9 > 83.8	3.815	3.800	0.015	1.000	166444	47.8		101	1043	
15 Sodium 1H,1H,2H,2H-perfluorooctane										M
426.6 > 406.6	4.374	4.387	-0.013	0.996	888	0.6540		69.0	20.2	M
D 14 M2-6:2FTS										
428.6 > 408.6	4.393	4.389	0.004	1.000	48529	49.7		105	583	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 49 13C2-PFOA										
414.9 > 369.8	4.449	4.443	0.006		296730	50.0			2106	
D 17 13C4 PFOA										
416.9 > 371.8	4.449	4.446	0.003	1.000	284648	50.4		101	1439	
16 Perfluorooctanoic acid										
412.9 > 368.8	4.468	4.449	0.019	1.004	7560	1.32		132	82.3	
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.505	4.494	0.011	0.860	3910	1.32		139	65.3	M
D 21 13C5 PFNA										
467.8 > 422.8	5.222	5.215	0.007	1.000	389593	52.4		105	678	
19 Perfluorononanoic acid										
462.8 > 418.8	5.209	5.206	0.003	0.997	6510	1.02		102	119	
20 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.236	5.236	0.0	1.000	3647	0.9660		104	48.4	M
D 22 13C4 PFOS										
502.8 > 79.8	5.236	5.229	0.007	1.000	171353	45.5		95.1	294	
D 23 M2-8:2FTS										
528.8 > 508.8	5.974	5.974	0.0	1.000	99843	49.4		103	1176	
24 Sodium 1H,1H,2H,2H-perfluorodecane										M
526.8 > 506.5	5.998	5.982	0.016	1.004	726	0.7457		77.8	6.4	M
D 25 13C2 PFDA										
514.9 > 469.5	5.998	5.998	0.0	1.000	559915	51.7		103	1479	
26 Perfluorodecanoic acid										
512.9 > 468.5	6.022	6.002	0.020	1.004	9609	0.99		99.2	45.3	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.367	6.346	0.021	1.000	111970	49.0		98.1	781	
28 N-methyl perfluorooctane sulfonami										M
569.8 > 418.8	6.349	6.352	-0.003	0.997	2580	1.26		126	22.4	M
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.720	6.711	0.009	1.000	103487	53.0		106	1176	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.734	6.727	0.007	1.002	1560	0.9648		96.5	41.0	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.762	6.752	0.010	1.292	3636	1.01		105	63.5	
D 33 13C2 PFUnA										
564.8 > 519.8	6.762	6.755	0.007	1.000	530613	53.5		107	6354	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.762	6.758	0.004	1.000	11180	1.00		100	125	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	6.931	6.931	0.0	0.998	8294	1.31		131	125	
D 35 13C8 FOSA										
505.8 > 77.8	6.944	6.933	0.011	1.000	398621	47.9		95.7	3136	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.429	7.429	0.0	0.997	10875	1.07		107	122	
D 36 13C2 PFDoA										
614.8 > 569.6	7.452	7.433	0.019	1.000	567931	47.5		94.9	3521	
40 Perfluorotridecanoic acid										
662.8 > 618.6	8.063	8.050	0.013	1.082	11290	1.03		103	203	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2-PFTeDA										
714.8 > 669.6	8.605	8.590	0.015	1.000	576579	47.5		95.0	1541	
44 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.605	8.593	0.012	1.000	12827	1.06		106	132	M
712.8 > 168.8	8.605	8.593	0.012	1.000	2163		5.93(0.00-0.00)	106	26.3	M
712.8 > 218.8	8.636	8.593	0.043	1.004	220		58.30(0.00-0.00)	106	3.7	M

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFAS21-L1_00003 Amount Added: 100.00 Units: uL

Report Date: 08-Jun-2018 09:03:25 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d

Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410

Lims ID: IC

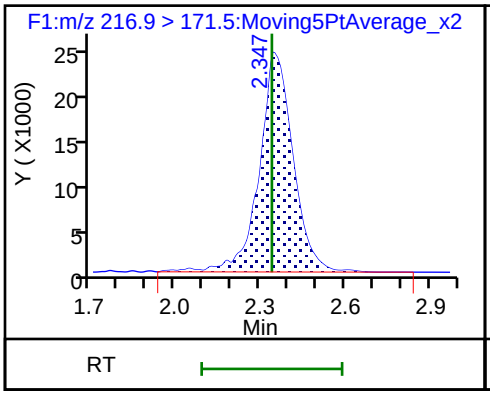
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6

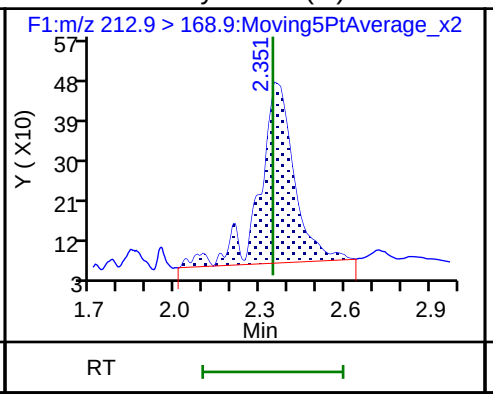
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

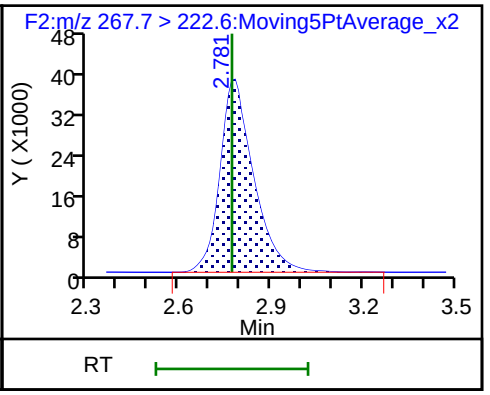
D 2 13C4 PFBA



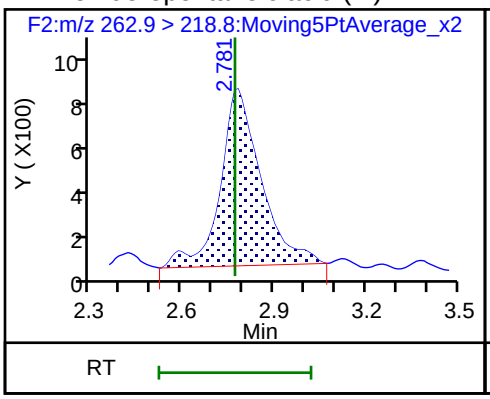
1 Perfluorobutyric acid (M)



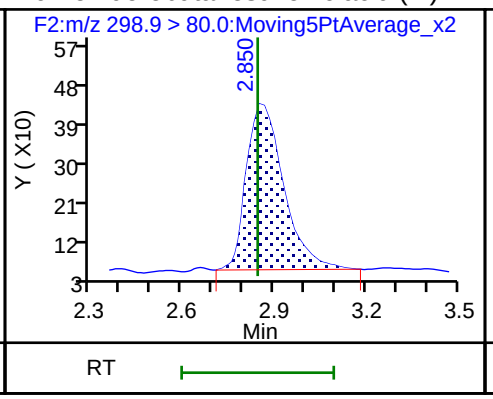
D 3 13C5-PFPeA



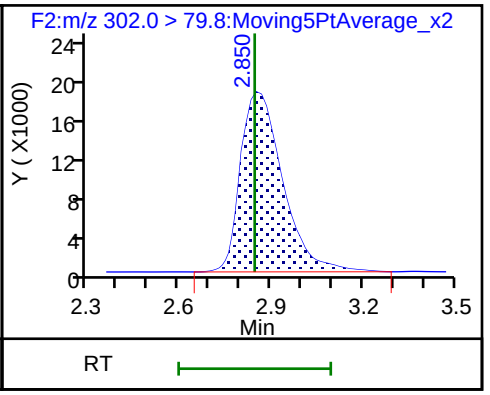
4 Perfluoropentanoic acid (M)



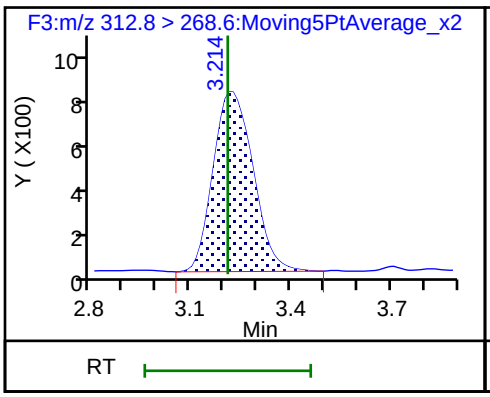
6 Perfluorobutanesulfonic acid (M)



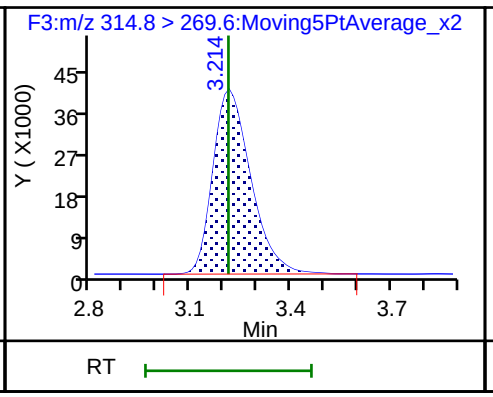
D 5 13C3-PFBS



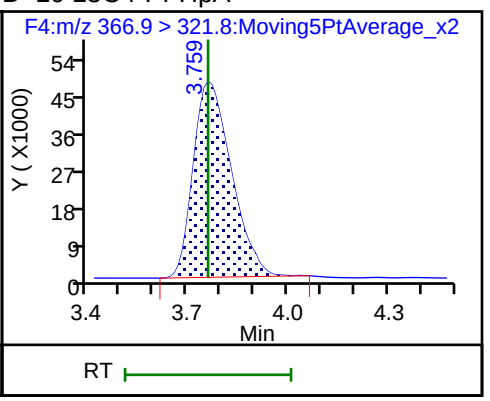
8 Perfluorohexanoic acid



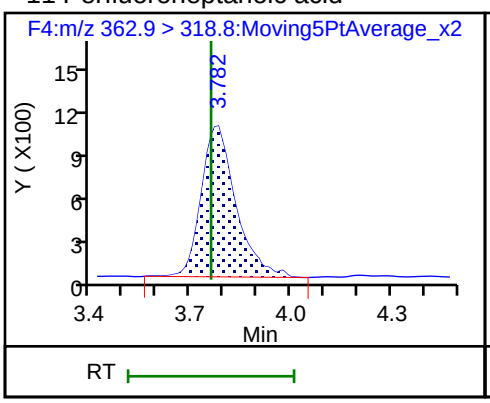
D 7 13C2 PFHxA



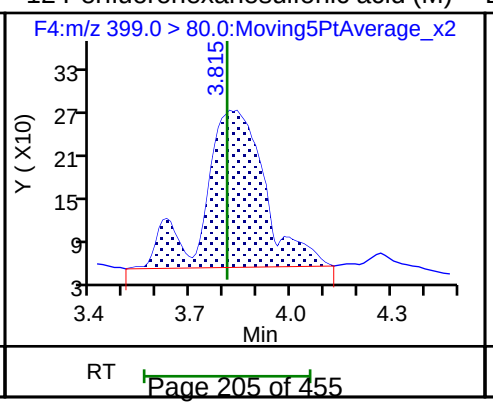
D 10 13C4-PFHpA



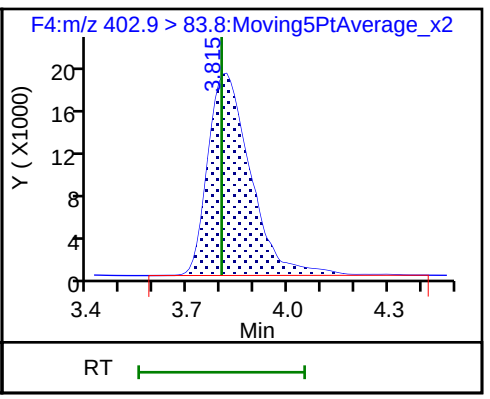
11 Perfluoroheptanoic acid



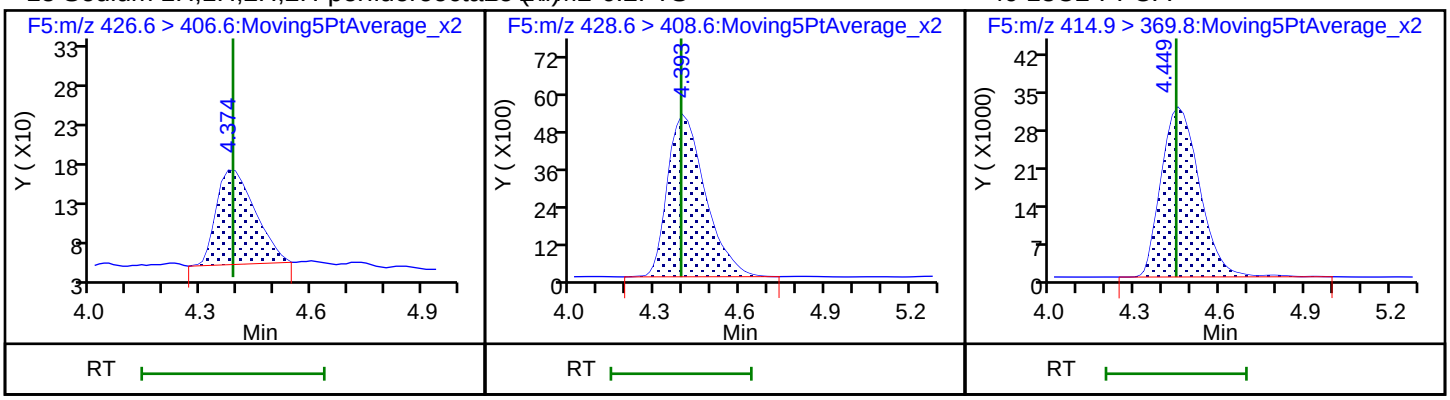
12 Perfluorohexanesulfonic acid (M)



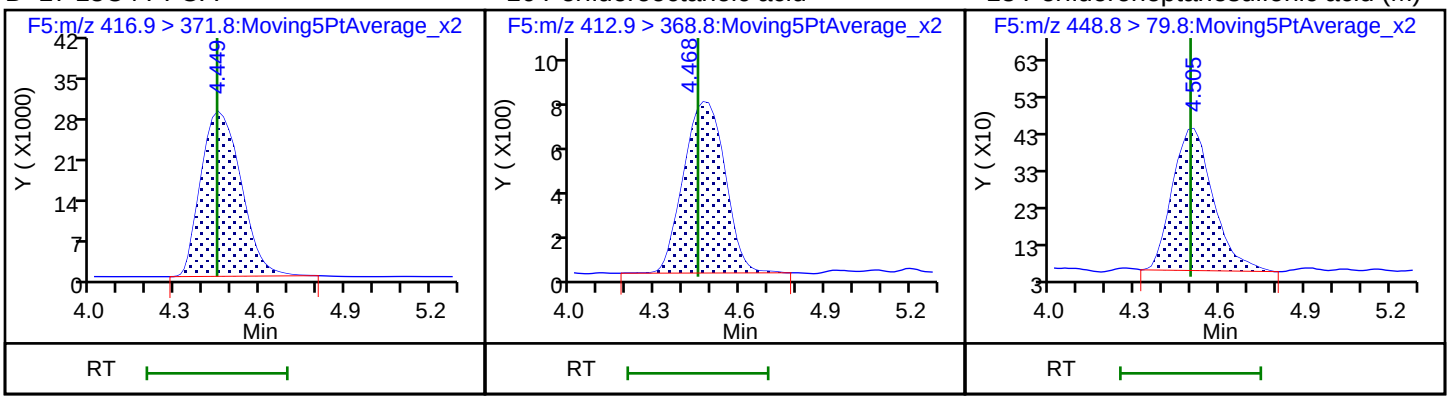
D 13 18O2 PFHxS



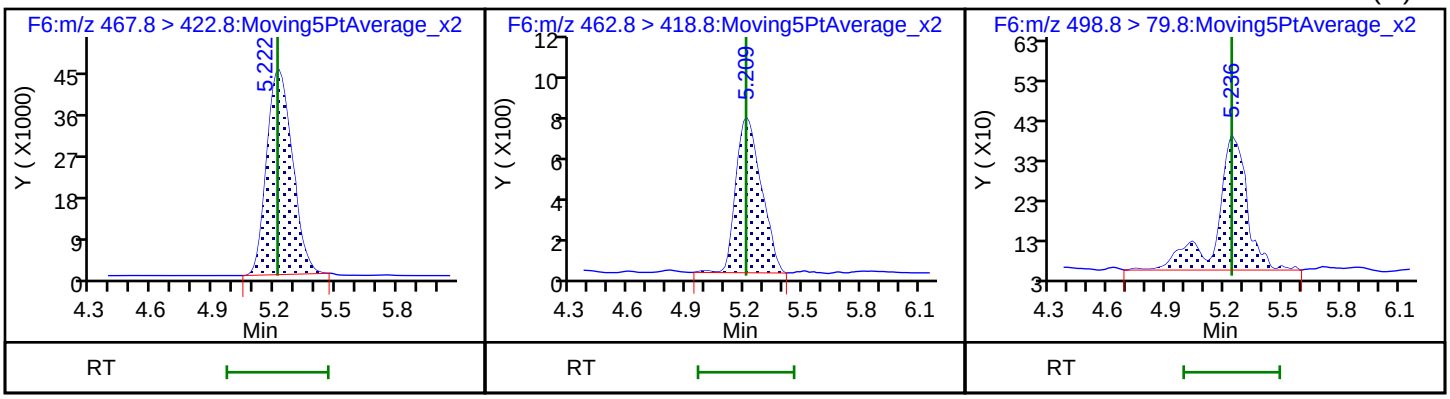
15 Sodium 1H,1H,2H,2H-perfluorooctane (M) D (M)M2-6:2FTS * 49 13C2-PFOA



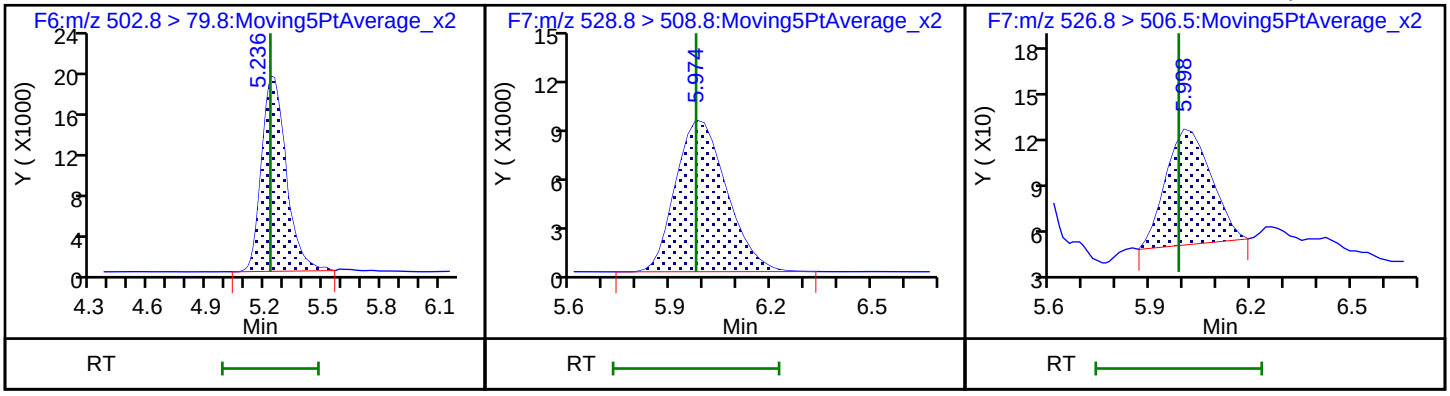
D 17 13C4 PFOA 16 Perfluorooctanoic acid 18 Perfluoroheptanesulfonic acid (M)



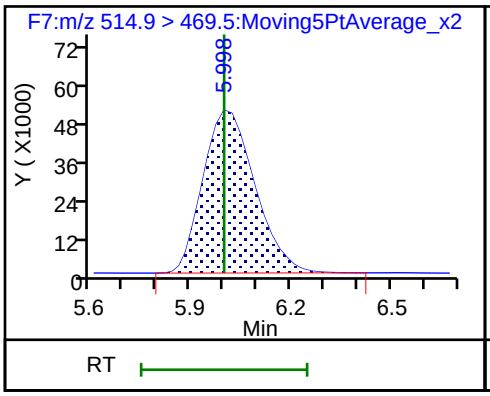
D 21 13C5 PFNA 19 Perfluorononanoic acid 20 Perfluorooctane sulfonic acid (M)



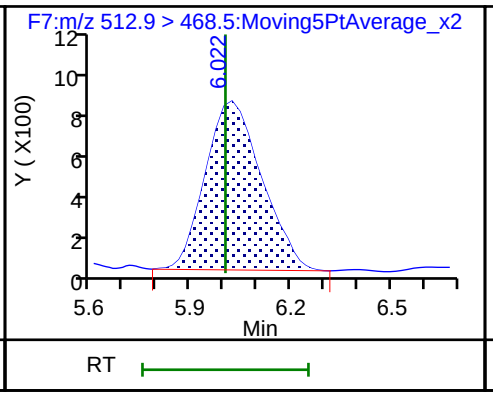
D 22 13C4 PFOS D 23 M2-8:2FTS 24 Sodium 1H,1H,2H,2H-perfluorodecane (M)



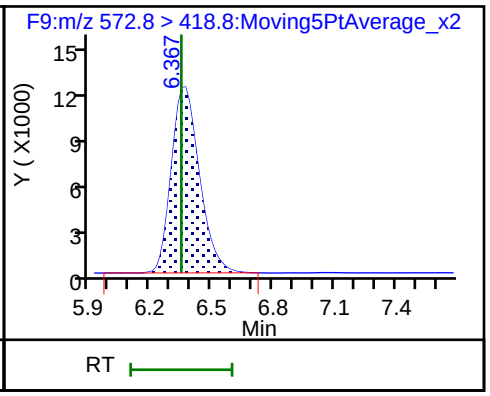
D 25 13C2 PFDA



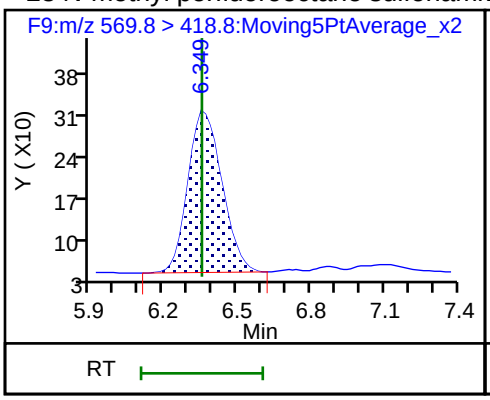
26 Perfluorodecanoic acid



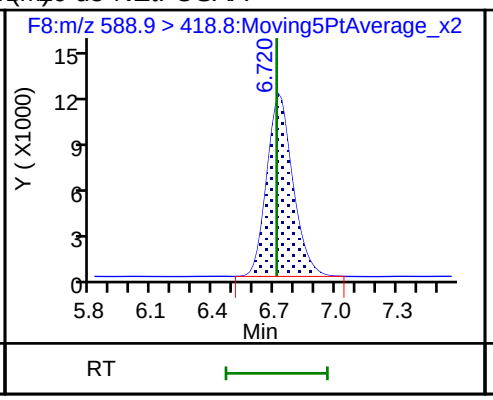
D 27 d3-NMeFOSAA



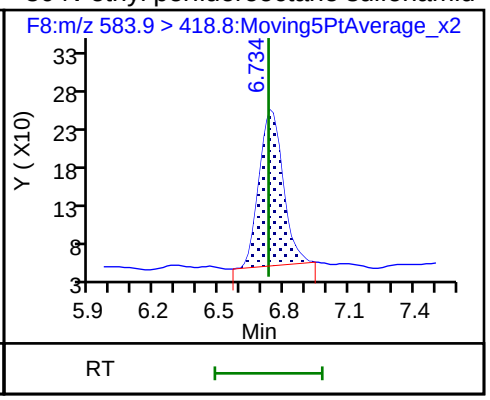
28 N-methyl perfluorooctane sulfonamid (M)



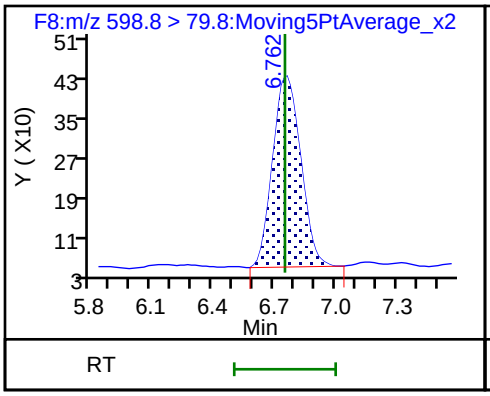
D 29 d5-NEtFOSAA



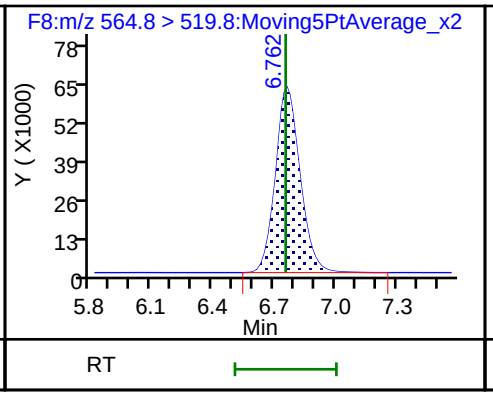
30 N-ethyl perfluorooctane sulfonamid



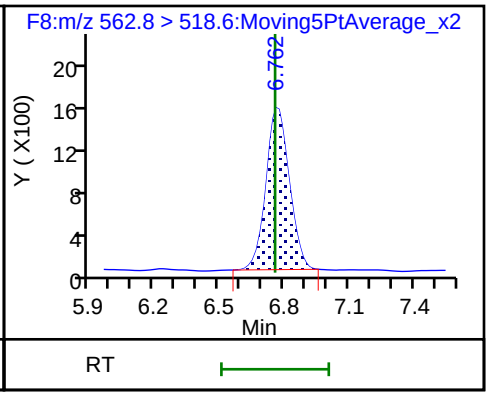
31 Perfluorodecane Sulfonic acid



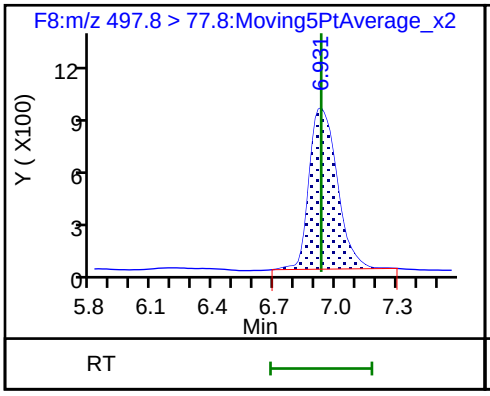
D 33 13C2 PFUnA



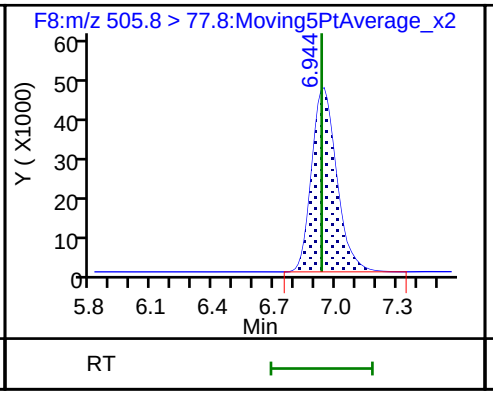
32 Perfluoroundecanoic acid



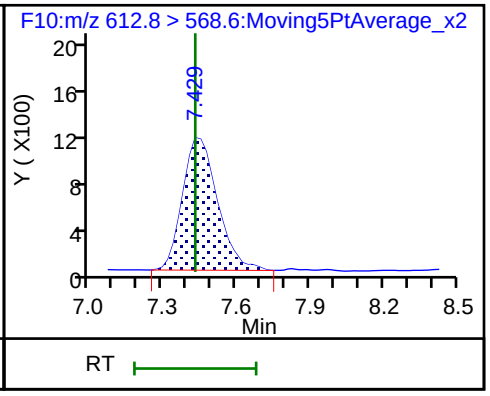
34 Perfluorooctane Sulfonamide



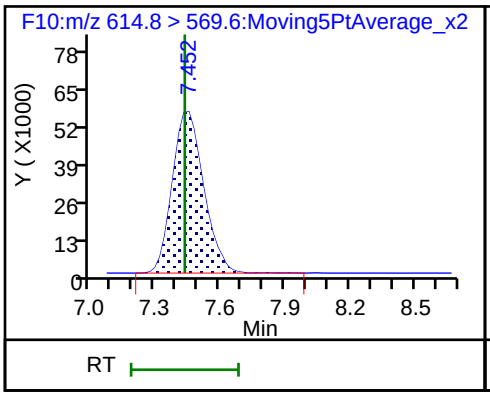
D 35 13C8 FOSA



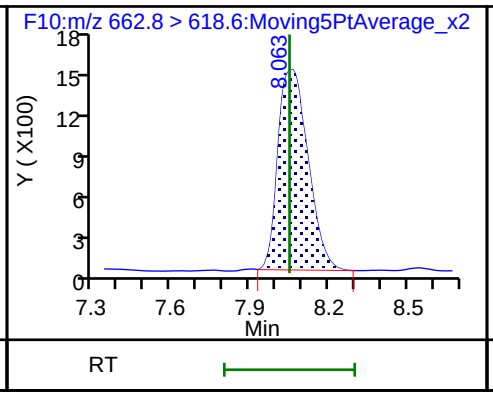
37 Perfluorododecanoic acid



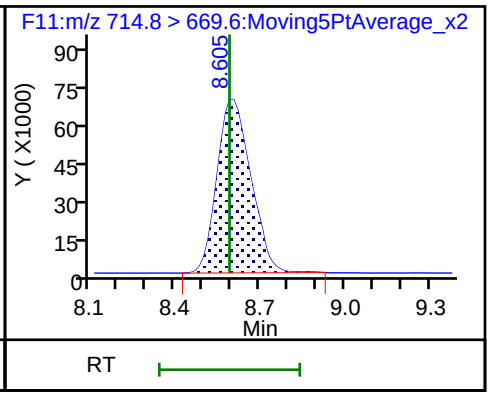
D 36 13C2 PFDoA



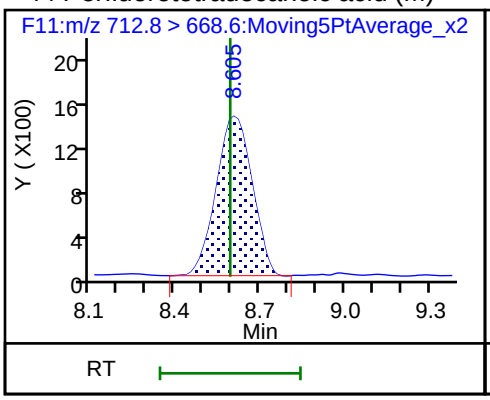
40 Perfluorotridecanoic acid



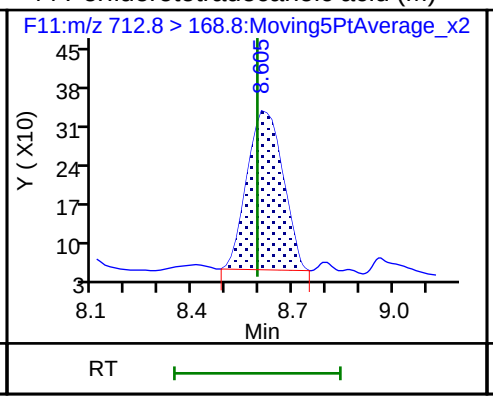
D 43 13C2-PFTeDA



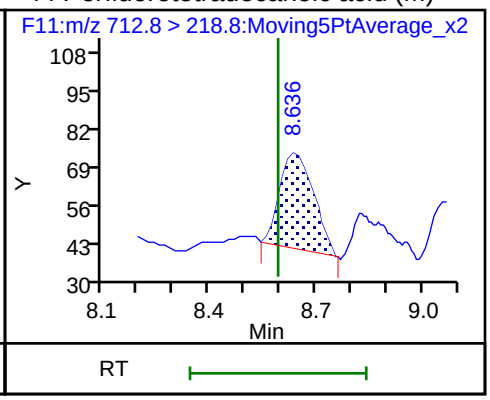
44 Perfluorotetradecanoic acid (M)



44 Perfluorotetradecanoic acid (M)



44 Perfluorotetradecanoic acid (M)



Manual Integration/User Assign Peak Report

TestAmerica Burlington

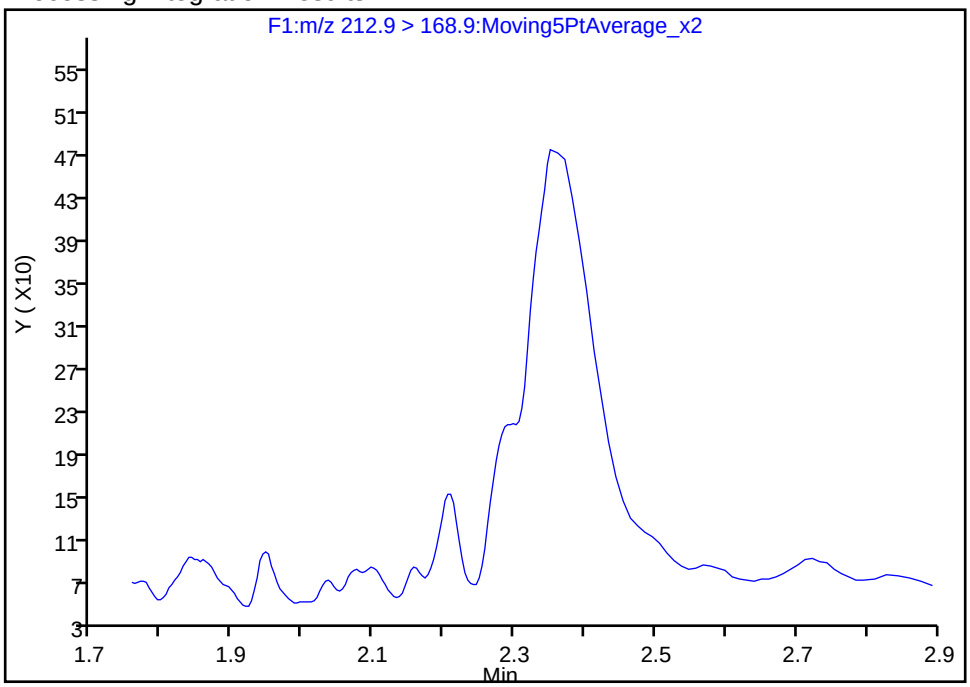
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

1 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

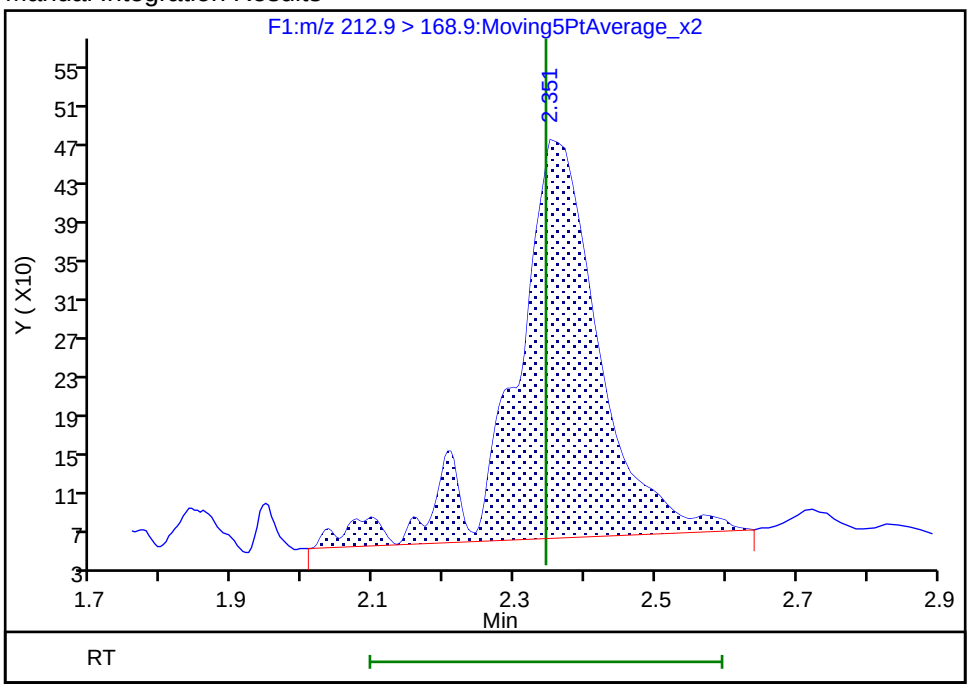
Not Detected
Expected RT: 2.34

Processing Integration Results



Manual Integration Results

RT: 2.35
Area: 3426
Amount: 1.282495
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:15:45
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

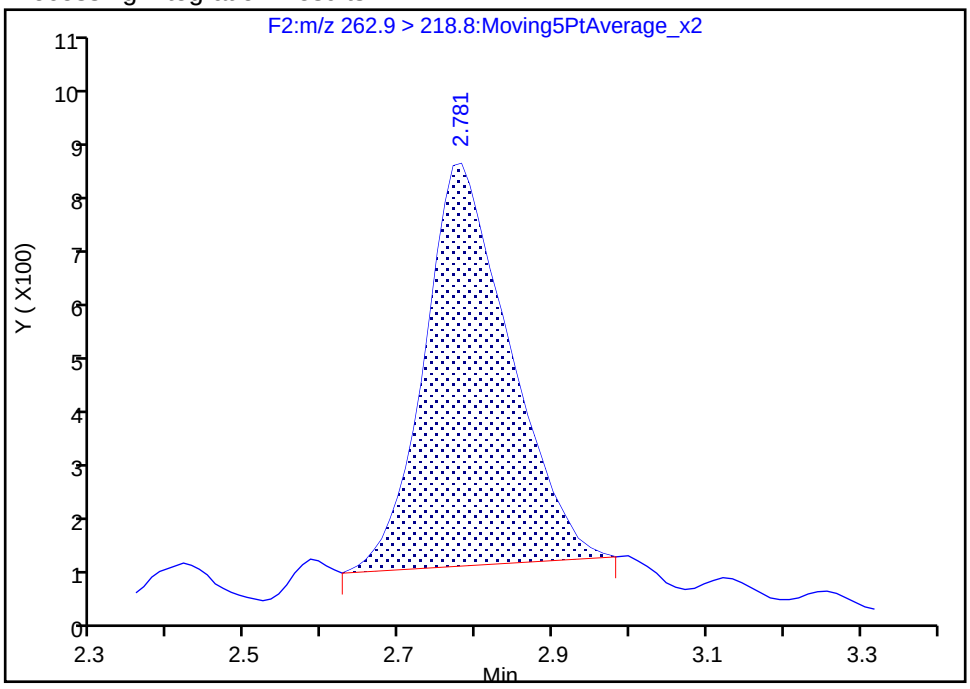
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

4 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

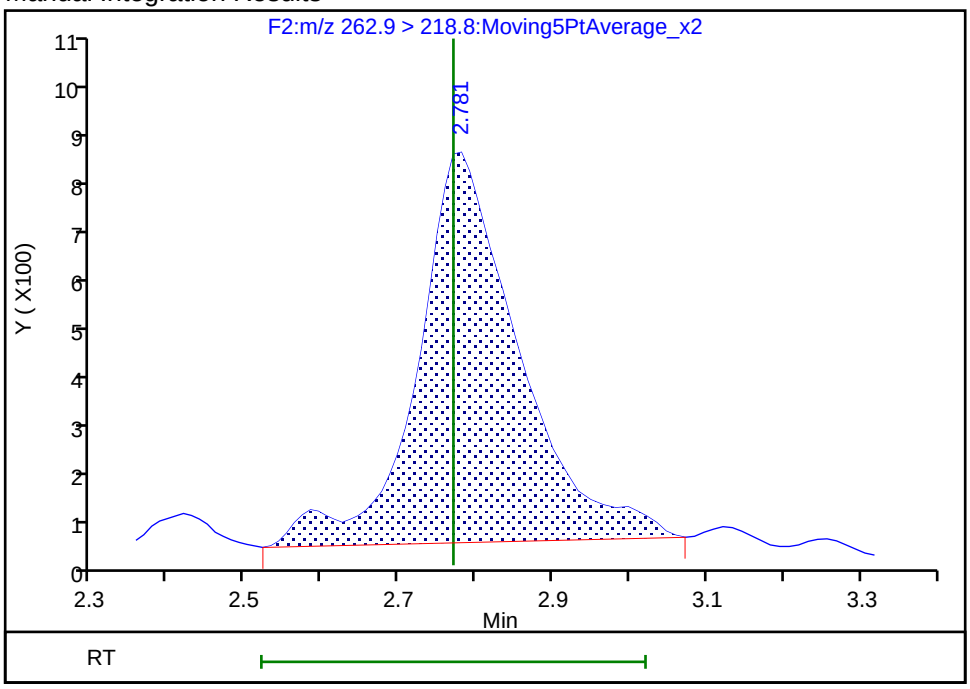
Processing Integration Results

RT: 2.78
Area: 5520
Amount: 0.949730
Amount Units: ng/ml



Manual Integration Results

RT: 2.78
Area: 7110
Amount: 1.169720
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:16:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

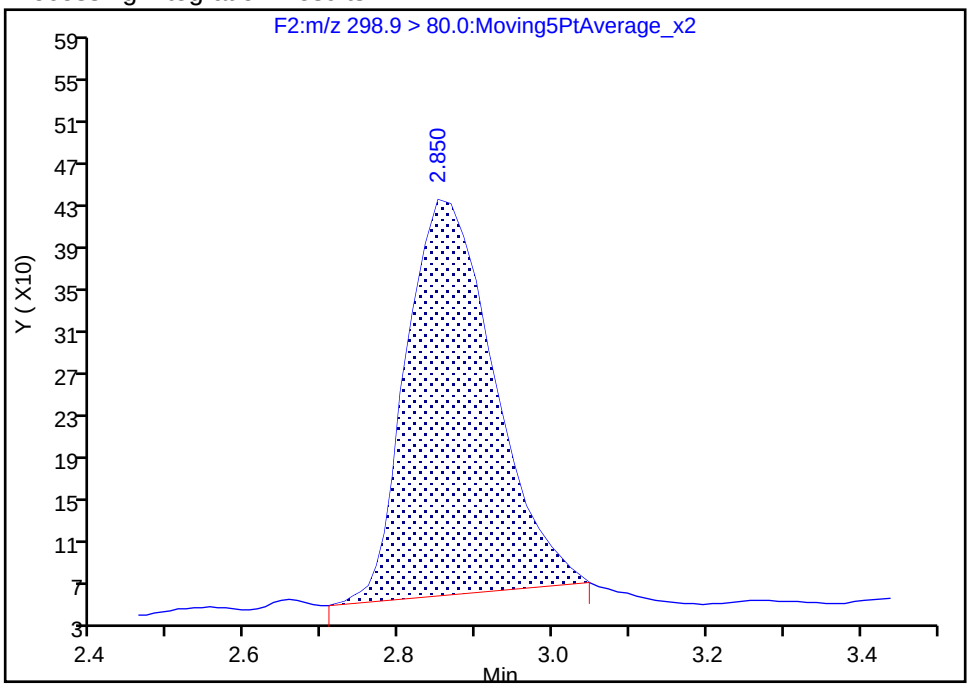
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

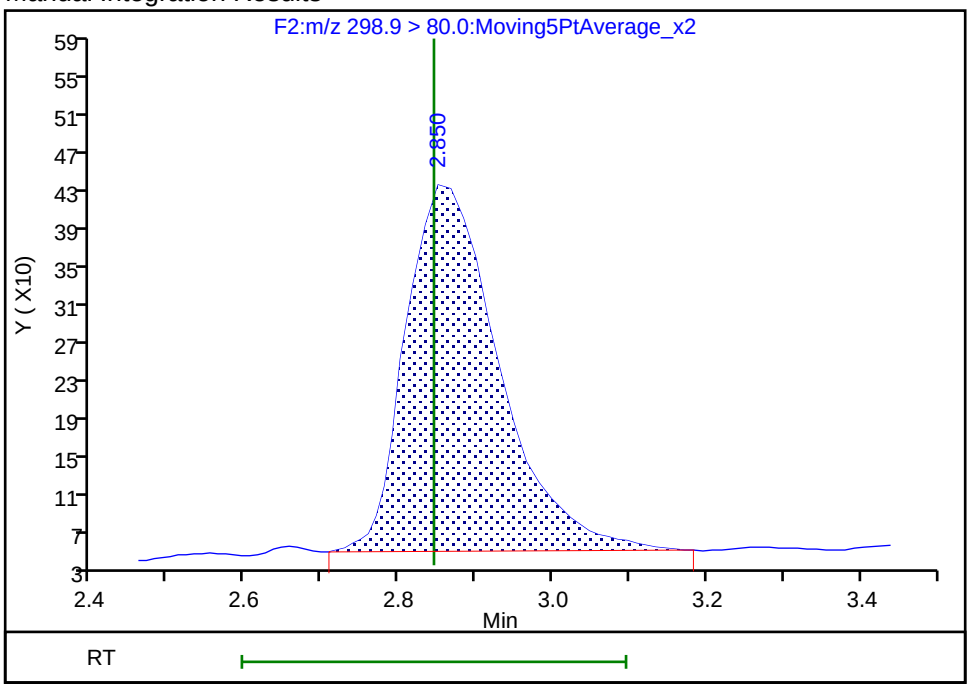
Processing Integration Results

RT: 2.85
Area: 2988
Amount: 0.929556
Amount Units: ng/ml



Manual Integration Results

RT: 2.85
Area: 3258
Amount: 1.034448
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:16:42
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington

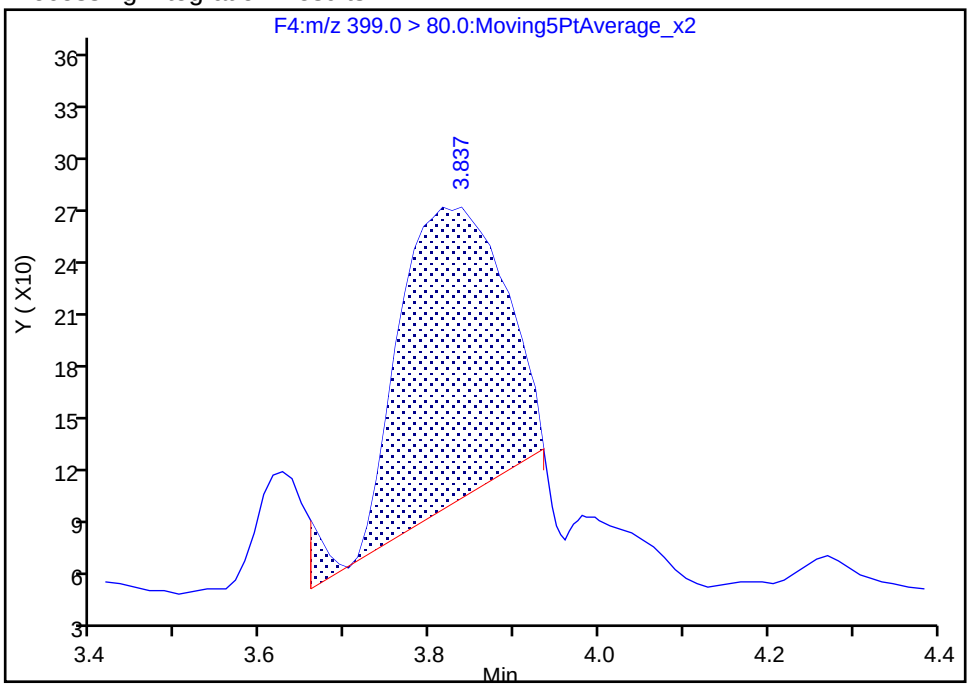
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

12 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

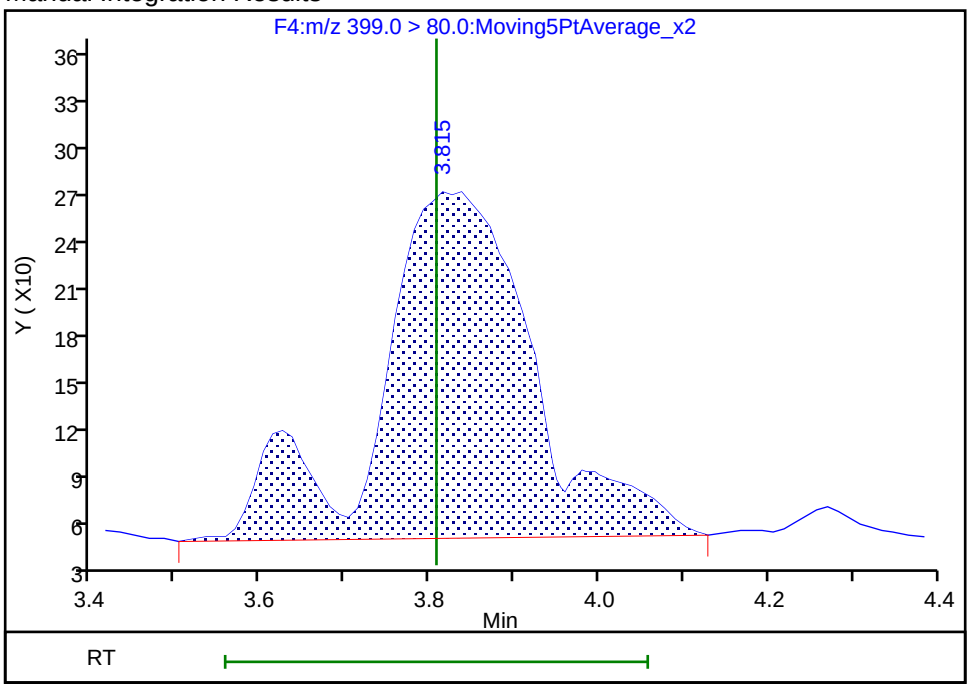
Processing Integration Results

RT: 3.84
Area: 1508
Amount: 0.895121
Amount Units: ng/ml



Manual Integration Results

RT: 3.81
Area: 2777
Amount: 1.187924
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:16:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

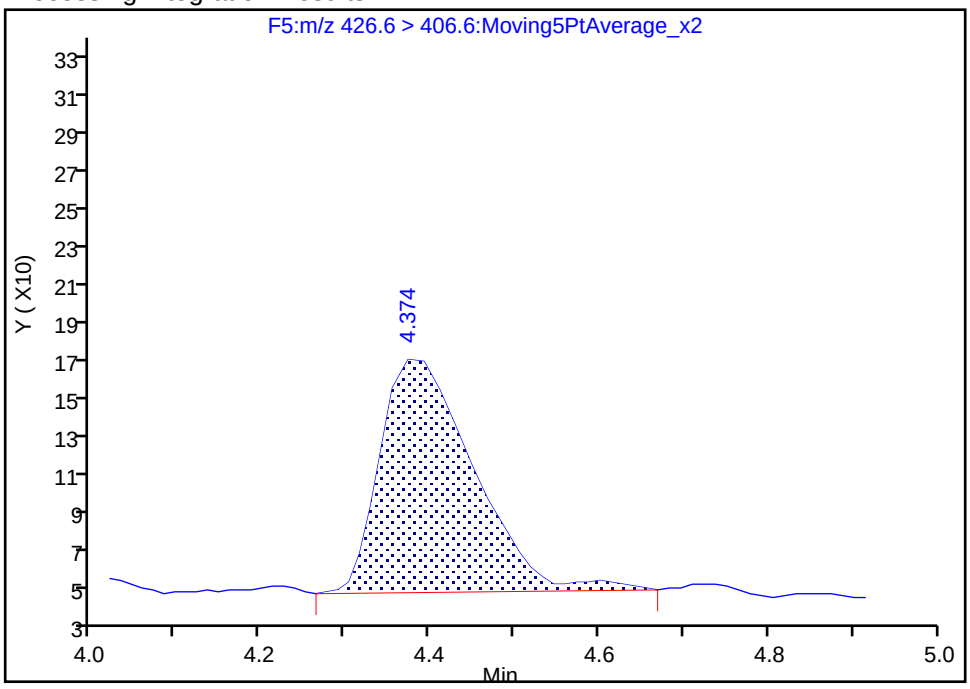
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

15 Sodium 1H,1H,2H,2H-perfluorooctane sulfonate, CAS: 27619-97-2

Signal: 1

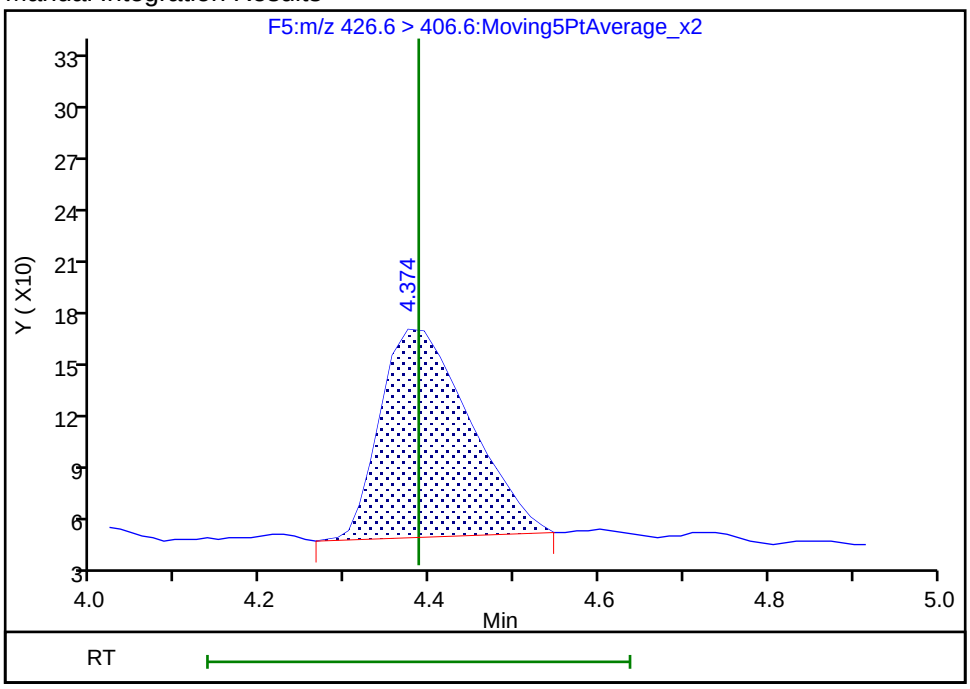
Processing Integration Results

RT: 4.37
Area: 943
Amount: 0.912707
Amount Units: ng/ml



Manual Integration Results

RT: 4.37
Area: 888
Amount: 0.654016
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:17:00
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

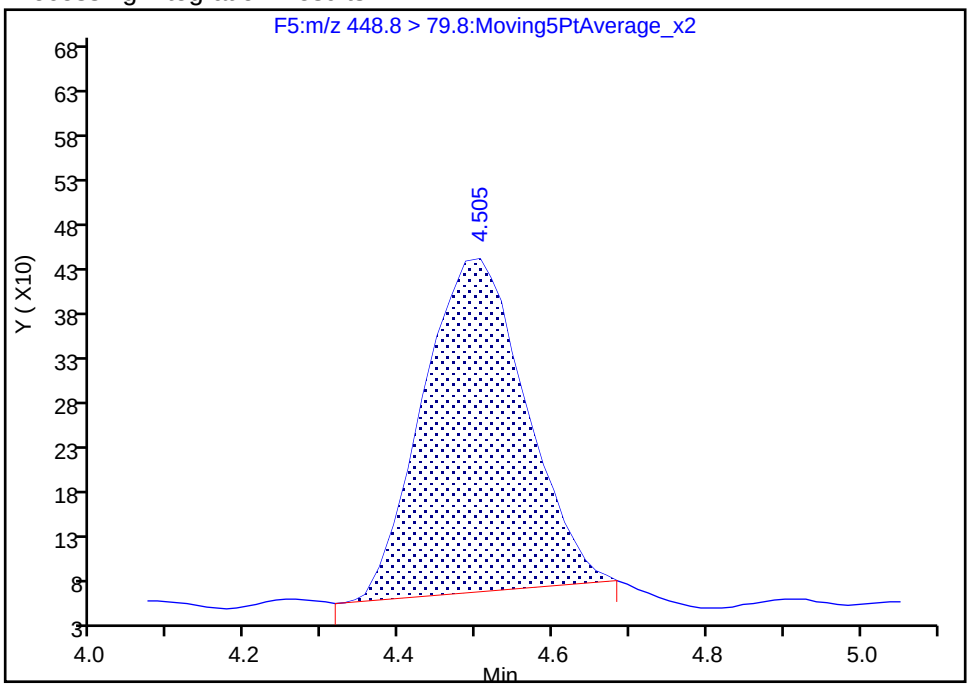
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

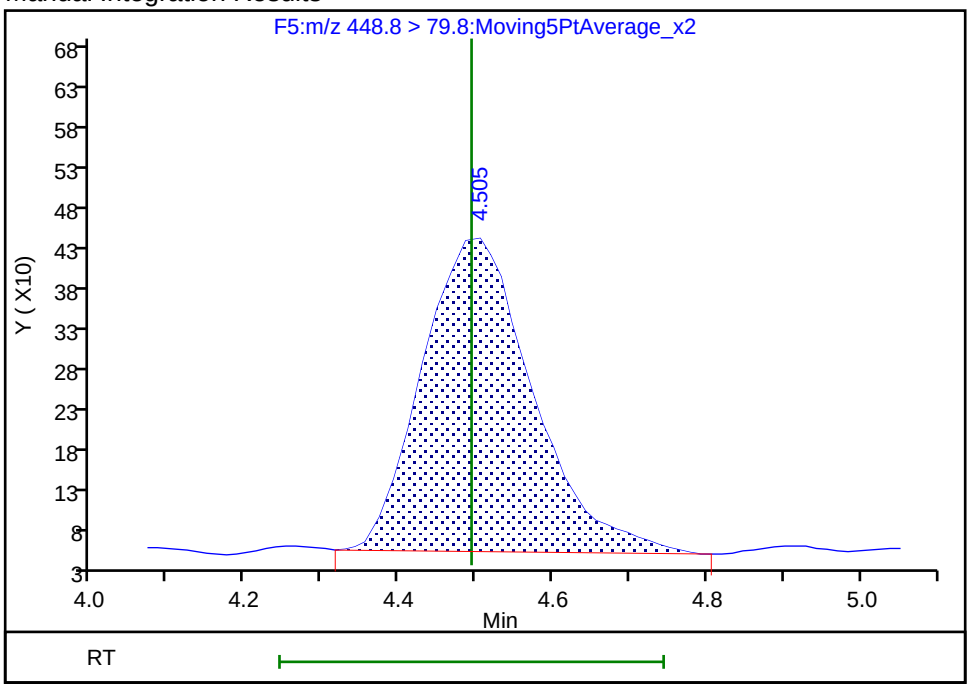
Processing Integration Results

RT: 4.51
Area: 3499
Amount: 1.091436
Amount Units: ng/ml



Manual Integration Results

RT: 4.51
Area: 3910
Amount: 1.322849
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:17:10
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

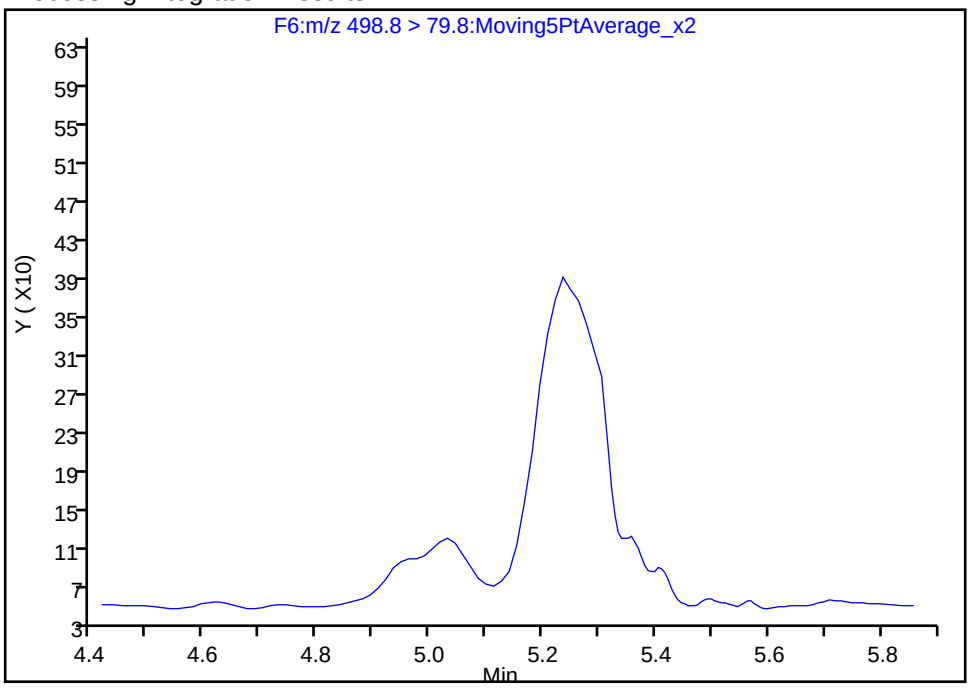
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

20 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

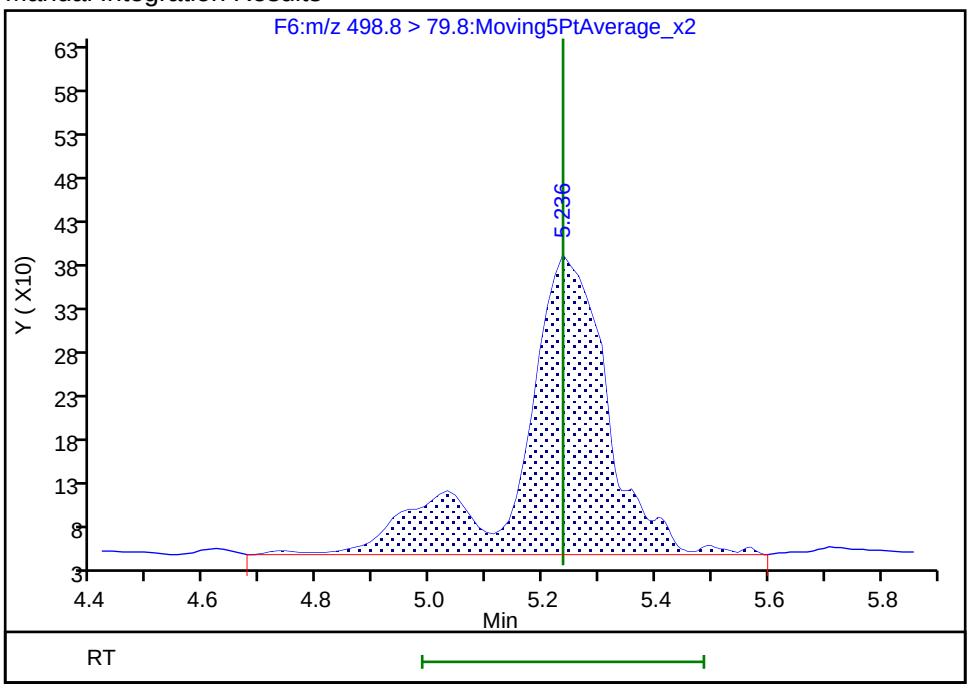
Not Detected
Expected RT: 5.24

Processing Integration Results



Manual Integration Results

RT: 5.24
Area: 3647
Amount: 0.965951
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:16:00
Audit Action: Manually Integrated Audit Reason: Missed Peak

TestAmerica Burlington

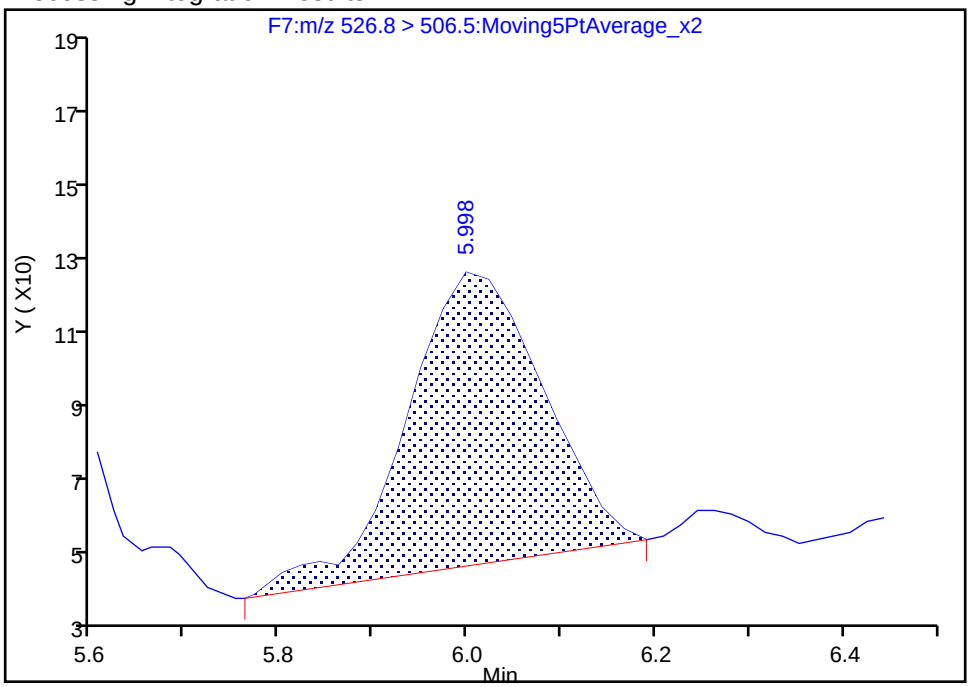
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

24 Sodium 1H,1H,2H,2H-perfluorodecane sulfonate, CAS: 39108-34-4

Signal: 1

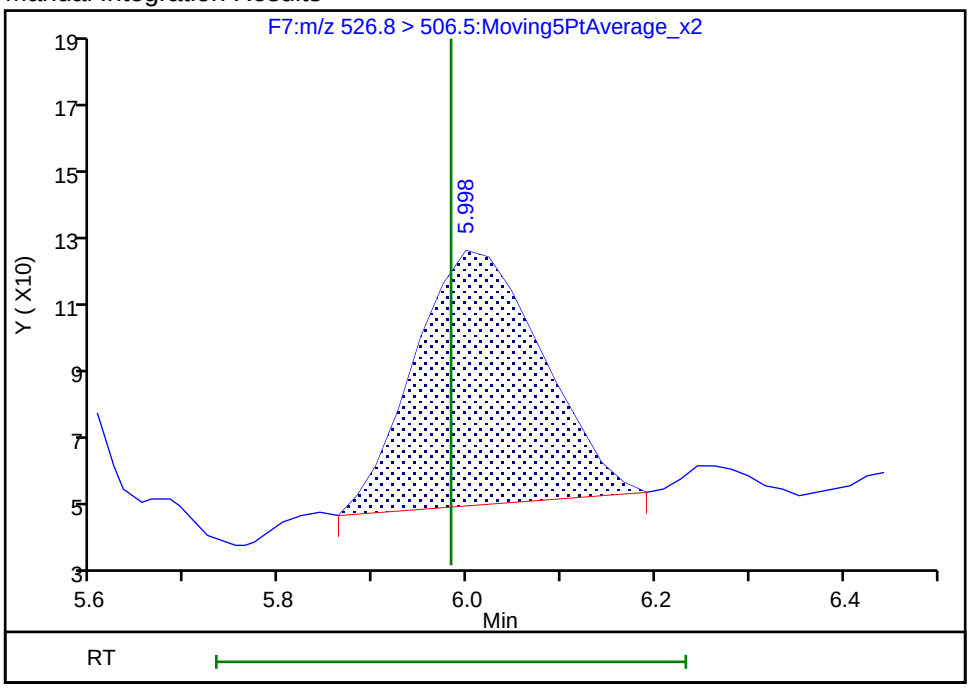
Processing Integration Results

RT: 6.00
Area: 807
Amount: 0.979664
Amount Units: ng/ml



Manual Integration Results

RT: 6.00
Area: 726
Amount: 0.745662
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:17:22
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington

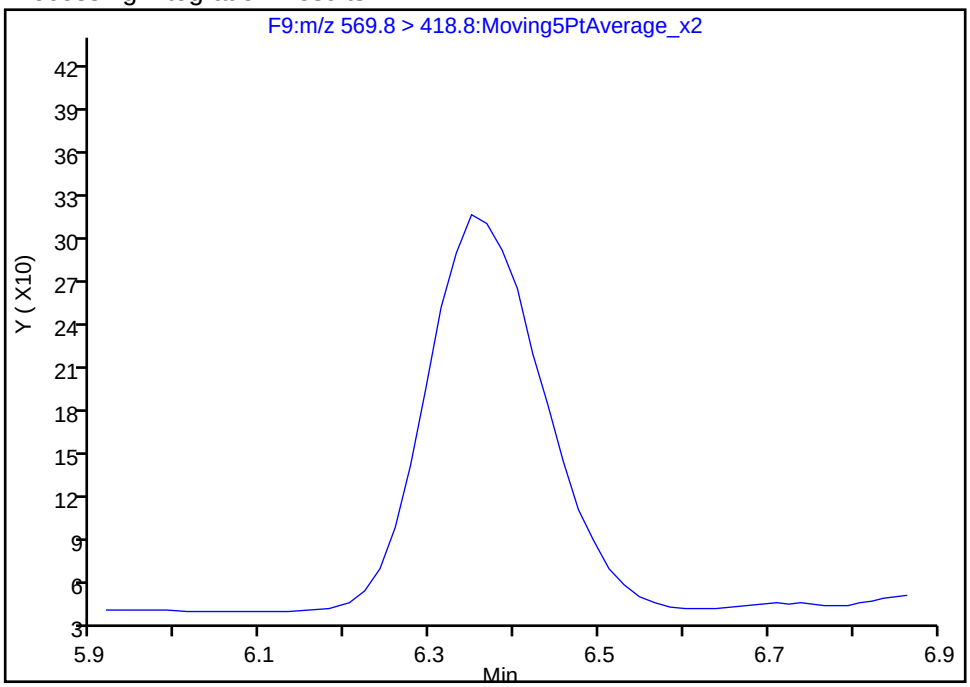
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F9:MRM

28 N-methyl perfluorooctane sulfonamidoacetic a, CAS: 2355-31-9

Signal: 1

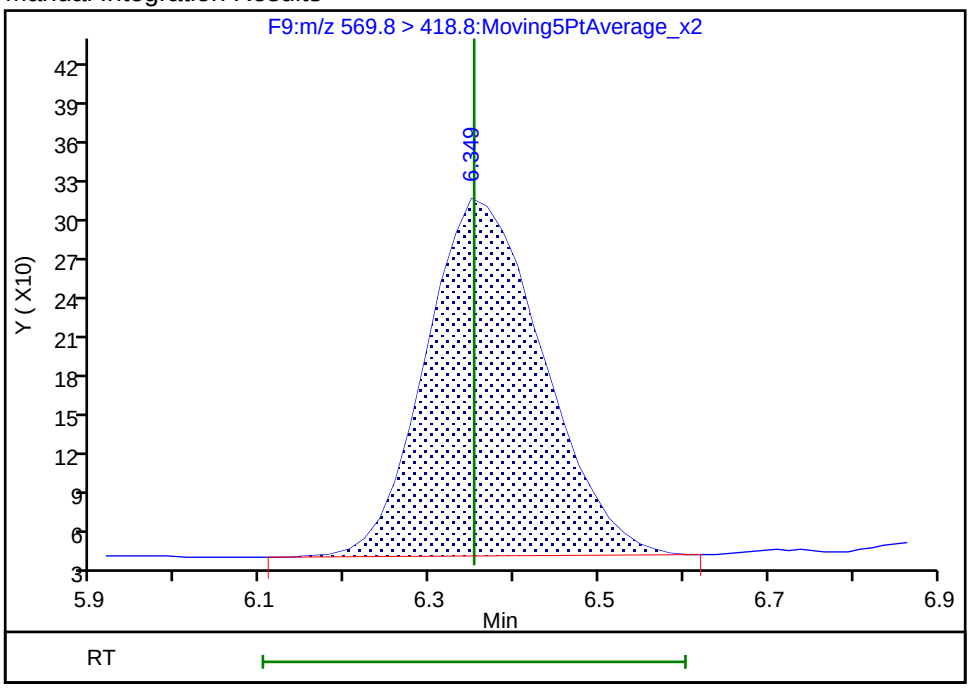
Not Detected
Expected RT: 6.35

Processing Integration Results



Manual Integration Results

RT: 6.35
Area: 2580
Amount: 1.257228
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:16:09
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

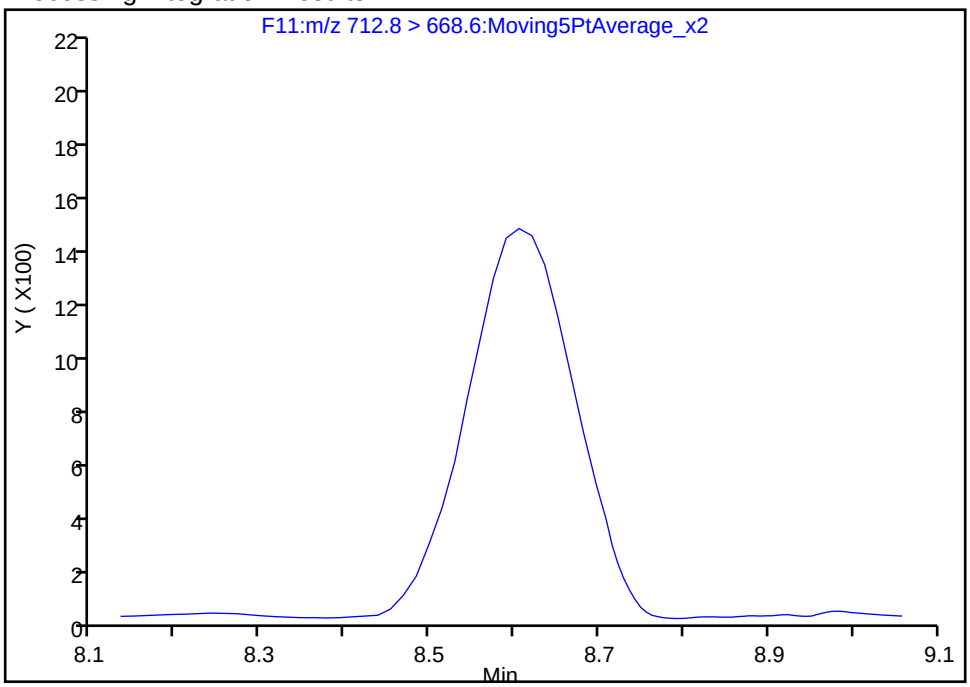
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

44 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

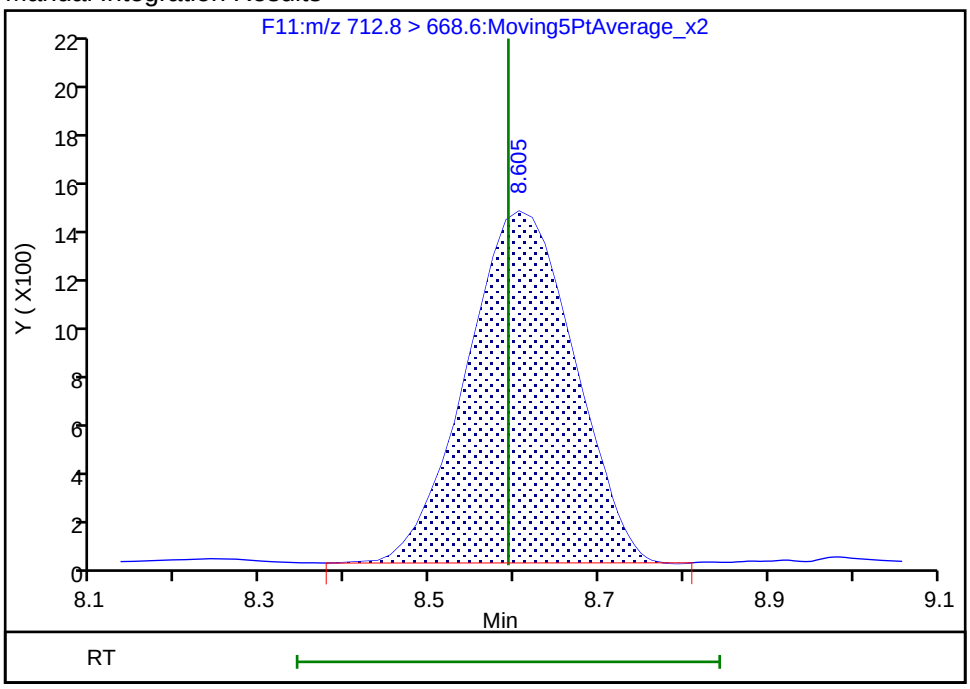
Not Detected
Expected RT: 8.59

Processing Integration Results



Manual Integration Results

RT: 8.61
Area: 12827
Amount: 1.061743
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:16:16
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d

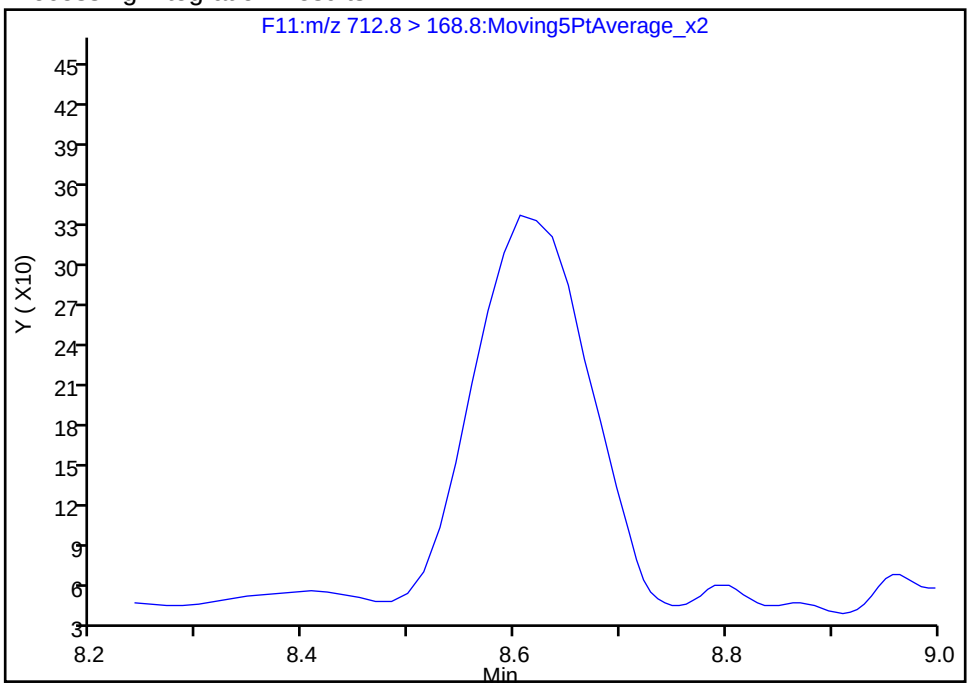
Injection Date:	06-Jun-2018 18:01:31	Instrument ID:	LC410		
Lims ID:	IC				
Client ID:					
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	6
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F11:MRM		

44 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

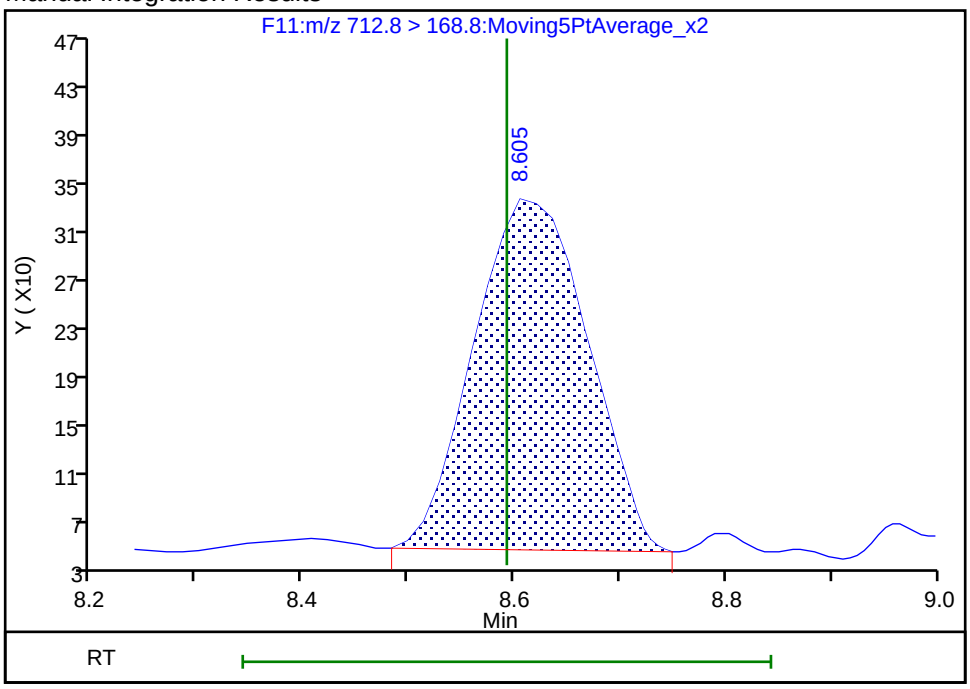
Not Detected
Expected RT: 8.59

Processing Integration Results



Manual Integration Results

RT: 8.61
Area: 2163
Amount: 1.061743
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:16:19
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

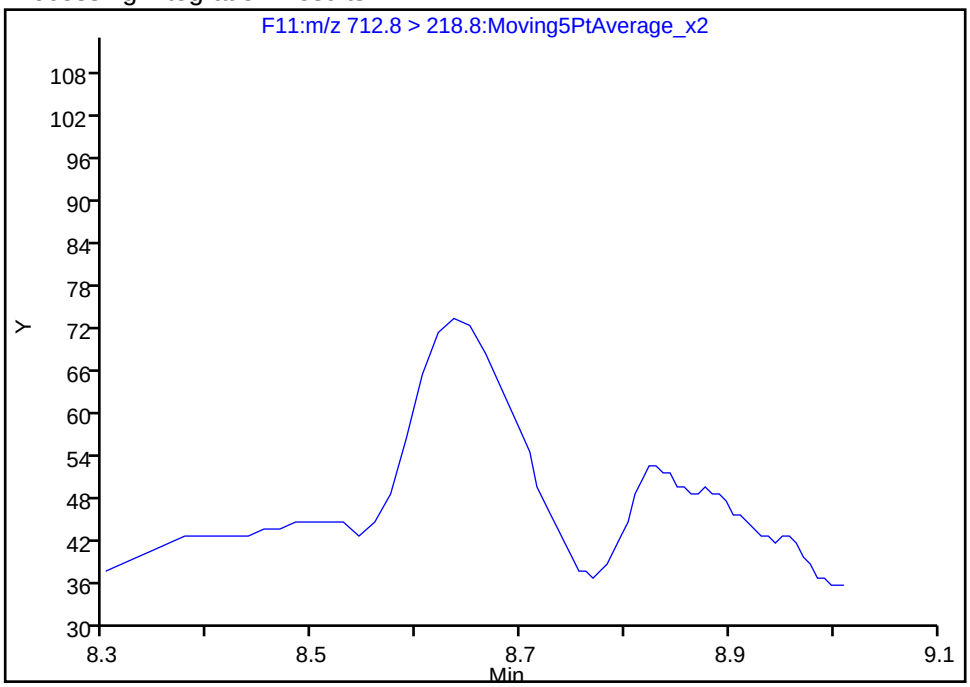
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A06.d
Injection Date: 06-Jun-2018 18:01:31 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

44 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 3

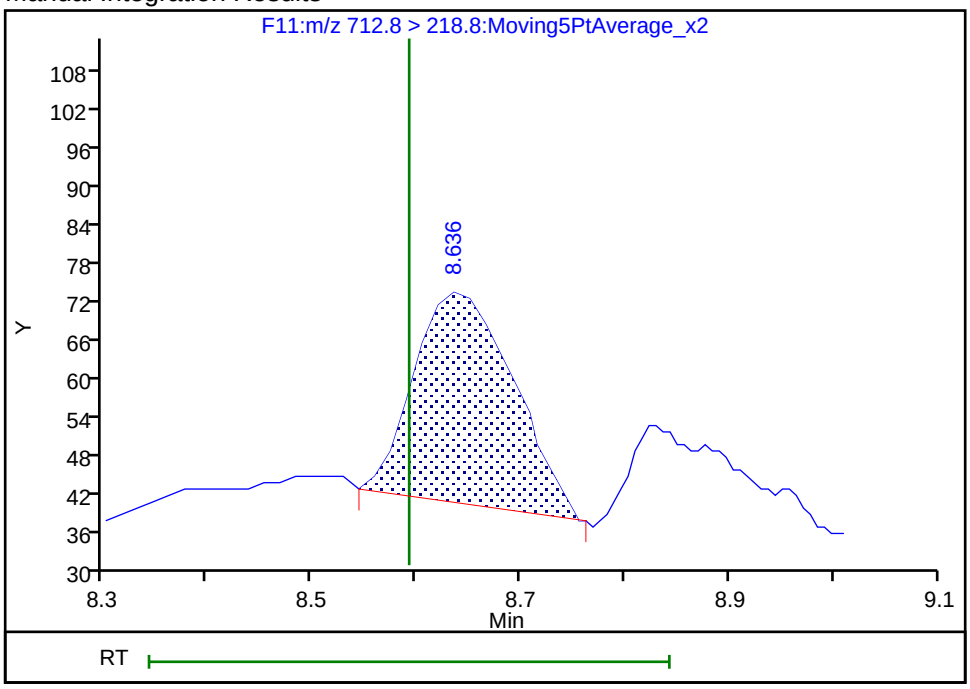
Not Detected
Expected RT: 8.59

Processing Integration Results



Manual Integration Results

RT: 8.64
Area: 220
Amount: 1.061743
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:16:22
Audit Action: Manually Integrated Audit Reason: Missed Peak

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 06-Jun-2018 18:17:37 ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030801-007 IC 2
Misc. Info.: PFAS21 060618A ICAL
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 08-Jun-2018 09:03:18 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: chirgwinb Date: 08-Jun-2018 09:03:18

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 2 13C4 PFBA										
216.9 > 171.5	2.343	2.340	0.003	1.000	232354	52.2		104	294	
1 Perfluorobutyric acid										M
212.9 > 168.9	2.338	2.338	0.0	0.998	6138	1.90		95.2	48.0	M
D 3 13C5-PFPeA										
267.7 > 222.6	2.760	2.770	-0.010	1.000	333242	51.0		102	6699	
4 Perfluoropentanoic acid										
262.9 > 218.8	2.760	2.770	-0.010	1.000	16151	2.13		107	38.2	
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.834	2.845	-0.011	1.000	5906	1.56		88.4	68.6	M
D 5 13C3-PFBS										
302.0 > 79.8	2.834	2.845	-0.011	1.000	208538	48.2		104	234	
8 Perfluorohexanoic acid										
312.8 > 268.6	3.214	3.209	0.005	1.004	15816	2.17		109	656	
D 7 13C2 PFHxA										
314.8 > 269.6	3.201	3.211	-0.010	1.000	379512	49.7		99.4	2035	
D 10 13C4-PFHpA										
366.9 > 321.8	3.759	3.759	0.0	1.000	482116	55.0		110	751	
11 Perfluoroheptanoic acid										
362.9 > 318.8	3.759	3.759	0.0	1.000	19553	2.01		101	336	
12 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.815	3.804	0.011	1.006	6351	1.82		100	80.3	M
D 13 18O2 PFHxS										
402.9 > 83.8	3.793	3.800	-0.007	1.000	207237	50.1		106	837	
15 Sodium 1H,1H,2H,2H-perfluorooctane										M
426.6 > 406.6	4.393	4.387	0.006	1.004	2888	2.15		113	84.0	M
D 14 M2-6:2FTS										
428.6 > 408.6	4.374	4.388	-0.014	1.000	57583	49.6		104	962	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 49 13C2-PFOA										
414.9 > 369.8	4.449	4.443	0.006		352375	50.0			2613	
D 17 13C4 PFOA										
416.9 > 371.8	4.449	4.446	0.003	1.000	389557	58.1		116	897	
16 Perfluorooctanoic acid										
412.9 > 368.8	4.449	4.449	0.0	1.000	14847	1.83		91.3	241	
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.505	4.491	0.014	0.863	4771	1.25		65.7	83.4	M
D 21 13C5 PFNA										
467.8 > 422.8	5.209	5.209	0.0	1.000	479444	54.3		109	1067	
19 Perfluorononanoic acid										
462.8 > 418.8	5.209	5.206	0.003	1.000	16917	1.96		98.1	155	
20 Perfluorooctane sulfonic acid										
498.8 > 79.8	5.236	5.236	0.0	1.003	9121	1.81		97.4	115	
D 22 13C4 PFOS										
502.8 > 79.8	5.222	5.229	-0.007	1.000	223075	49.8		104	2032	
D 23 M2-8:2FTS										
528.8 > 508.8	5.974	5.974	0.0	1.000	113621	47.3		98.8	795	
24 Sodium 1H,1H,2H,2H-perfluorodecane										
526.8 > 506.5	5.974	5.982	-0.008	1.000	3222	1.90		99.0	25.5	
D 25 13C2 PFDA										
514.9 > 469.5	5.998	5.998	0.0	1.000	694712	54.0		108	3249	
26 Perfluorodecanoic acid										
512.9 > 468.5	5.998	6.002	-0.004	1.000	27477	2.07		104	280	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.331	6.346	-0.015	1.000	140494	51.8		104	1475	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.349	6.352	-0.003	1.003	6246	2.09		104	44.0	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.706	6.711	-0.005	1.000	131307	56.6		113	1057	
30 N-ethyl perfluorooctane sulfonamid										M
583.9 > 418.8	6.734	6.727	0.007	1.004	5666	2.21		110	121	M
31 Perfluorodecane Sulfonic acid										M
598.8 > 79.8	6.748	6.748	0.0	1.292	8626	1.81		93.6	173	M
D 33 13C2 PFUnA										
564.8 > 519.8	6.748	6.755	-0.007	1.000	691628	58.8		118	2096	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.762	6.758	0.004	1.002	30803	2.06		103	327	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	6.931	6.931	0.0	1.000	16062	1.78		88.9	193	
D 35 13C8 FOSA										
505.8 > 77.8	6.931	6.933	-0.002	1.000	525681	53.1		106	12042	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.429	7.429	0.0	1.000	25653	1.72		85.8	347	
D 36 13C2 PFDoA										
614.8 > 569.6	7.429	7.433	-0.004	1.000	816892	57.5		115	2025	
40 Perfluorotridecanoic acid										
662.8 > 618.6	8.063	8.050	0.013	1.085	30584	1.90		95.0	499	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2-PFTeDA										
714.8 > 669.6	8.590	8.590	0.0	1.000	847687	58.8		118	1216	
44 Perfluorotetradecanoic acid										
712.8 > 668.6	8.590	8.593	-0.003	1.000	30814	1.85		92.3	413	
712.8 > 168.8	8.621	8.593	0.028	1.004	6232		4.94(0.00-0.00)	92.3	71.5	
712.8 > 218.8	8.590	8.593	-0.003	1.000	2169		14.21(0.00-0.00)	92.3	28.2	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFAS21-L2_00003 Amount Added: 100.00 Units: uL

Report Date: 08-Jun-2018 09:03:20 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d

Injection Date: 06-Jun-2018 18:17:37 Instrument ID: LC410

Lims ID: IC

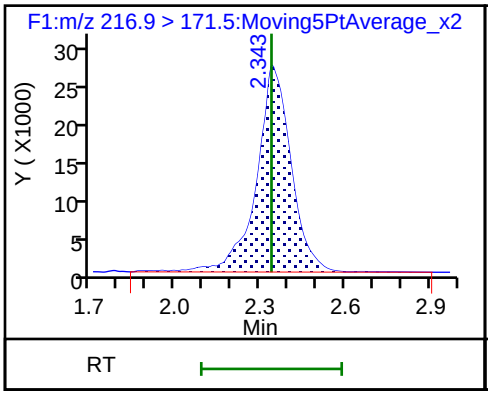
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 7

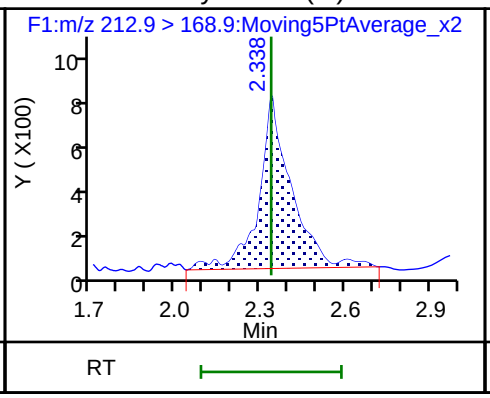
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

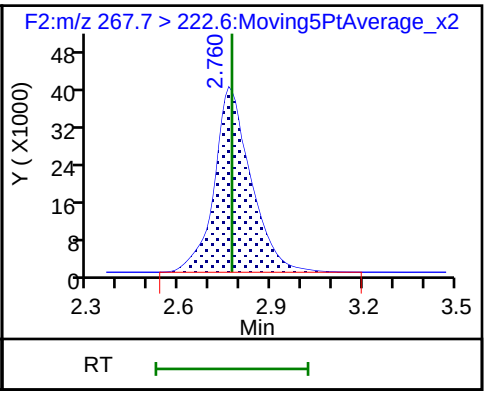
D 2 13C4 PFBA



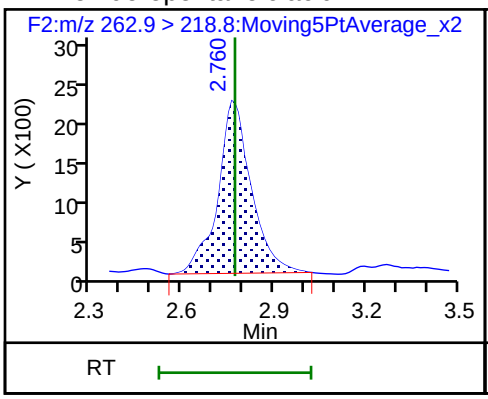
1 Perfluorobutyric acid (M)



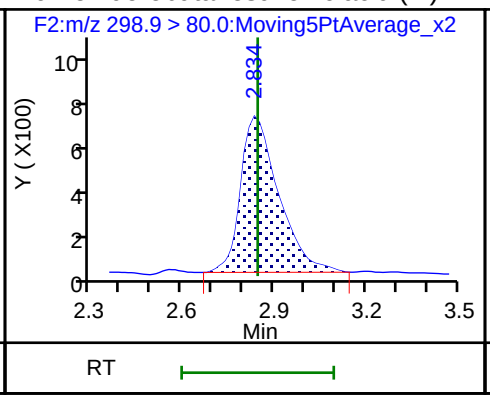
D 3 13C5-PFPeA



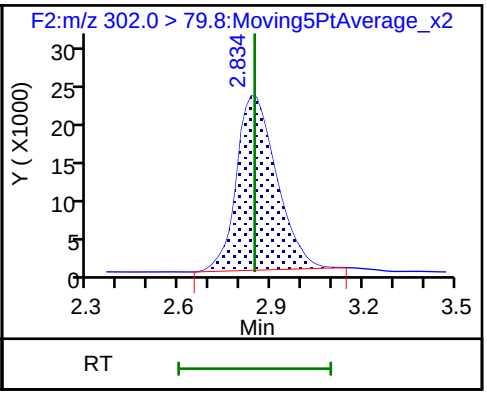
4 Perfluoropentanoic acid



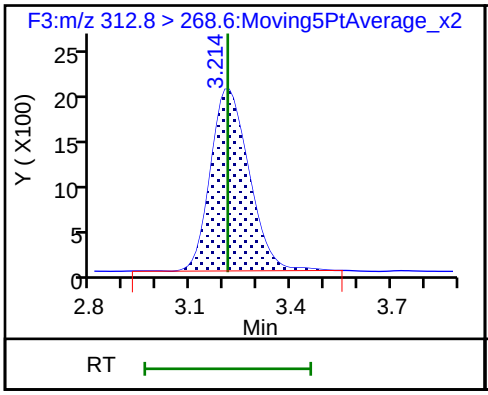
6 Perfluorobutanesulfonic acid (M)



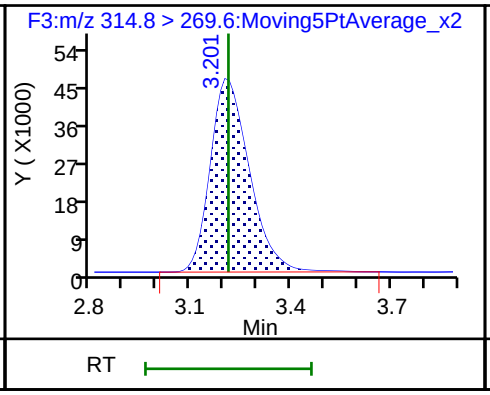
D 5 13C3-PFBS



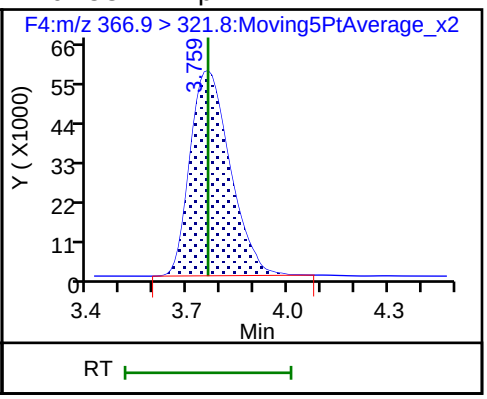
8 Perfluorohexanoic acid



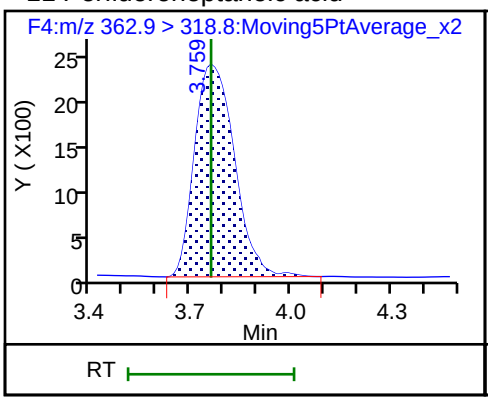
D 7 13C2 PFHxA



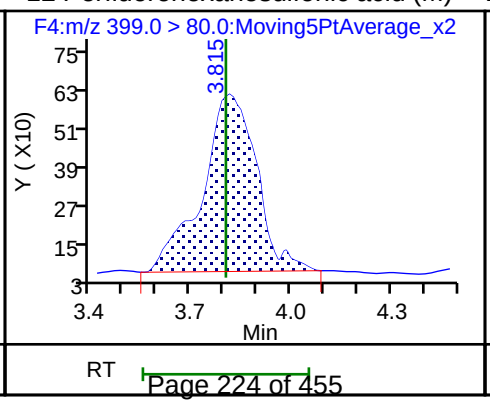
D 10 13C4-PFHpA



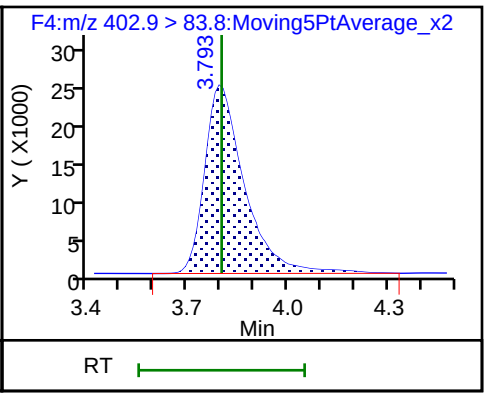
11 Perfluoroheptanoic acid



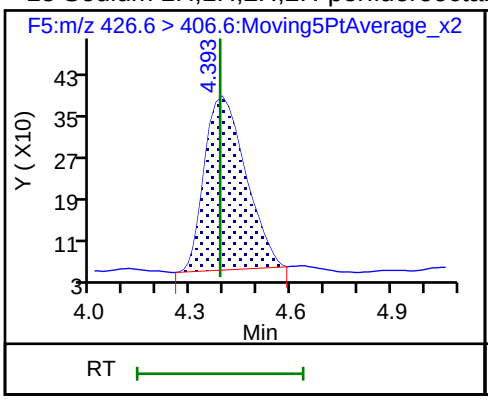
12 Perfluorohexanesulfonic acid (M)



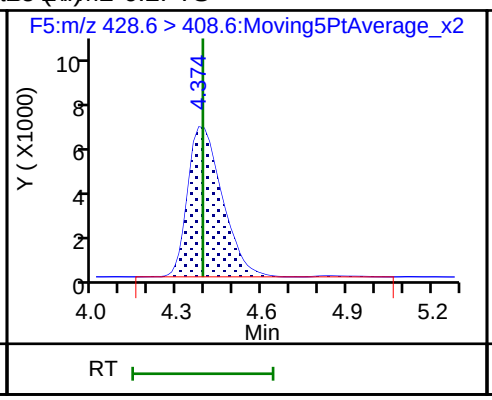
D 13 18O2 PFHxS



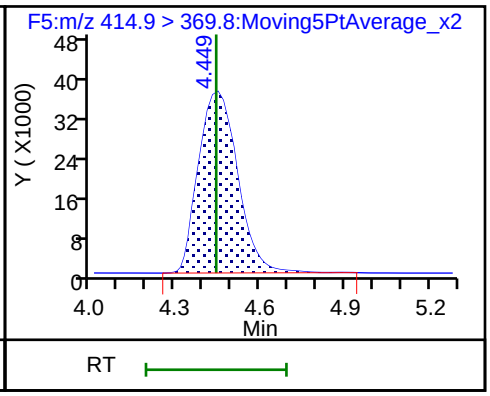
15 Sodium 1H,1H,2H,2H-perfluorooctane (M)



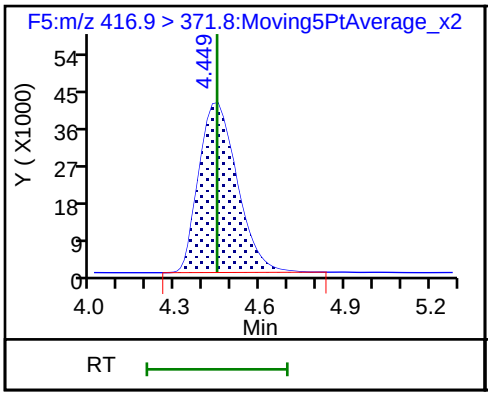
D 14 M2-6:2FTS



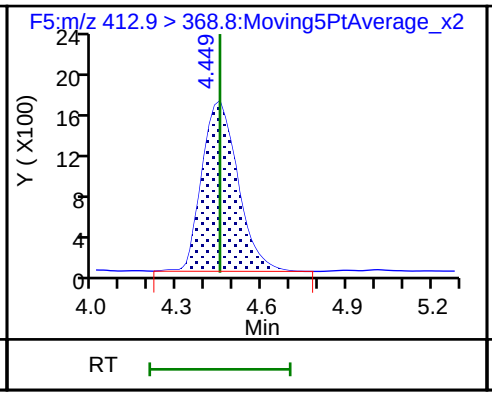
* 49 13C2-PFOA



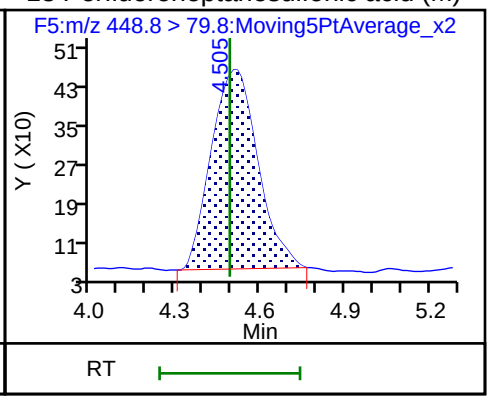
D 17 13C4 PFOA



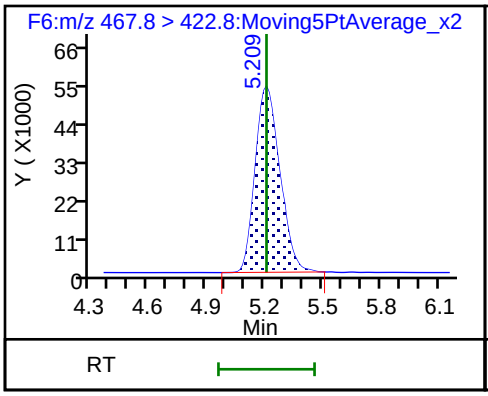
16 Perfluorooctanoic acid



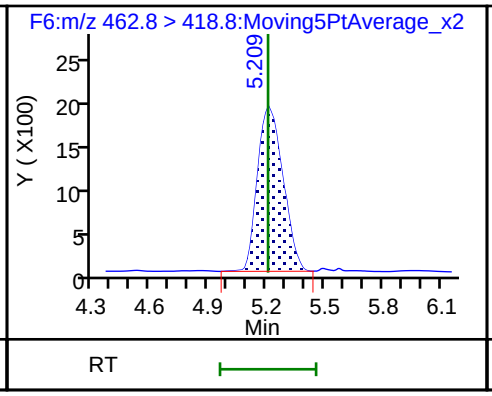
18 Perfluoroheptanesulfonic acid (M)



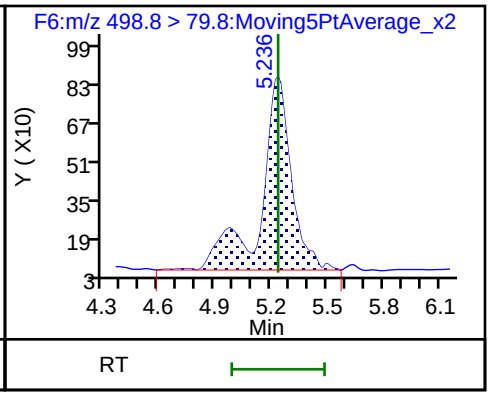
D 21 13C5 PFNA



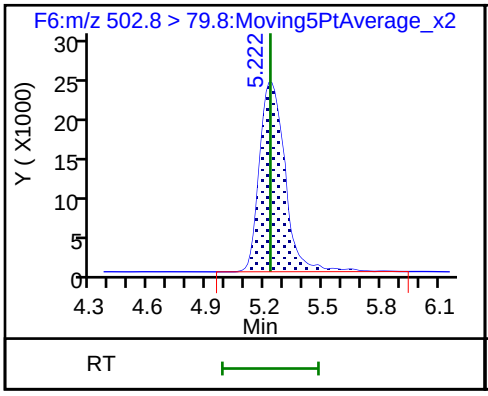
19 Perfluorononanoic acid



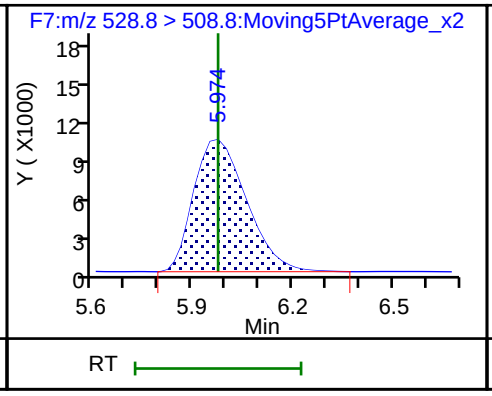
20 Perfluorooctane sulfonic acid



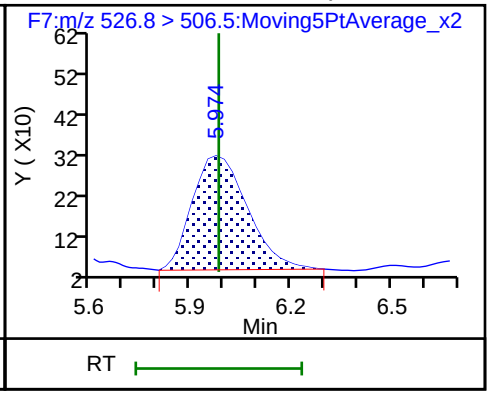
D 22 13C4 PFOS



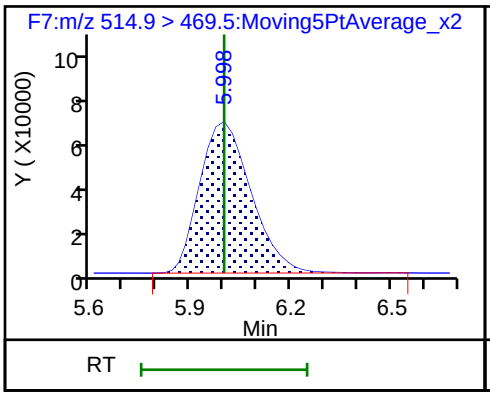
D 23 M2-8:2FTS



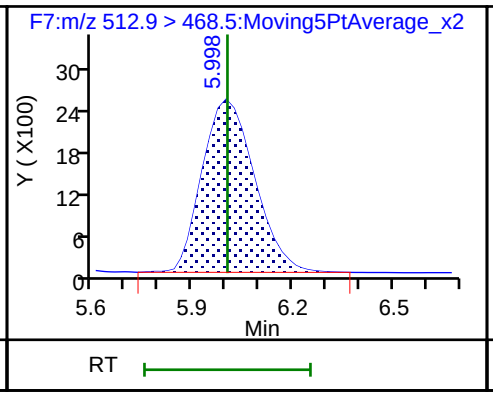
24 Sodium 1H,1H,2H,2H-perfluorodecane



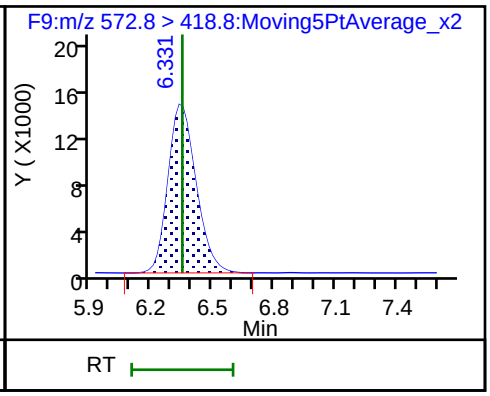
D 25 13C2 PFDA



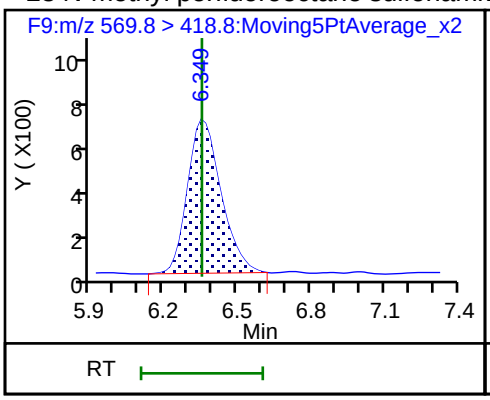
26 Perfluorodecanoic acid



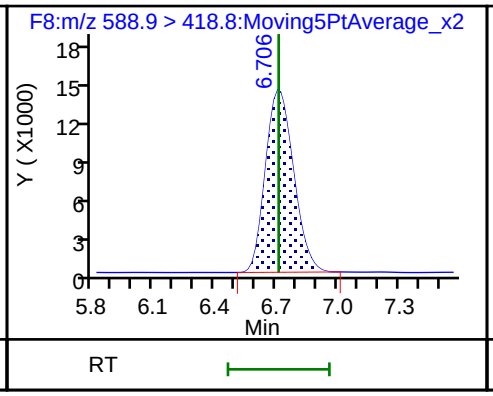
D 27 d3-NMeFOSAA



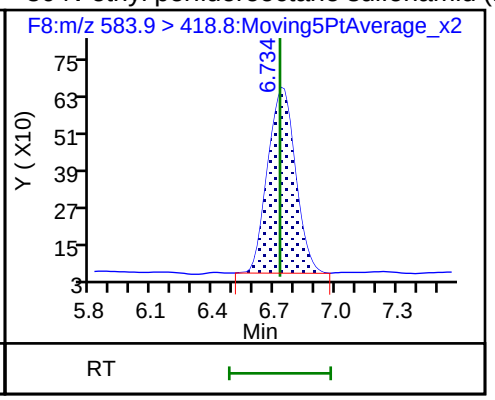
28 N-methyl perfluorooctane sulfonami



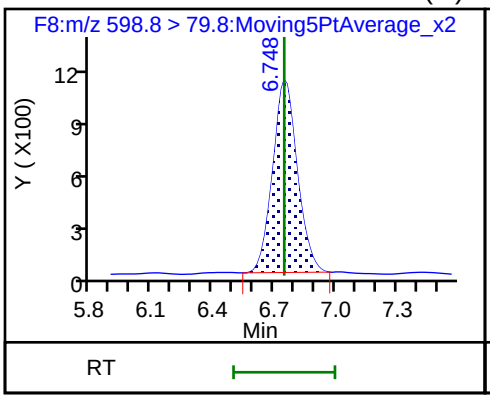
D 29 d5-NEtFOSAA



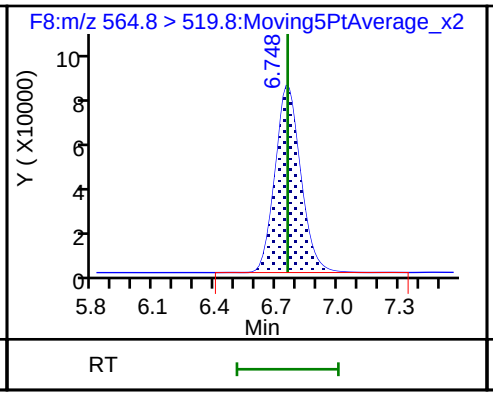
30 N-ethyl perfluorooctane sulfonamid (M)



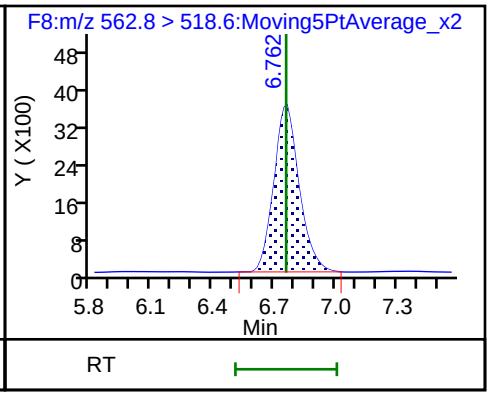
31 Perfluorodecane Sulfonic acid (M)



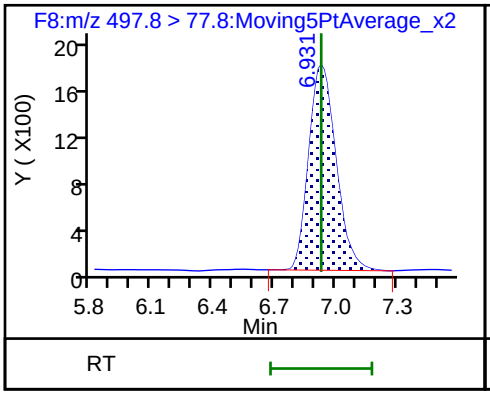
D 33 13C2 PFUnA



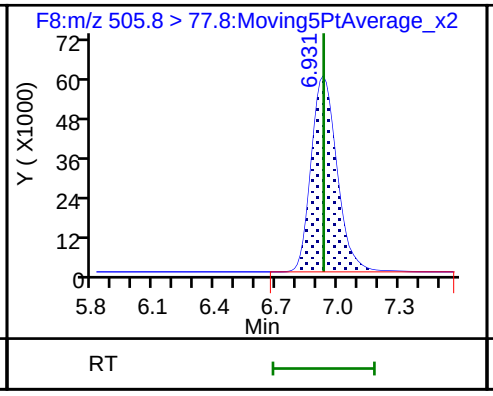
32 Perfluoroundecanoic acid



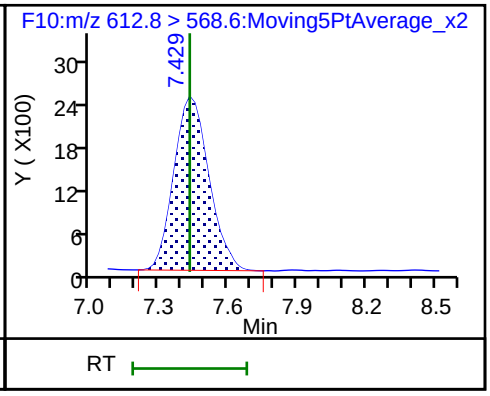
34 Perfluorooctane Sulfonamide



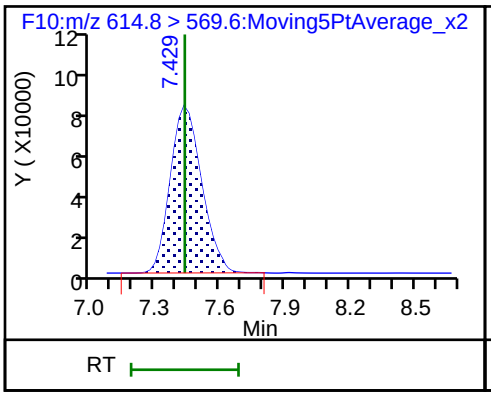
D 35 13C8 FOSA



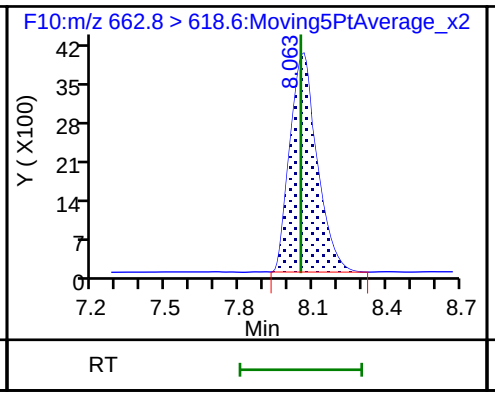
37 Perfluorododecanoic acid



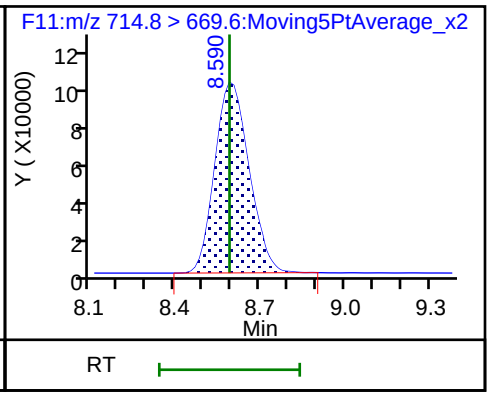
D 36 13C2 PFDoA



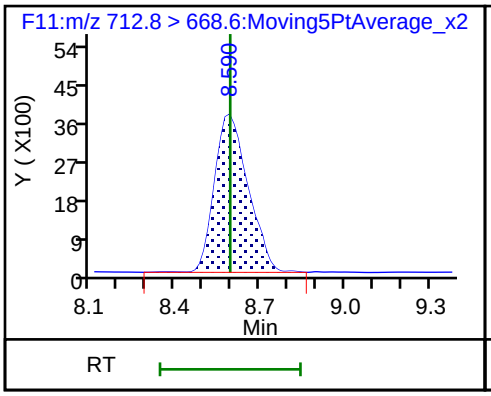
40 Perfluorotridecanoic acid



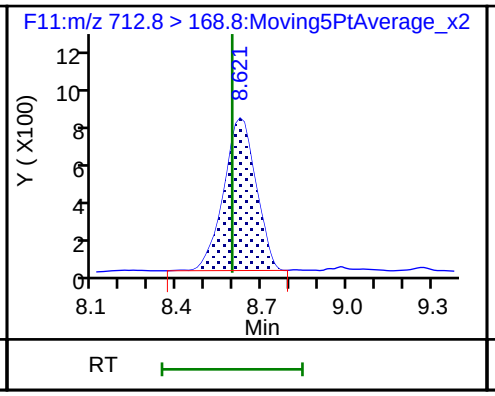
D 43 13C2-PFTeDA



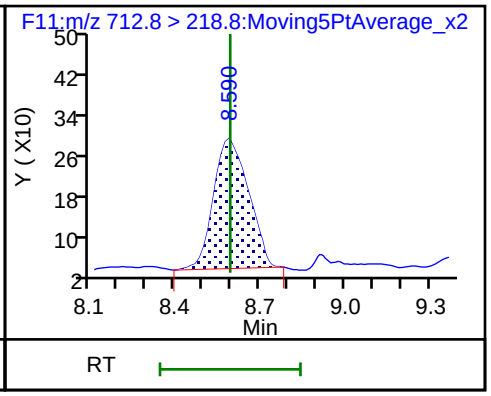
44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

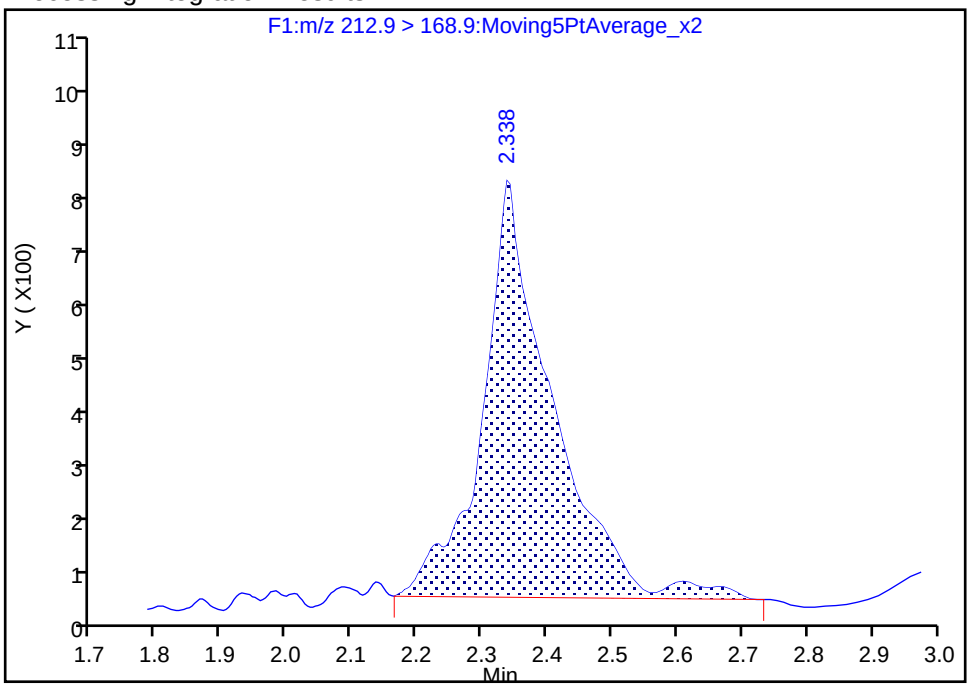
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d
Injection Date: 06-Jun-2018 18:17:37 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

1 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

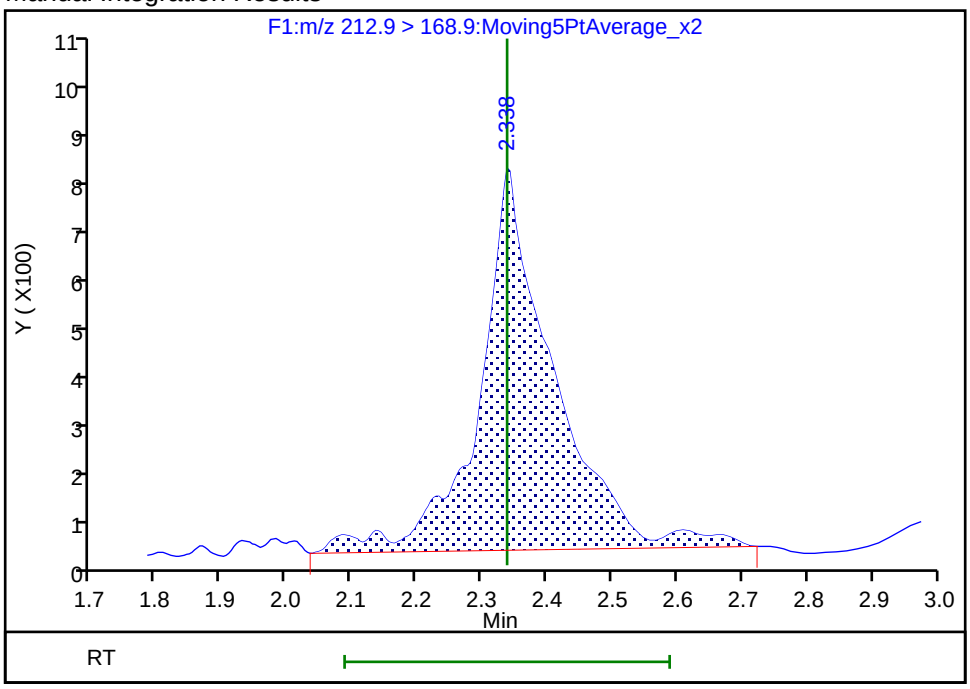
Processing Integration Results

RT: 2.34
Area: 5653
Amount: 1.746194
Amount Units: ng/ml



Manual Integration Results

RT: 2.34
Area: 6138
Amount: 1.904994
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:23:13
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

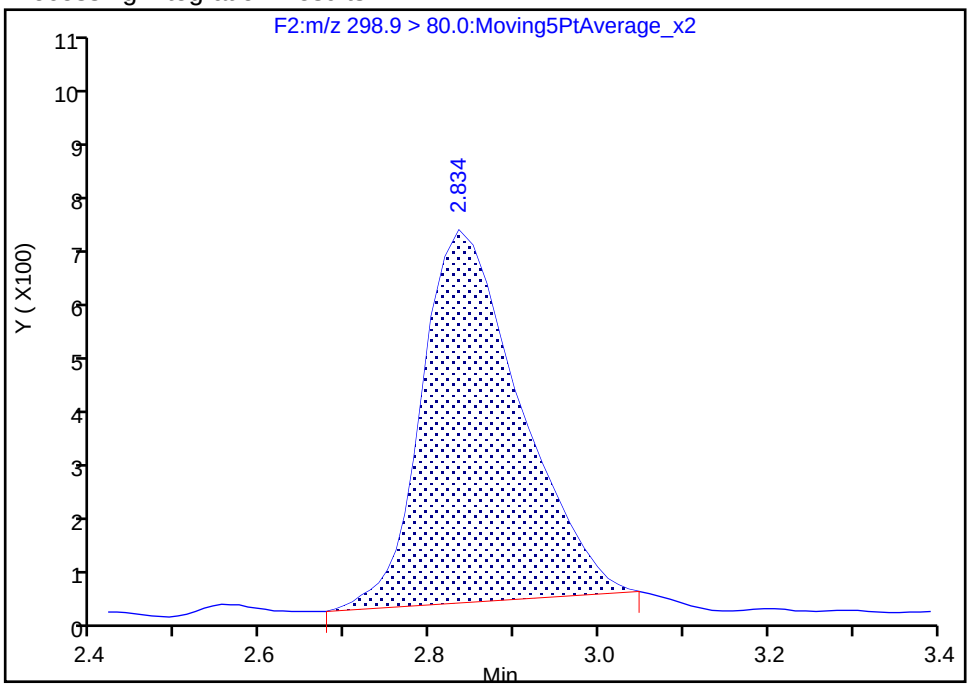
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d
Injection Date: 06-Jun-2018 18:17:37 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

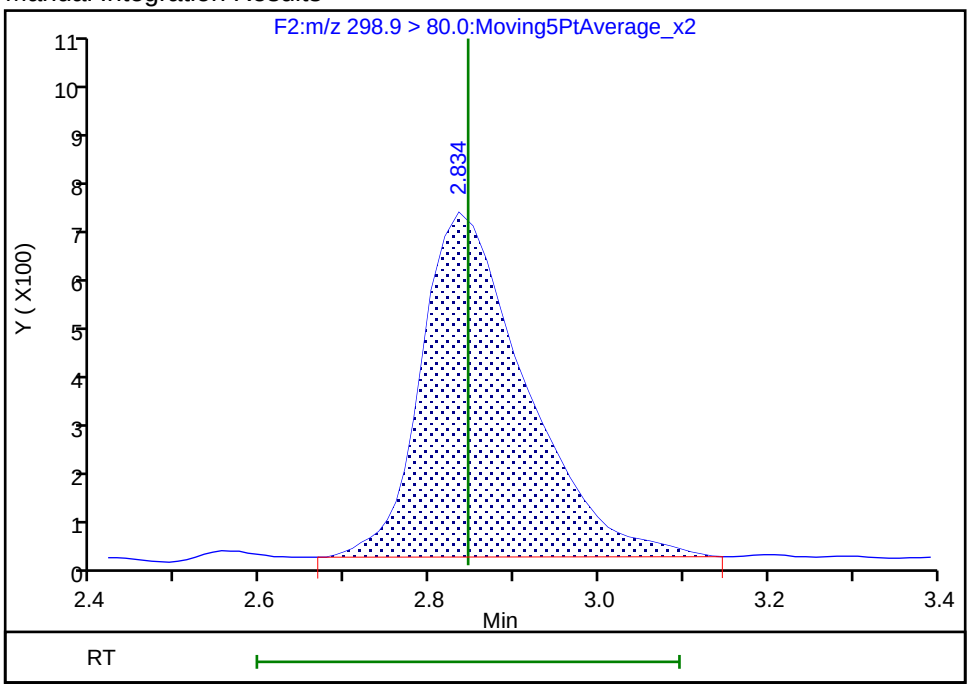
Processing Integration Results

RT: 2.83
Area: 5422
Amount: 1.458225
Amount Units: ng/ml



Manual Integration Results

RT: 2.83
Area: 5906
Amount: 1.563096
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:21:31
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

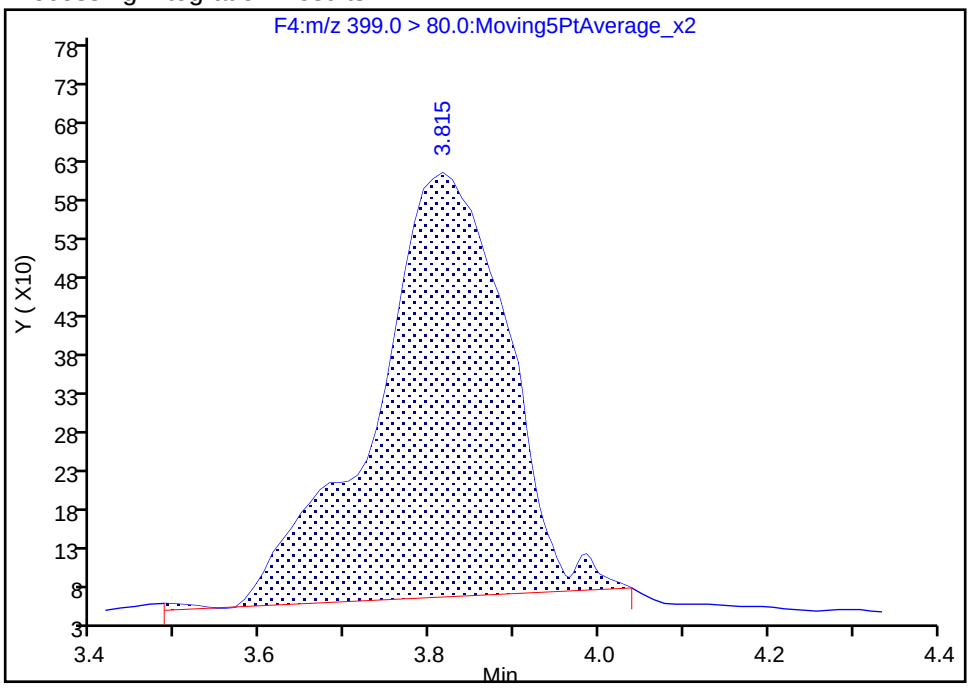
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d
Injection Date: 06-Jun-2018 18:17:37 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

12 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

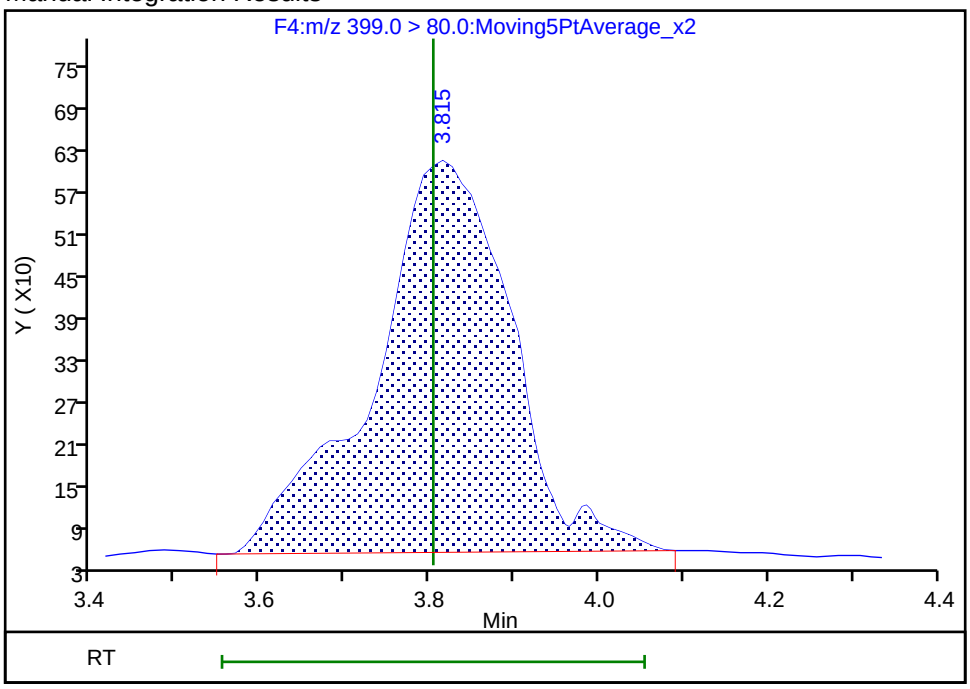
Processing Integration Results

RT: 3.82
Area: 6025
Amount: 1.688912
Amount Units: ng/ml



Manual Integration Results

RT: 3.82
Area: 6351
Amount: 1.821626
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:21:40
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

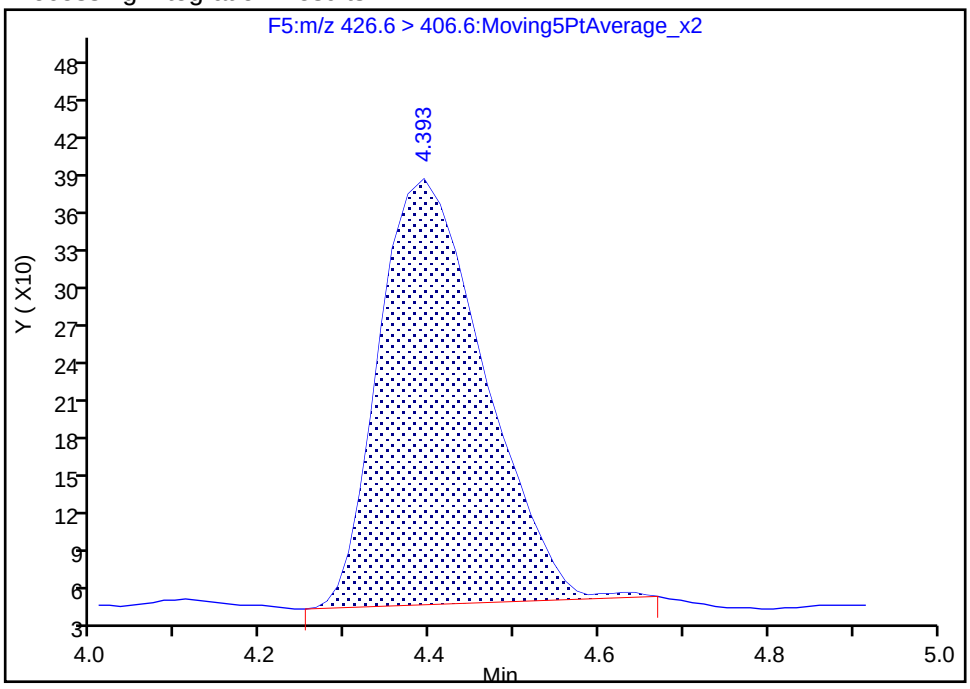
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d
Injection Date: 06-Jun-2018 18:17:37 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

15 Sodium 1H,1H,2H,2H-perfluorooctane sulfonate, CAS: 27619-97-2

Signal: 1

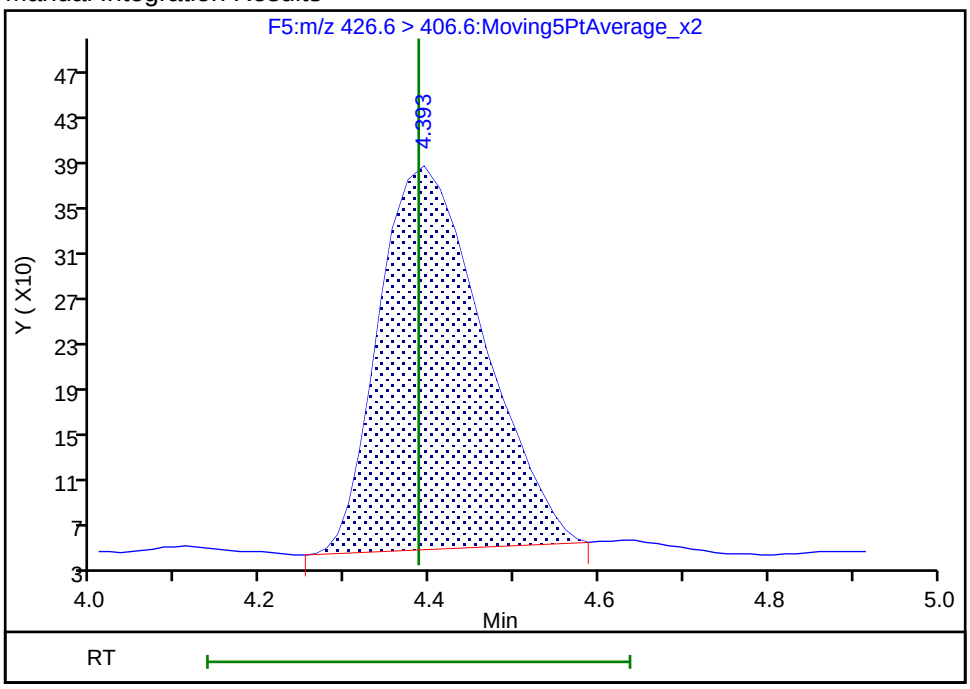
Processing Integration Results

RT: 4.39
Area: 2932
Amount: 2.101068
Amount Units: ng/ml



Manual Integration Results

RT: 4.39
Area: 2888
Amount: 2.149796
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:21:45
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

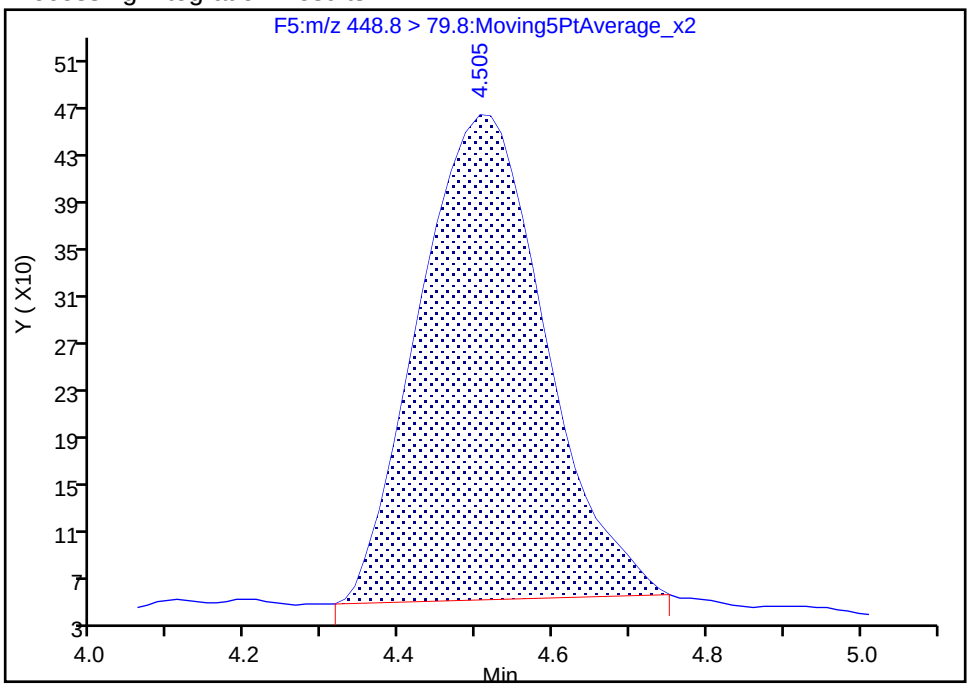
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d
Injection Date: 06-Jun-2018 18:17:37 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

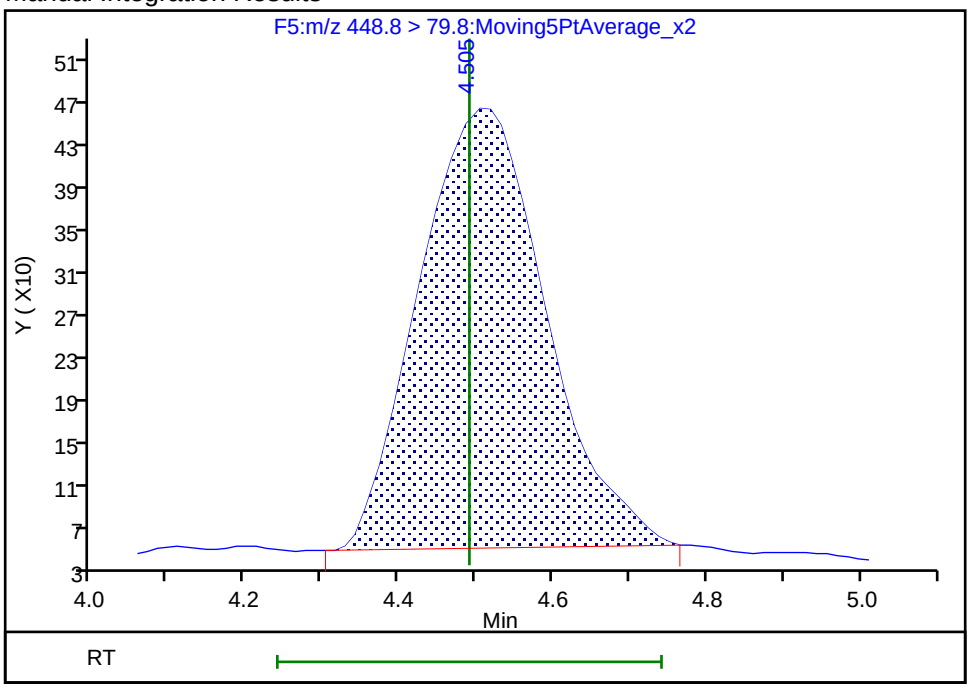
Processing Integration Results

RT: 4.51
Area: 4730
Amount: 0.970558
Amount Units: ng/ml



Manual Integration Results

RT: 4.51
Area: 4771
Amount: 1.251699
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:21:59
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

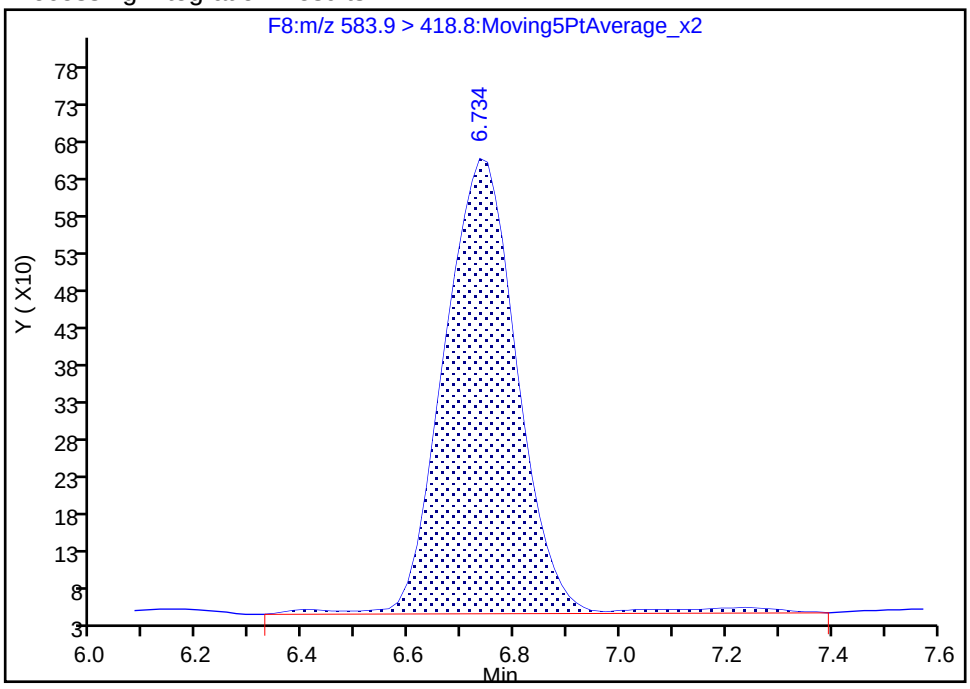
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d
Injection Date: 06-Jun-2018 18:17:37 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

30 N-ethyl perfluorooctane sulfonamidoacetic ac, CAS: 2991-50-6

Signal: 1

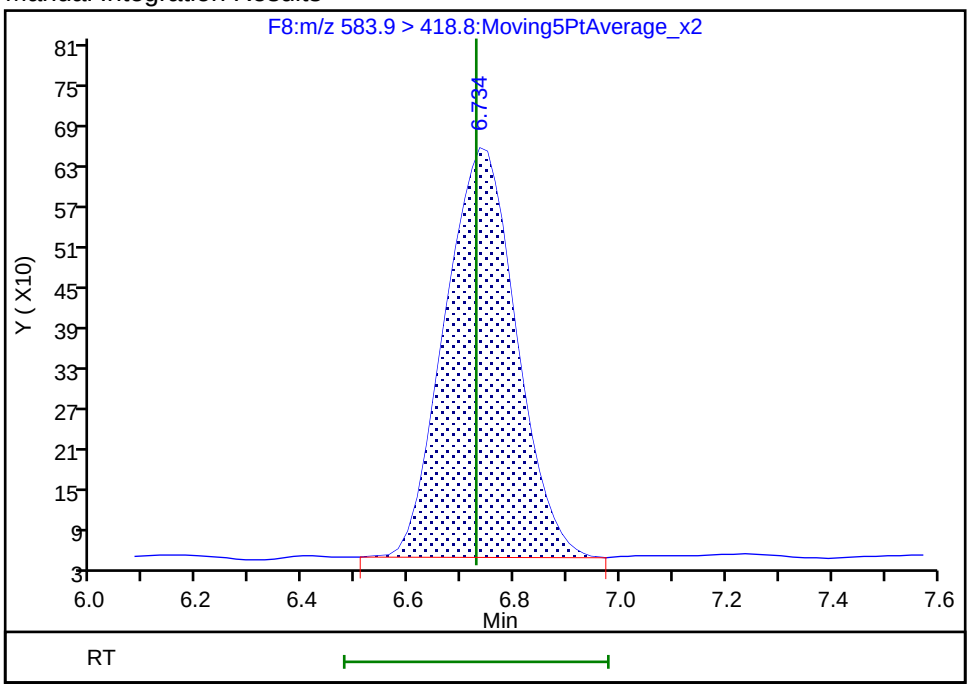
Processing Integration Results

RT: 6.73
Area: 5891
Amount: 2.268877
Amount Units: ng/ml



Manual Integration Results

RT: 6.73
Area: 5666
Amount: 2.206288
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:22:14
Audit Action: Manually Integrated Audit Reason: Missed Peak

TestAmerica Burlington

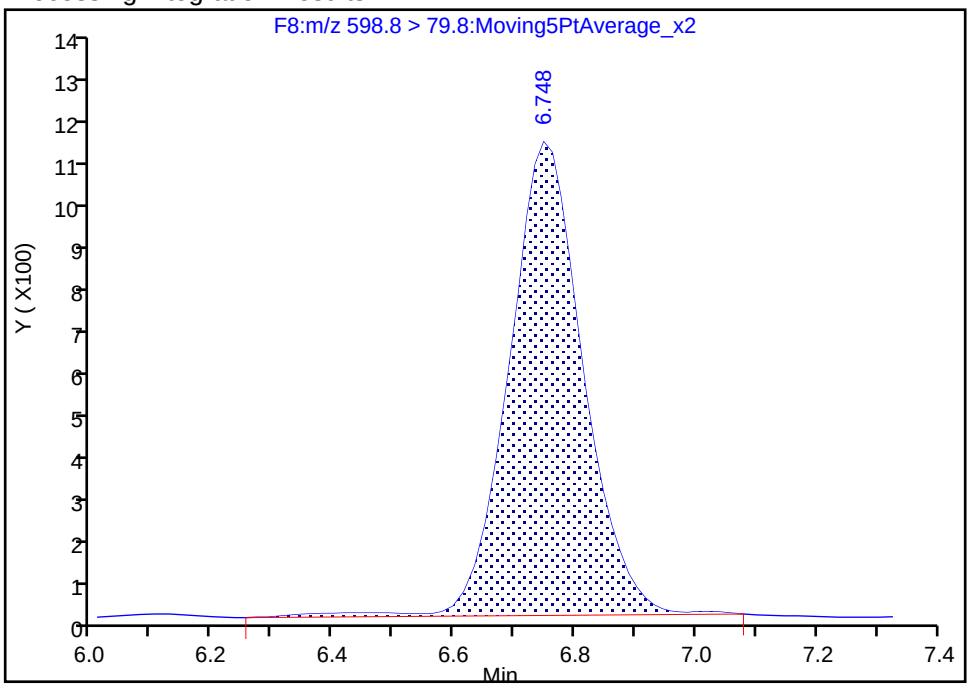
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A07.d
Injection Date: 06-Jun-2018 18:17:37 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 7
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

31 Perfluorodecane Sulfonic acid, CAS: 335-77-3

Signal: 1

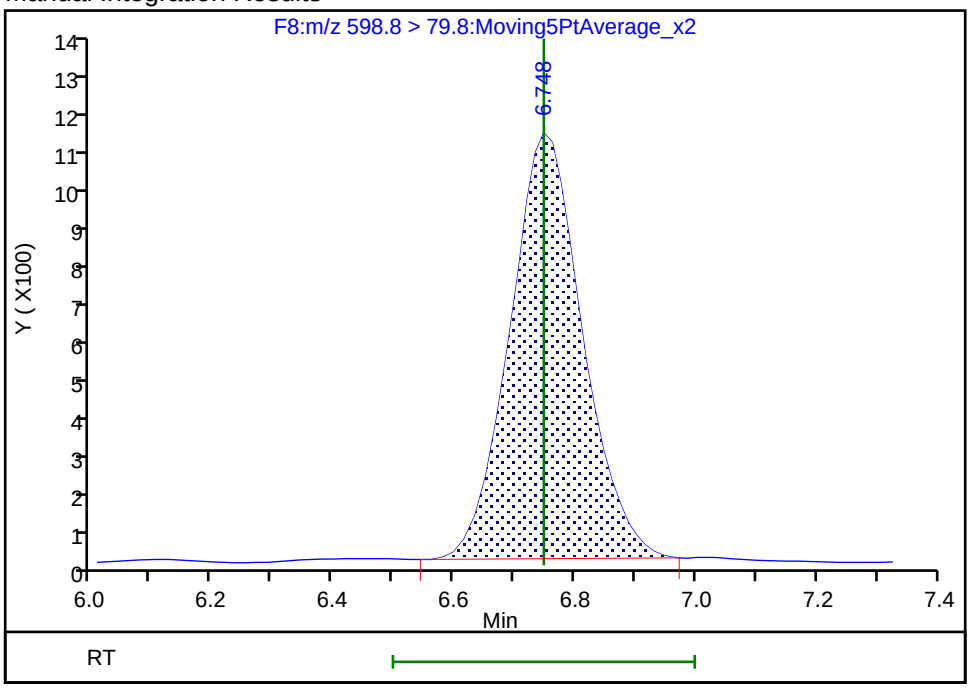
Processing Integration Results

RT: 6.75
Area: 8882
Amount: 1.956622
Amount Units: ng/ml



Manual Integration Results

RT: 6.75
Area: 8626
Amount: 1.805423
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:22:19
Audit Action: Manually Integrated Audit Reason: Missed Peak

Report Date: 08-Jun-2018 09:03:29 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A08.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 06-Jun-2018 18:33:43 ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030801-008 IC 3
Misc. Info.: PFAS21 060618A ICAL
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 08-Jun-2018 09:03:28 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: chirgwinb Date: 07-Jun-2018 08:23:01

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 2 13C4 PFBA										M
216.9 > 171.5	2.343	2.341	0.002	1.000	230409	47.3		94.7	261	M
1 Perfluorobutyric acid										M
212.9 > 168.9	2.351	2.347	0.004	1.003	14208	4.28		85.6	57.6	M
D 3 13C5-PFPeA										
267.7 > 222.6	2.770	2.770	0.0	1.000	357406	50.0		100	2041	
4 Perfluoropentanoic acid										
262.9 > 218.8	2.770	2.770	0.0	1.000	35724	4.21		84.1	153	
6 Perfluorobutanesulfonic acid										
298.9 > 80.0	2.850	2.845	0.005	1.000	16318	4.11		93.0	156	
D 5 13C3-PFBS										
302.0 > 79.8	2.850	2.845	0.005	1.000	219178	46.4		99.7	3887	
8 Perfluorohexanoic acid										
312.8 > 268.6	3.214	3.209	0.005	1.000	37186	4.19		83.8	410	
D 7 13C2 PFHxA										
314.8 > 269.6	3.214	3.211	0.003	1.000	425909	51.0		102	3689	
D 10 13C4-PFHpA										
366.9 > 321.8	3.759	3.759	0.0	1.000	493271	51.5		103	1019	
11 Perfluoroheptanoic acid										
362.9 > 318.8	3.759	3.759	0.0	1.000	44333	4.27		85.5	254	
D 13 18O2 PFHxS										
402.9 > 83.8	3.804	3.800	0.004	1.000	206281	45.6		96.5	239	
12 Perfluorohexanesulfonic acid										
399.0 > 80.0	3.804	3.807	-0.003	1.000	16384	4.04		88.7	131	
15 Sodium 1H,1H,2H,2H-perfluorooctane										
426.6 > 406.6	4.393	4.387	0.006	1.000	5589	5.26		111	103	
D 14 M2-6:2FTS										M
428.6 > 408.6	4.393	4.387	0.006	1.000	48047	37.9		79.8	284	M

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 49 13C2-PFOA										
414.9 > 369.8	4.449	4.443	0.006		385160	50.0			3995	
D 17 13C4 PFOA										
416.9 > 371.8	4.449	4.446	0.003	1.000	377268	51.4		103	942	
16 Perfluorooctanoic acid										
412.9 > 368.8	4.449	4.449	0.0	1.000	35998	4.32		86.3	350	
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.486	4.493	-0.007	0.857	19107	4.19		88.1	465	M
D 21 13C5 PFNA										
467.8 > 422.8	5.209	5.213	-0.004	1.000	494157	51.2		102	1206	
19 Perfluorononanoic acid										
462.8 > 418.8	5.209	5.206	0.003	1.000	43971	4.67		93.5	720	
20 Perfluorooctane sulfonic acid										
498.8 > 79.8	5.236	5.236	0.0	1.000	21248	3.90		84.1	121	
D 22 13C4 PFOS										
502.8 > 79.8	5.236	5.229	0.007	1.000	237113	48.5		101	853	
D 23 M2-8:2FTS										
528.8 > 508.8	5.974	5.974	0.0	1.000	100213	38.2		79.7	564	
24 Sodium 1H,1H,2H,2H-perfluorodecane										
526.8 > 506.5	5.998	5.982	0.016	1.004	10689	6.17		129	93.8	
D 25 13C2 PFDA										
514.9 > 469.5	5.998	5.998	0.0	1.000	671932	47.8		95.5	1419	
26 Perfluorodecanoic acid										
512.9 > 468.5	5.998	6.002	-0.004	1.000	63974	4.75		95.0	591	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.349	6.346	0.003	1.000	140563	47.4		94.9	1576	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.349	6.352	-0.003	1.000	14308	4.31		86.3	96.8	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.706	6.711	-0.005	1.000	135676	53.5		107	1625	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.720	6.727	-0.007	1.002	13167	4.59		91.8	201	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.748	6.751	-0.003	1.289	21895	4.24		88.0	473	
D 33 13C2 PFUnA										
564.8 > 519.8	6.748	6.755	-0.007	1.000	654180	50.9		102	4526	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.748	6.758	-0.010	1.000	65079	4.52		90.3	911	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	6.931	6.931	0.0	1.000	45088	4.34		86.9	573	
D 35 13C8 FOSA										
505.8 > 77.8	6.931	6.933	-0.002	1.000	534185	49.4		98.8	6223	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.429	7.429	0.0	1.000	67376	4.94		98.8	824	
D 36 13C2 PFDoA										
614.8 > 569.6	7.429	7.433	-0.004	1.000	727823	46.9		93.7	2444	
40 Perfluorotridecanoic acid										
662.8 > 618.6	8.038	8.050	-0.012	1.082	71516	4.93		98.5	1040	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2-PFTeDA										
714.8 > 669.6	8.590	8.590	0.0	1.000	755676	48.0		95.9	1063	
44 Perfluorotetradecanoic acid										
712.8 > 668.6	8.590	8.593	-0.003	1.000	61999	4.39		87.8	860	
712.8 > 168.8	8.575	8.593	-0.018	0.998	10759		5.76(0.00-0.00)	87.8	94.9	
712.8 > 218.8	8.590	8.593	-0.003	1.000	8183		7.58(0.00-0.00)	87.8	80.7	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFAS21-L3_00003 Amount Added: 100.00 Units: uL

Report Date: 08-Jun-2018 09:03:29 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A08.d

Injection Date: 06-Jun-2018 18:33:43 Instrument ID: LC410

Lims ID: IC

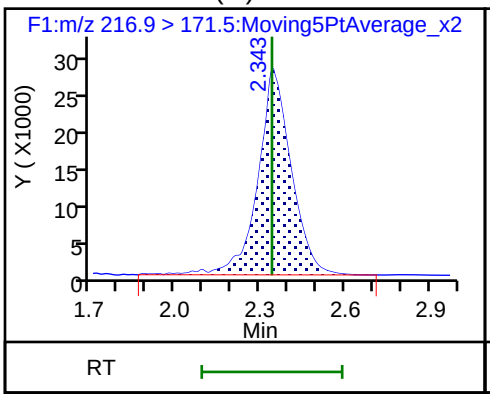
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 8

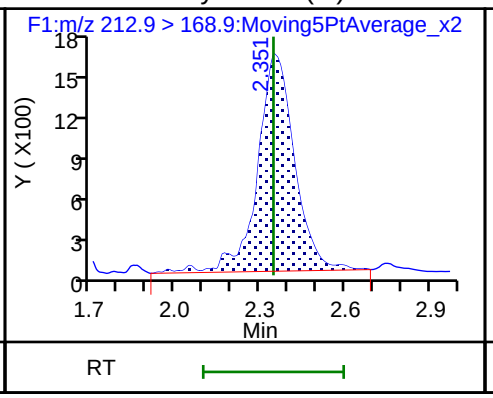
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

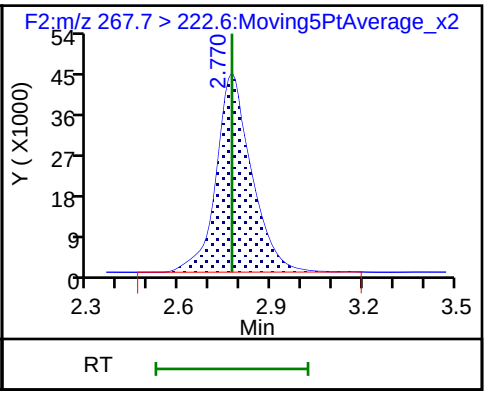
D 2 13C4 PFBA (M)



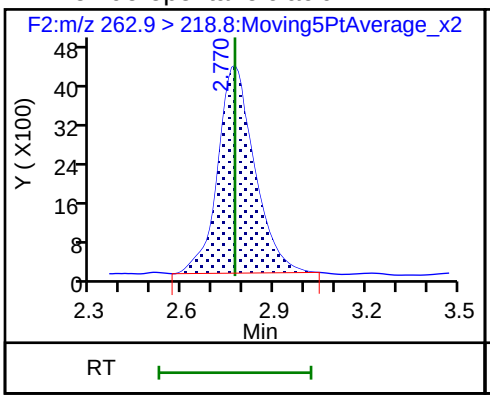
1 Perfluorobutyric acid (M)



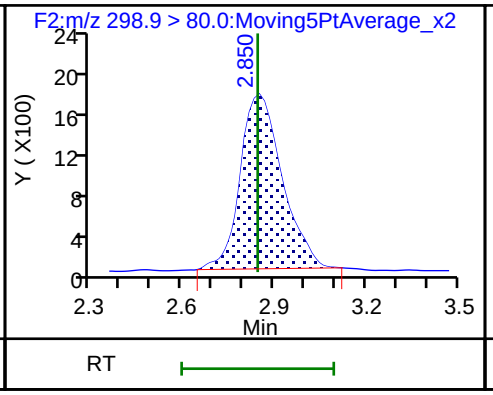
D 3 13C5-PFPeA



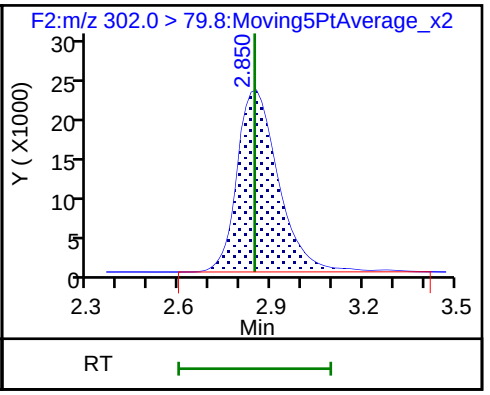
4 Perfluoropentanoic acid



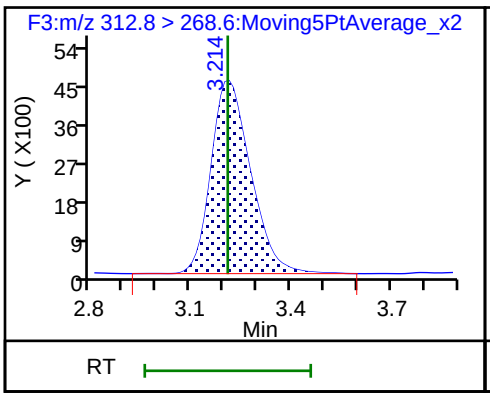
6 Perfluorobutanesulfonic acid



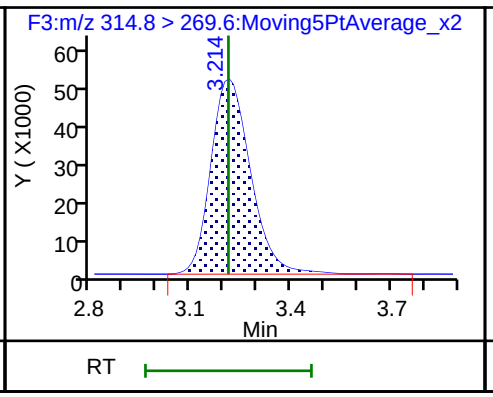
D 5 13C3-PFBS



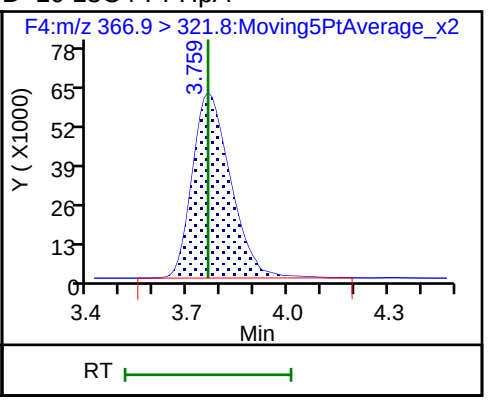
8 Perfluorohexanoic acid



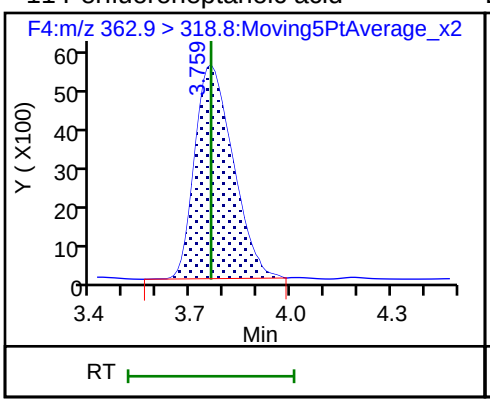
D 7 13C2 PFHxA



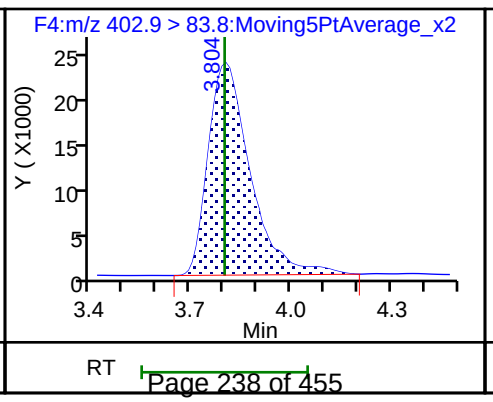
D 10 13C4-PFHpA



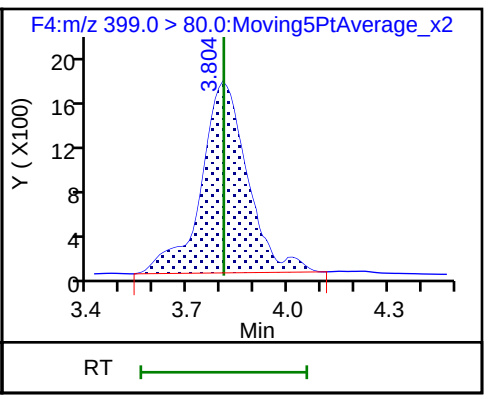
11 Perfluoroheptanoic acid



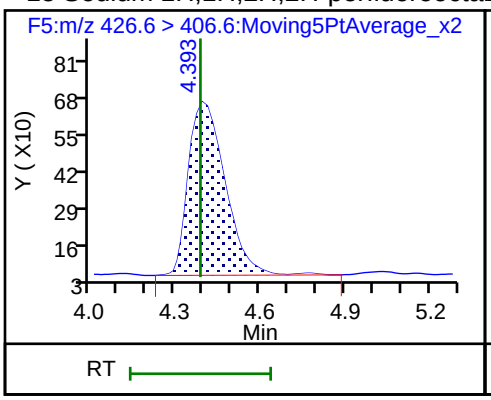
D 13 18O2 PFHxS



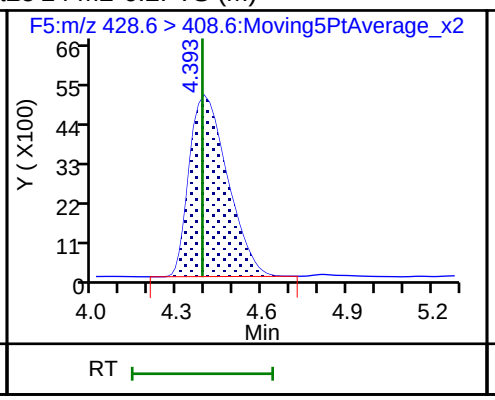
12 Perfluorohexanesulfonic acid



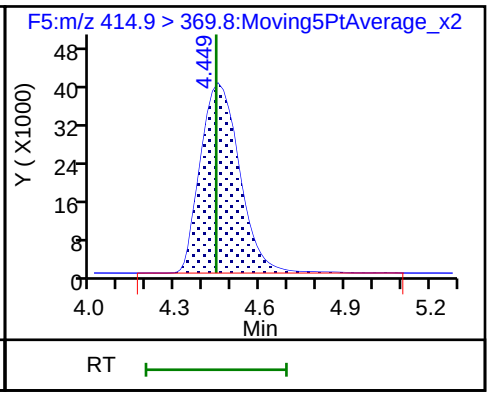
15 Sodium 1H,1H,2H,2H-perfluorooctane



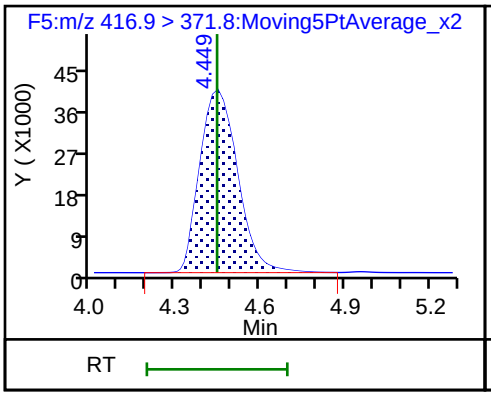
D 14 M2-6:2FTS (M)



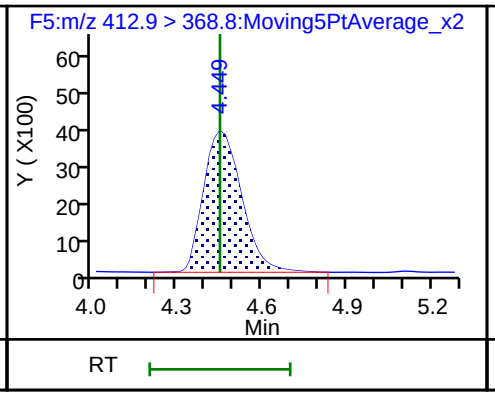
* 49 13C2-PFOA



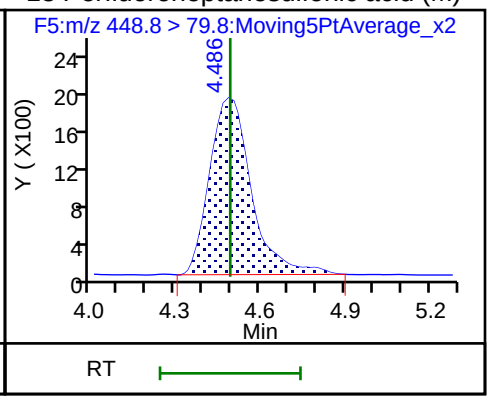
D 17 13C4 PFOA



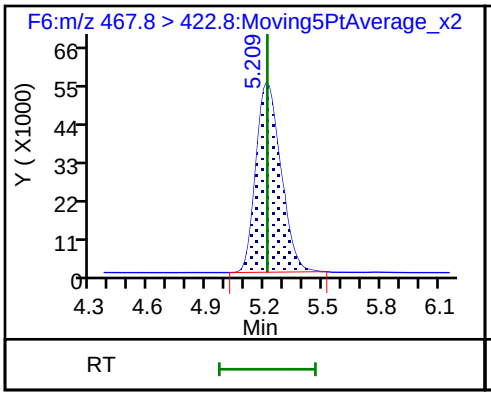
16 Perfluorooctanoic acid



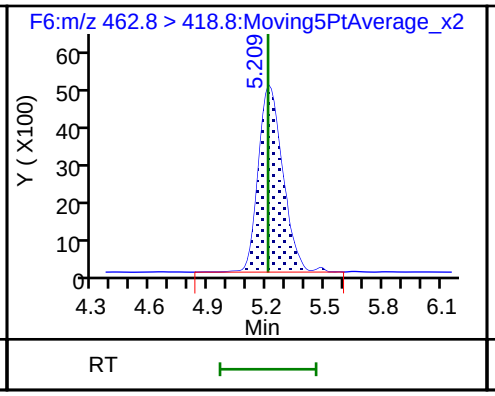
18 Perfluoroheptanesulfonic acid (M)



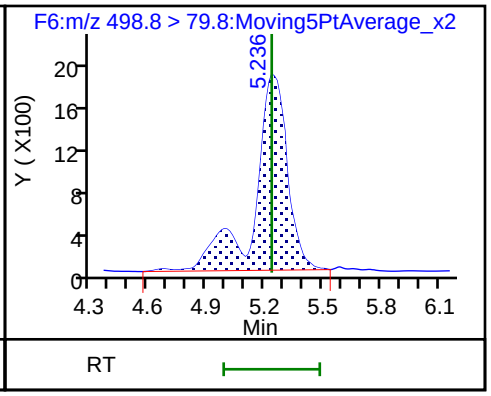
D 21 13C5 PFNA



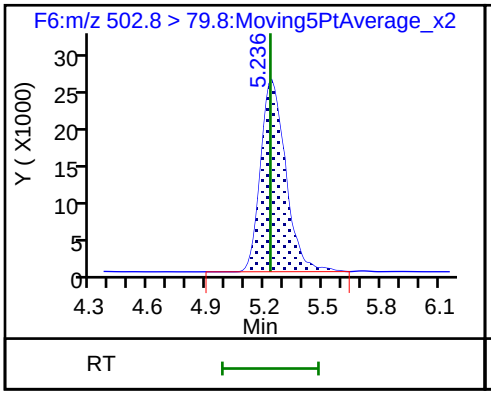
19 Perfluorononanoic acid



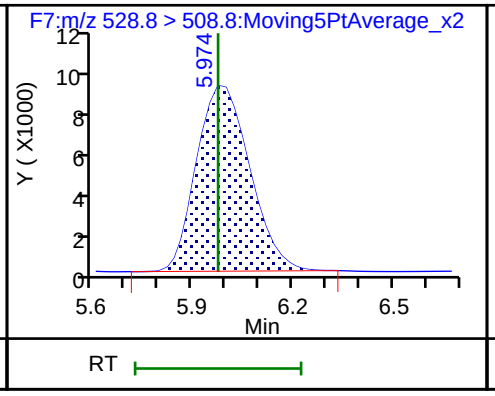
20 Perfluorooctane sulfonic acid



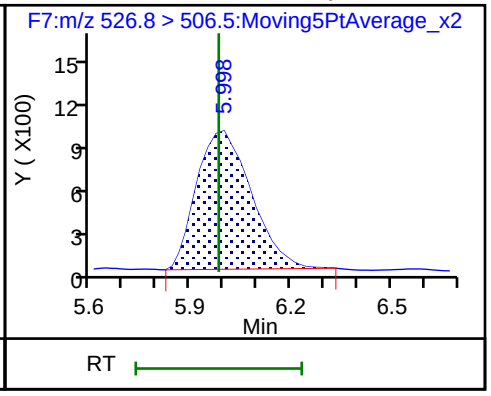
D 22 13C4 PFOS



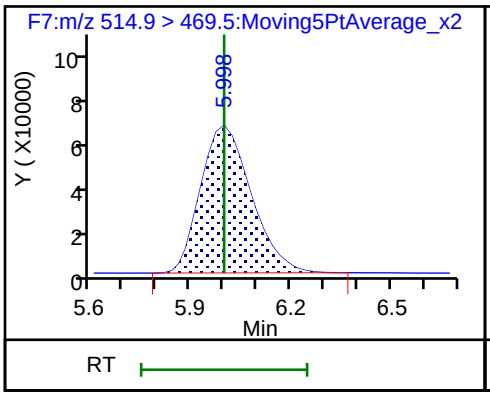
D 23 M2-8:2FTS



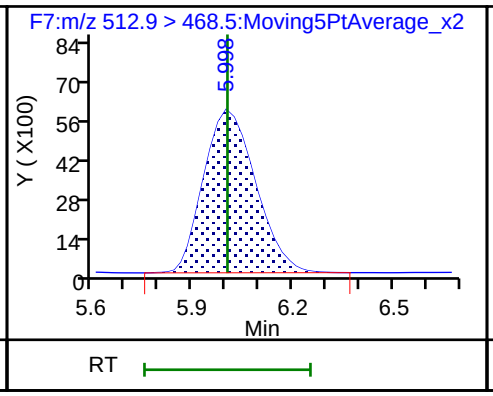
24 Sodium 1H,1H,2H,2H-perfluorodecane



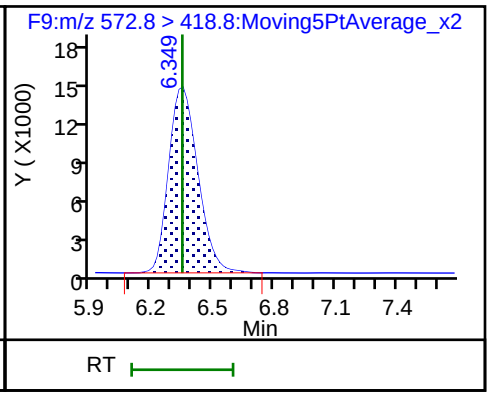
D 25 13C2 PFDA



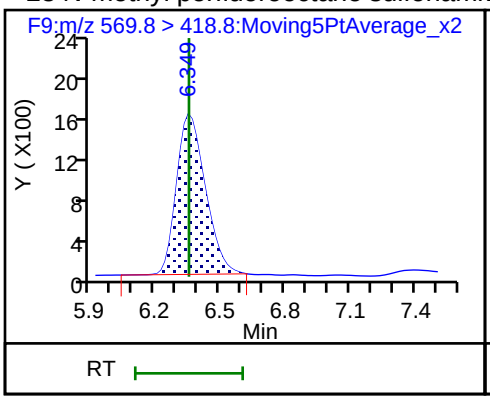
26 Perfluorodecanoic acid



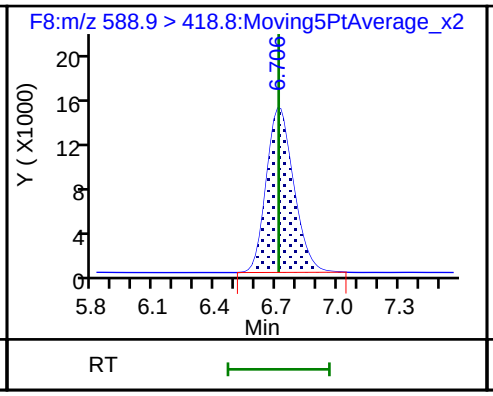
D 27 d3-NMeFOSAA



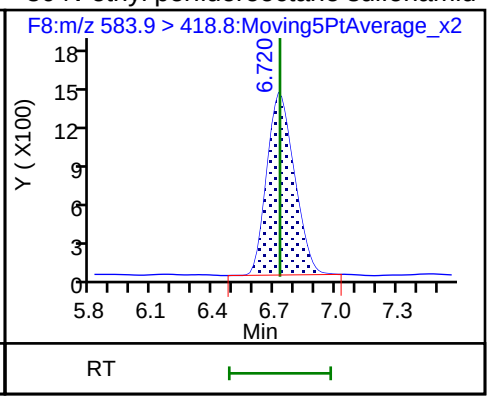
28 N-methyl perfluorooctane sulfonami



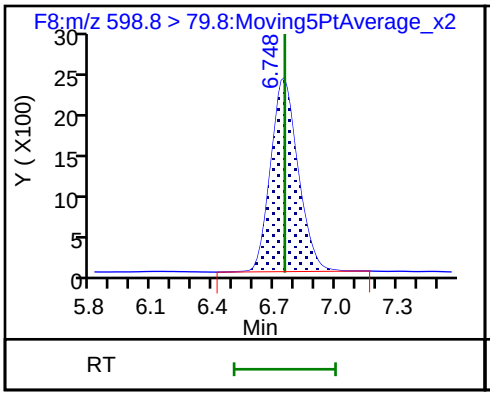
D 29 d5-NEtFOSAA



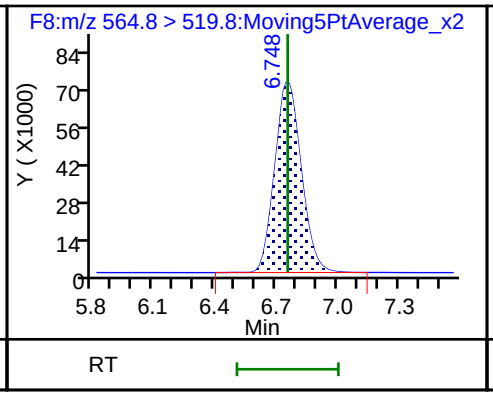
30 N-ethyl perfluorooctane sulfonamid



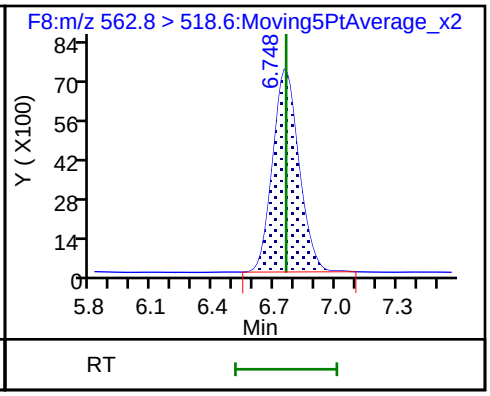
31 Perfluorodecane Sulfonic acid



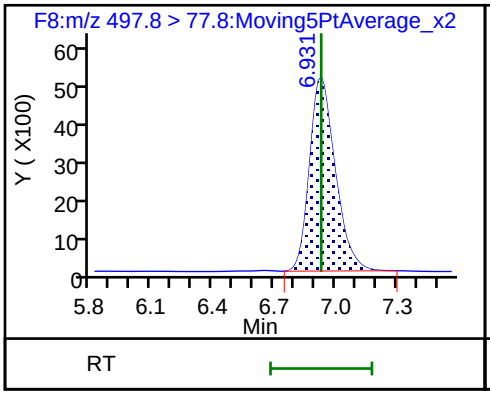
D 33 13C2 PFUnA



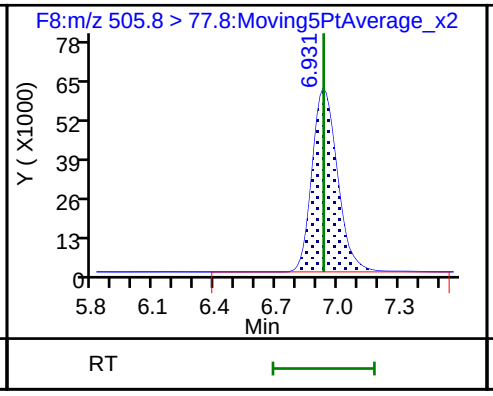
32 Perfluoroundecanoic acid



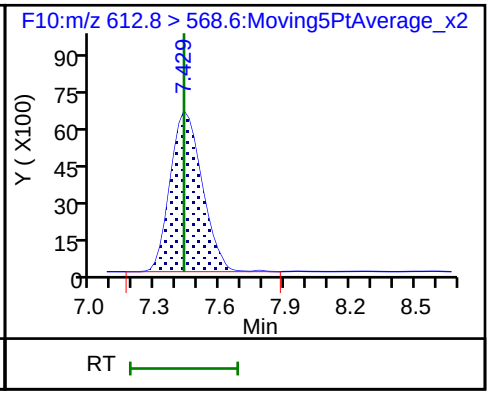
34 Perfluorooctane Sulfonamide



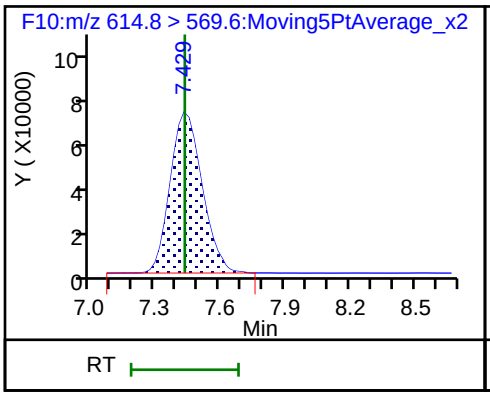
D 35 13C8 FOSA



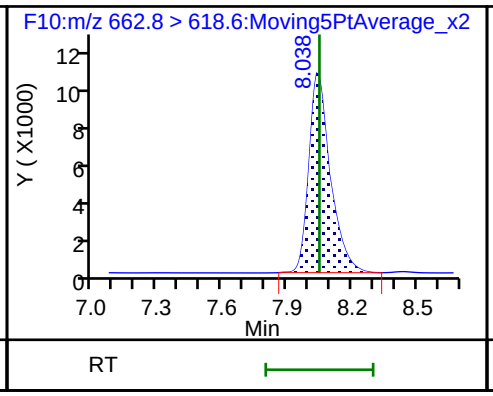
37 Perfluorododecanoic acid



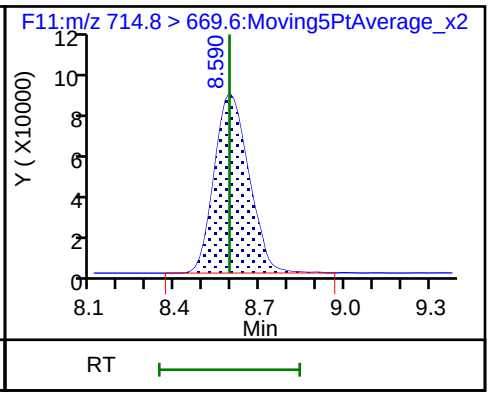
D 36 13C2 PFDoA



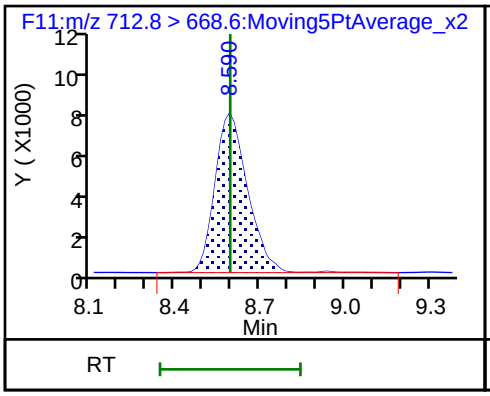
40 Perfluorotridecanoic acid



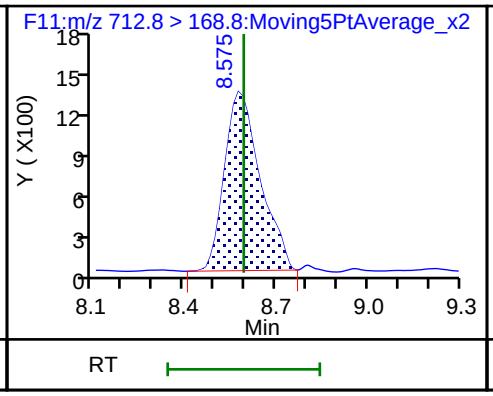
D 43 13C2-PFTeDA



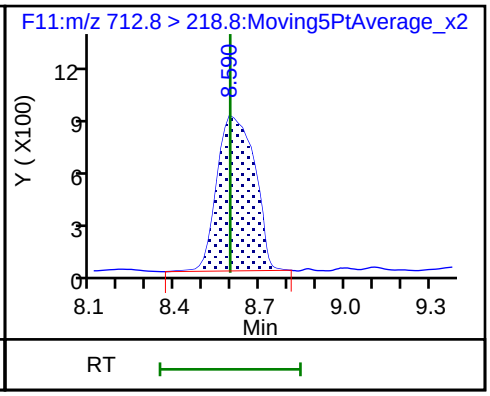
44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

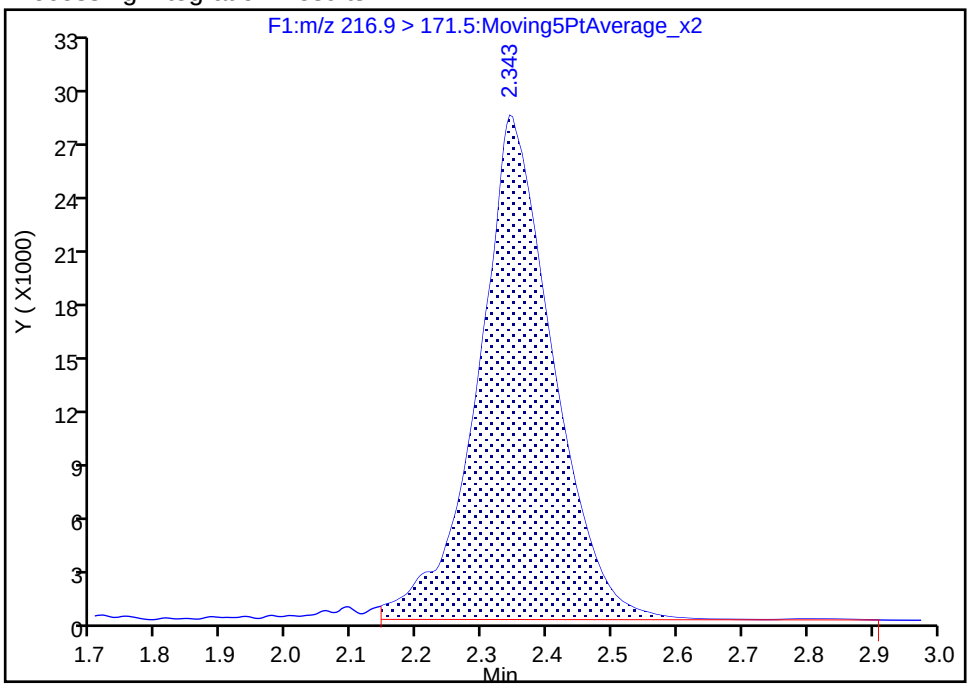
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A08.d
Injection Date: 06-Jun-2018 18:33:43 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

D 2 13C4 PFBA, CAS: STL00992

Signal: 1

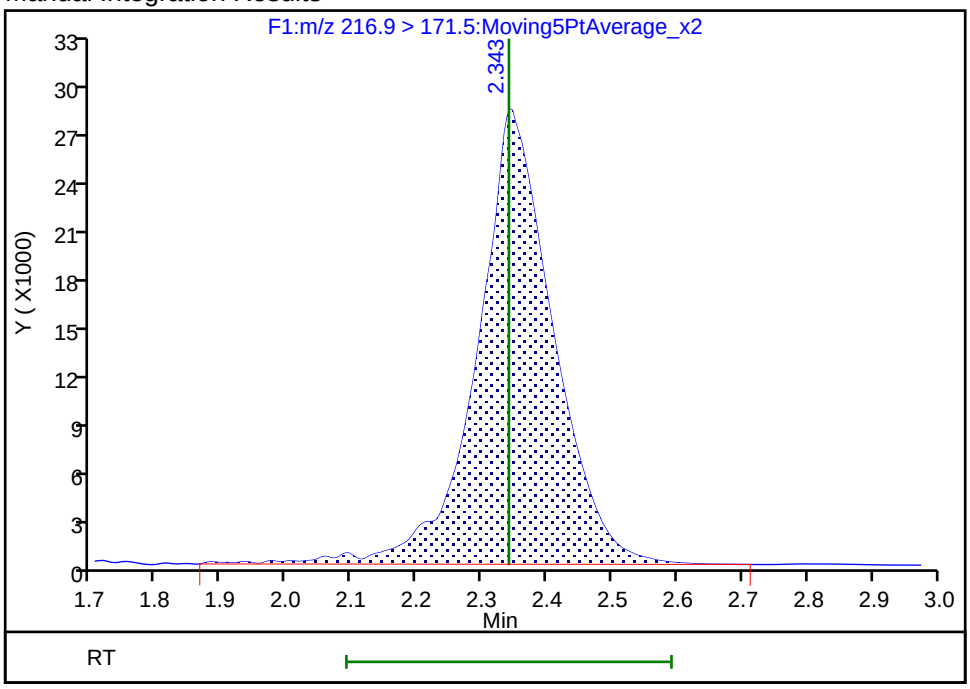
Processing Integration Results

RT: 2.34
Area: 226953
Amount: 46.021103
Amount Units: ng/ml



Manual Integration Results

RT: 2.34
Area: 230409
Amount: 47.331820
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:23:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

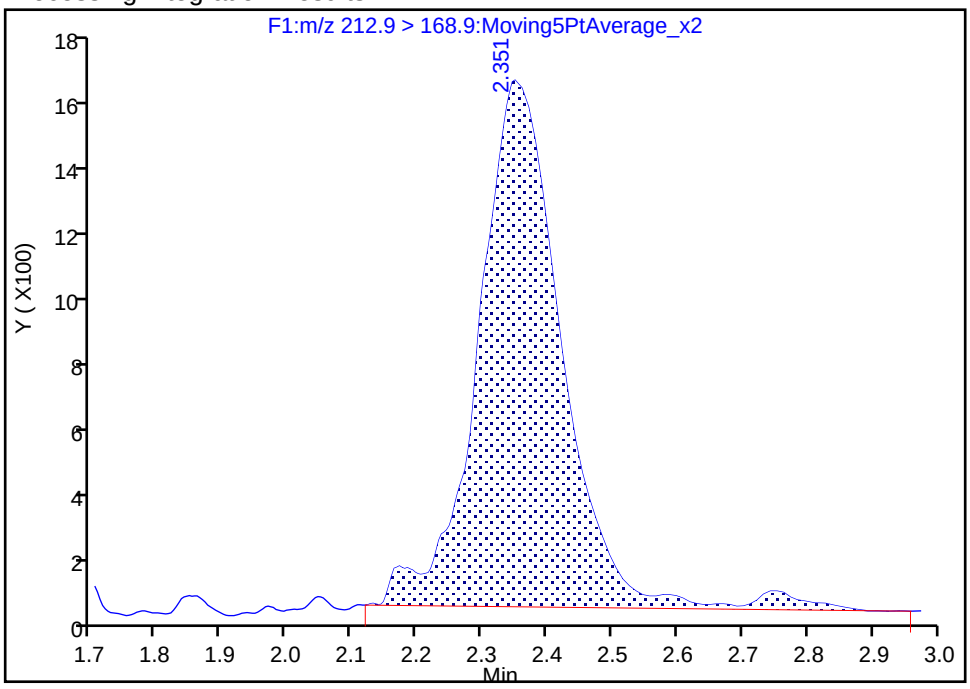
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A08.d
Injection Date: 06-Jun-2018 18:33:43 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

1 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

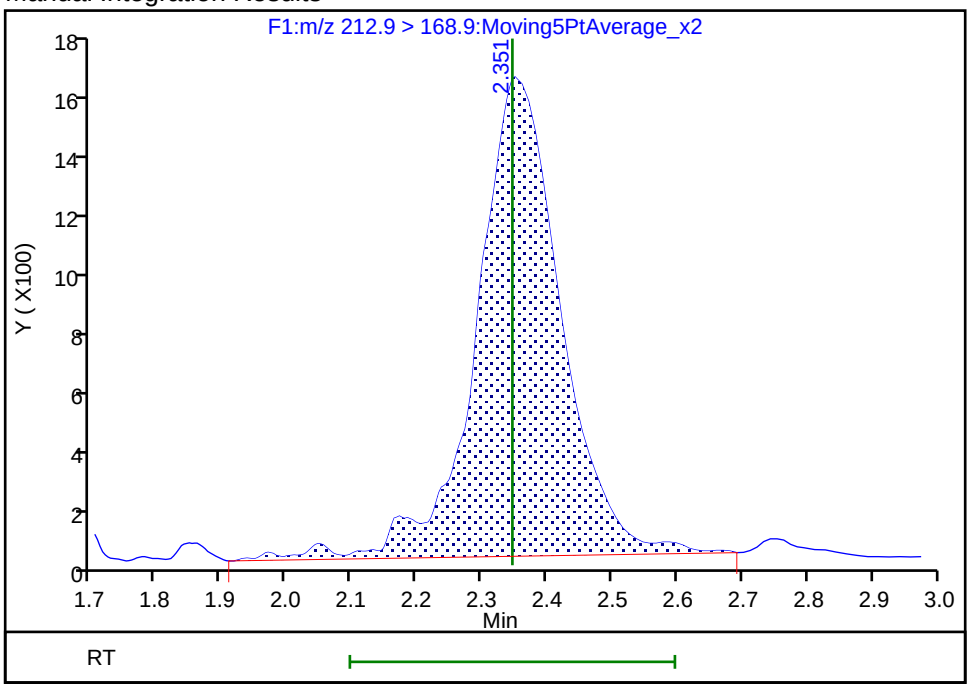
Processing Integration Results

RT: 2.35
Area: 13996
Amount: 4.926079
Amount Units: ng/ml



Manual Integration Results

RT: 2.35
Area: 14208
Amount: 4.281327
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:22:58
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

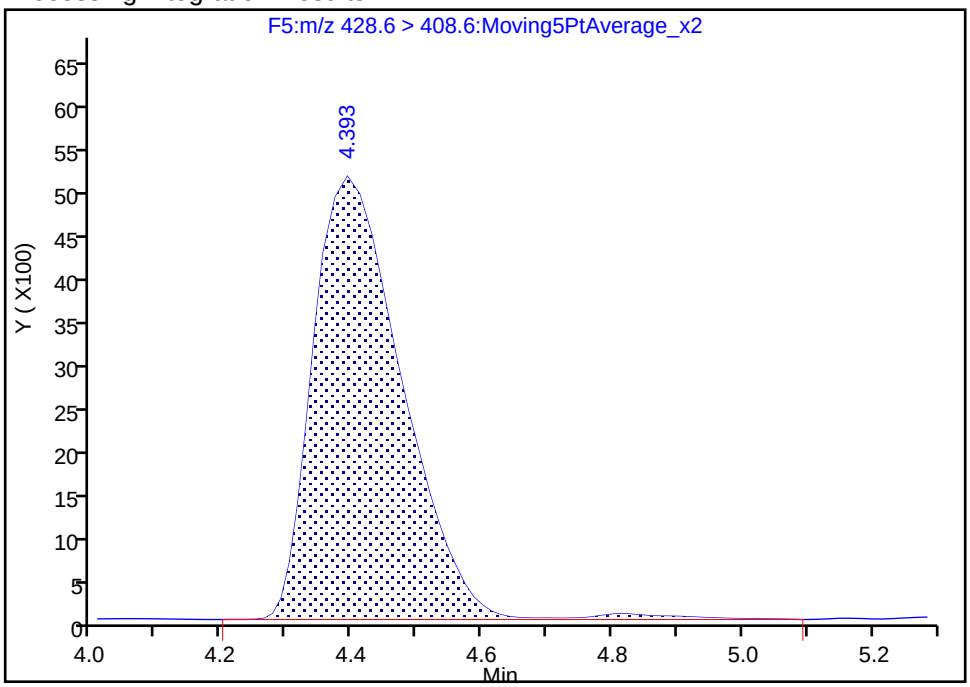
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A08.d
Injection Date: 06-Jun-2018 18:33:43 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

D 14 M2-6:2FTS, CAS: STL02279

Signal: 1

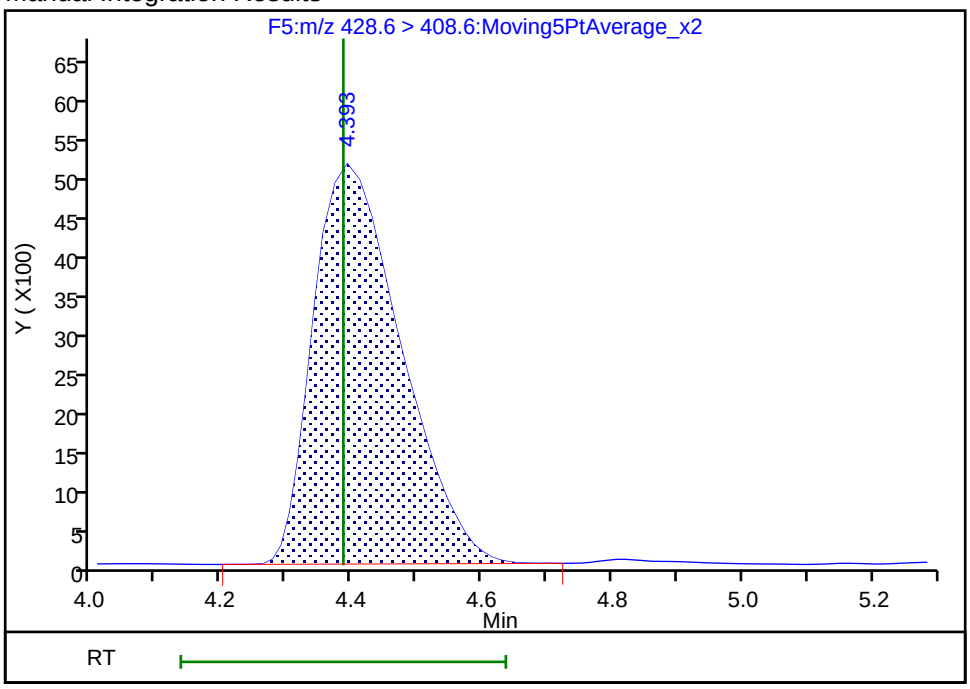
Processing Integration Results

RT: 4.39
Area: 48859
Amount: 39.832781
Amount Units: ng/ml



Manual Integration Results

RT: 4.39
Area: 48047
Amount: 37.884453
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:23:52
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

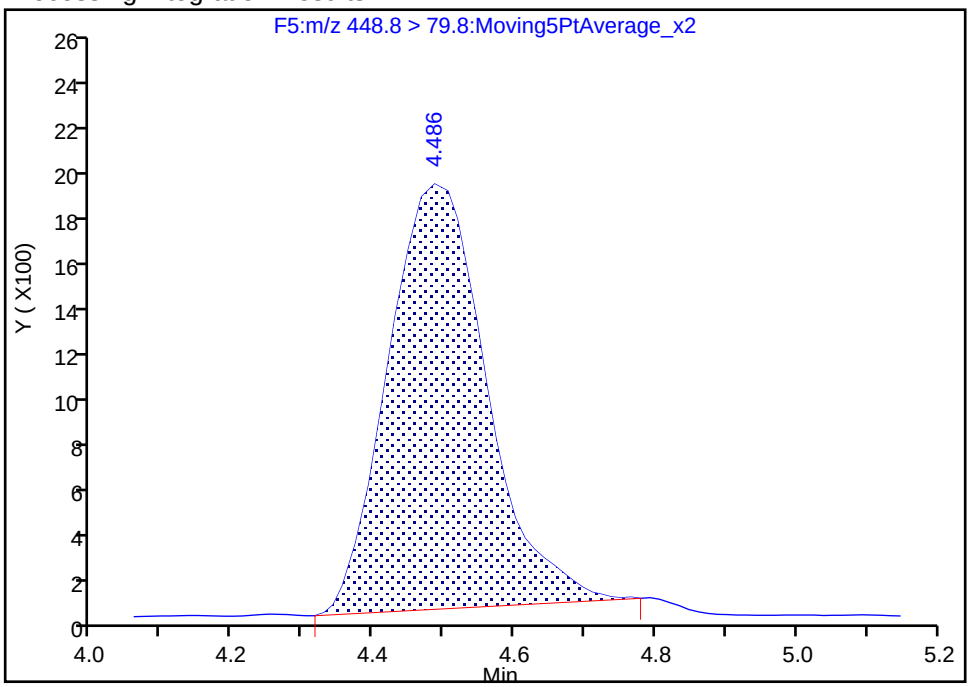
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A08.d
Injection Date: 06-Jun-2018 18:33:43 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 8
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

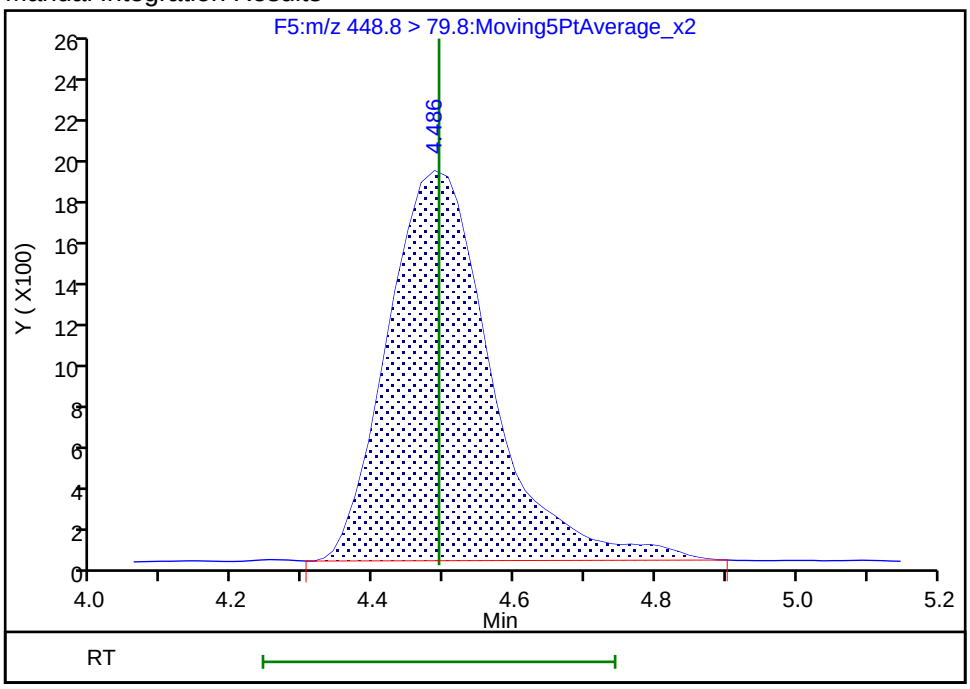
Processing Integration Results

RT: 4.49
Area: 17870
Amount: 6.194307
Amount Units: ng/ml



Manual Integration Results

RT: 4.49
Area: 19107
Amount: 4.194939
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:24:00
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A09.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 06-Jun-2018 18:49:49 ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030801-009 IC 4
Misc. Info.: PFAS21 060618A ICAL
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 08-Jun-2018 09:03:34 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: chirgwinb Date: 07-Jun-2018 08:25:47

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 2 13C4 PFBA										
216.9 > 171.5	2.334	2.341	-0.007	1.000	238511	48.7		97.3	365	
1 Perfluorobutyric acid										M
212.9 > 168.9	2.347	2.347	0.0	1.005	66031	18.8		93.9	282	M
D 3 13C5-PFPeA										
267.7 > 222.6	2.770	2.770	0.0	1.000	348889	48.5		97.0	5324	
4 Perfluoropentanoic acid										
262.9 > 218.8	2.770	2.770	0.0	1.000	167518	19.5		97.7	471	
6 Perfluorobutanesulfonic acid										
298.9 > 80.0	2.834	2.845	-0.011	1.000	72247	17.8		101	193	
D 5 13C3-PFBS										
302.0 > 79.8	2.834	2.845	-0.011	1.000	224244	47.1		101	846	
8 Perfluorohexanoic acid										
312.8 > 268.6	3.214	3.209	0.005	1.000	176105	19.2		96.0	1083	
D 7 13C2 PFHxA										
314.8 > 269.6	3.214	3.211	0.003	1.000	412593	49.1		98.2	2242	
D 10 13C4-PFHpA										
366.9 > 321.8	3.759	3.759	0.0	1.000	477962	49.5		99.1	695	
11 Perfluoroheptanoic acid										
362.9 > 318.8	3.759	3.759	0.0	1.000	208918	20.2		101	2060	
D 13 18O2 PFHxS										
402.9 > 83.8	3.804	3.800	0.004	1.000	213321	46.9		99.1	1028	
12 Perfluorohexanesulfonic acid										
399.0 > 80.0	3.804	3.806	-0.002	1.000	74684	16.3		89.7	1228	
15 Sodium 1H,1H,2H,2H-perfluorooctane										
426.6 > 406.6	4.393	4.387	0.006	1.000	24958	21.1		111	473	
D 14 M2-6:2FTS										
428.6 > 408.6	4.393	4.387	0.006	1.000	55080	43.1		90.8	884	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 49 13C2-PFOA										
414.9 > 369.8	4.449	4.443	0.006		387757	50.0			5706	
D 17 13C4 PFOA										
416.9 > 371.8	4.449	4.446	0.003	1.000	370077	50.1		100	771	
16 Perfluorooctanoic acid										
412.9 > 368.8	4.449	4.449	0.0	1.000	162873	19.3		96.5	926	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.486	4.493	-0.007	0.857	91527	20.2		106	370	
D 21 13C5 PFNA										
467.8 > 422.8	5.209	5.212	-0.003	1.000	495131	50.9		102	811	
19 Perfluorononanoic acid										
462.8 > 418.8	5.209	5.206	0.003	1.000	190008	19.6		97.8	1465	
D 22 13C4 PFOS										
502.8 > 79.8	5.236	5.229	0.007	1.000	227604	46.2		96.7	1061	
20 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.236	5.236	0.0	1.000	104190	19.7		106	246	M
D 23 M2-8:2FTS										
528.8 > 508.8	5.974	5.974	0.0	1.000	112421	42.6		88.8	742	
24 Sodium 1H,1H,2H,2H-perfluorodecane										
526.8 > 506.5	5.974	5.982	-0.008	1.000	36540	18.1		94.5	513	
D 25 13C2 PFDA										
514.9 > 469.5	5.998	5.998	0.0	1.000	675541	47.7		95.4	2157	
26 Perfluorodecanoic acid										
512.9 > 468.5	5.998	6.002	-0.004	1.000	287661	20.7		103	2951	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.349	6.346	0.003	1.000	139215	46.7		93.3	947	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.367	6.352	0.015	1.003	68069	19.3		96.7	260	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.720	6.711	0.009	1.000	118926	46.6		93.2	843	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.734	6.727	0.007	1.002	54421	20.5		103	1178	
31 Perfluorodecane Sulfonic acid										M
598.8 > 79.8	6.748	6.748	0.0	1.289	103213	20.6		107	1073	M
D 33 13C2 PFUnA										
564.8 > 519.8	6.762	6.755	0.007	1.000	636874	49.2		98.4	3447	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.762	6.758	0.004	1.000	286757	20.2		101	1172	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	6.931	6.931	0.0	1.000	207840	18.9		94.4	2948	
D 35 13C8 FOSA										
505.8 > 77.8	6.931	6.933	-0.002	1.000	533440	49.0		98.0	8906	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.429	7.429	0.0	1.000	289946	20.4		102	2558	
D 36 13C2 PFDoA										
614.8 > 569.6	7.429	7.433	-0.004	1.000	750706	48.0		96.0	1589	
40 Perfluorotridecanoic acid										
662.8 > 618.6	8.054	8.050	0.004	1.084	313218	20.8		104	1734	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2-PFTeDA										
714.8 > 669.6	8.590	8.590	0.0	1.000	777332	49.0		98.0	1251	
44 Perfluorotetradecanoic acid										
712.8 > 668.6	8.590	8.593	-0.003	1.000	280269	19.9		99.4	369	
712.8 > 168.8	8.605	8.593	0.012	1.002	60246		4.65(0.00-0.00)	99.4	545	
712.8 > 218.8	8.590	8.593	-0.003	1.000	30816		9.09(0.00-0.00)	99.4	512	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFAS21-L4_00003 Amount Added: 100.00 Units: uL

Report Date: 08-Jun-2018 09:03:35 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A09.d

Injection Date: 06-Jun-2018 18:49:49 Instrument ID: LC410

Lims ID: IC

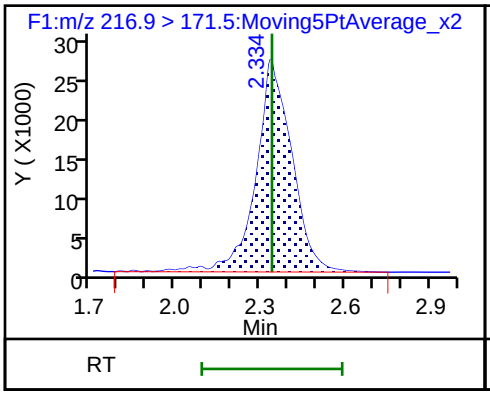
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 9

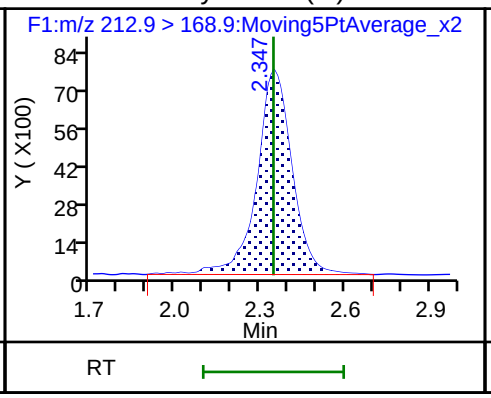
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

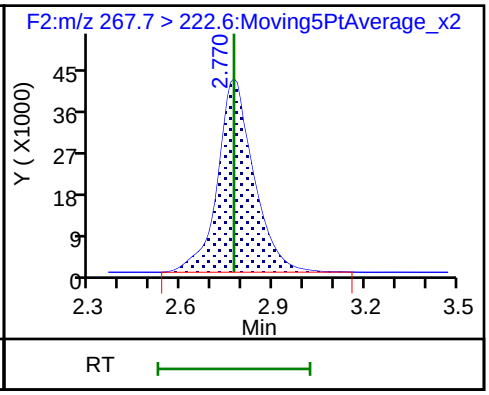
D 2 13C4 PFBA



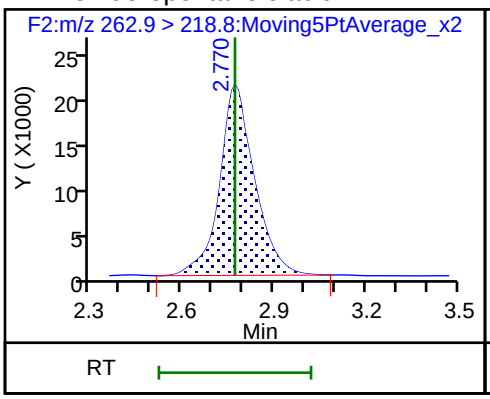
1 Perfluorobutyric acid (M)



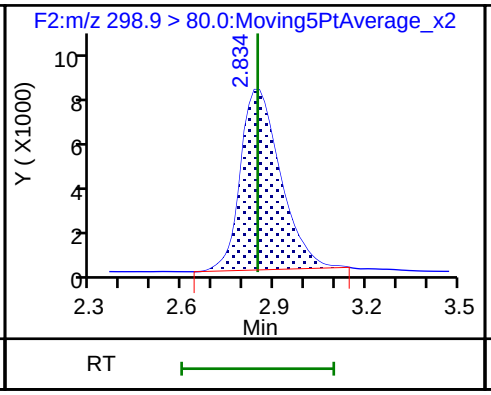
D 3 13C5-PFPeA



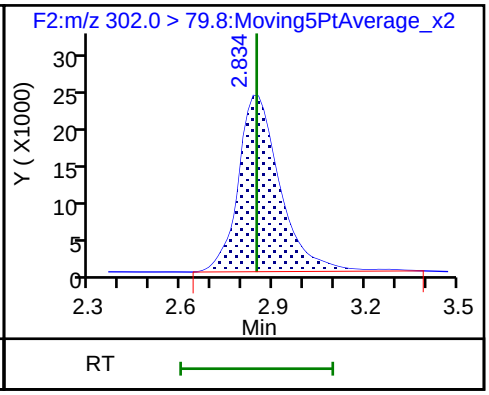
4 Perfluoropentanoic acid



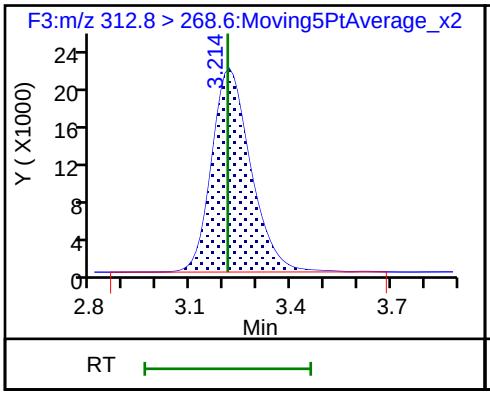
6 Perfluorobutanesulfonic acid



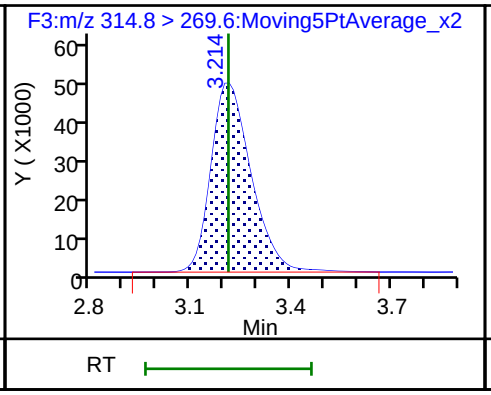
D 5 13C3-PFBS



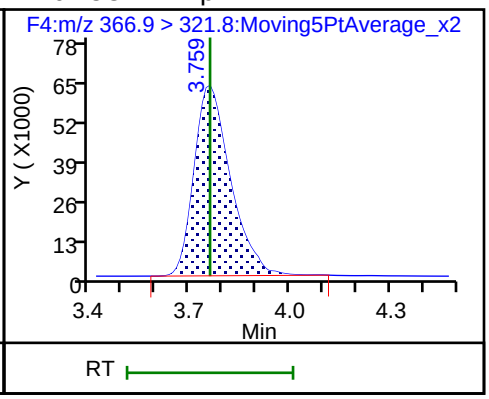
8 Perfluorohexanoic acid



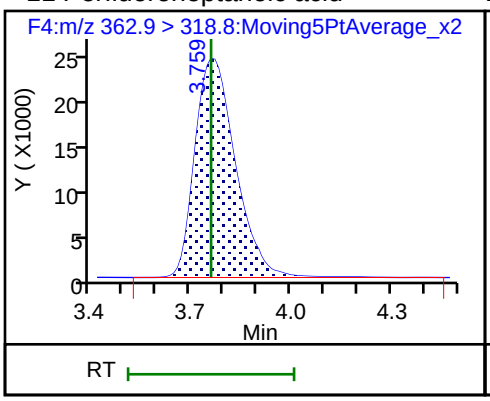
D 7 13C2 PFHxA



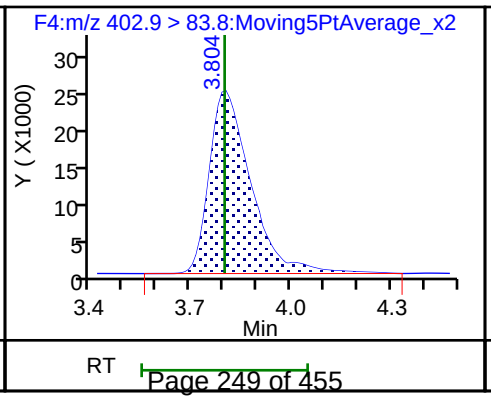
D 10 13C4-PFHpA



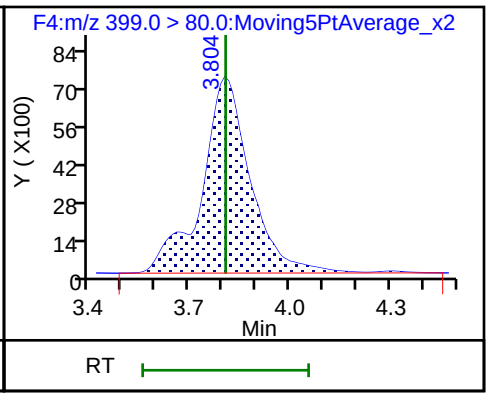
11 Perfluoroheptanoic acid



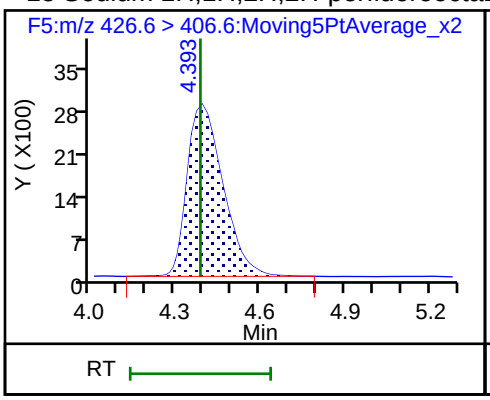
D 13 18O2 PFHxS



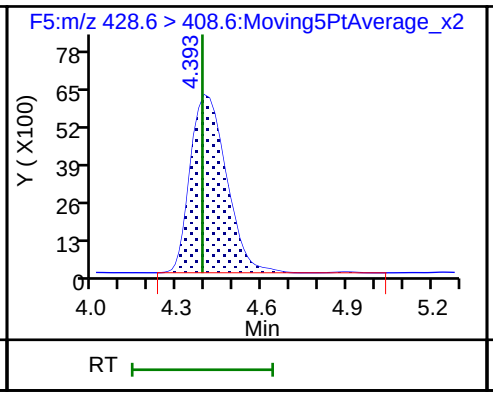
12 Perfluorohexanesulfonic acid



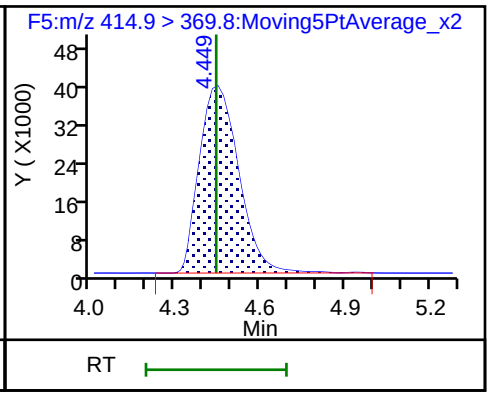
15 Sodium 1H,1H,2H,2H-perfluorooctane



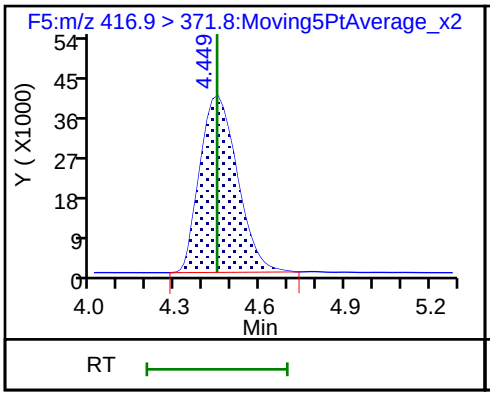
D 14 M2-6:2FTS



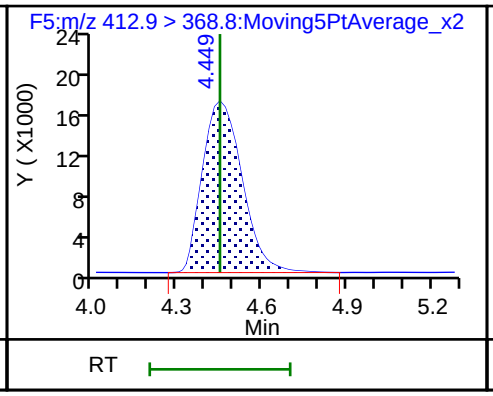
* 49 13C2-PFOA



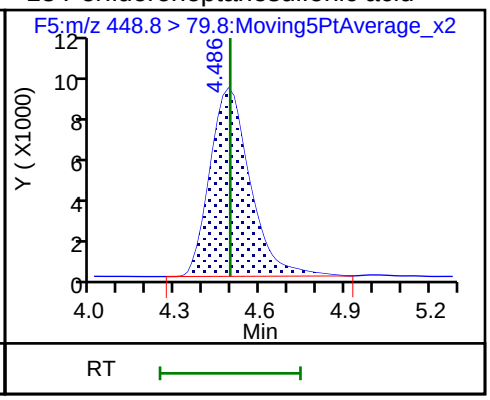
D 17 13C4 PFOA



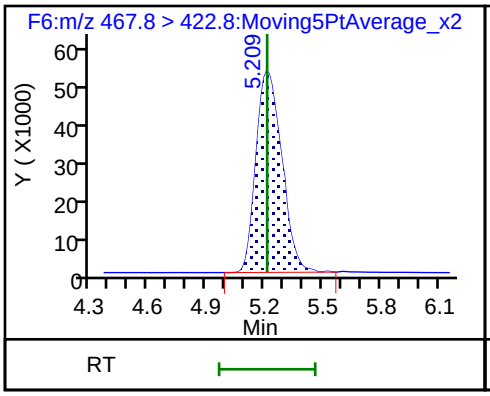
16 Perfluorooctanoic acid



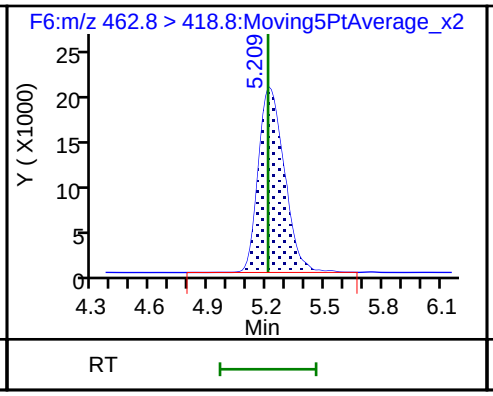
18 Perfluoroheptanesulfonic acid



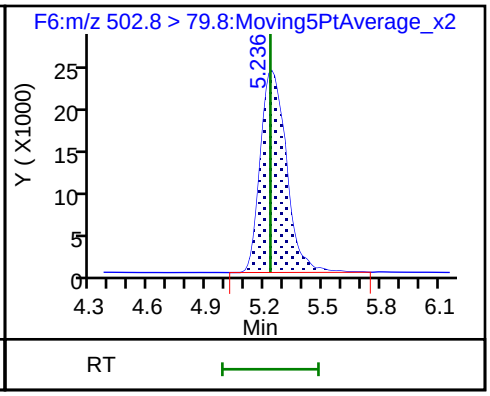
D 21 13C5 PFNA



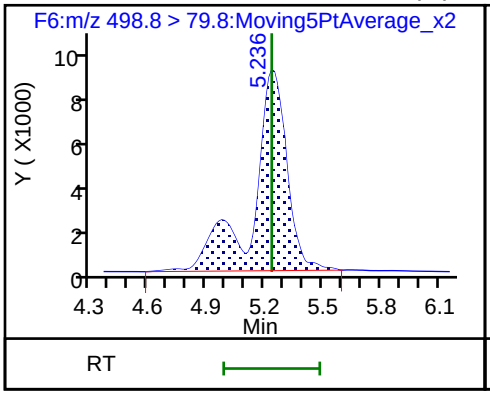
19 Perfluorononanoic acid



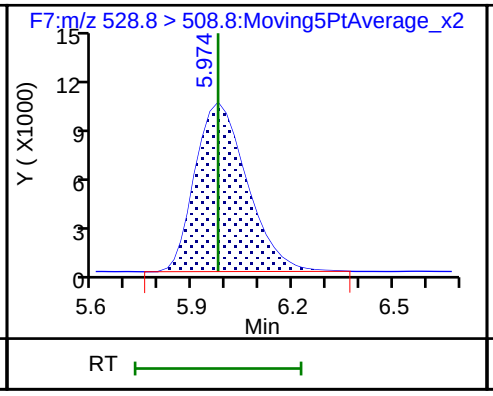
D 22 13C4 PFOS



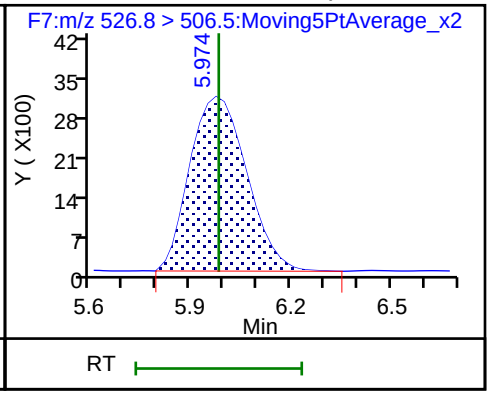
20 Perfluorooctane sulfonic acid (M)



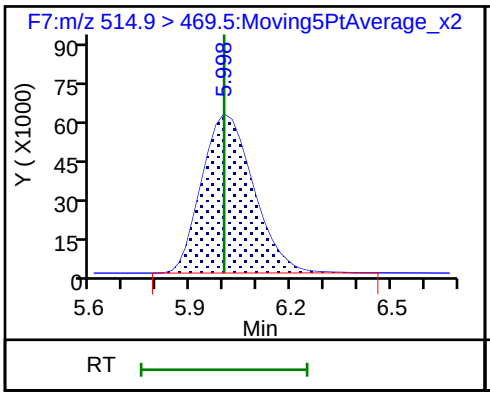
D 23 M2-8:2FTS



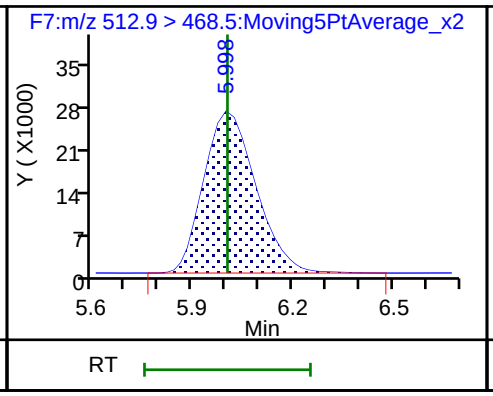
24 Sodium 1H,1H,2H,2H-perfluorodecane



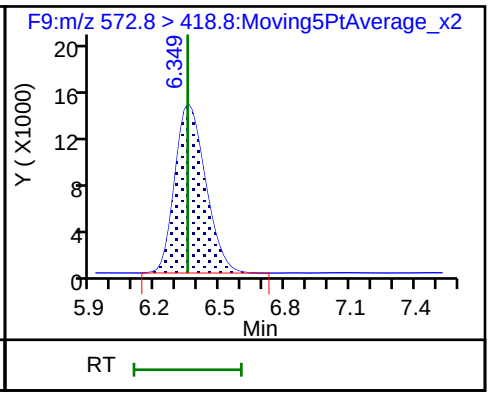
D 25 13C2 PFDA



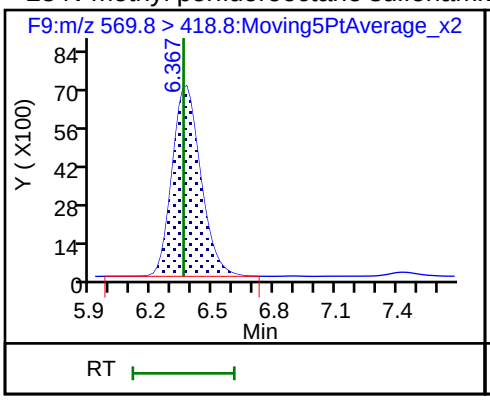
26 Perfluorodecanoic acid



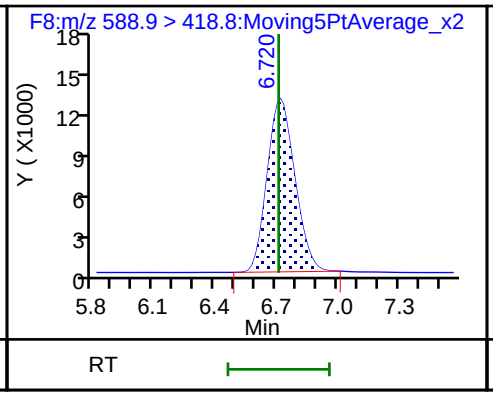
D 27 d3-NMeFOSAA



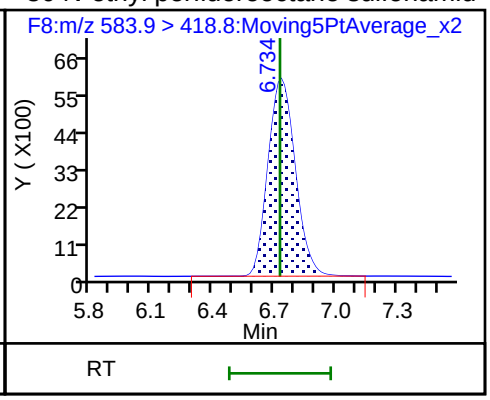
28 N-methyl perfluorooctane sulfonami



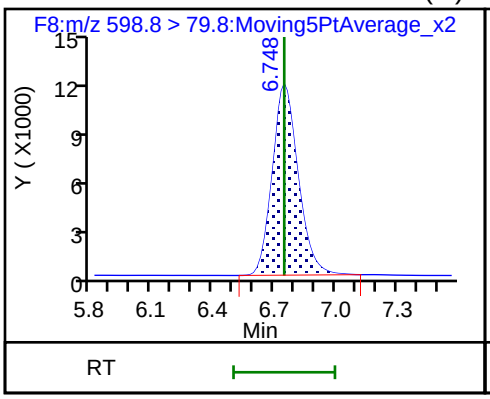
D 29 d5-NEtFOSAA



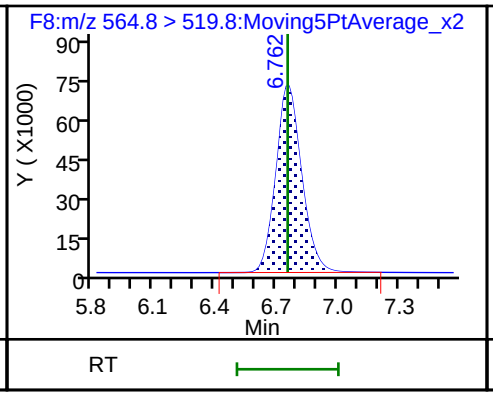
30 N-ethyl perfluorooctane sulfonamid



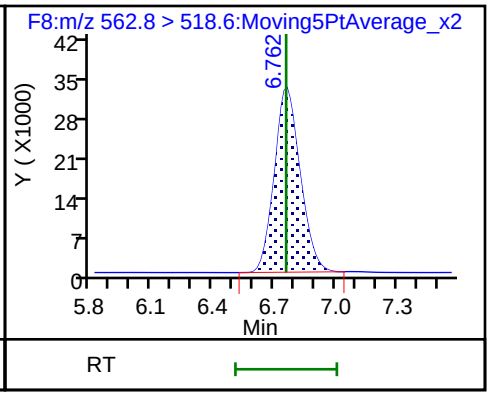
31 Perfluorodecane Sulfonic acid (M)



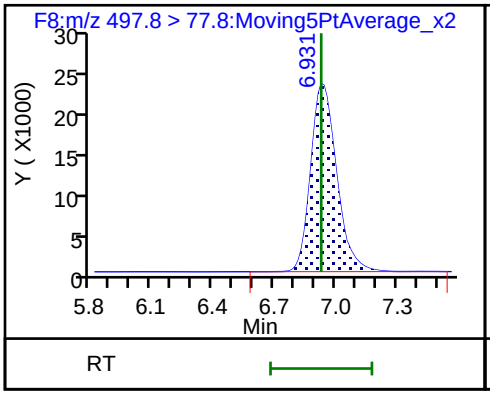
D 33 13C2 PFUnA



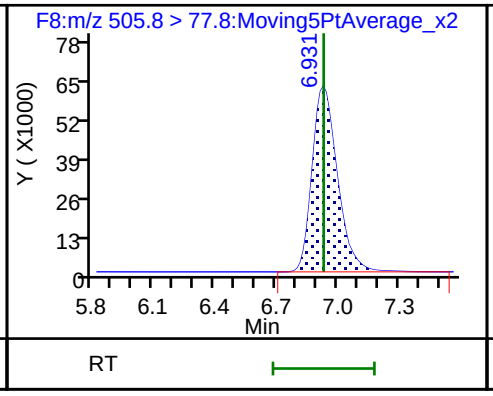
32 Perfluoroundecanoic acid



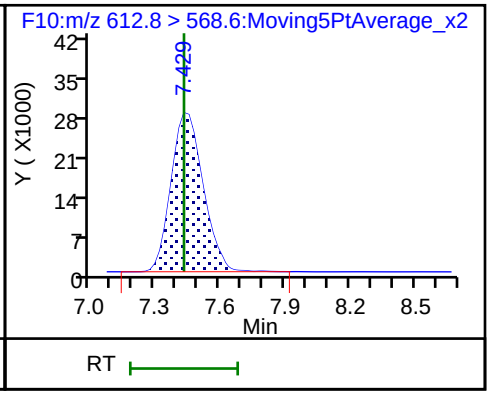
34 Perfluorooctane Sulfonamide



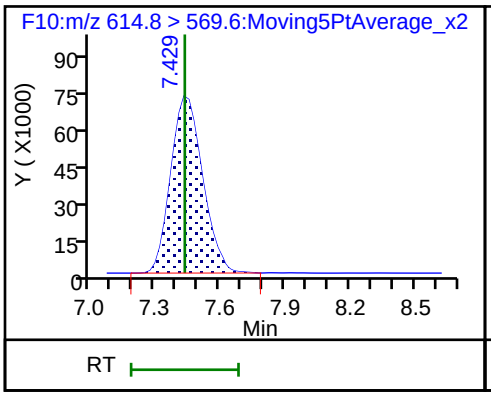
D 35 13C8 FOSA



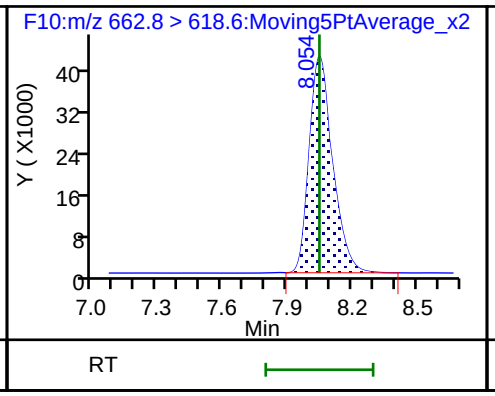
37 Perfluorododecanoic acid



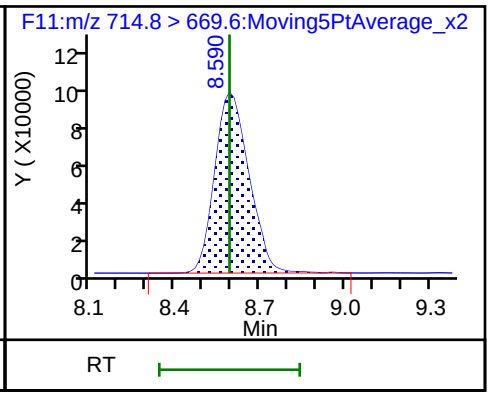
D 36 13C2 PFDoA



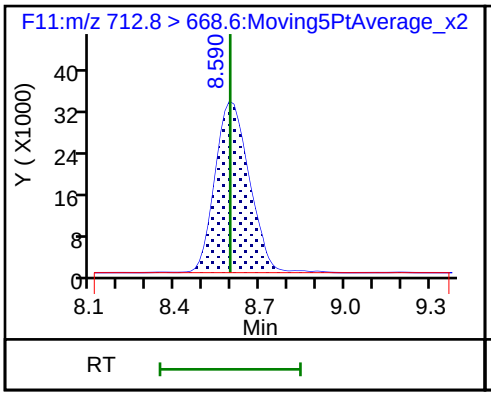
40 Perfluorotridecanoic acid



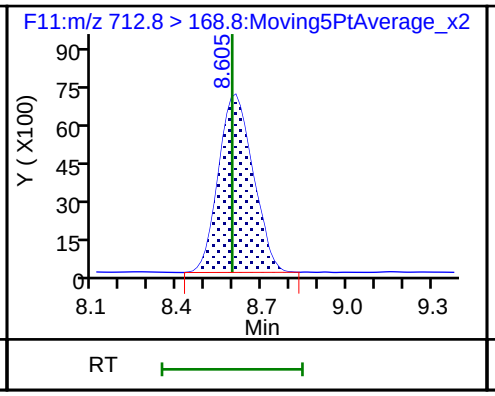
D 43 13C2-PFTeDA



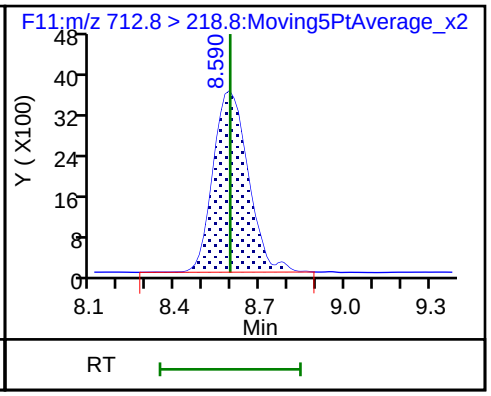
44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

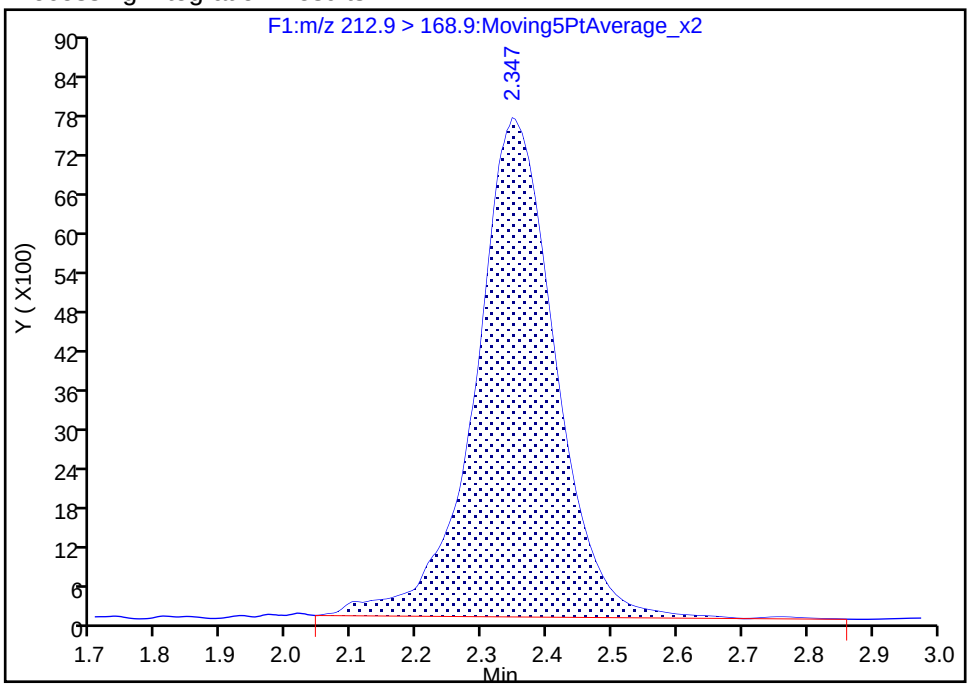
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A09.d
Injection Date: 06-Jun-2018 18:49:49 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

1 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

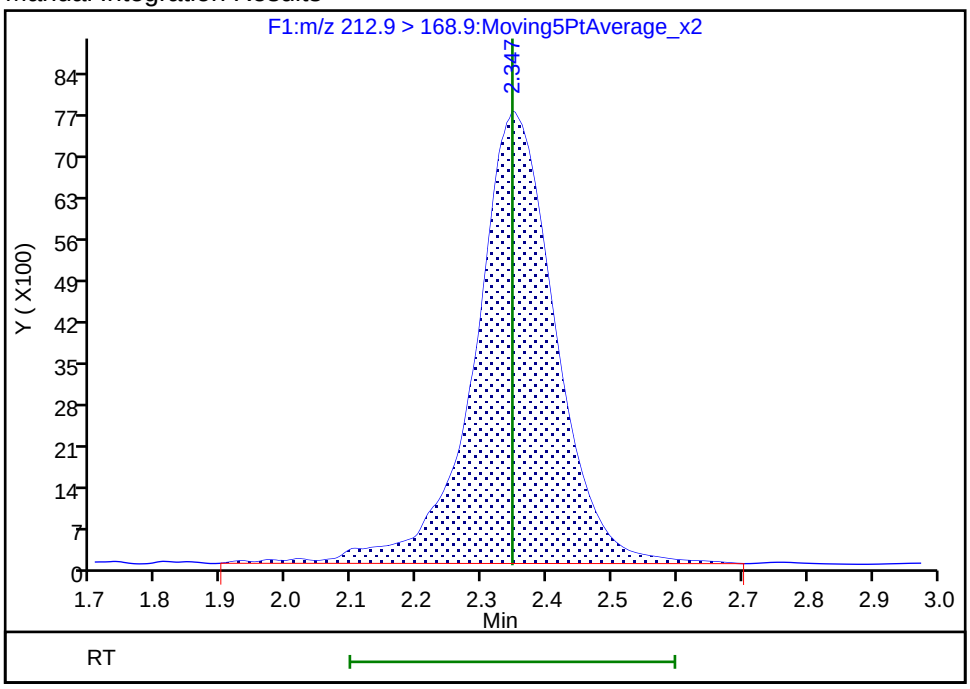
Processing Integration Results

RT: 2.35
Area: 64940
Amount: 21.987505
Amount Units: ng/ml



Manual Integration Results

RT: 2.35
Area: 66031
Amount: 18.788536
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:25:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

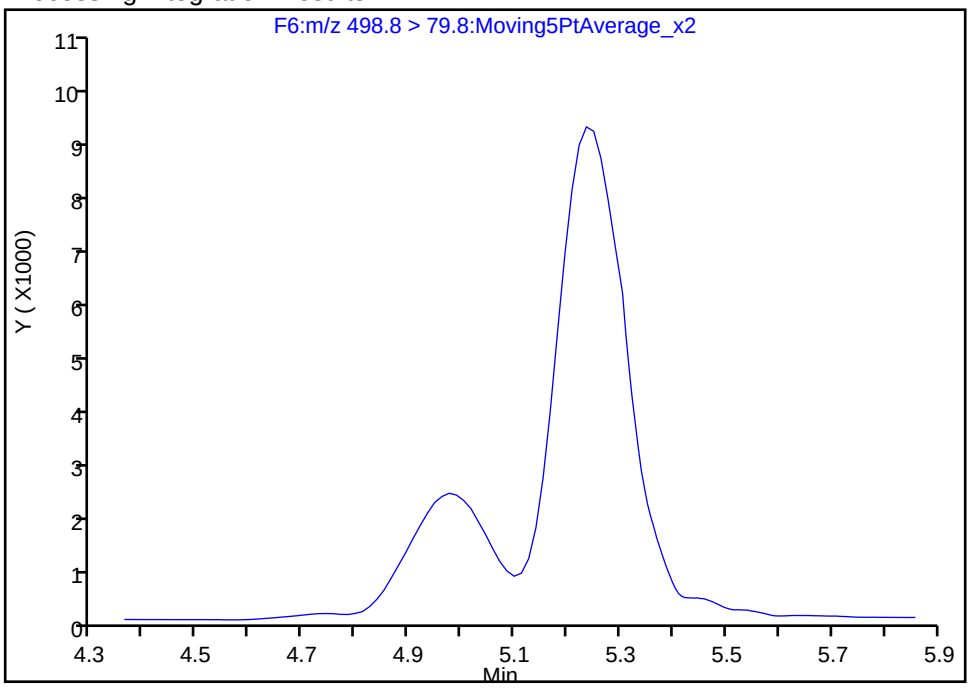
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A09.d
Injection Date: 06-Jun-2018 18:49:49 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

20 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

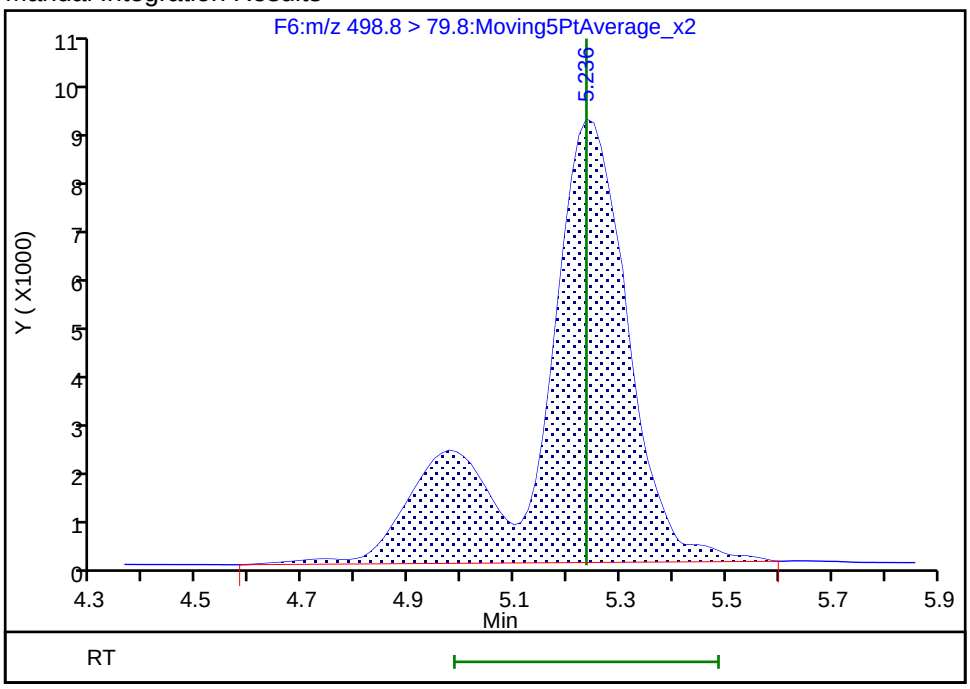
Not Detected
Expected RT: 5.24

Processing Integration Results



Manual Integration Results

RT: 5.24
Area: 104190
Amount: 19.720420
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:24:44
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

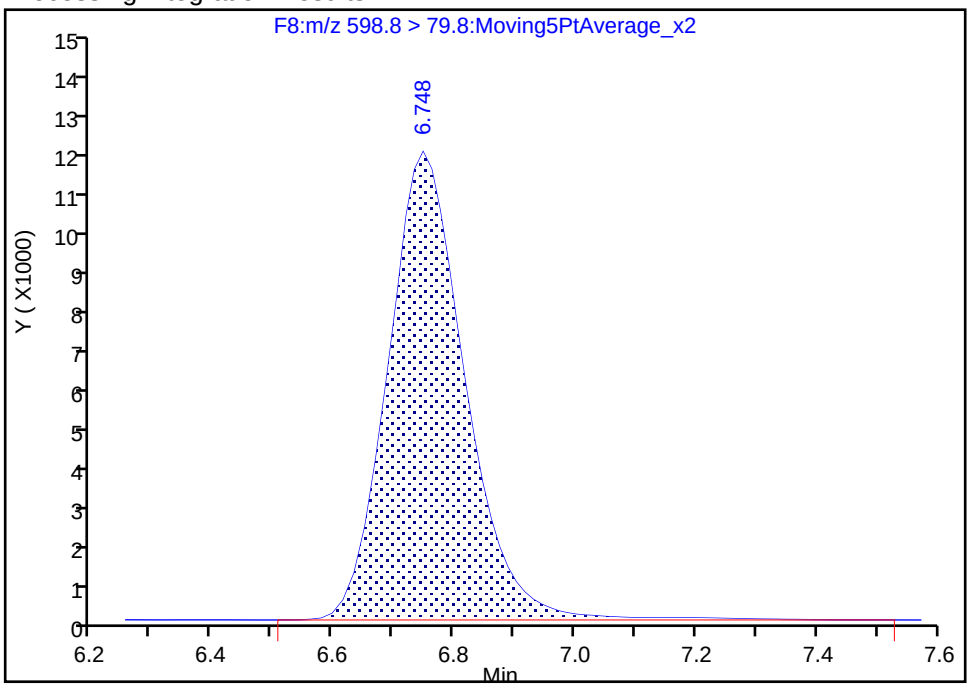
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A09.d
Injection Date: 06-Jun-2018 18:49:49 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 9
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

31 Perfluorodecane Sulfonic acid, CAS: 335-77-3

Signal: 1

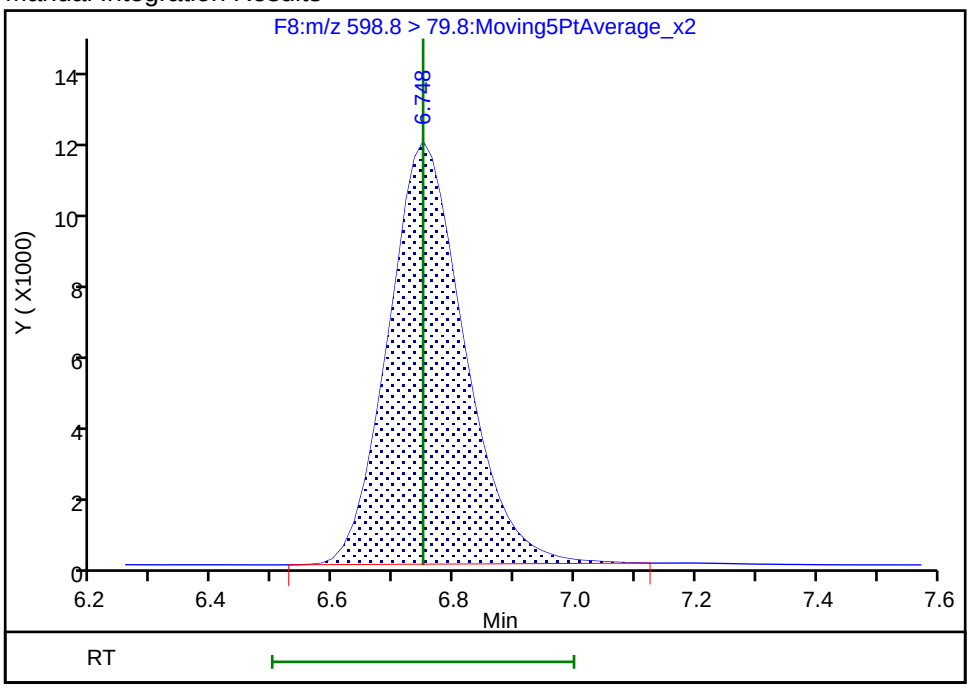
Processing Integration Results

RT: 6.75
Area: 104670
Amount: 21.502575
Amount Units: ng/ml



Manual Integration Results

RT: 6.75
Area: 103213
Amount: 20.616773
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:25:39
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A10.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 06-Jun-2018 19:05:55 ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030801-010 IC 5
Misc. Info.: PFAS21 060618A ICAL
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 08-Jun-2018 09:03:39 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: chirgwinb Date: 07-Jun-2018 08:27:02

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 2 13C4 PFBA										
216.9 > 171.5	2.338	2.341	-0.003	1.000	212844	46.9		93.8	219	
1 Perfluorobutyric acid										
212.9 > 168.9	2.347	2.347	0.0	1.003	149170	47.4		94.7	232	
D 3 13C5-PFPeA										
267.7 > 222.6	2.770	2.770	0.0	1.000	331442	49.8		99.5	2244	
4 Perfluoropentanoic acid										
262.9 > 218.8	2.770	2.770	0.0	1.000	377752	46.1		92.3	540	
6 Perfluorobutanesulfonic acid										
298.9 > 80.0	2.851	2.845	0.006	1.000	165434	44.7		101	379	
D 5 13C3-PFBS										
302.0 > 79.8	2.851	2.845	0.006	1.000	204473	46.4		99.8	534	
8 Perfluorohexanoic acid										
312.8 > 268.6	3.201	3.209	-0.008	0.996	382484	43.3		86.7	1356	
D 7 13C2 PFHxA										
314.8 > 269.6	3.214	3.211	0.003	1.000	393360	50.6		101	2335	
D 10 13C4-PFHpA										
366.9 > 321.8	3.748	3.757	-0.009	1.000	415670	46.5		93.1	336	
11 Perfluoroheptanoic acid										
362.9 > 318.8	3.748	3.759	-0.011	1.000	473780	52.3		105	19188	
D 13 18O2 PFHxS										
402.9 > 83.8	3.793	3.800	-0.007	1.000	203817	48.4		102	874	
12 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.793	3.806	-0.013	1.000	174695	39.3		86.4	366	M
15 Sodium 1H,1H,2H,2H-perfluorooctane										
426.6 > 406.6	4.393	4.387	0.006	1.000	56894	45.5		95.9	1599	
D 14 M2-6:2FTS										
428.6 > 408.6	4.393	4.387	0.006	1.000	58485	49.5		104	688	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 49 13C2-PFOA										
414.9 > 369.8	4.430	4.443	-0.013		358996	50.0			2000	
D 17 13C4 PFOA										
416.9 > 371.8	4.449	4.446	0.003	1.000	320845	46.9		93.9	885	
16 Perfluorooctanoic acid										
412.9 > 368.8	4.449	4.449	0.0	1.000	333572	45.3		90.7	910	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.486	4.493	-0.007	0.859	205369	48.4		102	815	
D 21 13C5 PFNA										
467.8 > 422.8	5.195	5.209	-0.014	1.000	413969	46.0		92.0	968	
19 Perfluorononanoic acid										
462.8 > 418.8	5.209	5.206	0.003	1.003	403969	49.5		98.9	4807	
D 22 13C4 PFOS										
502.8 > 79.8	5.222	5.229	-0.007	1.000	211611	46.4		97.1	1138	
20 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.236	5.236	0.0	1.003	232025	47.2		102	533	M
D 23 M2-8:2FTS										
528.8 > 508.8	5.974	5.974	0.0	1.000	121996	49.9		104	1111	
24 Sodium 1H,1H,2H,2H-perfluorodecane										
526.8 > 506.5	5.974	5.982	-0.008	1.000	106028	47.8		99.8	1126	
D 25 13C2 PFDA										
514.9 > 469.5	5.999	5.998	0.001	1.000	653436	49.8		99.7	2230	
26 Perfluorodecanoic acid										
512.9 > 468.5	5.999	6.002	-0.003	1.000	621045	45.9		91.9	1154	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.349	6.346	0.003	1.000	149736	54.2		108	494	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.349	6.352	-0.003	1.000	156674	41.0		81.9	820	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.706	6.711	-0.005	1.000	113634	48.1		96.2	1555	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.721	6.727	-0.006	1.002	117127	45.9		91.7	2451	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.748	6.748	0.0	1.292	226488	48.6		101	4204	
D 33 13C2 PFUnA										
564.8 > 519.8	6.762	6.755	0.007	1.000	553283	46.1		92.3	4361	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.762	6.758	0.004	1.000	617692	50.1		100	1974	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	6.931	6.931	0.0	1.000	493661	48.3		96.6	2085	
D 35 13C8 FOSA										
505.8 > 77.8	6.931	6.933	-0.002	1.000	489846	48.6		97.2	1958	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.429	7.429	0.0	1.000	665965	51.9		104	2806	
D 36 13C2 PFDoA										
614.8 > 569.6	7.429	7.433	-0.004	1.000	676599	46.7		93.5	3964	
40 Perfluorotridecanoic acid										
662.8 > 618.6	8.046	8.050	-0.004	1.083	687420	50.6		101	2176	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2-PFTeDA										
714.8 > 669.6	8.590	8.590	0.0	1.000	678162	46.2		92.3	773	
44 Perfluorotetradecanoic acid										
712.8 > 668.6	8.590	8.593	-0.003	1.000	643890	52.6		105	1119	
712.8 > 168.8	8.590	8.593	-0.003	1.000	126361		5.10(0.00-0.00)	105	1097	
712.8 > 218.8	8.605	8.593	0.012	1.002	74798		8.61(0.00-0.00)	105	709	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFAS21-L5_00003 Amount Added: 100.00 Units: uL

Report Date: 08-Jun-2018 09:03:40 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A10.d

Injection Date: 06-Jun-2018 19:05:55 Instrument ID: LC410

Lims ID: IC

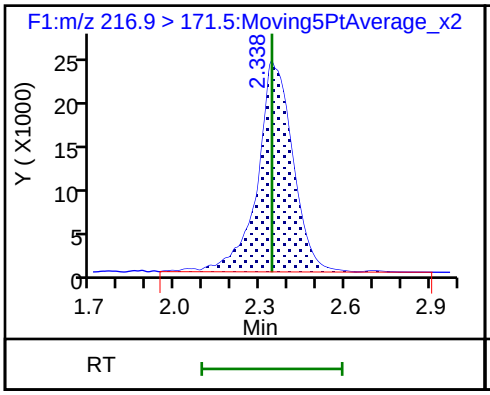
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 10

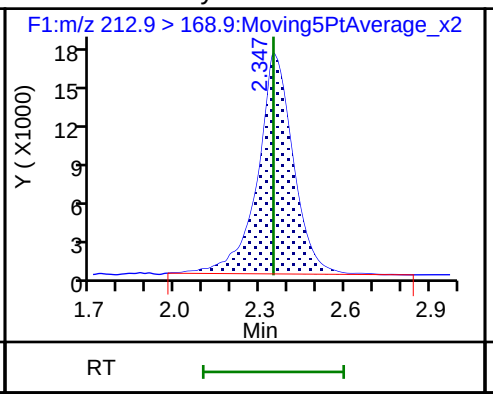
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

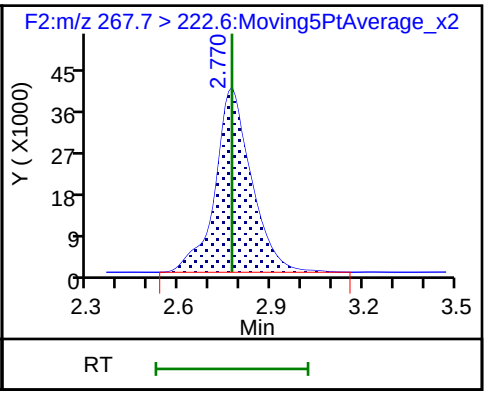
D 2 13C4 PFBA



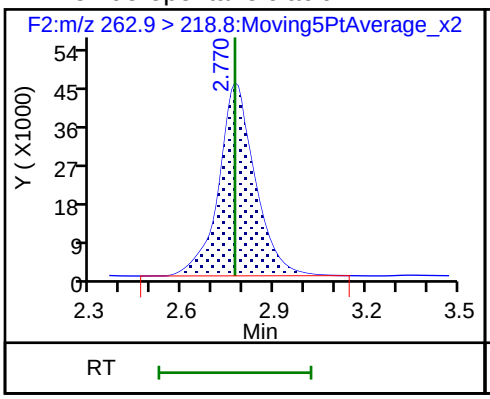
1 Perfluorobutyric acid



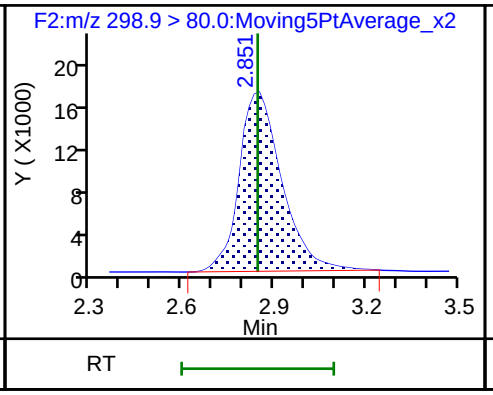
D 3 13C5-PFPeA



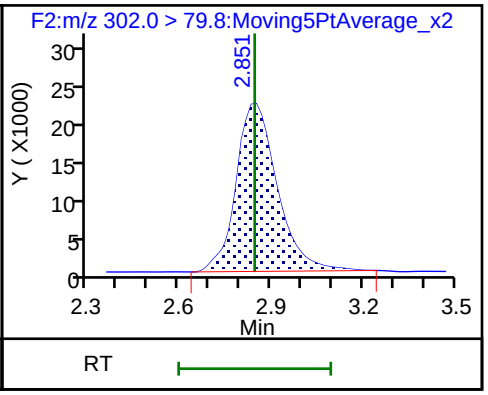
4 Perfluoropentanoic acid



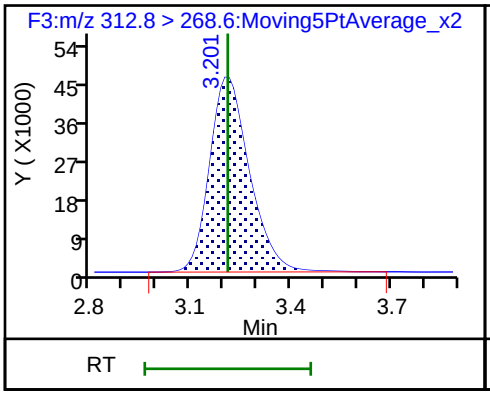
6 Perfluorobutanesulfonic acid



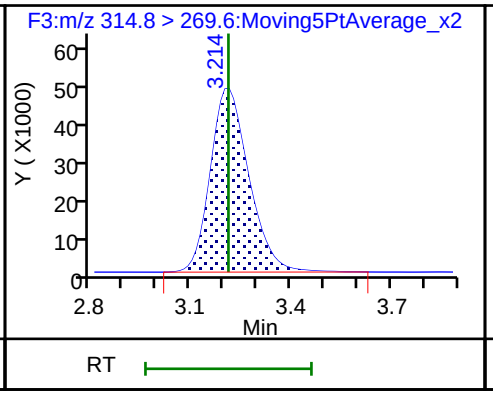
D 5 13C3-PFBS



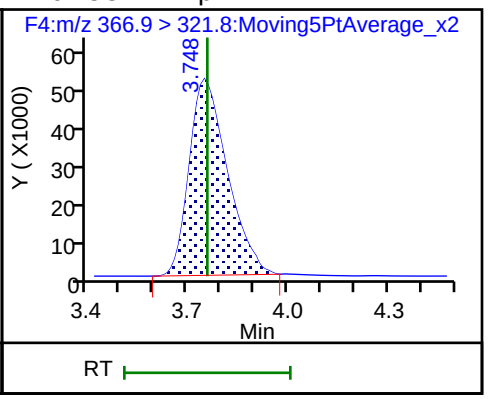
8 Perfluorohexanoic acid



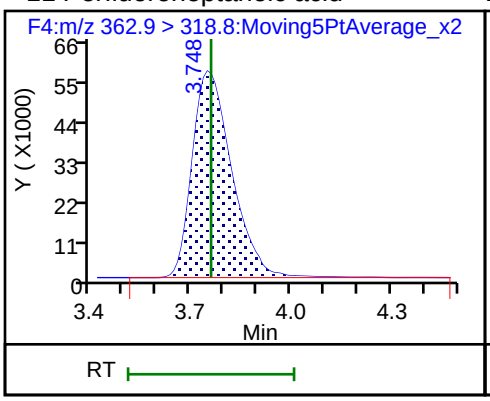
D 7 13C2 PFHxA



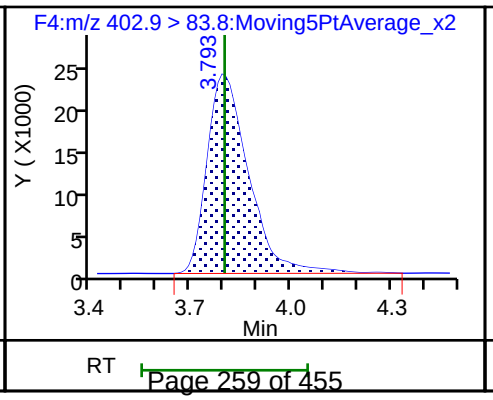
D 10 13C4-PFHpA



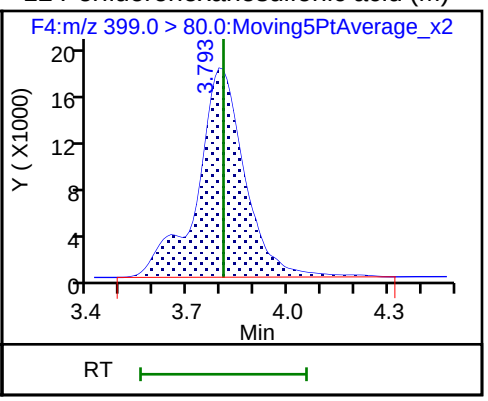
11 Perfluoroheptanoic acid



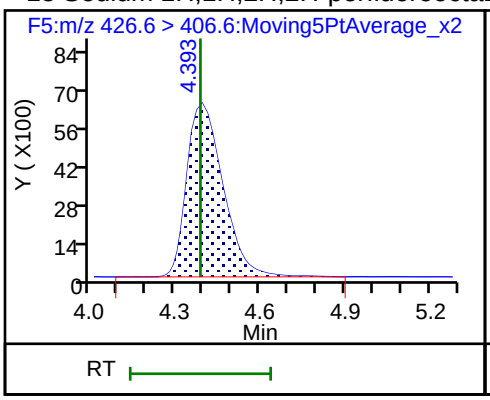
D 13 18O2 PFHxS



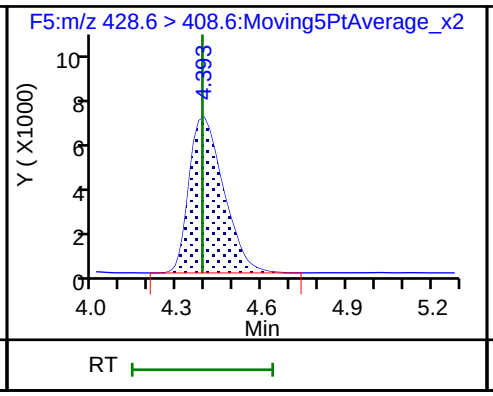
12 Perfluorohexanesulfonic acid (M)



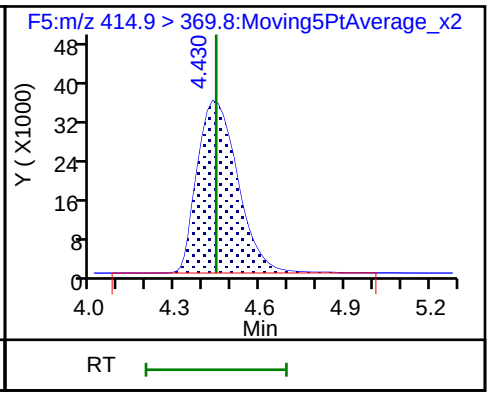
15 Sodium 1H,1H,2H,2H-perfluorooctane



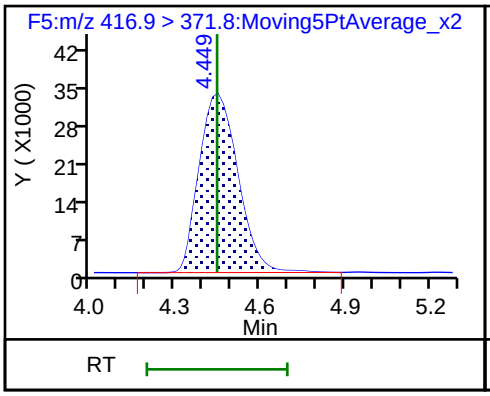
D 14 M2-6:2FTS



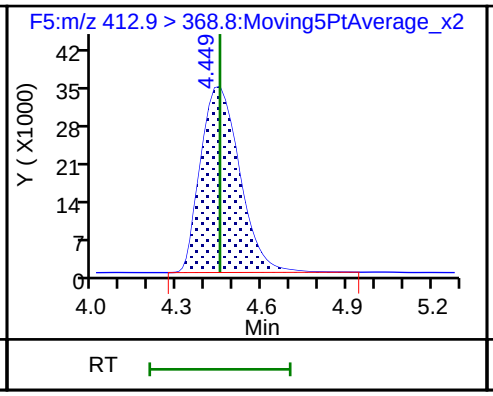
* 49 13C2-PFOA



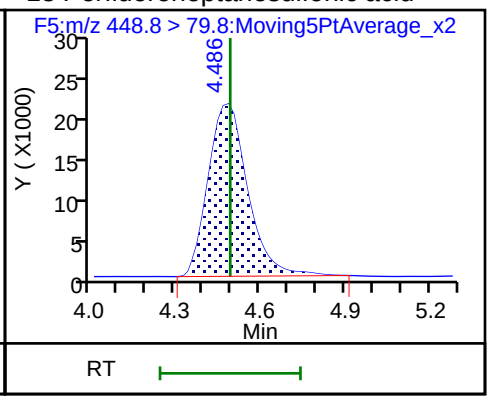
D 17 13C4 PFOA



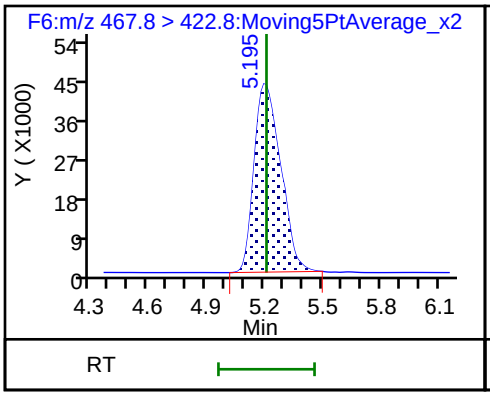
16 Perfluorooctanoic acid



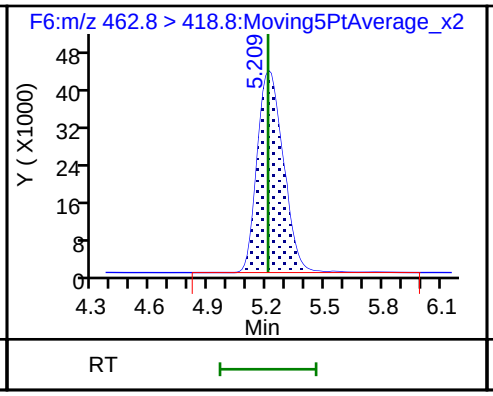
18 Perfluoroheptanesulfonic acid



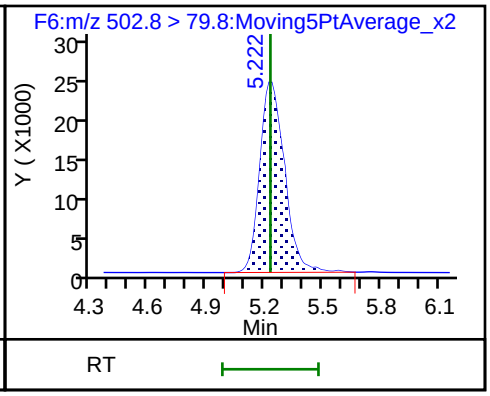
D 21 13C5 PFNA



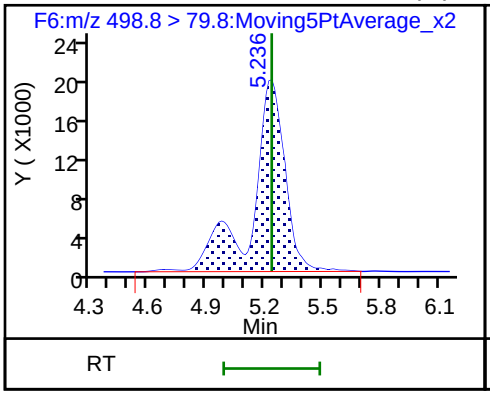
19 Perfluorononanoic acid



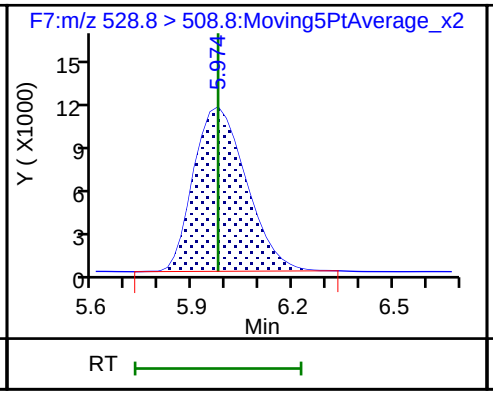
D 22 13C4 PFOS



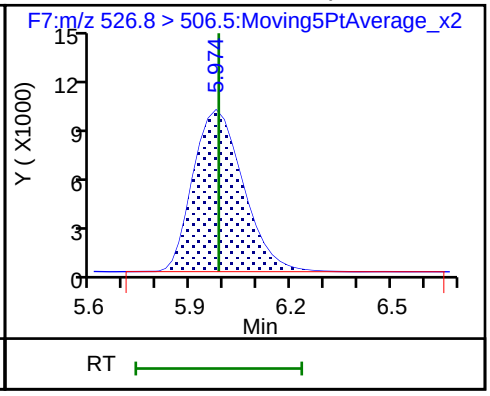
20 Perfluorooctane sulfonic acid (M)



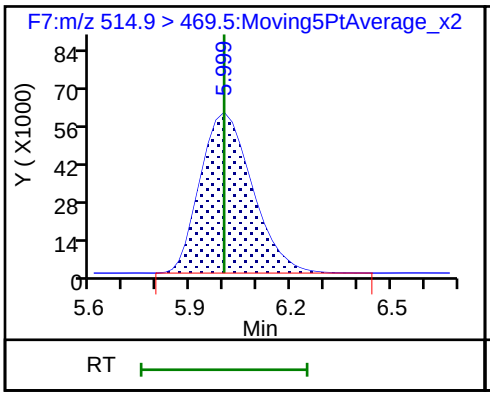
D 23 M2-8:2FTS



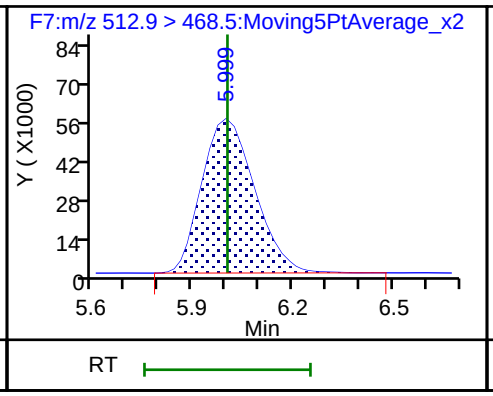
24 Sodium 1H,1H,2H,2H-perfluorodecane



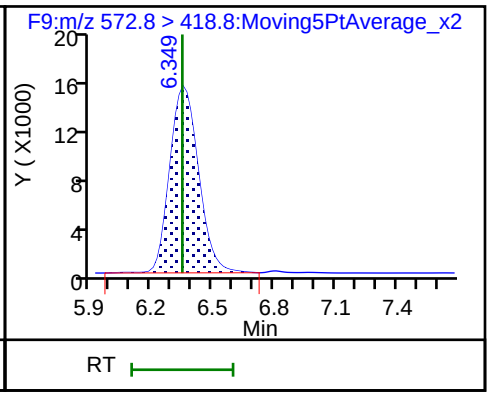
D 25 13C2 PFDA



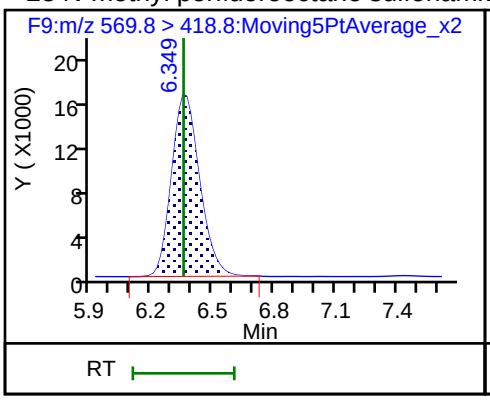
26 Perfluorodecanoic acid



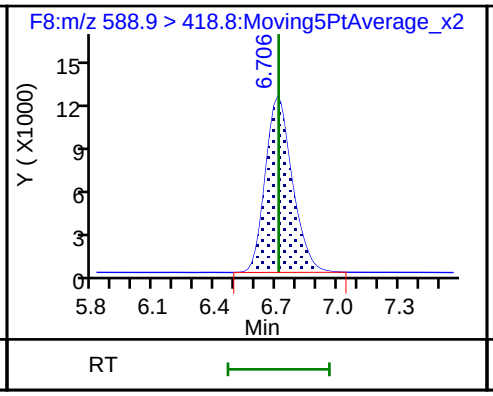
D 27 d3-NMeFOSAA



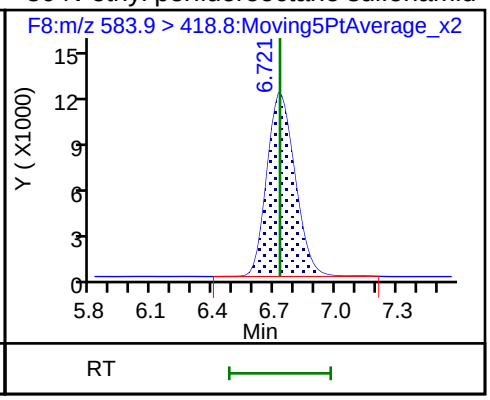
28 N-methyl perfluorooctane sulfonami



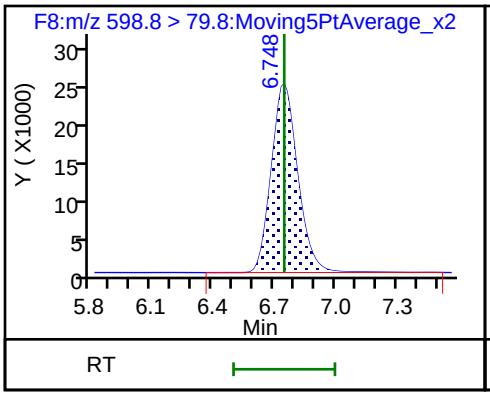
D 29 d5-NEtFOSAA



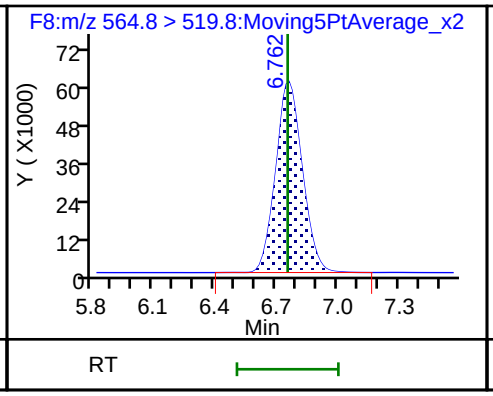
30 N-ethyl perfluorooctane sulfonamid



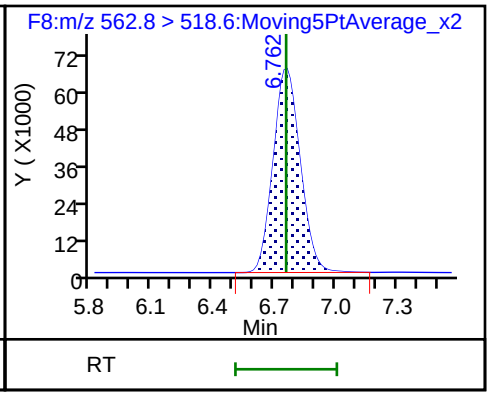
31 Perfluorodecane Sulfonic acid



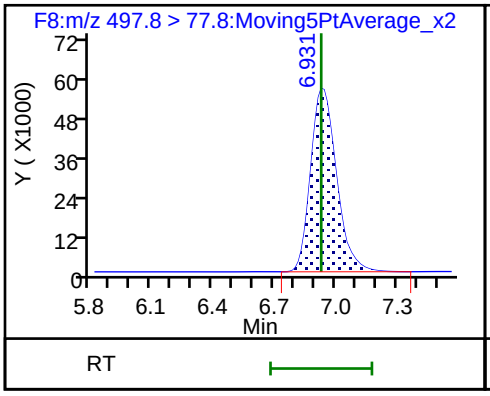
D 33 13C2 PFUnA



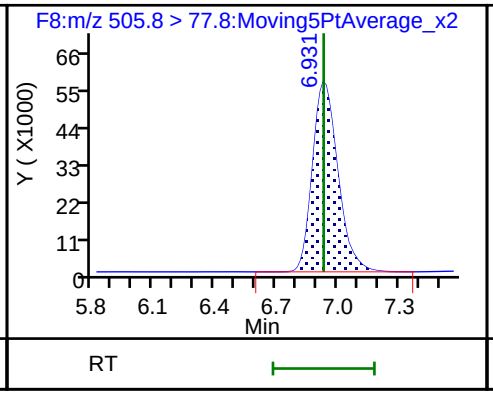
32 Perfluoroundecanoic acid



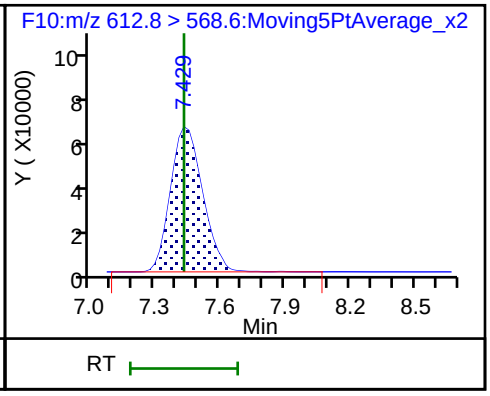
34 Perfluorooctane Sulfonamide



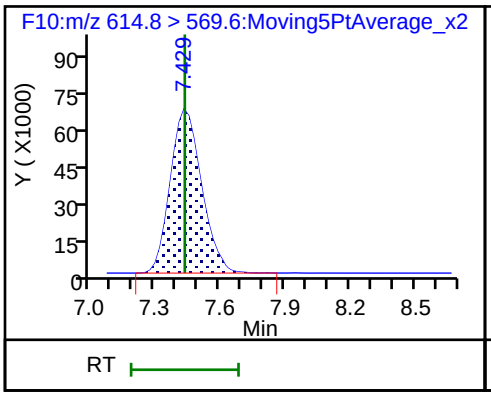
D 35 13C8 FOSA



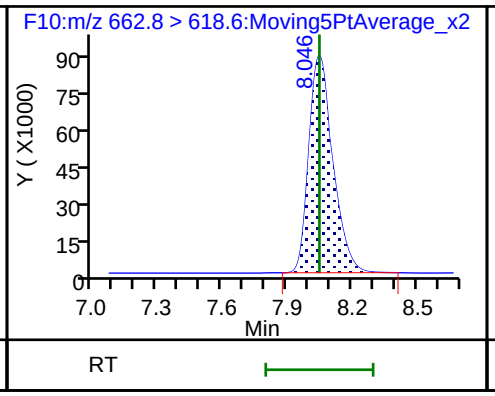
37 Perfluorododecanoic acid



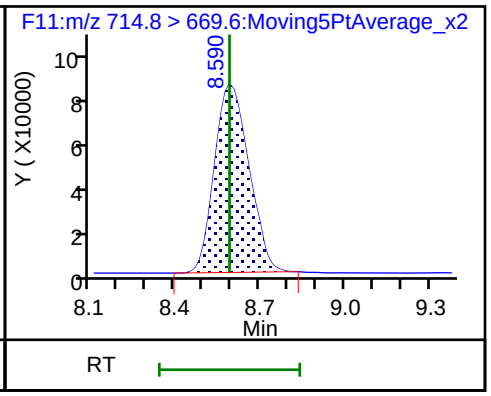
D 36 13C2 PFDoA



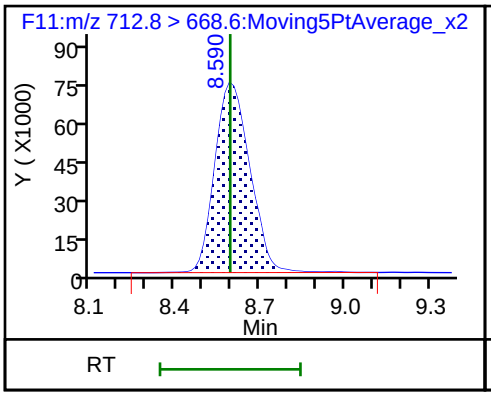
40 Perfluorotridecanoic acid



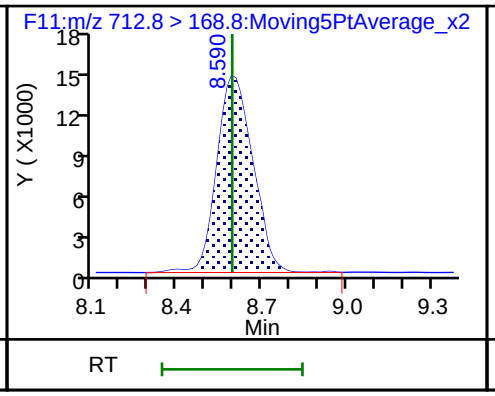
D 43 13C2-PFTeDA



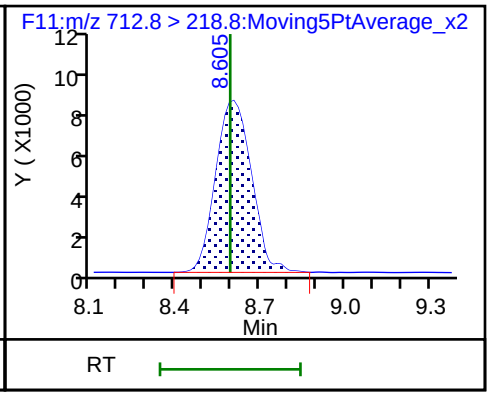
44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

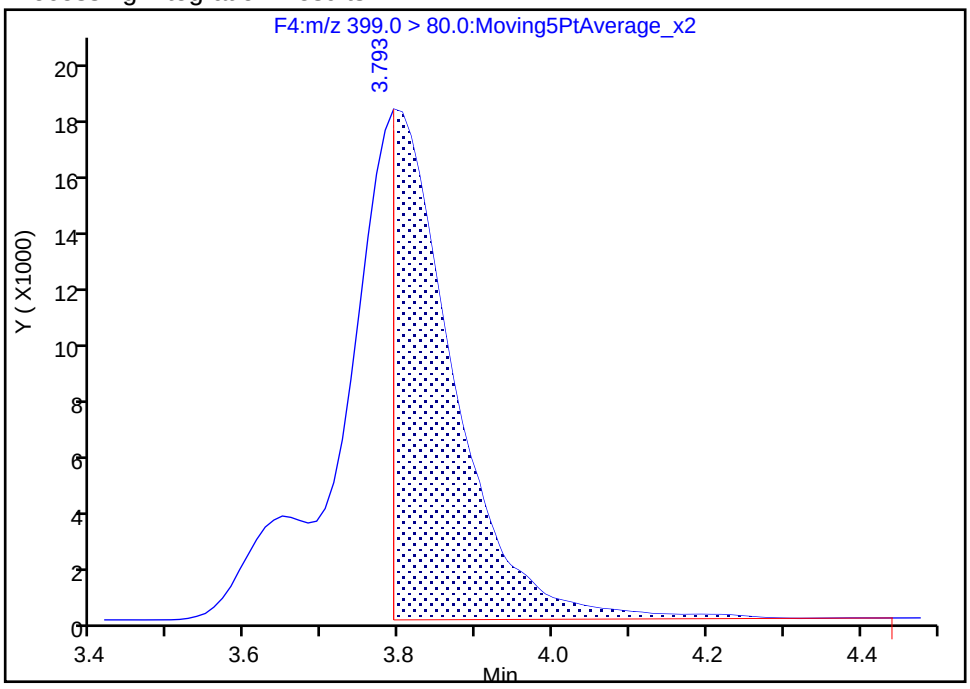
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A10.d
Injection Date: 06-Jun-2018 19:05:55 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

12 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

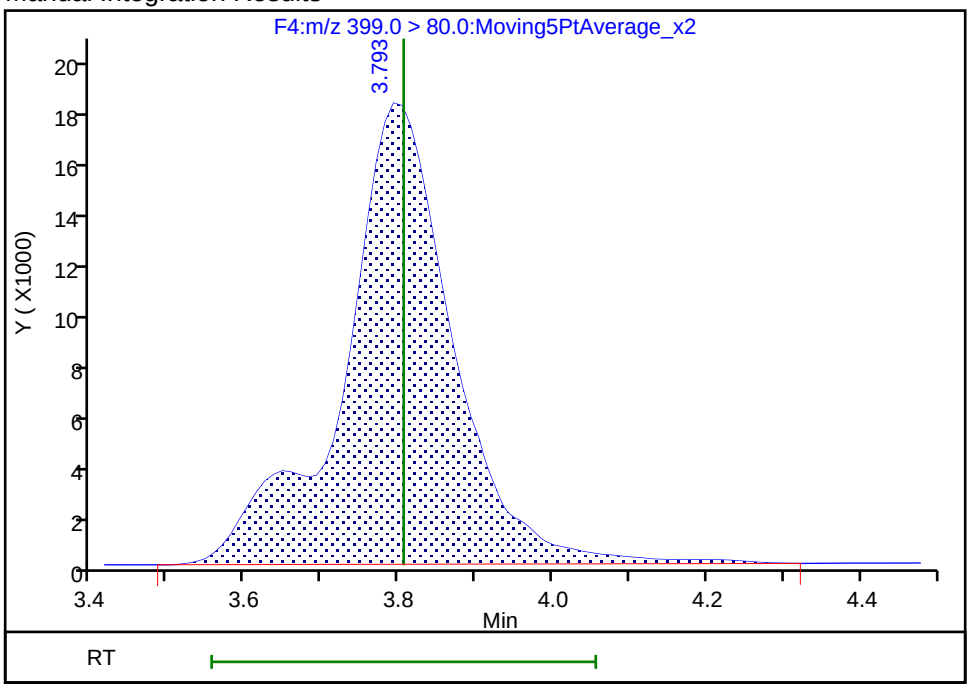
Processing Integration Results

RT: 3.79
Area: 94085
Amount: 28.143553
Amount Units: ng/ml



Manual Integration Results

RT: 3.79
Area: 174695
Amount: 39.333754
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:26:42
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

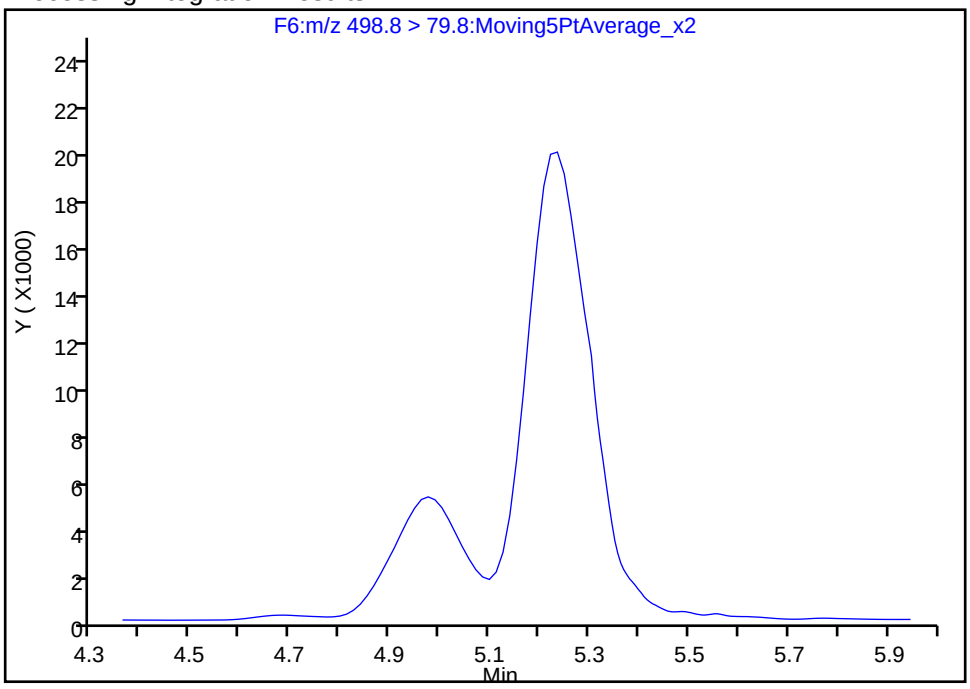
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A10.d
Injection Date: 06-Jun-2018 19:05:55 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 10
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

20 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

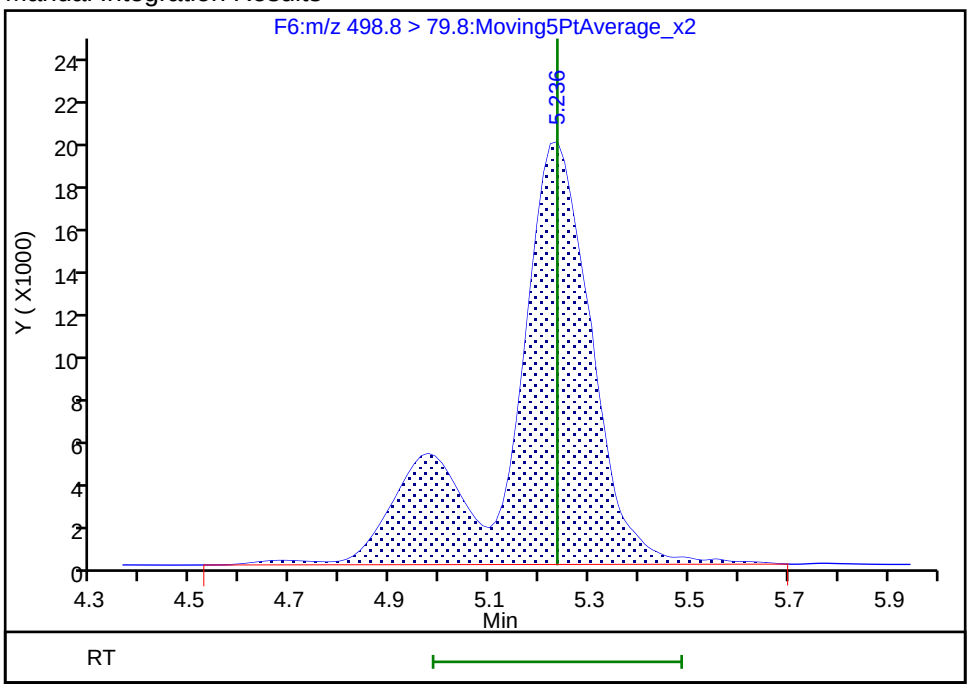
Not Detected
Expected RT: 5.24

Processing Integration Results



Manual Integration Results

RT: 5.24
Area: 232025
Amount: 47.163487
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:26:04
Audit Action: Manually Integrated Audit Reason: Missed Peak

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d
Lims ID: IC
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 06-Jun-2018 19:22:01 ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030801-011 IC 6
Misc. Info.: PFAS21 060618A ICAL
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 08-Jun-2018 09:03:44 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK015

First Level Reviewer: chirgwinb Date: 07-Jun-2018 08:28:34

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 2 13C4 PFBA										
216.9 > 171.5	2.343	2.341	0.002	1.000	177535	51.8		104	349	
1 Perfluorobutyric acid										M
212.9 > 168.9	2.343	2.346	-0.003	1.000	537847	204.4		102	283	M
D 3 13C5-PFPeA										
267.7 > 222.6	2.770	2.770	0.0	1.000	242890	48.2		96.5	3751	
4 Perfluoropentanoic acid										
262.9 > 218.8	2.770	2.770	0.0	1.000	1232903	204.8		102	2449	
6 Perfluorobutanesulfonic acid										
298.9 > 80.0	2.850	2.845	0.005	1.000	570824	219.5		124	1205	
D 5 13C3-PFBS										
302.0 > 79.8	2.850	2.845	0.005	1.000	143537	43.1		92.7	425	
8 Perfluorohexanoic acid										
312.8 > 268.6	3.201	3.209	-0.008	0.996	1369452	207.9		104	2857	
D 7 13C2 PFHxA										
314.8 > 269.6	3.214	3.211	0.003	1.000	291789	49.6		99.2	6945	
D 10 13C4-PFHpA										M
366.9 > 321.8	3.748	3.755	-0.007	1.000	311962	46.2		92.4	422	M
11 Perfluoroheptanoic acid										
362.9 > 318.8	3.748	3.759	-0.011	1.000	1441979	211.8		106	181189	
D 13 18O2 PFHxS										
402.9 > 83.8	3.793	3.800	-0.007	1.000	143153	45.0		95.0	413	
12 Perfluorohexanesulfonic acid										
399.0 > 80.0	3.804	3.806	-0.002	1.003	598777	190.3		105	918	
15 Sodium 1H,1H,2H,2H-perfluorooctane										
426.6 > 406.6	4.374	4.387	-0.013	1.000	198742	188.9		99.7	1025	
D 14 M2-6:2FTS										
428.6 > 408.6	4.374	4.387	-0.013	1.000	49328	55.2		116	357	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 49 13C2-PFOA										
414.9 > 369.8	4.430	4.443	-0.013		271417	50.0			768	
D 17 13C4 PFOA										
416.9 > 371.8	4.430	4.446	-0.016	1.000	222469	43.0		86.1	2103	
16 Perfluorooctanoic acid										
412.9 > 368.8	4.430	4.449	-0.019	1.000	1053154	205.9		103	6376	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.486	4.493	-0.007	0.859	661640	189.3		99.4	811	
D 21 13C5 PFNA										M
467.8 > 422.8	5.195	5.206	-0.011	1.000	307327	45.2		90.4	1636	M
19 Perfluorononanoic acid										
462.8 > 418.8	5.195	5.206	-0.011	1.000	1331168	218.9		109	1422	
D 22 13C4 PFOS										
502.8 > 79.8	5.222	5.229	-0.007	1.000	173996	50.5		106	848	
20 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.222	5.234	-0.012	1.000	800189	197.7		106	303	M
D 23 M2-8:2FTS										
528.8 > 508.8	5.974	5.974	0.0	1.000	111104	60.1		125	1310	
24 Sodium 1H,1H,2H,2H-perfluorodecane										
526.8 > 506.5	5.974	5.982	-0.008	1.000	322723	159.0		83.0	4174	
D 25 13C2 PFDA										
514.9 > 469.5	5.998	5.998	0.0	1.000	485959	49.0		98.1	3143	
26 Perfluorodecanoic acid										
512.9 > 468.5	5.998	6.002	-0.004	1.000	2159035	214.1		107	5556	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.331	6.346	-0.015	1.000	106077	50.8		102	989	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.349	6.352	-0.003	1.003	573266	210.0		105	2123	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.706	6.711	-0.005	1.000	75494	42.2		84.5	1267	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.720	6.727	-0.007	1.002	364870	214.0		107	3765	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.734	6.748	-0.014	1.290	779948	203.3		105	13294	
D 33 13C2 PFUnA										
564.8 > 519.8	6.748	6.755	-0.007	1.000	376162	41.5		83.0	5787	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.748	6.758	-0.010	1.000	1766235	210.4		105	8048	
34 Perfluorooctane Sulfonamide										M
497.8 > 77.8	6.931	6.931	0.0	1.000	1687455	203.4		102	1788	M
D 35 13C8 FOSA										
505.8 > 77.8	6.931	6.933	-0.002	1.000	395800	52.0		104	1431	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.429	7.429	0.0	1.000	2270316	204.6		102	6154	
D 36 13C2 PFDoA										
614.8 > 569.6	7.429	7.433	-0.004	1.000	584909	53.4		107	3088	
40 Perfluorotridecanoic acid										
662.8 > 618.6	8.038	8.050	-0.012	1.082	2219717	197.4		98.7	5341	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2-PFTeDA										
714.8 > 669.6	8.575	8.590	-0.015	1.000	561860	50.6		101	1642	
44 Perfluorotetradecanoic acid										
712.8 > 668.6	8.590	8.593	-0.003	1.002	2206162	218.2		109	1253	
712.8 > 168.8	8.590	8.593	-0.003	1.002	467024		4.72(0.00-0.00)	109	5239	
712.8 > 218.8	8.590	8.593	-0.003	1.002	270029		8.17(0.00-0.00)	109	861	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFAS21-L6_00002 Amount Added: 100.00 Units: uL

Report Date: 08-Jun-2018 09:03:44 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Injection Date: 06-Jun-2018 19:22:01 Instrument ID: LC410

Lims ID: IC

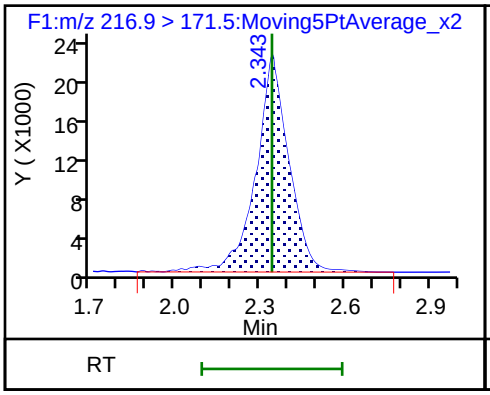
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 11

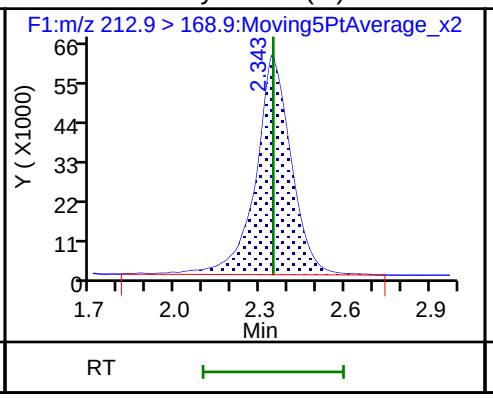
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

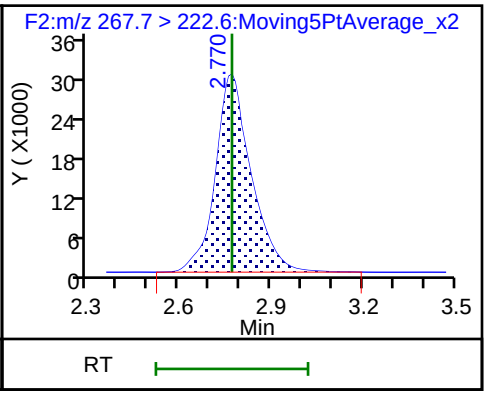
D 2 13C4 PFBA



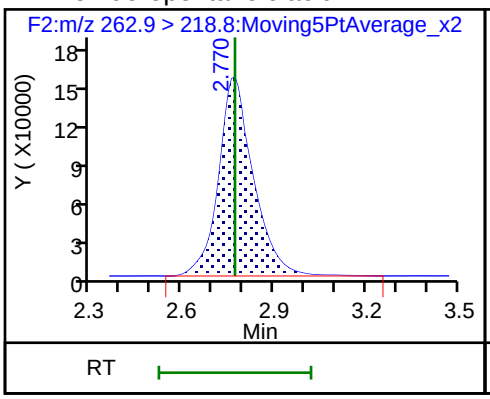
1 Perfluorobutyric acid (M)



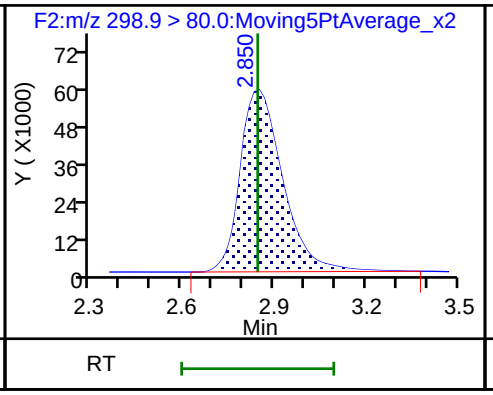
D 3 13C5-PFPeA



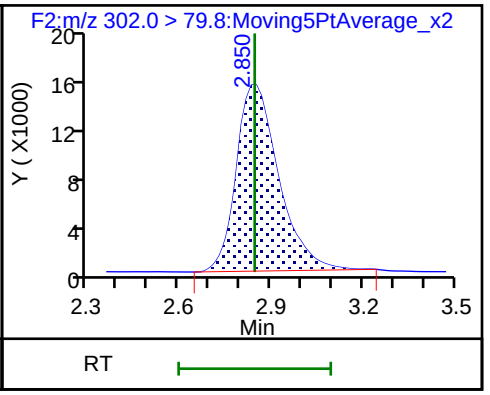
4 Perfluoropentanoic acid



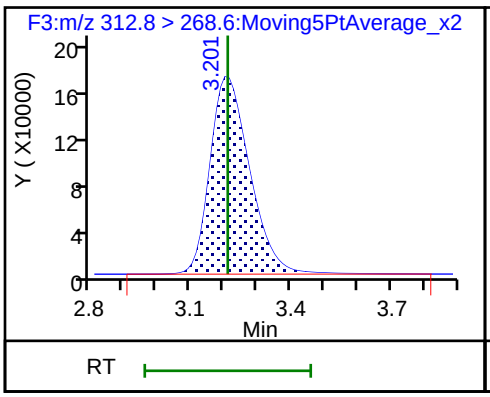
6 Perfluorobutanesulfonic acid



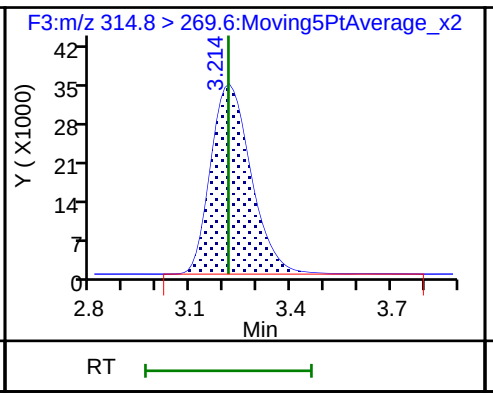
D 5 13C3-PFBS



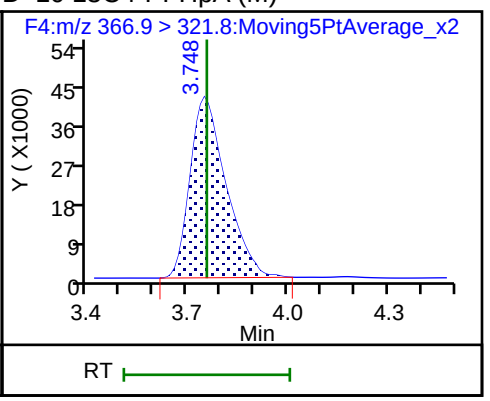
8 Perfluorohexanoic acid



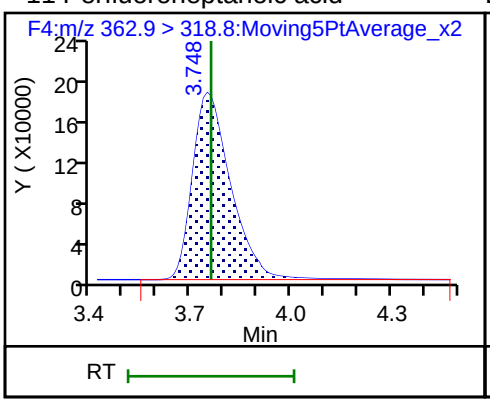
D 7 13C2 PFHxA



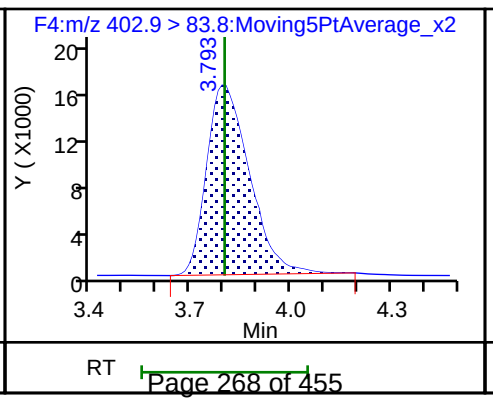
D 10 13C4-PFHpA (M)



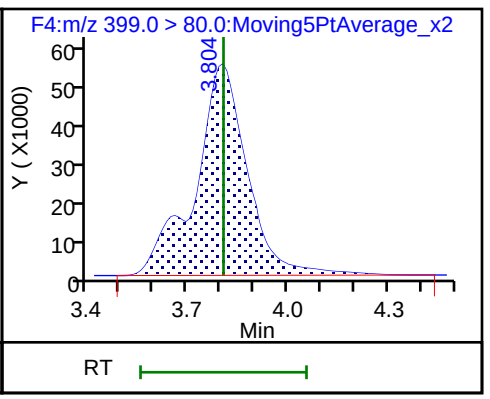
11 Perfluoroheptanoic acid



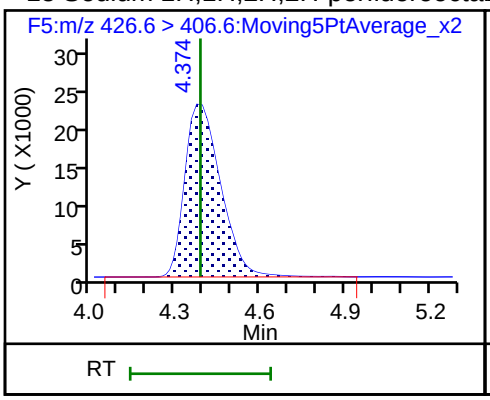
D 13 18O2 PFHxS



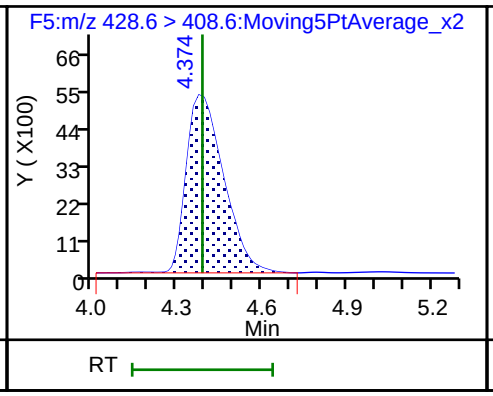
12 Perfluorohexanesulfonic acid



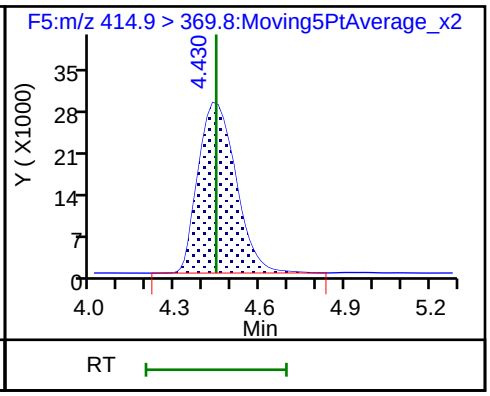
15 Sodium 1H,1H,2H,2H-perfluorooctane



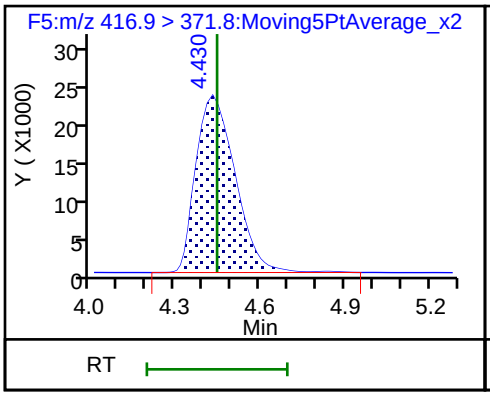
D 14 M2-6:2FTS



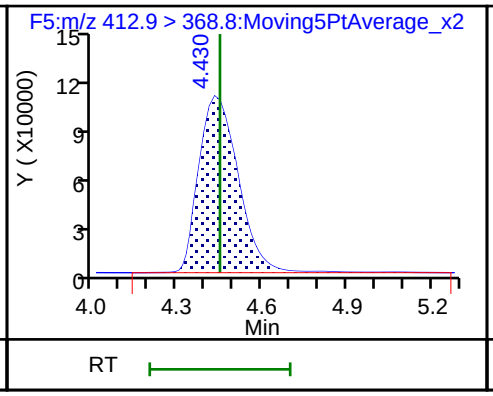
* 49 13C2-PFOA



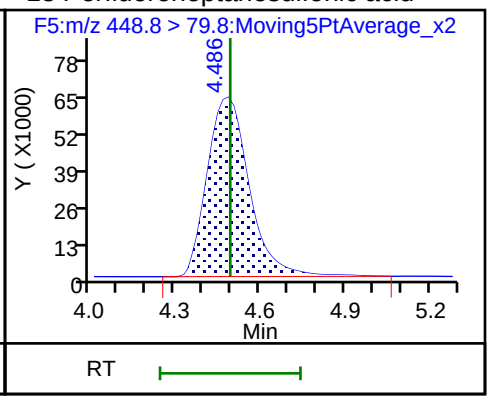
D 17 13C4 PFOA



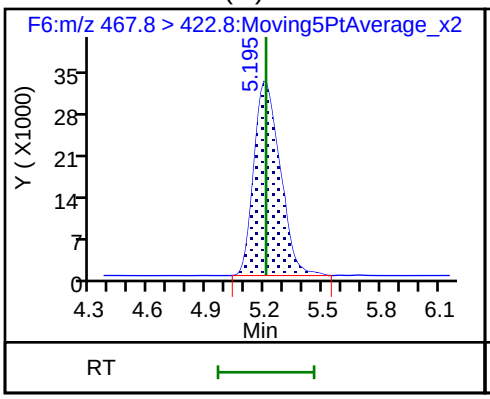
16 Perfluorooctanoic acid



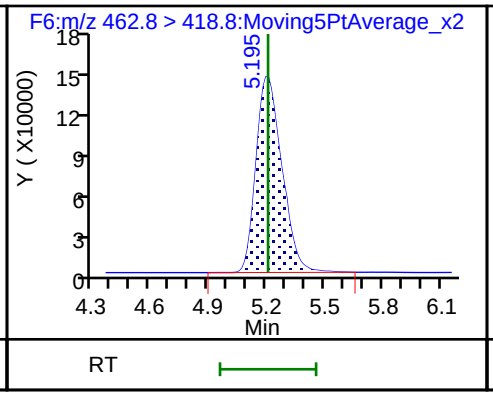
18 Perfluoroheptanesulfonic acid



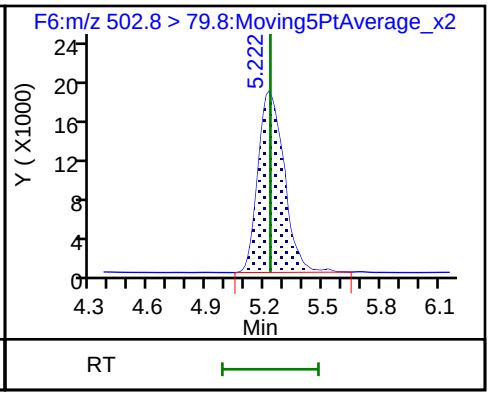
D 21 13C5 PFNA (M)



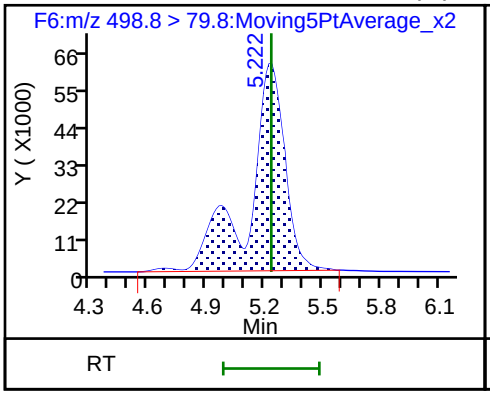
19 Perfluorononanoic acid



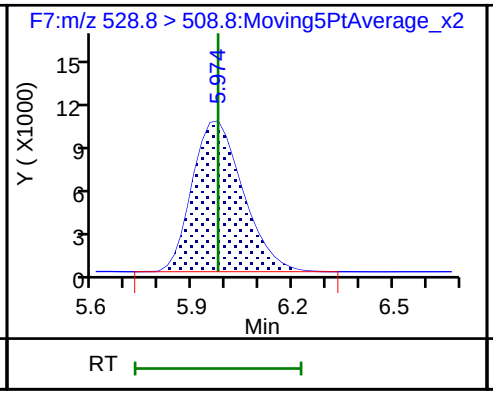
D 22 13C4 PFOS



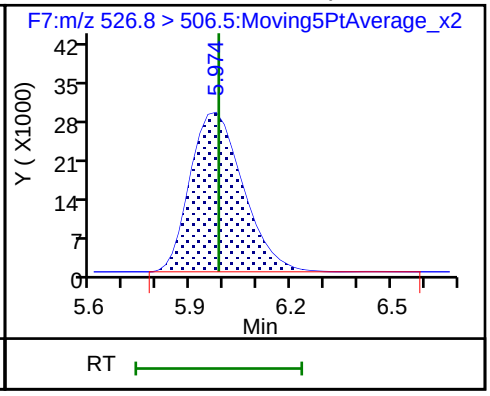
20 Perfluorooctane sulfonic acid (M)



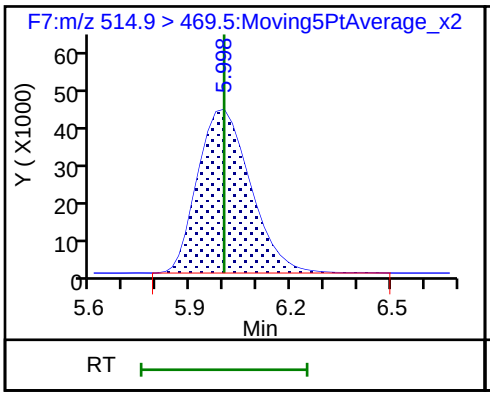
D 23 M2-8:2FTS



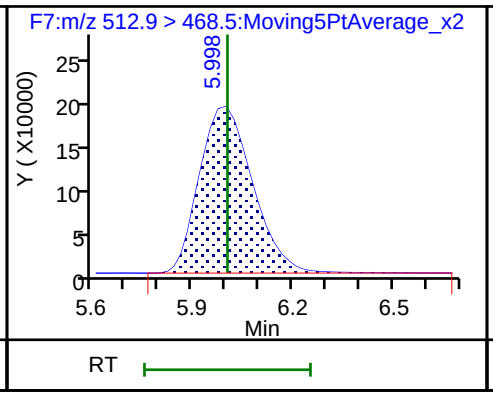
24 Sodium 1H,1H,2H,2H-perfluorodecane



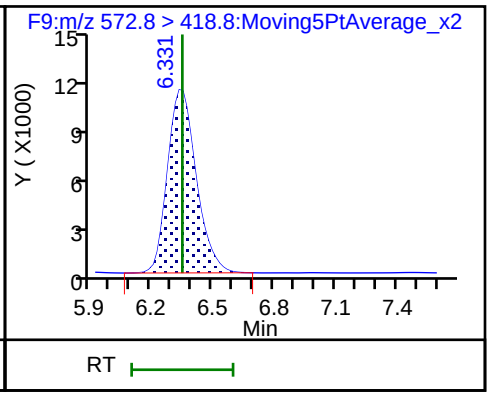
D 25 13C2 PFDA



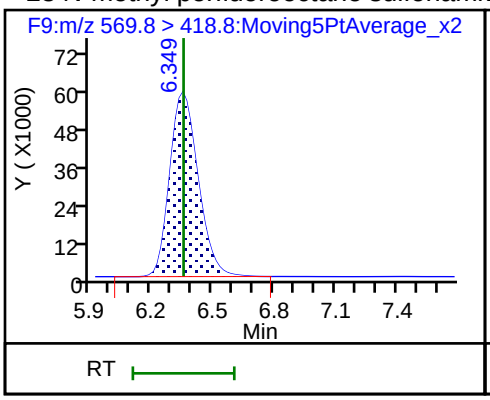
26 Perfluorodecanoic acid



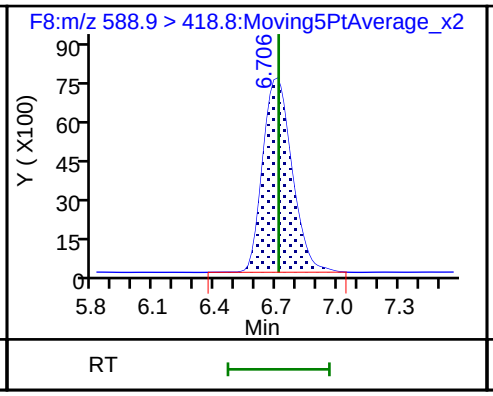
D 27 d3-NMeFOSAA



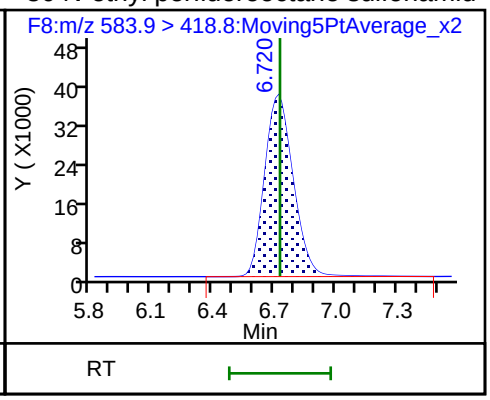
28 N-methyl perfluorooctane sulfonami



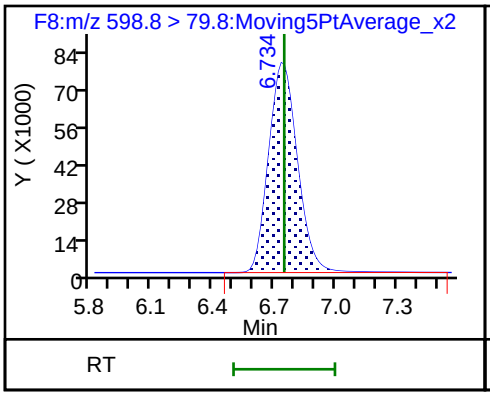
D 29 d5-NEtFOSAA



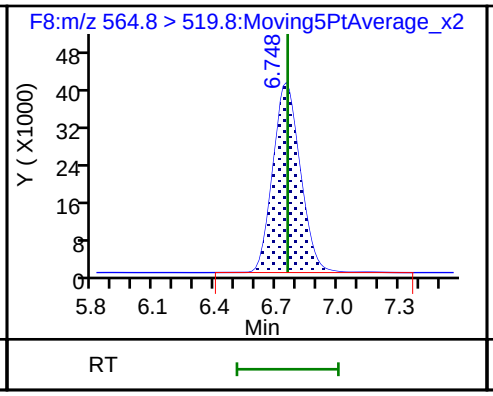
30 N-ethyl perfluorooctane sulfonamid



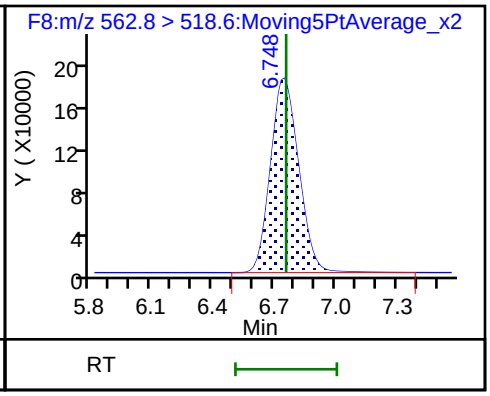
31 Perfluorodecane Sulfonic acid



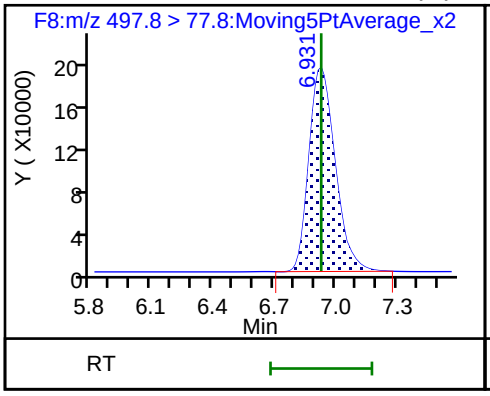
D 33 13C2 PFUnA



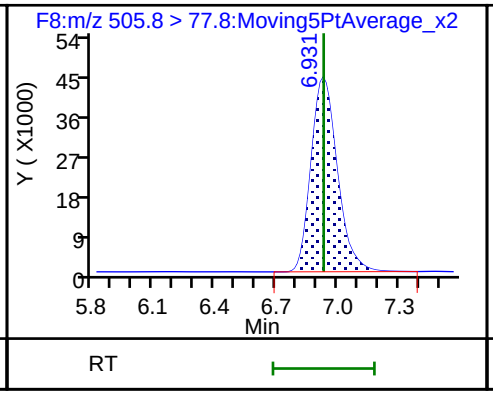
32 Perfluoroundecanoic acid



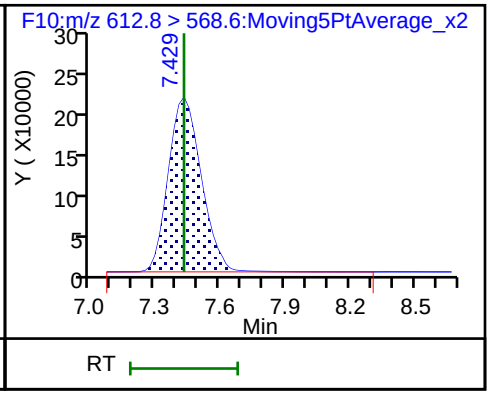
34 Perfluorooctane Sulfonamide (M)



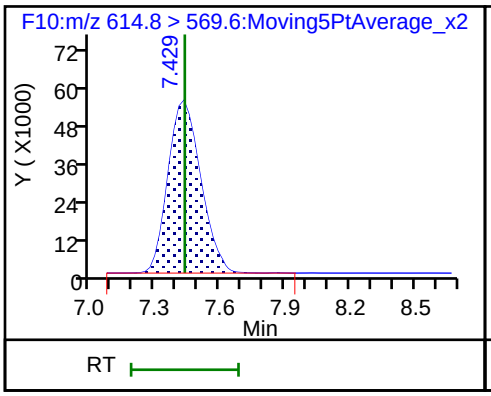
D 35 13C8 FOSA



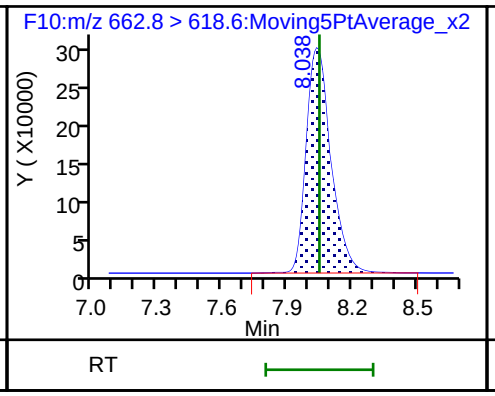
37 Perfluorododecanoic acid



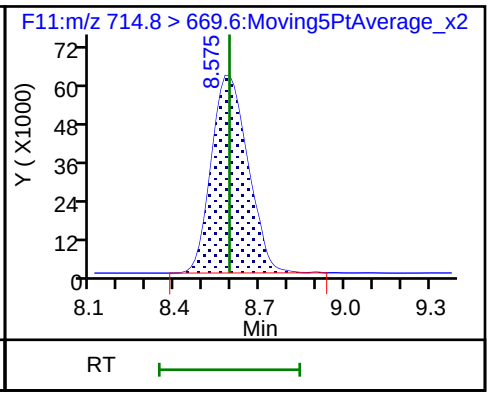
D 36 13C2 PFDoA



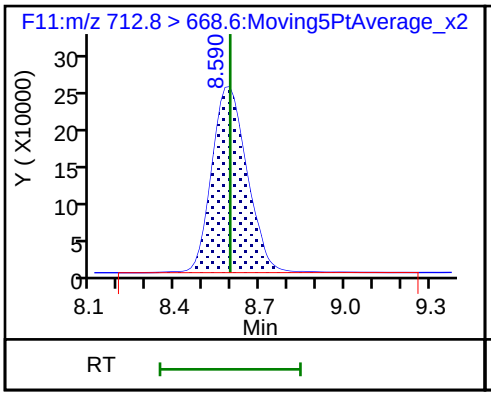
40 Perfluorotridecanoic acid



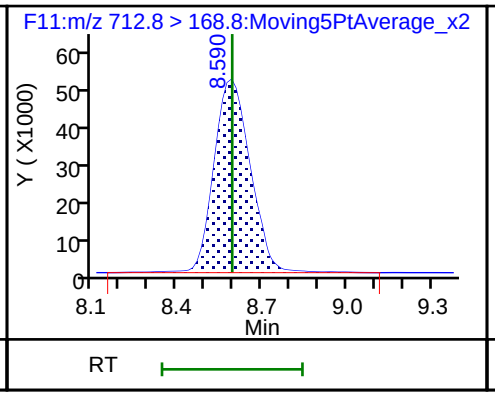
D 43 13C2-PFTeDA



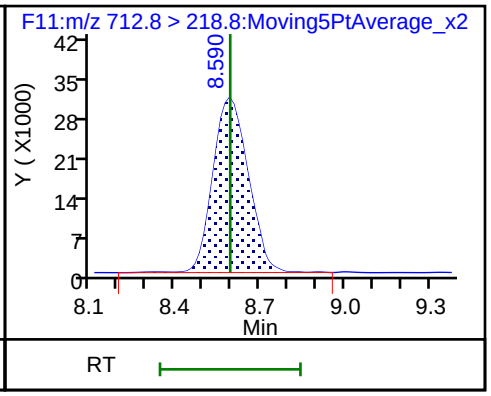
44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

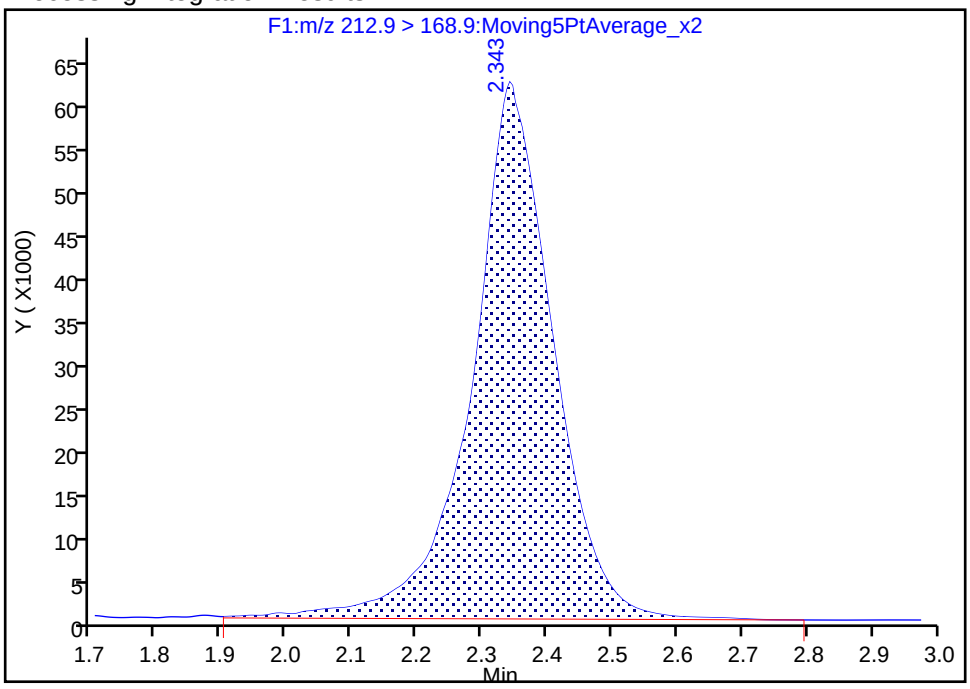
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d
Injection Date: 06-Jun-2018 19:22:01 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

1 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

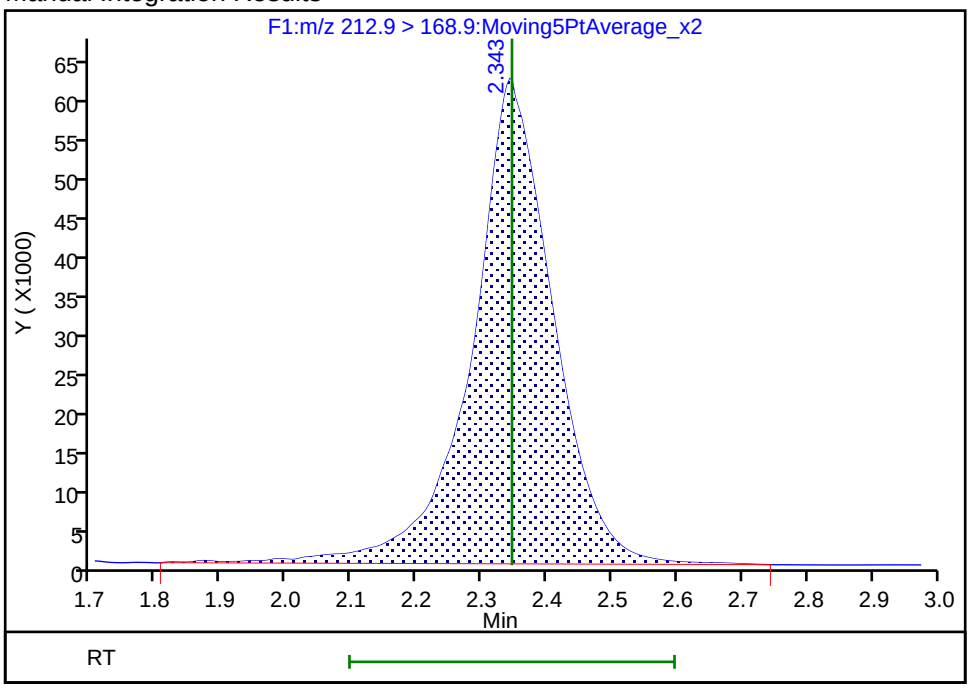
Processing Integration Results

RT: 2.34
Area: 537744
Amount: 204.3601
Amount Units: ng/ml



Manual Integration Results

RT: 2.34
Area: 537847
Amount: 204.3691
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:27:38
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

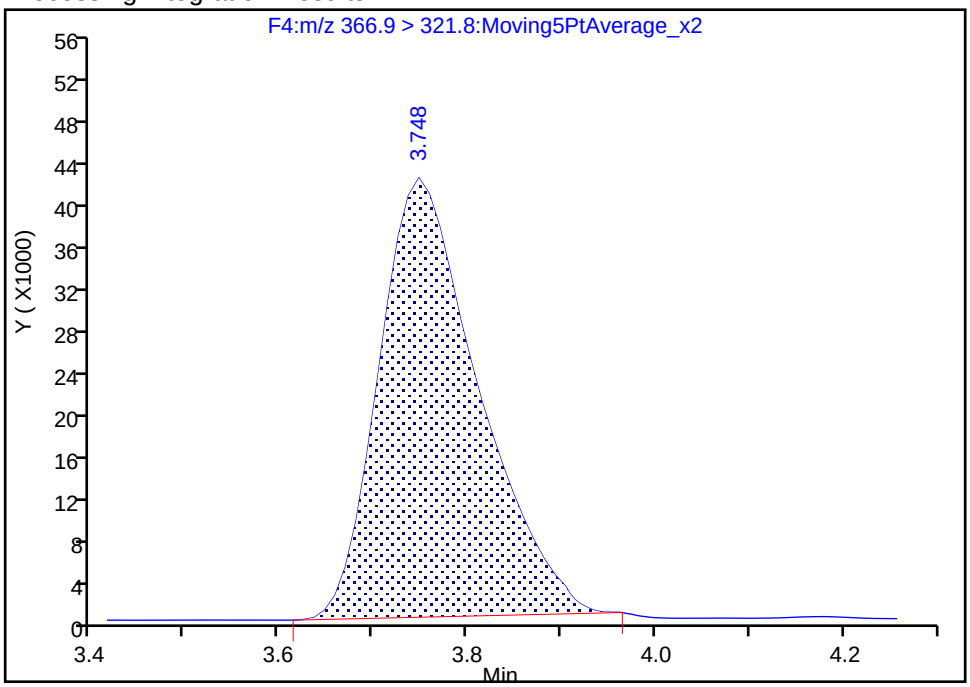
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d
Injection Date: 06-Jun-2018 19:22:01 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 10 13C4-PFHpA, CAS: STL01892

Signal: 1

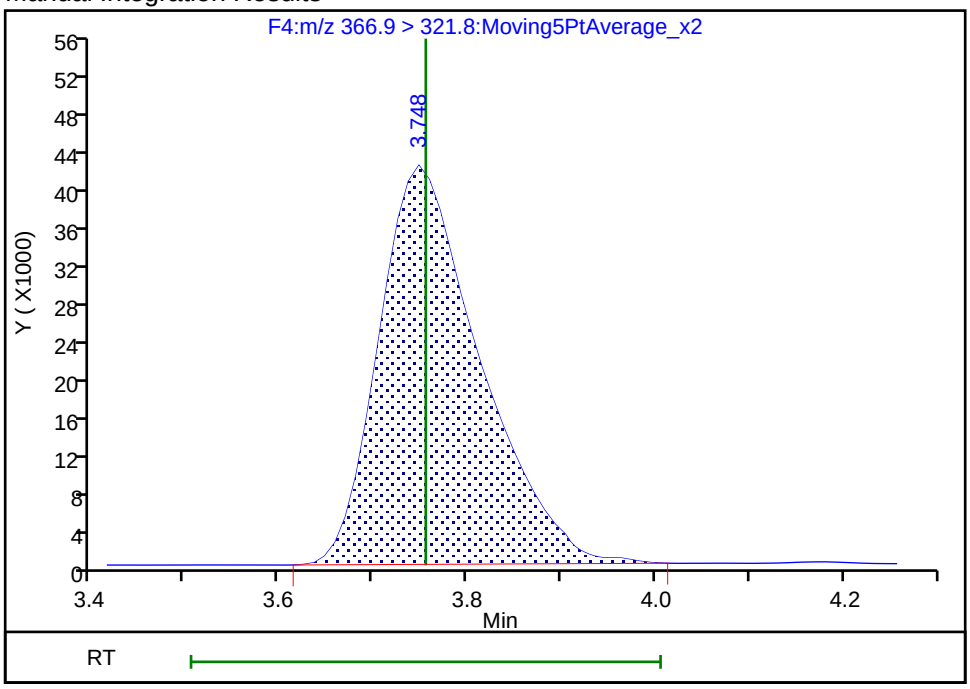
Processing Integration Results

RT: 3.75
Area: 305650
Amount: 45.402313
Amount Units: ng/ml



Manual Integration Results

RT: 3.75
Area: 311962
Amount: 46.195542
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:27:54
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

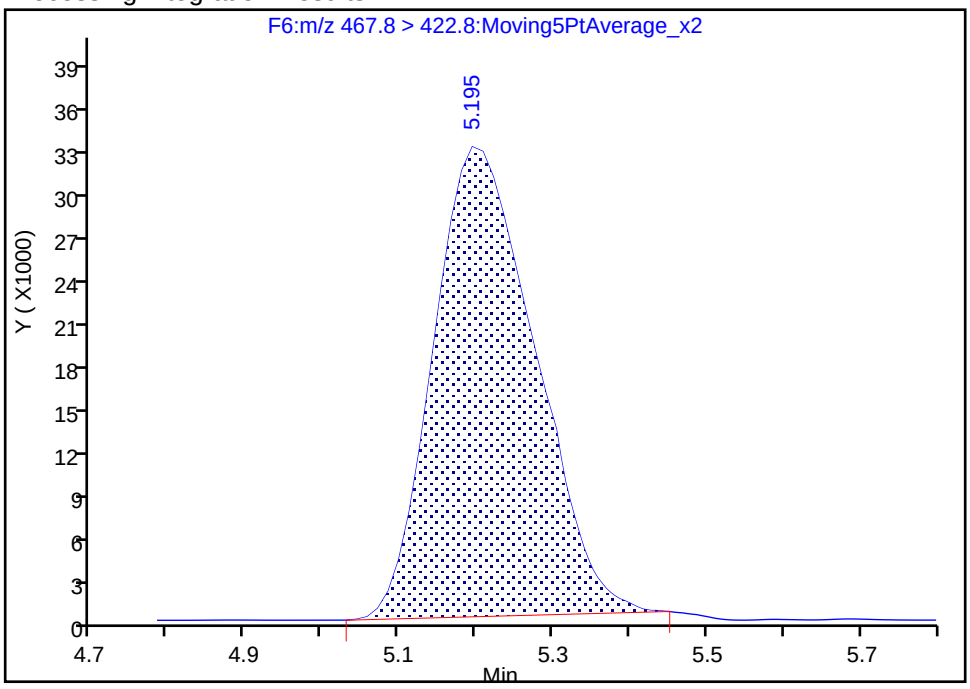
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d
Injection Date: 06-Jun-2018 19:22:01 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

D 21 13C5 PFNA, CAS: STL00995

Signal: 1

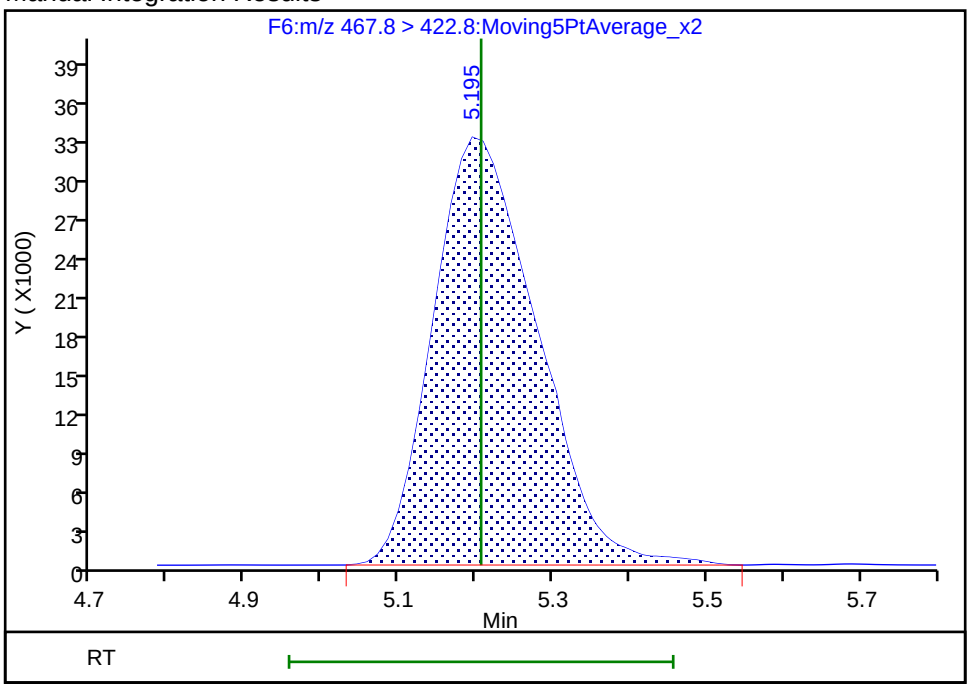
Processing Integration Results

RT: 5.19
Area: 298369
Amount: 44.054897
Amount Units: ng/ml



Manual Integration Results

RT: 5.19
Area: 307327
Amount: 45.178380
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:28:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

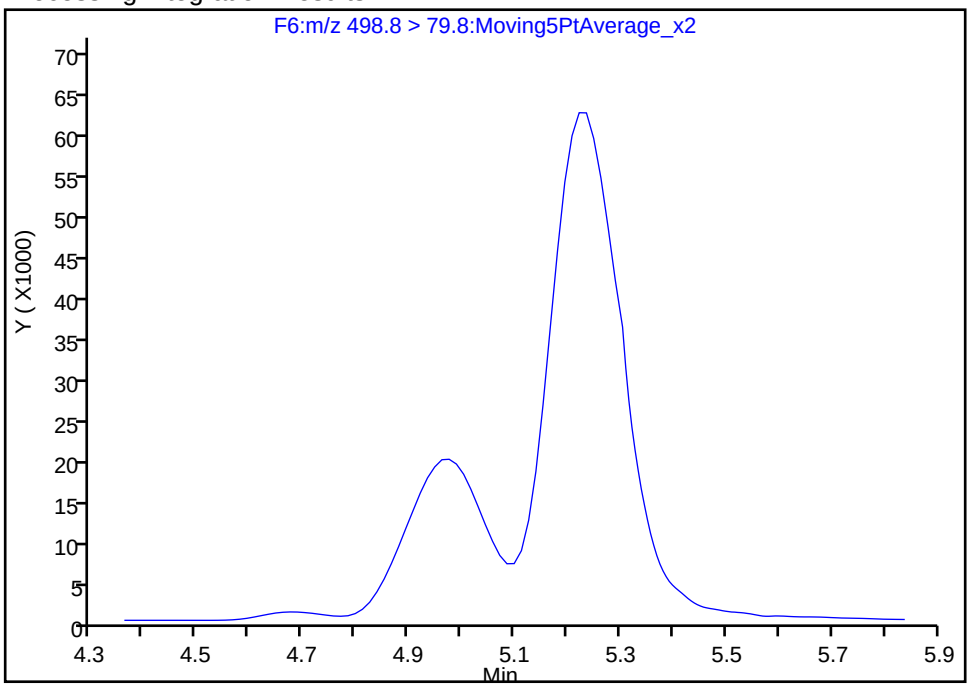
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d
Injection Date: 06-Jun-2018 19:22:01 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

20 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

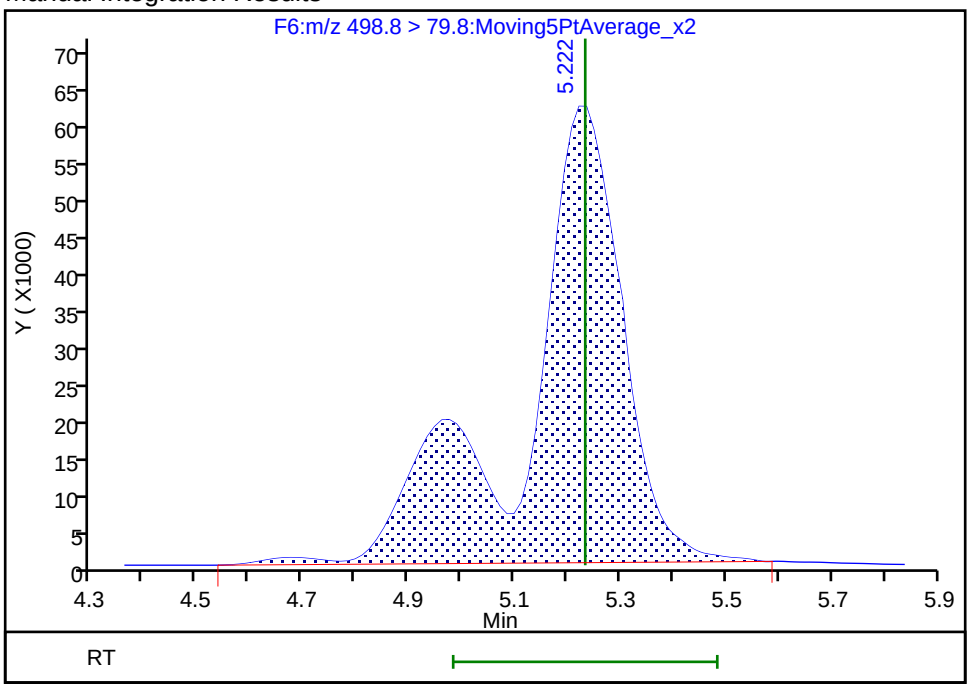
Not Detected
Expected RT: 5.23

Processing Integration Results



Manual Integration Results

RT: 5.22
Area: 800189
Amount: 197.6522
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:27:24
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

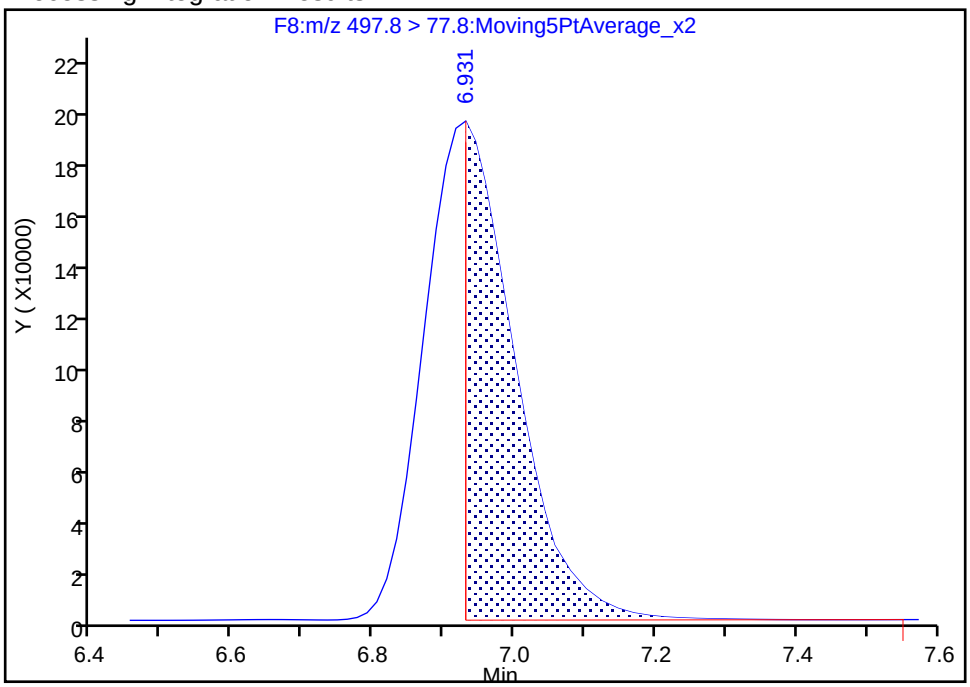
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d
Injection Date: 06-Jun-2018 19:22:01 Instrument ID: LC410
Lims ID: IC
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 11
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

34 Perfluorooctane Sulfonamide, CAS: 754-91-6

Signal: 1

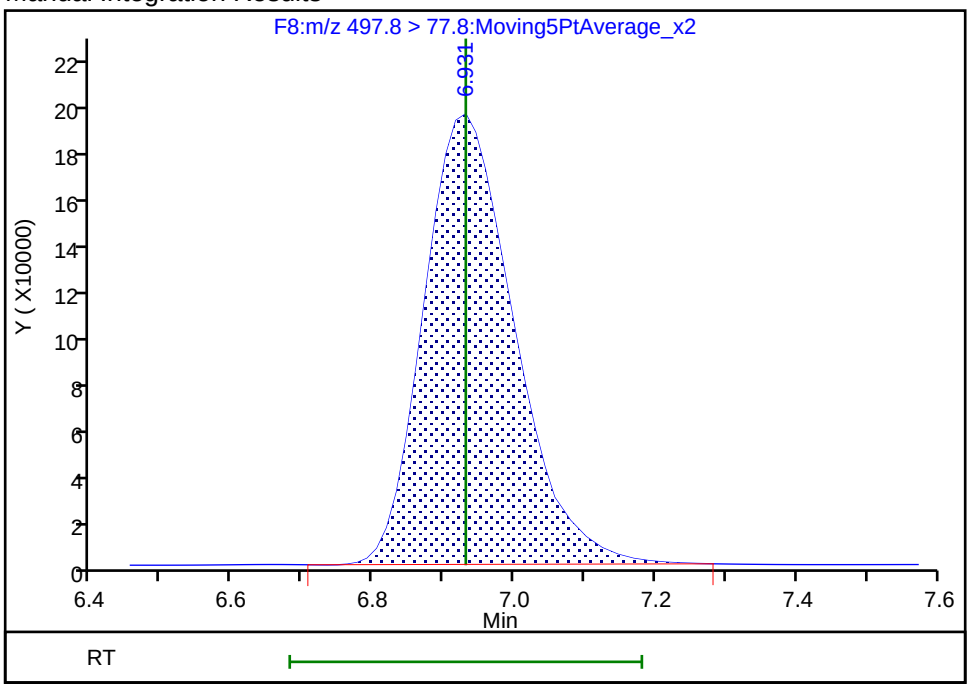
Processing Integration Results

RT: 6.93
Area: 927447
Amount: 134.7737
Amount Units: ng/ml



Manual Integration Results

RT: 6.93
Area: 1687455
Amount: 203.3648
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:28:18
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: ICV 200-130333/13 Calibration Date: 06/06/2018 19:54

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF060618A13.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	L1ID		0.7040		19110	20000	-4.5	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		1.460		23710	20000	18.6	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8425	0.8843		18560	17700	5.0	40.0
Perfluorohexanoic acid (PFHxA)	L1ID		1.088		19570	20000	-2.2	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.100		20300	20000	1.5	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.9565		17140	18200	-5.8	40.0
6:2 FTS	L1ID		0.9941		18430	19000	-2.8	40.0
Perfluorooctanoic acid (PFOA)	L1ID		1.071		18790	20000	-6.0	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	L1ID		0.9328		18660	19000	-2.0	50.0
Perfluorononanoic acid (PFNA)	L2ID		1.052		21420	20000	7.1	40.0
Perfluorooctanesulfonic acid (PFOS)	L2ID		1.151		19260	18600	3.8	40.0
8:2 FTS	L1ID		0.8539		19000	19200	-0.8	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9797		19040	20000	-4.8	40.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	L1ID		1.070		16980	20000	-15.1	40.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	L2ID		1.079		19390	20000	-3.1	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		1.090		19990	19300	3.7	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.317		23650	20000	18.2	40.0
Perfluorooctane Sulfonamide (FOSA)	L1ID		1.005		19460	20000	-2.7	40.0
Perfluorododecanoic acid (PFDoA)	L2ID		1.040		21980	20000	9.9	40.0
Perfluorotridecanoic Acid (PFTriA)	L2ID		1.066		21260	20000	6.3	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		1.032		22780	20000	13.9	40.0
13C4 PFBA	Ave	0.6319	0.5829		46120	50000	-7.8	50.0
13C5 PFPeA	Ave	0.9274	0.8872		47830	50000	-4.3	50.0
13C3-PFBS	Ave	0.6135	0.6232		47240	46500	1.6	50.0
13C2 PFHxA	Ave	1.084	1.015		46840	50000	-6.3	50.0
13C4-PFHpA	Ave	1.244	1.197		48100	50000	-3.8	50.0
18O2 PFHxS	Ave	0.5867	0.5323		42910	47300	-9.3	50.0
M2-6:2FTS	Ave	0.1646	0.1678		48400	47500	1.9	50.0
13C4 PFOA	Ave	0.9520	0.8748		45950	50000	-8.1	50.0
13C5 PFNA	Ave	1.253	1.175		46900	50000	-6.2	50.0
13C4 PFOS	Ave	0.6352	0.5856		44070	47800	-7.8	50.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: ICV 200-130333/13 Calibration Date: 06/06/2018 19:54

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF060618A13.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2FTS	Ave	0.3407	0.3105		43650	47900	-8.9	50.0
13C2 PFDA	Ave	1.826	1.761		48220	50000	-3.6	50.0
d3-NMeFOSAA	Ave	0.3847	0.3611		46930	50000	-6.1	50.0
d5-NEtFOSAA	Ave	0.3292	0.2959		44950	50000	-10.1	50.0
13C2 PFUnA	Ave	1.670	1.461		43730	50000	-12.5	50.0
13C8 FOSA	Ave	1.403	1.288		45880	50000	-8.2	50.0
13C2 PFDoA	Ave	2.016	1.706		42310	50000	-15.4	50.0
13C2-PFTeDA	Ave	2.046	1.692		41350	50000	-17.3	50.0

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A13.d
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 06-Jun-2018 19:54:13 ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030801-013 ICV
Misc. Info.: PFAS21 060618A ICAL
Operator ID: BC Instrument ID: LC410
Sublist:

Method: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 11-Jun-2018 13:29:53 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK034

First Level Reviewer: chirgwinb Date: 07-Jun-2018 08:32:44

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 2 13C4 PFBA										
216.9 > 171.5	2.343	2.340	0.003	1.000	216865	46.1		92.2	592	
1 Perfluorobutyric acid										M
212.9 > 168.9	2.334	2.346	-0.012	0.997	61068	19.1			249	M
D 3 13C5-PFPeA										
267.7 > 222.6	2.770	2.770	0.0	1.000	330088	47.8		95.7	826	
4 Perfluoropentanoic acid										
262.9 > 218.8	2.770	2.770	0.0	1.000	192706	23.7			806	
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.834	2.845	-0.011	1.000	72504	18.6			640	M
D 5 13C3-PFBS										
302.0 > 79.8	2.834	2.845	-0.011	1.000	215643	47.2		102	2314	
8 Perfluorohexanoic acid										
312.8 > 268.6	3.201	3.209	-0.008	1.000	164302	19.6			807	
D 7 13C2 PFHxA										
314.8 > 269.6	3.201	3.211	-0.010	1.000	377668	46.8		93.7	1544	
D 10 13C4-PFHpA										
366.9 > 321.8	3.748	3.748	0.0	1.000	445297	48.1		96.2	1272	
11 Perfluoroheptanoic acid										
362.9 > 318.8	3.748	3.759	-0.011	1.000	195911	20.3			262	
D 13 18O2 PFHxS										
402.9 > 83.8	3.804	3.800	0.004	1.000	187336	42.9		90.7	1932	
12 Perfluorohexanesulfonic acid										
399.0 > 80.0	3.793	3.806	-0.013	0.997	68950	17.1			1456	
15 Sodium 1H,1H,2H,2H-perfluorooctane										
426.6 > 406.6	4.374	4.387	-0.013	1.000	23528	18.4			529	
D 14 M2-6:2FTS										
428.6 > 408.6	4.374	4.388	-0.014	1.000	59297	48.4		102	643	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
* 49 13C2-PFOA										
414.9 > 369.8	4.430	4.443	-0.013		372052	50.0			1423	
D 17 13C4 PFOA										
416.9 > 371.8	4.430	4.446	-0.016	1.000	325485	45.9		91.9	1445	
16 Perfluorooctanoic acid										
412.9 > 368.8	4.430	4.449	-0.019	1.000	139473	18.8			516	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.468	4.493	-0.025	0.856	77395	18.7			444	
D 21 13C5 PFNA										
467.8 > 422.8	5.195	5.195	0.0	1.000	437306	46.9		93.8	746	
19 Perfluorononanoic acid										
462.8 > 418.8	5.195	5.206	-0.011	1.000	183982	21.4			1663	
D 22 13C4 PFOS										
502.8 > 79.8	5.222	5.229	-0.007	1.000	208294	44.1		92.2	1160	
20 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.222	5.234	-0.012	1.000	93105	19.3			369	M
D 23 M2-8:2FTS										
528.8 > 508.8	5.950	5.974	-0.024	1.000	110659	43.7		91.1	483	
24 Sodium 1H,1H,2H,2H-perfluorodecane										
526.8 > 506.5	5.974	5.982	-0.008	1.004	37796	19.0			402	
D 25 13C2 PFDA										
514.9 > 469.5	5.998	5.998	0.0	1.000	655186	48.2		96.4	1516	
26 Perfluorodecanoic acid										
512.9 > 468.5	5.998	6.002	-0.004	1.000	256765	19.0			2653	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.331	6.346	-0.015	1.000	134330	46.9		93.9	1763	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.349	6.352	-0.003	1.003	57519	17.0			297	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.706	6.711	-0.005	1.000	110093	44.9		89.9	846	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.720	6.727	-0.007	1.002	47534	19.4			723	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.734	6.748	-0.014	1.290	91580	20.0			1110	
D 33 13C2 PFUnA										
564.8 > 519.8	6.748	6.755	-0.007	1.000	543415	43.7		87.5	1878	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.748	6.758	-0.010	1.000	286166	23.6			1303	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	6.931	6.931	0.0	1.000	192508	19.5			2001	
D 35 13C8 FOSA										
505.8 > 77.8	6.931	6.933	-0.002	1.000	479096	45.9		91.8	4524	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.429	7.429	0.0	1.000	264025	22.0			2858	
D 36 13C2 PFDoA										
614.8 > 569.6	7.429	7.433	-0.004	1.000	634771	42.3		84.6	1462	
40 Perfluorotridecanoic acid										
662.8 > 618.6	8.038	8.050	-0.012	1.082	270742	21.3			2612	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 43 13C2-PFTeDA										
714.8 > 669.6	8.590	8.590	0.0	1.000	629396	41.3		82.7	2152	
44 Perfluorotetradecanoic acid										
712.8 > 668.6	8.590	8.593	-0.003	1.000	259727	22.8			1184	
712.8 > 168.8	8.590	8.593	-0.003	1.000	48605		5.34(0.00-0.00)		563	
712.8 > 218.8	8.575	8.593	-0.018	0.998	31636		8.21(0.00-0.00)		465	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

LCPFAS21ISICV_00002 Amount Added: 100.00 Units: uL

Report Date: 11-Jun-2018 13:29:53 Chrom Revision: 2.2 11-May-2018 08:54:46

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A13.d

Injection Date: 06-Jun-2018 19:54:13 Instrument ID: LC410

Lims ID: ICV

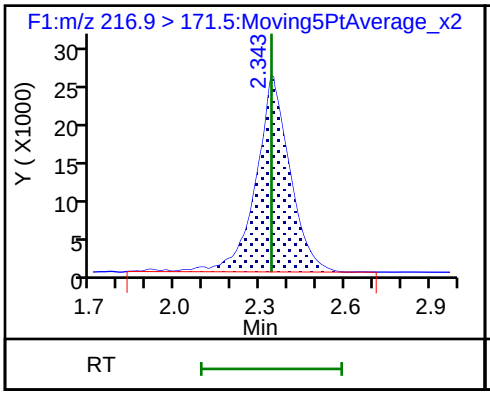
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 13

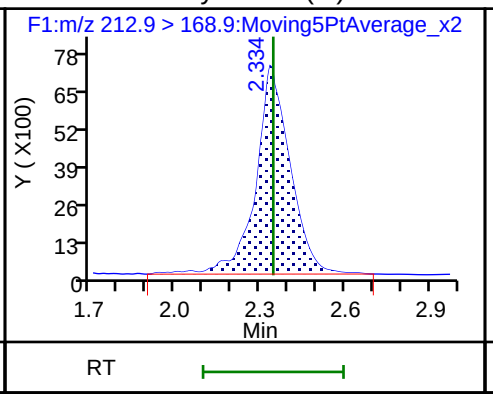
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

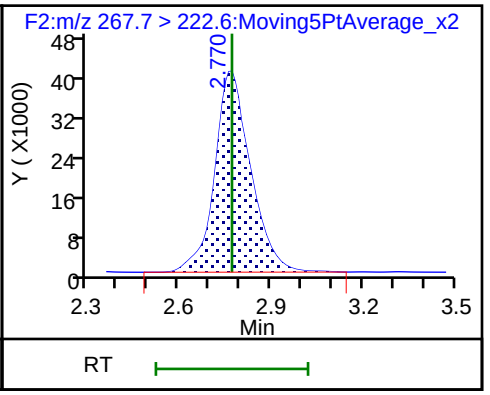
D 2 13C4 PFBA



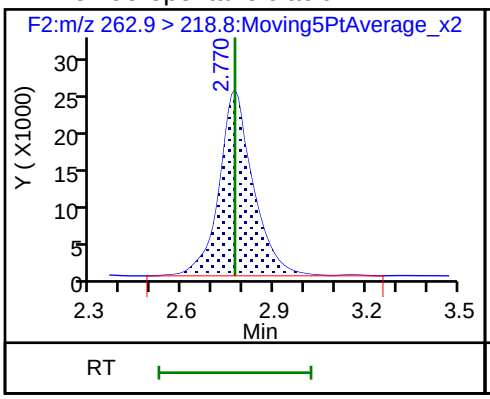
1 Perfluorobutyric acid (M)



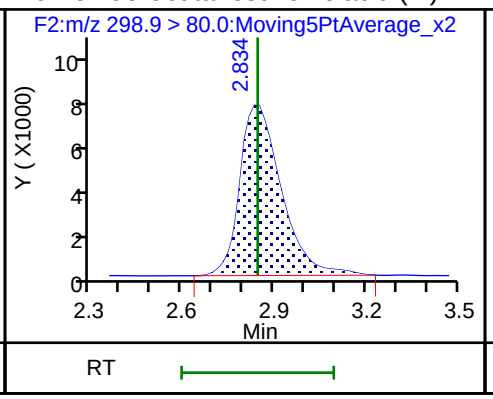
D 3 13C5-PFPeA



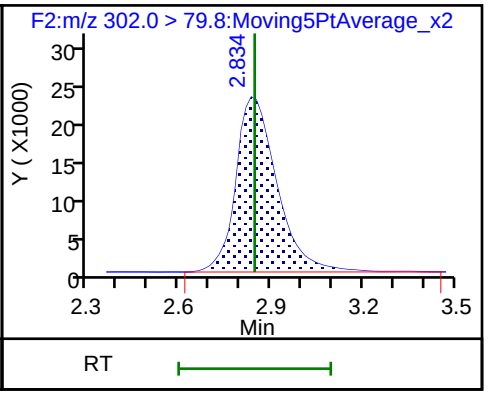
4 Perfluoropentanoic acid



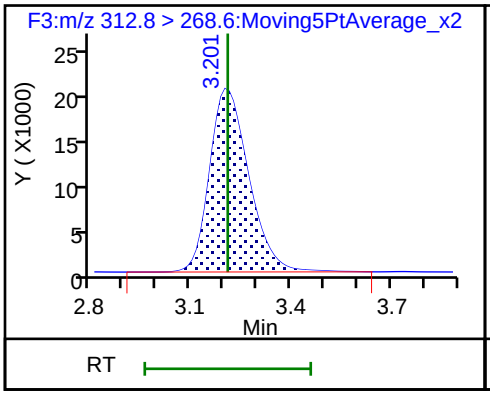
6 Perfluorobutanesulfonic acid (M)



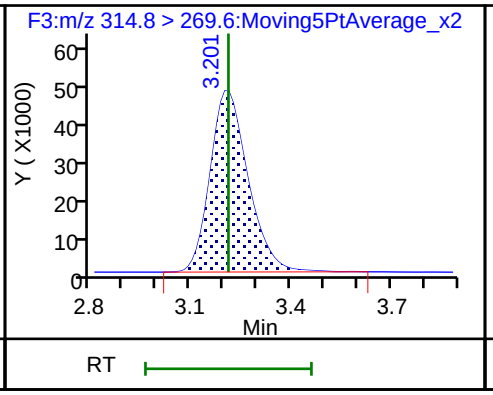
D 5 13C3-PFBS



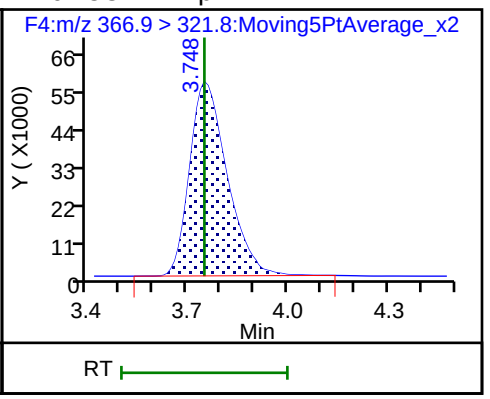
8 Perfluorohexanoic acid



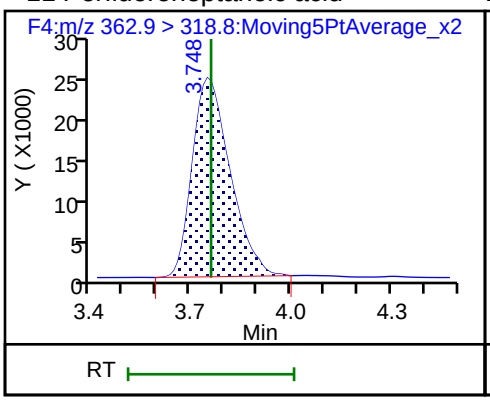
D 7 13C2 PFHxA



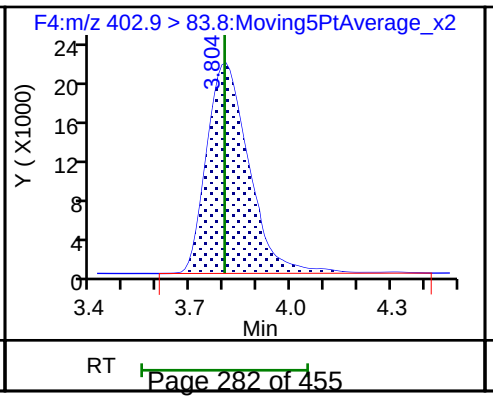
D 10 13C4-PFHpA



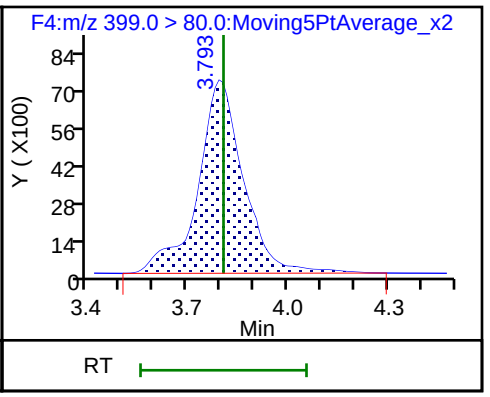
11 Perfluoroheptanoic acid



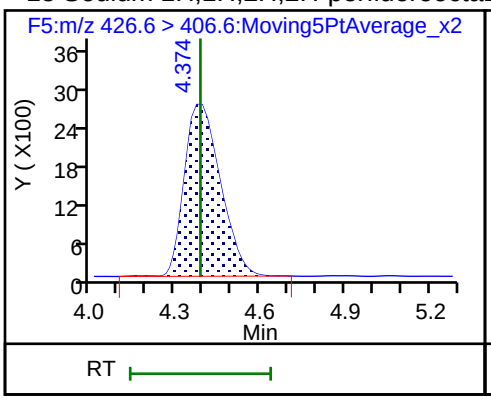
D 13 18O2 PFHxS



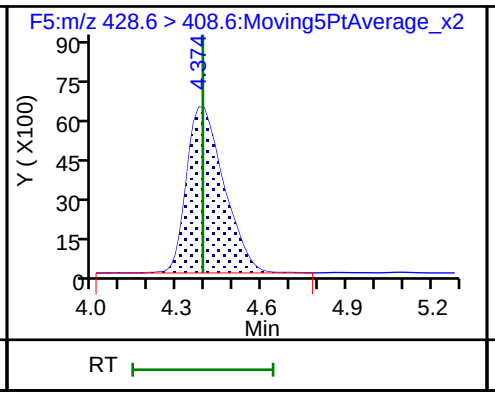
12 Perfluorohexanesulfonic acid



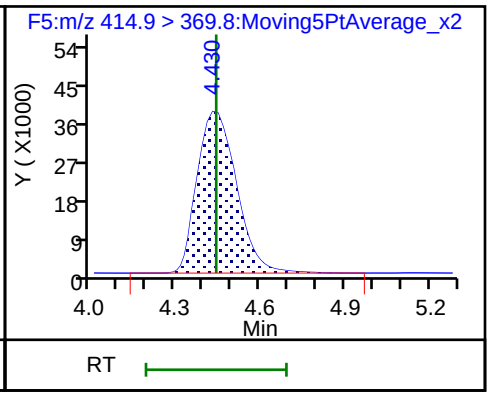
15 Sodium 1H,1H,2H,2H-perfluorooctane



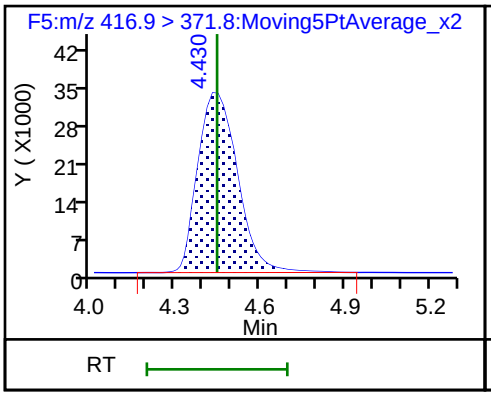
D 14 M2-6:2FTS



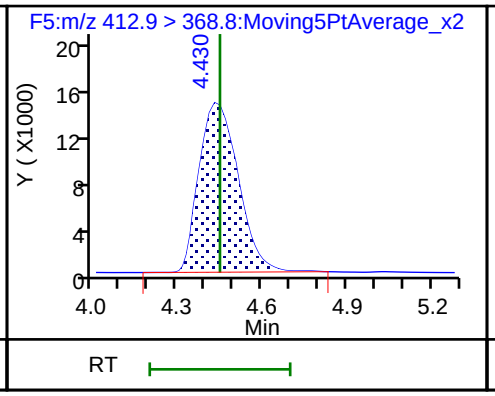
* 49 13C2-PFOA



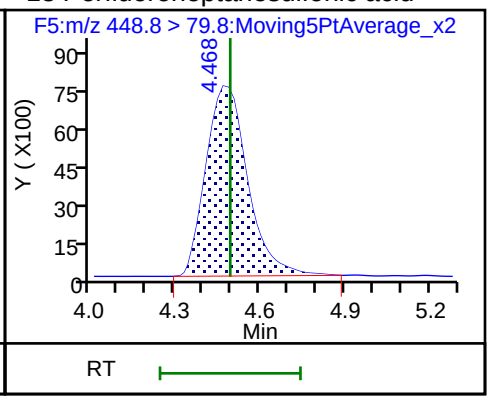
D 17 13C4 PFOA



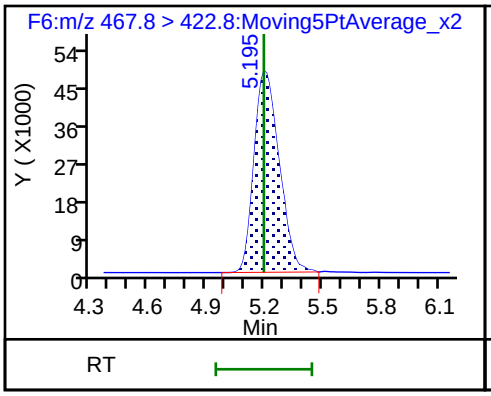
16 Perfluorooctanoic acid



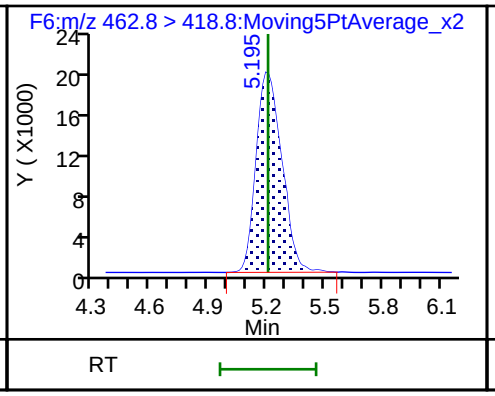
18 Perfluoroheptanesulfonic acid



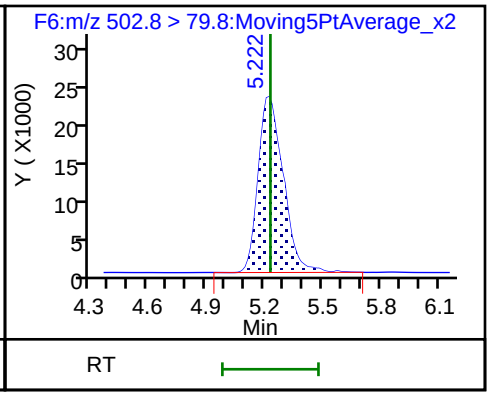
D 21 13C5 PFNA



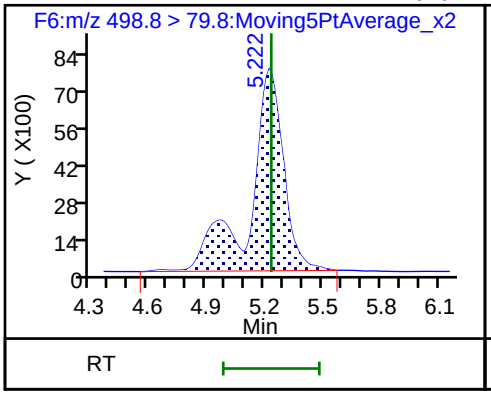
19 Perfluorononanoic acid



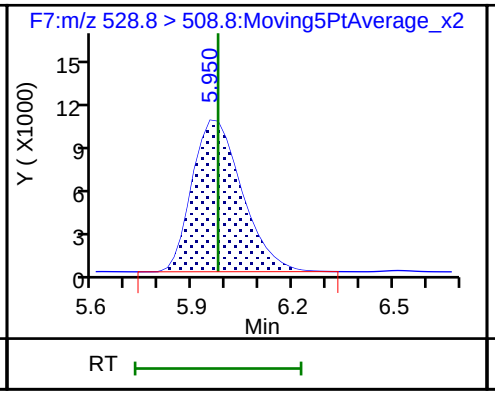
D 22 13C4 PFOS



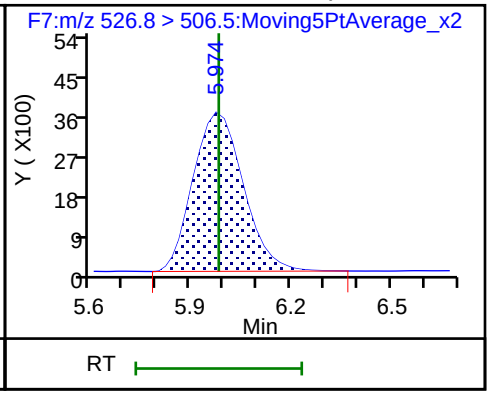
20 Perfluorooctane sulfonic acid (M)



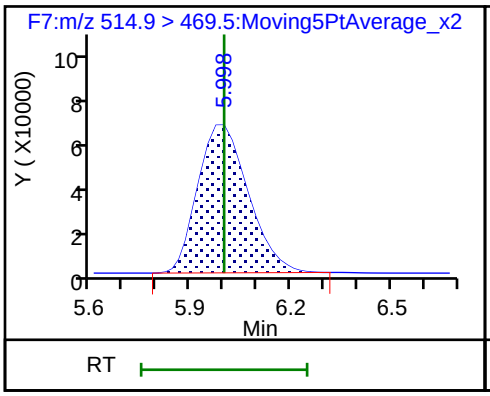
D 23 M2-8:2FTS



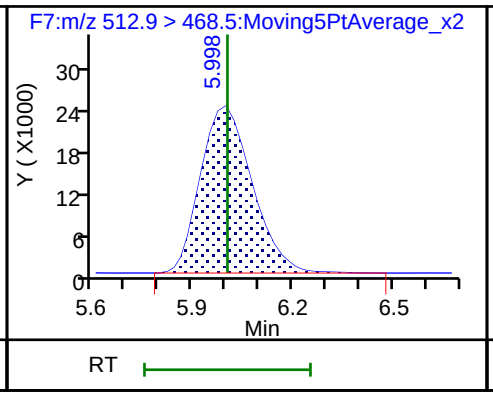
24 Sodium 1H,1H,2H,2H-perfluorodecane



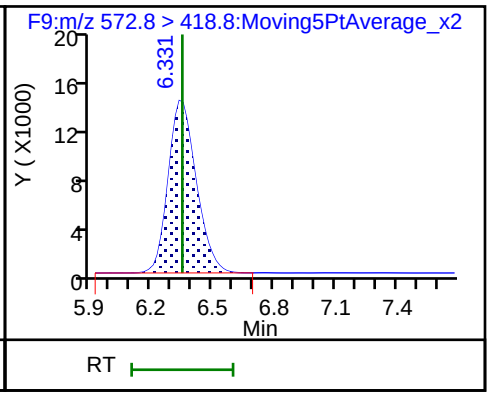
D 25 13C2 PFDA



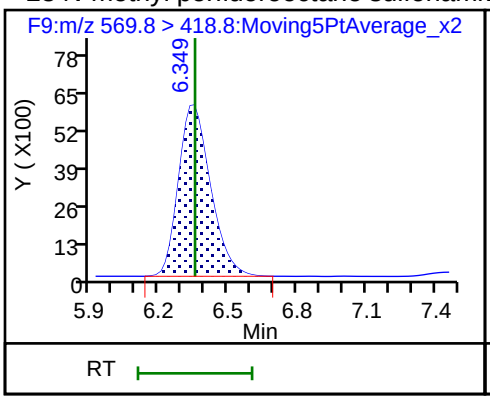
26 Perfluorodecanoic acid



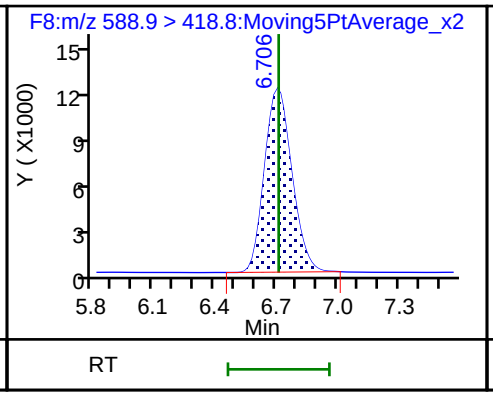
D 27 d3-NMeFOSAA



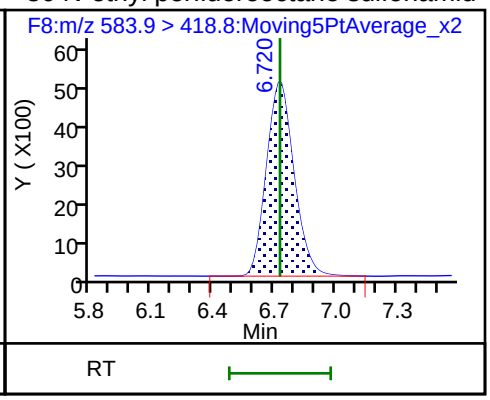
28 N-methyl perfluorooctane sulfonami



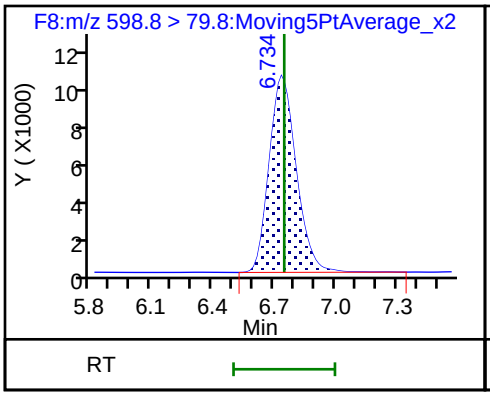
D 29 d5-NEtFOSAA



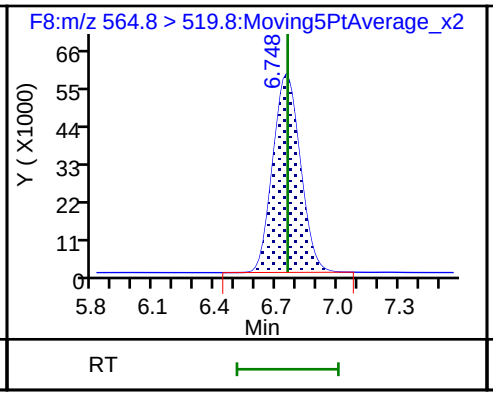
30 N-ethyl perfluorooctane sulfonamid



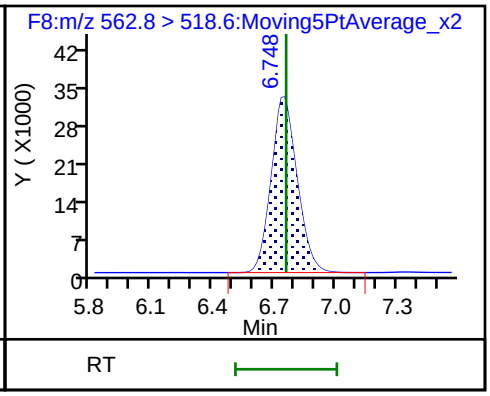
31 Perfluorodecane Sulfonic acid



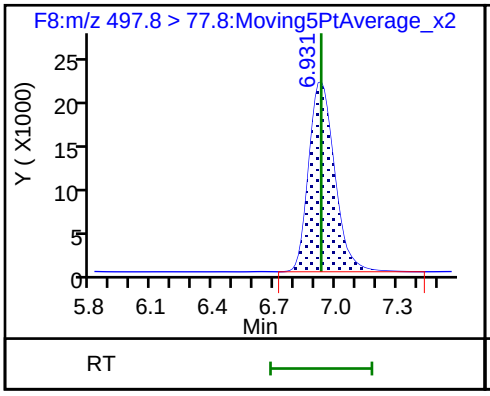
D 33 13C2 PFUnA



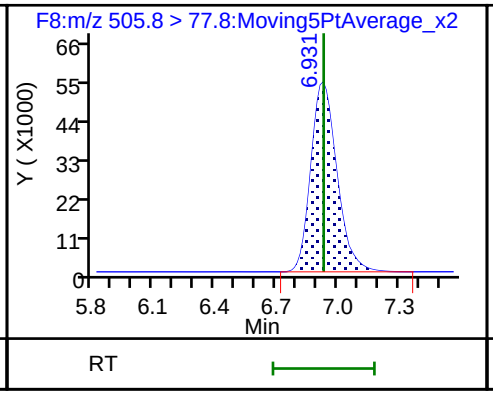
32 Perfluoroundecanoic acid



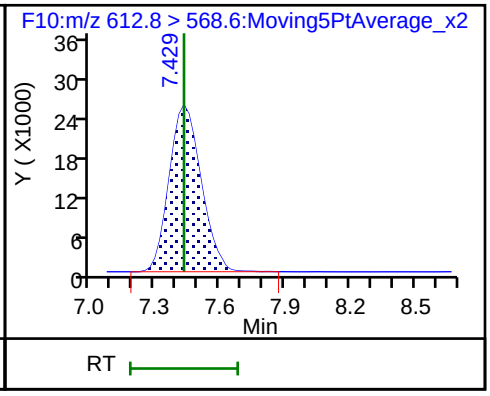
34 Perfluorooctane Sulfonamide



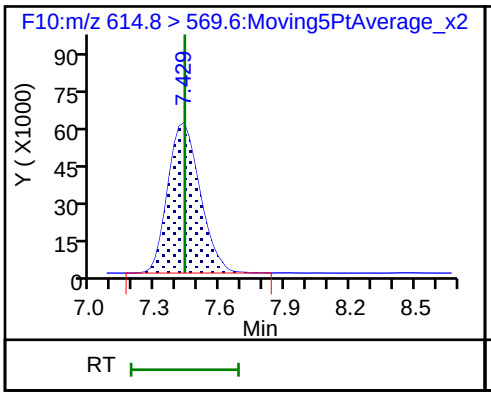
D 35 13C8 FOSA



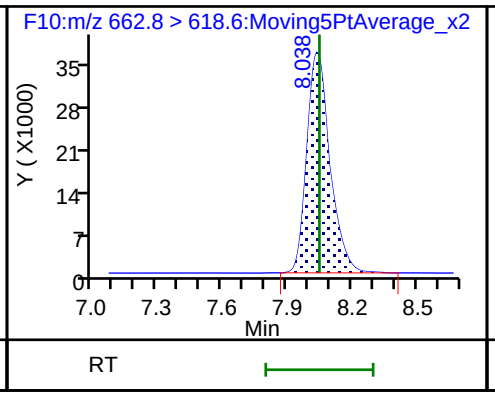
37 Perfluorododecanoic acid



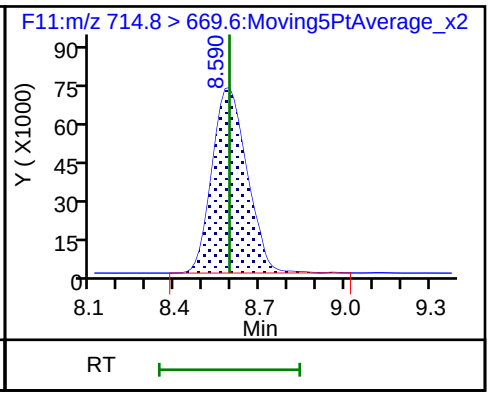
D 36 13C2 PFDoA



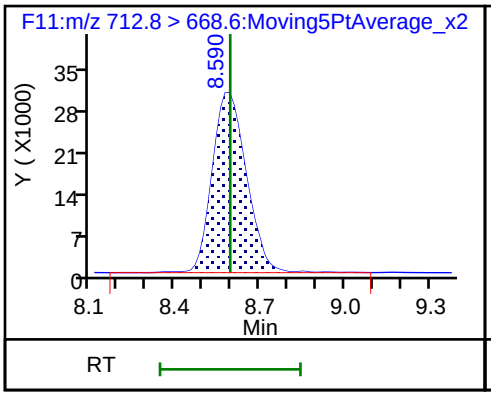
40 Perfluorotridecanoic acid



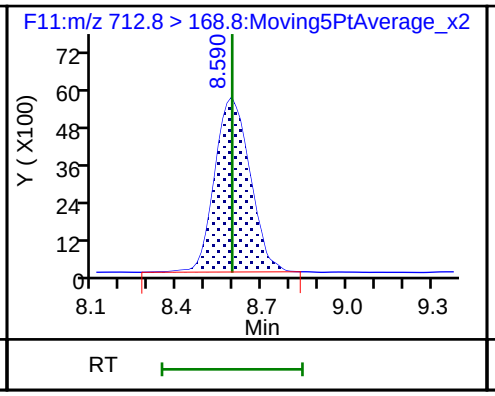
D 43 13C2-PFTeDA



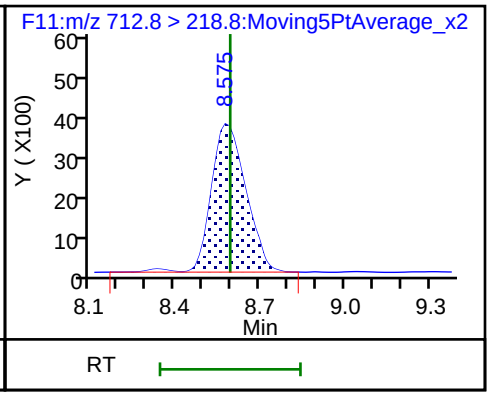
44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



44 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

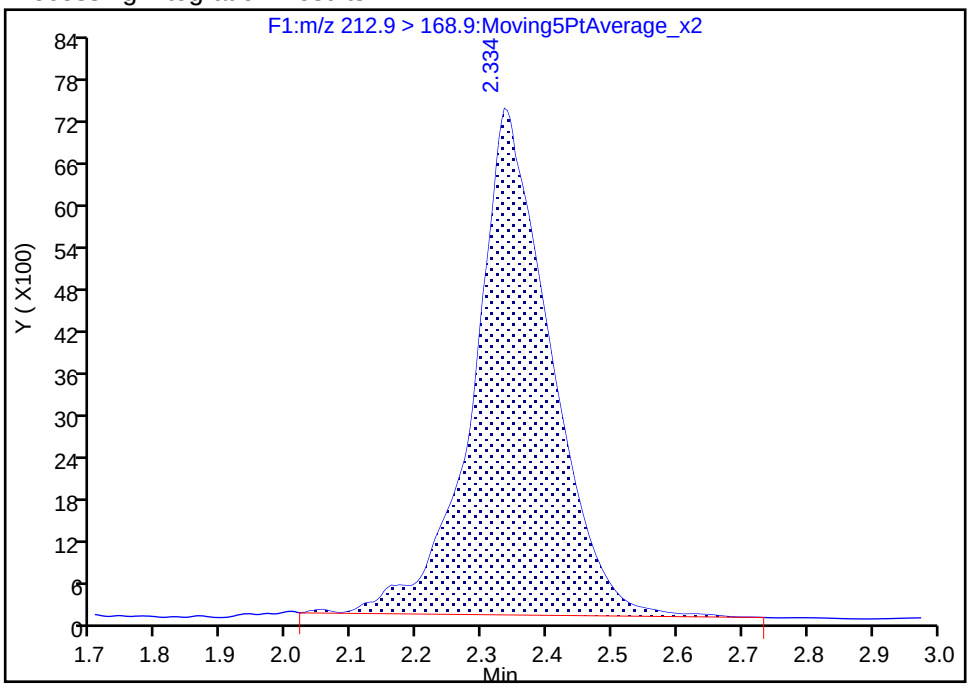
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A13.d
Injection Date: 06-Jun-2018 19:54:13 Instrument ID: LC410
Lims ID: ICV
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

1 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

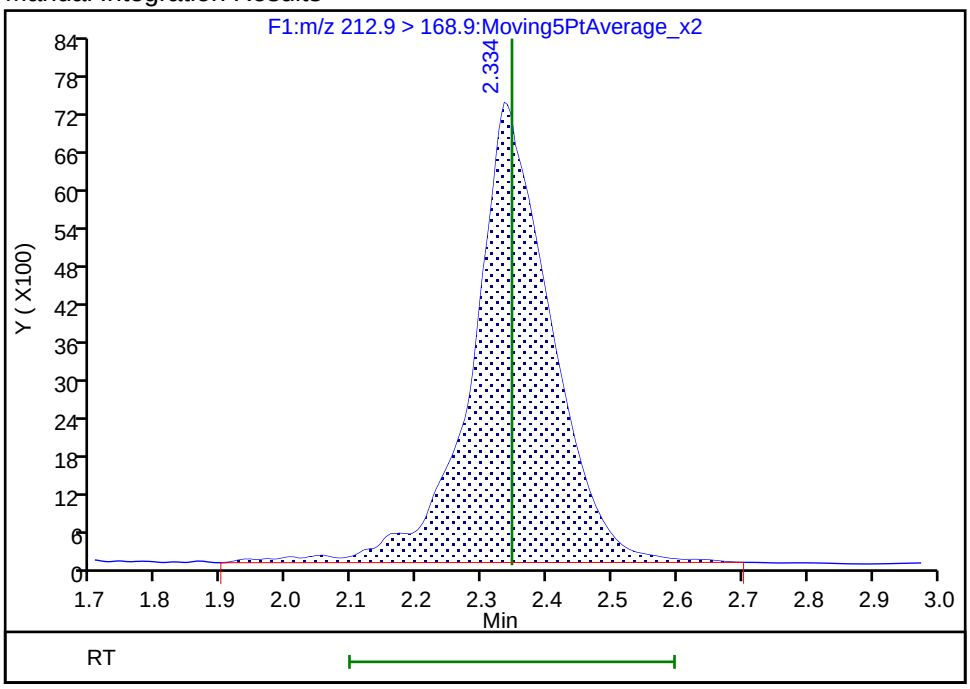
Processing Integration Results

RT: 2.33
Area: 59378
Amount: 18.583241
Amount Units: ng/ml



Manual Integration Results

RT: 2.33
Area: 61068
Amount: 19.108622
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:32:08
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

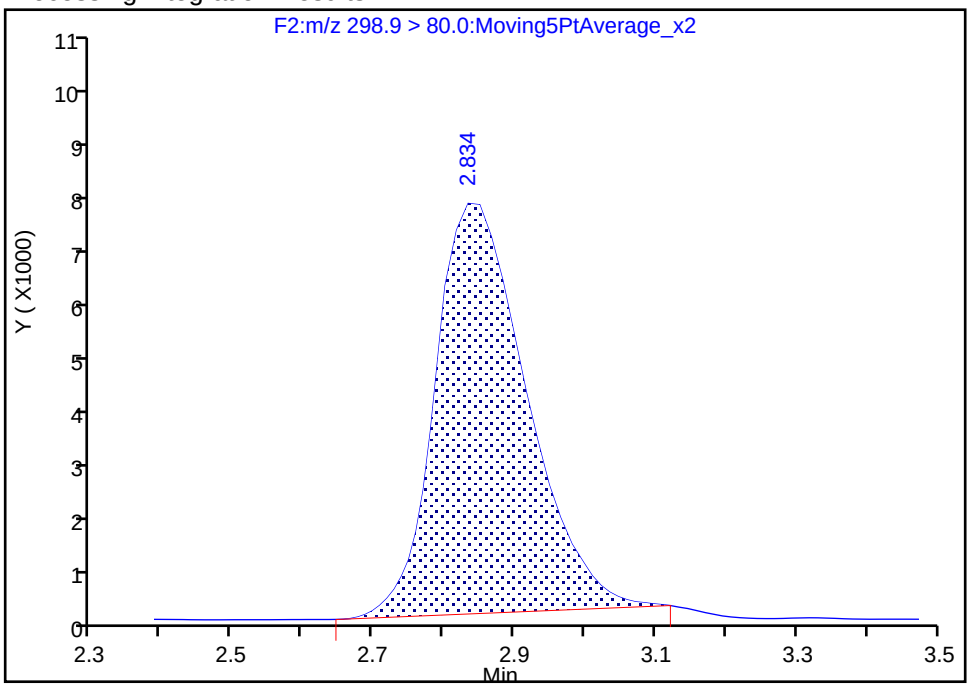
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A13.d
Injection Date: 06-Jun-2018 19:54:13 Instrument ID: LC410
Lims ID: ICV
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

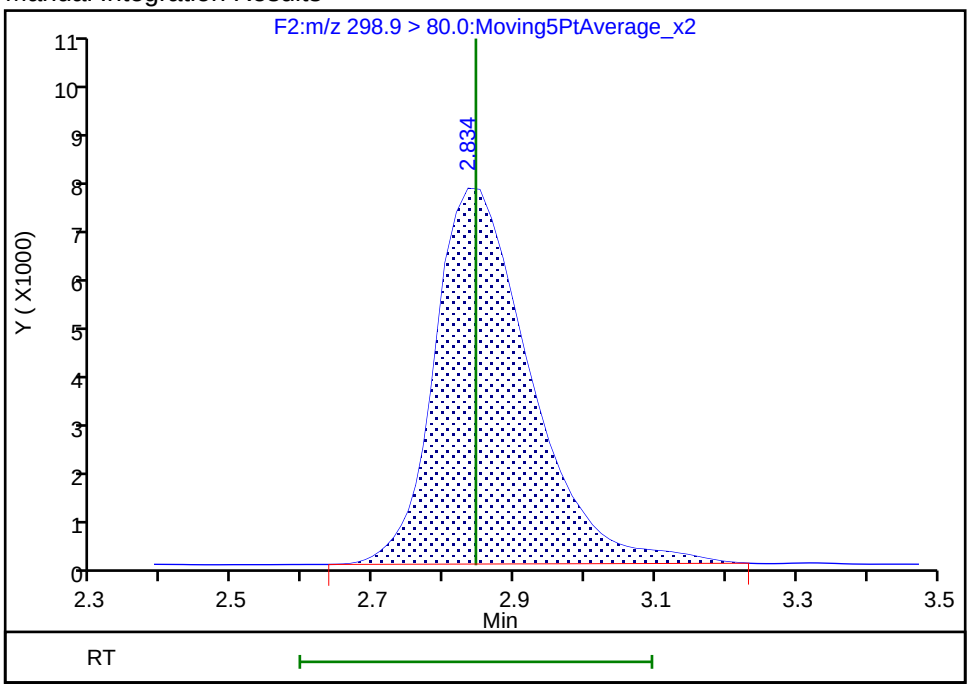
Processing Integration Results

RT: 2.83
Area: 68454
Amount: 15.149489
Amount Units: ng/ml



Manual Integration Results

RT: 2.83
Area: 72504
Amount: 18.556836
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:32:14
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

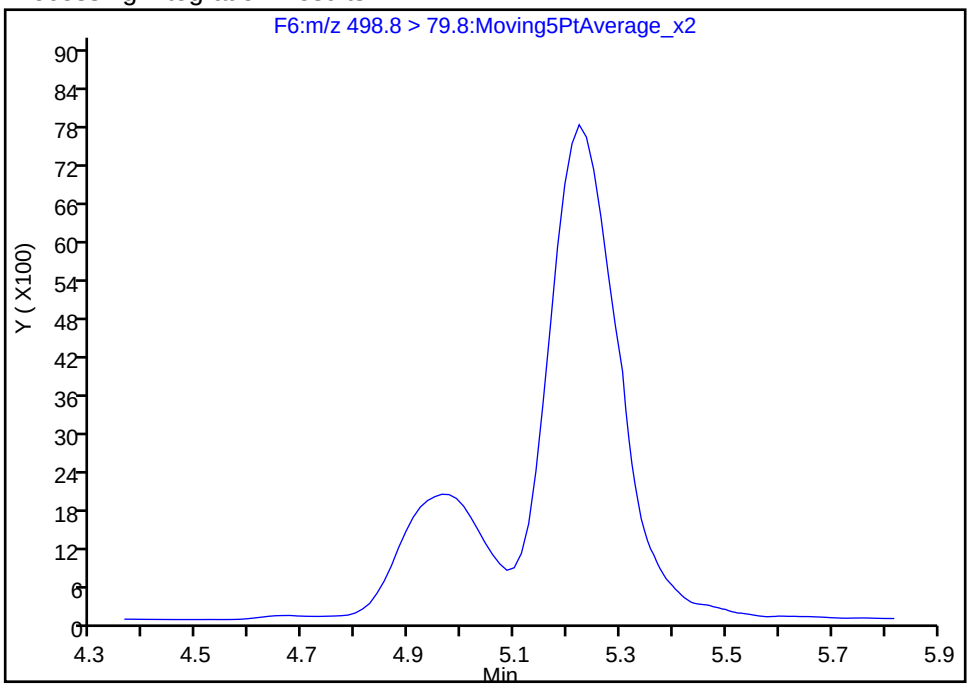
Data File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A13.d
Injection Date: 06-Jun-2018 19:54:13 Instrument ID: LC410
Lims ID: ICV
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 13
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

20 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

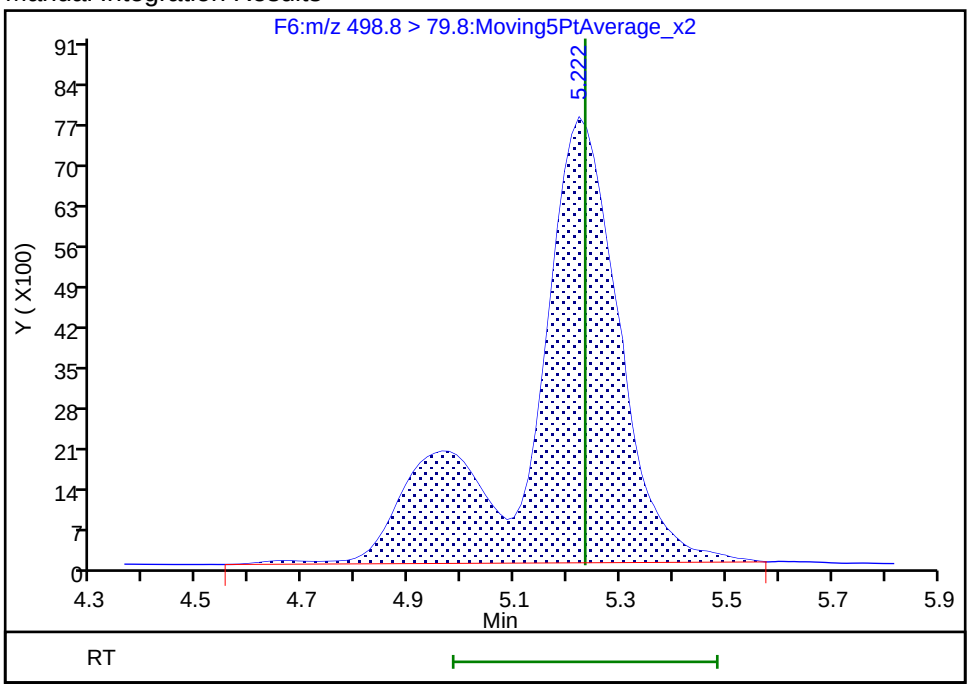
Not Detected
Expected RT: 5.23

Processing Integration Results



Manual Integration Results

RT: 5.22
Area: 93105
Amount: 19.257220
Amount Units: ng/ml



Reviewer: chirgwinb, 07-Jun-2018 08:31:55
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: CCVL 200-130505/6 Calibration Date: 06/12/2018 09:36

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF061218A06.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	L1ID		0.7876		1186	1000	18.6	50.0
Perfluoropentanoic acid (PFPeA)	L1ID		0.998		981	1000	-1.9	50.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8425	0.6483		680	884	-23.0	50.0
Perfluorohexanoic acid (PFHxA)	L1ID		1.126		1324	1000	32.4	50.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.097		1162	1000	16.2	50.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.8869		1205	910	32.4	50.0
6:2 FTS	L1ID		0.8752		615	948	-35.1	50.0
Perfluorooctanoic acid (PFOA)	L1ID		1.328		1324	1000	32.4	50.0
Perfluoroheptanesulfonic Acid (PFHpS)	L1ID		0.8754		1055	952	10.8	50.0
Perfluorononanoic acid (PFNA)	L2ID		0.9788		1168	1000	16.8	50.0
Perfluorooctanesulfonic acid (PFOS)	L2ID		1.167		1025	928	10.4	50.0
8:2 FTS	L1ID		1.054		1499	958	56.5*	50.0
Perfluorodecanoic acid (PFDA)	L2ID		0.998		1126	1000	12.6	50.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	L1ID		1.217		1308	1000	30.8	50.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	L2ID		1.124		1293	1000	29.3	50.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		1.094		1052	964	9.1	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.270		1199	1000	19.9	50.0
Perfluorooctane Sulfonamide (FOSA)	L1ID		0.8052		1091	1000	9.1	50.0
Perfluorododecanoic acid (PFDoA)	L2ID		0.9625		1077	1000	7.7	50.0
Perfluorotridecanoic Acid (PFTriA)	L2ID		0.8927		925	1000	-7.5	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.8756		798	1000	-20.2	50.0
13C4 PFBA	Ave	0.6319	0.5591		44230	50000	-11.5	50.0
13C5 PFPeA	Ave	0.9274	0.9788		52770	50000	5.5	50.0
13C3-PFBS	Ave	0.6135	0.5330		40400	46500	-13.1	50.0
13C2 PFHxA	Ave	1.084	1.196		55190	50000	10.4	50.0
13C4-PFHpA	Ave	1.244	1.333		53590	50000	7.2	50.0
18O2 PFHxS	Ave	0.5867	0.5750		46360	47300	-2.0	50.0
M2-6:2FTS	Ave	0.1646	0.1949		56230	47500	18.4	50.0
13C4 PFOA	Ave	0.9520	1.034		54300	50000	8.6	50.0
13C5 PFNA	Ave	1.253	1.480		59040	50000	18.1	50.0
13C4 PFOS	Ave	0.6352	0.6758		50850	47800	6.4	50.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: CCVL 200-130505/6 Calibration Date: 06/12/2018 09:36

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF061218A06.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2FTS	Ave	0.3407	0.3249		45680	47900	-4.6	50.0
13C2 PFDA	Ave	1.826	2.184		59810	50000	19.6	50.0
d3-NMeFOSAA	Ave	0.3847	0.3692		47990	50000	-4.0	50.0
d5-NEtFOSAA	Ave	0.3292	0.3552		53950	50000	7.9	50.0
13C2 PFUnA	Ave	1.670	1.991		59620	50000	19.2	50.0
13C8 FOSA	Ave	1.403	1.398		49790	50000	-0.4	50.0
13C2 PFDoA	Ave	2.016	2.495		61870	50000	23.7	50.0
13C2-PFTeDA	Ave	2.046	2.554		62410	50000	24.8	50.0

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Lims ID: CCVL
Client ID:
Sample Type: CCVL
Inject. Date: 12-Jun-2018 09:36:48 ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-006 CCVL
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 16:41:19 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK013

First Level Reviewer: chirgwinb Date: 21-Jun-2018 16:41:19

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										M
216.9 > 171.5	2.382	2.382	0.0	1.000	159038	44.2		88.5	259	M
2 Perfluorobutyric acid										M
212.9 > 168.9	2.392	2.392	0.0	1.004	2505	1.19		119	17.9	M
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.818	2.818	0.0	0.994	5556	0.9814		98.1	11.9	M
D 4 13C5-PFPeA										
267.7 > 222.6	2.834	2.834	0.0	1.000	278423	52.8		106	1464	
D 5 13C3-PFBS										M
302.0 > 79.8	2.900	2.900	0.0	1.000	141010	40.4		86.9	72.6	M
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.916	2.916	0.0	1.006	1738	0.6803		77.0	23.3	M
7 Perfluorohexanoic acid										M
312.8 > 268.6	3.300	3.300	0.0	1.000	7661	1.32		132	143	M
D 8 13C2 PFHxA										M
314.8 > 269.6	3.300	3.300	0.0	1.000	340234	55.2		110	398	M
9 Perfluoroheptanoic acid										
362.9 > 318.8	3.882	3.882	0.0	0.994	8320	1.16		116	116	
D 10 13C4-PFHpA										
366.9 > 321.8	3.904	3.904	0.0	1.000	379323	53.6		107	445	
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.914	3.914	0.0	0.997	2640	1.21		132	62.5	M
D 12 18O2 PFHxS										
402.9 > 83.8	3.924	3.924	0.0	1.000	154723	46.4		98.0	186	
D 13 M2-6:2FTS										
428.6 > 408.6	4.546	4.546	0.0	1.000	52673	56.2		118	1348	
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.560	4.560	0.0	1.003	920	0.6149		64.9	15.5	a

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										
412.9 > 368.8	4.601	4.601	0.0	0.997	7814	1.32		132	150	
D 16 13C4 PFOA										
416.9 > 371.8	4.615	4.615	0.0	1.000	294094	54.3		109	670	
* 17 13C2-PFOA										
414.9 > 369.8	4.615	4.615	0.0		284467	50.0			5695	
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.615	4.615	0.0	0.850	3204	1.06		111	44.3	M
D 19 13C5 PFNA										
467.8 > 422.8	5.410	5.410	0.0	1.000	420938	59.0		118	4685	
20 Perfluorononanoic acid										
462.8 > 418.8	5.417	5.417	0.0	1.001	8240	1.17		117	99.0	
D 21 13C4 PFOS										
502.8 > 79.8	5.428	5.428	0.0	1.000	183777	50.9		106	2176	
22 Perfluorooctane sulfonic acid										
498.8 > 79.8	5.452	5.452	0.0	1.004	4163	1.02		110	68.6	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.190	6.190	0.0	0.997	1866	1.50		157	28.8	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.209	6.209	0.0	1.000	88542	45.7		95.4	892	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.209	6.209	0.0	0.997	12397	1.13		113	156	
D 26 13C2 PFDA										
514.9 > 469.5	6.227	6.227	0.0	1.000	621365	59.8		120	4950	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.584	6.584	0.0	1.000	105024	48.0		96.0	1040	
28 N-methyl perfluorooctane sulfonami										M
569.8 > 418.8	6.584	6.584	0.0	1.000	2557	1.31		131	17.2	M
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.959	6.959	0.0	1.000	101036	53.9		108	835	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.973	6.973	0.0	1.002	2272	1.29		129	34.6	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.973	6.973	0.0	1.285	4054	1.05		109	86.8	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.987	6.987	0.0	0.998	14391	1.20		120	285	
D 33 13C2 PFUnA										
564.8 > 519.8	7.001	7.001	0.0	1.000	566402	59.6		119	3959	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	7.079	7.079	0.0	1.000	6402	1.09		109	94.3	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	397557	49.8		99.6	4300	
D 36 13C2 PFDoA										a
614.8 > 569.6	7.684	7.684	0.0	1.000	709702	61.9		124	5913	a
37 Perfluorododecanoic acid										a
612.8 > 568.6	7.709	7.709	0.0	1.003	13661	1.08		108	289	a
38 Perfluorotridecanoic acid										a
662.8 > 618.6	8.310	8.310	0.0	1.081	12671	0.9250		92.5	60.2	a

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 39 13C2-PFTeDA										a
714.8 > 669.6	8.857	8.857	0.0	1.000	726388	62.4		125	4256	a
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.877	8.877	0.0	1.002	12720	0.7984		79.8	118	M
712.8 > 168.8	8.857	8.877	-0.020	1.000	992		12.82(0.00-0.00)		17.1	M
712.8 > 218.8	8.843	8.877	-0.034	0.998	2001		6.36(0.00-0.00)		37.8	M

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

LCPFAS21-L1_00003 Amount Added: 100.00 Units: uL

Report Date: 21-Jun-2018 16:41:20 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d

Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410

Lims ID: CCVL

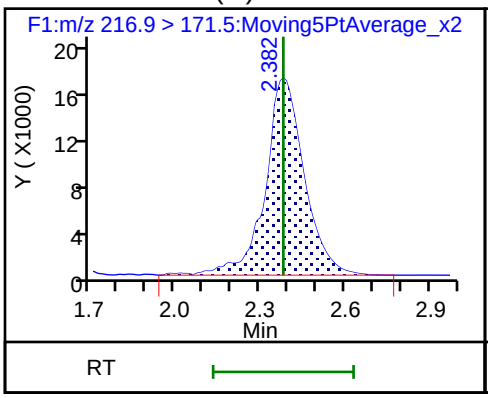
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6

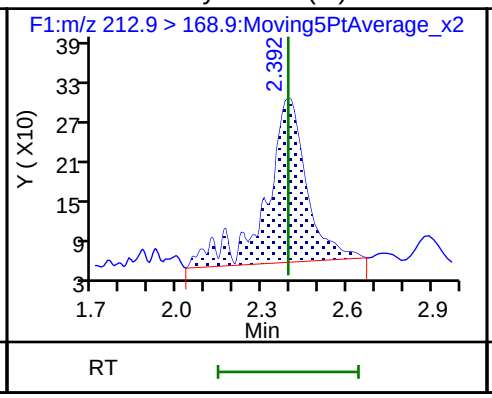
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

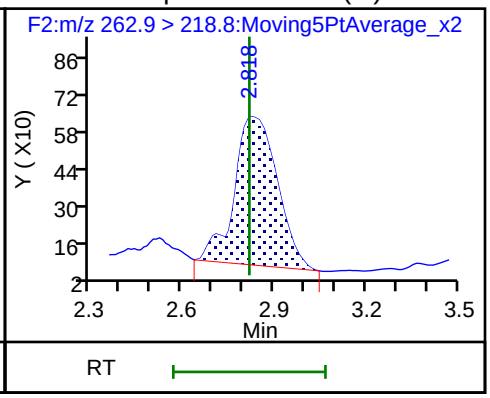
D 1 13C4 PFBA (M)



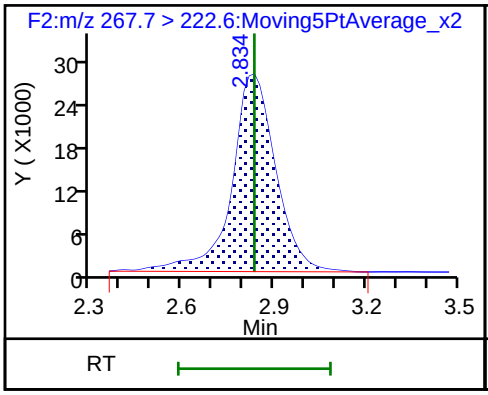
2 Perfluorobutyric acid (M)



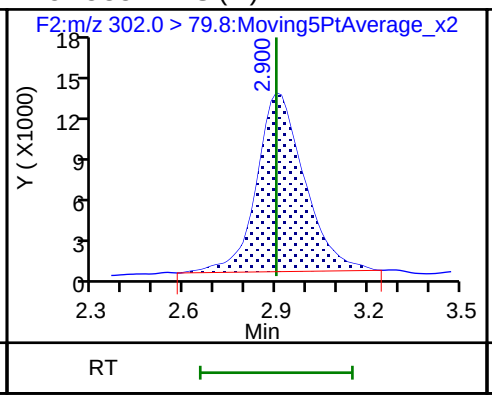
3 Perfluoropentanoic acid (M)



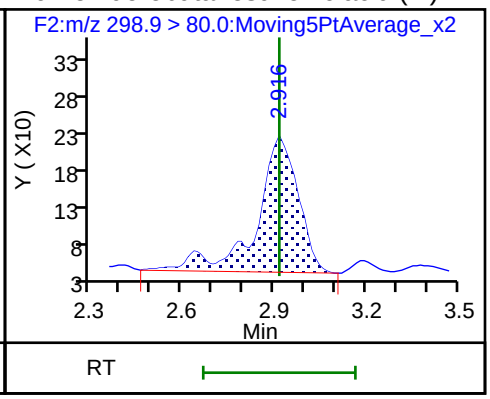
D 4 13C5-PFPeA



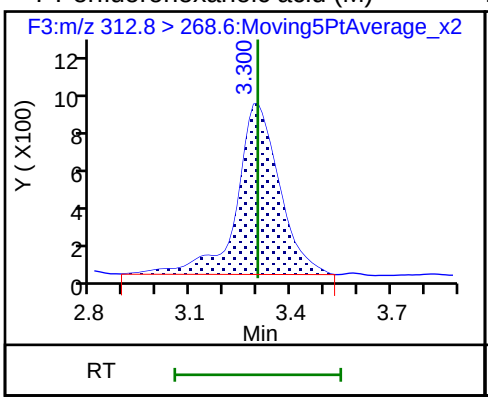
D 5 13C3-PFBS (M)



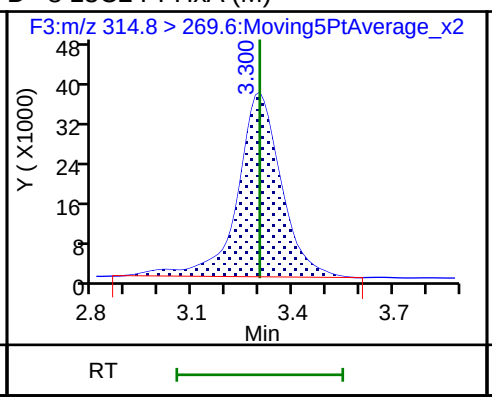
6 Perfluorobutanesulfonic acid (M)



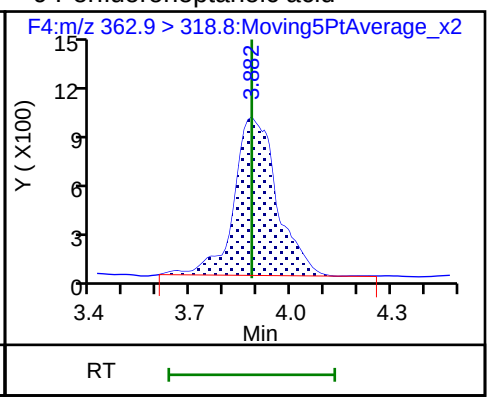
7 Perfluorohexanoic acid (M)



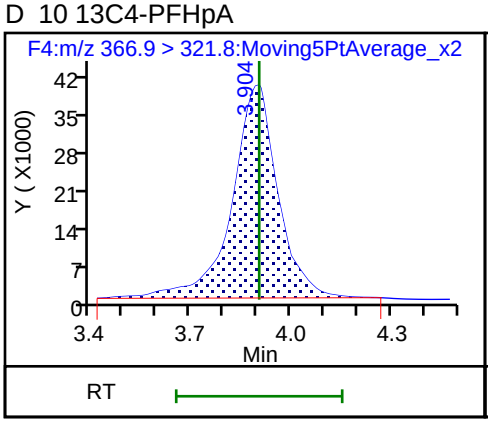
D 8 13C2 PFHxA (M)



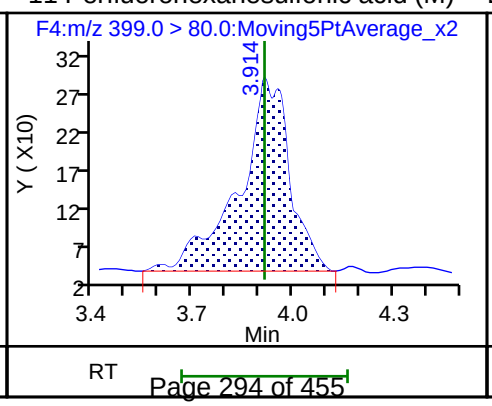
9 Perfluoroheptanoic acid



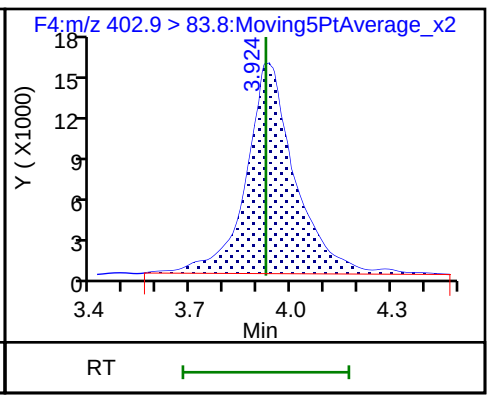
D 10 13C4-PFHpA



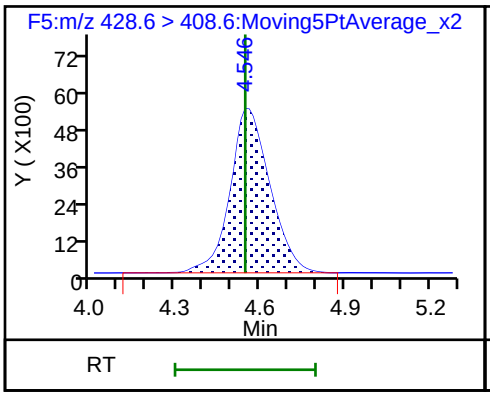
11 Perfluorohexanesulfonic acid (M)



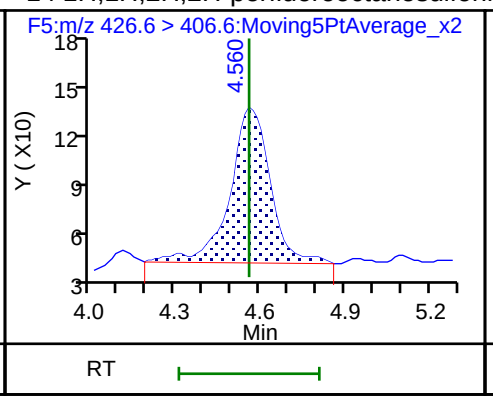
D 12 18O2 PFHxS



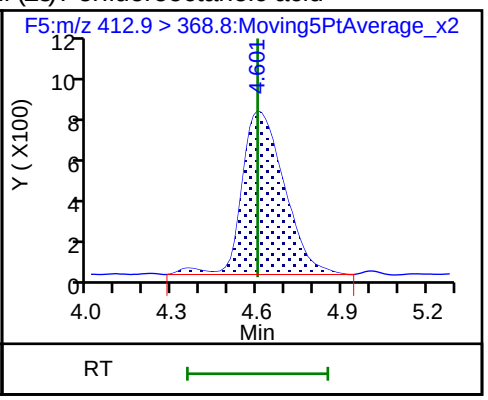
D 13 M2-6:2FTS



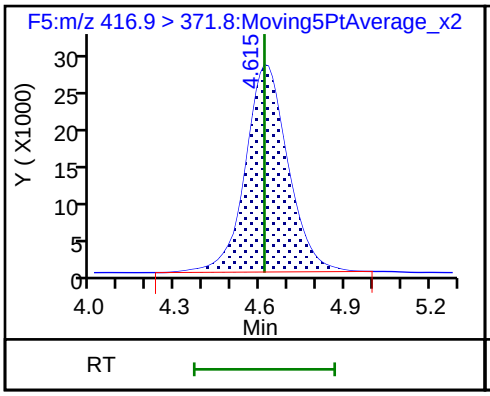
14 1H,1H,2H,2H-perfluorooctanesulfoni (M)



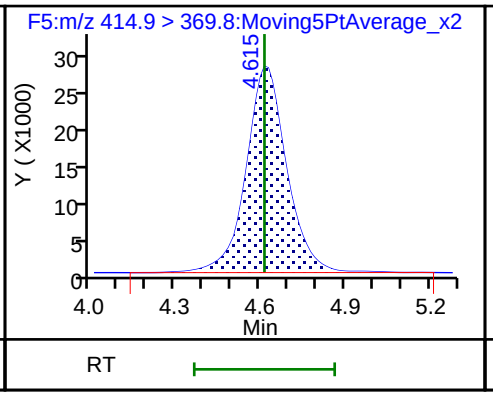
15 Perfluorooctanoic acid



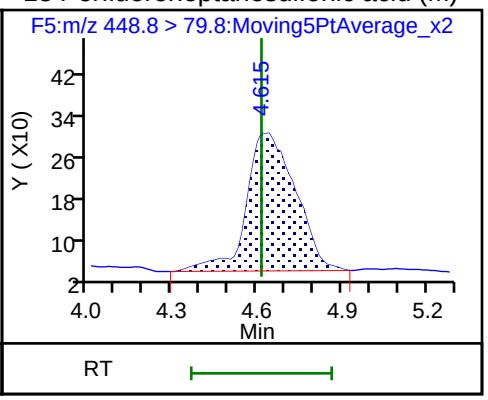
D 16 13C4 PFOA



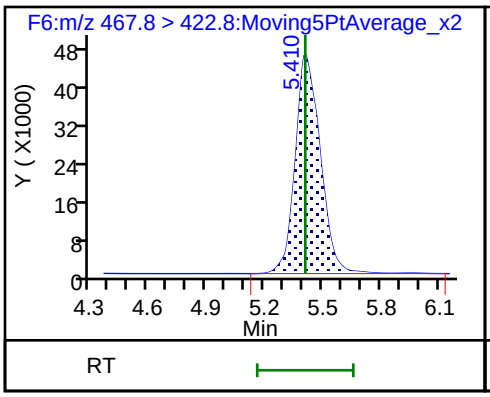
* 17 13C2-PFOA



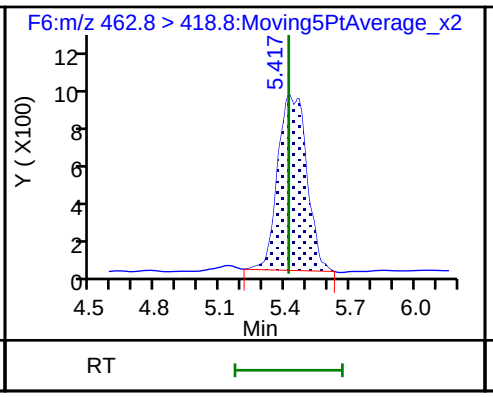
18 Perfluoroheptanesulfonic acid (M)



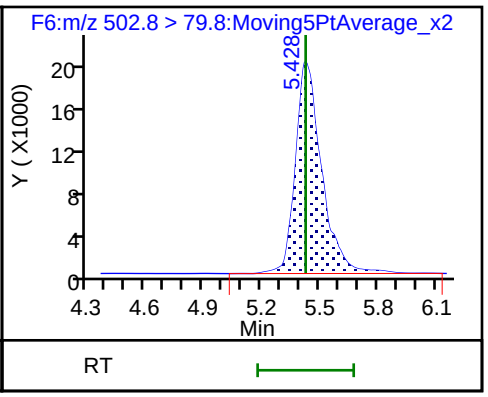
D 19 13C5 PFNA



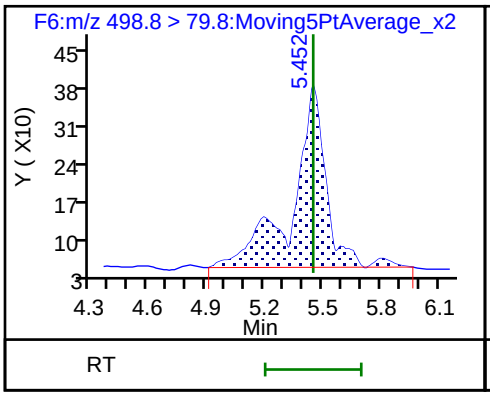
20 Perfluorononanoic acid



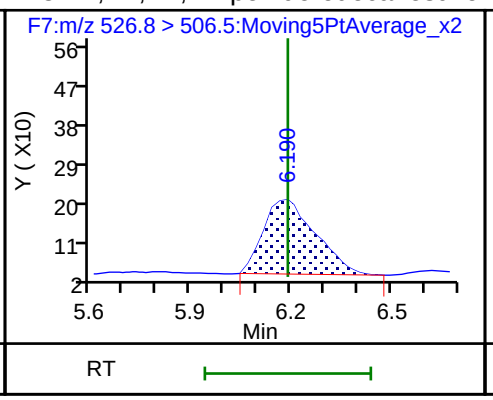
D 21 13C4 PFOS



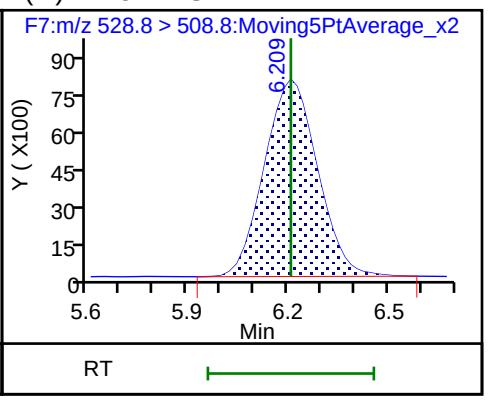
22 Perfluorooctane sulfonic acid



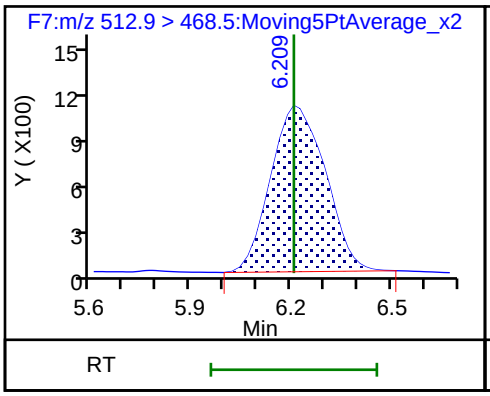
23 1H,1H,2H,2H-perfluorodecanesulfoni (M)



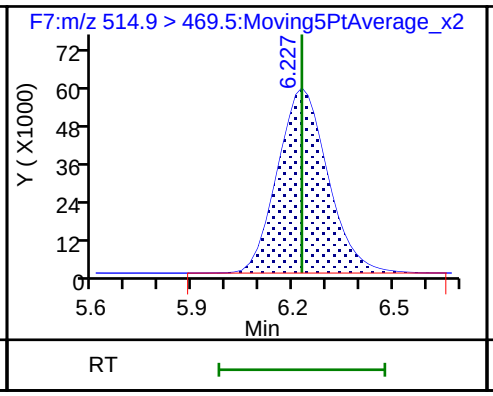
D 24 M2-8:2FTS



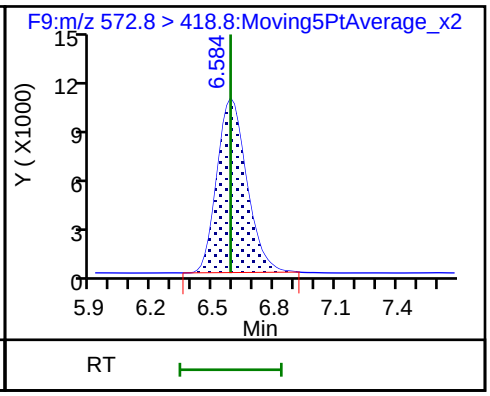
25 Perfluorodecanoic acid



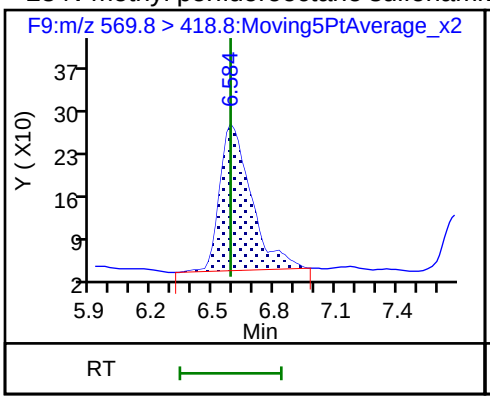
D 26 13C2 PFDA



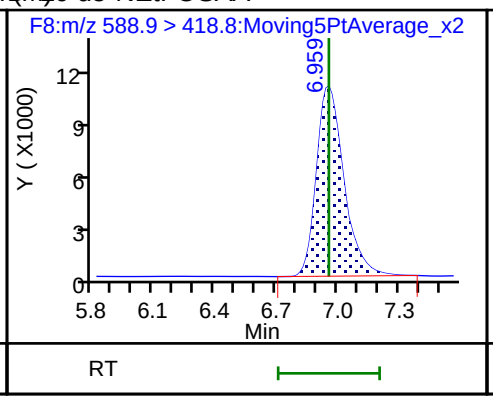
D 27 d3-NMeFOSAA



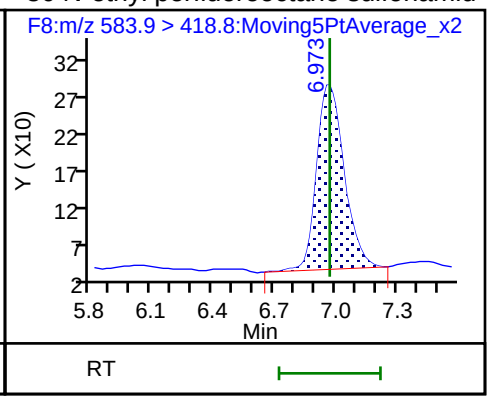
28 N-methyl perfluorooctane sulfonamid (M)



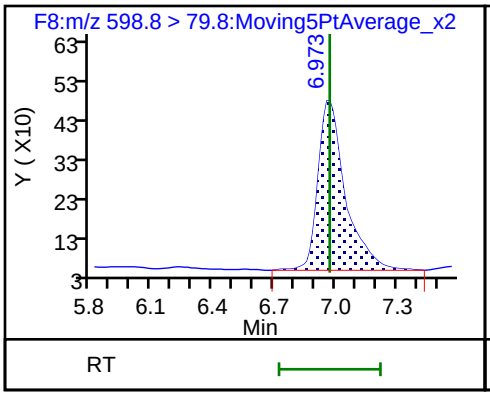
D 29 d5-NEtFOSAA



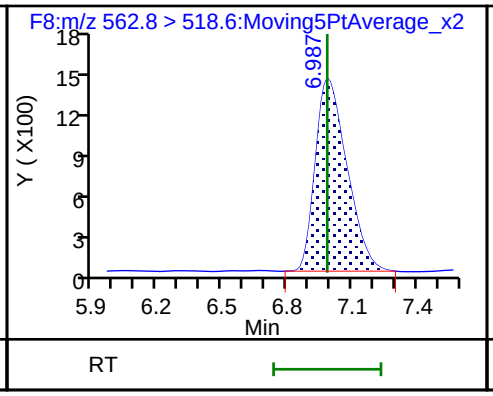
30 N-ethyl perfluorooctane sulfonamid



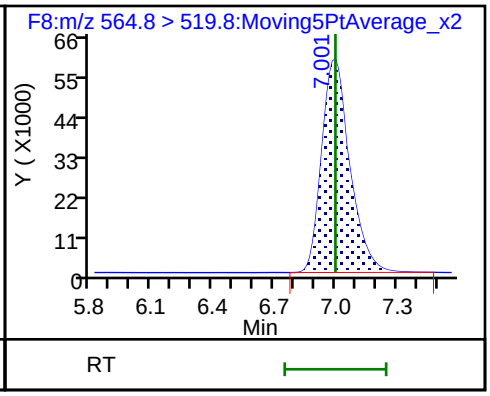
31 Perfluorodecane Sulfonic acid



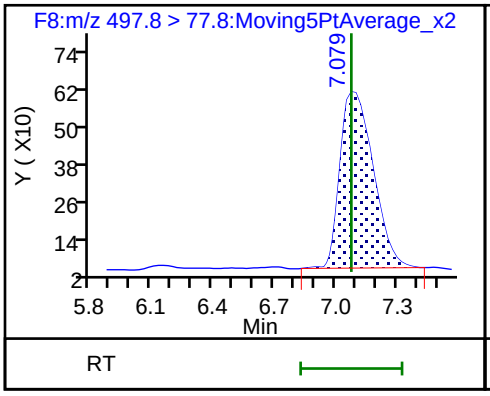
32 Perfluoroundecanoic acid



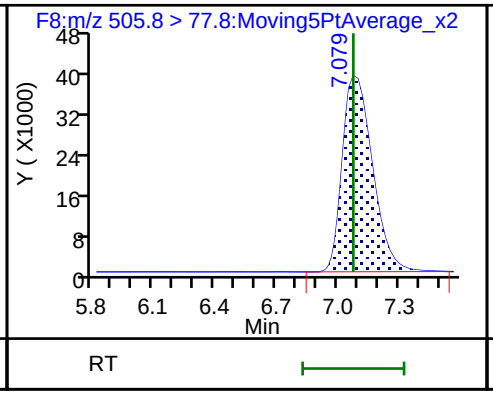
D 33 13C2 PFUnA



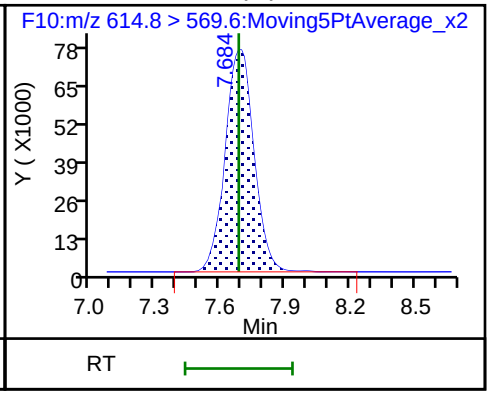
34 Perfluorooctane Sulfonamide



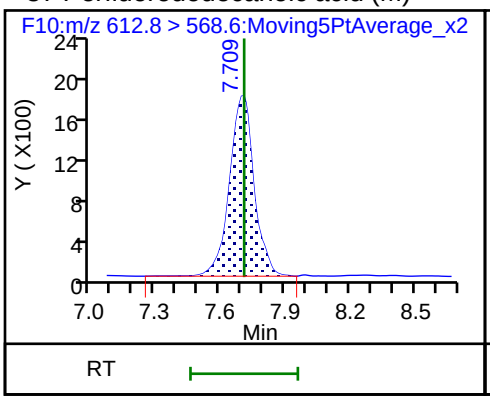
D 35 13C8 FOSA



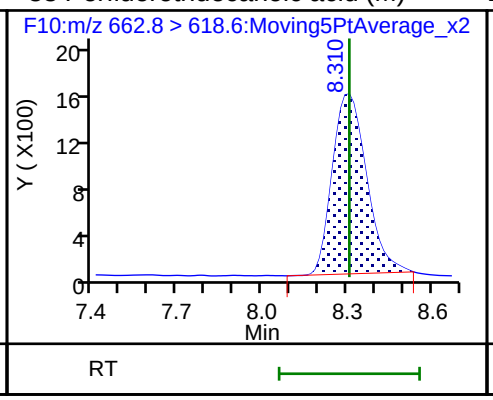
D 36 13C2 PFDoA (M)



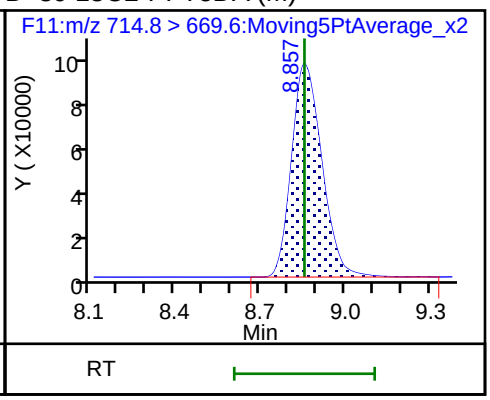
37 Perfluorododecanoic acid (M)



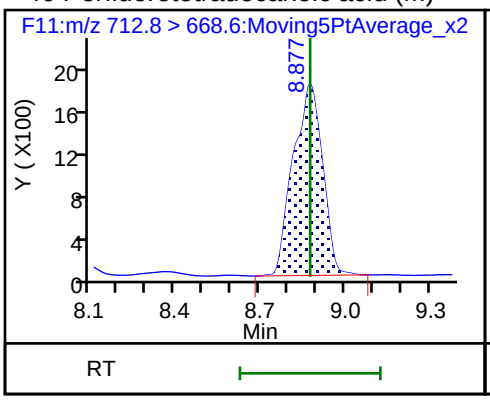
38 Perfluorotridecanoic acid (M)



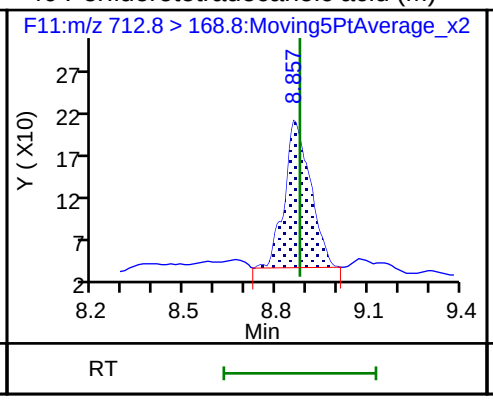
D 39 13C2-PFTeDA (M)



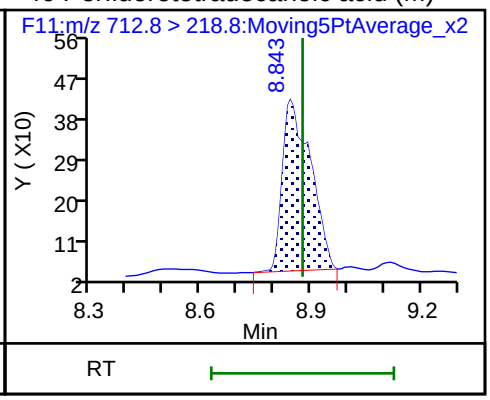
40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid (M)



Manual Integration/User Assign Peak Report

TestAmerica Burlington

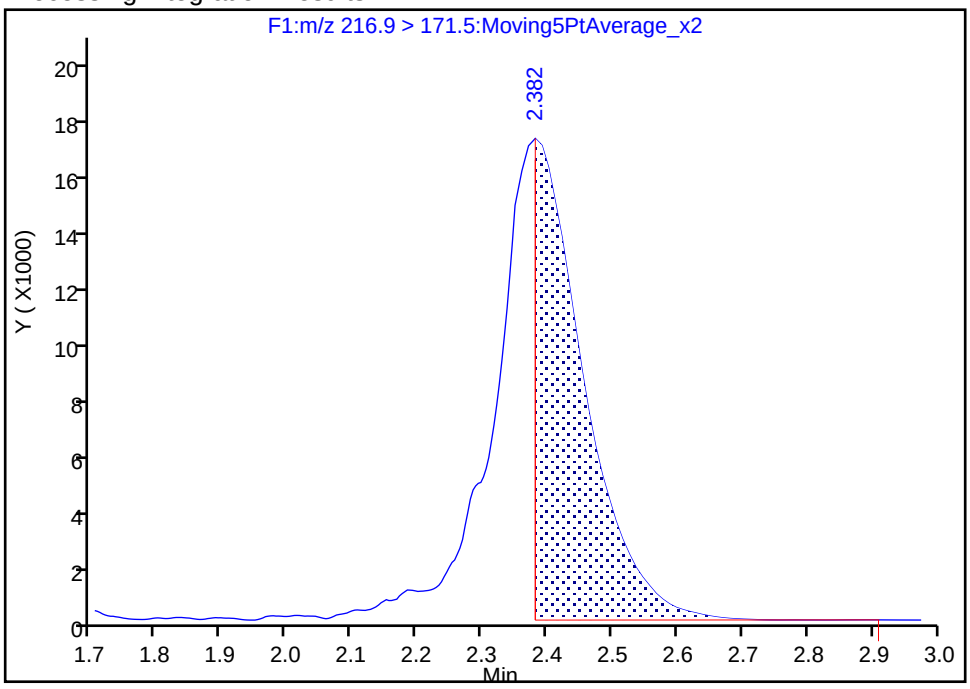
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

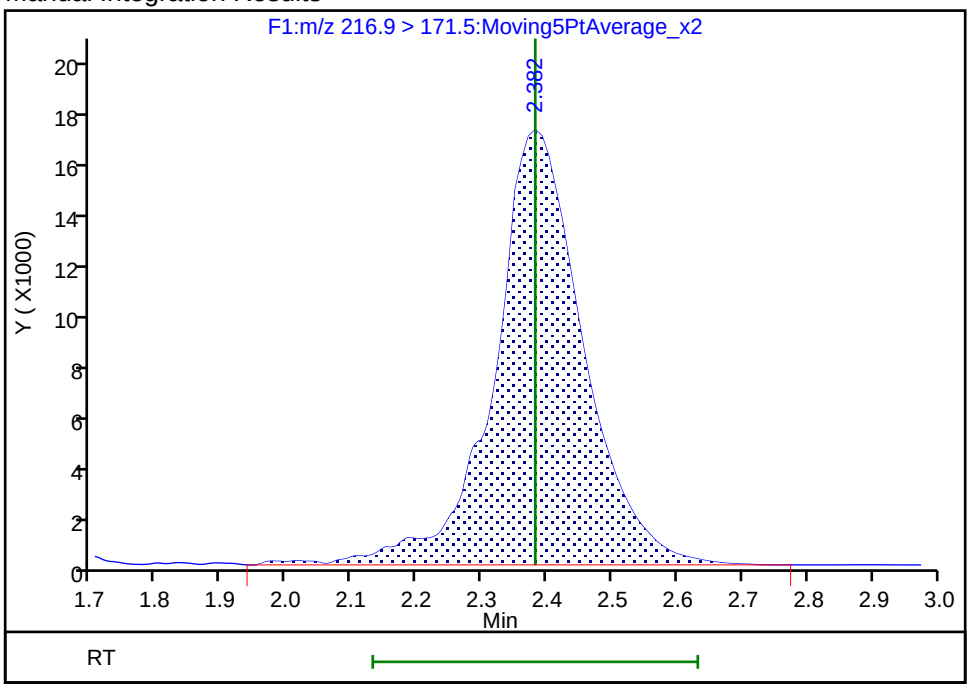
Processing Integration Results

RT: 2.38
Area: 85308
Amount: 23.727545
Amount Units: ng/ml



Manual Integration Results

RT: 2.38
Area: 159038
Amount: 44.234789
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:29:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

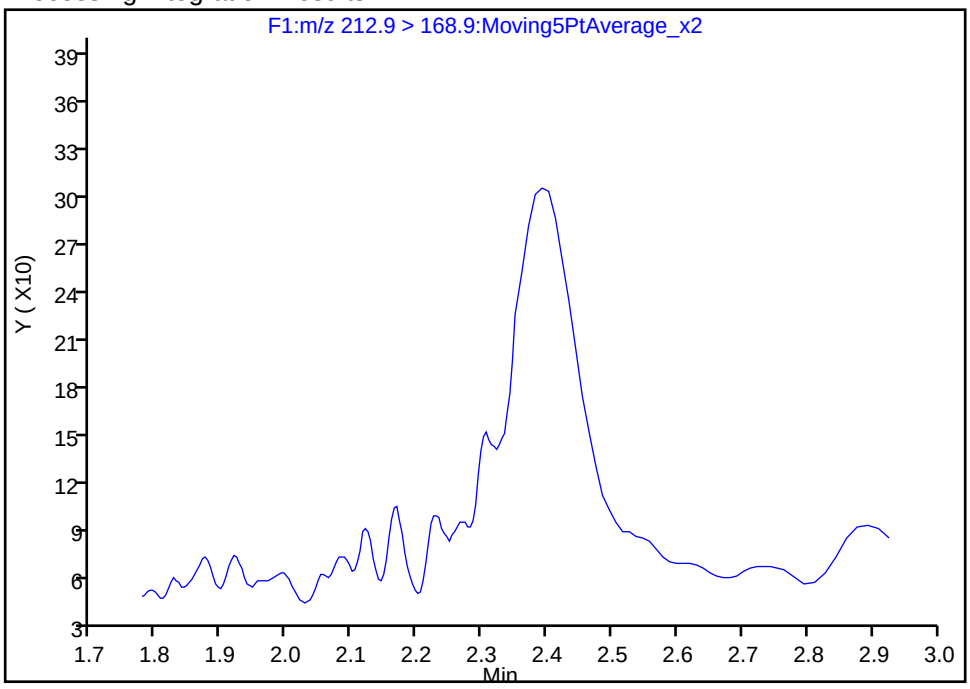
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

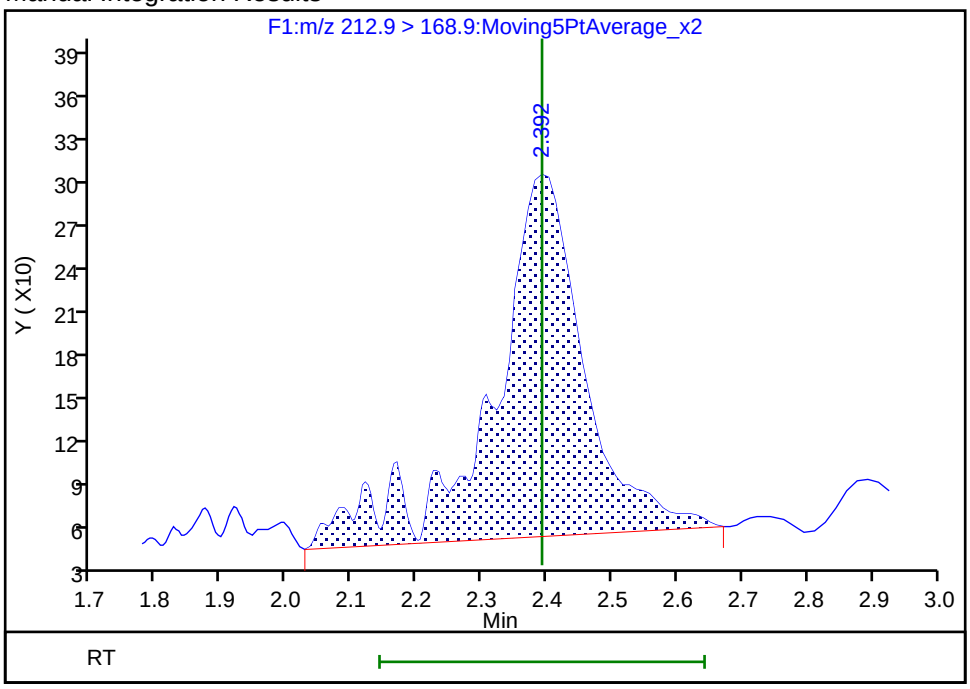
Not Detected
Expected RT: 2.39

Processing Integration Results



Manual Integration Results

RT: 2.39
Area: 2505
Amount: 1.185937
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:29:18
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

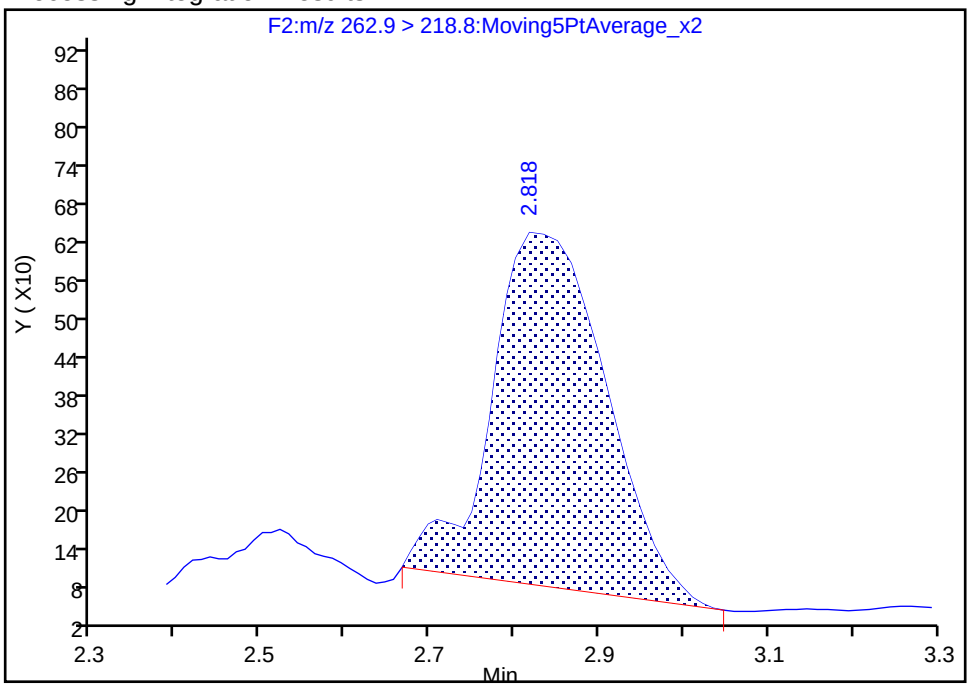
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

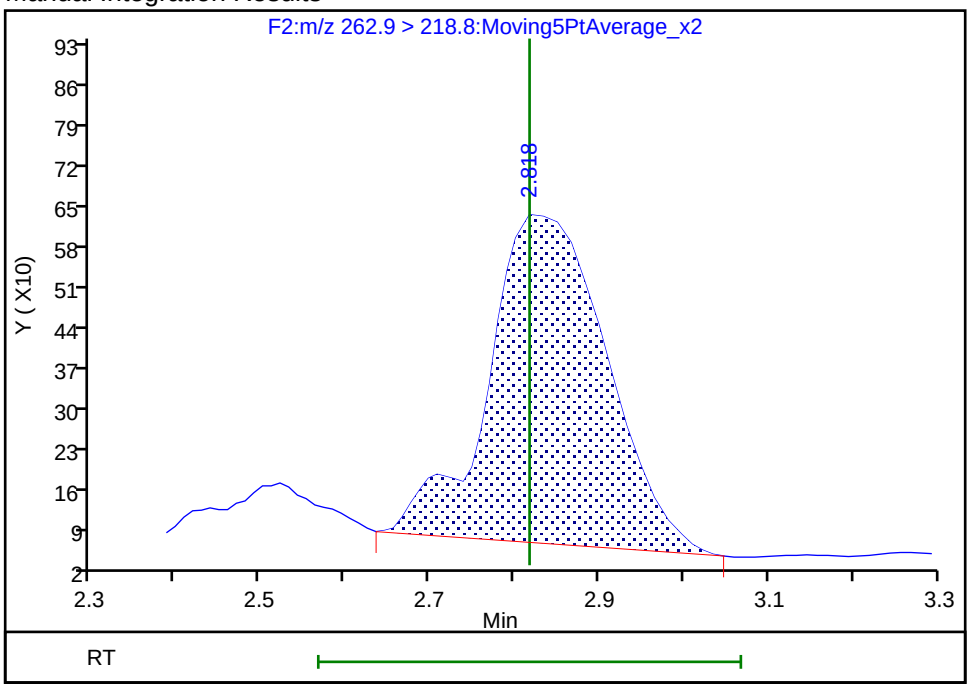
Processing Integration Results

RT: 2.82
Area: 5219
Amount: 0.932601
Amount Units: ng/ml



Manual Integration Results

RT: 2.82
Area: 5556
Amount: 0.981401
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:42
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

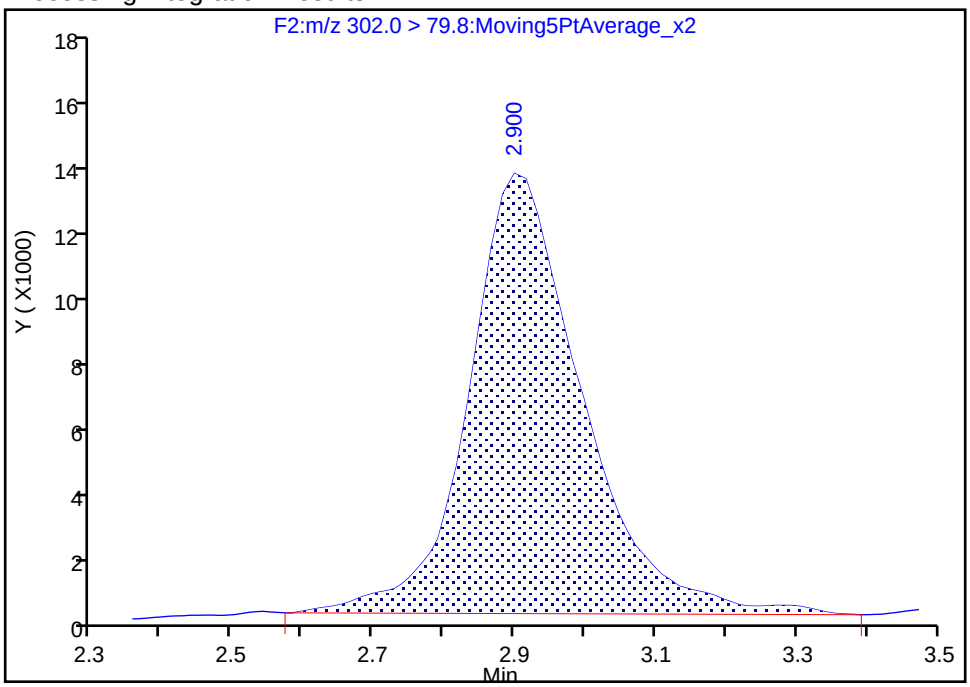
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

D 5 13C3-PFBS, CAS: STL02337

Signal: 1

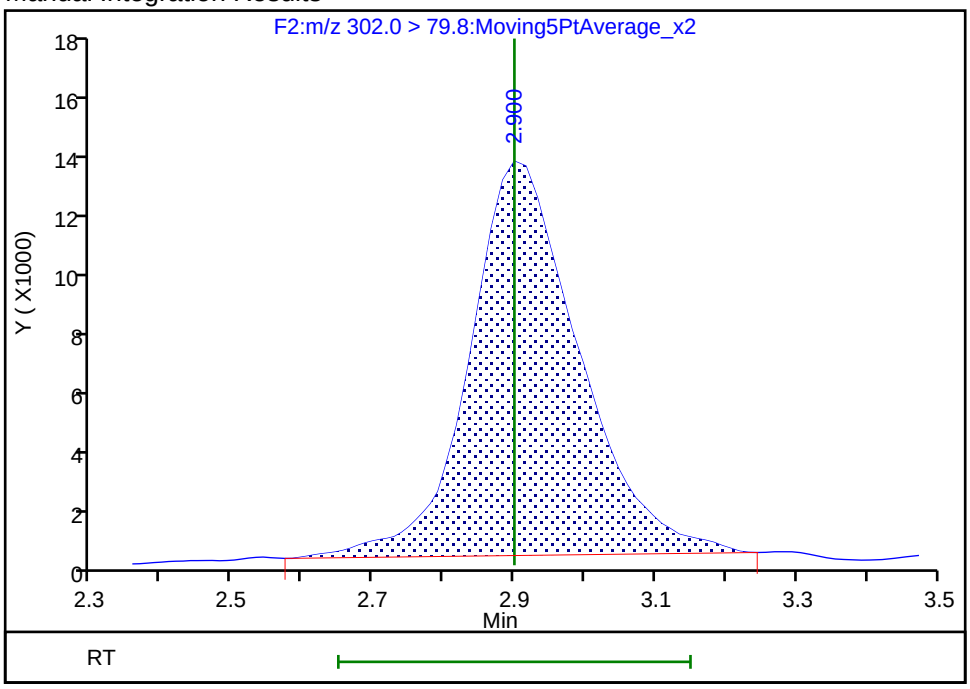
Processing Integration Results

RT: 2.90
Area: 147262
Amount: 42.189610
Amount Units: ng/ml



Manual Integration Results

RT: 2.90
Area: 141010
Amount: 40.398453
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

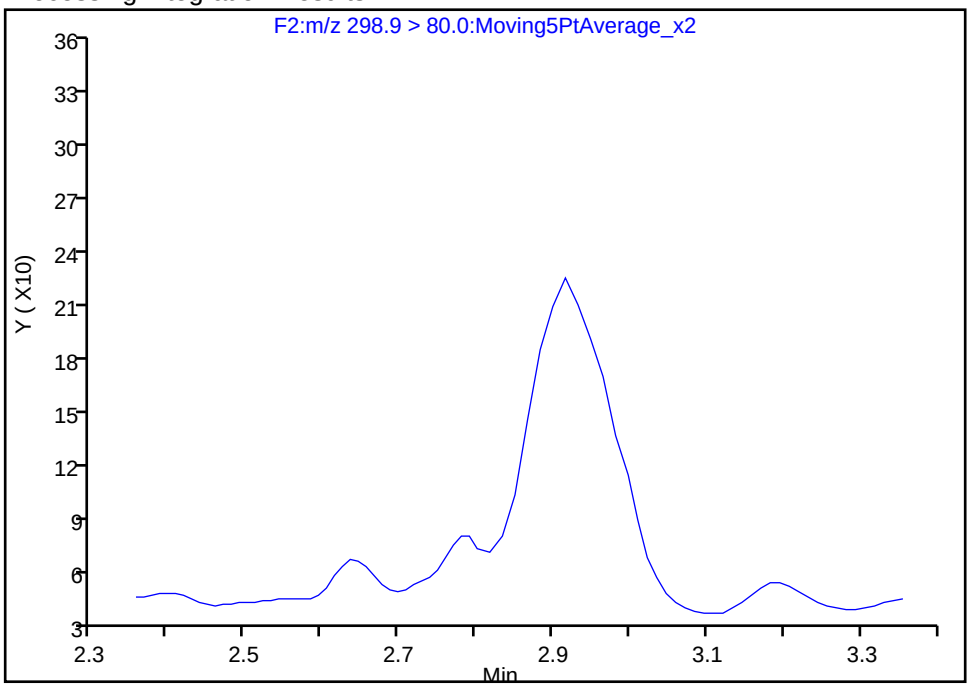
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

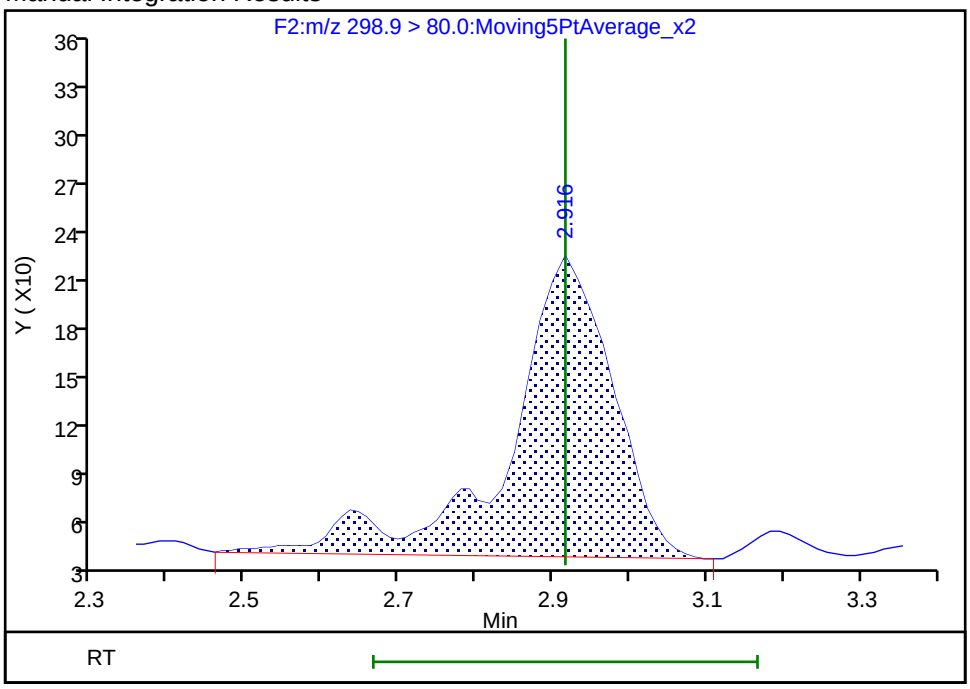
Not Detected
Expected RT: 2.92

Processing Integration Results



Manual Integration Results

RT: 2.92
Area: 1738
Amount: 0.680264
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:29:38
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

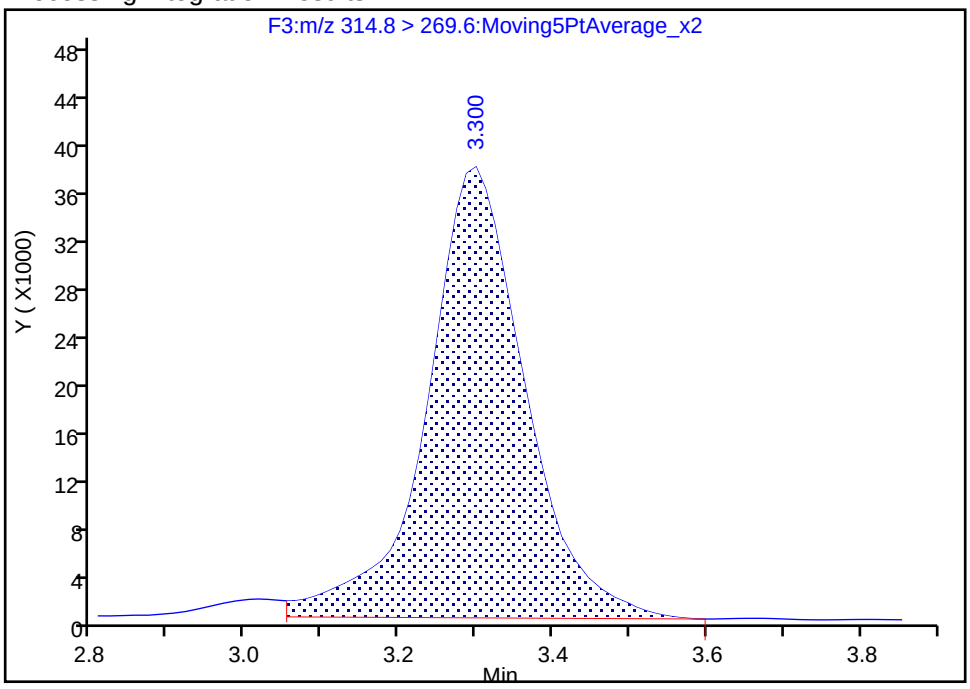
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F3:MRM

D 8 13C2 PFHxA, CAS: STL00993

Signal: 1

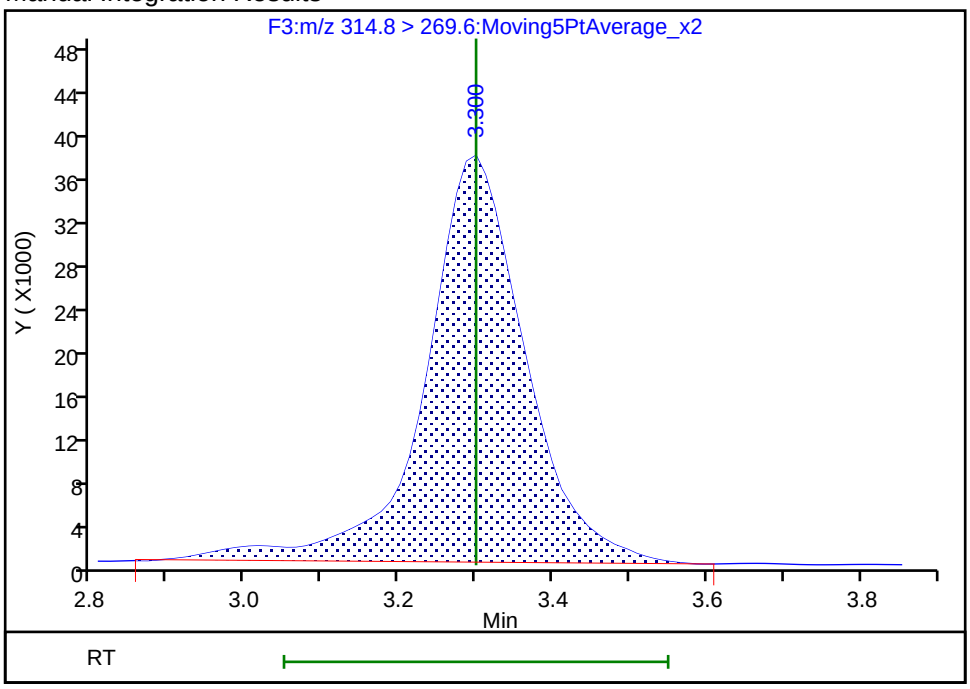
Processing Integration Results

RT: 3.30
Area: 334485
Amount: 54.254579
Amount Units: ng/ml



Manual Integration Results

RT: 3.30
Area: 340234
Amount: 55.187086
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:31:01
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

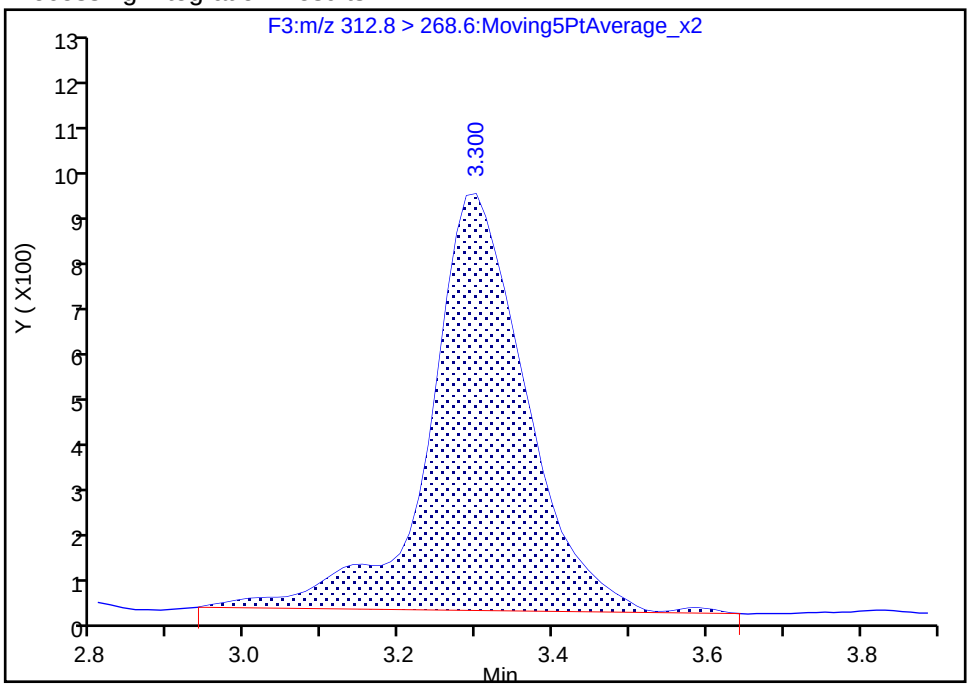
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F3:MRM

7 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

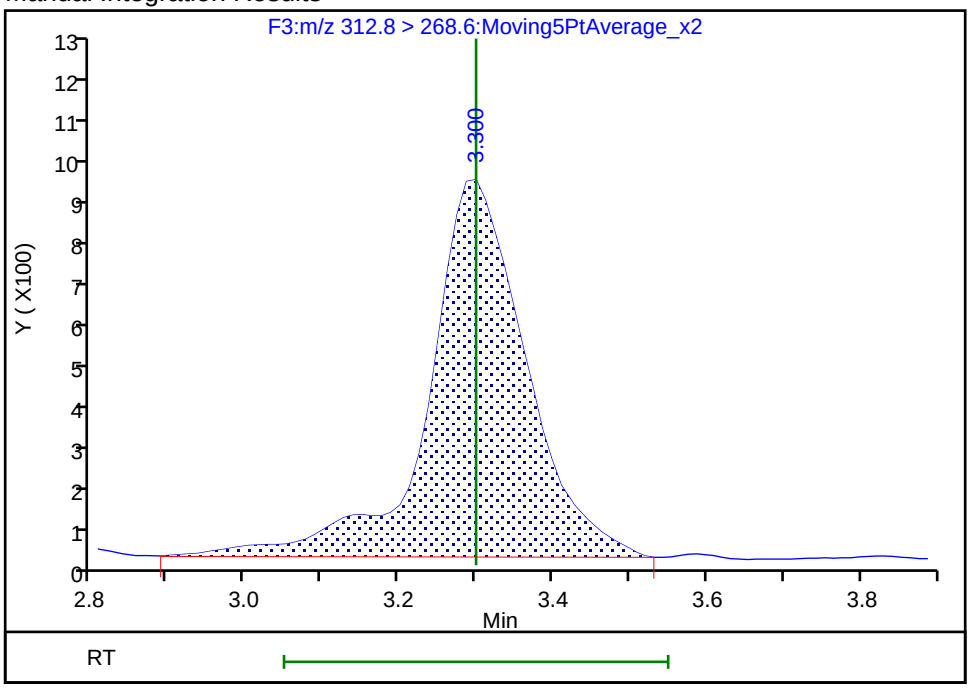
Processing Integration Results

RT: 3.30
Area: 7594
Amount: 1.315138
Amount Units: ng/ml



Manual Integration Results

RT: 3.30
Area: 7661
Amount: 1.323847
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:31:08
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington

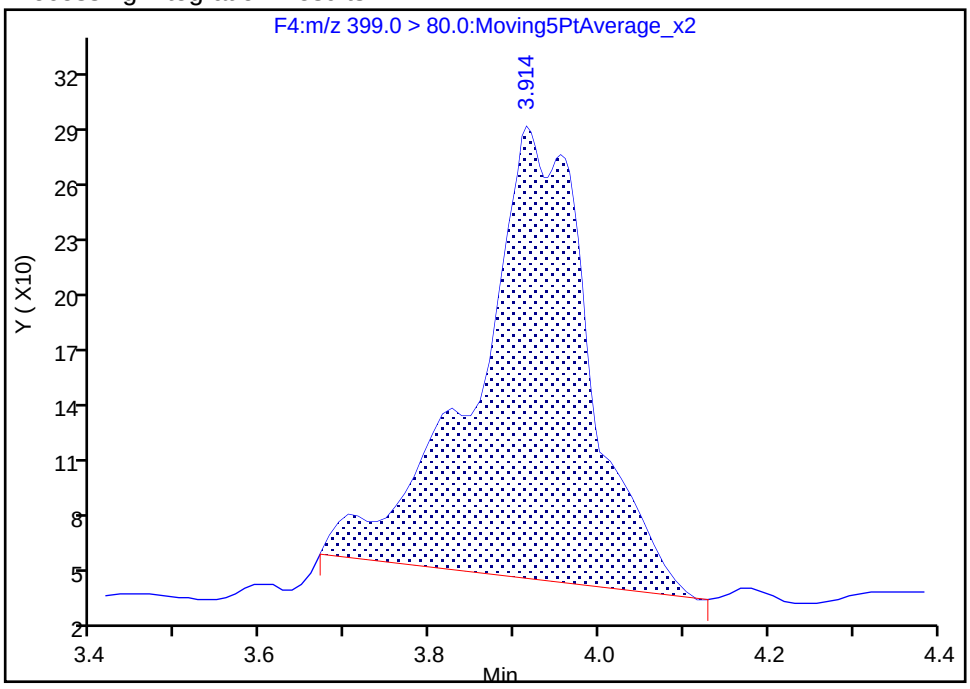
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

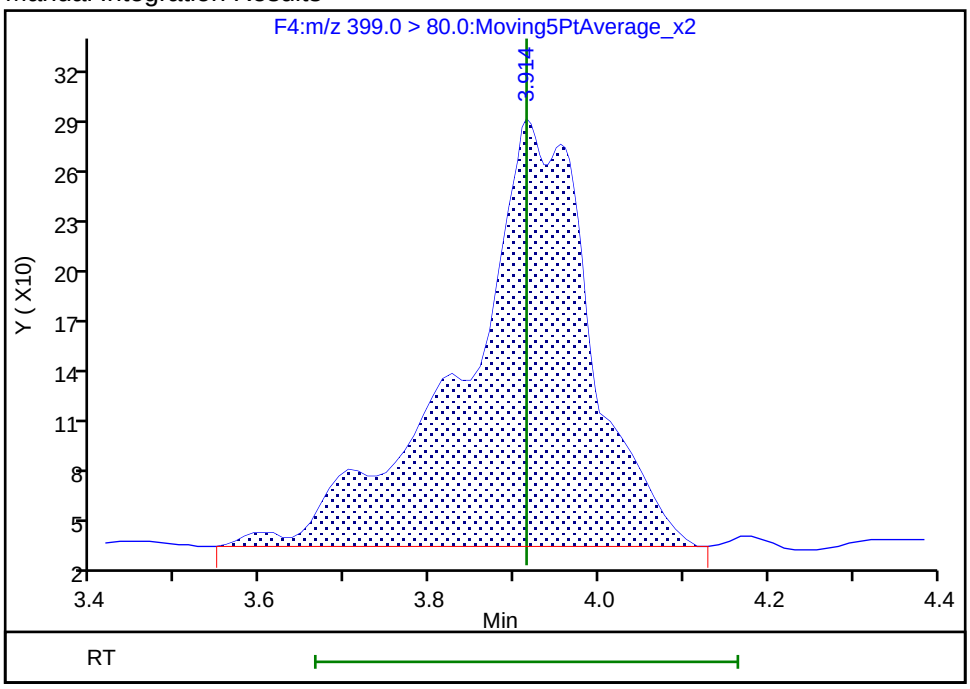
Processing Integration Results

RT: 3.91
Area: 2258
Amount: 1.093041
Amount Units: ng/ml



Manual Integration Results

RT: 3.91
Area: 2640
Amount: 1.205102
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:31:20
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

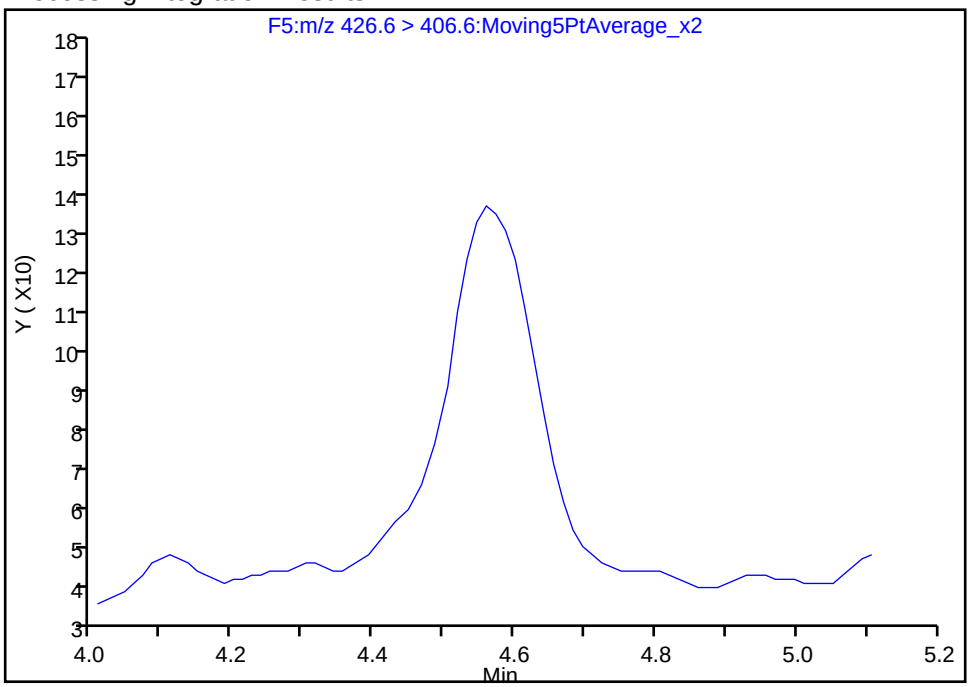
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

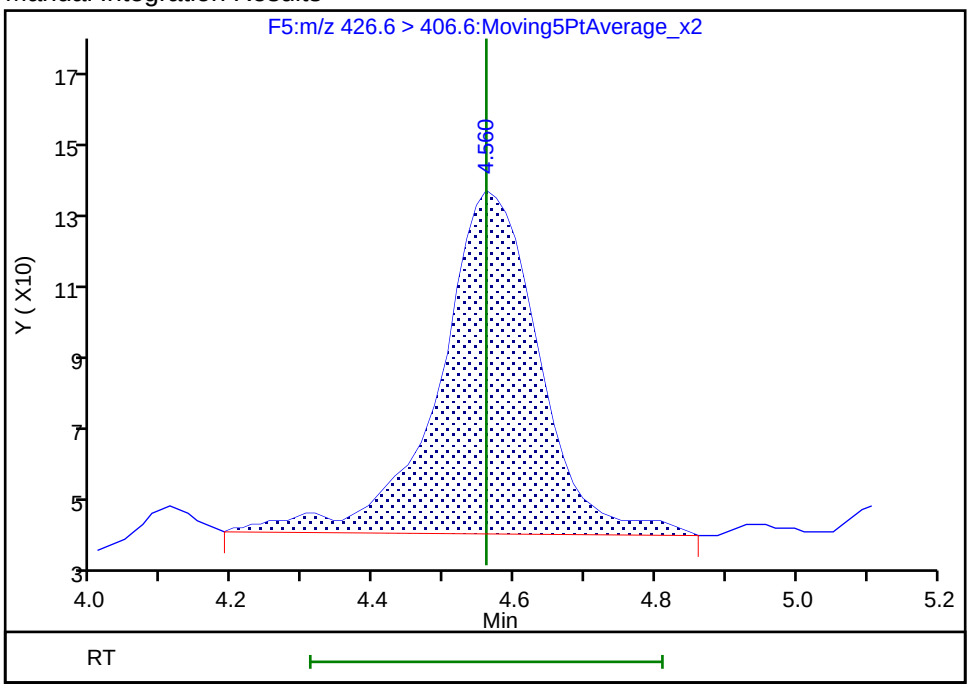
Processing Integration Results

Not Detected
Expected RT: 4.56



Manual Integration Results

RT: 4.56
Area: 920
Amount: 0.614945
Amount Units: ng/ml



Reviewer: chirgwinb, 21-Jun-2018 16:41:03
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

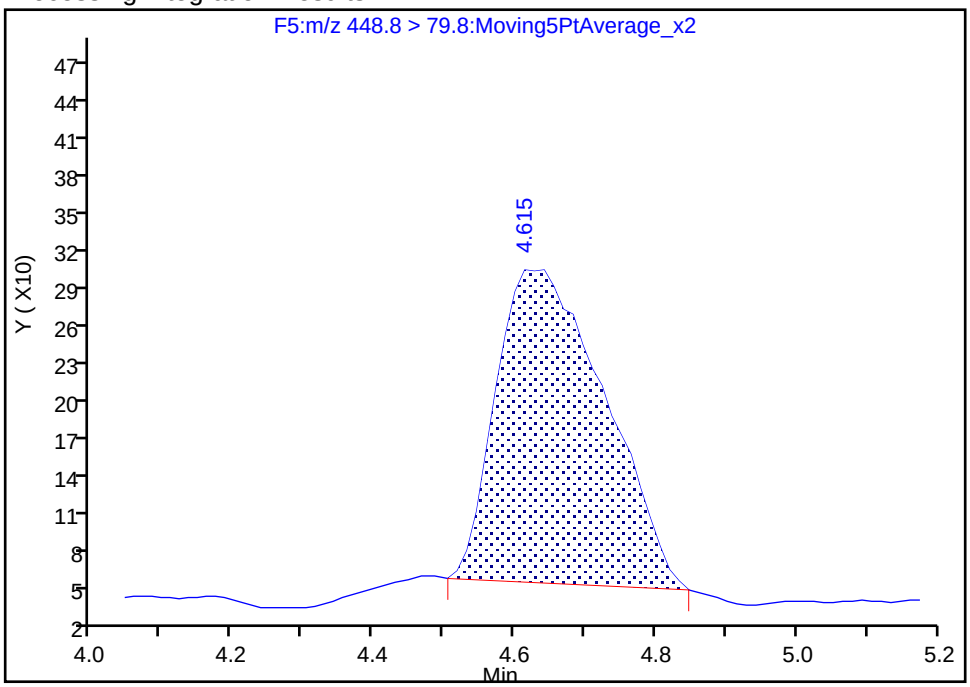
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

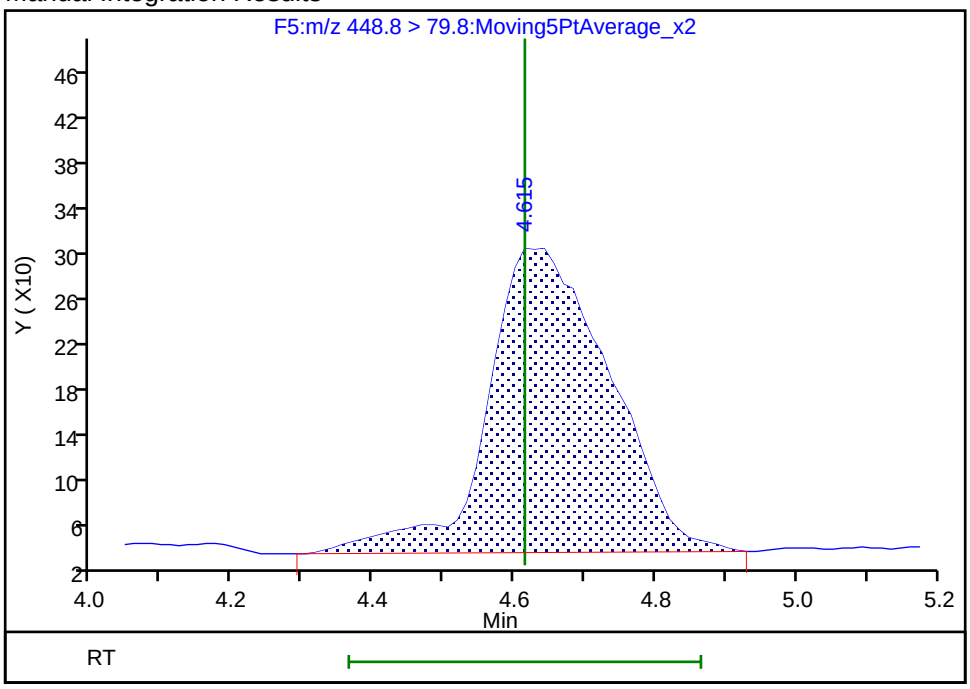
Processing Integration Results

RT: 4.61
Area: 2647
Amount: 0.904439
Amount Units: ng/ml



Manual Integration Results

RT: 4.61
Area: 3204
Amount: 1.055137
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:31:41
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

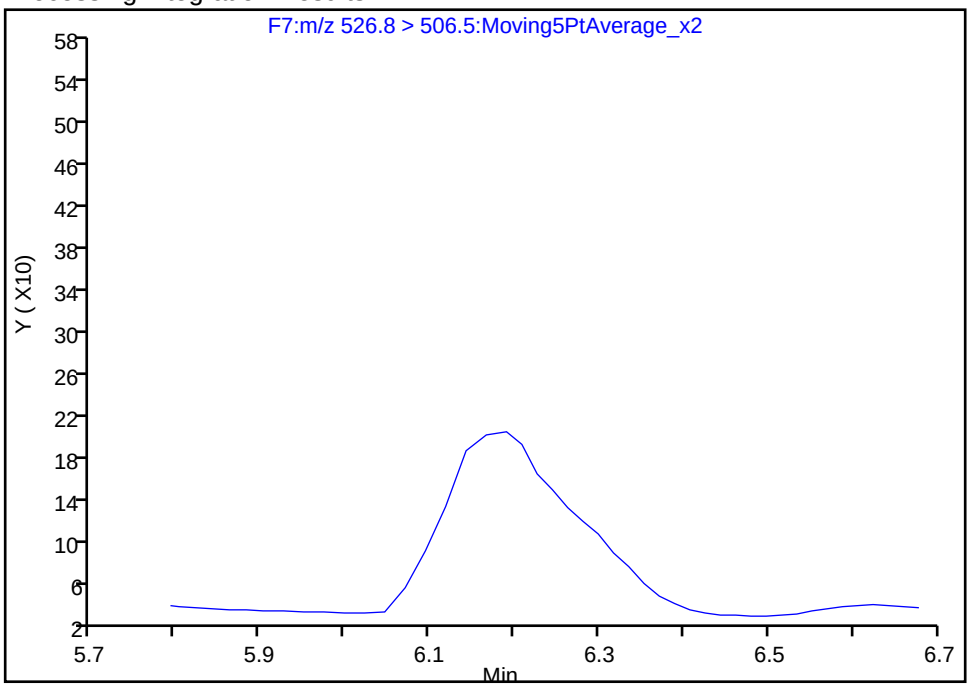
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

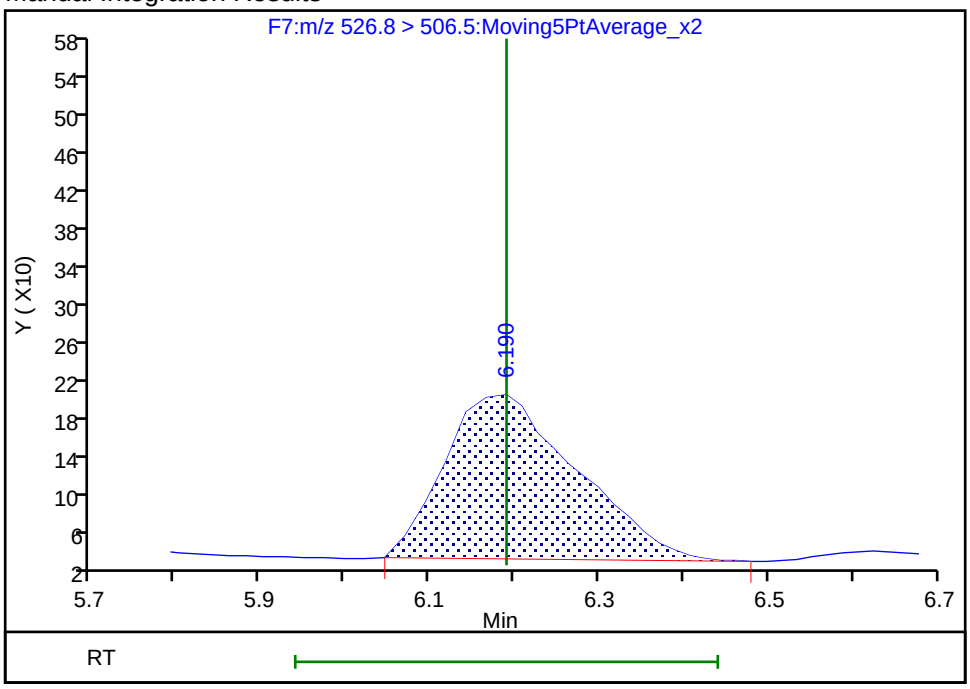
Not Detected
Expected RT: 6.19

Processing Integration Results



Manual Integration Results

RT: 6.19
Area: 1866
Amount: 1.499448
Amount Units: ng/ml



Reviewer: chirgwinb, 21-Jun-2018 16:41:07
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

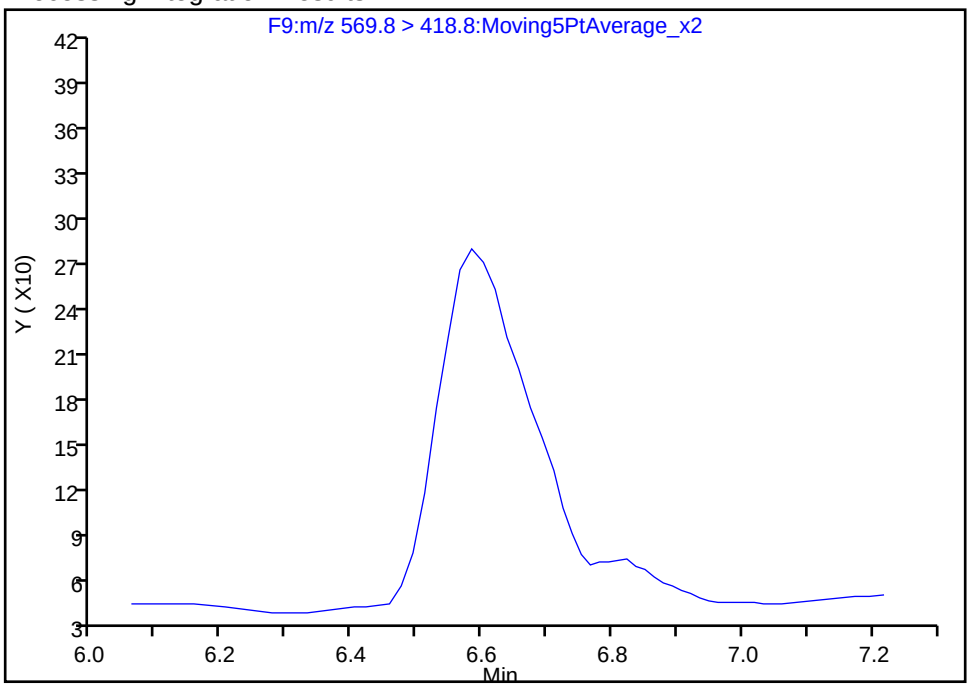
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F9:MRM

28 N-methyl perfluorooctane sulfonamidoacetic a, CAS: 2355-31-9

Signal: 1

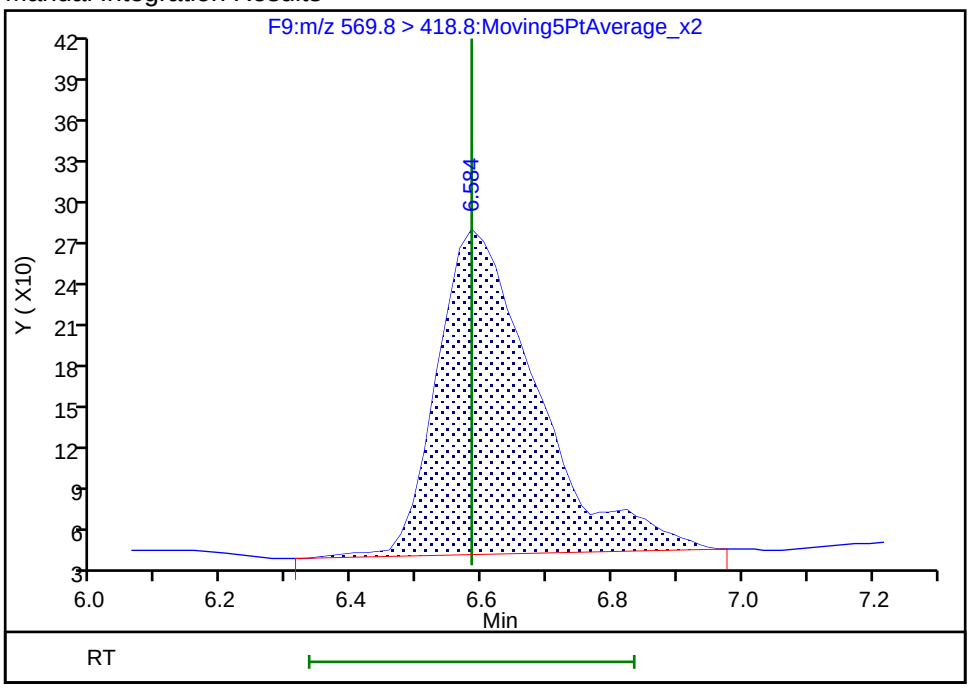
Not Detected
Expected RT: 6.58

Processing Integration Results



Manual Integration Results

RT: 6.58
Area: 2557
Amount: 1.307859
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:29:48
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

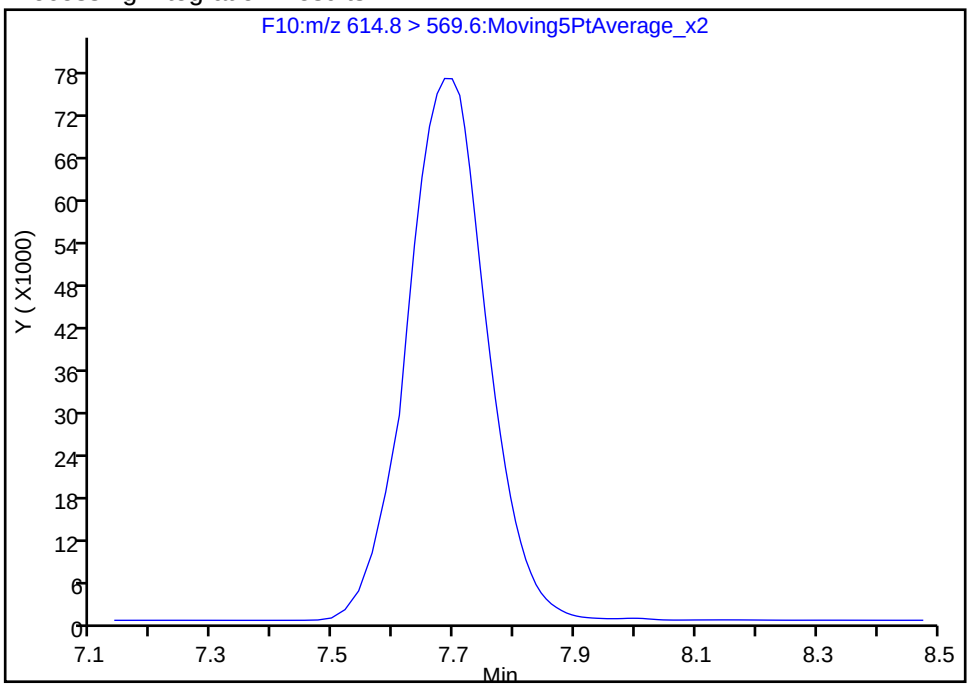
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F10:MRM

D 36 13C2 PFDoA, CAS: STL00998

Signal: 1

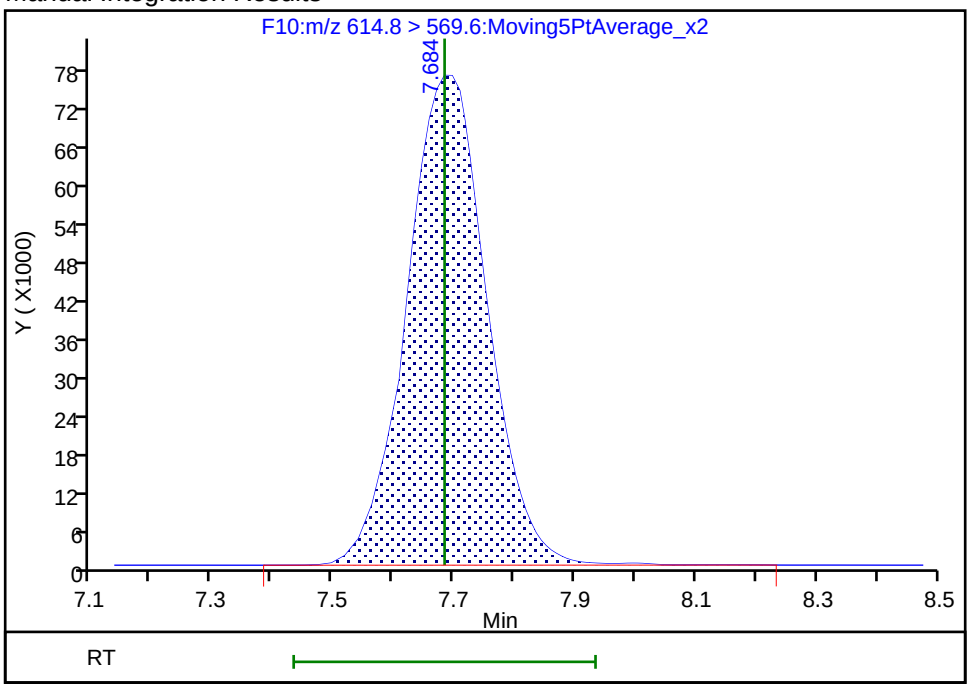
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.68
Area: 709702
Amount: 61.867936
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:22
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

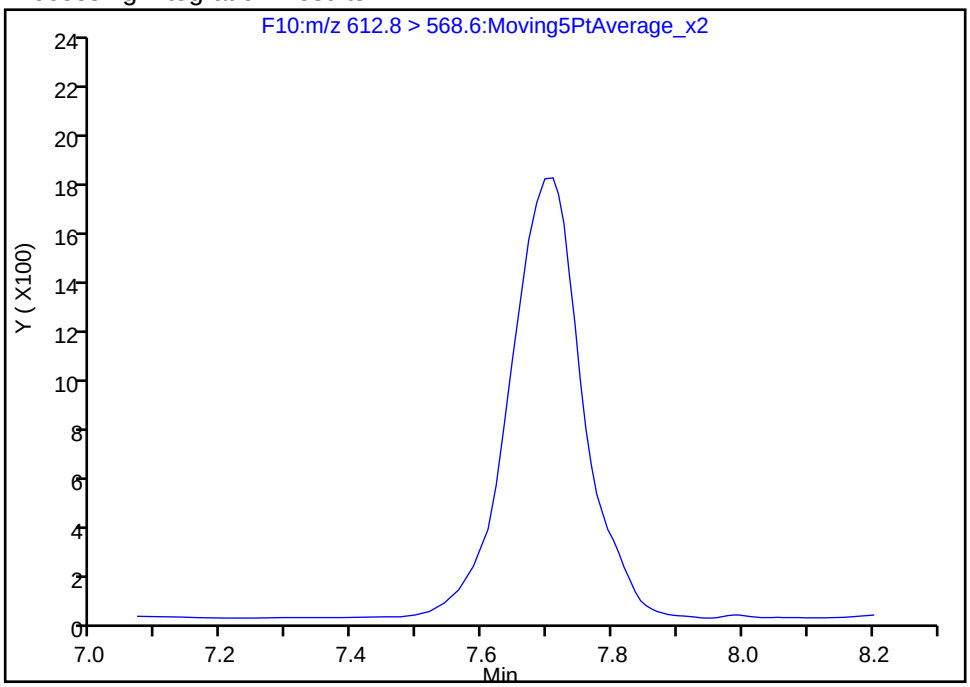
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F10:MRM

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

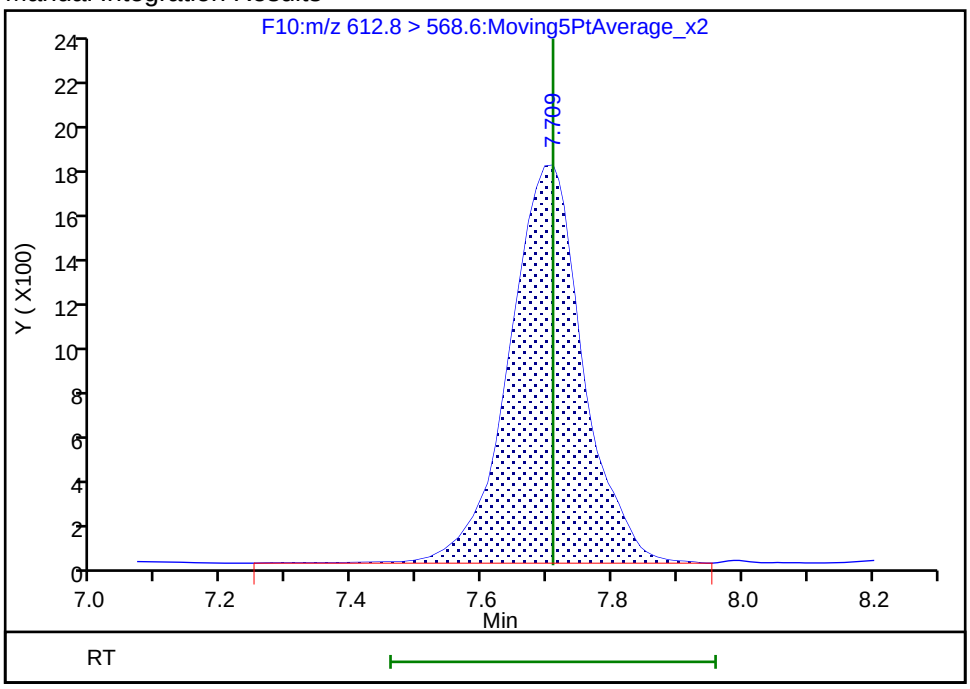
Not Detected
Expected RT: 7.71

Processing Integration Results



Manual Integration Results

RT: 7.71
Area: 13661
Amount: 1.076520
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:26
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

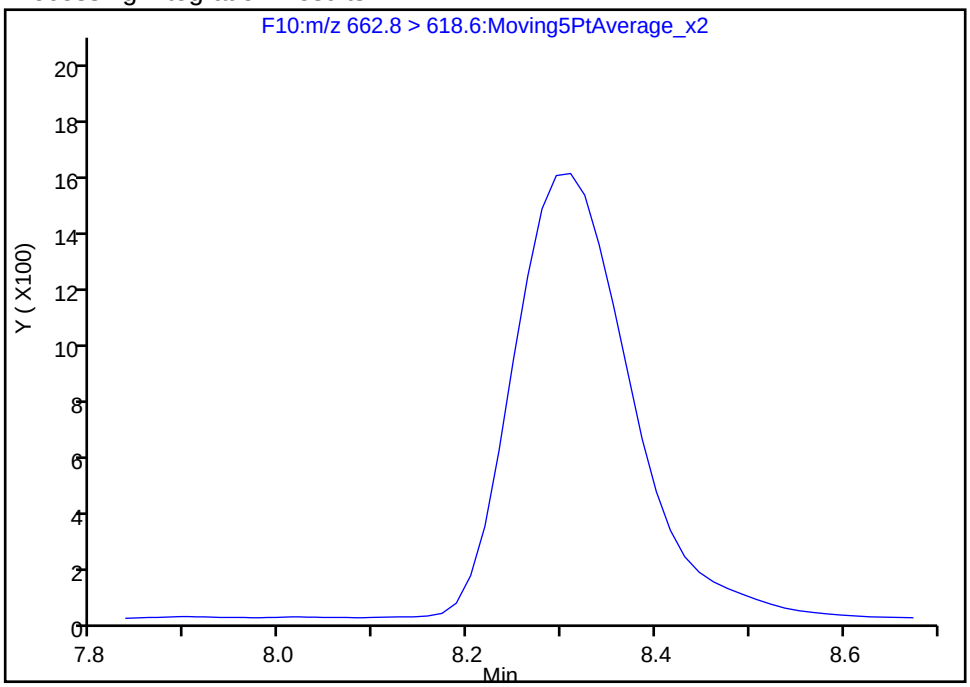
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F10:MRM

38 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

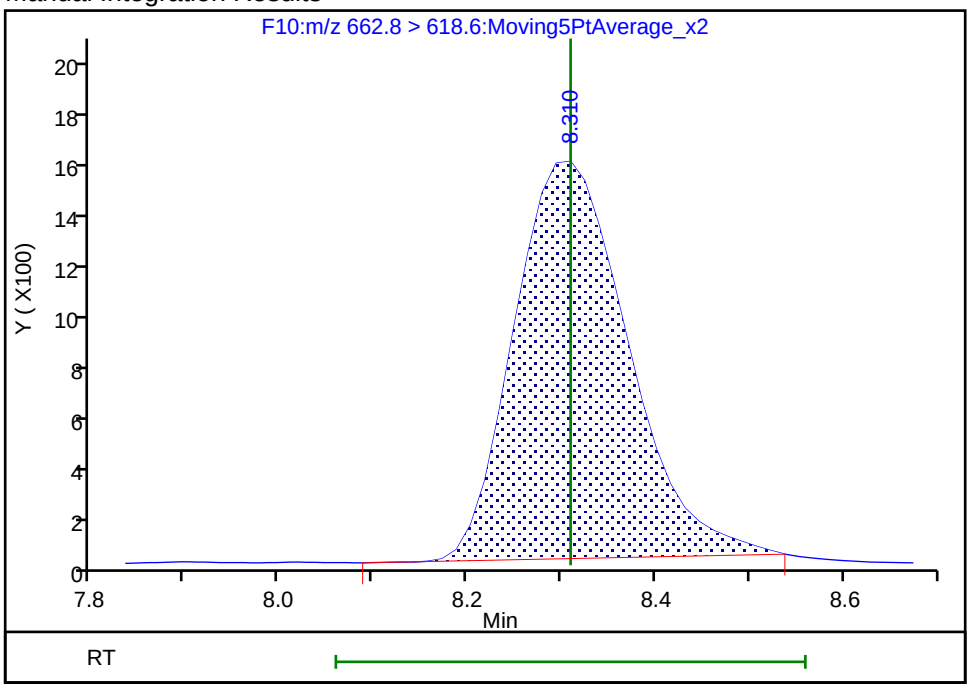
Not Detected
Expected RT: 8.31

Processing Integration Results



Manual Integration Results

RT: 8.31
Area: 12671
Amount: 0.925046
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:16
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

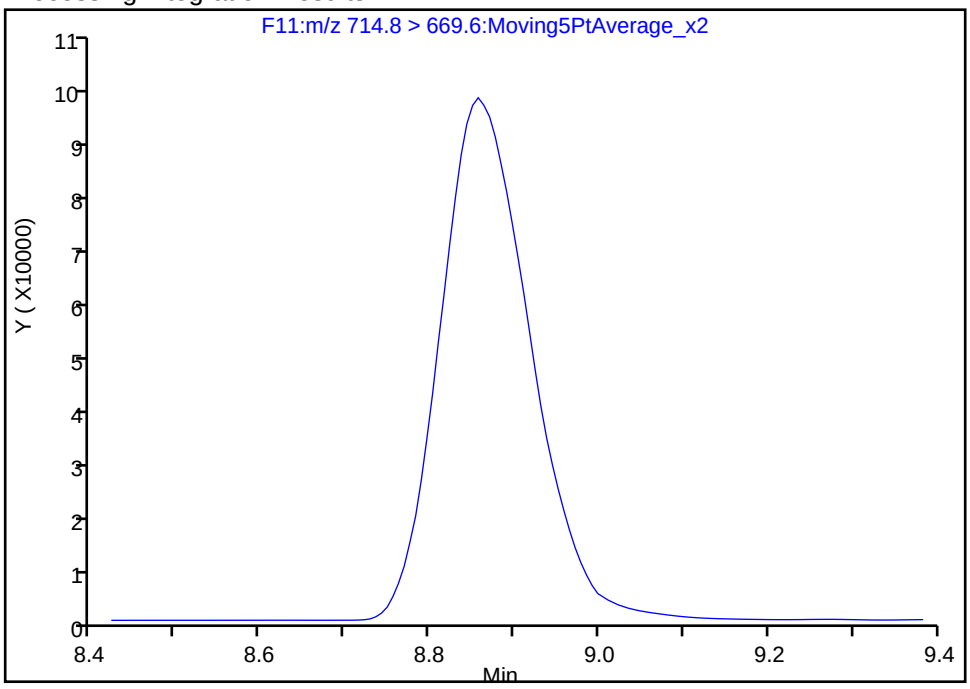
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

D 39 13C2-PFTeDA, CAS: STL02116

Signal: 1

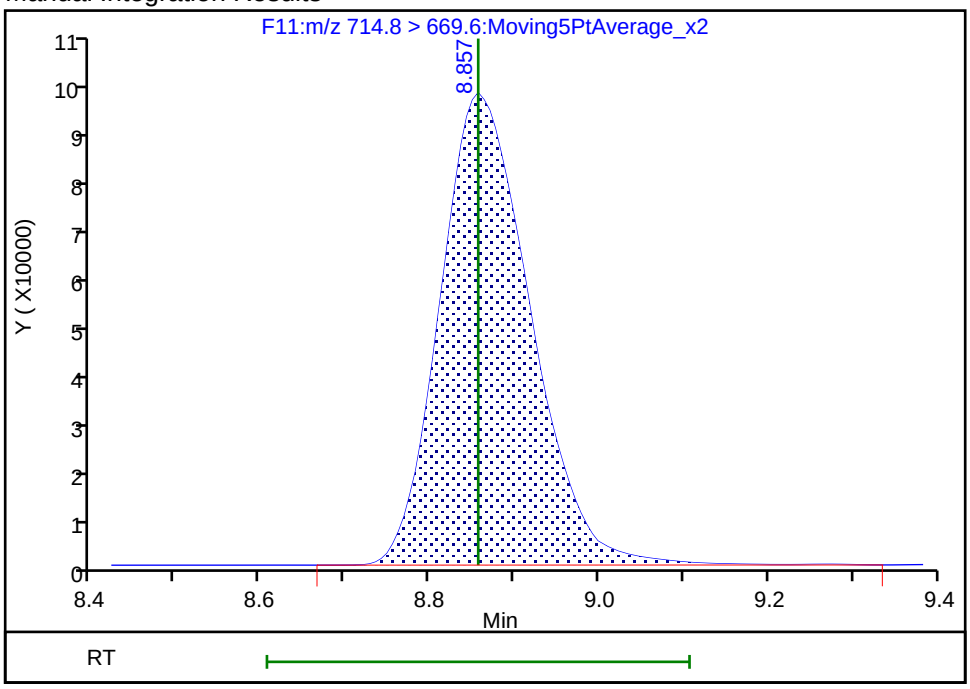
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.86
Area: 726388
Amount: 62.409663
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:11
Audit Action: Assigned Compound ID Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

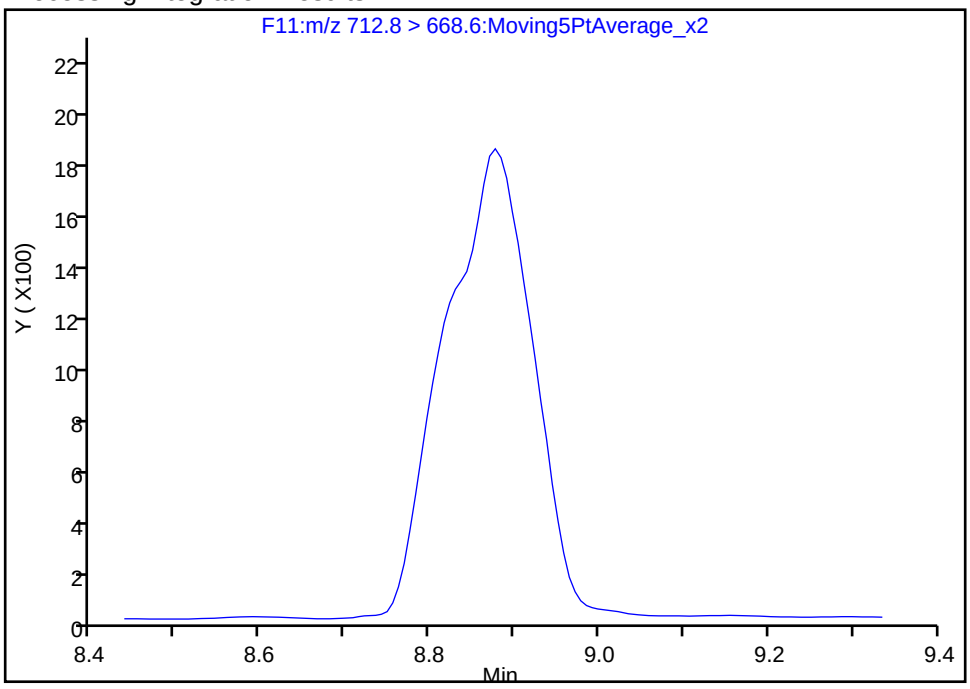
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

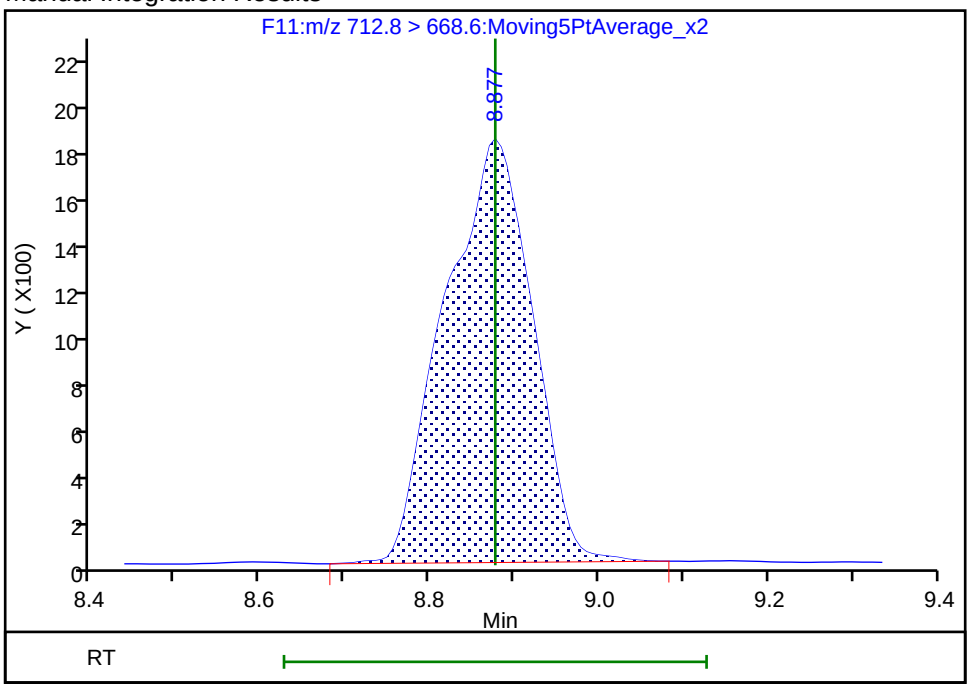
Processing Integration Results

Not Detected
Expected RT: 8.88



Manual Integration Results

RT: 8.88
Area: 12720
Amount: 0.798362
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:02
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

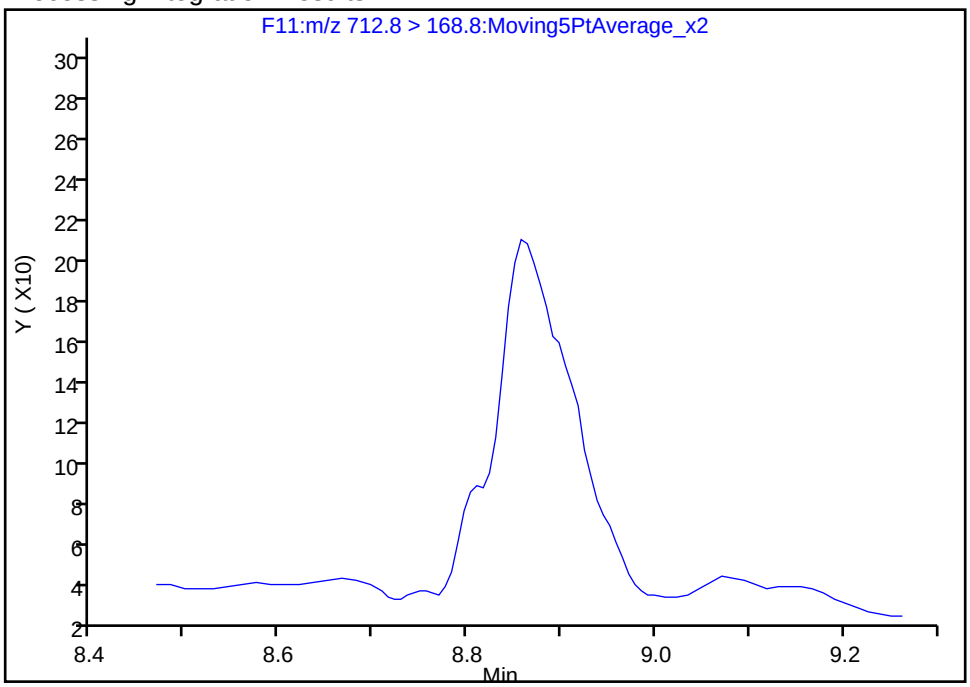
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

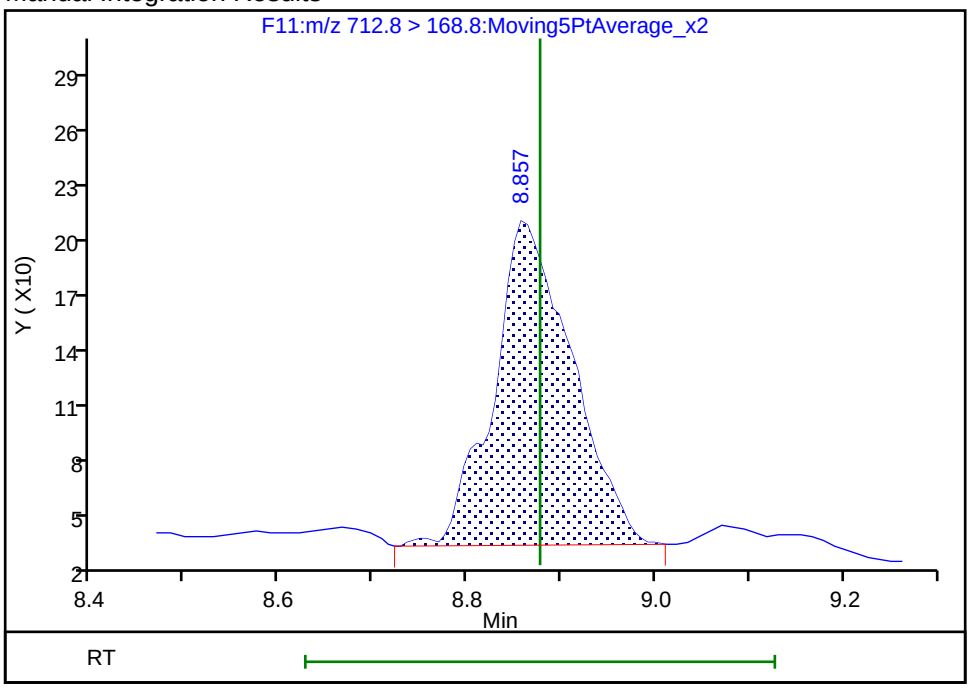
Not Detected
Expected RT: 8.88

Processing Integration Results



Manual Integration Results

RT: 8.86
Area: 992
Amount: 0.798362
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:04
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

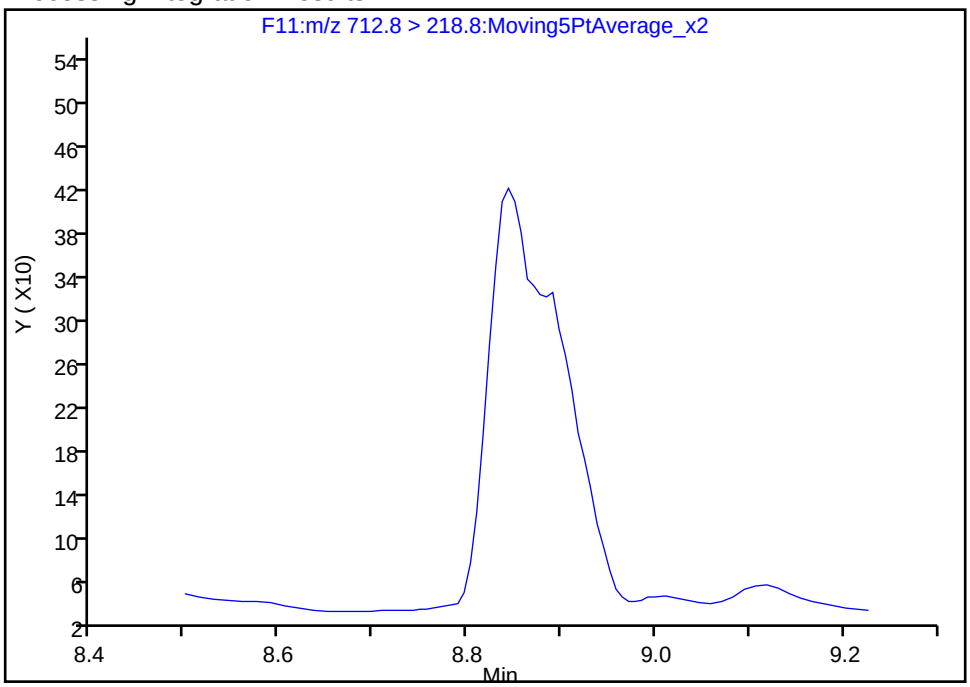
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A06.d
Injection Date: 12-Jun-2018 09:36:48 Instrument ID: LC410
Lims ID: CCVL
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 6
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 3

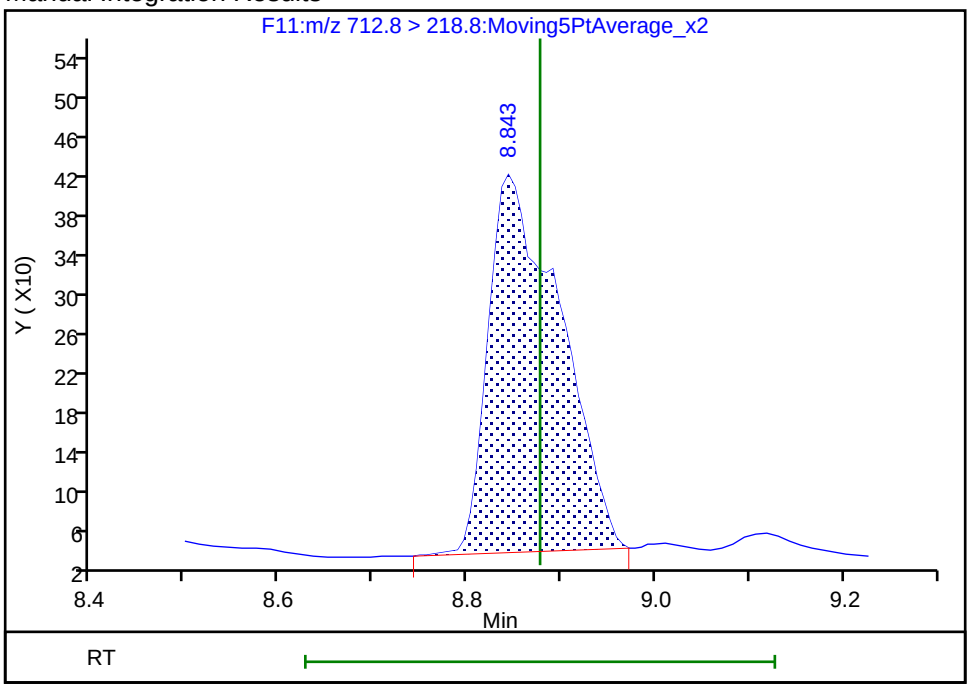
Not Detected
Expected RT: 8.88

Processing Integration Results



Manual Integration Results

RT: 8.84
Area: 2001
Amount: 0.798362
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 10:30:07
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: CCV 200-130505/30 Calibration Date: 06/12/2018 16:04

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF061218A30.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	L1ID		0.6938		46900	50000	-6.2	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		1.122		45390	50000	-9.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8425	0.8743		45870	44200	3.8	40.0
Perfluorohexanoic acid (PFHxA)	L1ID		1.064		47380	50000	-5.2	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.119		51390	50000	2.8	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.9098		40150	45500	-11.8	40.0
6:2 FTS	L1ID		1.051		49020	47400	3.4	40.0
Perfluorooctanoic acid (PFOA)	L1ID		1.155		50370	50000	0.7	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	L1ID		0.9549		47470	47600	-0.3	50.0
Perfluorononanoic acid (PFNA)	L2ID		0.9936		50340	50000	0.7	40.0
Perfluorooctanesulfonic acid (PFOS)	L2ID		1.137		47480	46400	2.3	40.0
8:2 FTS	L1ID		0.7503		41320	47900	-13.7	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9353		45200	50000	-9.6	40.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	L1ID		1.137		44500	50000	-11.0	40.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	L2ID		1.066		47420	50000	-5.2	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		1.121		51330	48200	6.5	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.167		52340	50000	4.7	40.0
Perfluorooctane Sulfonamide (FOSA)	L1ID		0.9163		43960	50000	-12.1	40.0
Perfluorododecanoic acid (PFDoA)	L2ID		0.9819		51800	50000	3.6	40.0
Perfluorotridecanoic Acid (PFTriA)	L2ID		1.018		50680	50000	1.4	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.998		55350	50000	10.7	40.0
13C4 PFBA	Ave	0.6319	0.4821		38150	50000	-23.7	50.0
13C5 PFPeA	Ave	0.9274	0.7361		39690	50000	-20.6	50.0
13C3-PFBS	Ave	0.6135	0.4930		37370	46500	-19.6	50.0
13C2 PFHxA	Ave	1.084	0.8801		40610	50000	-18.8	50.0
13C4-PFHpA	Ave	1.244	1.034		41550	50000	-16.9	50.0
18O2 PFHxS	Ave	0.5867	0.4656		37540	47300	-20.6	50.0
M2-6:2FTS	Ave	0.1646	0.1671		48220	47500	1.5	50.0
13C4 PFOA	Ave	0.9520	0.8800		46210	50000	-7.6	50.0
13C5 PFNA	Ave	1.253	1.249		49820	50000	-0.4	50.0
13C4 PFOS	Ave	0.6352	0.6141		46210	47800	-3.3	50.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: CCV 200-130505/30 Calibration Date: 06/12/2018 16:04

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF061218A30.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2FTS	Ave	0.3407	0.3215		45200	47900	-5.6	50.0
13C2 PFDA	Ave	1.826	1.844		50490	50000	1.0	50.0
d3-NMeFOSAA	Ave	0.3847	0.3930		51080	50000	2.2	50.0
d5-NEtFOSAA	Ave	0.3292	0.2967		45070	50000	-9.9	50.0
13C2 PFUnA	Ave	1.670	1.487		44530	50000	-10.9	50.0
13C8 FOSA	Ave	1.403	1.375		48970	50000	-2.1	50.0
13C2 PFDoA	Ave	2.016	1.990		49350	50000	-1.3	50.0
13C2-PFTeDA	Ave	2.046	2.010		49110	50000	-1.8	50.0

FORM VII 537 (modified)

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A30.d
Lims ID: CCV L5
Client ID:
Sample Type: CCV
Inject. Date: 12-Jun-2018 16:04:31 ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-030 CCV L5
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:26:49 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 12-Jun-2018 16:32:13

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										
212.9 > 168.9	2.371	2.382	-0.011	1.000	127684	46.9		93.8	263	
D 1 13C4 PFBA										
216.9 > 171.5	2.371	2.392	-0.021	1.000	184036	38.1		76.3	649	
D 4 13C5-PFPeA										
267.7 > 222.6	2.801	2.818	-0.017	1.000	280983	39.7		79.4	446	
3 Perfluoropentanoic acid										
262.9 > 218.8	2.801	2.834	-0.033	1.000	315128	45.4		90.8	611	
D 5 13C3-PFBS										
302.0 > 79.8	2.883	2.900	-0.017	1.000	175025	37.4		80.4	174	
6 Perfluorobutanesulfonic acid										E
298.9 > 80.0	2.883	2.900	-0.017	1.000	145462	45.9		104	151	E
7 Perfluorohexanoic acid										
312.8 > 268.6	3.263	3.300	-0.037	1.000	357431	47.4		94.8	1049	
D 8 13C2 PFHxA										
314.8 > 269.6	3.263	3.300	-0.037	1.000	335947	40.6		81.2	1077	
9 Perfluoroheptanoic acid										
362.9 > 318.8	3.826	3.882	-0.056	1.000	441555	51.4		103	1958	
D 10 13C4-PFHpA										
366.9 > 321.8	3.826	3.882	-0.056	1.000	394603	41.5		83.1	157	
D 12 18O2 PFHxS										M
402.9 > 83.8	3.859	3.914	-0.055	1.000	168135	37.5		79.4	87.2	M
11 Perfluorohexanesulfonic acid										
399.0 > 80.0	3.871	3.919	-0.048	1.003	147140	40.2		88.2	1491	
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.486	4.486	0.0	1.004	63547	49.0		103		a
D 13 M2-6:2FTS										
428.6 > 408.6	4.468	4.546	-0.078	1.000	60611	48.2		102	217	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.532	4.601	-0.069	1.000	335889	46.2		92.4	503	
* 17 13C2-PFOA										
414.9 > 369.8	4.532	4.601	-0.069		381715	50.0			3715	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.532	4.615	-0.083	1.000	388052	50.4		101	2276	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.560	4.642	-0.082	0.854	213112	47.5		99.7	157	
D 19 13C5 PFNA										
467.8 > 422.8	5.322	5.422	-0.100	1.000	476661	49.8		99.6	1124	
20 Perfluorononanoic acid										
462.8 > 418.8	5.322	5.422	-0.100	1.000	473585	50.3		101	1408	
22 Perfluorooctane sulfonic acid										
498.8 > 79.8	5.340	5.434	-0.094	1.000	247377	47.5		102	807	
D 21 13C4 PFOS										
502.8 > 79.8	5.340	5.440	-0.100	1.000	224105	46.2		96.7	2639	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.071	6.070	0.001	0.996	88200	41.3		86.3	785	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	117547	45.2		94.4	314	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.118	6.227	-0.109	1.000	658232	45.2		90.4	5015	
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	703770	50.5		101	8858	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	150009	51.1		102	1200	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.476	6.602	-0.126	1.000	170628	44.5		89.0	378	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.833	6.959	-0.126	1.000	113270	45.1		90.1	1838	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.861	6.973	-0.112	1.004	120718	47.4		94.8	1328	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.861	6.973	-0.112	1.285	253380	51.3		106	4345	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.874	6.987	-0.113	1.000	662656	52.3		105	4915	
D 33 13C2 PFUnA										
564.8 > 519.8	6.874	6.987	-0.113	1.000	567663	44.5		89.1	3551	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	7.079	7.079	0.0	1.000	480775	44.0		87.9	3971	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	524692	49.0		97.9	3768	
D 36 13C2 PFDoA										
614.8 > 569.6	7.564	7.684	-0.120	1.000	759698	49.4		98.7	3535	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.564	7.684	-0.120	1.000	745939	51.8		104	2618	
38 Perfluorotridecanoic acid										
662.8 > 618.6	8.173	8.294	-0.121	1.080	773062	50.7		101	1892	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 39 13C2-PFTeDA										
714.8 > 669.6	8.727	8.855	-0.128	1.000	767075	49.1		98.2	804	
40 Perfluorotetradecanoic acid										
712.8 > 668.6	8.727	8.862	-0.135	1.000	765737	55.3		111	1676	
712.8 > 168.8	8.734	8.862	-0.128	1.001	158371		4.84(0.00-0.00)		1604	
712.8 > 218.8	8.740	8.862	-0.122	1.002	86325		8.87(0.00-0.00)		802	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

LCPFAS21-L5_00003 Amount Added: 100.00 Units: uL

Report Date: 21-Jun-2018 21:26:51 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A30.d

Injection Date: 12-Jun-2018 16:04:31 Instrument ID: LC410

Lims ID: CCV L5

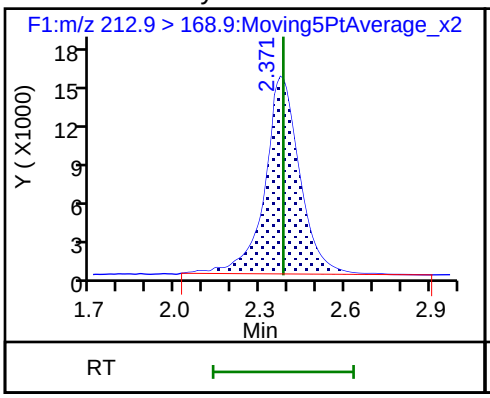
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 30

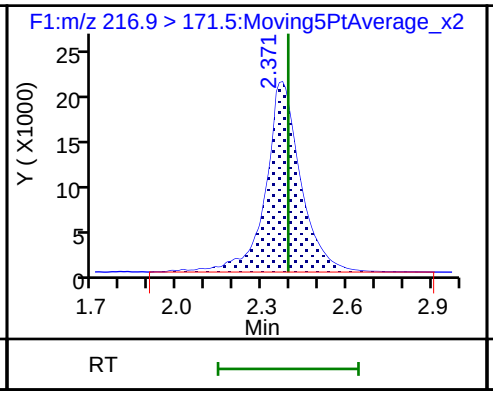
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

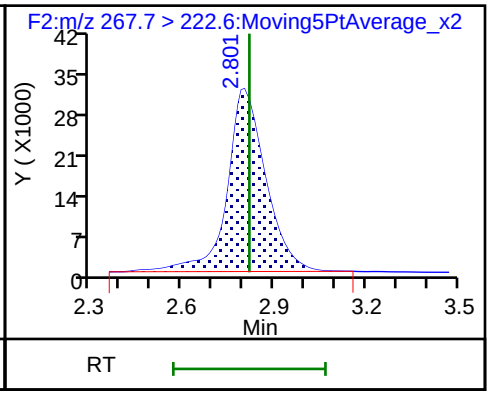
2 Perfluorobutyric acid



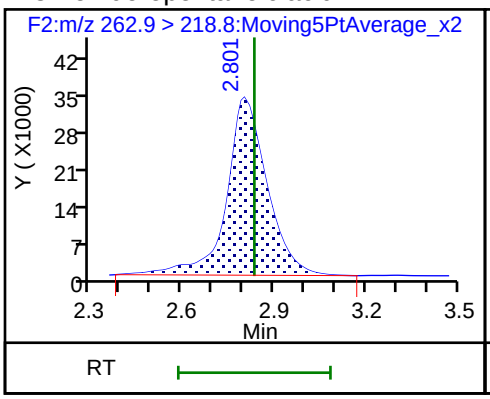
D 1 13C4 PFBA



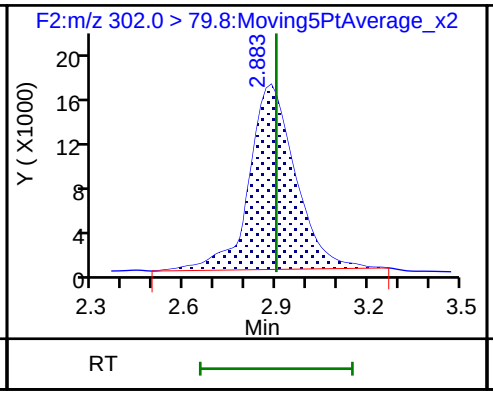
D 4 13C5-PFPeA



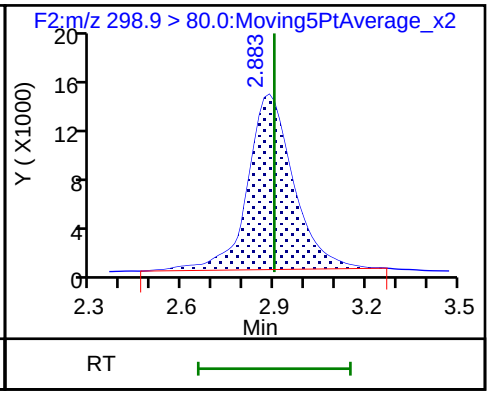
3 Perfluoropentanoic acid



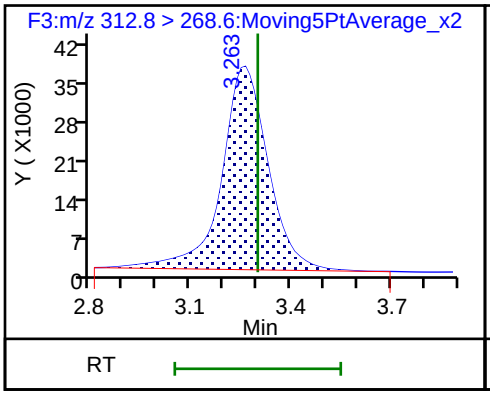
D 5 13C3-PFBS



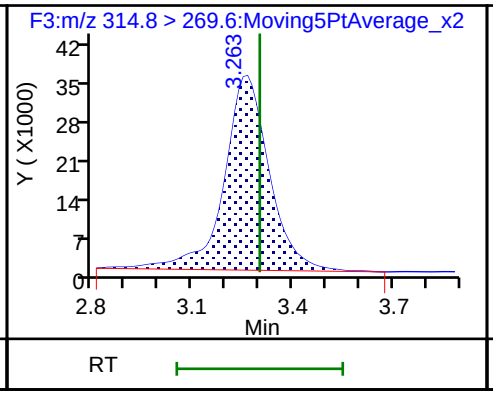
6 Perfluorobutanesulfonic acid



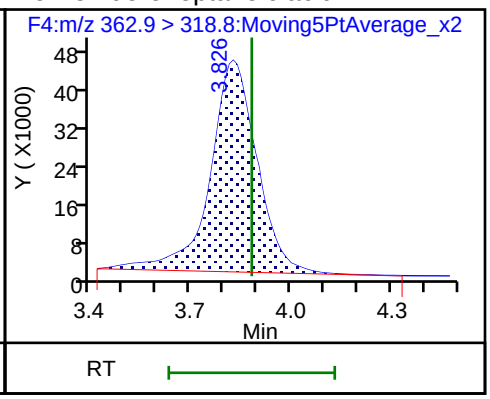
7 Perfluorohexanoic acid



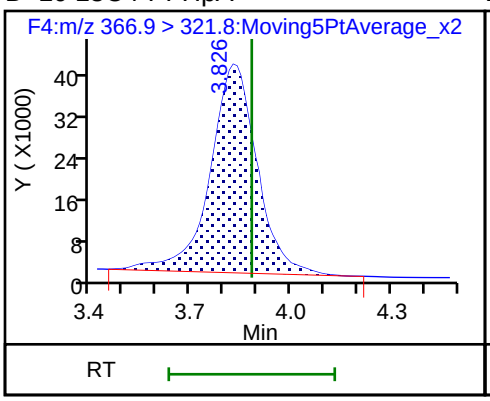
D 8 13C2 PFHxA



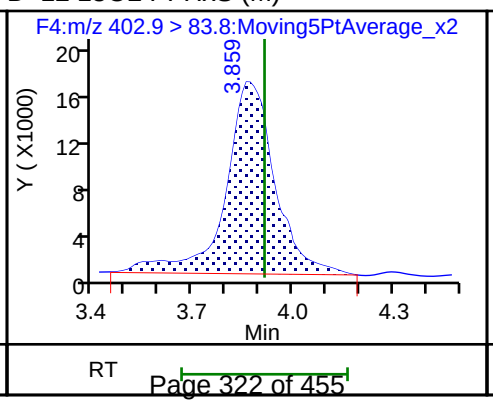
9 Perfluoroheptanoic acid



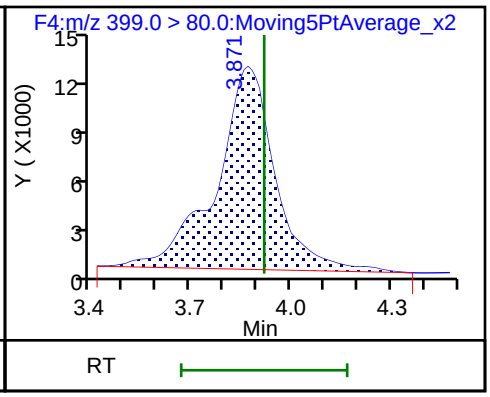
D 10 13C4-PFHpA



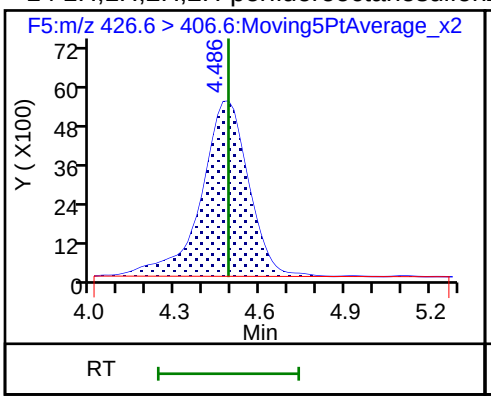
D 12 18O2 PFHxS (M)



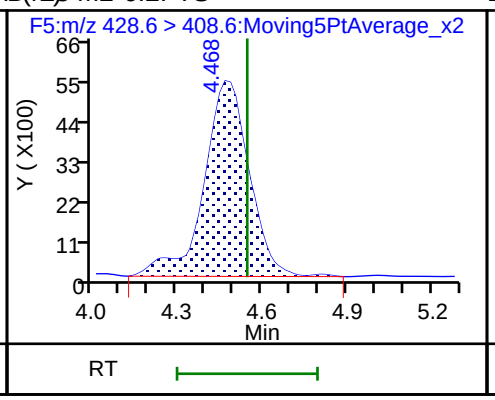
11 Perfluorohexanesulfonic acid



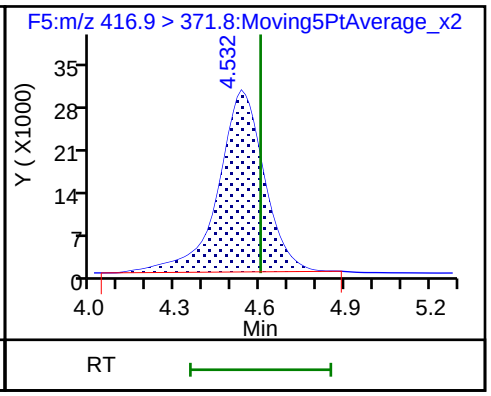
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



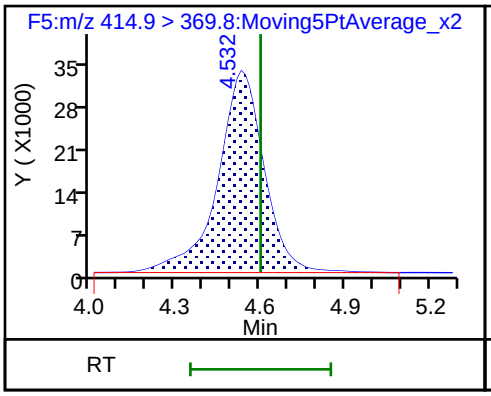
D 13 M2-6:2FTS



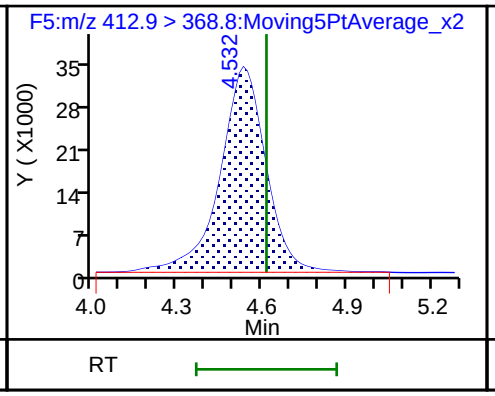
D 16 13C4 PFOA



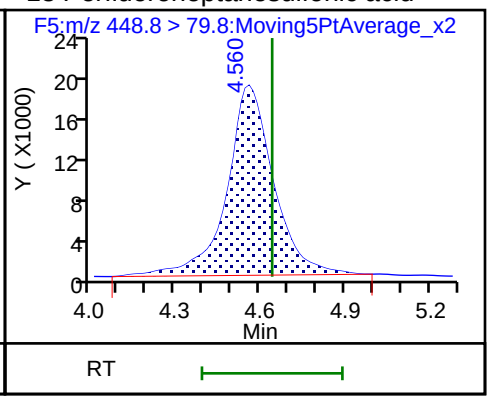
* 17 13C2-PFOA



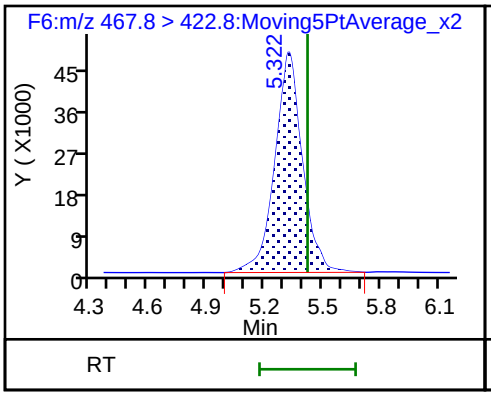
15 Perfluorooctanoic acid



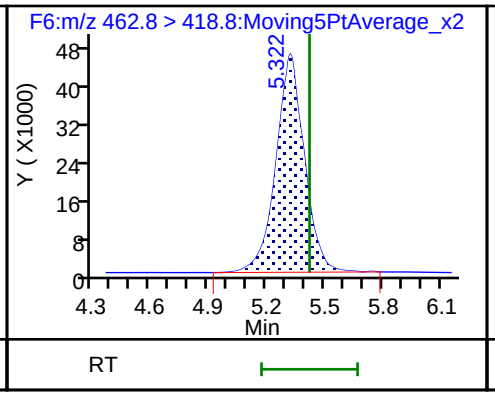
18 Perfluoroheptanesulfonic acid



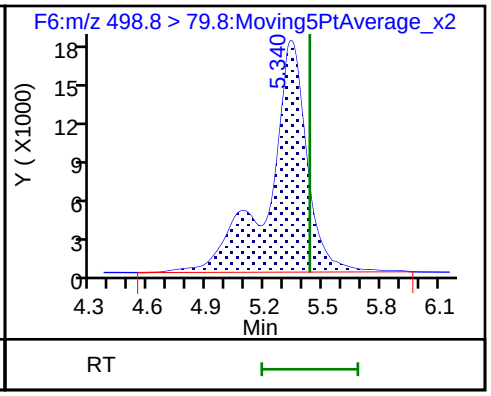
D 19 13C5 PFNA



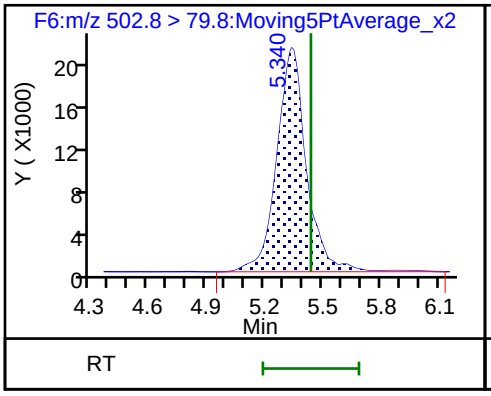
20 Perfluorononanoic acid



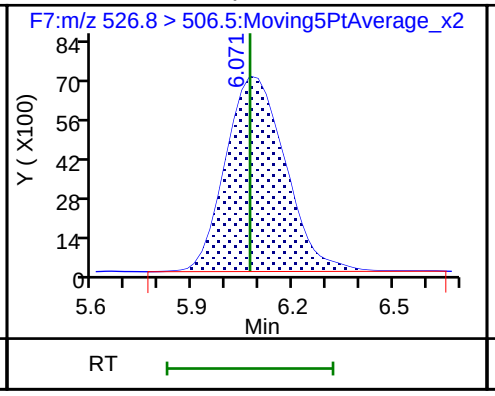
22 Perfluorooctane sulfonic acid



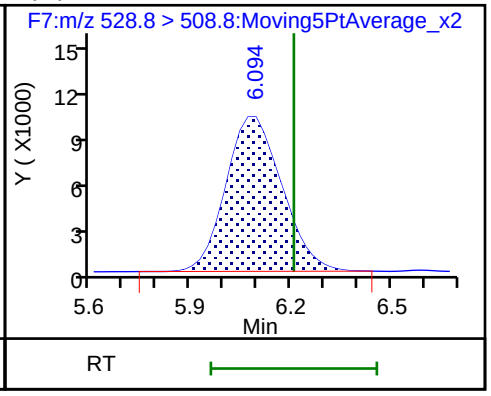
D 21 13C4 PFOS



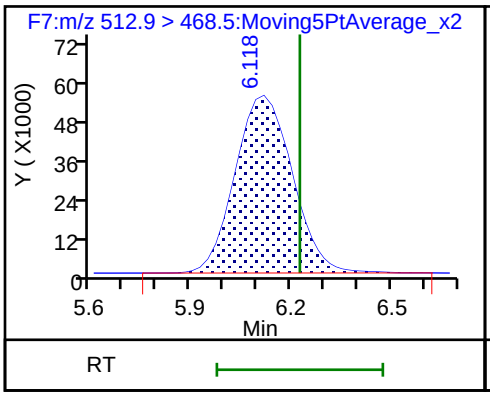
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



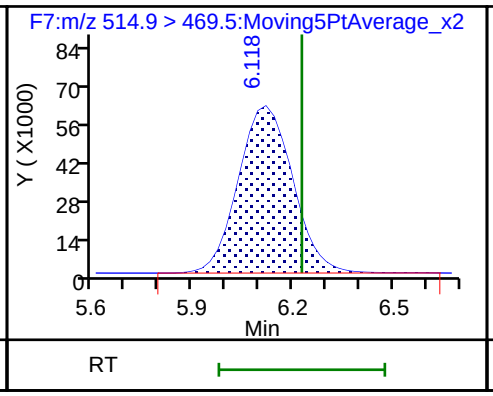
D 24 M2-8:2FTS



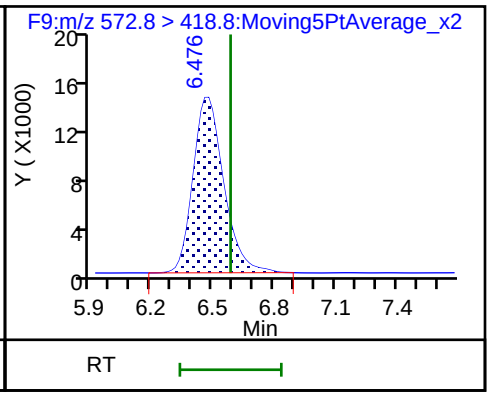
25 Perfluorodecanoic acid



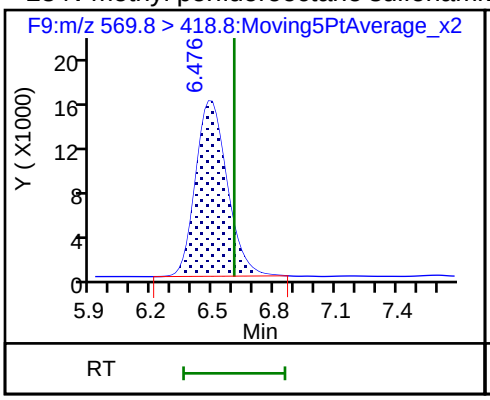
D 26 13C2 PFDA



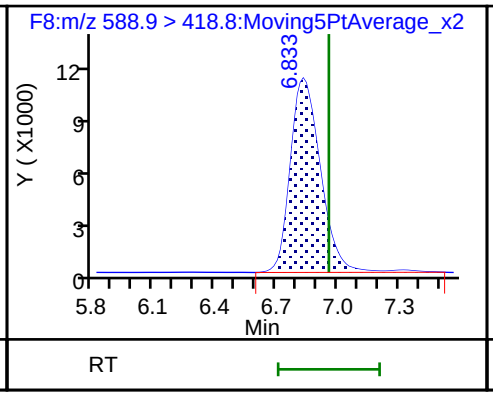
D 27 d3-NMeFOSAA



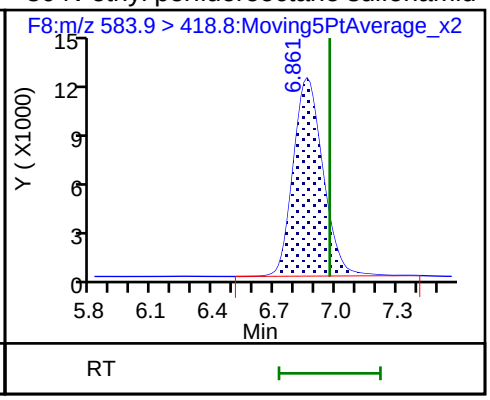
28 N-methyl perfluorooctane sulfonami



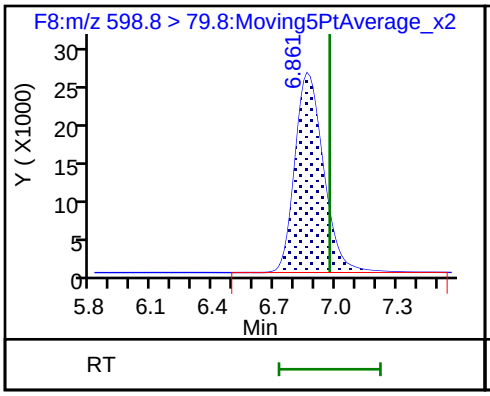
D 29 d5-NEtFOSAA



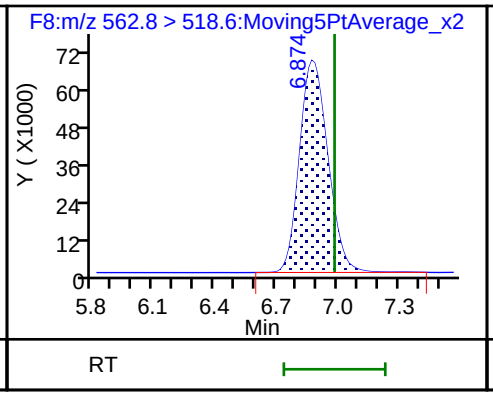
30 N-ethyl perfluorooctane sulfonamid



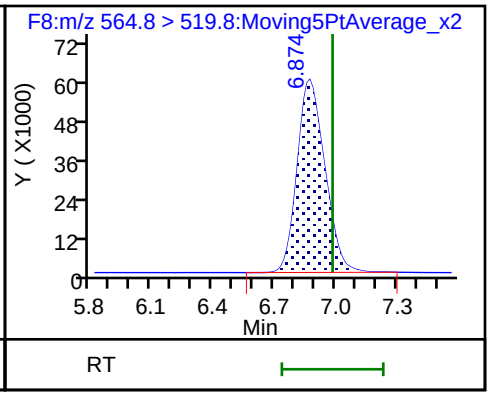
31 Perfluorodecane Sulfonic acid



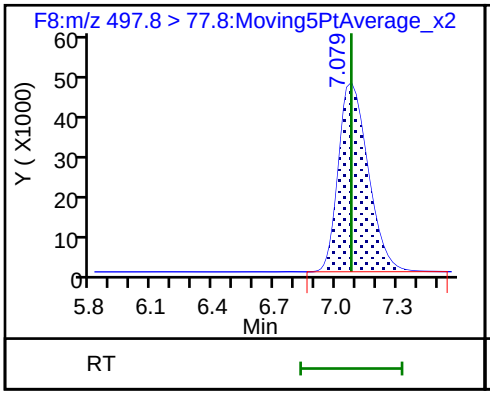
32 Perfluoroundecanoic acid



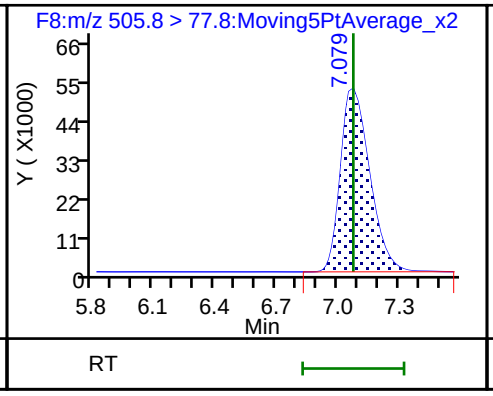
D 33 13C2 PFUnA



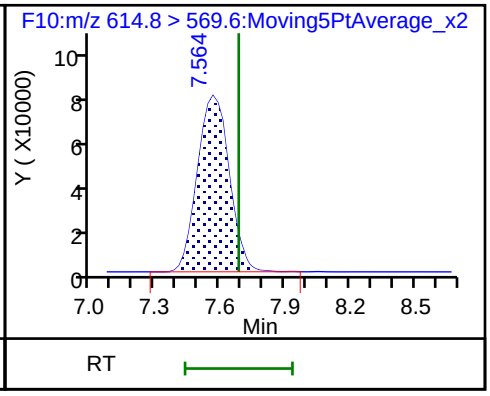
34 Perfluorooctane Sulfonamide



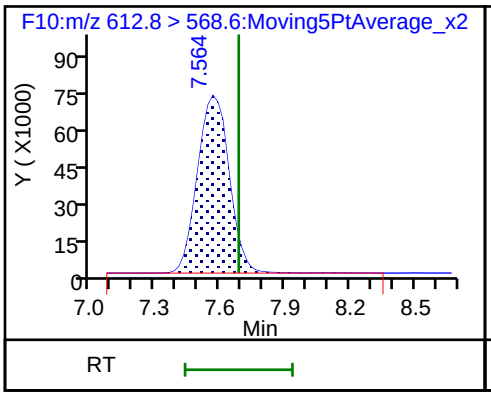
D 35 13C8 FOSA



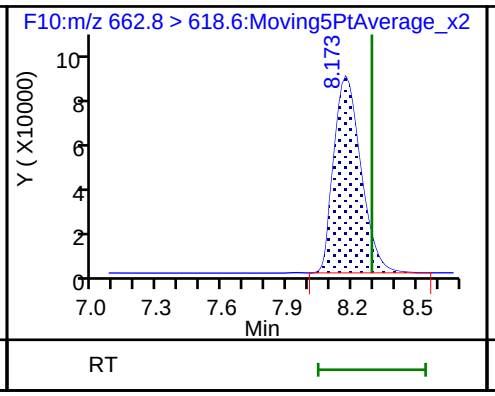
D 36 13C2 PFDoA



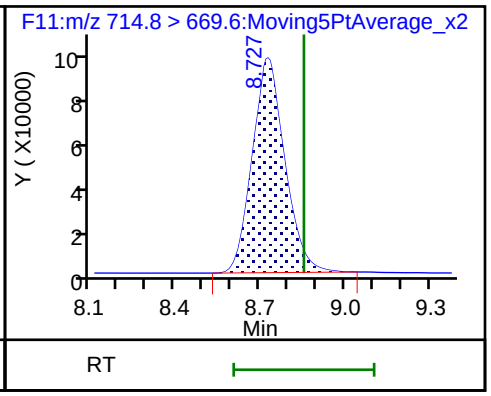
37 Perfluorododecanoic acid



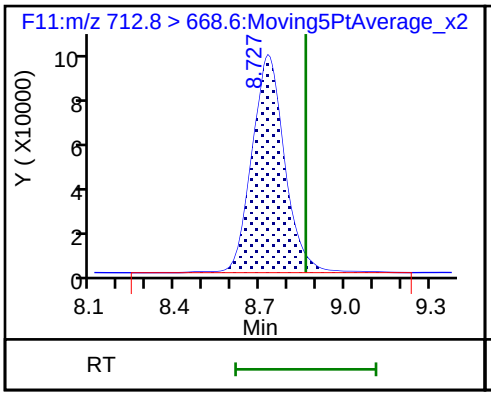
38 Perfluorotridecanoic acid



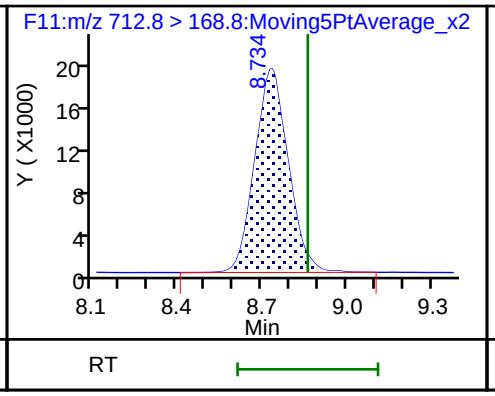
D 39 13C2-PFTeDA



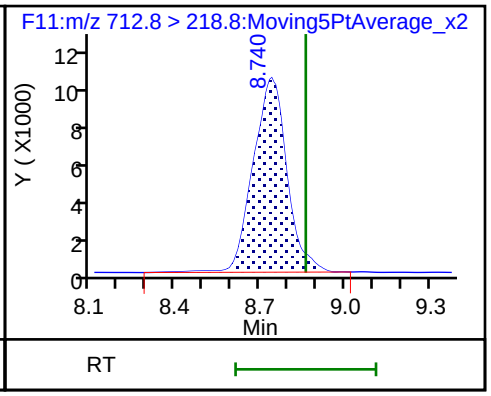
40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

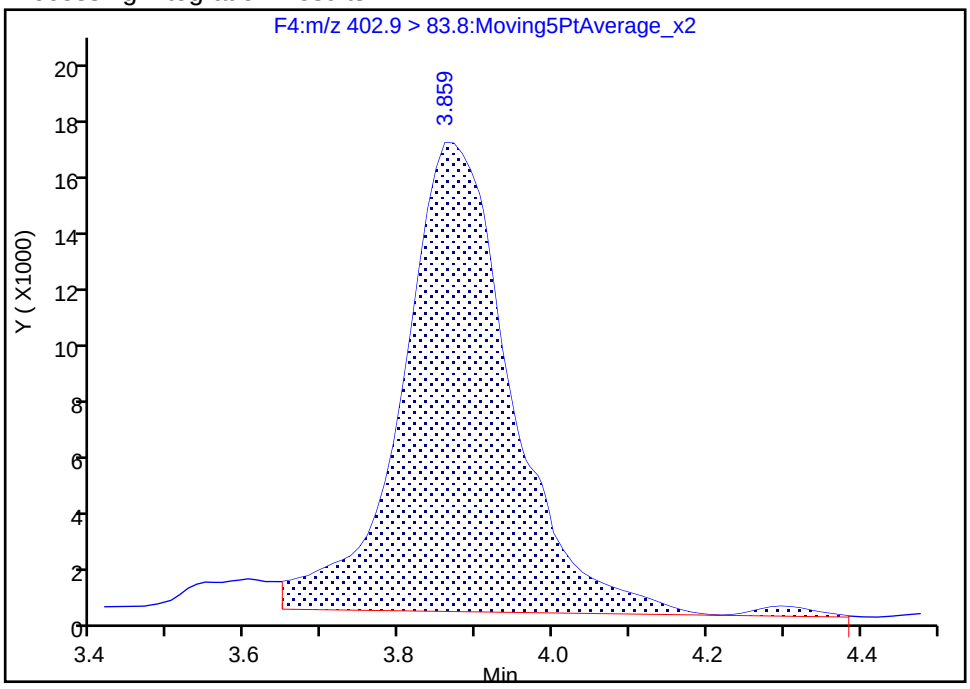
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A30.d
Injection Date: 12-Jun-2018 16:04:31 Instrument ID: LC410
Lims ID: CCV L5
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 12 18O2 PFHxS, CAS: STL00994

Signal: 1

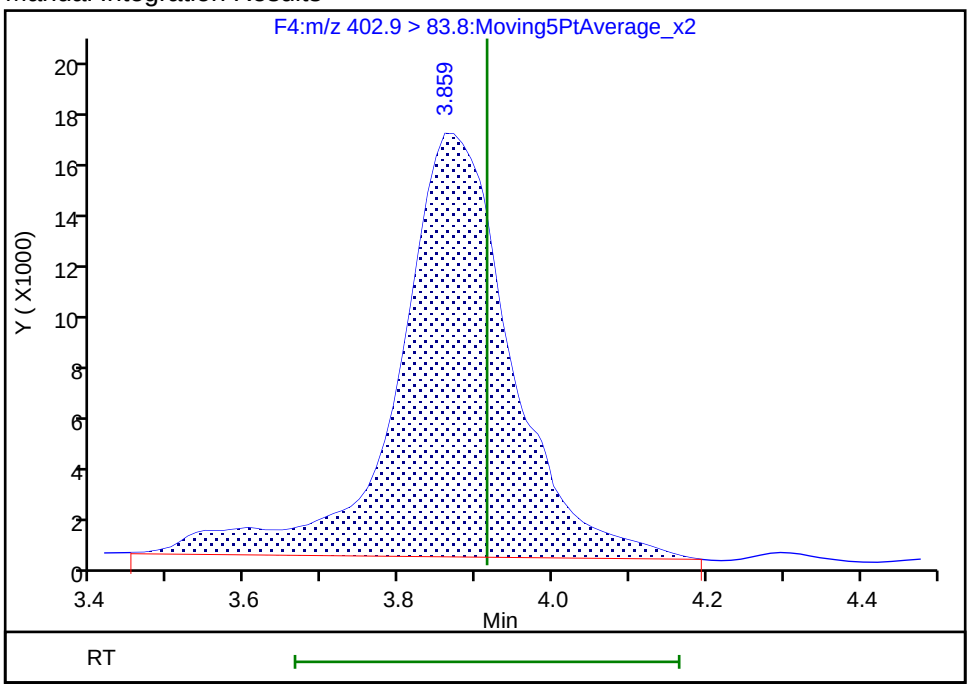
Processing Integration Results

RT: 3.86
Area: 162723
Amount: 36.331856
Amount Units: ng/ml



Manual Integration Results

RT: 3.86
Area: 168135
Amount: 37.540216
Amount Units: ng/ml



Reviewer: chirgwinb, 12-Jun-2018 16:31:47
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

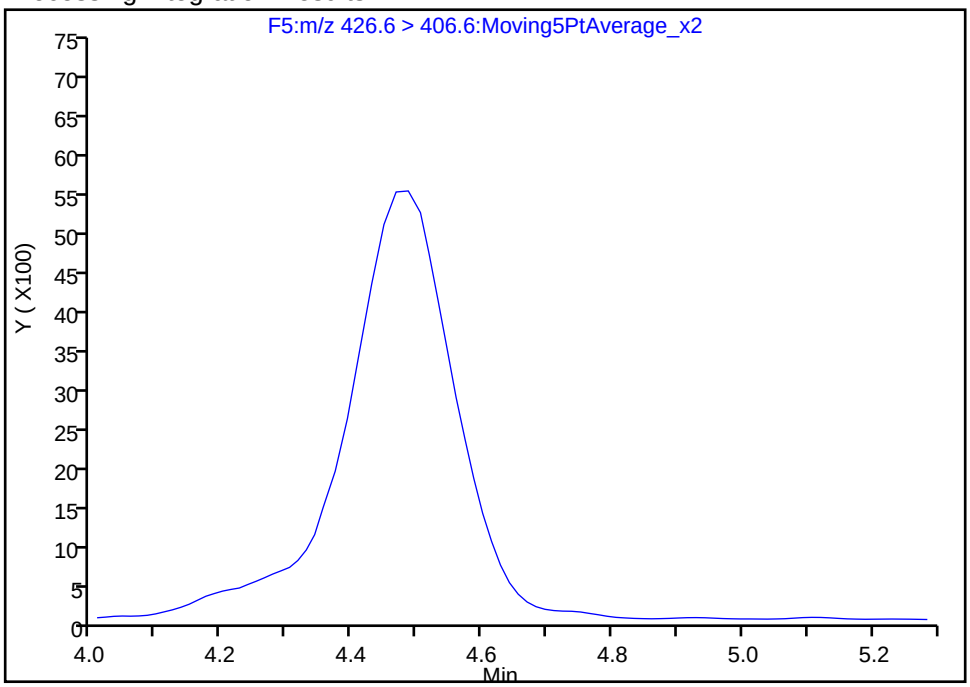
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A30.d
Injection Date: 12-Jun-2018 16:04:31 Instrument ID: LC410
Lims ID: CCV L5
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

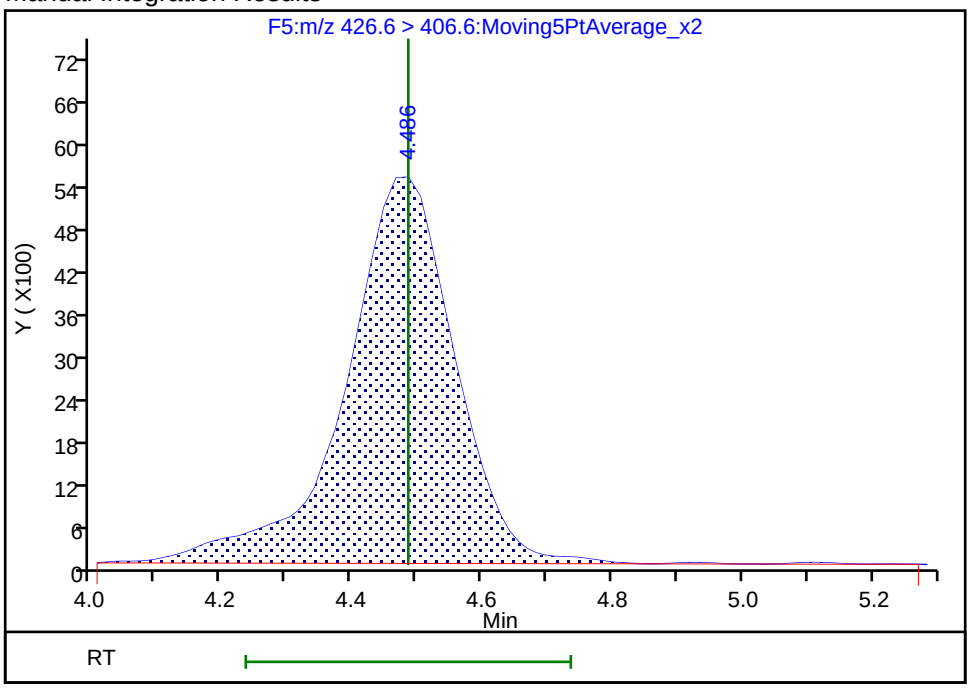
Not Detected
Expected RT: 4.49

Processing Integration Results



Manual Integration Results

RT: 4.49
Area: 63547
Amount: 49.024703
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:26:41
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

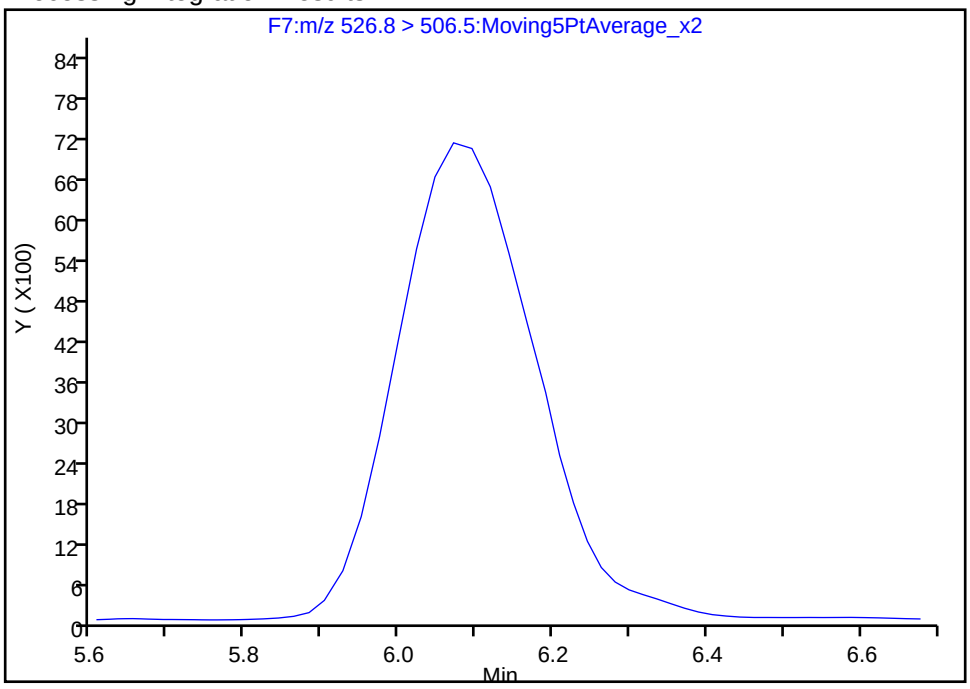
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A30.d
Injection Date: 12-Jun-2018 16:04:31 Instrument ID: LC410
Lims ID: CCV L5
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 30
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

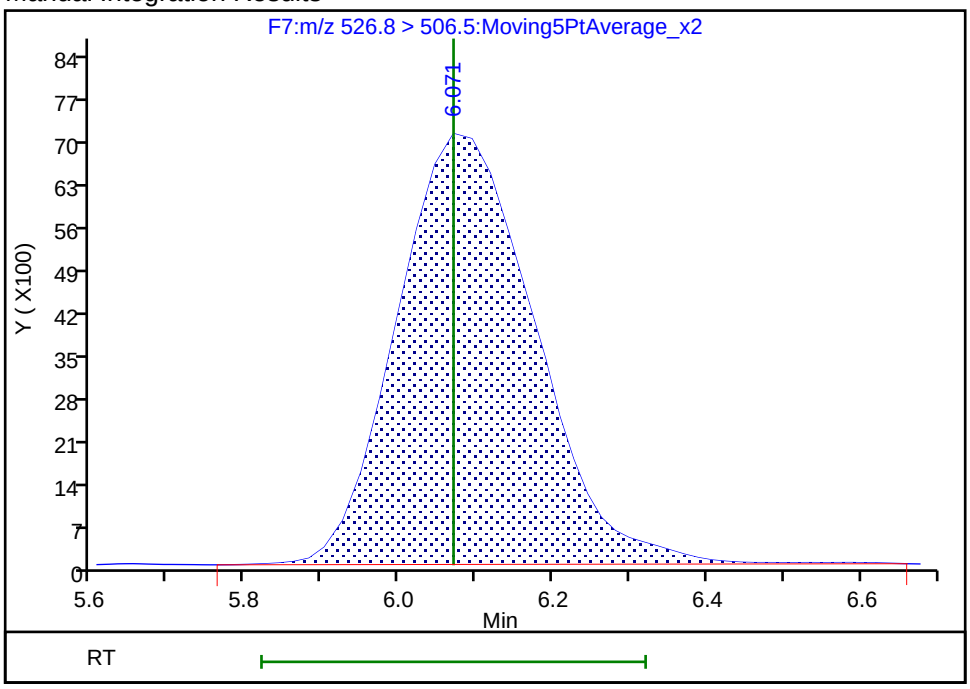
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.07
Area: 88200
Amount: 41.323787
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:26:43
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: CCV 200-130505/42 Calibration Date: 06/12/2018 19:18

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF061218A42.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	L1ID		0.7073		19200	20000	-4.0	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		1.103		17960	20000	-10.2	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8425	0.8988		18860	17700	6.7	40.0
Perfluorohexanoic acid (PFHxA)	L1ID		1.058		19040	20000	-4.8	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		1.123		20730	20000	3.6	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.9193		16490	18200	-9.4	40.0
6:2 FTS	L1ID		0.9287		17200	19000	-9.3	40.0
Perfluorooctanoic acid (PFOA)	L1ID		1.078		18910	20000	-5.4	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	L1ID		0.8751		17520	19000	-8.0	50.0
Perfluorononanoic acid (PFNA)	L2ID		0.999		20360	20000	1.8	40.0
Perfluorooctanesulfonic acid (PFOS)	L2ID		1.147		19190	18600	3.4	40.0
8:2 FTS	L1ID		0.9158		20350	19200	6.2	40.0
Perfluorodecanoic acid (PFDA)	L2ID		1.102		21390	20000	7.0	40.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	L1ID		1.080		17130	20000	-14.4	40.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	L2ID		1.067		19170	20000	-4.2	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		1.171		21460	19300	11.3	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.259		22610	20000	13.1	40.0
Perfluorooctane Sulfonamide (FOSA)	L1ID		1.013		19620	20000	-1.9	40.0
Perfluorododecanoic acid (PFDoA)	L2ID		0.9902		20930	20000	4.7	40.0
Perfluorotridecanoic Acid (PFTriA)	L2ID		1.075		21450	20000	7.2	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.9239		20380	20000	1.9	40.0
13C4 PFBA	Ave	0.6319	0.4618		36540	50000	-26.9	50.0
13C5 PFPeA	Ave	0.9274	0.7314		39430	50000	-21.1	50.0
13C3-PFBS	Ave	0.6135	0.4482		33970	46500	-26.9	50.0
13C2 PFHxA	Ave	1.084	0.9111		42040	50000	-15.9	50.0
13C4-PFHpA	Ave	1.244	1.037		41660	50000	-16.7	50.0
18O2 PFHxS	Ave	0.5867	0.4802		38720	47300	-18.1	50.0
M2-6:2FTS	Ave	0.1646	0.1865		53810	47500	13.3	50.0
13C4 PFOA	Ave	0.9520	0.9136		47980	50000	-4.0	50.0
13C5 PFNA	Ave	1.253	1.288		51390	50000	2.8	50.0
13C4 PFOS	Ave	0.6352	0.5895		44360	47800	-7.2	50.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: CCV 200-130505/42 Calibration Date: 06/12/2018 19:18

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF061218A42.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2FTS	Ave	0.3407	0.3285		46180	47900	-3.6	50.0
13C2 PFDA	Ave	1.826	1.823		49920	50000	-0.2	50.0
d3-NMeFOSAA	Ave	0.3847	0.3982		51760	50000	3.5	50.0
d5-NEtFOSAA	Ave	0.3292	0.3188		48430	50000	-3.1	50.0
13C2 PFUnA	Ave	1.670	1.607		48130	50000	-3.7	50.0
13C8 FOSA	Ave	1.403	1.248		44450	50000	-11.1	50.0
13C2 PFDoA	Ave	2.016	2.034		50440	50000	0.9	50.0
13C2-PFTeDA	Ave	2.046	2.155		52670	50000	5.3	50.0

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Lims ID: CCV L4
Client ID:
Sample Type: CCV
Inject. Date: 12-Jun-2018 19:18:07 ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-042 CCV L4
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:26:19 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 13-Jun-2018 10:04:24

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.382	2.382	0.0	1.000	56614	19.2		96.0	294	M
D 1 13C4 PFBA										
216.9 > 171.5	2.382	2.392	-0.010	1.000	200099	36.5		73.1	366	
D 4 13C5-PFPeA										
267.7 > 222.6	2.801	2.818	-0.017	1.000	316895	39.4		78.9	718	
3 Perfluoropentanoic acid										
262.9 > 218.8	2.801	2.834	-0.033	1.000	139762	18.0		89.8	219	
D 5 13C3-PFBS										
302.0 > 79.8	2.900	2.900	0.0	1.000	180593	34.0		73.1	165	
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.900	2.900	0.0	1.000	61717	18.9		107	79.3	M
7 Perfluorohexanoic acid										
312.8 > 268.6	3.275	3.300	-0.025	1.000	167030	19.0		95.2	437	
D 8 13C2 PFHxA										M
314.8 > 269.6	3.275	3.300	-0.025	1.000	394739	42.0		84.1	679	M
9 Perfluoroheptanoic acid										M
362.9 > 318.8	3.837	3.882	-0.045	0.997	201753	20.7		104	127	M
D 10 13C4-PFHpA										
366.9 > 321.8	3.848	3.882	-0.034	1.000	449074	41.7		83.3	136	
D 12 18O2 PFHxS										M
402.9 > 83.8	3.882	3.914	-0.032	1.000	196835	38.7		81.9	153	M
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.893	3.919	-0.026	1.003	69623	16.5		90.6	44.0	M
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.505	4.486	0.019	1.004	28459	17.2		90.7	336	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.486	4.546	-0.060	1.000	76773	53.8		113	1145	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										M
416.9 > 371.8	4.560	4.601	-0.041	1.000	395813	48.0		96.0	306	M
* 17 13C2-PFOA										M
414.9 > 369.8	4.546	4.601	-0.055		433261	50.0			190	M
15 Perfluorooctanoic acid										
412.9 > 368.8	4.560	4.615	-0.055	1.000	170709	18.9		94.6	1356	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.574	4.642	-0.068	0.855	85109	17.5		92.0	81.4	
D 19 13C5 PFNA										
467.8 > 422.8	5.340	5.422	-0.082	1.000	558034	51.4		103	1614	
20 Perfluorononanoic acid										
462.8 > 418.8	5.346	5.422	-0.076	1.001	223083	20.4		102	3415	
22 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.363	5.434	-0.071	1.002	108740	19.2		103	700	M
D 21 13C4 PFOS										
502.8 > 79.8	5.352	5.440	-0.088	1.000	244158	44.4		92.8	2038	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.118	6.070	0.048	1.000	49945	20.4		106	480	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.118	6.209	-0.091	1.000	136338	46.2		96.4	1205	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.143	6.227	-0.084	1.000	348208	21.4		107	819	
D 26 13C2 PFDA										
514.9 > 469.5	6.143	6.227	-0.084	1.000	789908	49.9		99.8	3268	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.494	6.584	-0.090	1.000	172510	51.8		104	662	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.494	6.602	-0.108	1.000	74546	17.1		85.6	181	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.861	6.959	-0.098	1.000	138135	48.4		96.9	1385	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.874	6.973	-0.099	1.002	58942	19.2		95.8	640	
31 Perfluorodecane Sulfonic acid										M
598.8 > 79.8	6.889	6.973	-0.084	1.287	115284	21.5		111	2002	M
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.903	6.987	-0.084	1.000	350603	22.6		113	1550	
D 33 13C2 PFUnA										
564.8 > 519.8	6.903	6.987	-0.084	1.000	696348	48.1		96.3	3988	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	7.079	7.079	0.0	1.000	219001	19.6		98.1	1993	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	540519	44.4		88.9	3783	
D 36 13C2 PFDoA										
614.8 > 569.6	7.609	7.684	-0.075	1.000	881270	50.4		101	2093	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.586	7.684	-0.098	0.997	349039	20.9		105	1860	
38 Perfluorotridecanoic acid										
662.8 > 618.6	8.203	8.294	-0.091	1.078	379115	21.4		107	4802	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 39 13C2-PFTeDA										
714.8 > 669.6	8.749	8.855	-0.106	1.000	933630	52.7		105	3154	
40 Perfluorotetradecanoic acid										
712.8 > 668.6	8.749	8.862	-0.113	1.000	345012	20.4		102	3128	
712.8 > 168.8	8.742	8.862	-0.120	0.999	71622		4.82(0.00-0.00)		545	
712.8 > 218.8	8.756	8.862	-0.106	1.001	38492		8.96(0.00-0.00)		458	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

LCPFAS21-L4_00003 Amount Added: 100.00 Units: uL

Report Date: 21-Jun-2018 21:26:21 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d

Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410

Lims ID: CCV L4

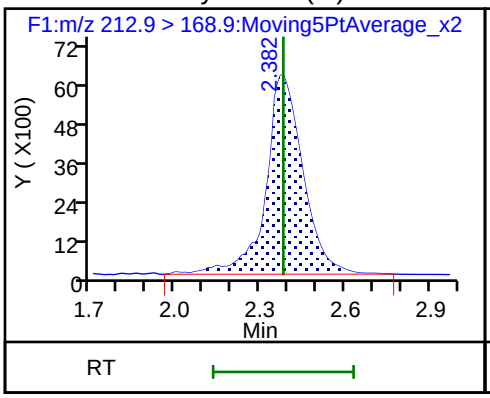
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42

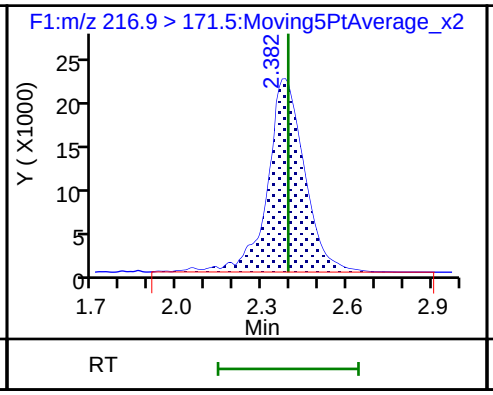
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

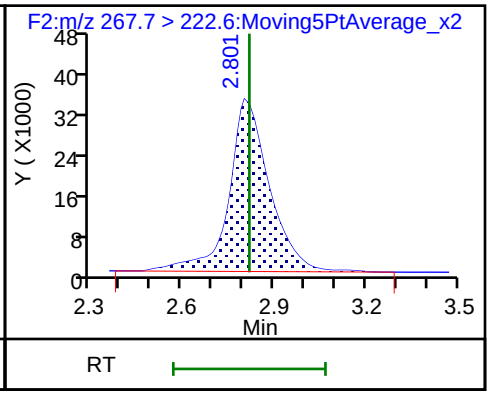
2 Perfluorobutyric acid (M)



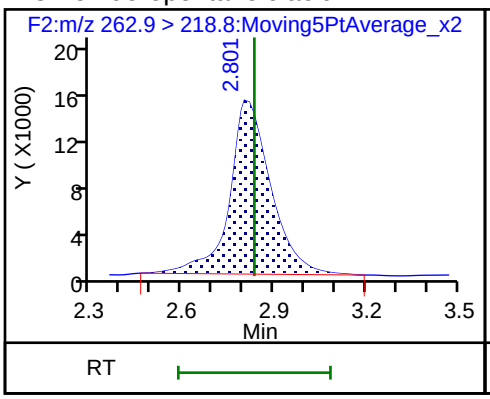
D 1 13C4 PFBA



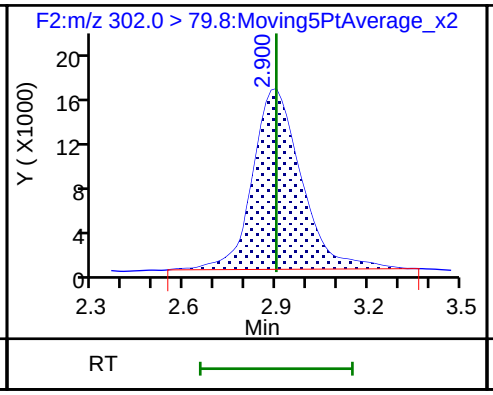
D 4 13C5-PFPeA



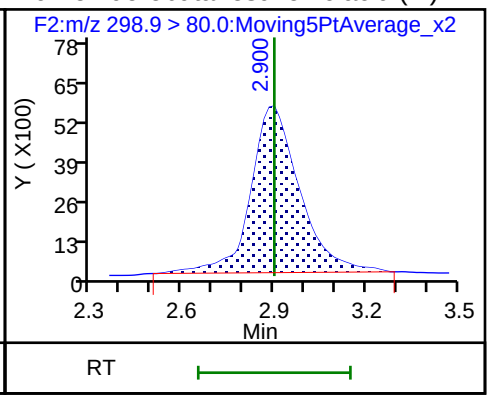
3 Perfluoropentanoic acid



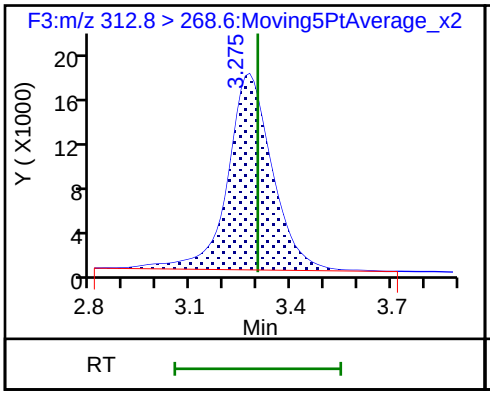
D 5 13C3-PFBS



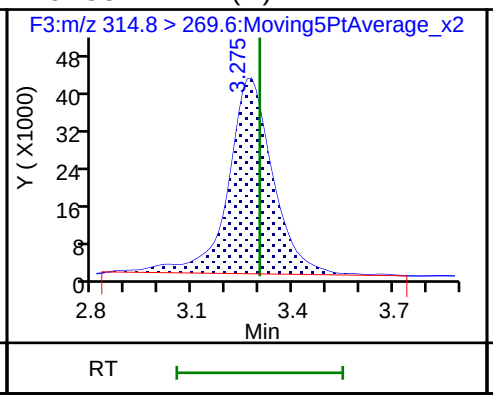
6 Perfluorobutanesulfonic acid (M)



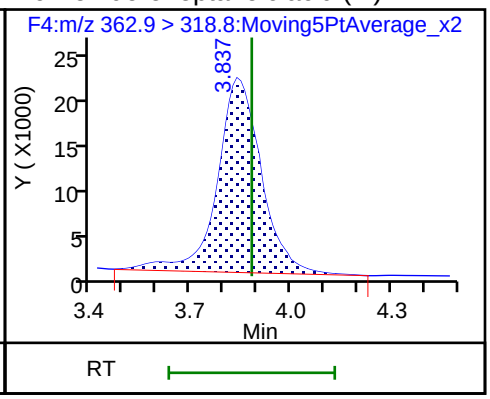
7 Perfluorohexanoic acid



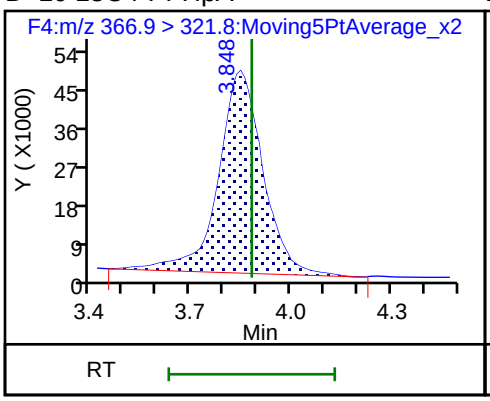
D 8 13C2 PFHxA (M)



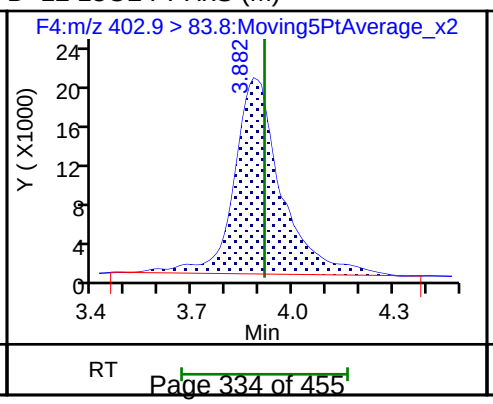
9 Perfluoroheptanoic acid (M)



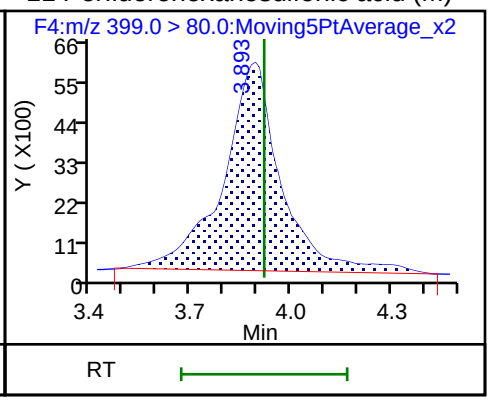
D 10 13C4-PFHpA



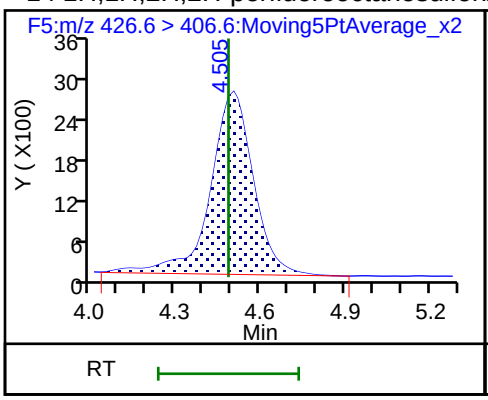
D 12 18O2 PFHxS (M)



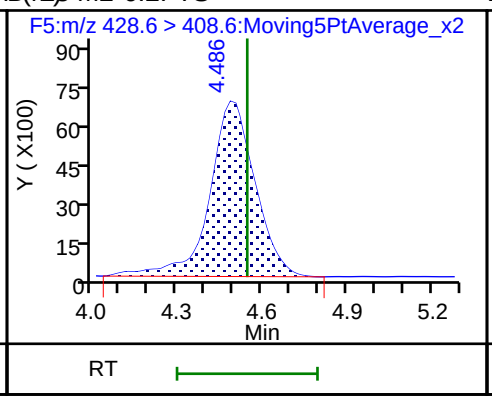
11 Perfluorohexanesulfonic acid (M)



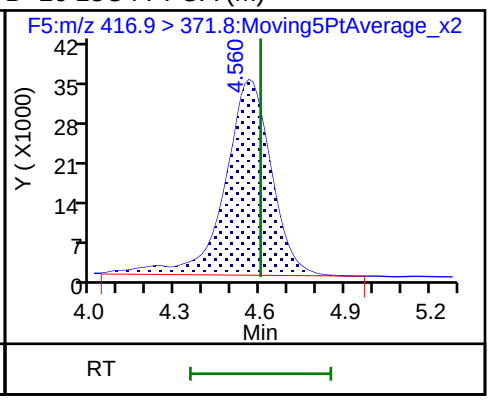
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



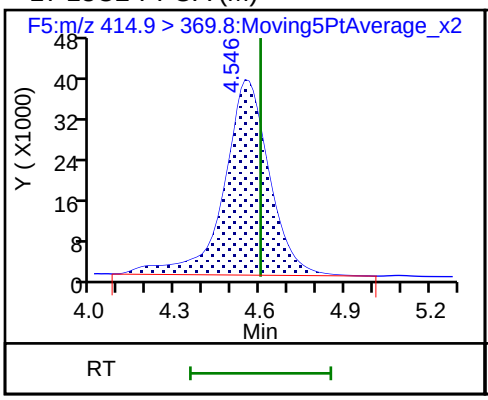
D 13 M2-6:2FTS



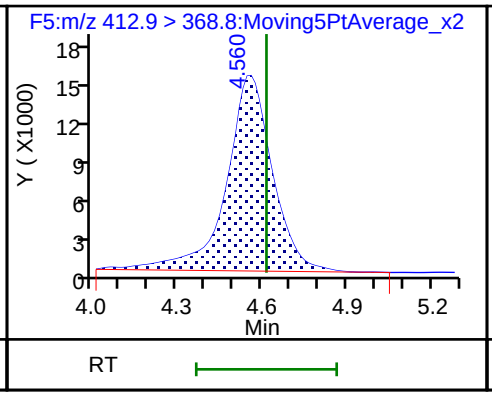
D 16 13C4 PFOA (M)



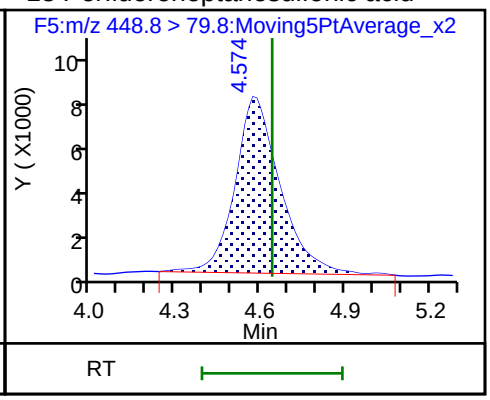
* 17 13C2-PFOA (M)



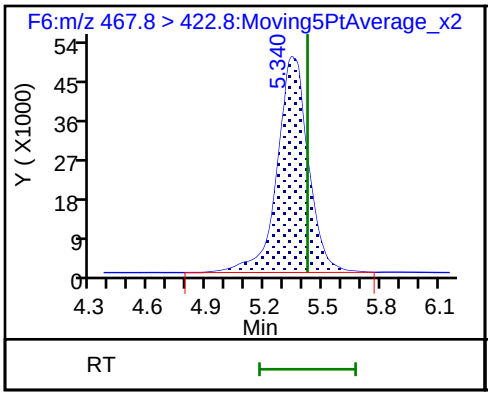
15 Perfluorooctanoic acid



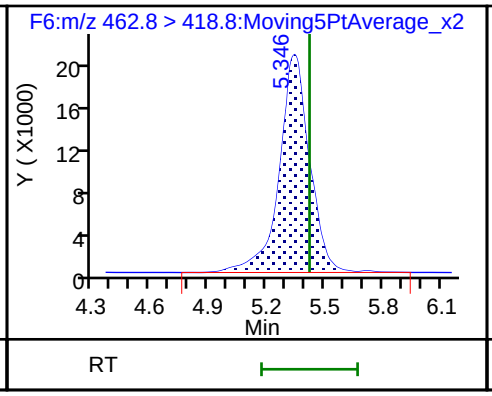
18 Perfluoroheptanesulfonic acid



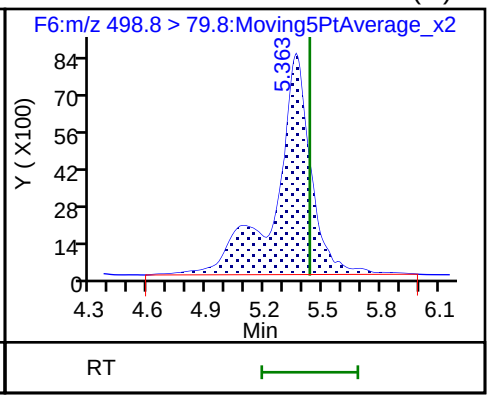
D 19 13C5 PFNA



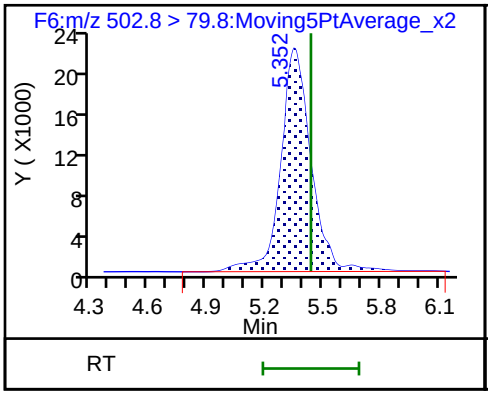
20 Perfluorononanoic acid



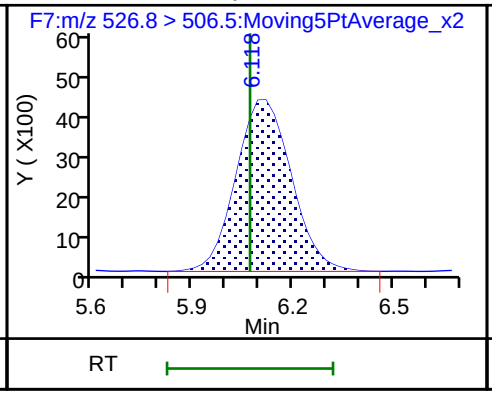
22 Perfluorooctane sulfonic acid (M)



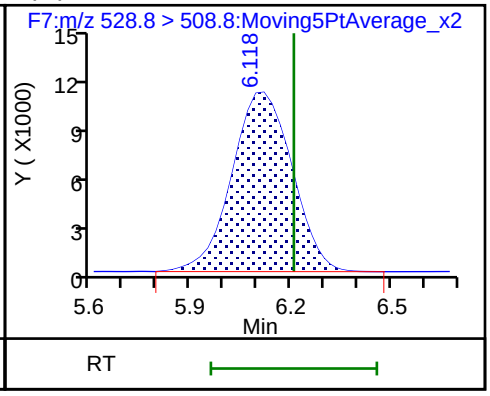
D 21 13C4 PFOS



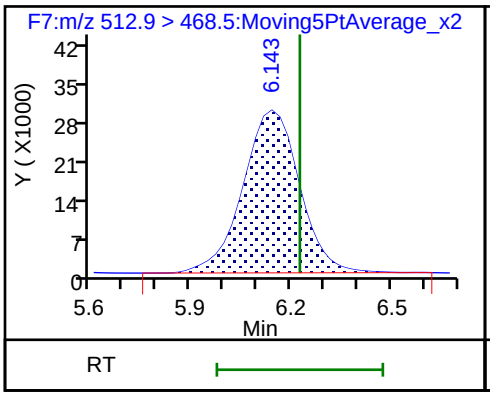
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



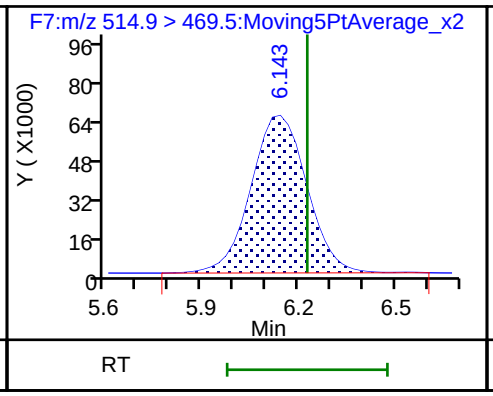
D 24 M2-8:2FTS



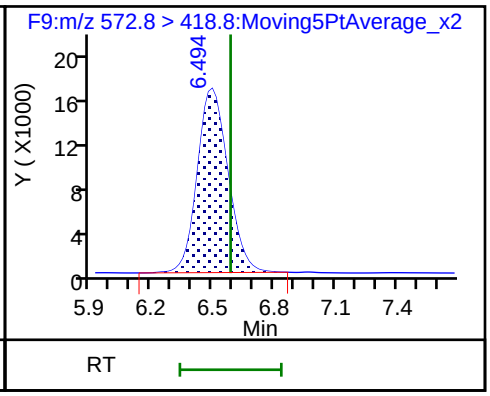
25 Perfluorodecanoic acid



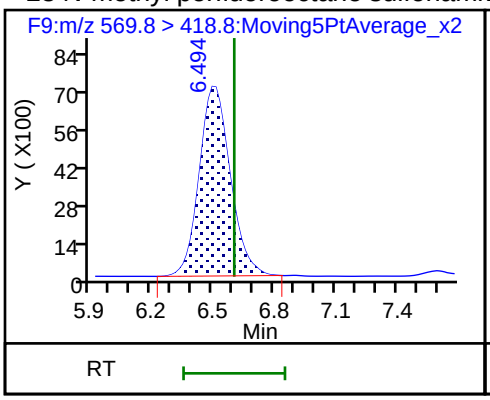
D 26 13C2 PFDA



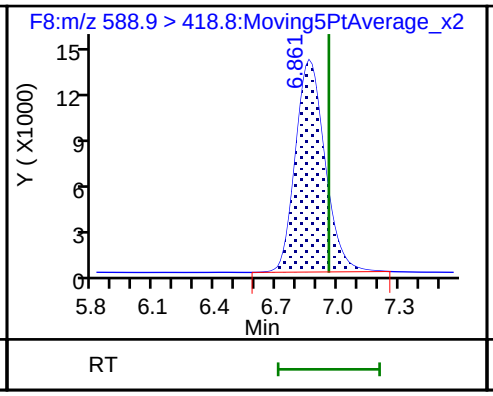
D 27 d3-NMeFOSAA



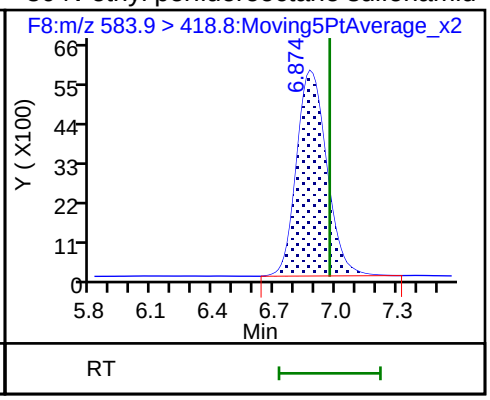
28 N-methyl perfluorooctane sulfonami



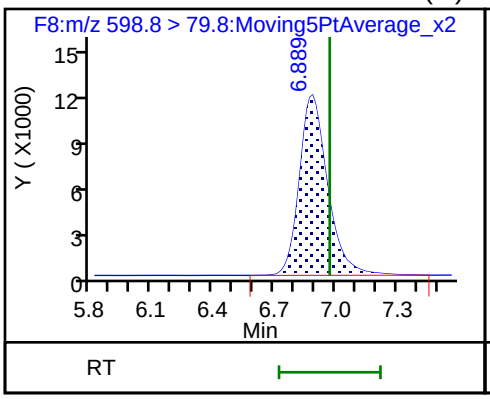
D 29 d5-NEtFOSAA



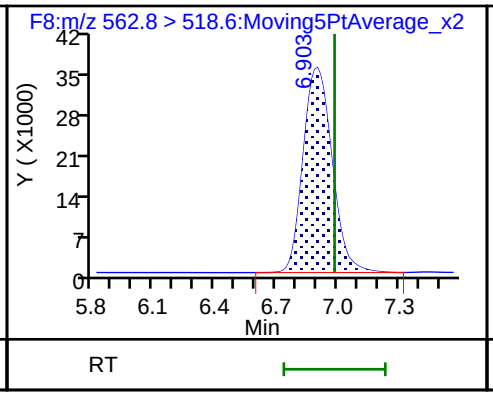
30 N-ethyl perfluorooctane sulfonamid



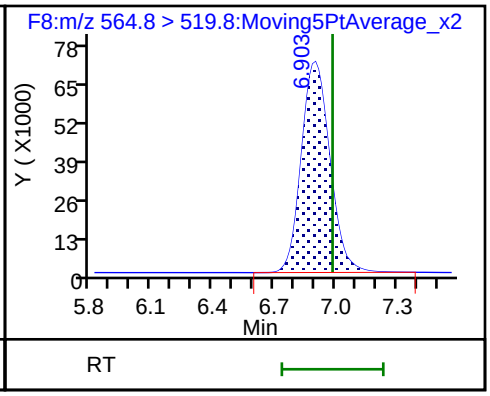
31 Perfluorodecane Sulfonic acid (M)



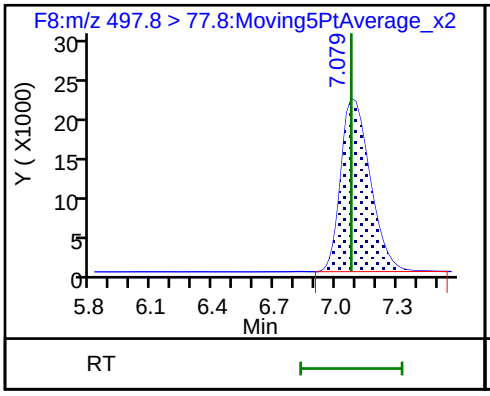
32 Perfluoroundecanoic acid



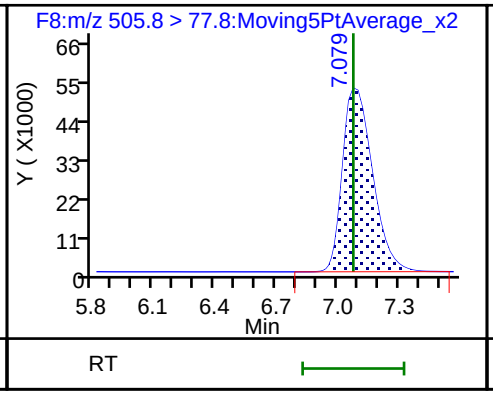
D 33 13C2 PFUnA



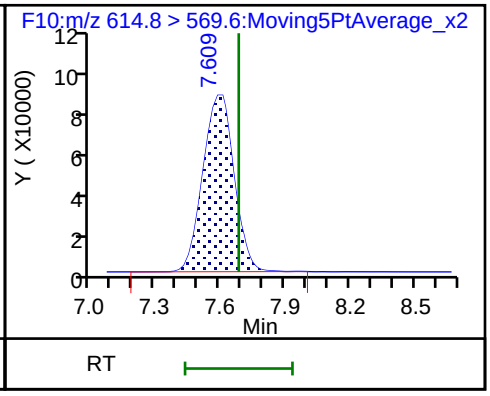
34 Perfluorooctane Sulfonamide



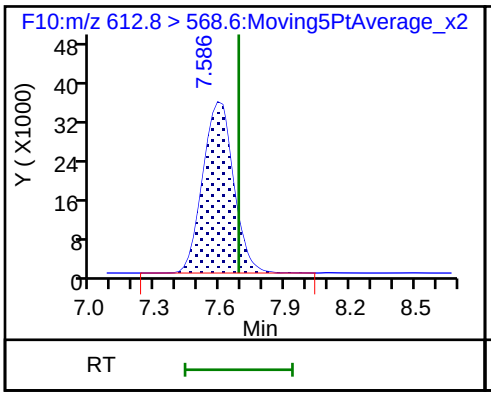
D 35 13C8 FOSA



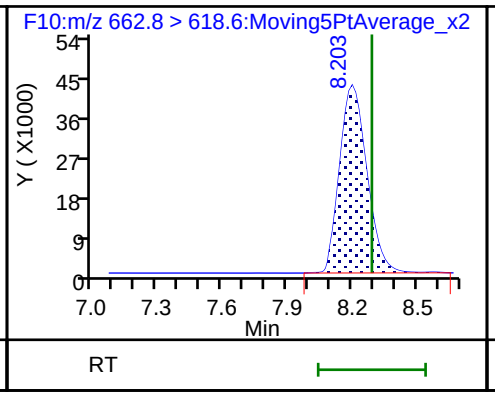
D 36 13C2 PFDoA



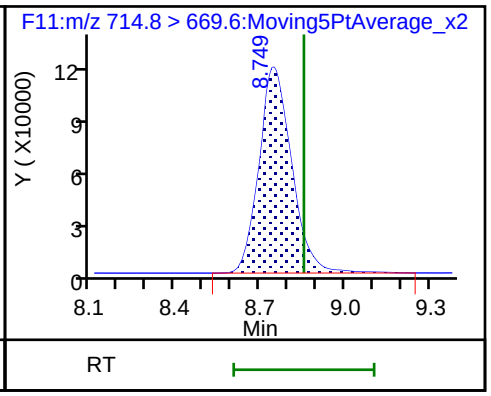
37 Perfluorododecanoic acid



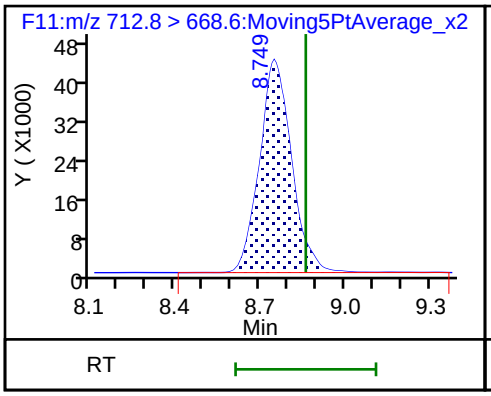
38 Perfluorotridecanoic acid



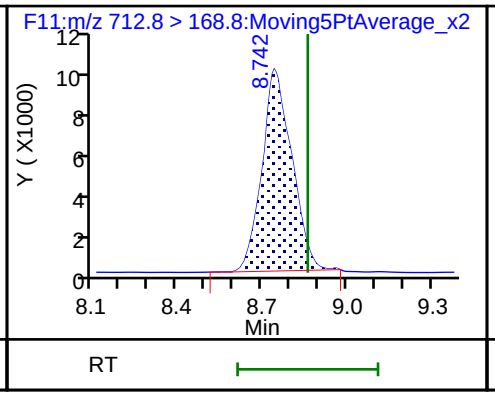
D 39 13C2-PFTeDA



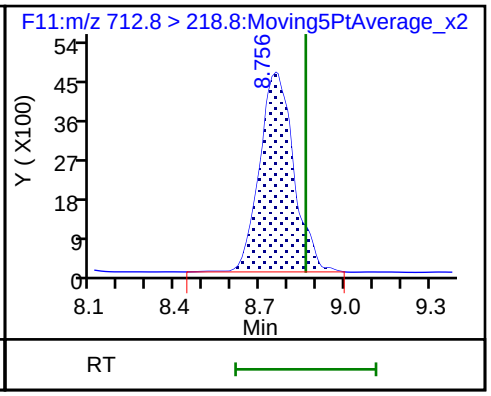
40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

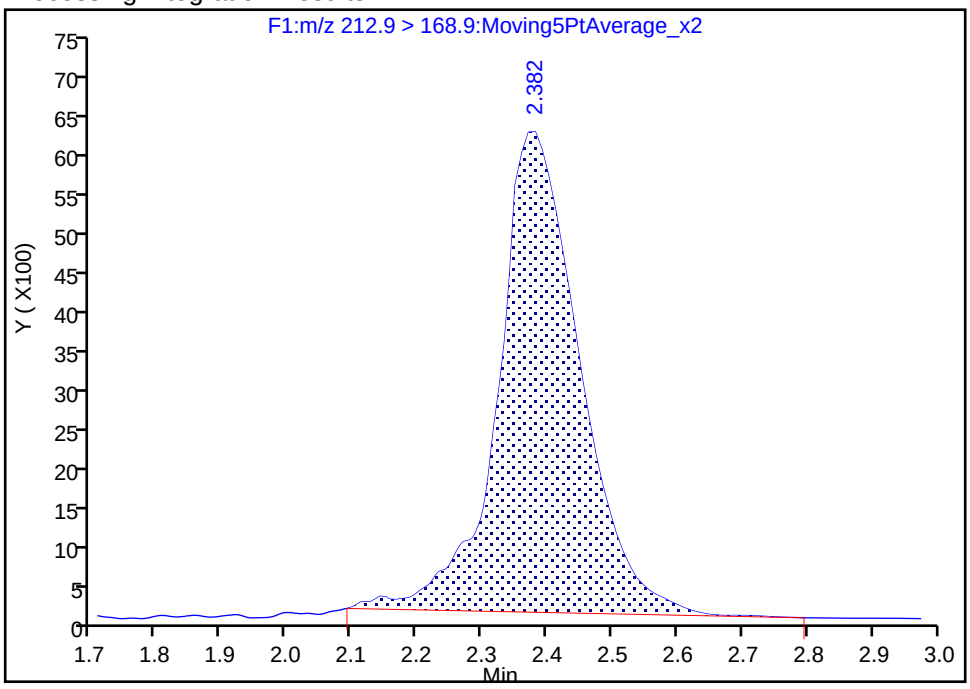
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

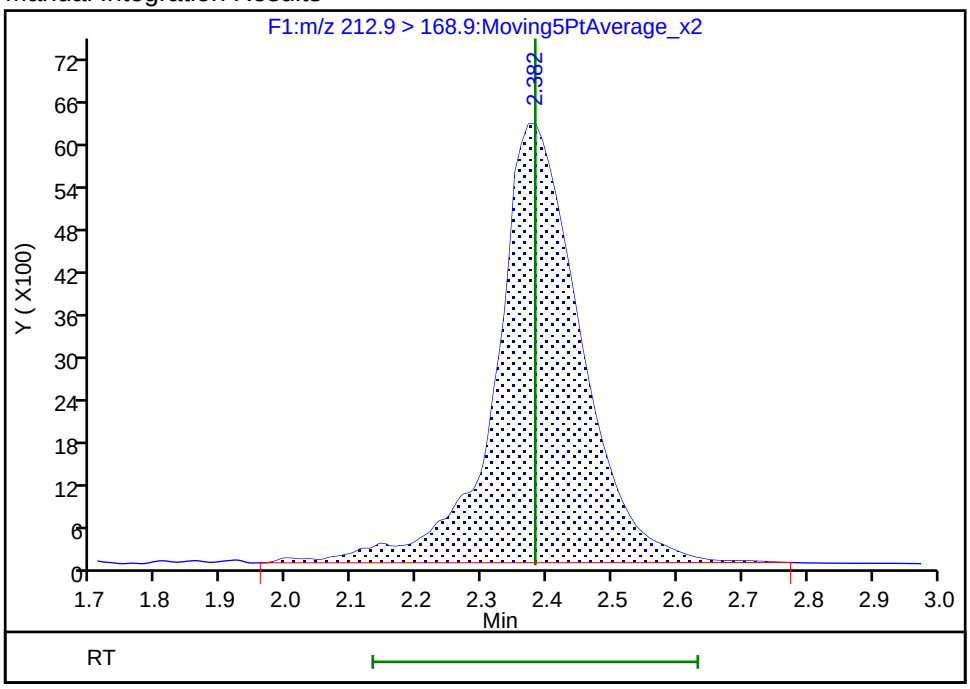
Processing Integration Results

RT: 2.38
Area: 53814
Amount: 18.255265
Amount Units: ng/ml



Manual Integration Results

RT: 2.38
Area: 56614
Amount: 19.198653
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:03:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

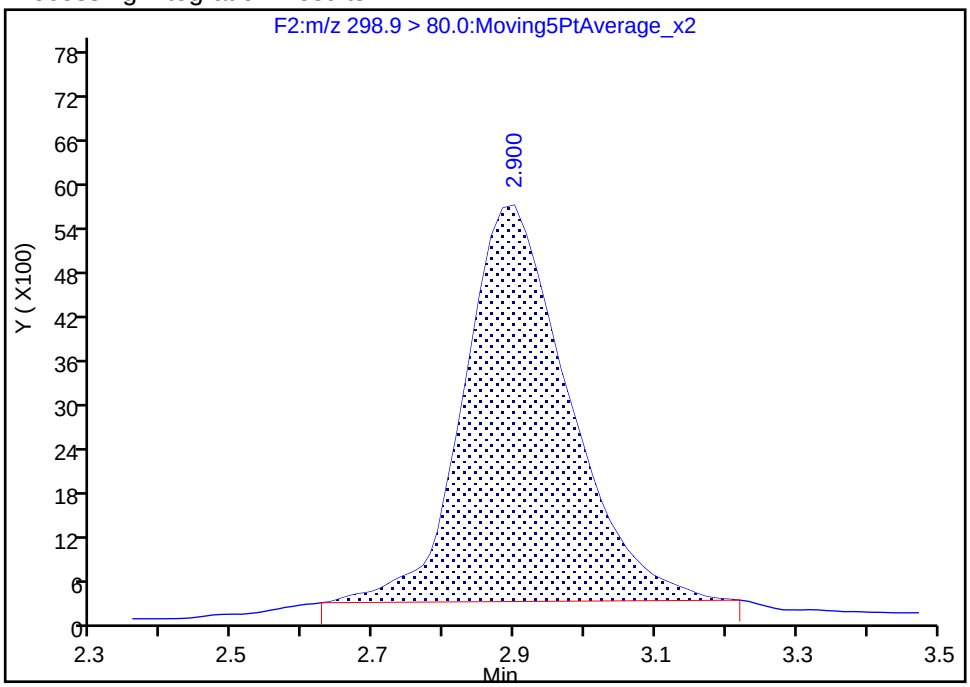
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

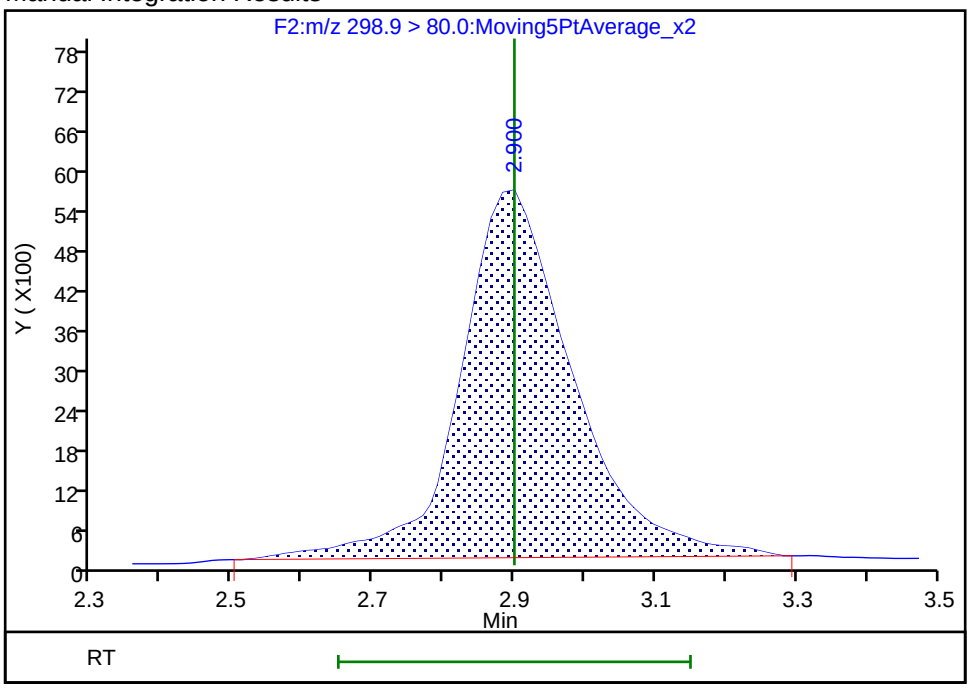
Processing Integration Results

RT: 2.90
Area: 55868
Amount: 17.074167
Amount Units: ng/ml



Manual Integration Results

RT: 2.90
Area: 61717
Amount: 18.861717
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:03:19
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

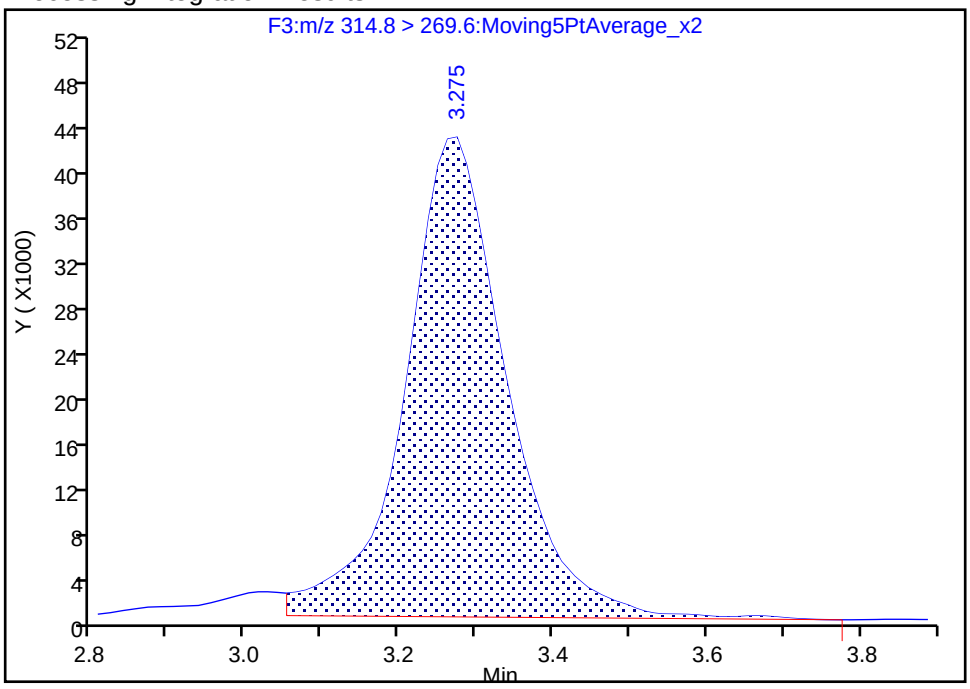
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F3:MRM

D 8 13C2 PFHxA, CAS: STL00993

Signal: 1

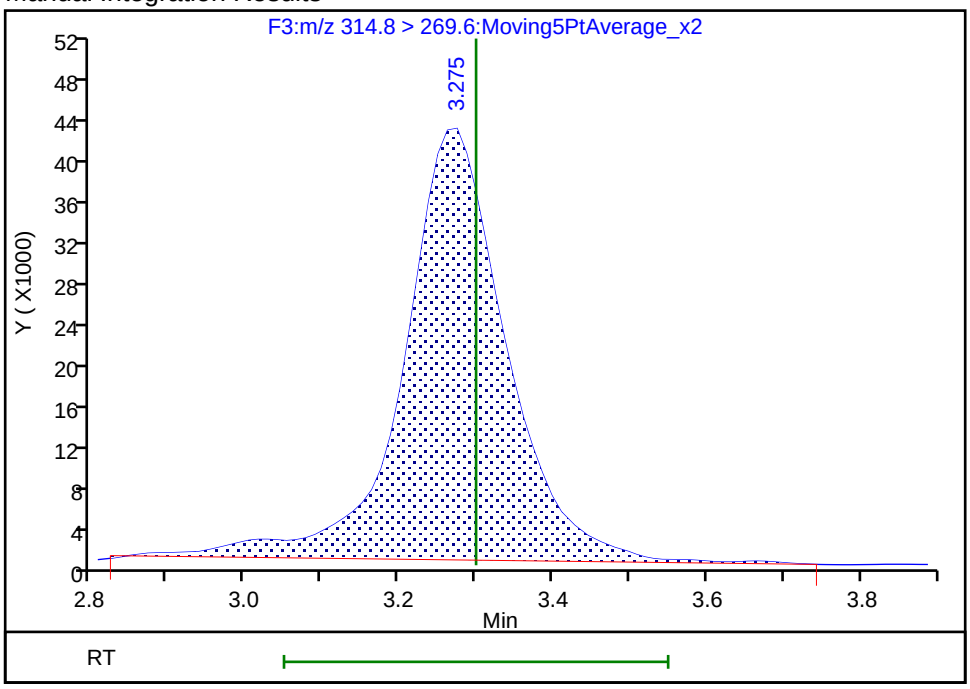
Processing Integration Results

RT: 3.28
Area: 390087
Amount: 41.499864
Amount Units: ng/ml



Manual Integration Results

RT: 3.28
Area: 394739
Amount: 42.038971
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:03:26
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

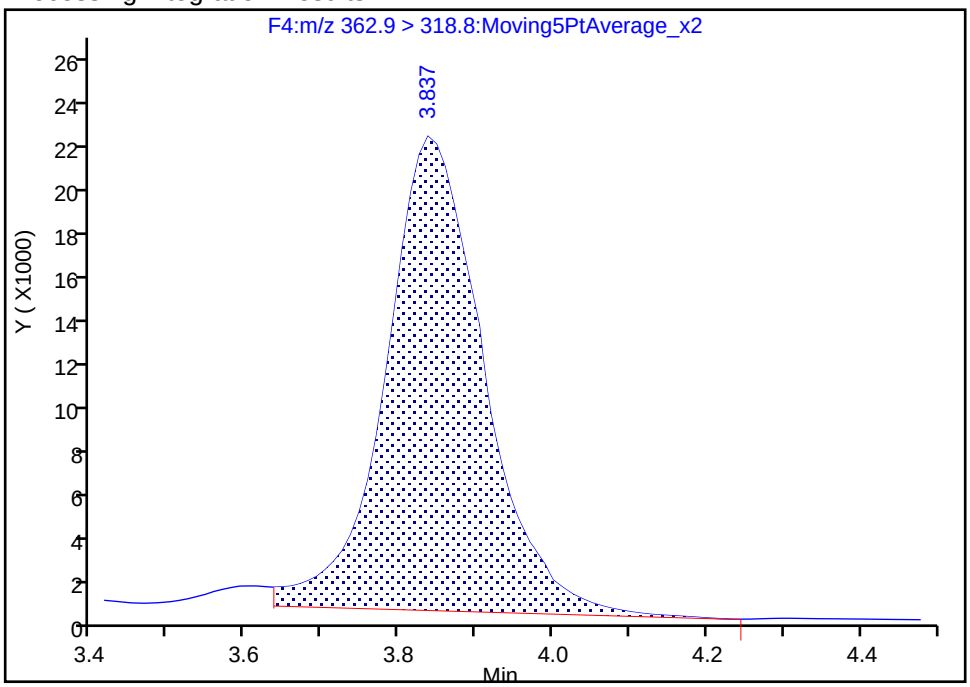
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

9 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

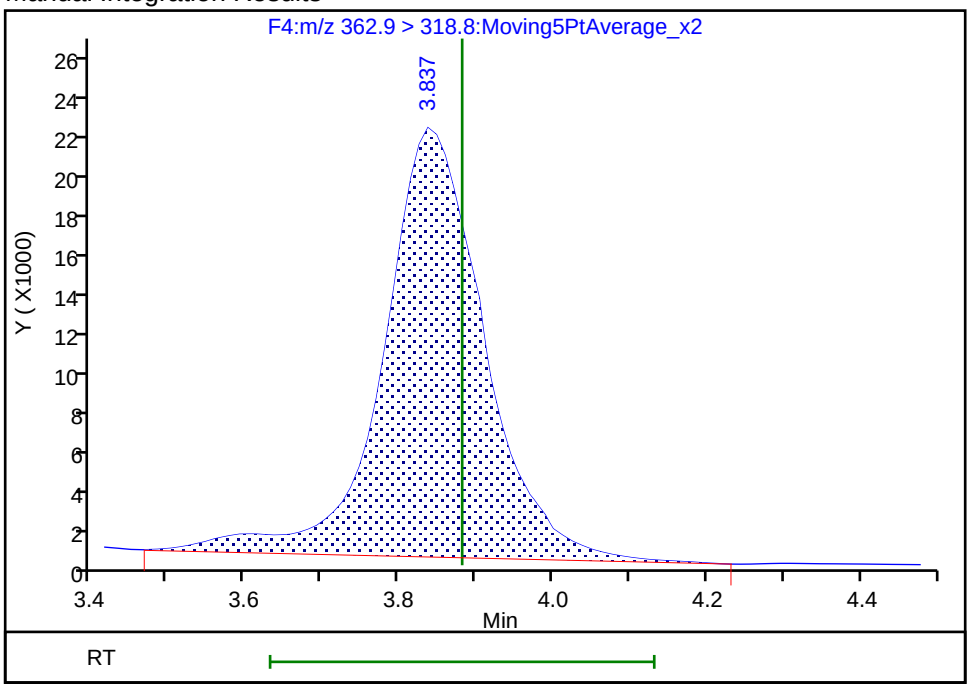
Processing Integration Results

RT: 3.84
Area: 195451
Amount: 20.084559
Amount Units: ng/ml



Manual Integration Results

RT: 3.84
Area: 201753
Amount: 20.727056
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:03:31
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

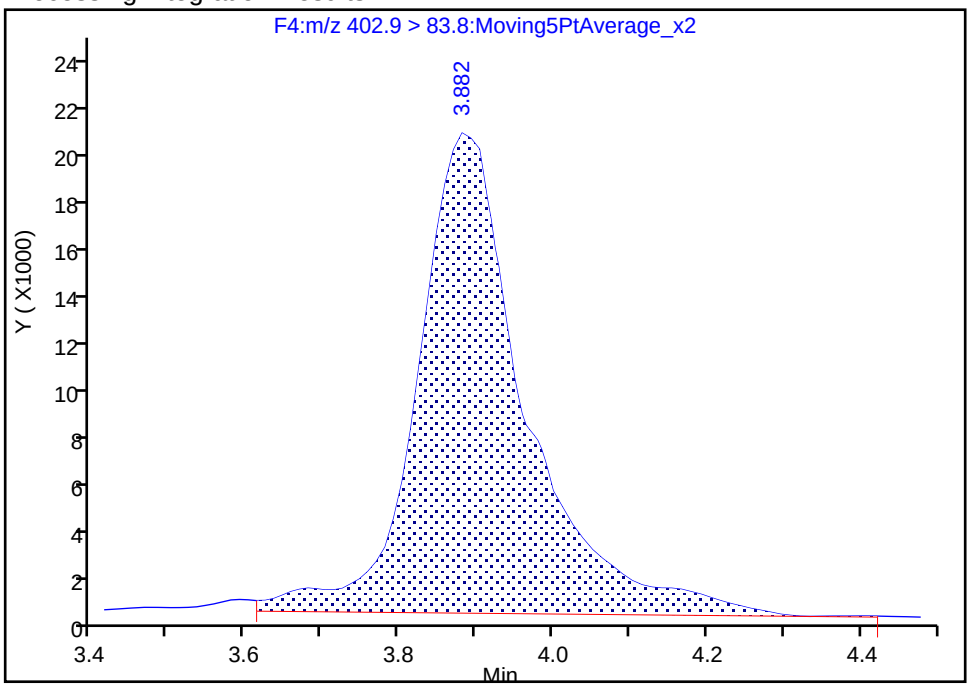
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 12 18O2 PFHxS, CAS: STL00994

Signal: 1

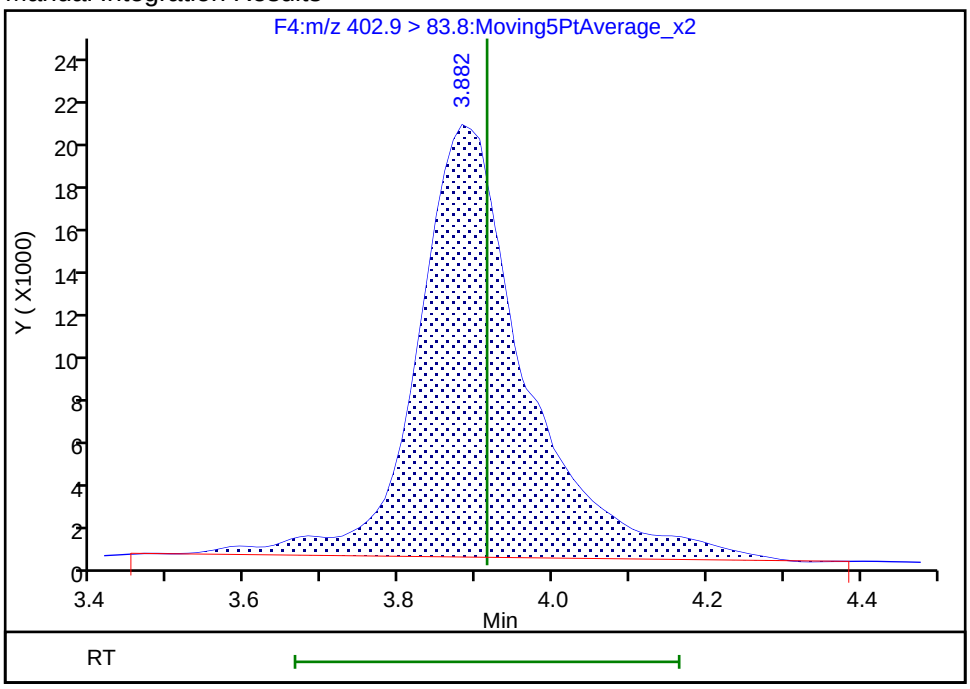
Processing Integration Results

RT: 3.88
Area: 198731
Amount: 39.051439
Amount Units: ng/ml



Manual Integration Results

RT: 3.88
Area: 196835
Amount: 38.719576
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:03:41
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

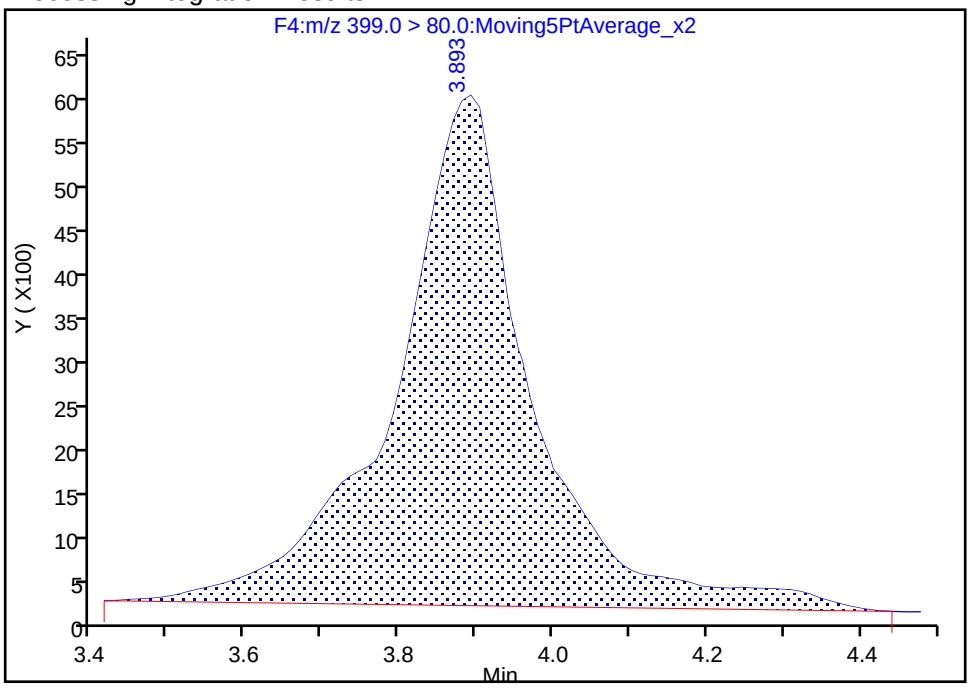
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

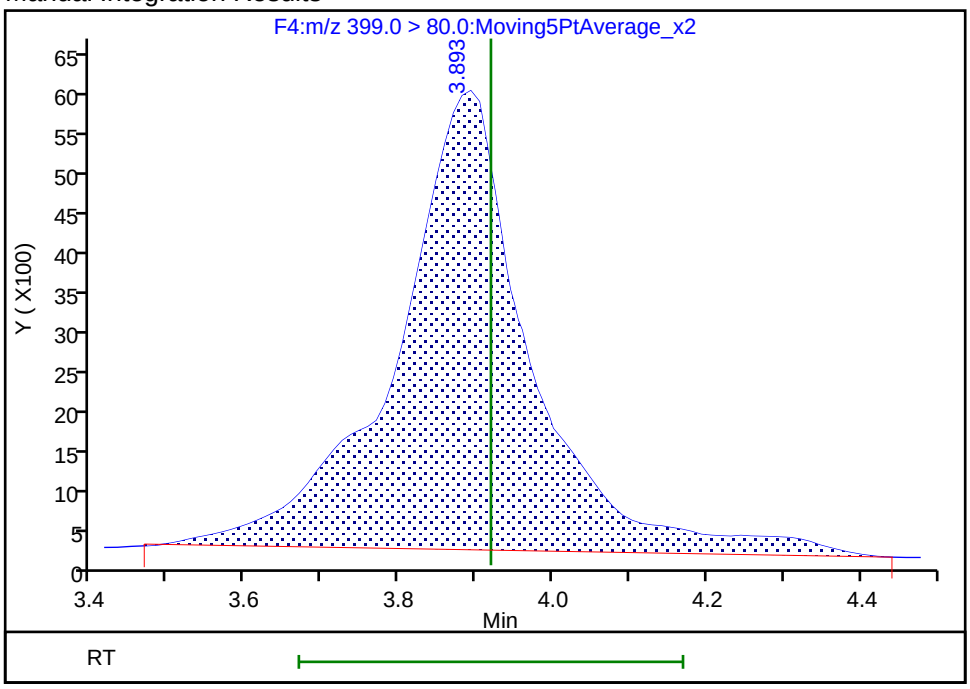
Processing Integration Results

RT: 3.89
Area: 71030
Amount: 16.653248
Amount Units: ng/ml



Manual Integration Results

RT: 3.89
Area: 69623
Amount: 16.485070
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:03:37
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

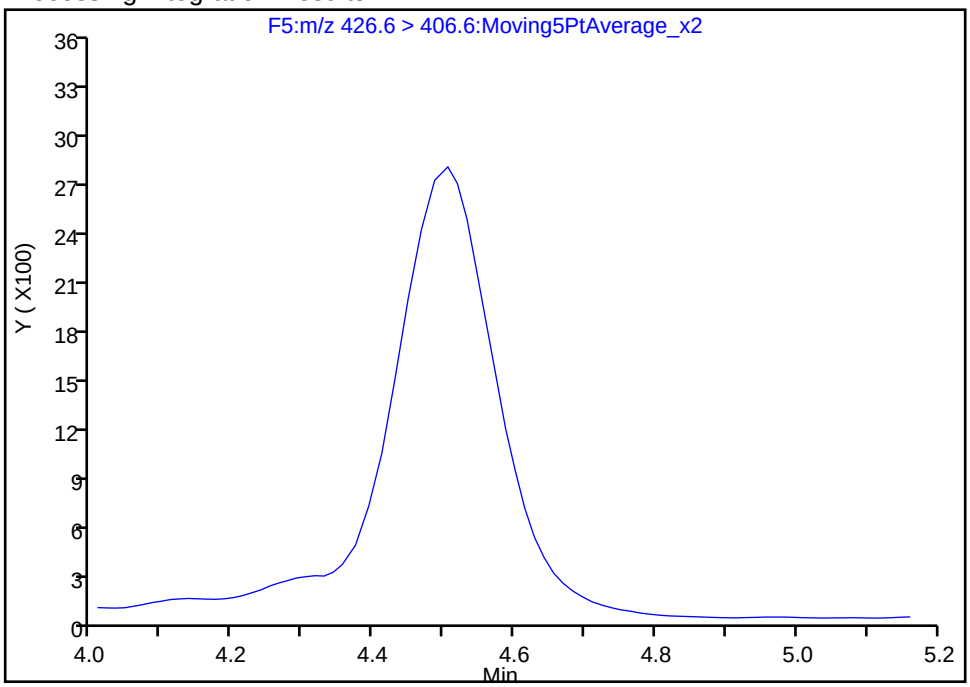
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

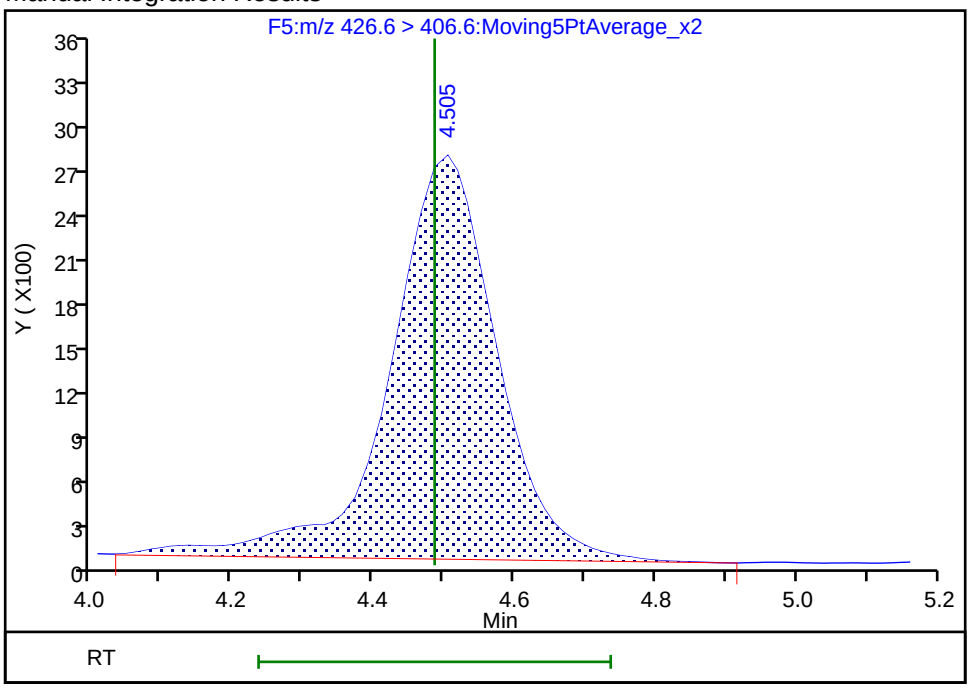
Not Detected
Expected RT: 4.49

Processing Integration Results



Manual Integration Results

RT: 4.51
Area: 28459
Amount: 17.200708
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:26:08
Audit Action: Manually Integrated/Assigned Compound ID Audit Reason:

Manual Integration/User Assign Peak Report

TestAmerica Burlington

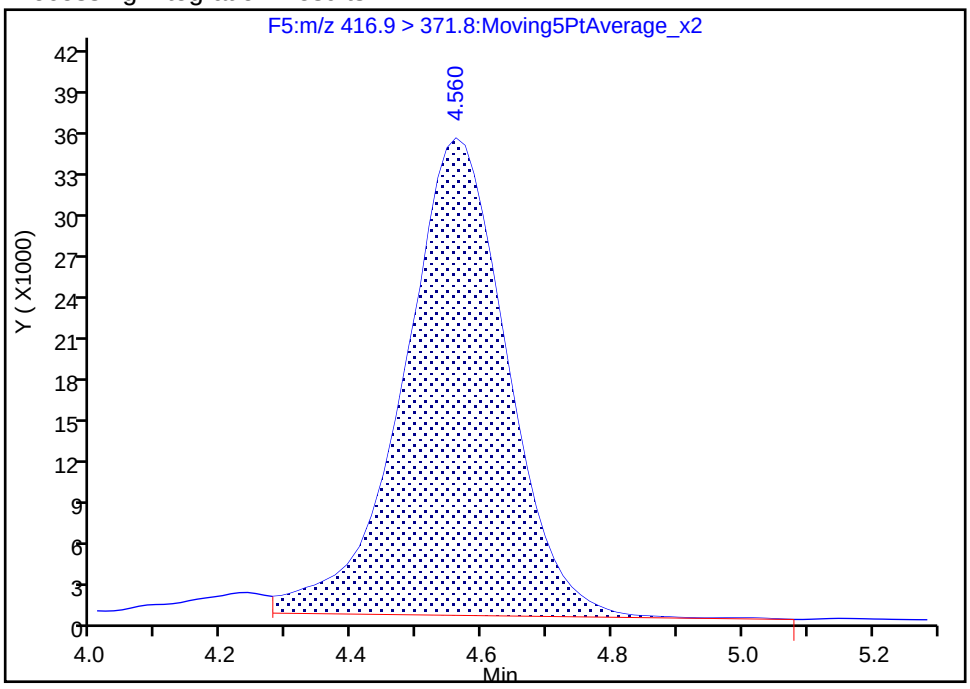
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

D 16 13C4 PFOA, CAS: STL00990

Signal: 1

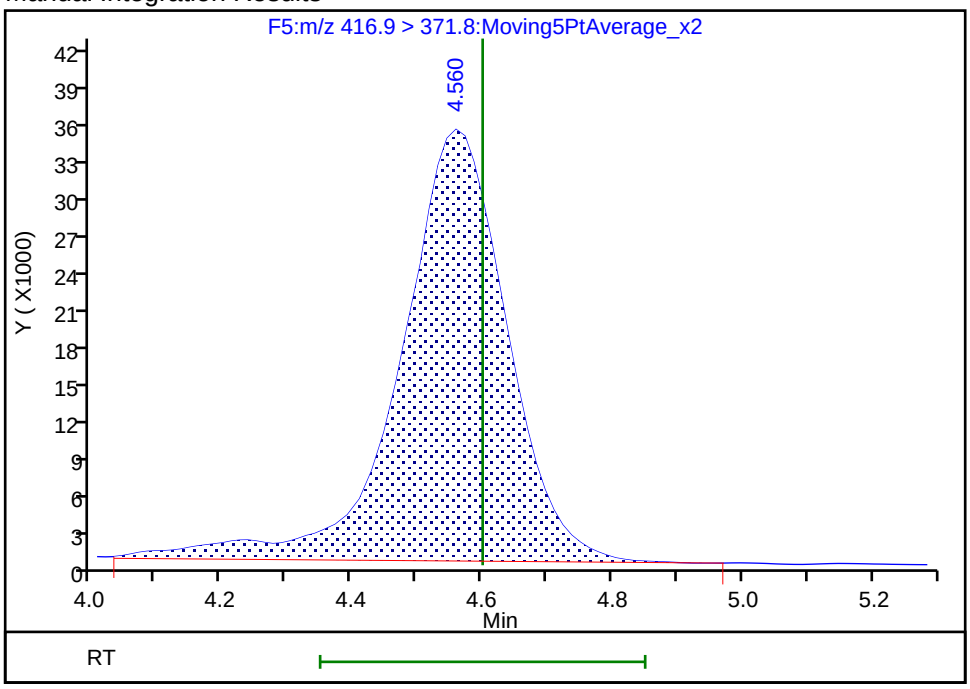
Processing Integration Results

RT: 4.56
Area: 381930
Amount: 46.249034
Amount Units: ng/ml



Manual Integration Results

RT: 4.56
Area: 395813
Amount: 47.980613
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:03:51
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

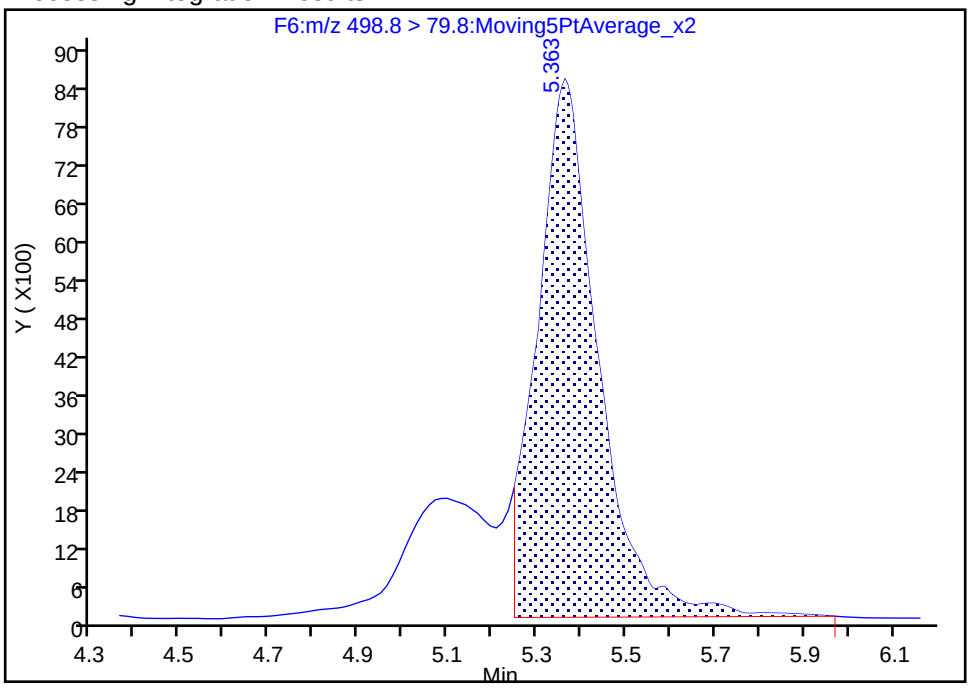
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

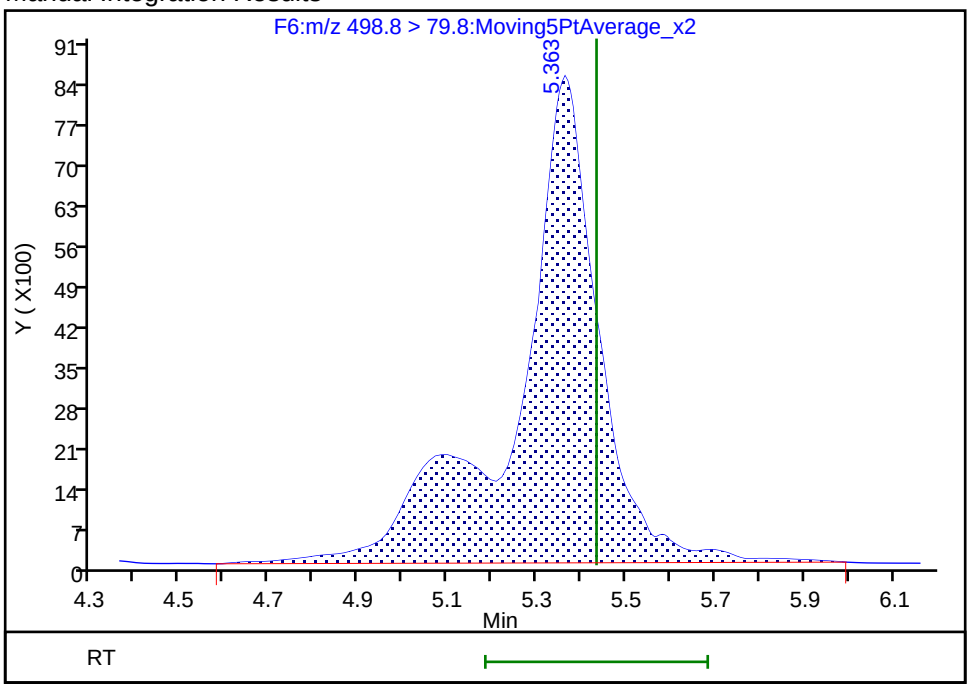
Processing Integration Results

RT: 5.36
Area: 79248
Amount: 13.997555
Amount Units: ng/ml



Manual Integration Results

RT: 5.36
Area: 108740
Amount: 19.187568
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:04:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

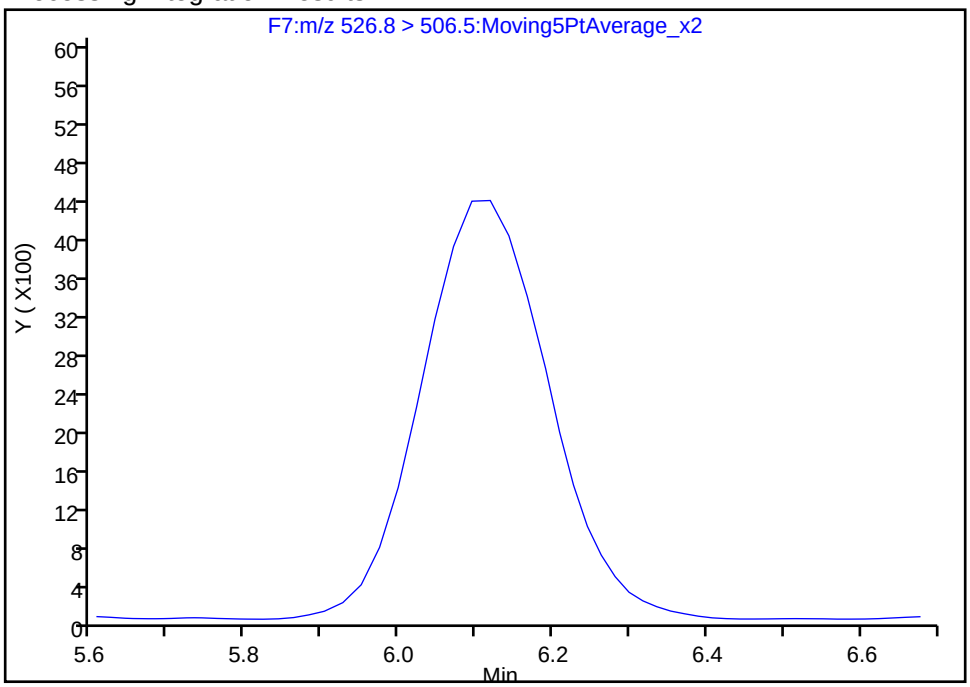
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

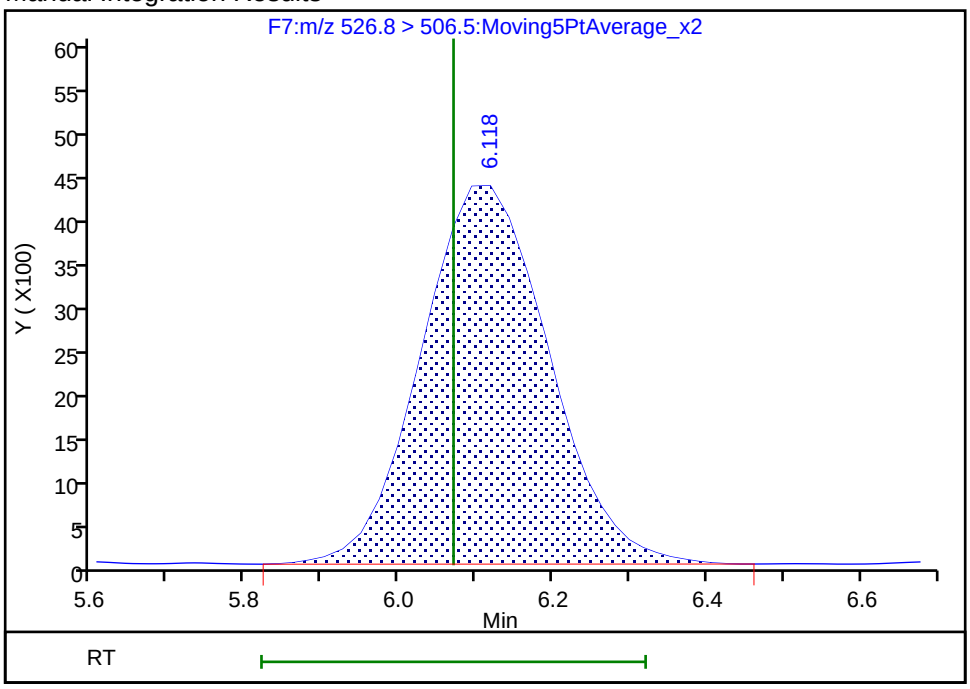
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.12
Area: 49945
Amount: 20.353609
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:26:09
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

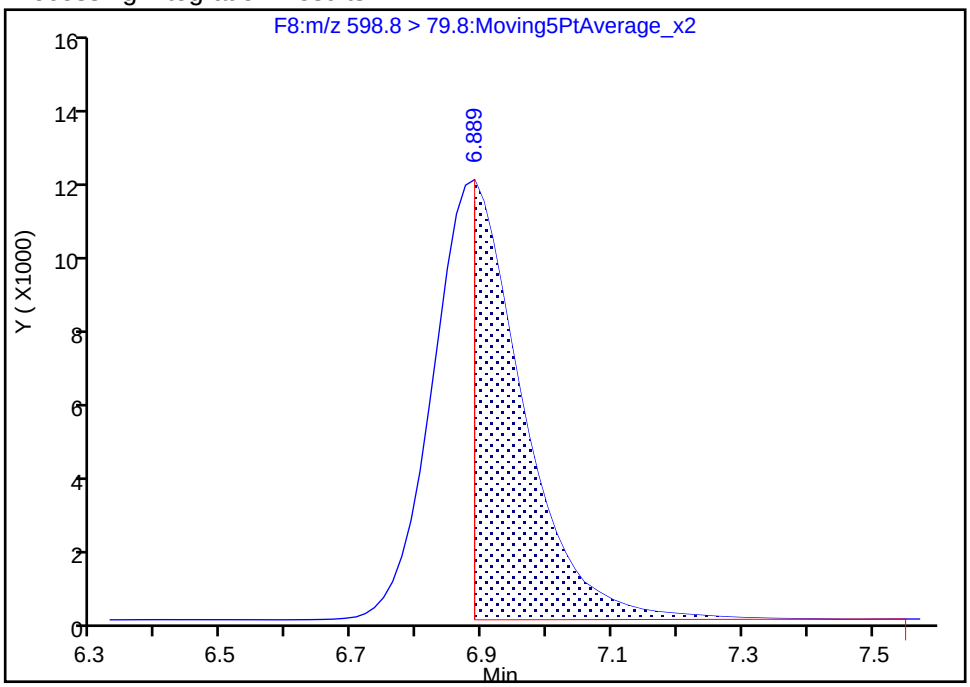
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A42.d
Injection Date: 12-Jun-2018 19:18:07 Instrument ID: LC410
Lims ID: CCV L4
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 42
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

31 Perfluorodecane Sulfonic acid, CAS: 335-77-3

Signal: 1

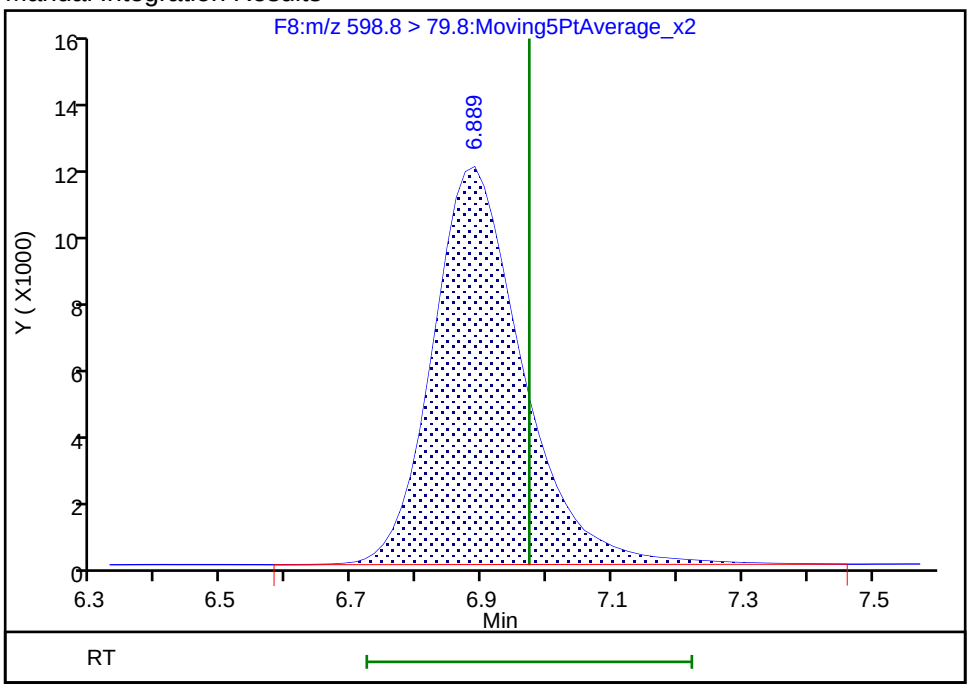
Processing Integration Results

RT: 6.89
Area: 62558
Amount: 11.671257
Amount Units: ng/ml



Manual Integration Results

RT: 6.89
Area: 115284
Amount: 21.464513
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:04:13
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: CCV 200-130505/53 Calibration Date: 06/12/2018 22:15

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF061218A53.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Perfluorobutanoic acid (PFBA)	L1ID		0.6167		4282	5000	-14.4	40.0
Perfluoropentanoic acid (PFPeA)	L1ID		0.9814		4134	5000	-17.3	40.0
Perfluorobutanesulfonic acid (PFBS)	AveID	0.8425	0.7897		4143	4420	-6.3	40.0
Perfluorohexanoic acid (PFHxA)	L1ID		0.8765		4204	5000	-15.9	40.0
Perfluoroheptanoic acid (PFHpA)	L2ID		0.9336		4432	5000	-11.4	40.0
Perfluorohexanesulfonic acid (PFHxS)	L1ID		0.7815		3843	4550	-15.5	40.0
6:2 FTS	L1ID		0.9044		4032	4740	-14.9	40.0
Perfluorooctanoic acid (PFOA)	L1ID		1.106		4976	5000	-0.5	40.0
Perfluoroheptanesulfonic Acid (PFHpS)	L1ID		0.7906		4103	4760	-13.8	50.0
Perfluorononanoic acid (PFNA)	L2ID		0.7713		4074	5000	-18.5	40.0
Perfluorooctanesulfonic acid (PFOS)	L2ID		0.9537		4029	4640	-13.2	40.0
8:2 FTS	L1ID		0.6260		3767	4790	-21.4	40.0
Perfluorodecanoic acid (PFDA)	L2ID		0.9185		4588	5000	-8.2	40.0
N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	L1ID		1.083		4564	5000	-8.7	40.0
N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	L2ID		0.9764		4616	5000	-7.7	40.0
Perfluorodecanesulfonic acid (PFDS)	L2ID		0.999		4622	4820	-4.1	50.0
Perfluoroundecanoic acid (PFUnA)	L2ID		1.005		4563	5000	-8.7	40.0
Perfluorooctane Sulfonamide (FOSA)	L1ID		0.9383		4792	5000	-4.2	40.0
Perfluorododecanoic acid (PFDoA)	L2ID		0.9137		4877	5000	-2.5	40.0
Perfluorotridecanoic Acid (PFTriA)	L2ID		0.8712		4372	5000	-12.6	50.0
Perfluorotetradecanoic acid (PFTeA)	L2ID		0.7570		4035	5000	-19.3	40.0
13C4 PFBA	Ave	0.6319	0.5206		41190	50000	-17.6	50.0
13C5 PFPeA	Ave	0.9274	0.8639		46570	50000	-6.9	50.0
13C3-PFBS	Ave	0.6135	0.5230		39640	46500	-14.7	50.0
13C2 PFHxA	Ave	1.084	1.089		50260	50000	0.5	50.0
13C4-PFHpA	Ave	1.244	1.122		45090	50000	-9.8	50.0
18O2 PFHxS	Ave	0.5867	0.4769		38450	47300	-18.7	50.0
M2-6:2FTS	Ave	0.1646	0.1901		54840	47500	15.4	50.0
13C4 PFOA	Ave	0.9520	0.9394		49340	50000	-1.3	50.0
13C5 PFNA	Ave	1.253	1.385		55250	50000	10.5	50.0
13C4 PFOS	Ave	0.6352	0.6200		46660	47800	-2.4	50.0

FORM VII 537 (modified)

FORM VII
LCMS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Lab Sample ID: CCV 200-130505/53 Calibration Date: 06/12/2018 22:15

Instrument ID: LC410 Calib Start Date: 06/06/2018 18:01

GC Column: C-18 ID: 4.60(mm) Calib End Date: 06/06/2018 19:22

Lab File ID: PF061218A53.d Conc. Units: ng/L

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
M2-8:2FTS	Ave	0.3407	0.2661		37410	47900	-21.9	50.0
13C2 PFDA	Ave	1.826	1.803		49380	50000	-1.2	50.0
d3-NMeFOSAA	Ave	0.3847	0.3553		46180	50000	-7.6	50.0
d5-NEtFOSAA	Ave	0.3292	0.3153		47890	50000	-4.2	50.0
13C2 PFUnA	Ave	1.670	1.768		52950	50000	5.9	50.0
13C8 FOSA	Ave	1.403	1.308		46600	50000	-6.8	50.0
13C2 PFDoA	Ave	2.016	2.118		52510	50000	5.0	50.0
13C2-PFTeDA	Ave	2.046	2.195		53650	50000	7.3	50.0

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Lims ID: CCV L3
Client ID:
Sample Type: CCV
Inject. Date: 12-Jun-2018 22:15:22 ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-053 CCV L3
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410
Sublist: chrom-PFCISO_12MRM*sub4

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:25:35 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 13-Jun-2018 10:06:18

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.382	2.382	0.0	1.004	9834	4.28		85.6	34.6	M
D 1 13C4 PFBA										
216.9 > 171.5	2.371	2.392	-0.021	1.000	159463	41.2		82.4	1285	
D 4 13C5-PFPeA										
267.7 > 222.6	2.801	2.818	-0.017	1.000	264598	46.6		93.1	326	
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.818	2.834	-0.016	1.006	25968	4.13		82.7	136	M
D 5 13C3-PFBS										
302.0 > 79.8	2.883	2.900	-0.017	1.000	148984	39.6		85.3	230	
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.883	2.900	-0.017	1.000	11183	4.14		93.7	123	M
7 Perfluorohexanoic acid										M
312.8 > 268.6	3.263	3.300	-0.037	0.996	29242	4.20		84.1	160	M
D 8 13C2 PFHxA										
314.8 > 269.6	3.275	3.300	-0.025	1.000	333625	50.3		101	4432	
9 Perfluoroheptanoic acid										
362.9 > 318.8	3.837	3.882	-0.045	1.000	32078	4.43		88.6	230	
D 10 13C4-PFHpA										M
366.9 > 321.8	3.837	3.882	-0.045	1.000	343593	45.1		90.2	226	M
D 12 18O2 PFHxS										M
402.9 > 83.8	3.871	3.914	-0.043	1.000	138169	38.4		81.3	69.6	M
11 Perfluorohexanesulfonic acid										
399.0 > 80.0	3.882	3.919	-0.037	1.003	10387	3.84		84.5	58.3	
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.486	4.486	0.0	0.996	4991	4.03		85.1	59.1	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.505	4.546	-0.041	1.000	55305	54.8		115	523	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.546	4.601	-0.055	1.000	287720	49.3		98.7	532	
* 17 13C2-PFOA										
414.9 > 369.8	4.560	4.601	-0.041		306285	50.0			655	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.546	4.615	-0.069	1.000	31826	4.98		99.5	786	
18 Perfluoroheptanesulfonic acid										M
448.8 > 79.8	4.587	4.642	-0.055	0.857	14293	4.10		86.2	232	M
D 19 13C5 PFNA										
467.8 > 422.8	5.334	5.422	-0.088	1.000	424097	55.2		110	4935	
20 Perfluorononanoic acid										
462.8 > 418.8	5.352	5.422	-0.070	1.003	32710	4.07		81.5	454	
22 Perfluorooctane sulfonic acid										
498.8 > 79.8	5.352	5.434	-0.082	1.000	16807	4.03		86.8	425	
D 21 13C4 PFOS										
502.8 > 79.8	5.352	5.440	-0.088	1.000	181546	46.7		97.6	1064	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.118	6.070	0.048	1.000	4887	3.77		78.6	90.0	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.118	6.209	-0.091	1.000	78070	37.4		78.1	468	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.142	6.227	-0.085	1.000	50729	4.59		91.8	210	
D 26 13C2 PFDA										
514.9 > 469.5	6.142	6.227	-0.085	1.000	552325	49.4		98.8	810	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.494	6.584	-0.090	1.000	108812	46.2		92.4	828	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.512	6.602	-0.090	1.003	11781	4.56		91.3	88.8	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.861	6.959	-0.098	1.000	96568	47.9		95.8	912	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.874	6.973	-0.099	1.002	9429	4.62		92.3	242	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.888	6.973	-0.085	1.287	18294	4.62		95.9	308	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.903	6.987	-0.084	1.000	54445	4.56		91.3	539	
D 33 13C2 PFUnA										
564.8 > 519.8	6.903	6.987	-0.084	1.000	541597	52.9		106	2224	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	7.079	7.079	0.0	1.000	37587	4.79		95.8	537	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	400584	46.6		93.2	3136	
D 36 13C2 PFDoA										
614.8 > 569.6	7.586	7.684	-0.098	1.000	648579	52.5		105	4188	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.586	7.684	-0.098	1.000	59262	4.88		97.5	545	
38 Perfluorotridecanoic acid										
662.8 > 618.6	8.203	8.294	-0.091	1.081	56503	4.37		87.4	597	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 39 13C2-PFTeDA										
714.8 > 669.6	8.742	8.855	-0.113	1.000	672343	53.7		107	1545	
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.756	8.862	-0.106	1.002	50899	4.03		80.7	622	M
712.8 > 168.8	8.756	8.862	-0.106	1.002	10183		5.00(0.00-0.00)		112	
712.8 > 218.8	8.762	8.862	-0.100	1.002	5931		8.58(0.00-0.00)		98.3	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

LCPFAS21-L3_00003 Amount Added: 100.00 Units: uL

Report Date: 21-Jun-2018 21:25:39 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d

Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410

Lims ID: CCV L3

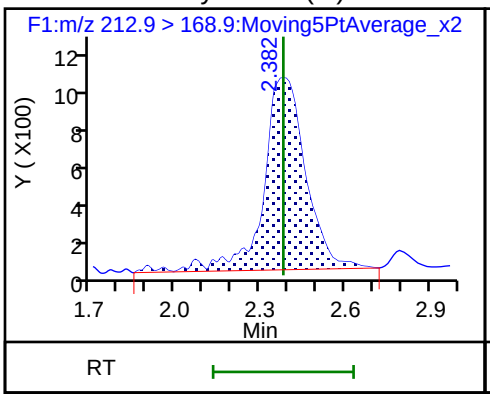
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53

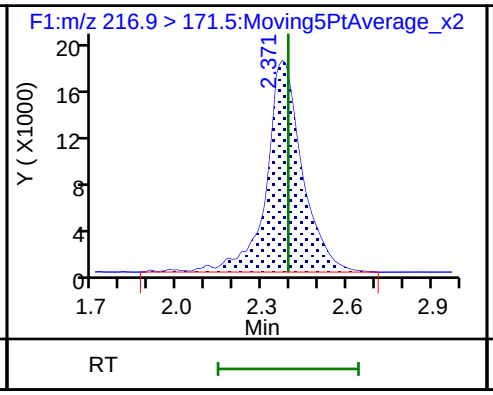
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

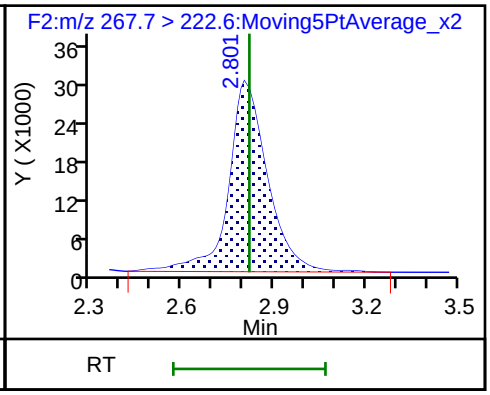
2 Perfluorobutyric acid (M)



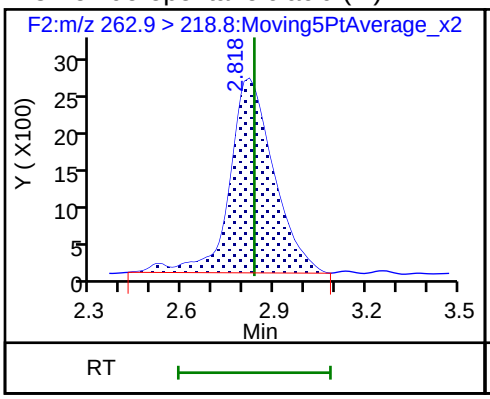
D 1 13C4 PFBA



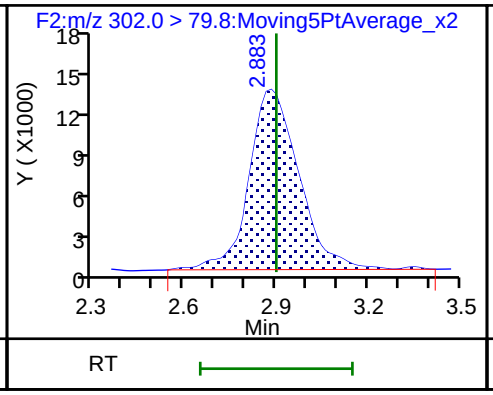
D 4 13C5-PFPeA



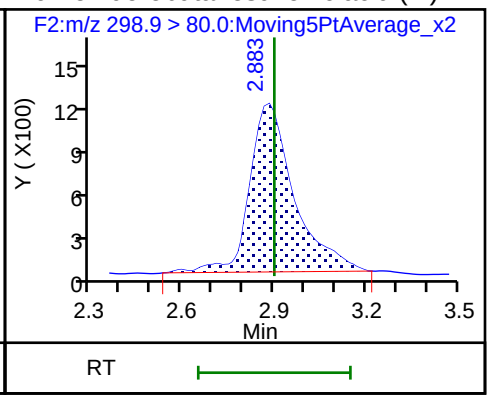
3 Perfluoropentanoic acid (M)



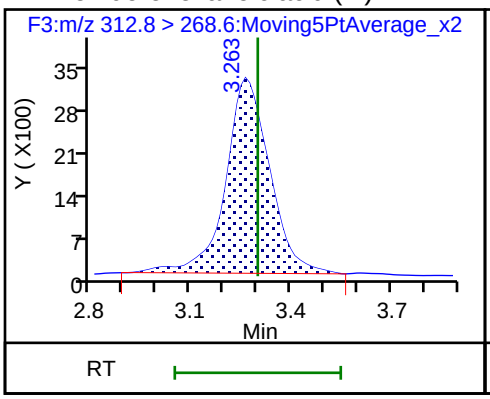
D 5 13C3-PFBS



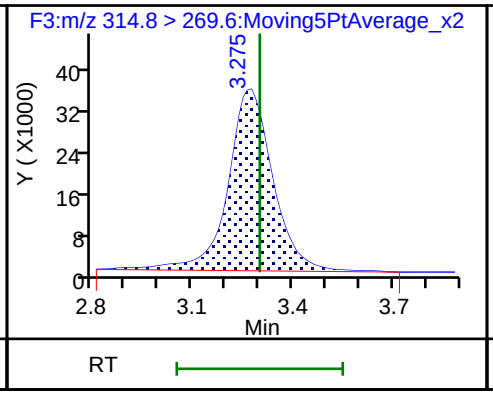
6 Perfluorobutanesulfonic acid (M)



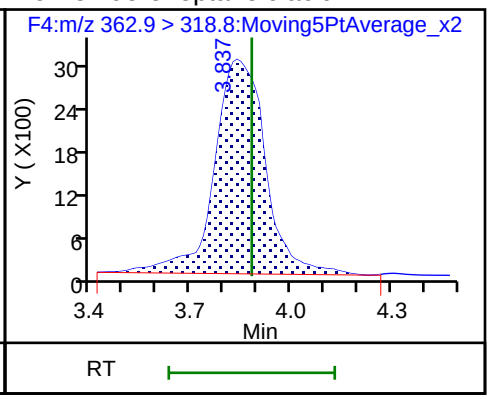
7 Perfluorohexanoic acid (M)



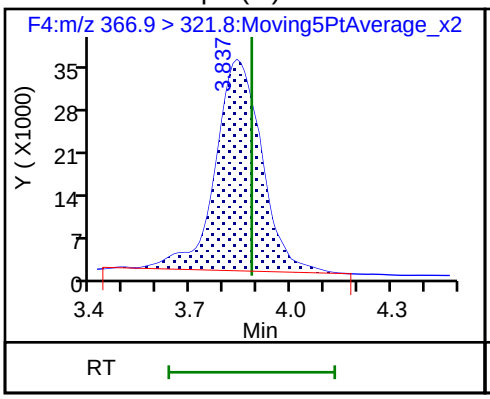
D 8 13C2 PFHxA



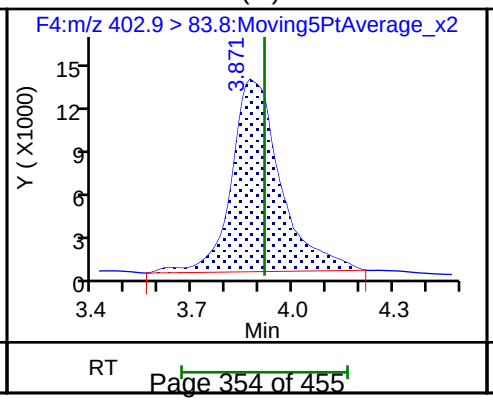
9 Perfluoroheptanoic acid



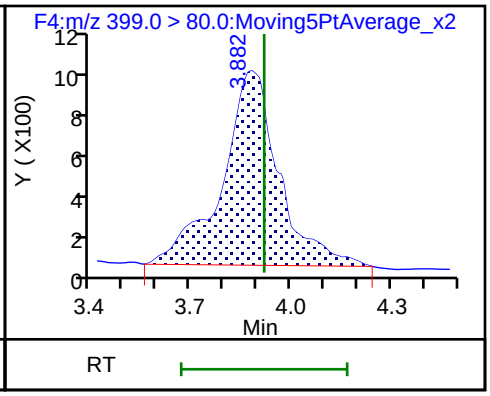
D 10 13C4-PFHpA (M)



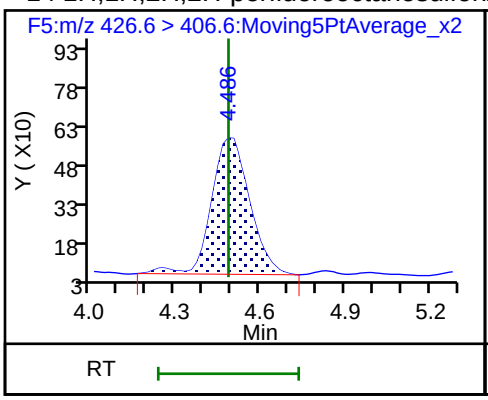
D 12 18O2 PFHxS (M)



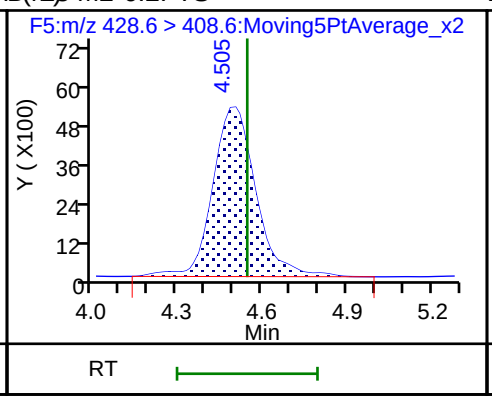
11 Perfluorohexanesulfonic acid



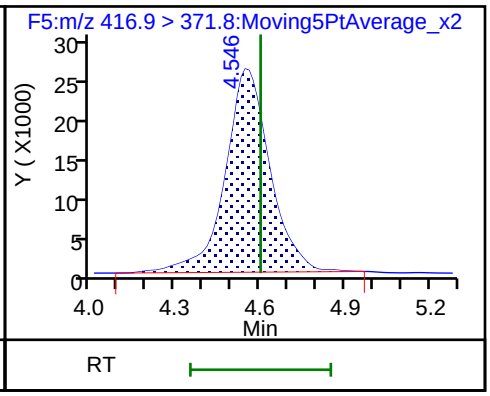
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



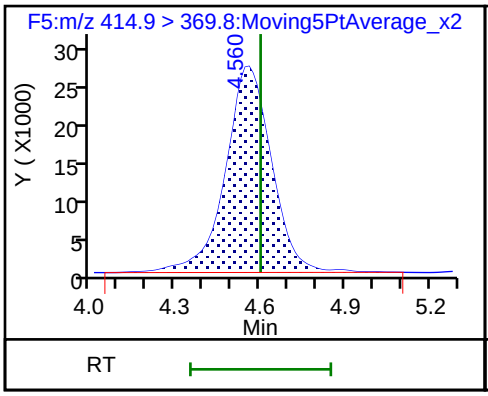
D 13 M2-6:2FTS



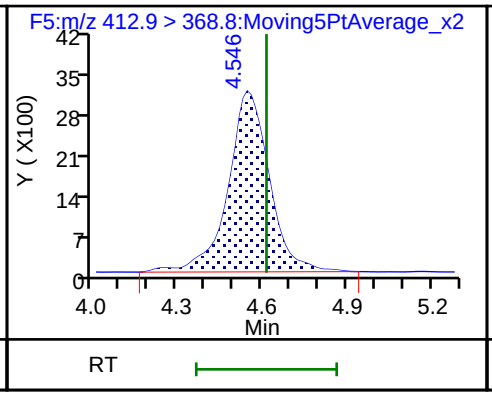
D 16 13C4 PFOA



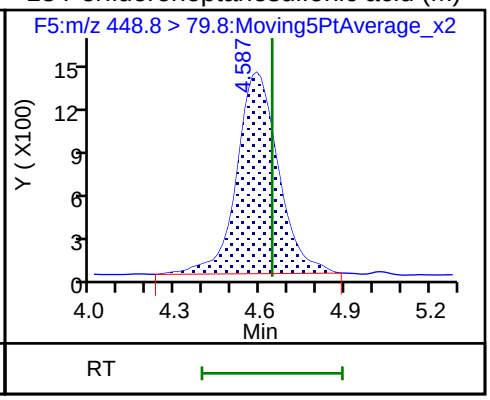
* 17 13C2-PFOA



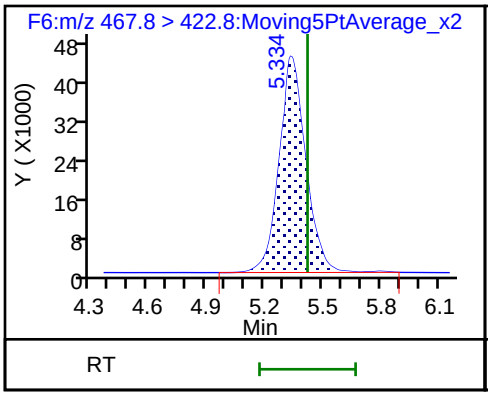
15 Perfluorooctanoic acid



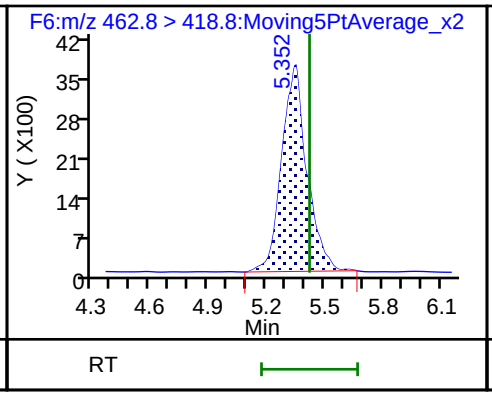
18 Perfluoroheptanesulfonic acid (M)



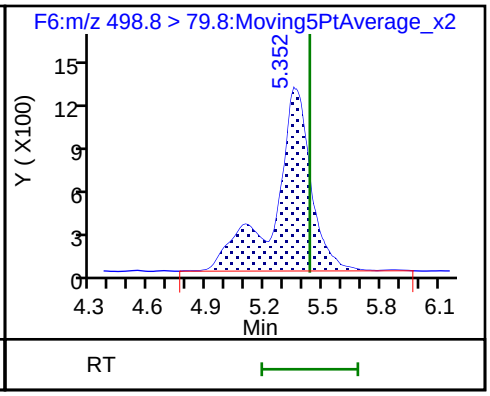
D 19 13C5 PFNA



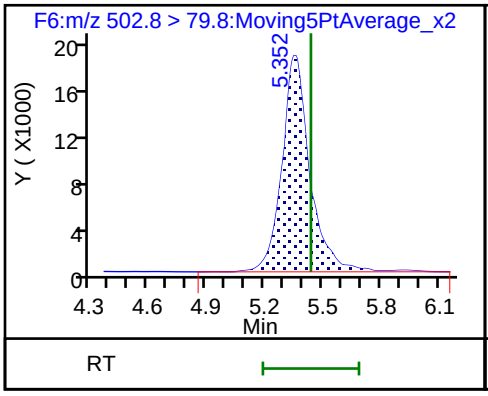
20 Perfluorononanoic acid



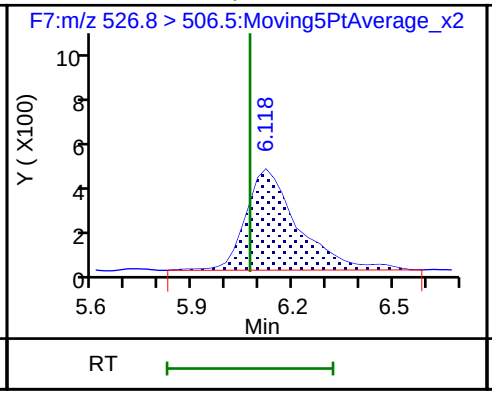
22 Perfluorooctane sulfonic acid



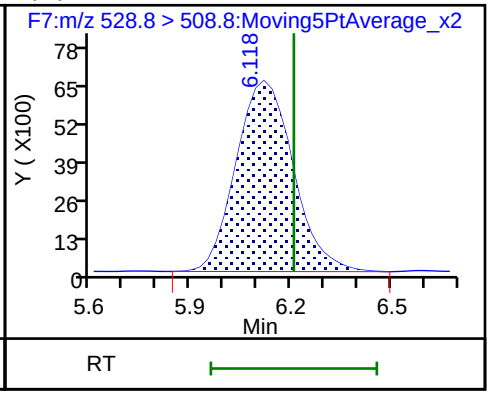
D 21 13C4 PFOS



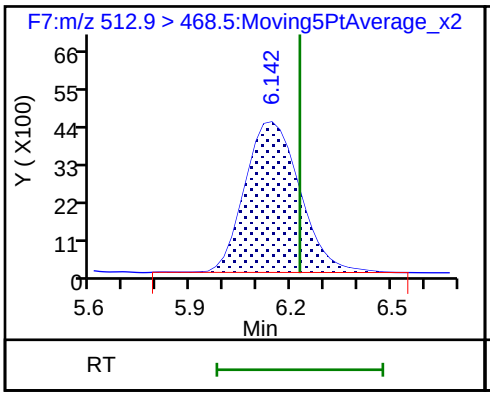
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



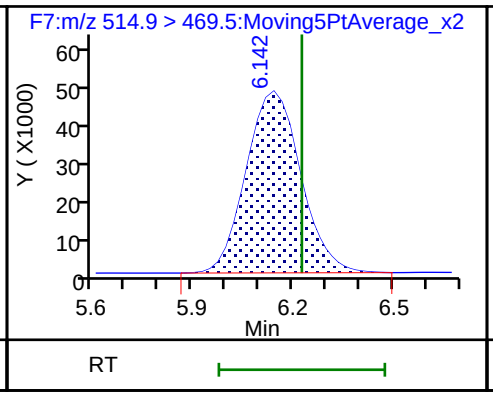
D 24 M2-8:2FTS



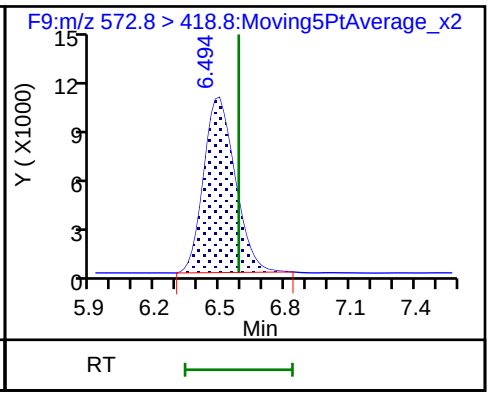
25 Perfluorodecanoic acid



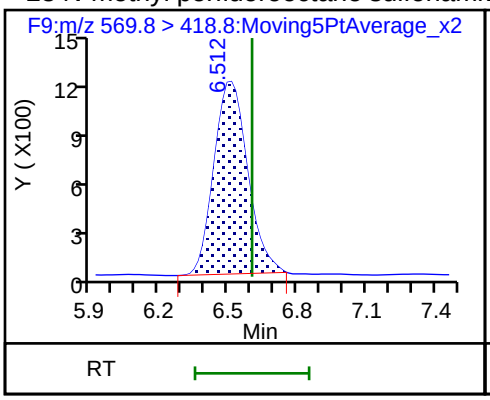
D 26 13C2 PFDA



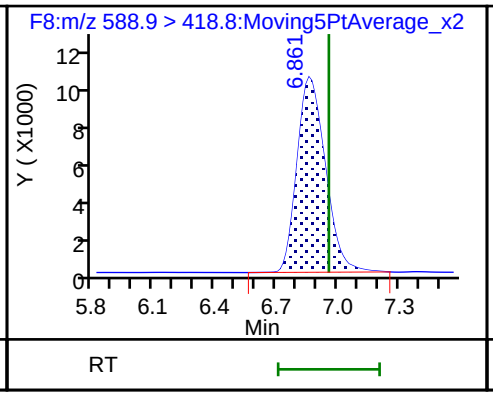
D 27 d3-NMeFOSAA



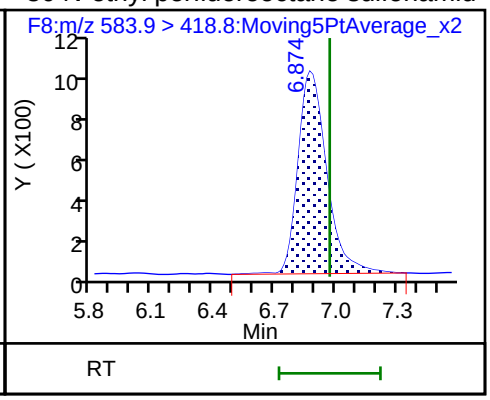
28 N-methyl perfluorooctane sulfonami



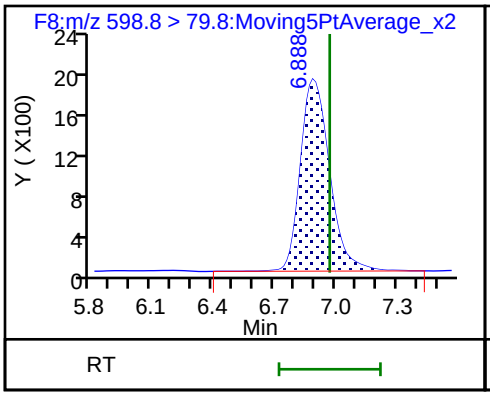
D 29 d5-NEtFOSAA



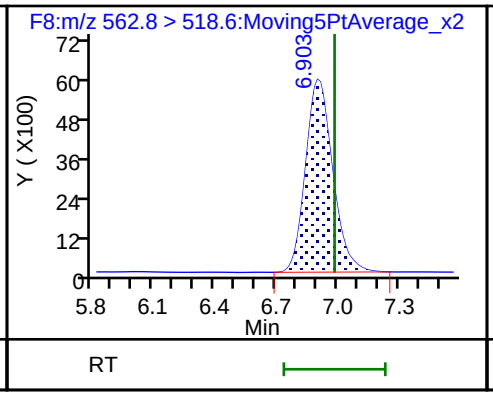
30 N-ethyl perfluorooctane sulfonamid



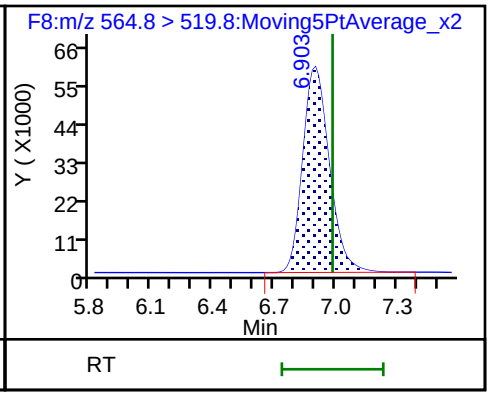
31 Perfluorodecane Sulfonic acid



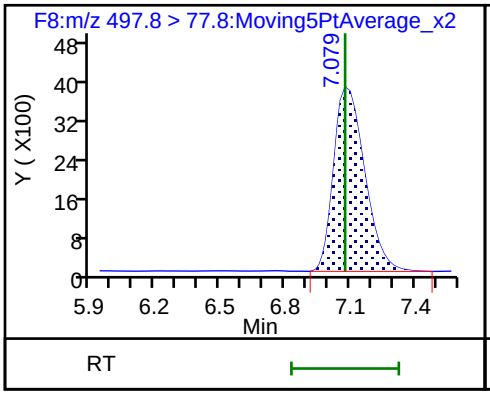
32 Perfluoroundecanoic acid



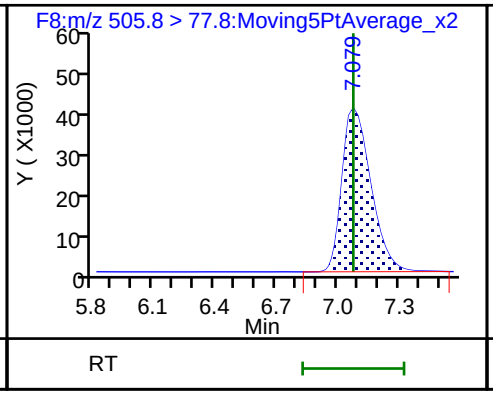
D 33 13C2 PFUnA



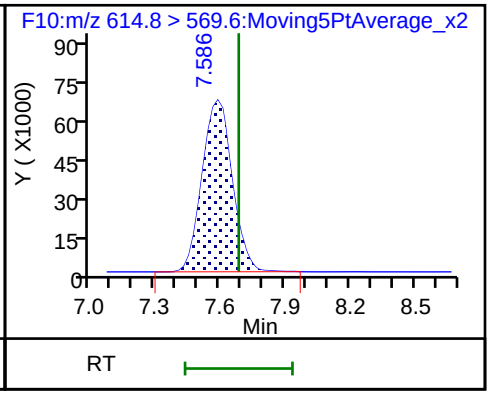
34 Perfluorooctane Sulfonamide



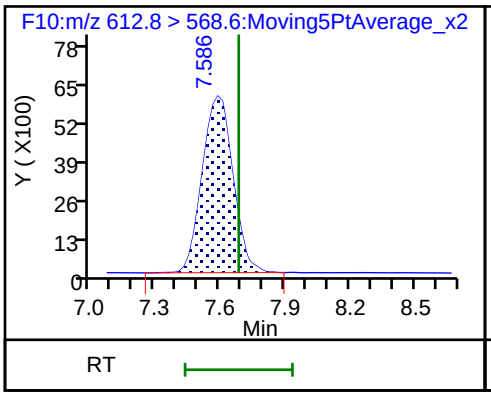
D 35 13C8 FOSA



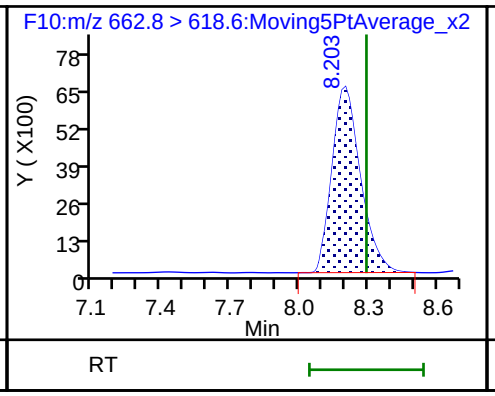
D 36 13C2 PFDoA



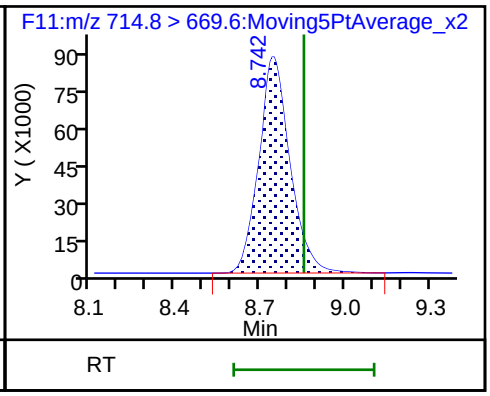
37 Perfluorododecanoic acid



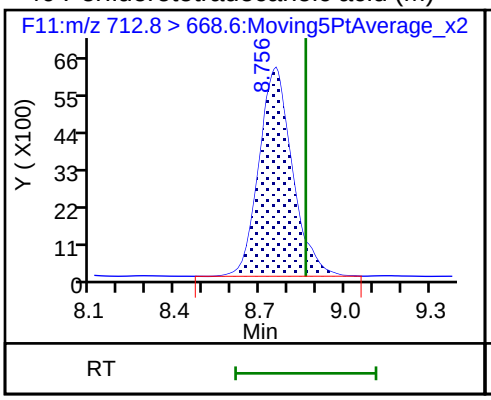
38 Perfluorotridecanoic acid



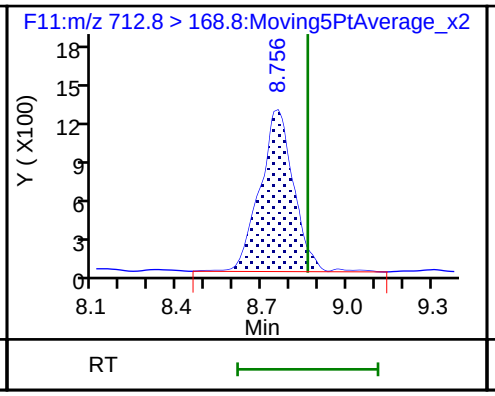
D 39 13C2-PFTeDA



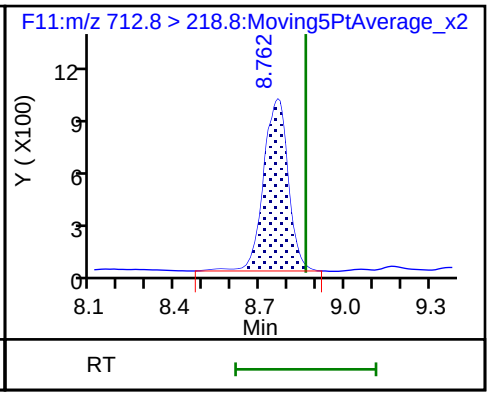
40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

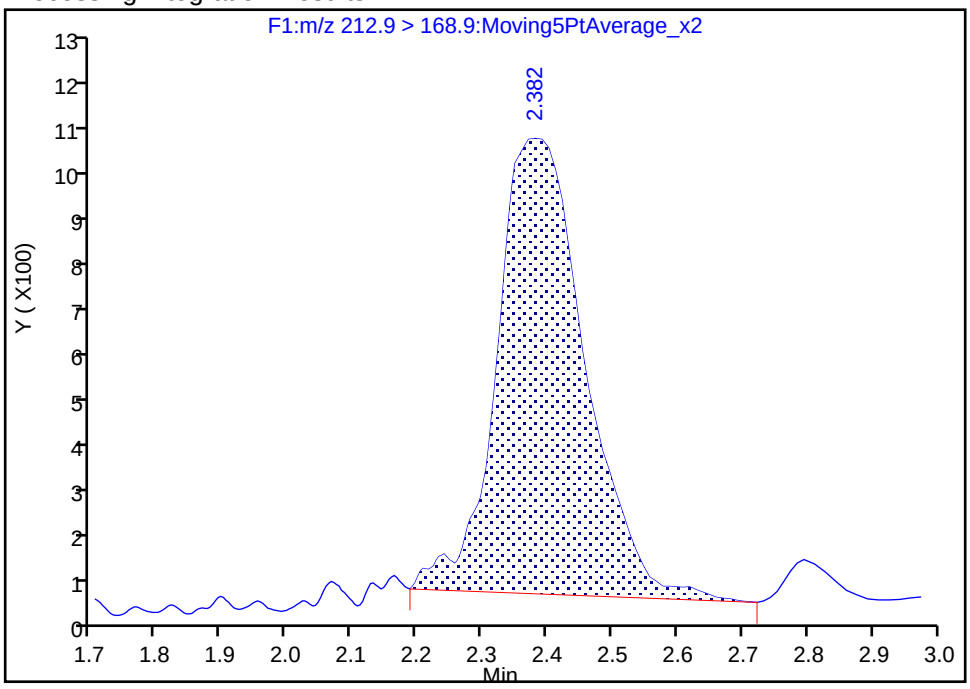
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

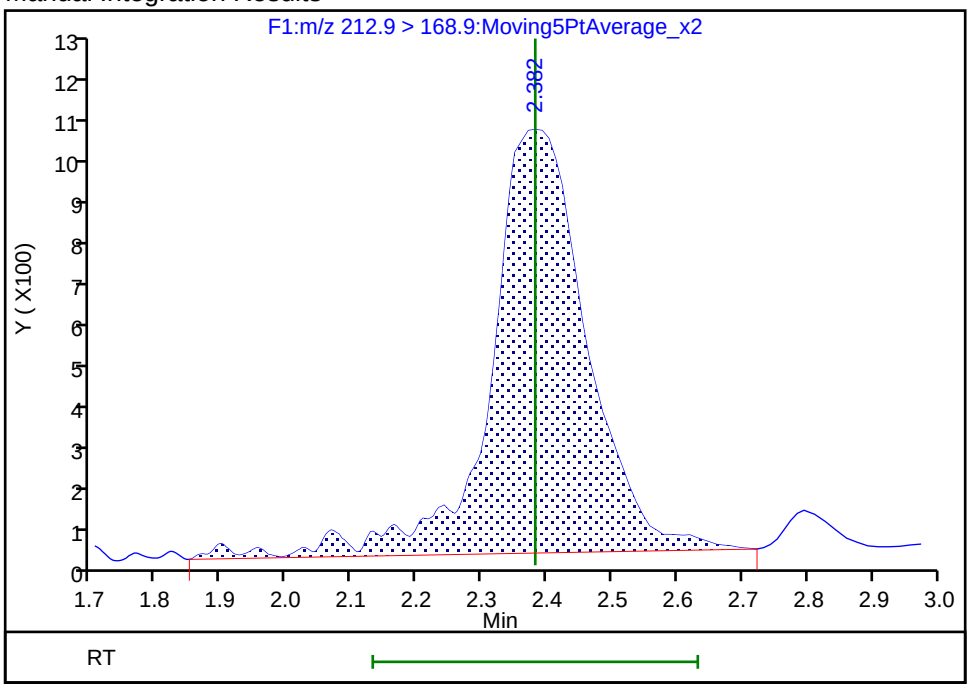
Processing Integration Results

RT: 2.38
Area: 8654
Amount: 3.782796
Amount Units: ng/ml



Manual Integration Results

RT: 2.38
Area: 9834
Amount: 4.281679
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:06:13
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

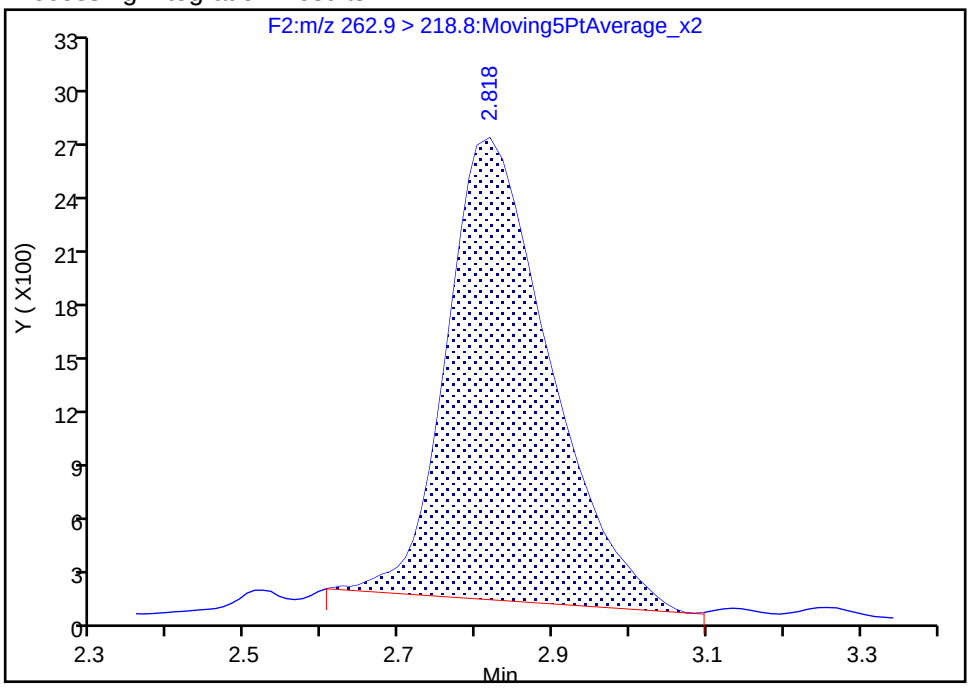
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

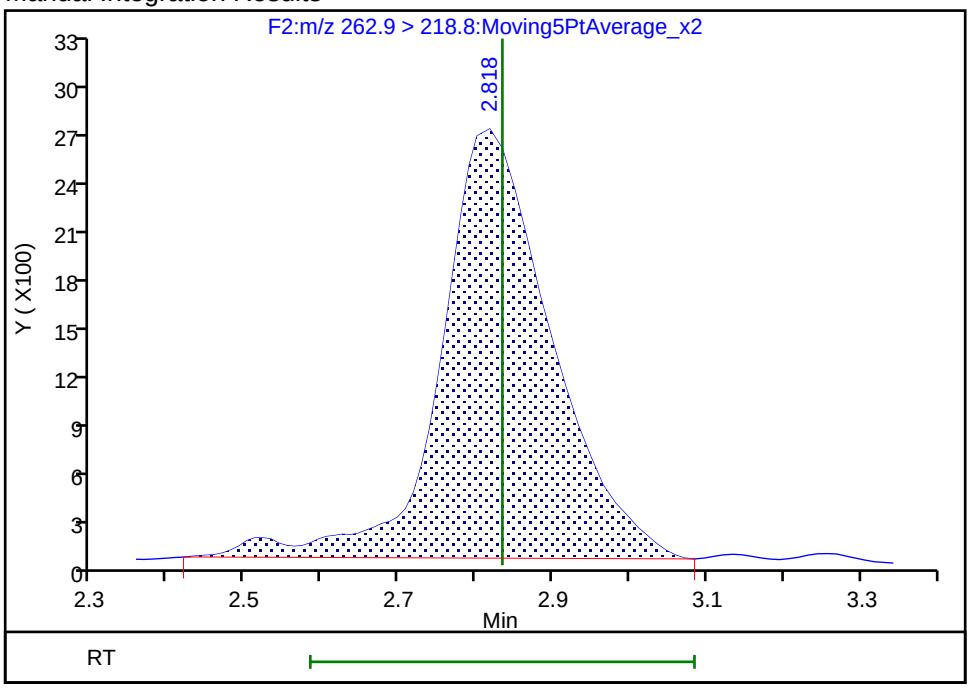
Processing Integration Results

RT: 2.82
Area: 23457
Amount: 3.751086
Amount Units: ng/ml



Manual Integration Results

RT: 2.82
Area: 25968
Amount: 4.133697
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:06:06
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

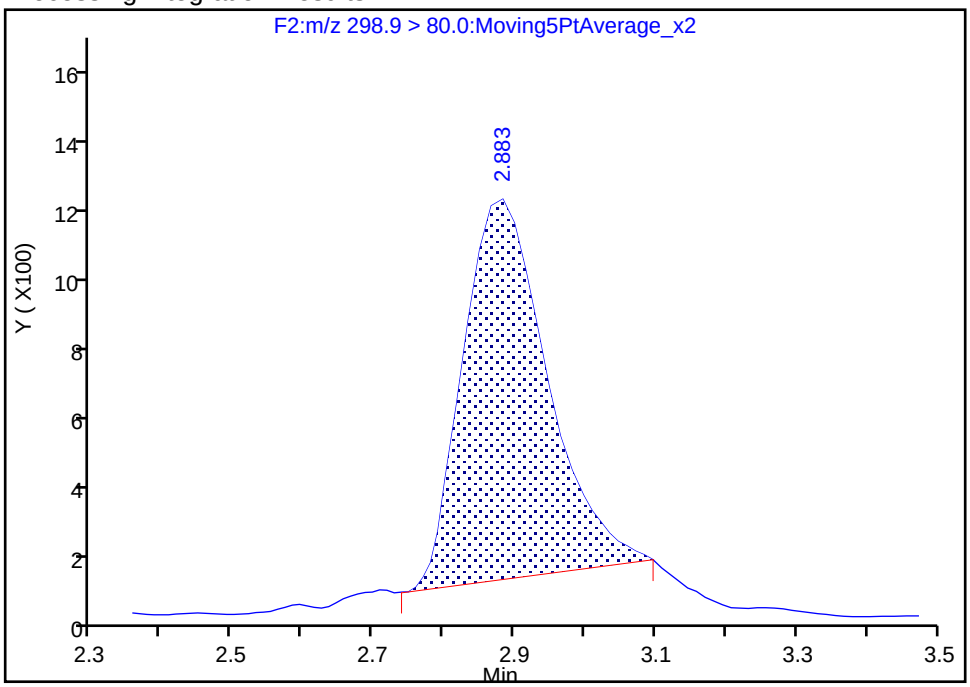
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

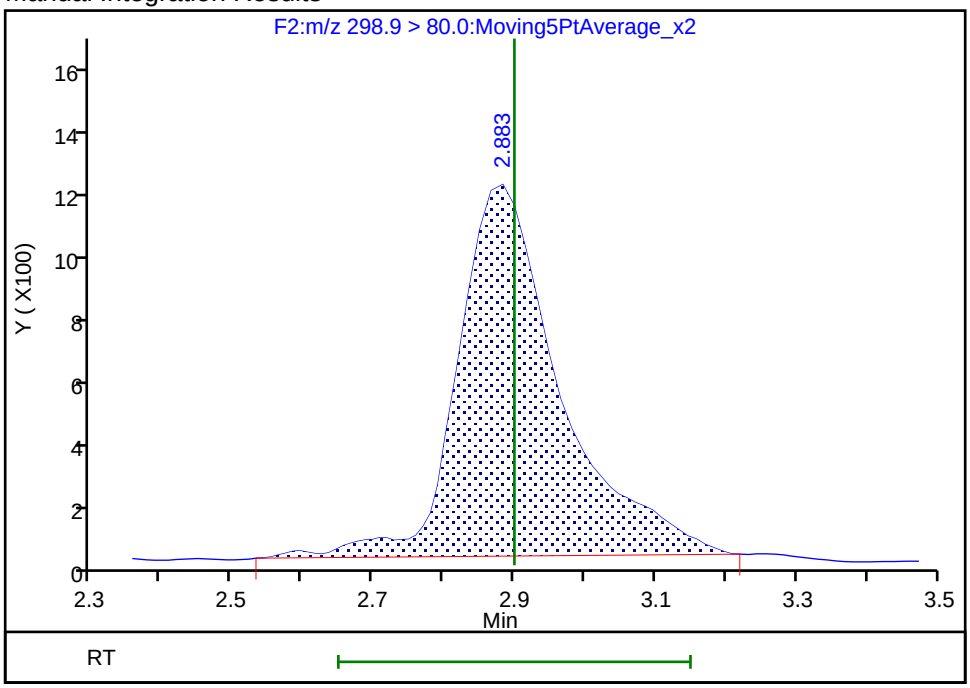
Processing Integration Results

RT: 2.88
Area: 8519
Amount: 3.155922
Amount Units: ng/ml



Manual Integration Results

RT: 2.88
Area: 11183
Amount: 4.142820
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:05:58
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

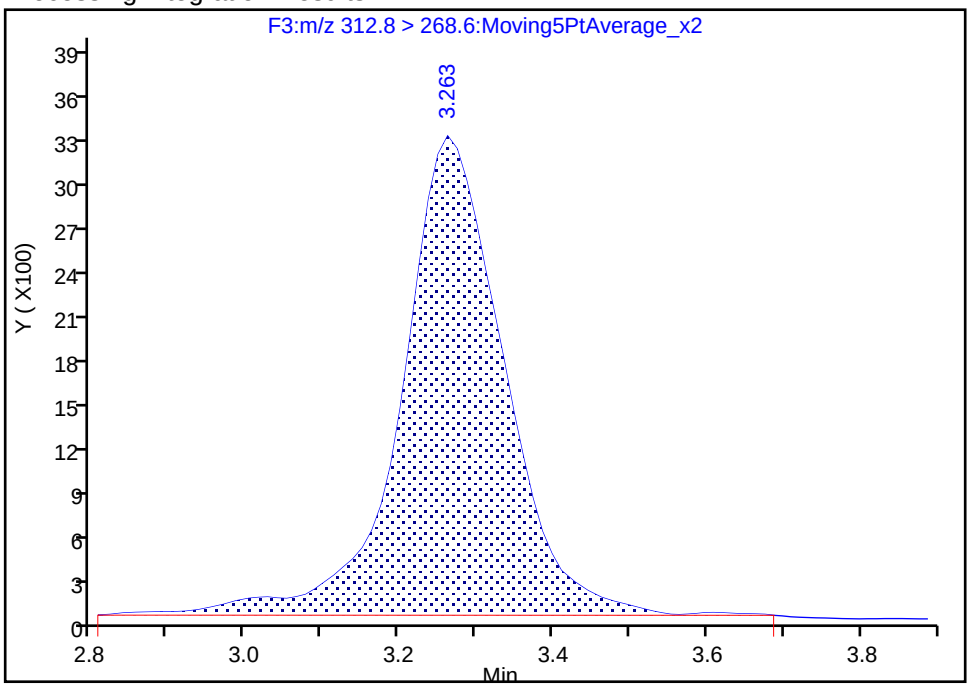
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F3:MRM

7 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

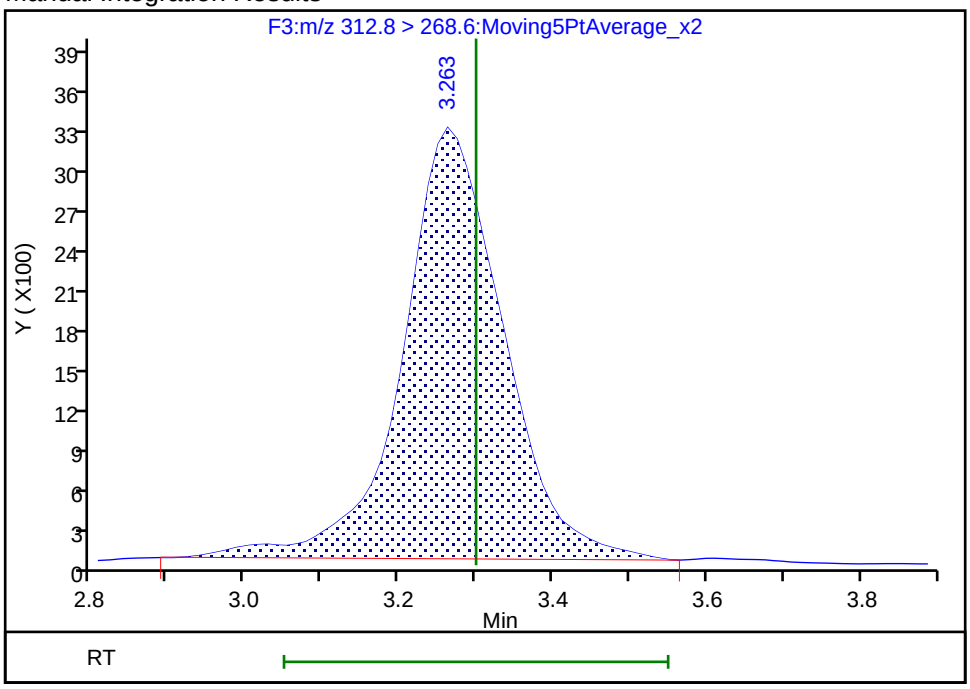
Processing Integration Results

RT: 3.26
Area: 29969
Amount: 4.300763
Amount Units: ng/ml



Manual Integration Results

RT: 3.26
Area: 29242
Amount: 4.204390
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:05:55
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

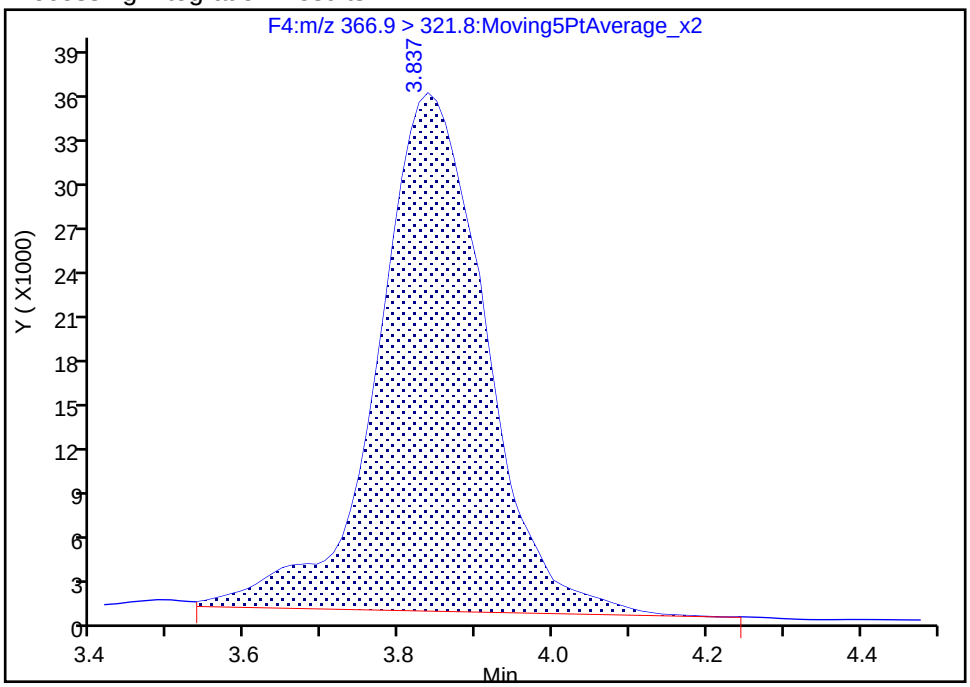
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 10 13C4-PFHpA, CAS: STL01892

Signal: 1

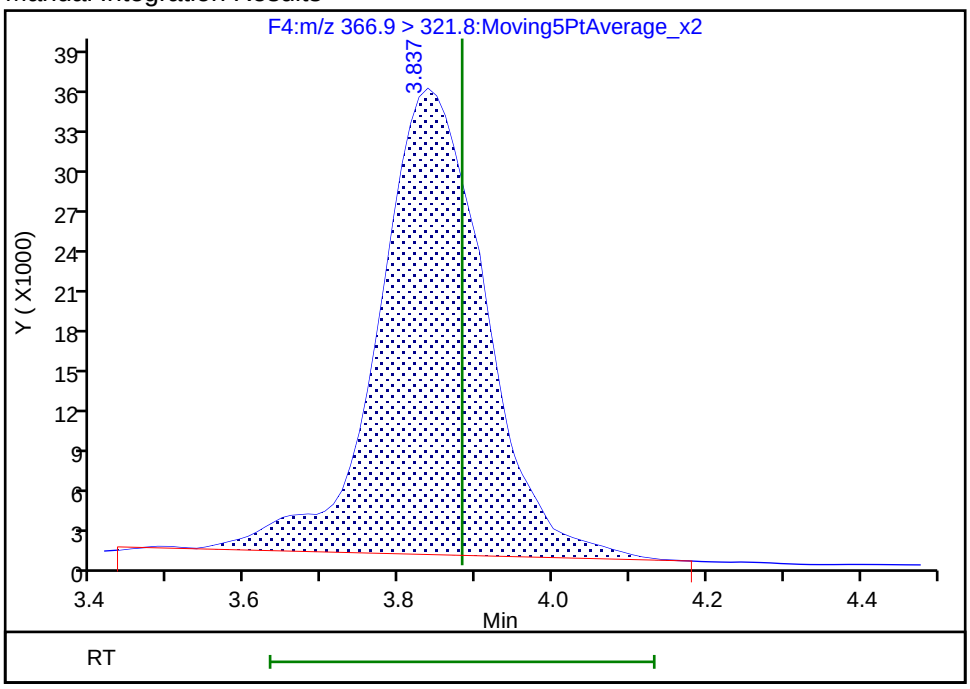
Processing Integration Results

RT: 3.84
Area: 349726
Amount: 45.892066
Amount Units: ng/ml



Manual Integration Results

RT: 3.84
Area: 343593
Amount: 45.087276
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:05:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

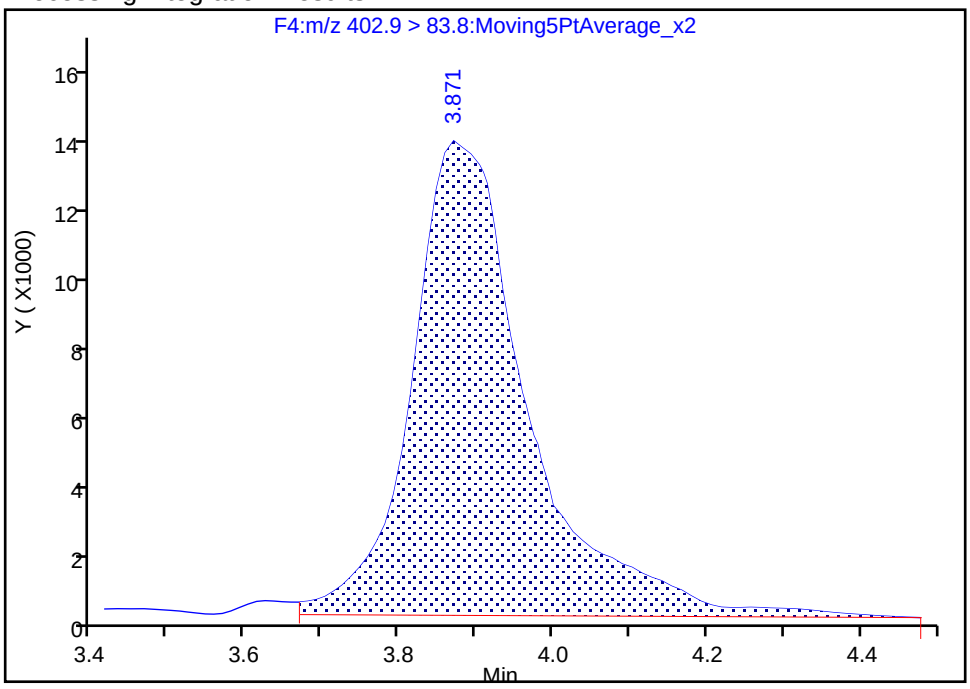
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 12 18O2 PFHxS, CAS: STL00994

Signal: 1

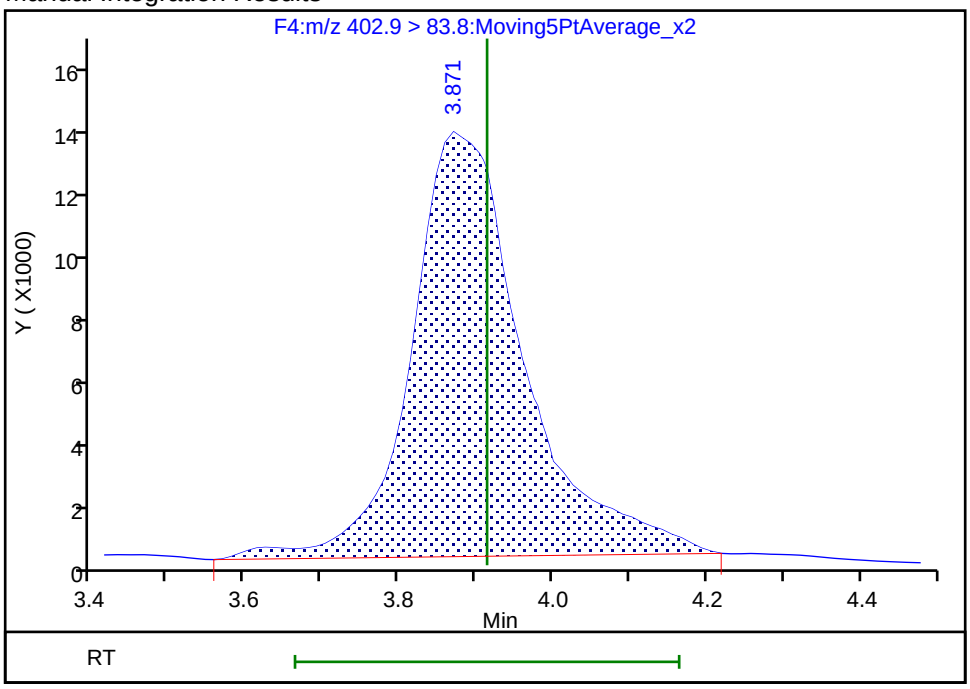
Processing Integration Results

RT: 3.87
Area: 144157
Amount: 40.113253
Amount Units: ng/ml



Manual Integration Results

RT: 3.87
Area: 138169
Amount: 38.447027
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:05:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

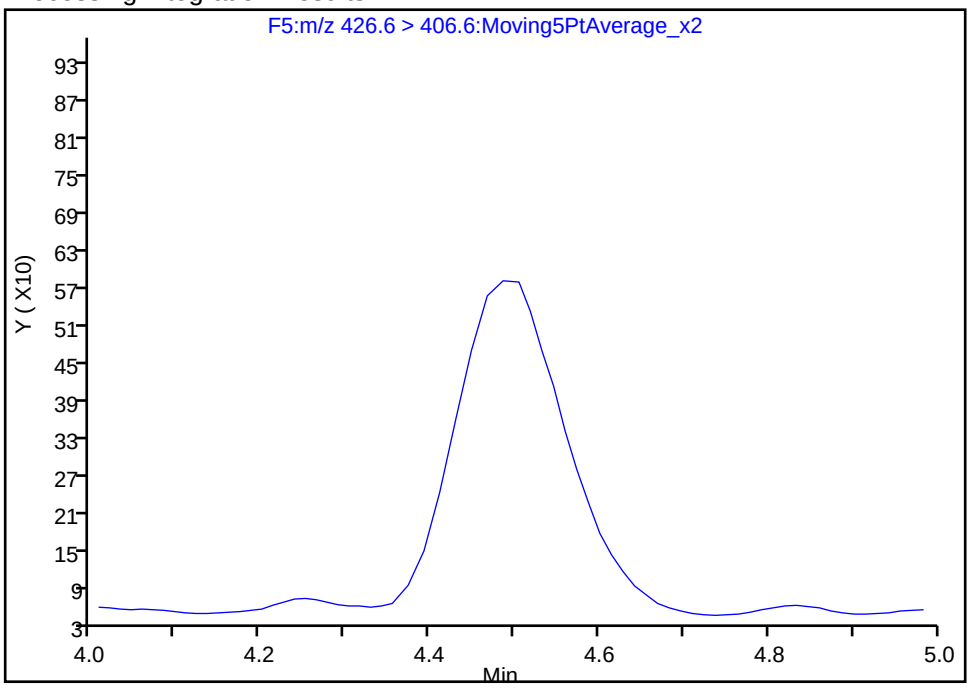
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

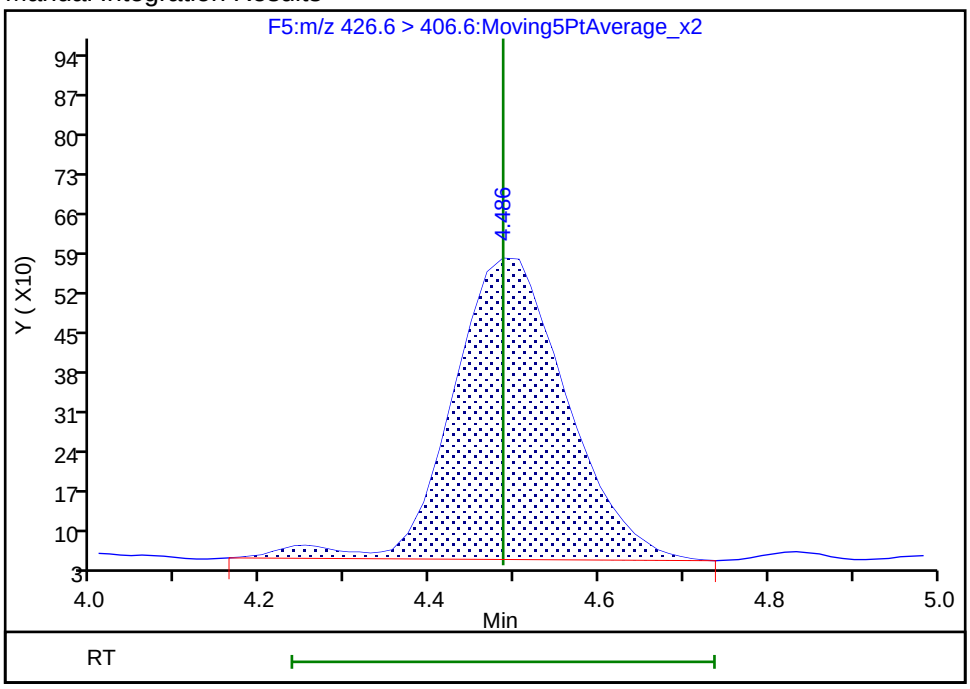
Processing Integration Results

Not Detected
Expected RT: 4.49



Manual Integration Results

RT: 4.49
Area: 4991
Amount: 4.032299
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:25:28
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

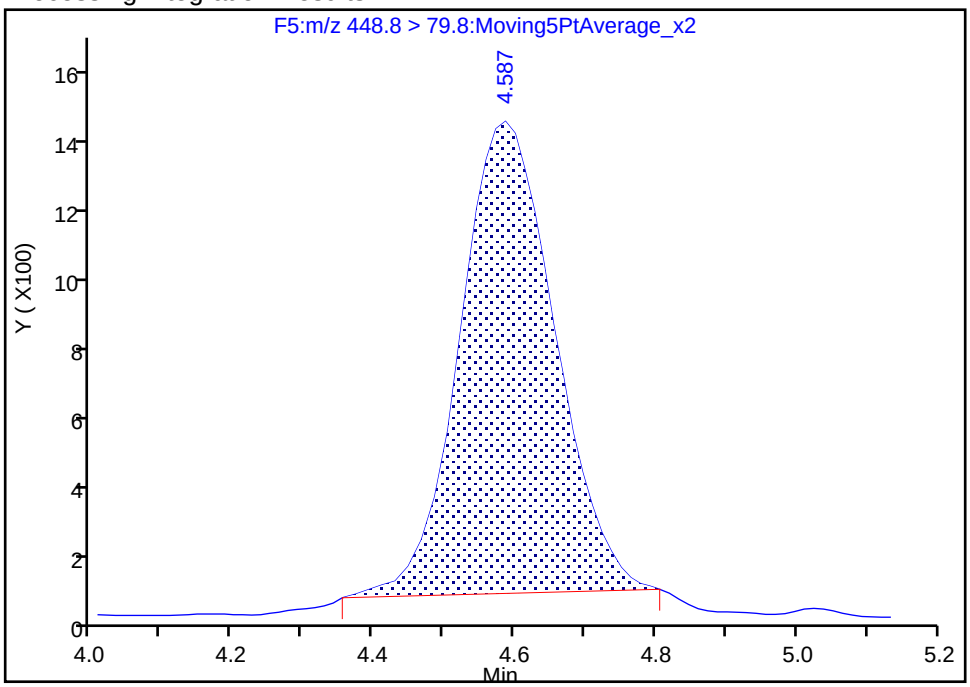
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

18 Perfluoroheptanesulfonic acid, CAS: 375-92-8

Signal: 1

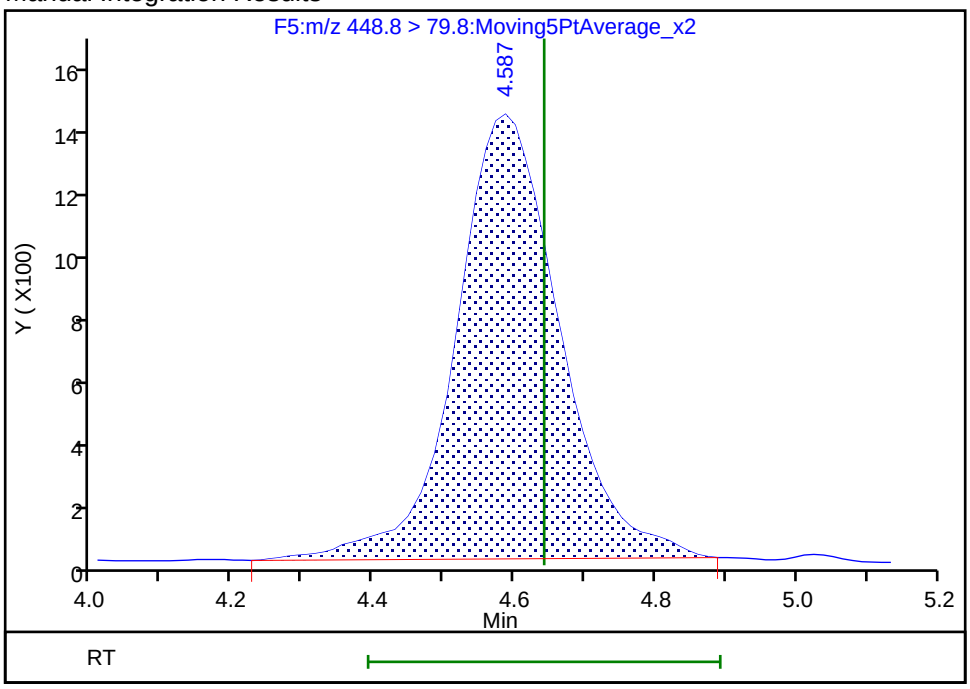
Processing Integration Results

RT: 4.59
Area: 12523
Amount: 3.618065
Amount Units: ng/ml



Manual Integration Results

RT: 4.59
Area: 14293
Amount: 4.102831
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:05:25
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

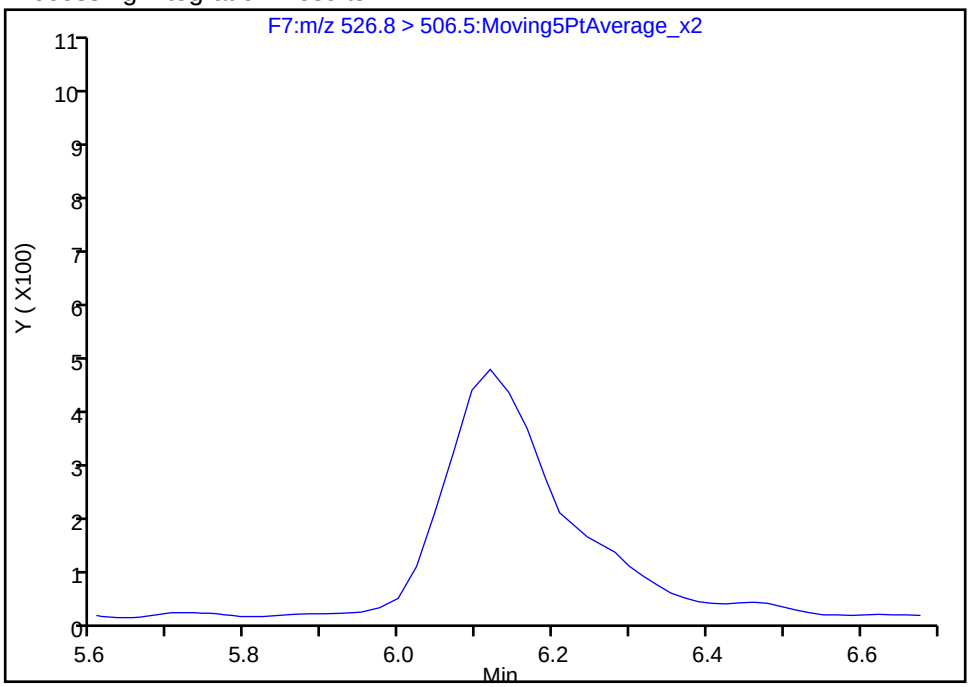
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

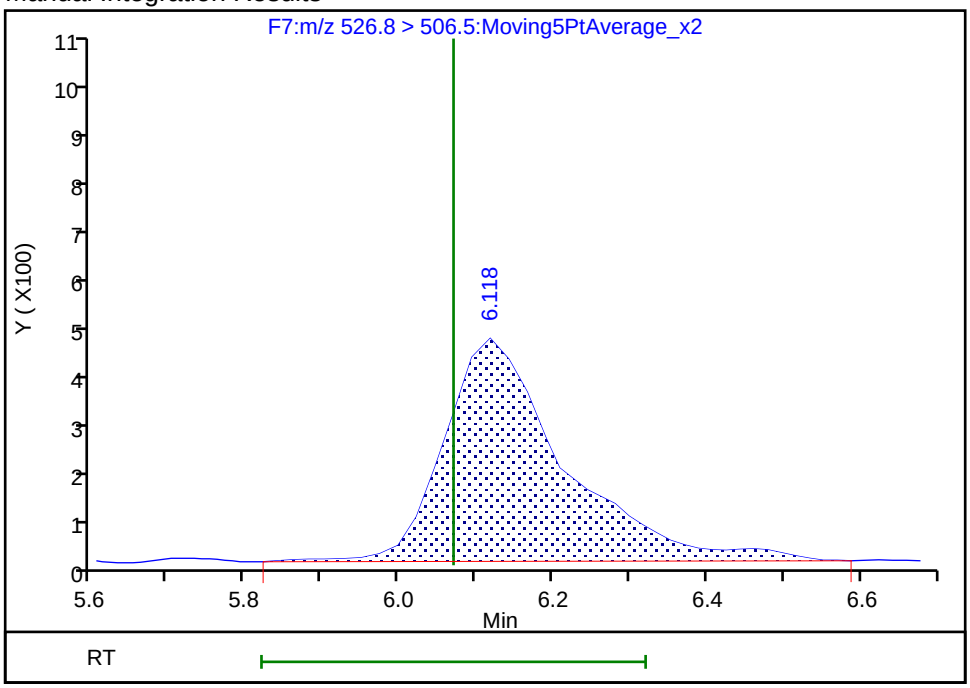
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.12
Area: 4887
Amount: 3.766973
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:25:30
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

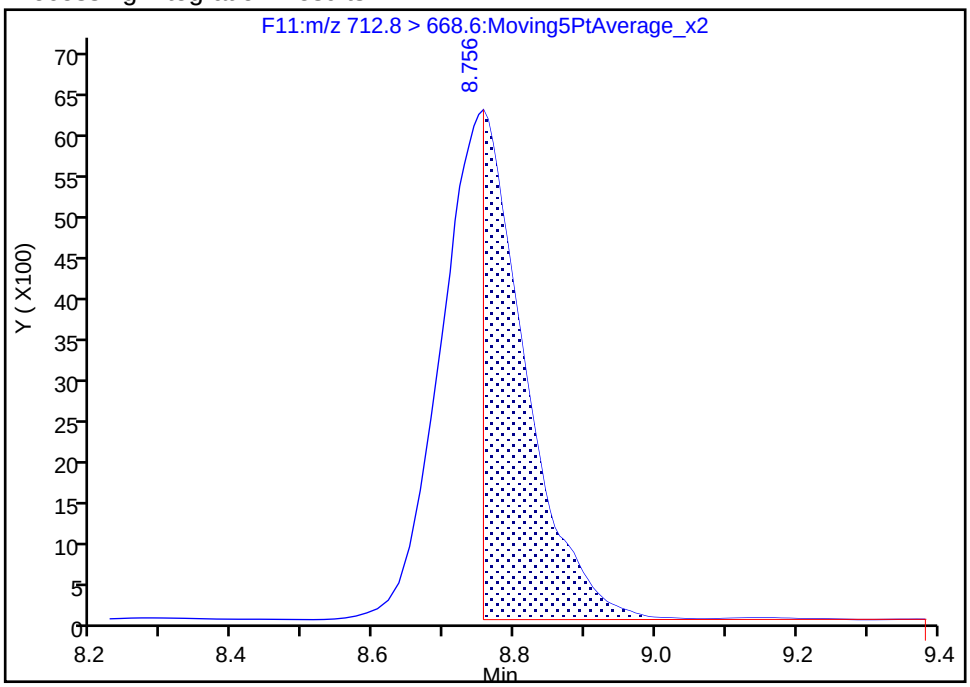
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A53.d
Injection Date: 12-Jun-2018 22:15:22 Instrument ID: LC410
Lims ID: CCV L3
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 53
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

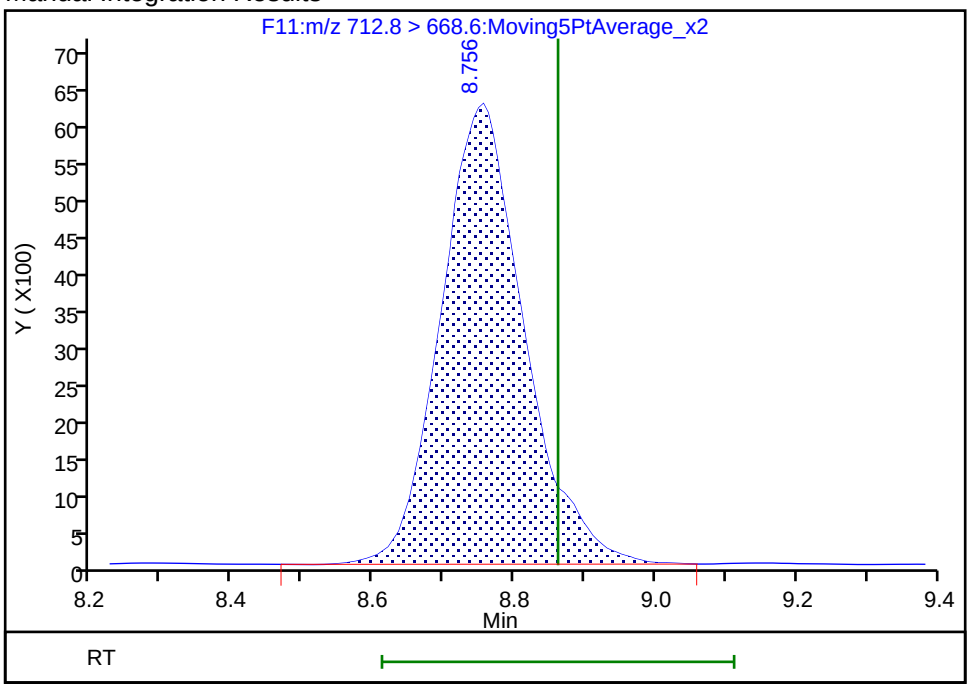
Processing Integration Results

RT: 8.76
Area: 25708
Amount: 1.951077
Amount Units: ng/ml



Manual Integration Results

RT: 8.76
Area: 50899
Amount: 4.034988
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 10:04:56
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 200-130388/1-A

Matrix: Water | Lab File ID: PF061218A31.d

Analysis Method: 537 (modified) | Date Collected:

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 250(mL) | Date Analyzed: 06/12/2018 16:20

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	2.00	U	2.00	0.44
2706-90-3	Perfluoropentanoic acid (PFPeA)	1.195	J	2.00	0.44
307-24-4	Perfluorohexanoic acid (PFHxA)	0.849	J	2.00	0.44
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.29
335-67-1	Perfluorooctanoic acid (PFOA)	0.735	J	2.00	0.47
375-95-1	Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.26
335-76-2	Perfluorodecanoic acid (PFDA)	2.00	U	2.00	0.44
2058-94-8	Perfluoroundecanoic acid (PFUnA)	2.00	U	2.00	0.44
307-55-1	Perfluorododecanoic acid (PFDoA)	2.00	U	2.00	0.44
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	2.00	U	2.00	0.44
376-06-7	Perfluorotetradecanoic acid (PFTeA)	2.00	U	2.00	0.44
375-73-5	Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.88
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.161	J	2.00	0.28
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	2.00	U	2.00	0.44
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	0.30
335-77-3	Perfluorodecanesulfonic acid (PFDS)	2.00	U	2.00	0.44
754-91-6	Perfluorooctane Sulfonamide (FOSA)	2.00	U	2.00	0.44
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	2.00	U	2.00	0.60
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	2.00	U	2.00	0.60
27619-97-2	6:2 FTS	2.00	U	2.00	0.60
39108-34-4	8:2 FTS	0.804	J	2.00	0.60

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 200-130388/1-A

Matrix: Water | Lab File ID: PF061218A31.d

Analysis Method: 537 (modified) | Date Collected:

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 250(mL) | Date Analyzed: 06/12/2018 16:20

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	63		25-150
STL01893	13C5 PFPeA	67		25-150
STL00993	13C2 PFHxA	71		25-150
STL01892	13C4-PFHpA	71		25-150
STL00990	13C4 PFOA	94		25-150
STL00995	13C5 PFNA	91		25-150
STL00996	13C2 PFDA	81		25-150
STL00997	13C2 PFUnA	90		25-150
STL00998	13C2 PFDoA	67		25-150
STL02116	13C2-PFTeDA	61		25-150
STL02337	13C3-PFBS	63		25-150
STL00994	18O2 PFHxS	68		25-150
STL00991	13C4 PFOS	90		25-150
STL01056	13C8 FOSA	41		25-150
STL02118	d3-NMeFOSAA	67		25-150
STL02117	d5-NEtFOSAA	75		25-150
STL02279	M2-6:2FTS	128		25-150
STL02280	M2-8:2FTS	111		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Lims ID: MB 200-130388/1-A
Client ID:
Sample Type: MB
Inject. Date: 12-Jun-2018 16:20:37 ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-031 MB 388
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 16:45:09 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK013

First Level Reviewer: chirgwinb Date: 13-Jun-2018 10:08:09

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 1 13C4 PFBA										
216.9 > 171.5	2.382	2.392	-0.010	1.000	167406	31.7		63.4	344	
D 4 13C5-PFPeA										
267.7 > 222.6	2.801	2.818	-0.017	1.000	259088	33.4		66.8	512	
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.851	2.834	0.017	1.018	2704	0.5976			7.5	M
D 5 13C3-PFBS										M
302.0 > 79.8	2.883	2.900	-0.017	1.000	149734	29.2		62.8	111	M
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.998	2.900	0.098	1.040	280	0.1032			3.0	M
7 Perfluorohexanoic acid										M
312.8 > 268.6	3.287	3.300	-0.013	1.008	699	0.4247			5.1	M
D 8 13C2 PFHxA										
314.8 > 269.6	3.263	3.300	-0.037	1.000	319856	35.3		70.6	1348	
D 10 13C4-PFHpA										M
366.9 > 321.8	3.826	3.882	-0.056	1.000	367588	35.4		70.7	276	M
D 12 18O2 PFHxS										M
402.9 > 83.8	3.859	3.914	-0.055	1.000	157759	32.2		68.0	235	M
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.859	3.919	-0.060	1.000	521	0.5805			5.5	M
D 13 M2-6:2FTS										
428.6 > 408.6	4.468	4.546	-0.078	1.000	83832	60.9		128	532	
14 1H,1H,2H,2H-perfluorooctanesulfoni										
426.6 > 406.6	4.486	4.486	0.0	1.004	764	0.2227			11.4	
D 16 13C4 PFOA										
416.9 > 371.8	4.532	4.601	-0.069	1.000	372064	46.8		93.5	415	
* 17 13C2-PFOA										
414.9 > 369.8	4.532	4.601	-0.069		417924	50.0			831	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
15 Perfluorooctanoic acid										M
412.9 > 368.8	4.560	4.615	-0.055	1.006	1700	0.3675			16.3	M
D 19 13C5 PFNA										
467.8 > 422.8	5.316	5.422	-0.106	1.000	477519	45.6		91.2	721	
D 21 13C4 PFOS										
502.8 > 79.8	5.340	5.440	-0.100	1.000	228347	43.0		90.0	1693	
23 1H,1H,2H,2H-perfluorodecanesulfoni										
526.8 > 506.5	6.070	6.070	0.0	0.996	149	0.4022			1.6	
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	151740	53.3		111	2151	
25 Perfluorodecanoic acid										M
512.9 > 468.5	6.166	6.227	-0.061	1.008	280	0.1875			3.1	M
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	615990	40.4		80.7	5241	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	107523	33.4		66.9	732	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.847	6.959	-0.112	1.000	102514	37.3		74.5	944	
31 Perfluorodecane Sulfonic acid										M
598.8 > 79.8	6.874	6.973	-0.099	1.287	360	0.1233			3.9	M
32 Perfluoroundecanoic acid										M
562.8 > 518.6	6.903	6.987	-0.084	1.004	1991	0.2033			19.9	M
D 33 13C2 PFUnA										
564.8 > 519.8	6.874	6.987	-0.113	1.000	626270	44.9		89.7	5007	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	242790	20.7		41.4	1552	
D 36 13C2 PFDoA										
614.8 > 569.6	7.564	7.684	-0.120	1.000	562949	33.4		66.8	5086	
37 Perfluorododecanoic acid										M
612.8 > 568.6	7.564	7.684	-0.120	1.000	269	0.0874			3.1	M
38 Perfluorotridecanoic acid										M
662.8 > 618.6	8.188	8.294	-0.106	1.083	880	0.1143			15.4	M
D 39 13C2-PFTeDA										
714.8 > 669.6	8.727	8.855	-0.128	1.000	517439	30.3		60.5	945	
40 Perfluorotetradecanoic acid										M
712.8 > 668.6	8.747	8.862	-0.115	1.002	1048	-0.0630			21.8	M
712.8 > 168.8	8.767	8.862	-0.095	1.005	176		5.95(0.00-0.00)		3.5	M
712.8 > 218.8	8.877	8.862	0.015	0.000	0		0.00(0.00-0.00)			

QC Flag Legend

Review Flags

M - Manually Integrated

Report Date: 21-Jun-2018 16:45:10 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d

Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410

Lims ID: MB 200-130388/1-A

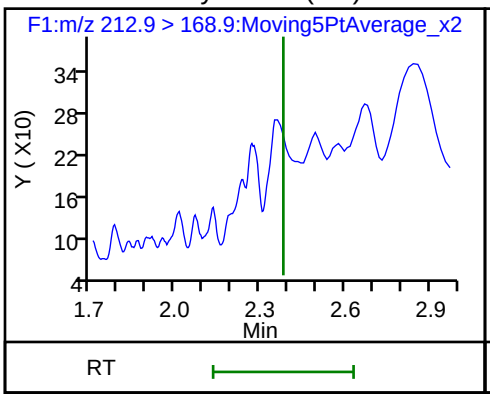
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31

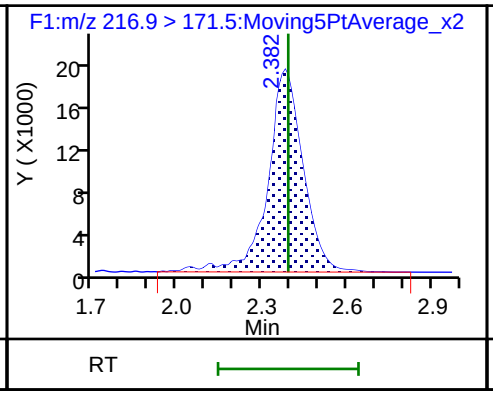
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

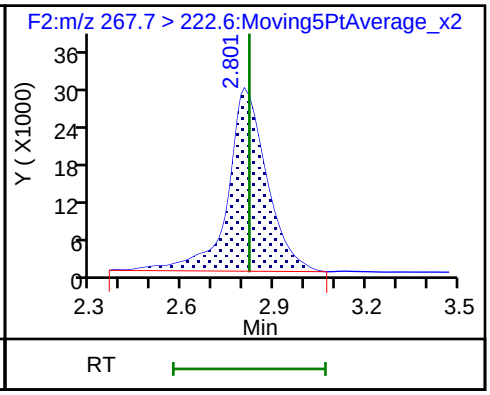
2 Perfluorobutyric acid (ND)



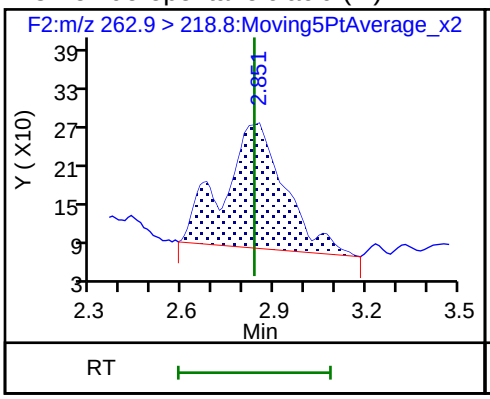
D 1 13C4 PFBA



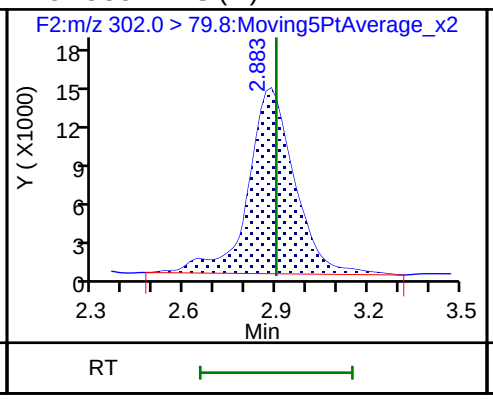
D 4 13C5-PFPeA



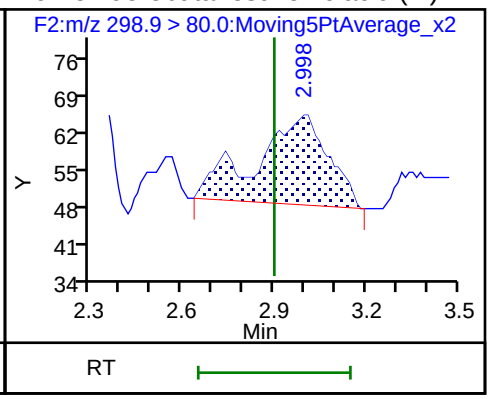
3 Perfluoropentanoic acid (M)



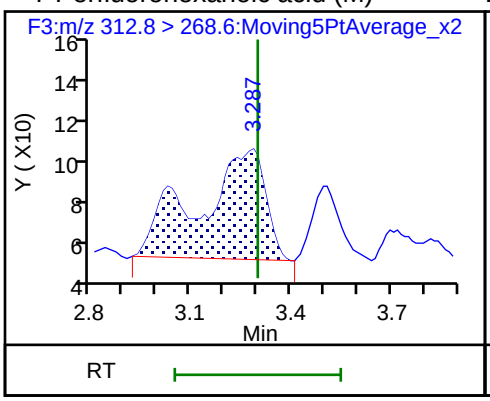
D 5 13C3-PFBS (M)



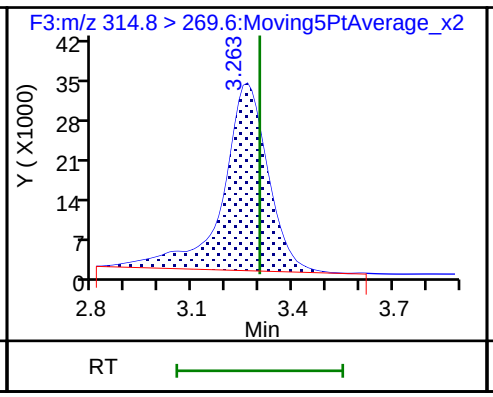
6 Perfluorobutanesulfonic acid (M)



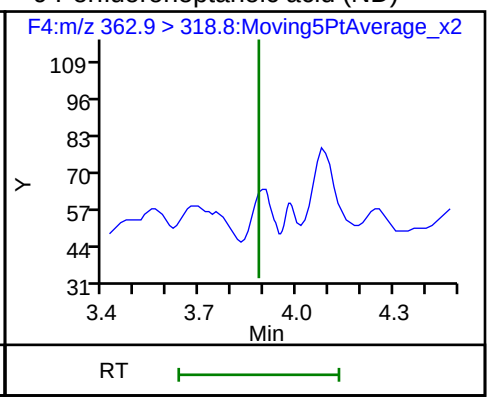
7 Perfluorohexanoic acid (M)



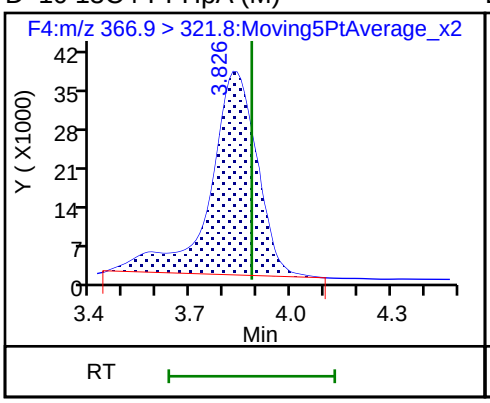
D 8 13C2 PFHxA



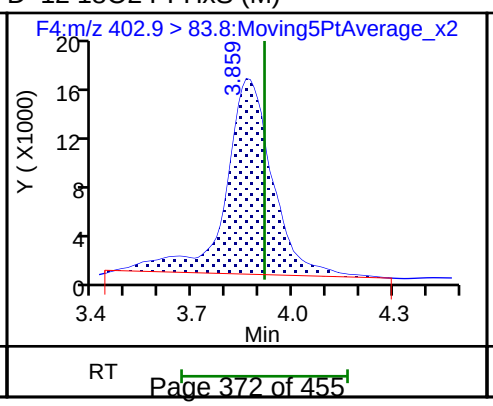
9 Perfluoroheptanoic acid (ND)



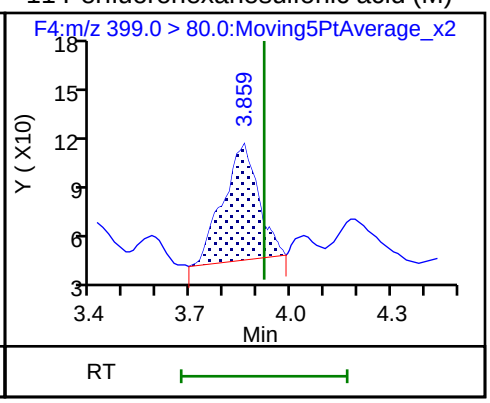
D 10 13C4-PFHpA (M)



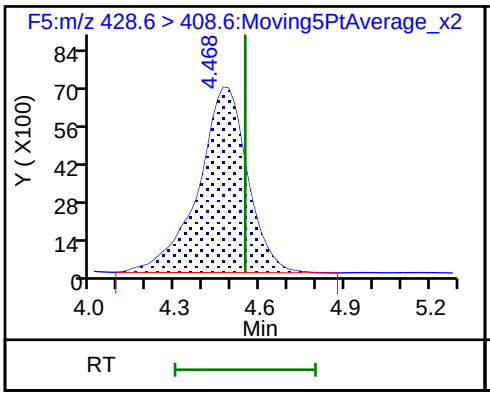
D 12 18O2 PFHxS (M)



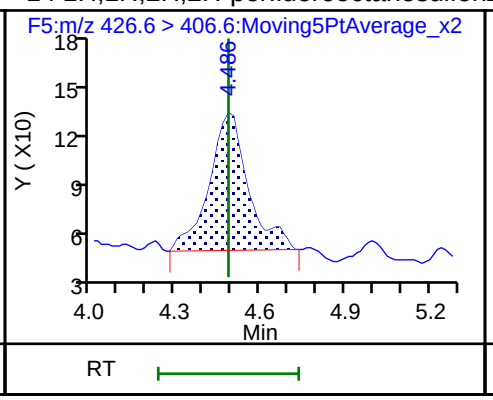
11 Perfluorohexanesulfonic acid (M)



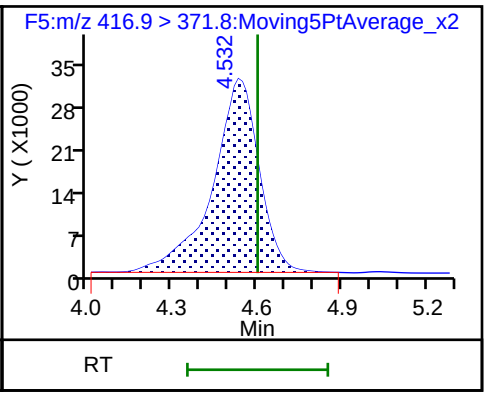
D 13 M2-6:2FTS



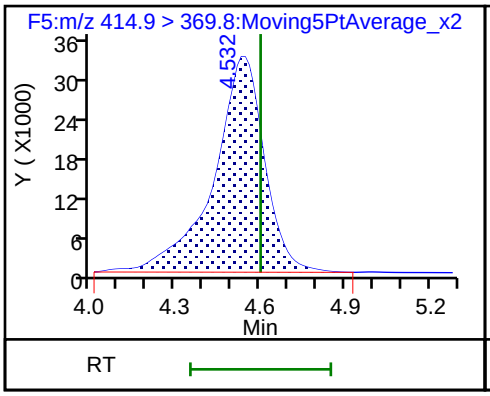
14 1H,1H,2H,2H-perfluorooctanesulfon



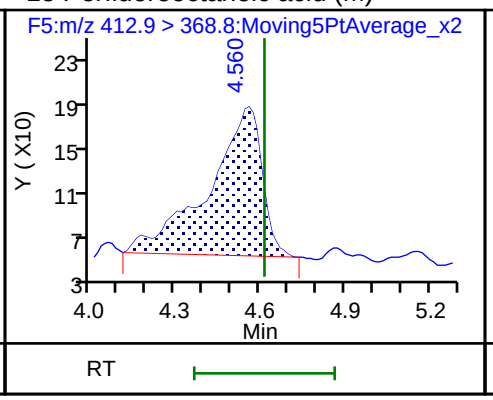
D 16 13C4 PFOA



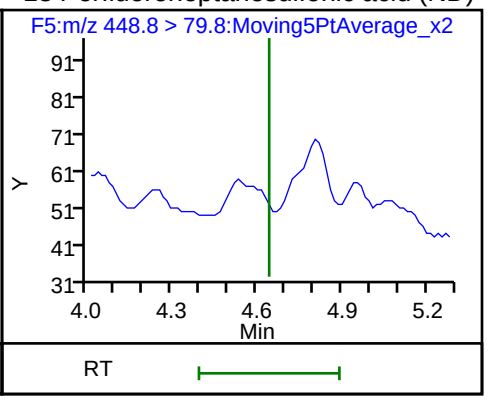
* 17 13C2-PFOA



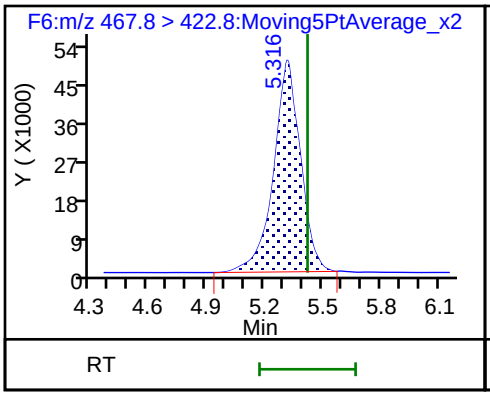
15 Perfluorooctanoic acid (M)



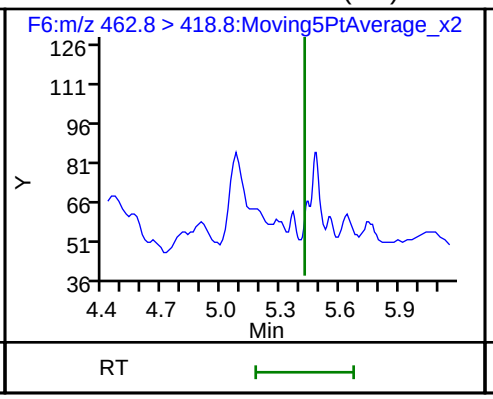
18 Perfluoroheptanesulfonic acid (ND)



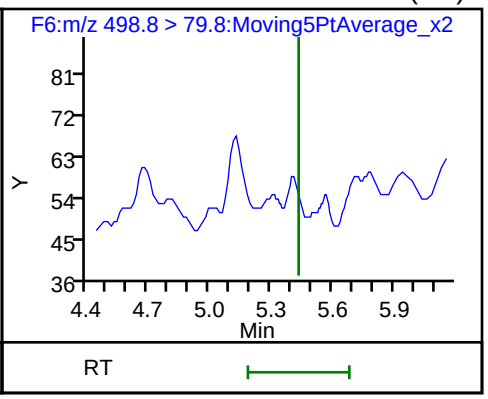
D 19 13C5 PFNA



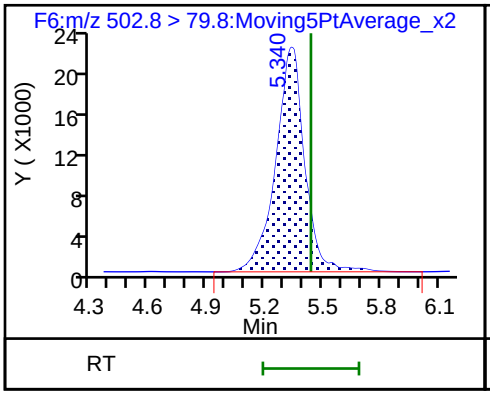
20 Perfluorononanoic acid (ND)



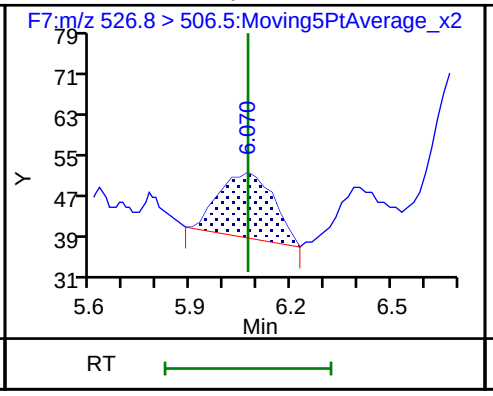
22 Perfluorooctane sulfonic acid (ND)



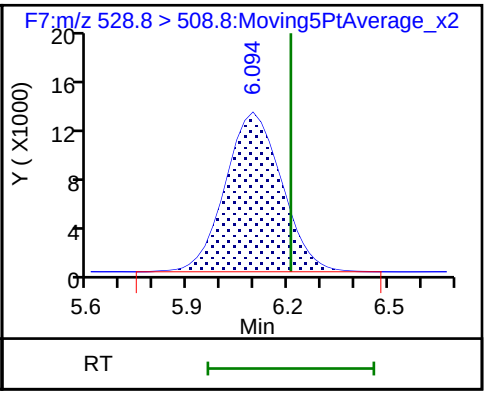
D 21 13C4 PFOS



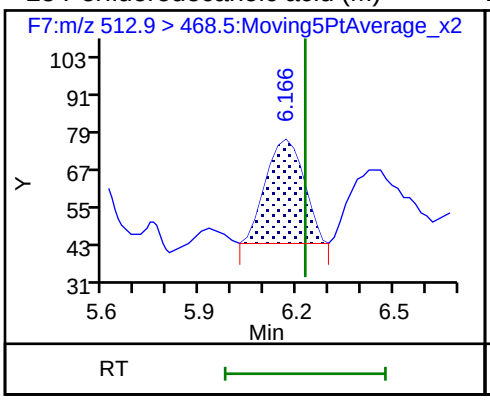
23 1H,1H,2H,2H-perfluorodecanesulfon



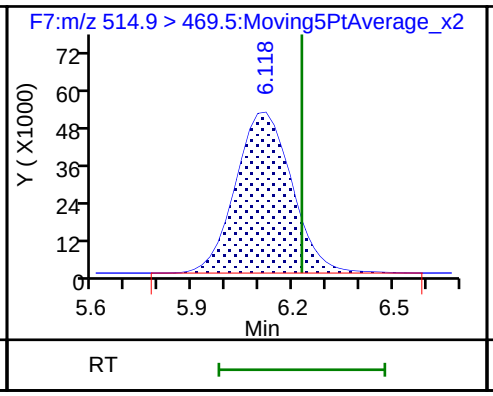
D 24 M2-8:2FTS



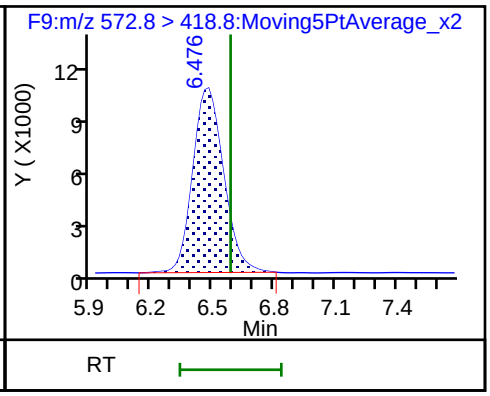
25 Perfluorodecanoic acid (M)



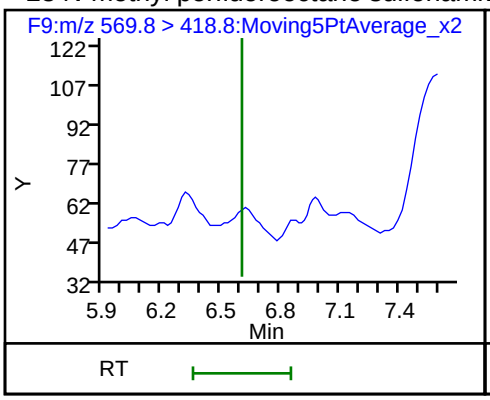
D 26 13C2 PFDA



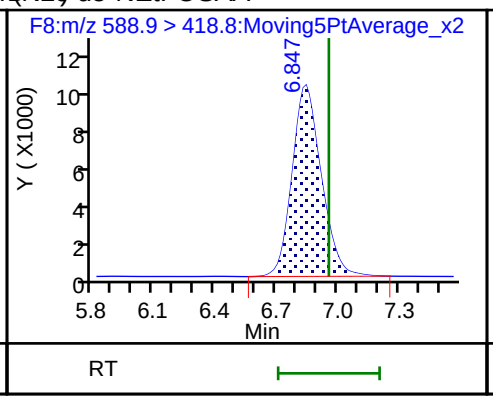
D 27 d3-NMeFOSAA



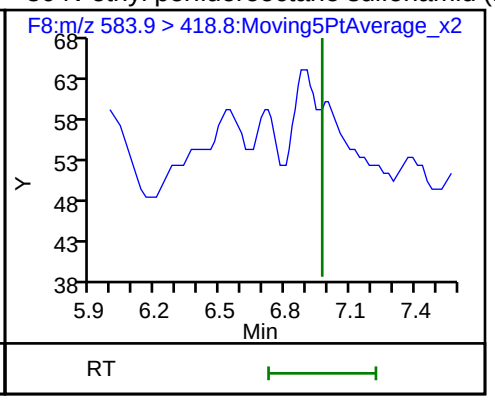
28 N-methyl perfluorooctane sulfonamid (ND)



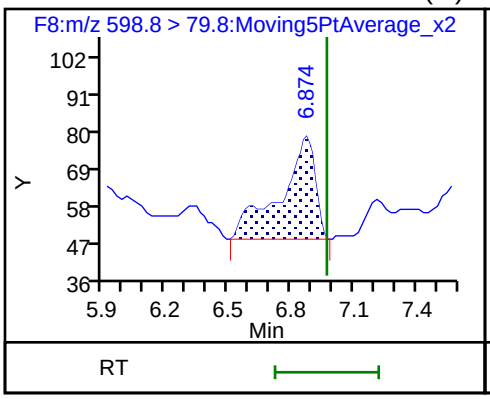
D 29 d5-NEtFOSAA



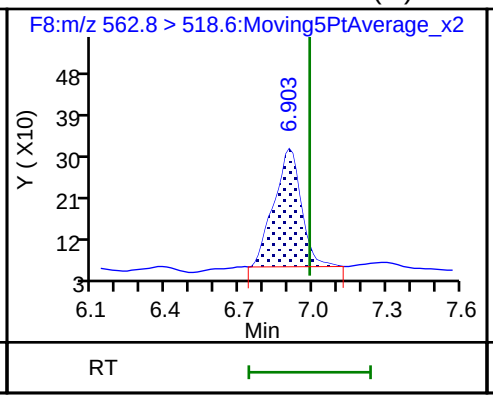
30 N-ethyl perfluorooctane sulfonamid (ND)



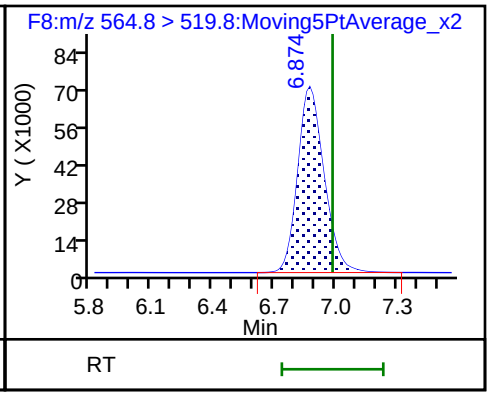
31 Perfluorodecane Sulfonic acid (M)



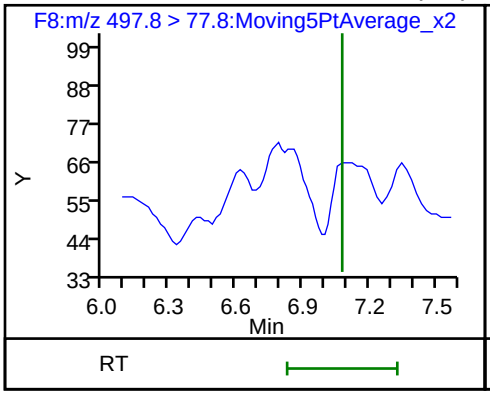
32 Perfluoroundecanoic acid (M)



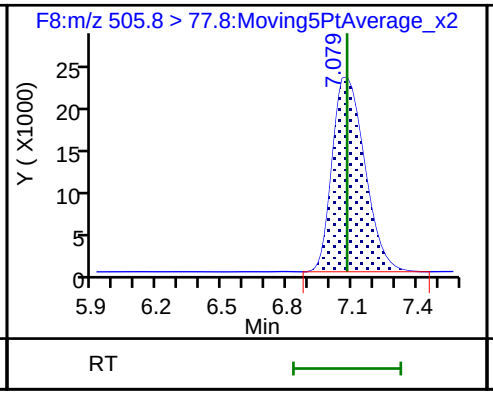
D 33 13C2 PFUnA



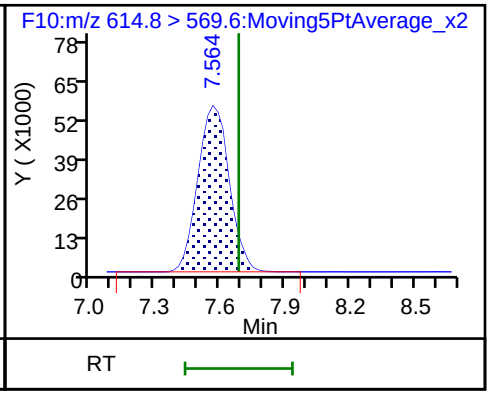
34 Perfluorooctane Sulfonamide (ND)



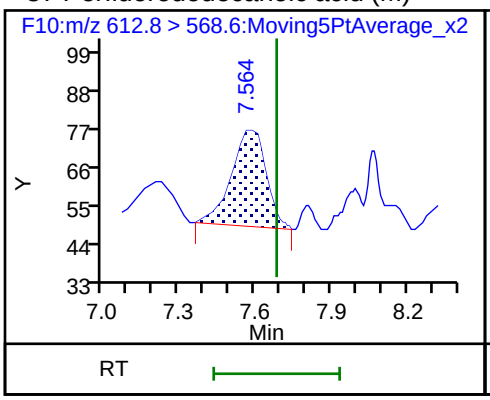
D 35 13C8 FOSA



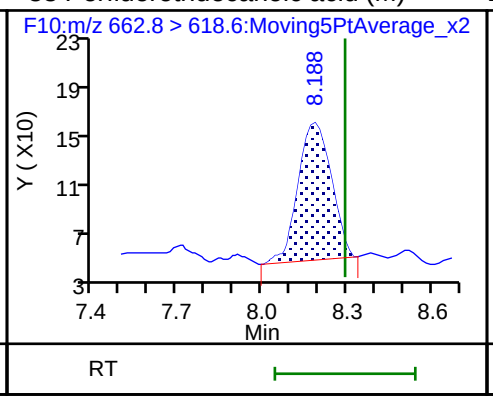
D 36 13C2 PFDoA



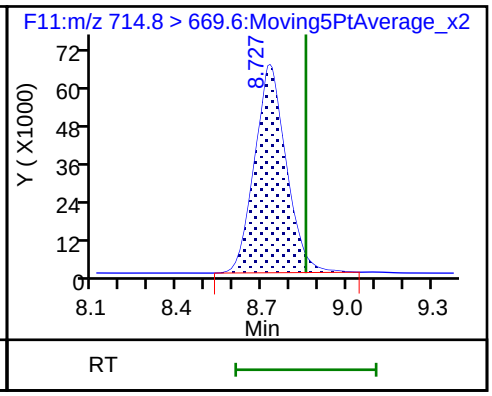
37 Perfluorododecanoic acid (M)



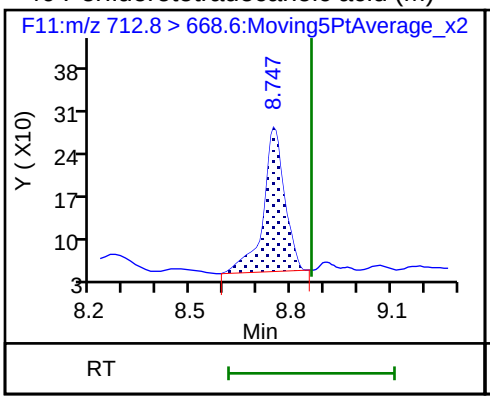
38 Perfluorotridecanoic acid (M)



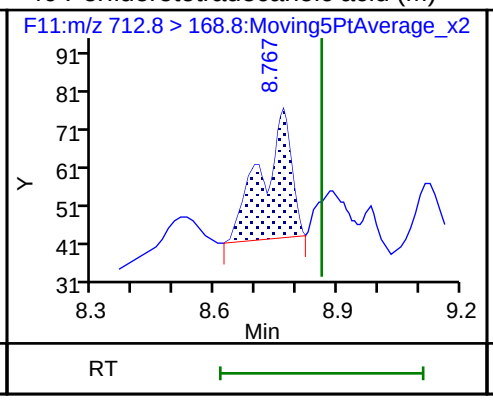
D 39 13C2-PFTeDA



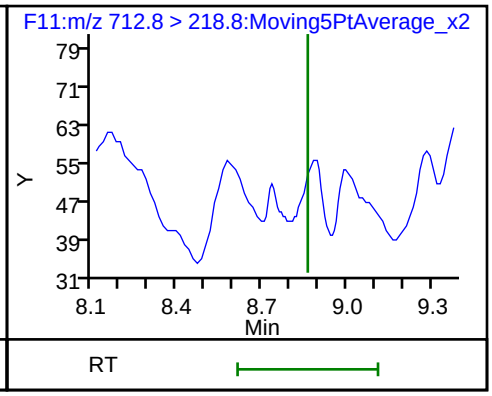
40 Perfluorotetradecanoic acid (M)



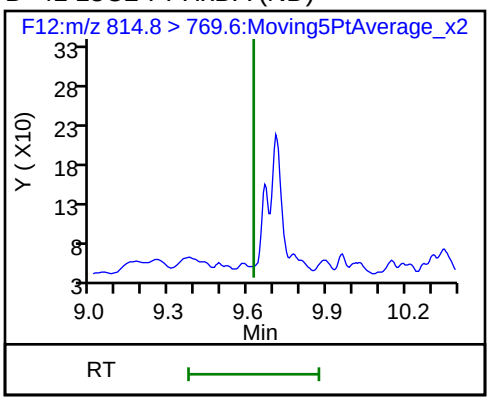
40 Perfluorotetradecanoic acid (M)



40 Perfluorotetradecanoic acid



D 41 13C2-PFHxDA (ND)



Manual Integration/User Assign Peak Report

TestAmerica Burlington

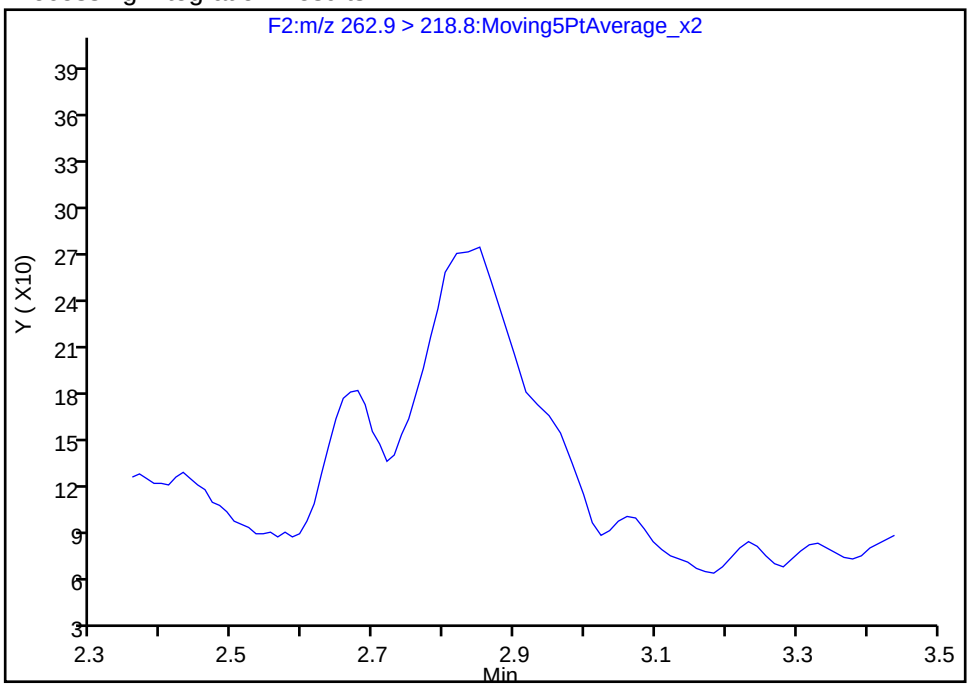
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

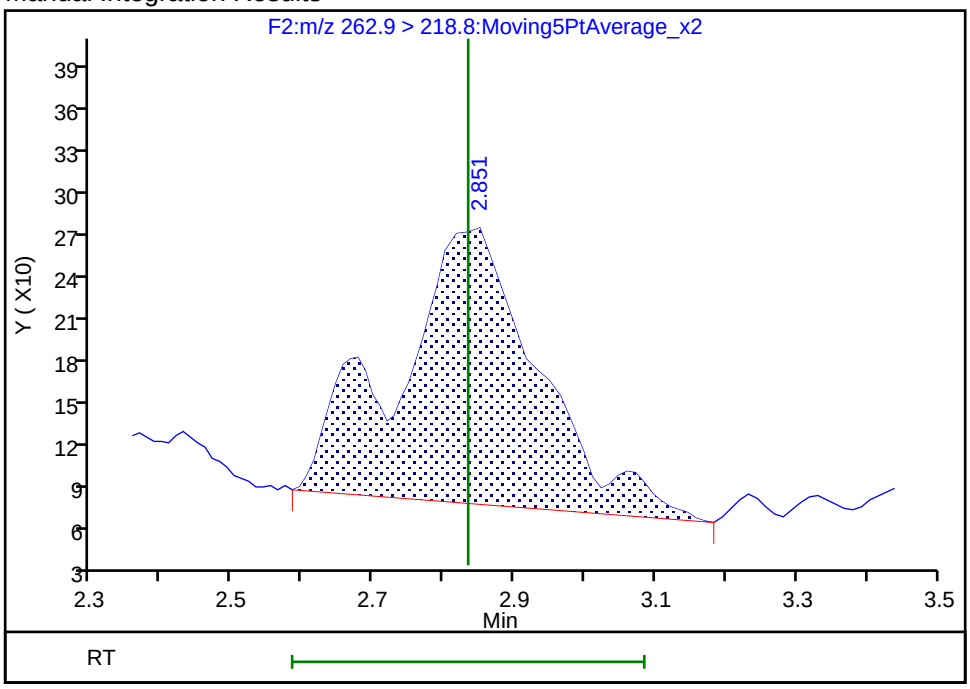
Not Detected
Expected RT: 2.83

Processing Integration Results



Manual Integration Results

RT: 2.85
Area: 2704
Amount: 0.597630
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:11:47
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

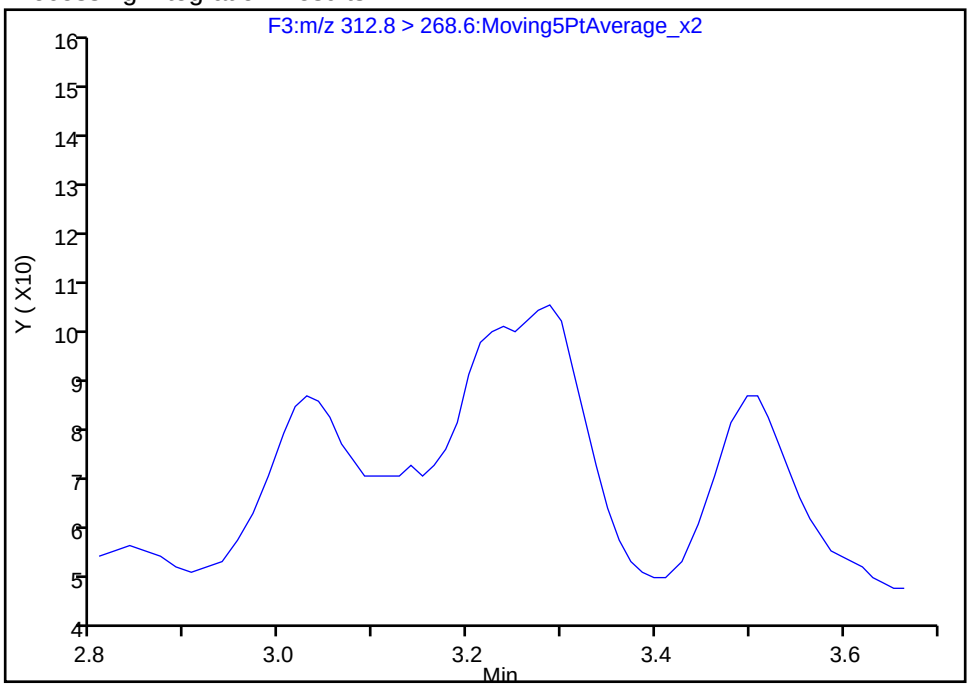
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F3:MRM

7 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

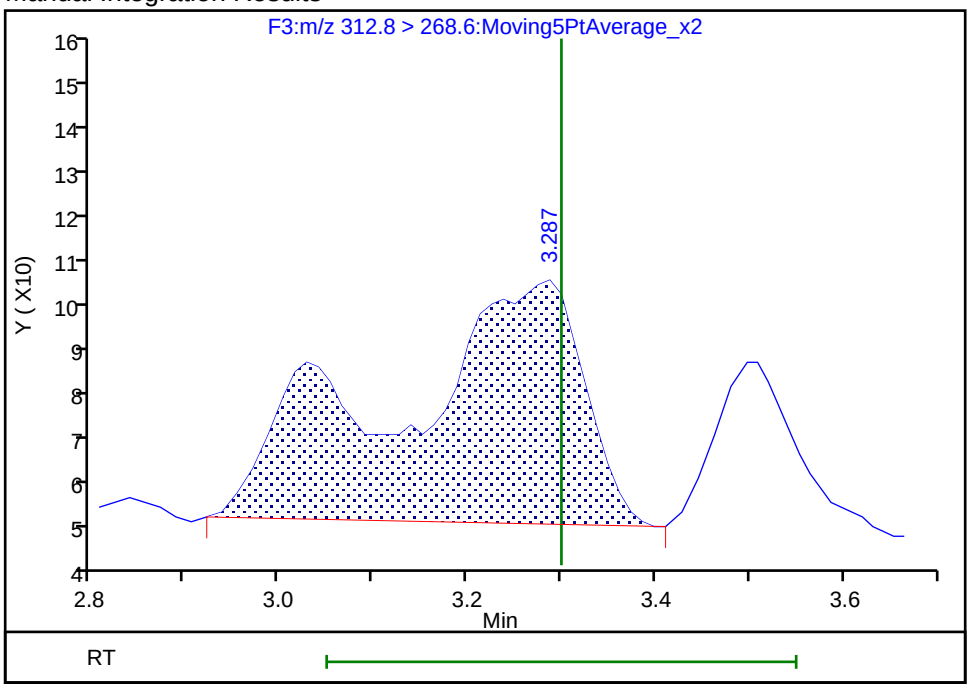
Not Detected
Expected RT: 3.30

Processing Integration Results



Manual Integration Results

RT: 3.29
Area: 699
Amount: 0.424668
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 17:37:13
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

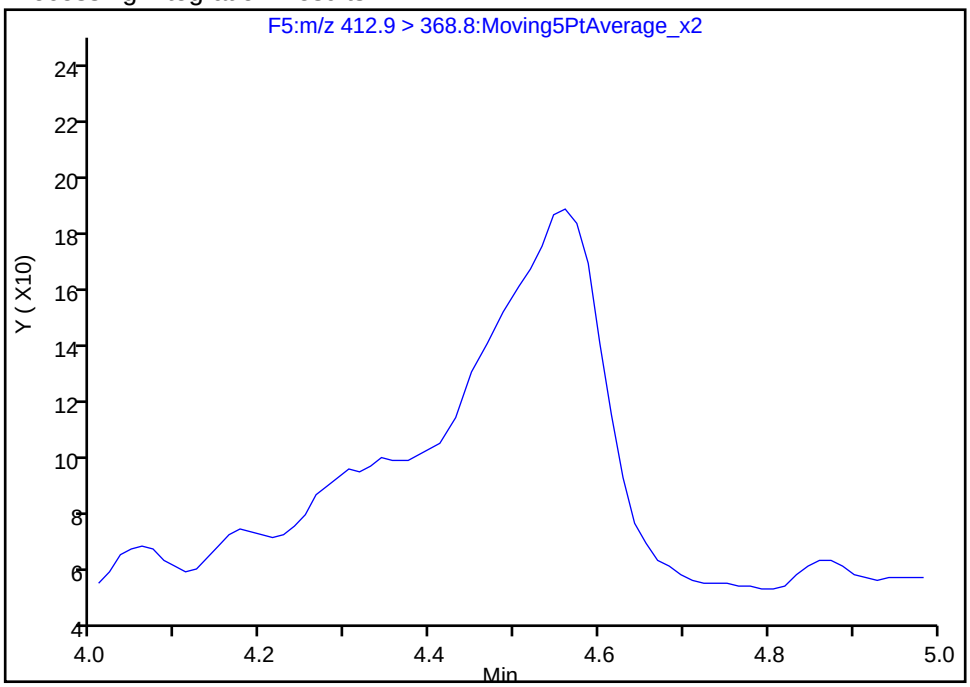
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

15 Perfluorooctanoic acid, CAS: 335-67-1

Signal: 1

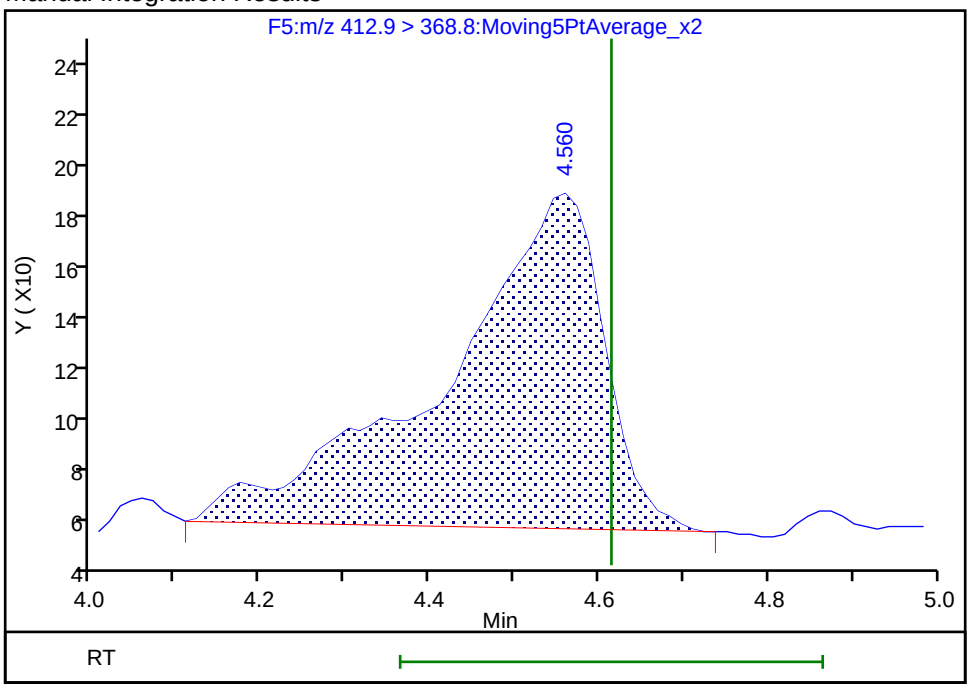
Not Detected
Expected RT: 4.61

Processing Integration Results



Manual Integration Results

RT: 4.56
Area: 1700
Amount: 0.367496
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:11:22
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

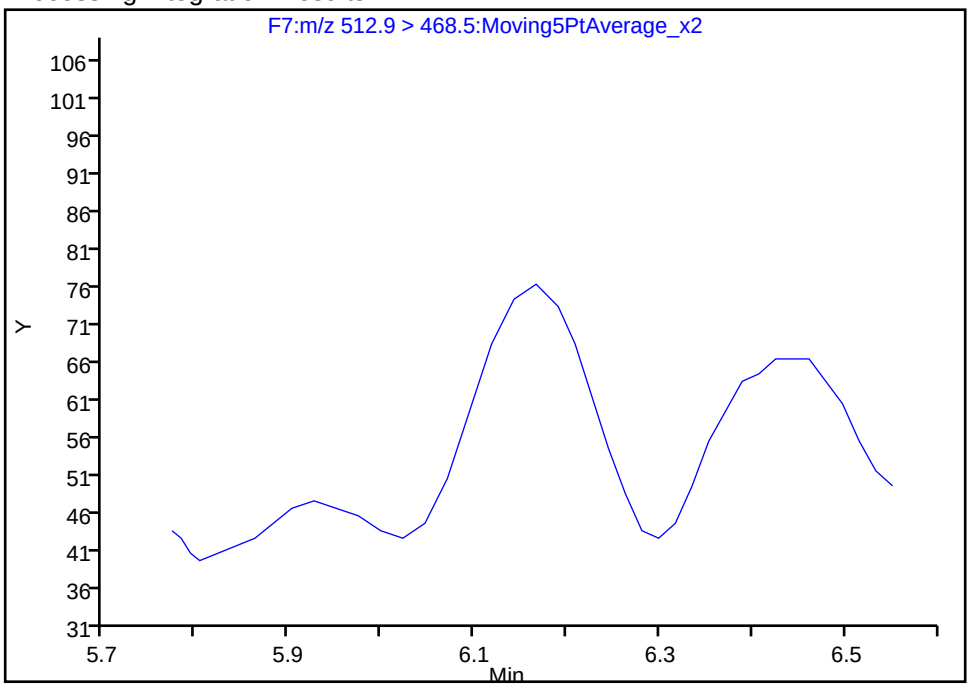
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

25 Perfluorodecanoic acid, CAS: 335-76-2

Signal: 1

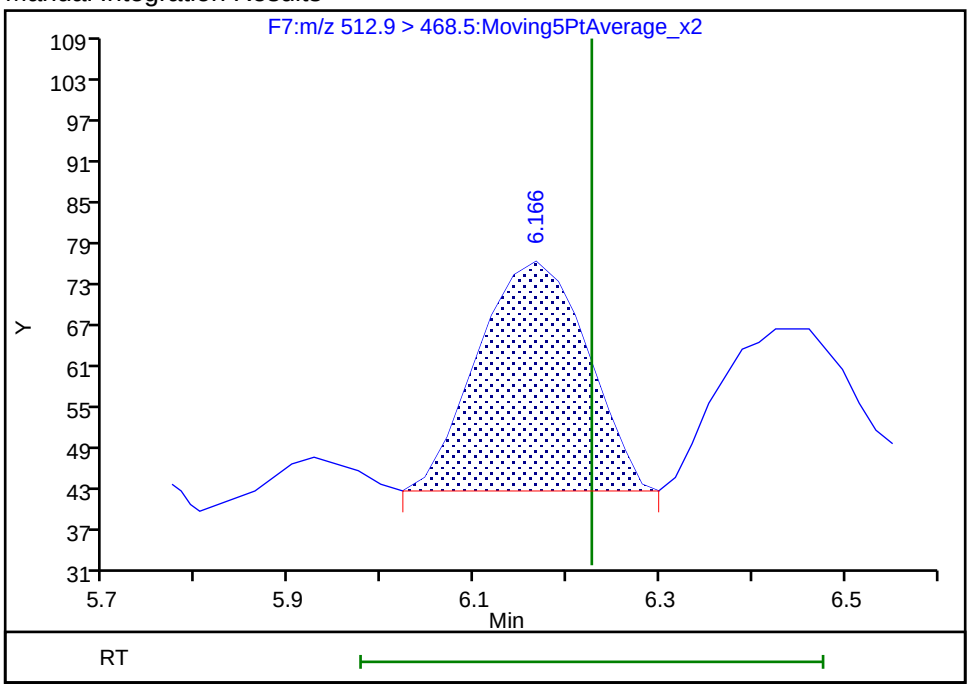
Not Detected
Expected RT: 6.23

Processing Integration Results



Manual Integration Results

RT: 6.17
Area: 280
Amount: 0.187498
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:20:18
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

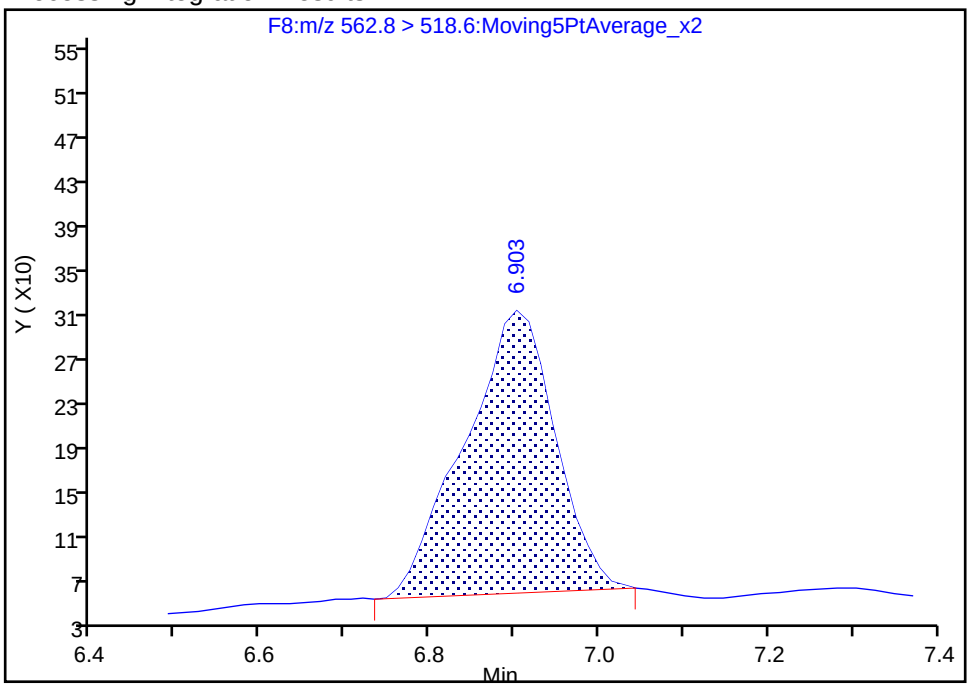
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

32 Perfluoroundecanoic acid, CAS: 2058-94-8

Signal: 1

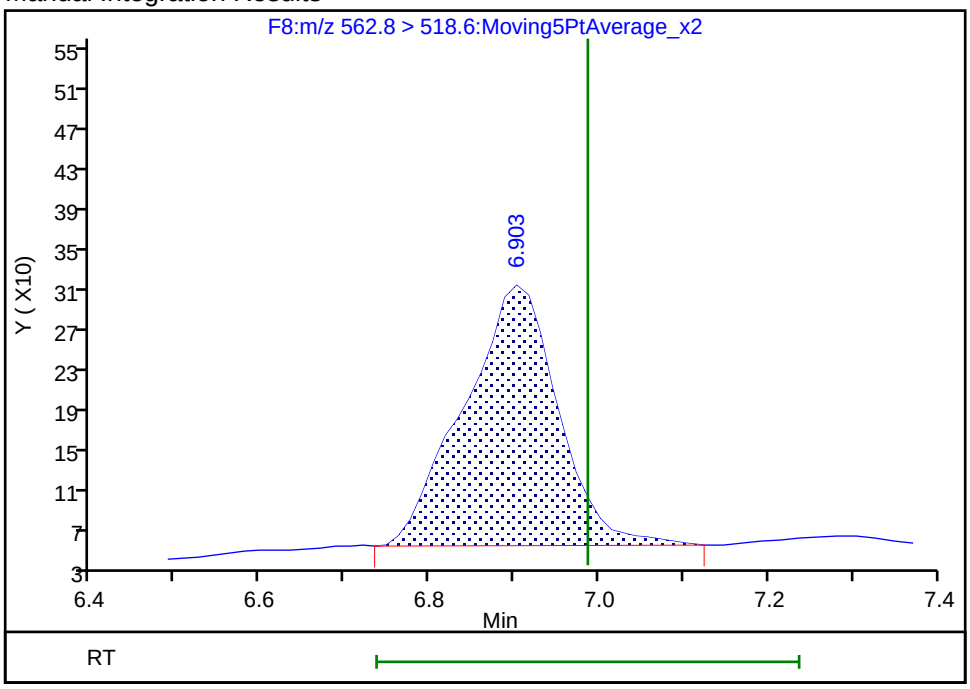
Processing Integration Results

RT: 6.90
Area: 1884
Amount: 0.195667
Amount Units: ng/ml



Manual Integration Results

RT: 6.90
Area: 1991
Amount: 0.203319
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 17:37:48
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

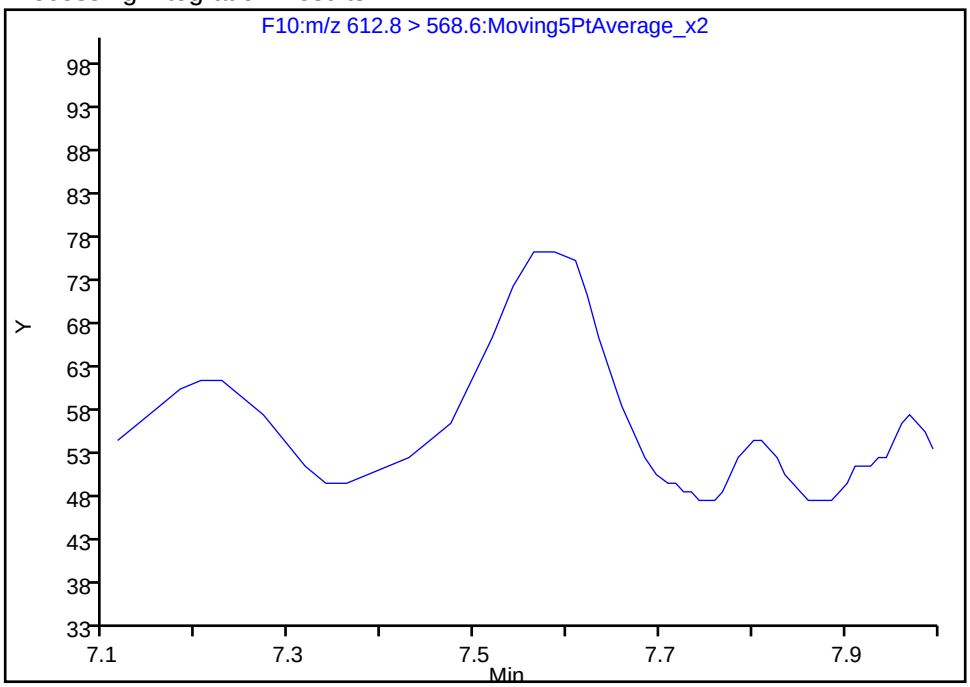
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F10:MRM

37 Perfluorododecanoic acid, CAS: 307-55-1

Signal: 1

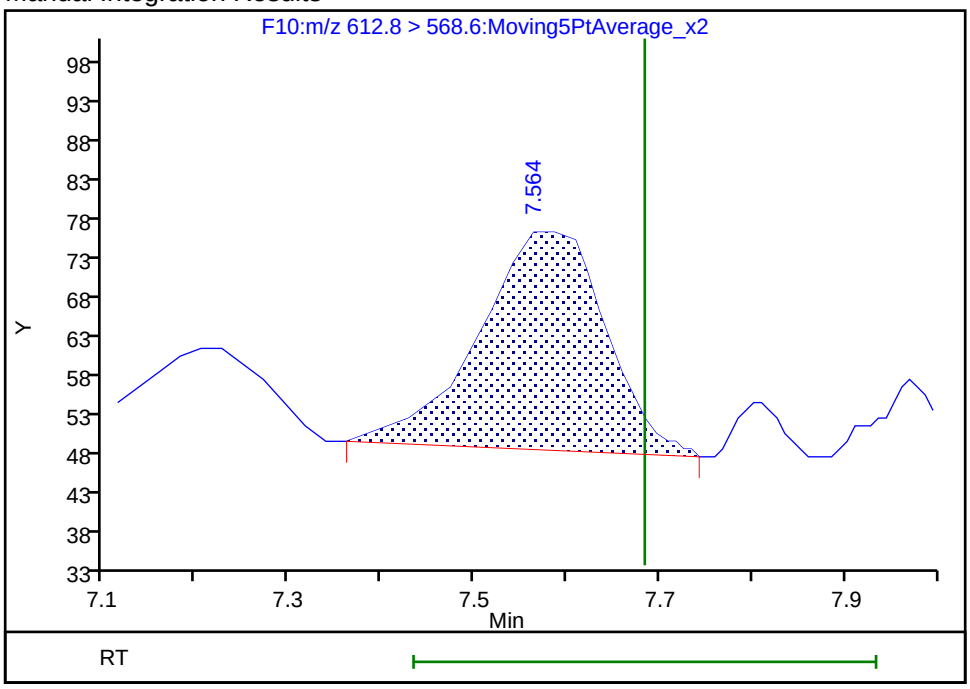
Not Detected
Expected RT: 7.68

Processing Integration Results



Manual Integration Results

RT: 7.56
Area: 269
Amount: 0.087395
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:20:31
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

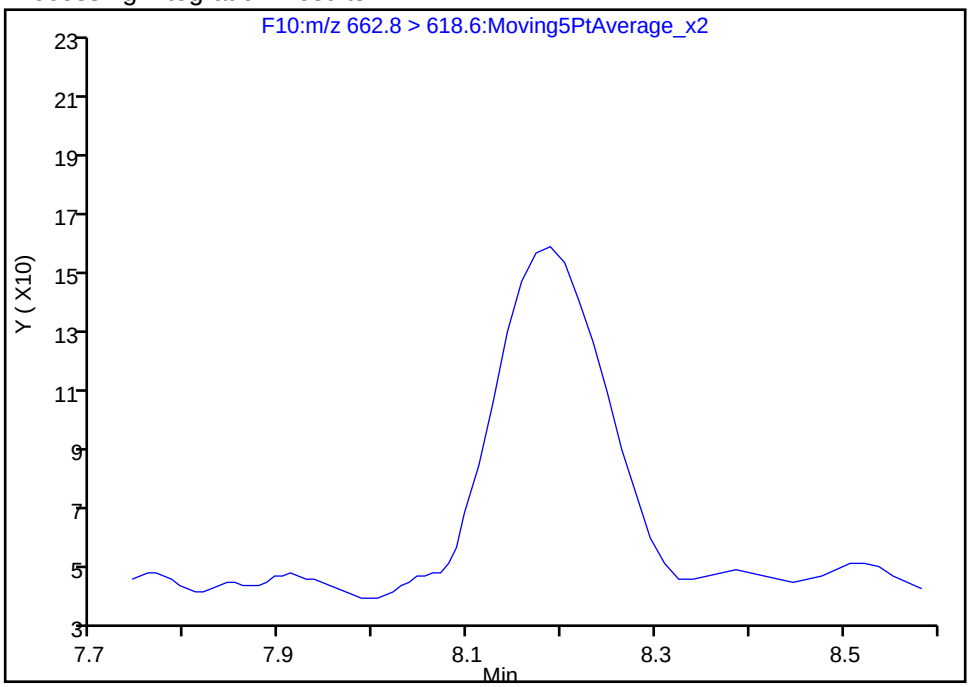
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F10:MRM

38 Perfluorotridecanoic acid, CAS: 72629-94-8

Signal: 1

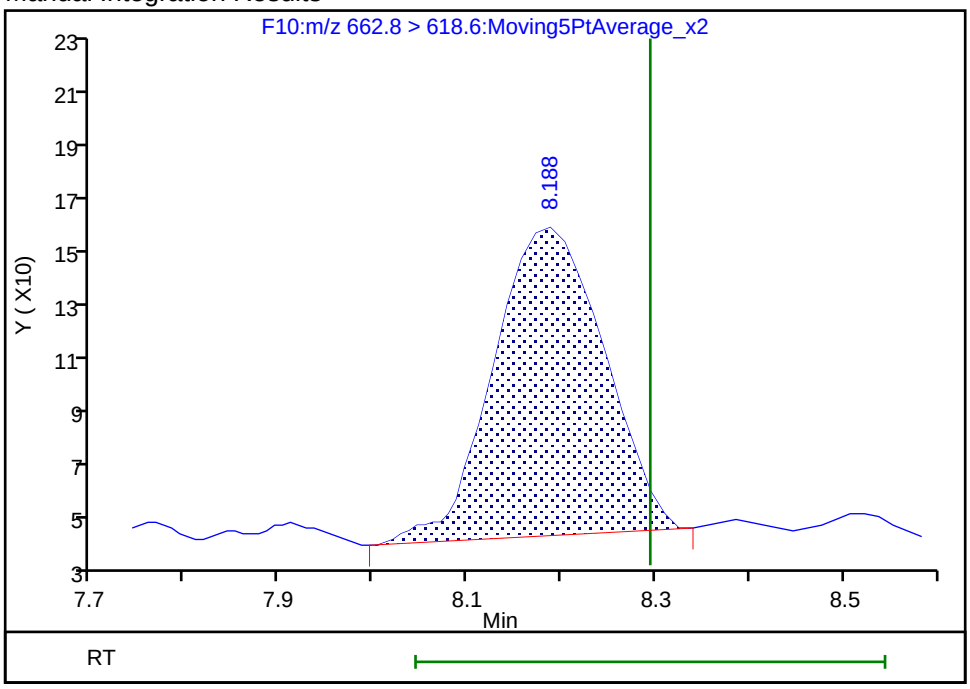
Not Detected
Expected RT: 8.29

Processing Integration Results



Manual Integration Results

RT: 8.19
Area: 880
Amount: 0.114325
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:20:36
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

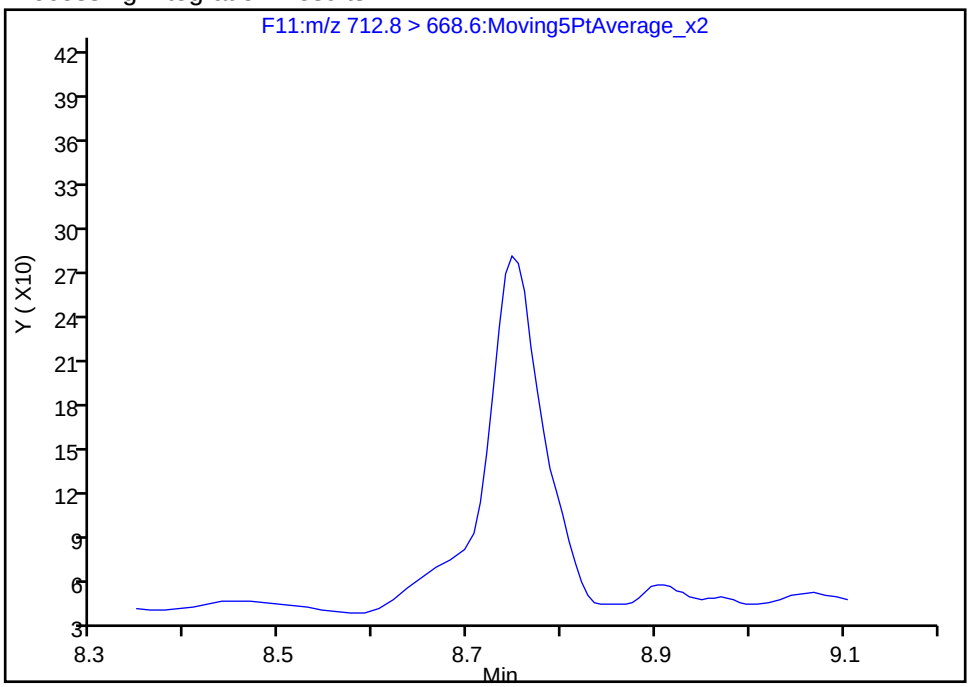
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 1

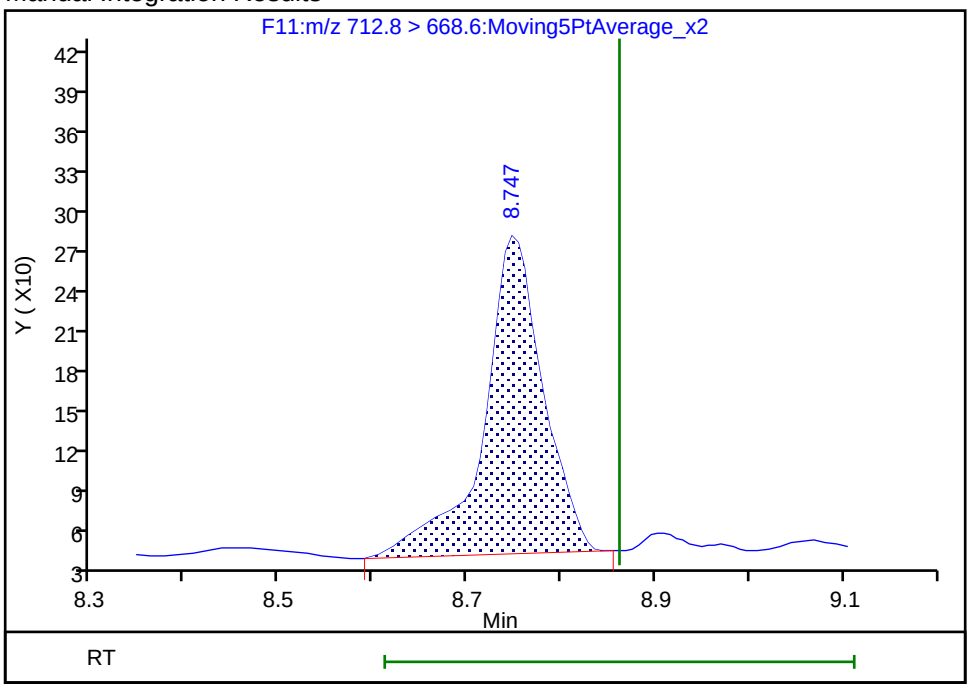
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.75
Area: 1048
Amount: -0.062954
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:20:40
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

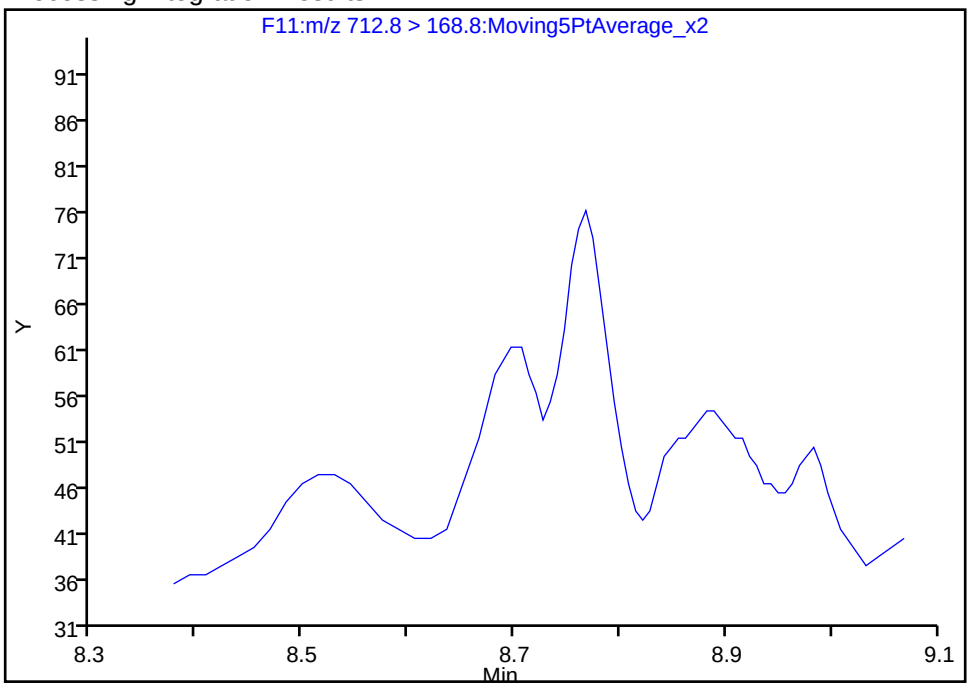
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F11:MRM

40 Perfluorotetradecanoic acid, CAS: 376-06-7

Signal: 2

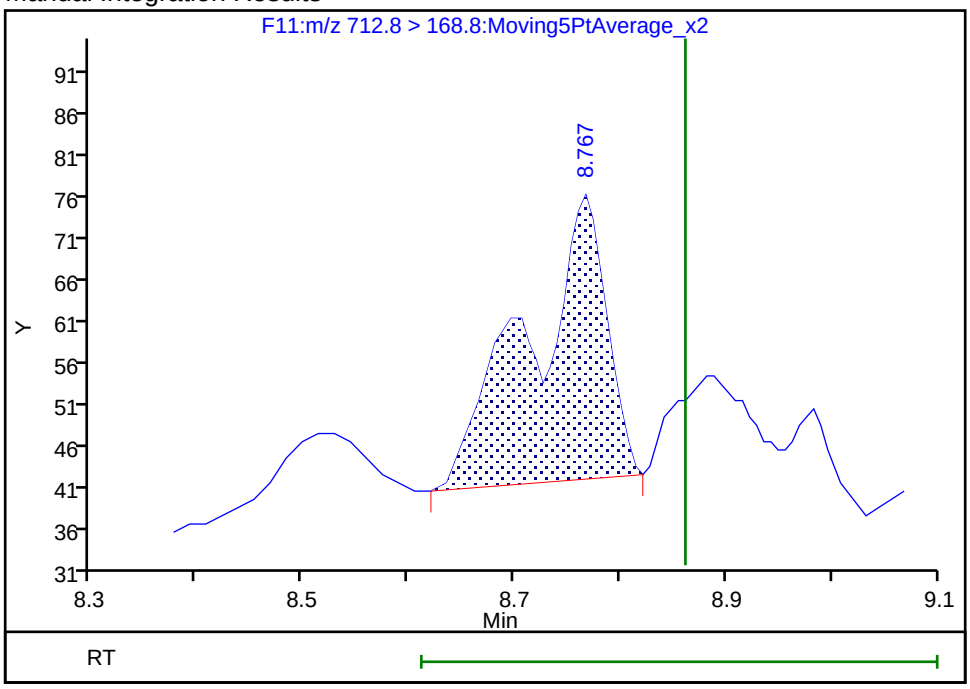
Not Detected
Expected RT: 8.86

Processing Integration Results



Manual Integration Results

RT: 8.77
Area: 176
Amount: -0.062954
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:20:51
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

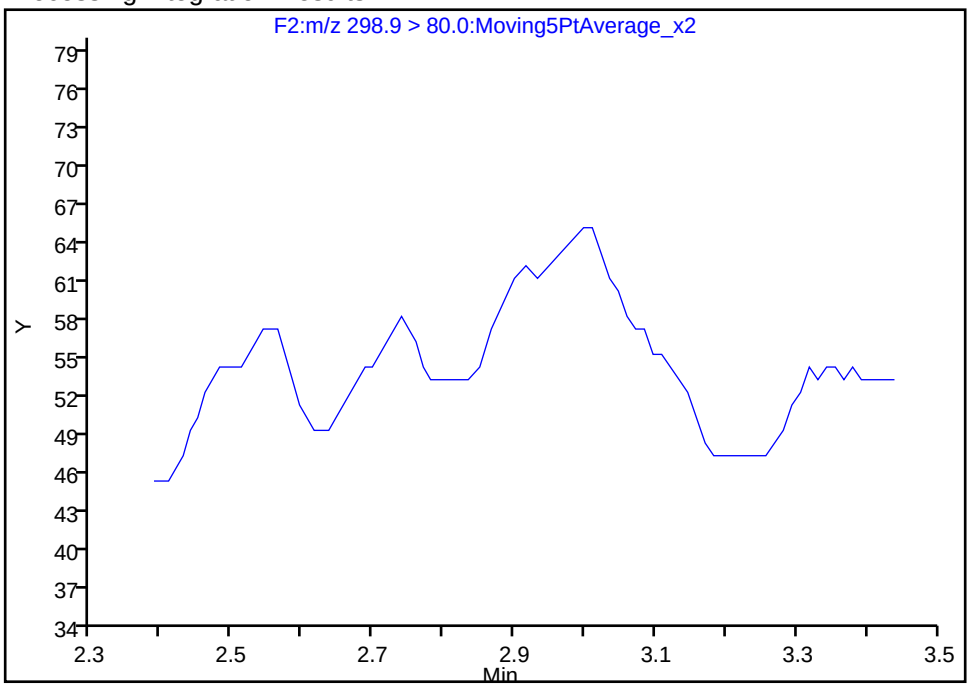
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

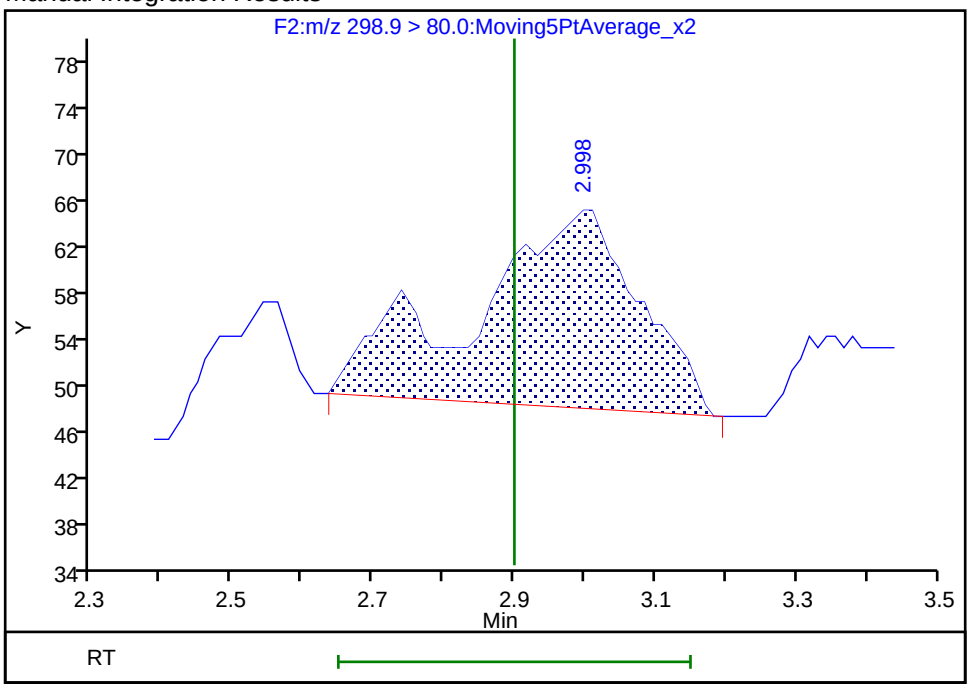
Not Detected
Expected RT: 2.90

Processing Integration Results



Manual Integration Results

RT: 3.00
Area: 280
Amount: 0.103208
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:11:58
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

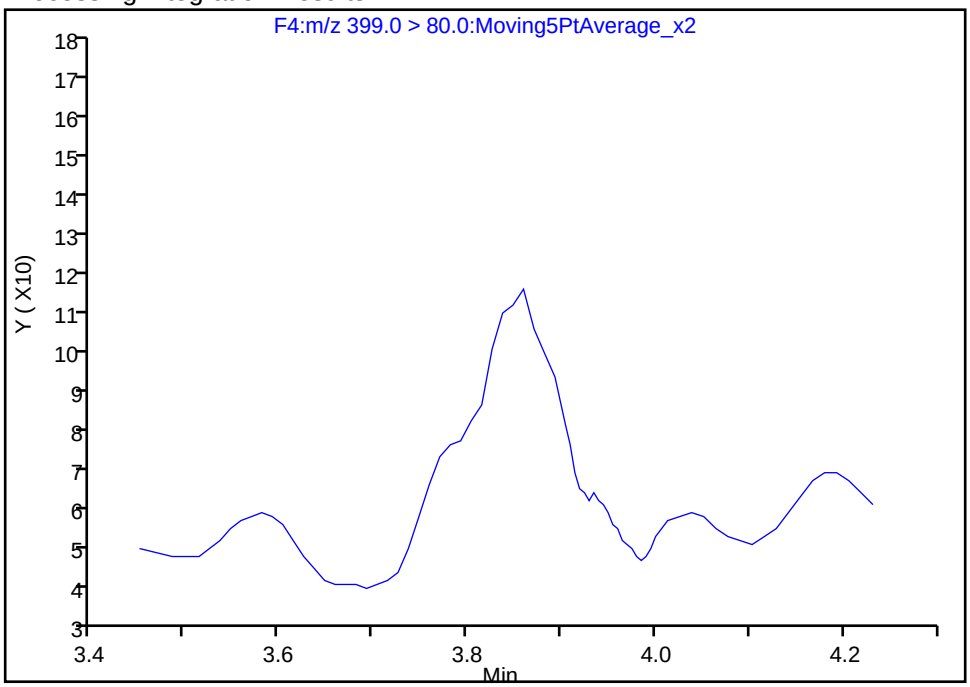
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

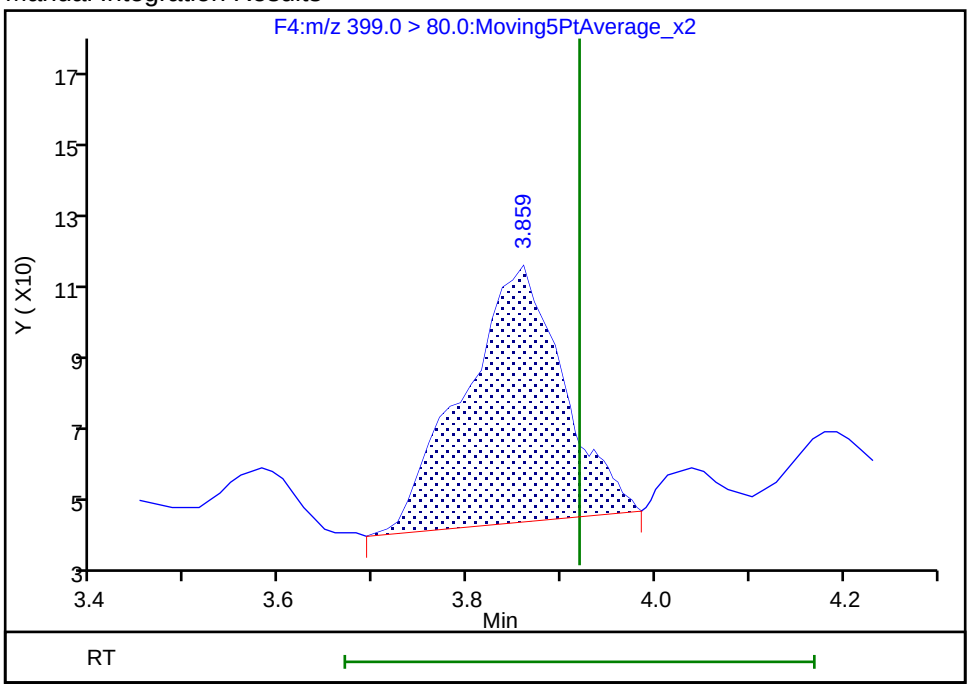
Not Detected
Expected RT: 3.92

Processing Integration Results



Manual Integration Results

RT: 3.86
Area: 521
Amount: 0.580547
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:20:02
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

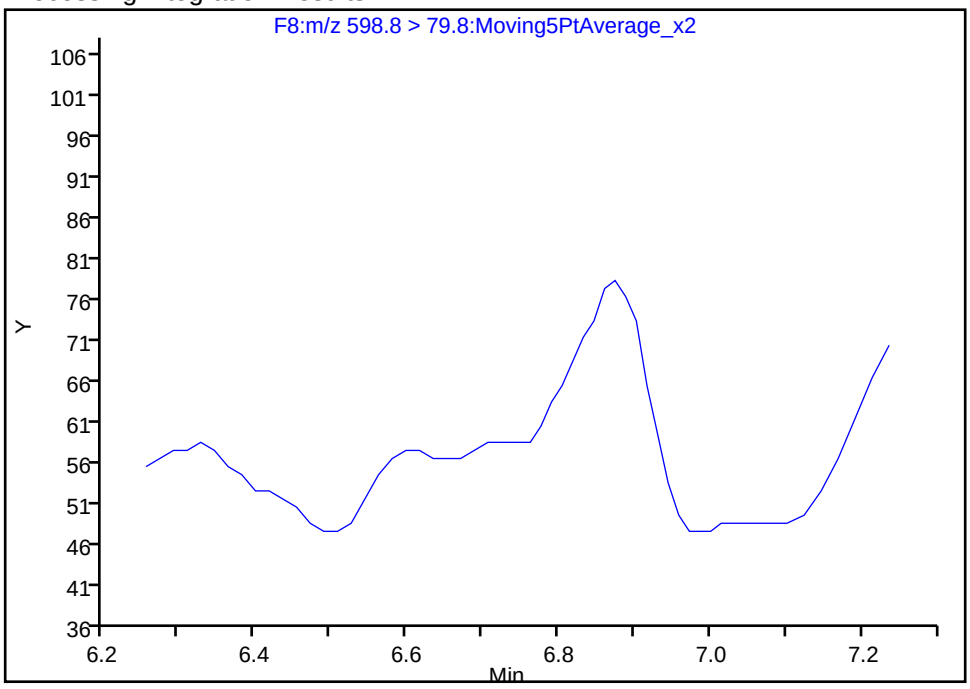
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

31 Perfluorodecane Sulfonic acid, CAS: 335-77-3

Signal: 1

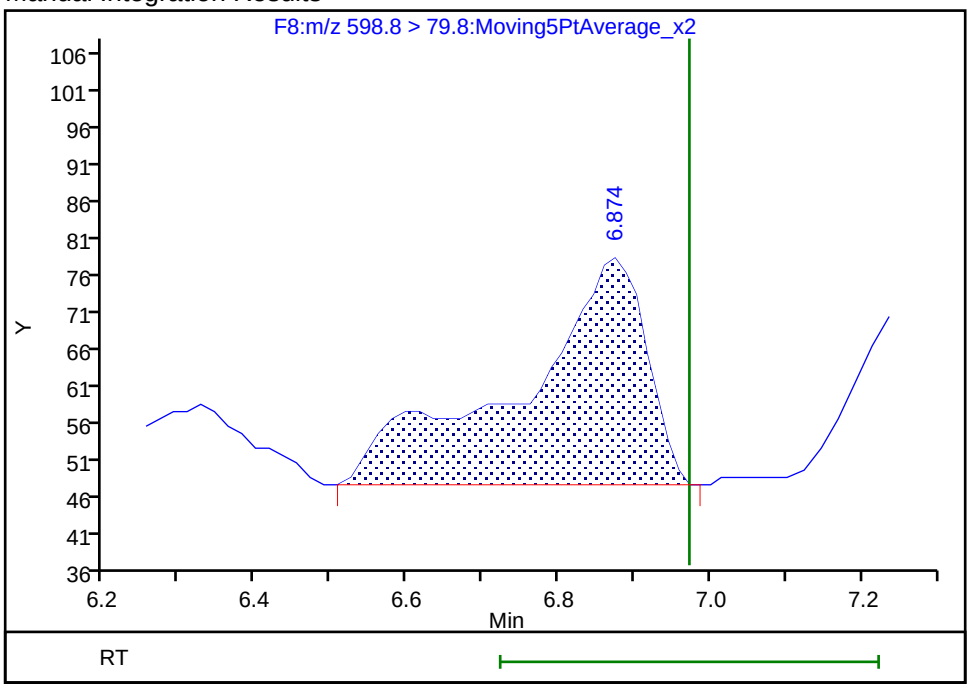
Not Detected
Expected RT: 6.97

Processing Integration Results



Manual Integration Results

RT: 6.87
Area: 360
Amount: 0.123314
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 17:38:12
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

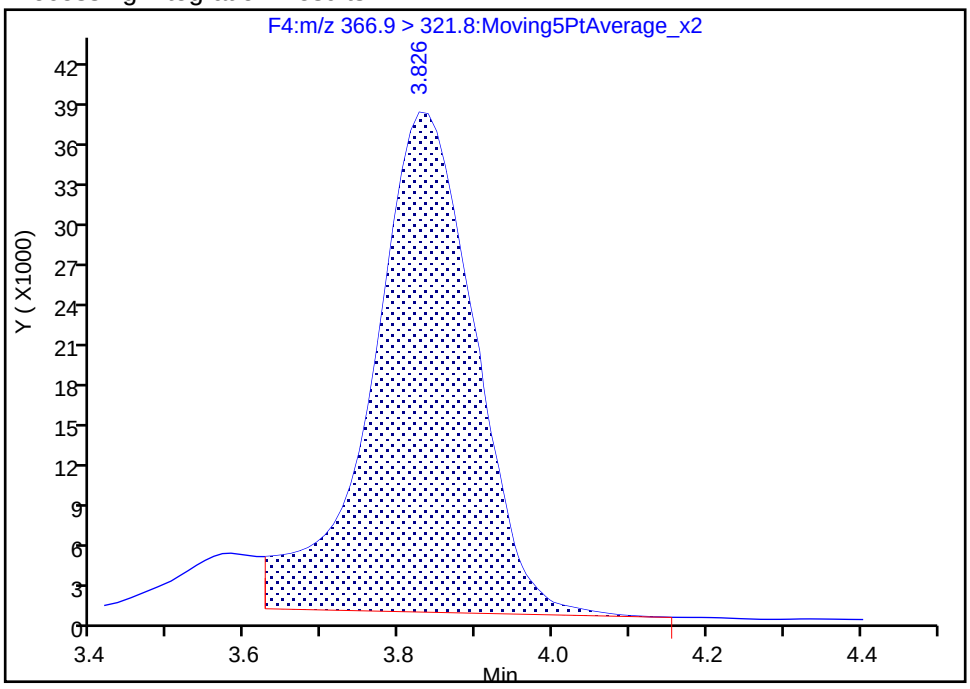
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 10 13C4-PFHpA, CAS: STL01892

Signal: 1

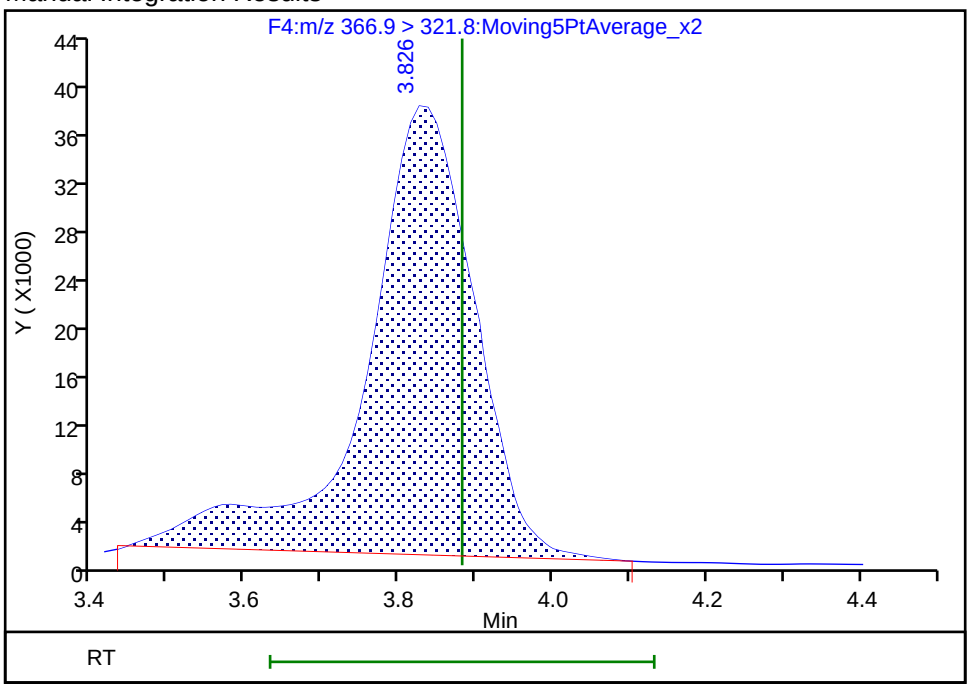
Processing Integration Results

RT: 3.83
Area: 348650
Amount: 33.529554
Amount Units: ng/ml



Manual Integration Results

RT: 3.83
Area: 367588
Amount: 35.350815
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:21:04
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

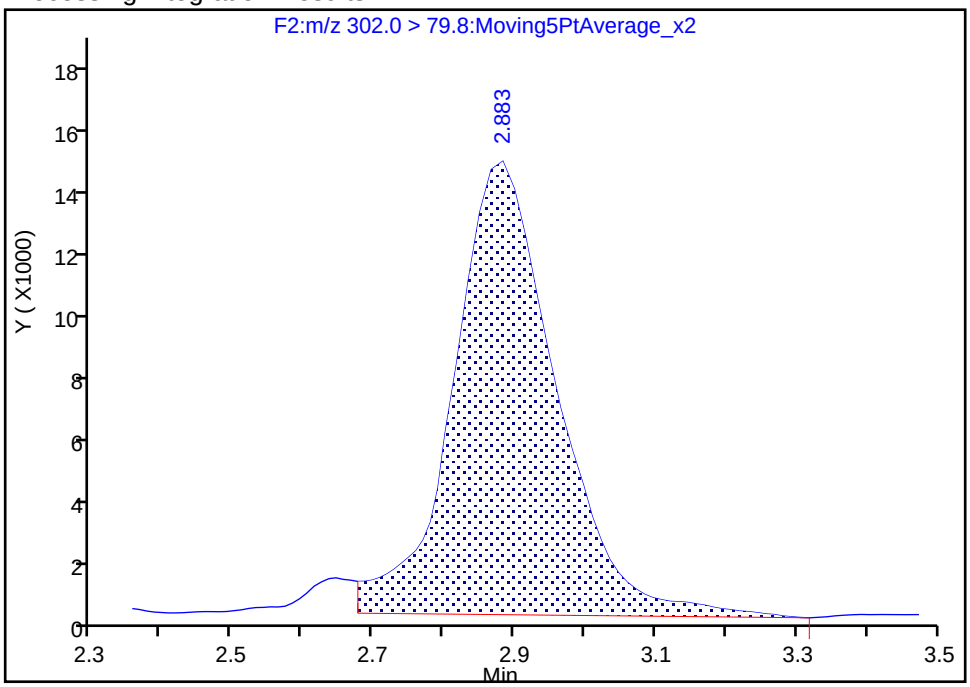
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

D 5 13C3-PFBS, CAS: STL02337

Signal: 1

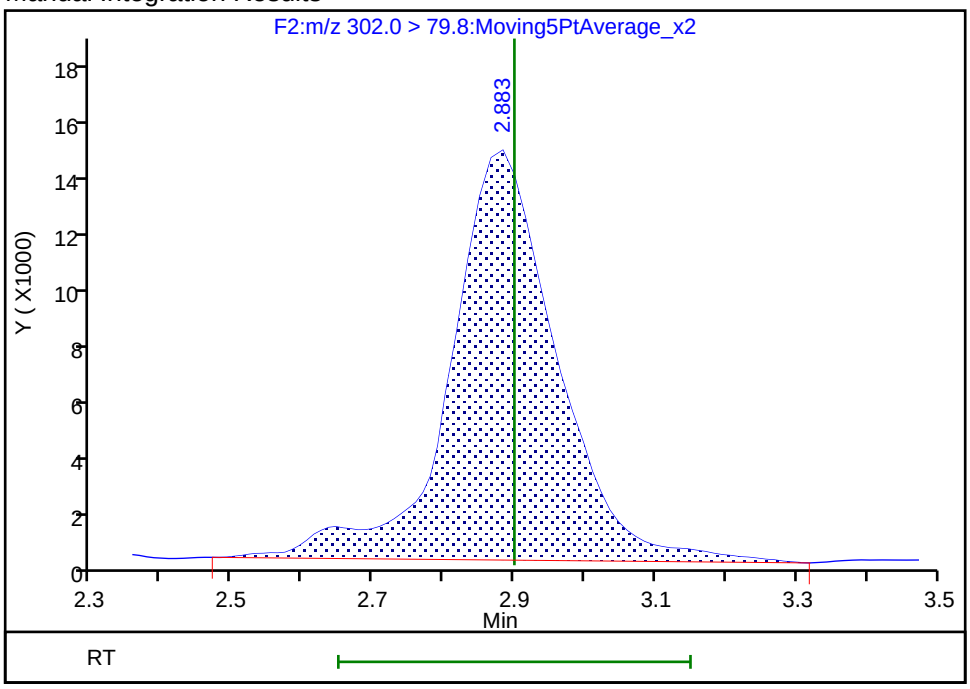
Processing Integration Results

RT: 2.88
Area: 144237
Amount: 28.127173
Amount Units: ng/ml



Manual Integration Results

RT: 2.88
Area: 149734
Amount: 29.199124
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:21:18
Audit Action: Manually Integrated Audit Reason: Missed Peak

Manual Integration/User Assign Peak Report

TestAmerica Burlington

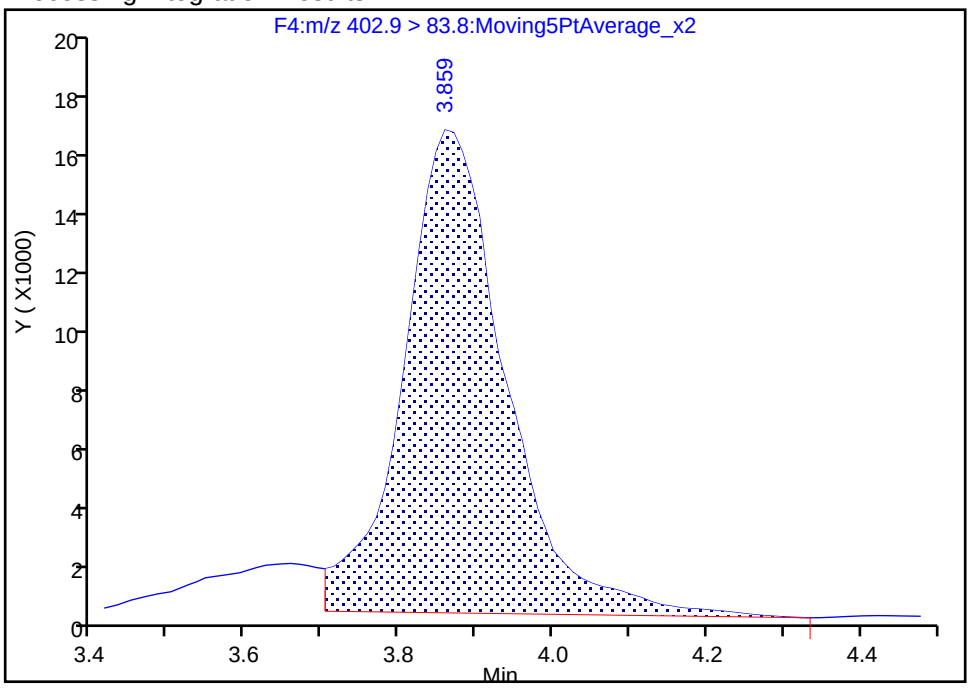
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A31.d
Injection Date: 12-Jun-2018 16:20:37 Instrument ID: LC410
Lims ID: MB 200-130388/1-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 31
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 12 18O2 PFHxS, CAS: STL00994

Signal: 1

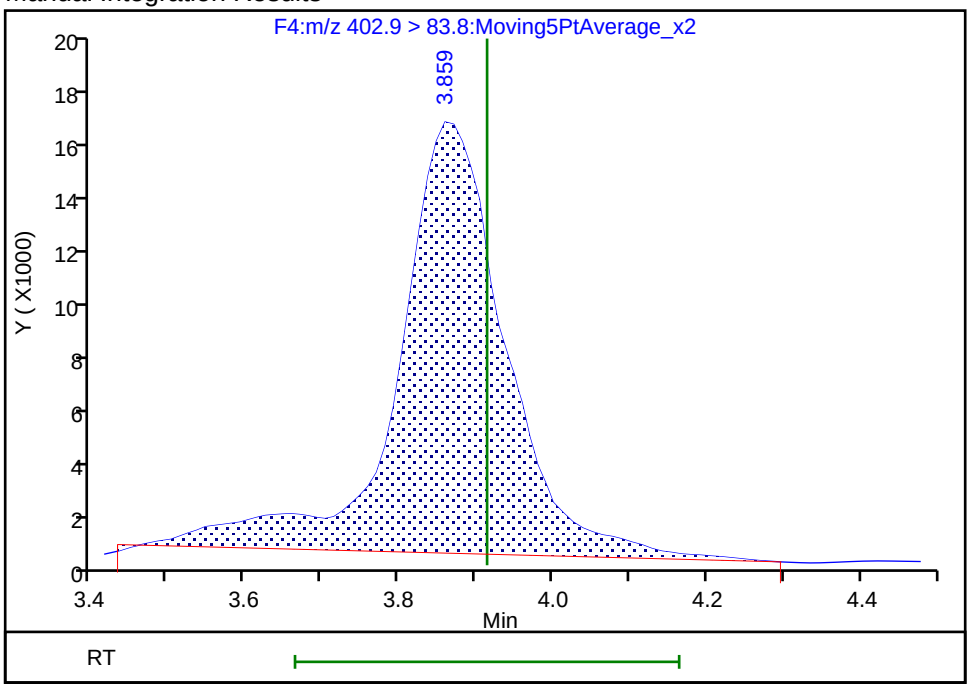
Processing Integration Results

RT: 3.86
Area: 150656
Amount: 30.723238
Amount Units: ng/ml



Manual Integration Results

RT: 3.86
Area: 157759
Amount: 32.171751
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:21:27
Audit Action: Manually Integrated Audit Reason: Missed Peak

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 200-130388/2-A

Matrix: Water | Lab File ID: PF061218A32.d

Analysis Method: 537 (modified) | Date Collected:

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 250(mL) | Date Analyzed: 06/12/2018 16:36

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	41.41		2.00	0.44
2706-90-3	Perfluoropentanoic acid (PFPeA)	39.91		2.00	0.44
307-24-4	Perfluorohexanoic acid (PFHxA)	40.07		2.00	0.44
375-85-9	Perfluoroheptanoic acid (PFHpA)	43.03		2.00	0.29
335-67-1	Perfluorooctanoic acid (PFOA)	44.15		2.00	0.47
375-95-1	Perfluorononanoic acid (PFNA)	40.86		2.00	0.26
335-76-2	Perfluorodecanoic acid (PFDA)	44.87		2.00	0.44
2058-94-8	Perfluoroundecanoic acid (PFUnA)	40.22		2.00	0.44
307-55-1	Perfluorododecanoic acid (PFDoA)	43.74		2.00	0.44
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	29.77		2.00	0.44
376-06-7	Perfluorotetradecanoic acid (PFTeA)	37.59		2.00	0.44
375-73-5	Perfluorobutanesulfonic acid (PFBS)	38.22		2.00	0.88
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	31.27		2.00	0.28
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	39.46		2.00	0.44
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	40.18		2.00	0.30
335-77-3	Perfluorodecanesulfonic acid (PFDS)	35.25		2.00	0.44
754-91-6	Perfluorooctane Sulfonamide (FOSA)	36.57		2.00	0.44
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	40.04		2.00	0.60
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	41.71		2.00	0.60
27619-97-2	6:2 FTS	47.37		2.00	0.60
39108-34-4	8:2 FTS	38.15		2.00	0.60

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 200-130388/2-A

Matrix: Water | Lab File ID: PF061218A32.d

Analysis Method: 537 (modified) | Date Collected:

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 250(mL) | Date Analyzed: 06/12/2018 16:36

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	67		25-150
STL01893	13C5 PFPeA	72		25-150
STL00993	13C2 PFHxA	69		25-150
STL01892	13C4-PFHpA	76		25-150
STL00990	13C4 PFOA	100		25-150
STL00995	13C5 PFNA	102		25-150
STL00996	13C2 PFDA	82		25-150
STL00997	13C2 PFUnA	93		25-150
STL00998	13C2 PFDoA	80		25-150
STL02116	13C2-PFTeDA	71		25-150
STL02337	13C3-PFBS	73		25-150
STL00994	18O2 PFHxS	71		25-150
STL00991	13C4 PFOS	94		25-150
STL01056	13C8 FOSA	51		25-150
STL02118	d3-NMeFOSAA	73		25-150
STL02117	d5-NEtFOSAA	78		25-150
STL02279	M2-6:2FTS	132		25-150
STL02280	M2-8:2FTS	120		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Lims ID: LCS 200-130388/2-A
Client ID:
Sample Type: LCS
Inject. Date: 12-Jun-2018 16:36:43 ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-032 LCS 388
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:18:23 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 13-Jun-2018 13:22:56

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.371	2.382	-0.011	0.996	50941	20.7		104	78.9	M
D 1 13C4 PFBA										M
216.9 > 171.5	2.382	2.392	-0.010	1.000	166853	33.7		67.4	306	M
D 4 13C5-PFPeA										
267.7 > 222.6	2.801	2.818	-0.017	1.000	262575	36.1		72.3	307	
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.801	2.834	-0.033	1.000	128801	20.0		99.8	161	M
D 5 13C3-PFBS										M
302.0 > 79.8	2.883	2.900	-0.017	1.000	163233	34.0		73.0	177	M
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.883	2.900	-0.017	1.000	56521	19.1		108	133	M
7 Perfluorohexanoic acid										M
312.8 > 268.6	3.263	3.300	-0.037	1.004	130433	20.0		100	181	M
D 8 13C2 PFHxA										
314.8 > 269.6	3.250	3.300	-0.050	1.000	292682	34.5		68.9	2137	
9 Perfluoroheptanoic acid										M
362.9 > 318.8	3.826	3.882	-0.056	1.000	171870	21.5		108	138	M
D 10 13C4-PFHpA										M
366.9 > 321.8	3.826	3.882	-0.056	1.000	368424	37.8		75.6	200	M
D 12 18O2 PFHxS										M
402.9 > 83.8	3.859	3.914	-0.055	1.000	153716	33.4		70.7	244	M
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.848	3.919	-0.071	0.997	51497	15.6		85.9	53.8	M
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.468	4.486	-0.018	0.996	41133	23.7		125	278	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.486	4.546	-0.060	1.000	80847	62.7		132	593	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.532	4.601	-0.069	1.000	374330	50.2		100	4465	
* 17 13C2-PFOA										
414.9 > 369.8	4.532	4.601	-0.069		391737	50.0			3144	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.532	4.615	-0.083	1.000	188709	22.1		110	858	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.560	4.642	-0.082	0.855	87618	19.7		104	207	
D 19 13C5 PFNA										
467.8 > 422.8	5.322	5.422	-0.100	1.000	499200	50.8		102	910	
20 Perfluorononanoic acid										
462.8 > 418.8	5.328	5.422	-0.094	1.001	200235	20.4		102	1354	
22 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.340	5.434	-0.094	1.001	103969	20.1		108	819	M
D 21 13C4 PFOS										
502.8 > 79.8	5.334	5.440	-0.106	1.000	222951	44.8		93.7	1519	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.094	6.070	0.024	1.000	52494	19.1		99.6	357	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	153074	57.4		120	1167	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.118	6.227	-0.109	1.004	272291	22.4		112	450	
D 26 13C2 PFDA										
514.9 > 469.5	6.094	6.227	-0.133	1.000	588849	41.2		82.3	2340	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	109789	36.4		72.9	1188	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.476	6.602	-0.126	1.000	55628	20.0		100	228	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.832	6.959	-0.127	1.000	100497	39.0		77.9	971	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.846	6.973	-0.127	1.002	46719	20.9		104	460	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.861	6.973	-0.112	1.286	86386	17.6		91.4	1163	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.874	6.987	-0.113	1.000	272227	20.1		101	3258	
D 33 13C2 PFUnA										
564.8 > 519.8	6.874	6.987	-0.113	1.000	608068	46.5		93.0	6459	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	7.079	7.079	0.0	1.000	106624	18.3		91.4	1754	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	282747	25.7		51.4	3172	
D 36 13C2 PFDoA										
614.8 > 569.6	7.564	7.684	-0.120	1.000	629914	39.9		79.8	1936	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.564	7.684	-0.120	1.000	260710	21.9		109	1840	
38 Perfluorotridecanoic acid										
662.8 > 618.6	8.173	8.294	-0.121	1.080	187940	14.9		74.4	3527	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 39 13C2-PFTeDA										
714.8 > 669.6	8.720	8.855	-0.135	1.000	566003	35.3		70.6	1324	
40 Perfluorotetradecanoic acid										
712.8 > 668.6	8.727	8.862	-0.135	1.001	193049	18.8		94.0	1432	
712.8 > 168.8	8.714	8.862	-0.148	0.999	34925		5.53(0.00-0.00)		410	
712.8 > 218.8	8.734	8.862	-0.128	1.002	23874		8.09(0.00-0.00)		248	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:18:28 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d

Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410

Lims ID: LCS 200-130388/2-A

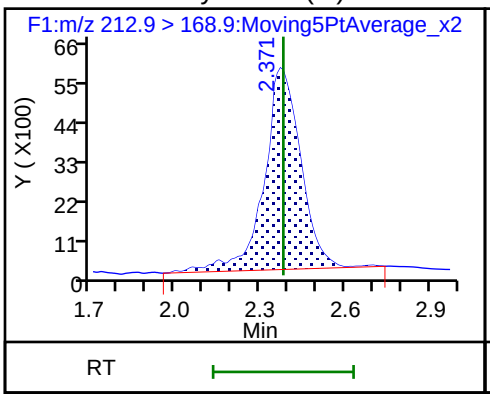
Client ID:

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32

Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

2 Perfluorobutyric acid (M)



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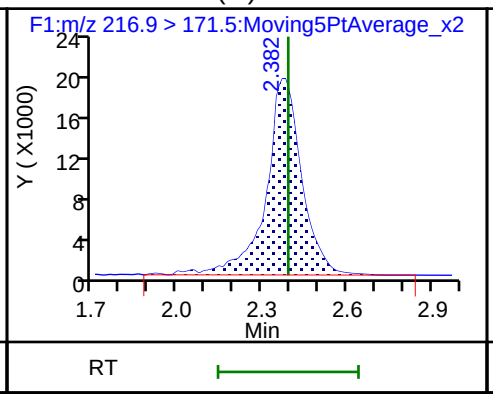
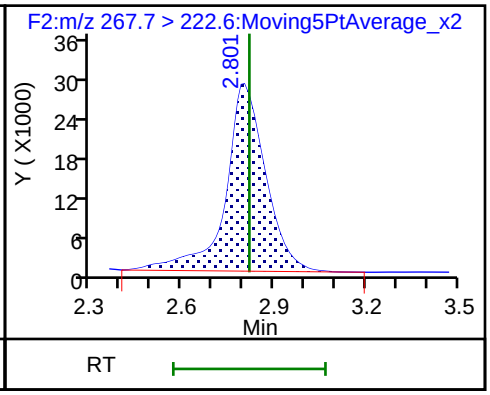
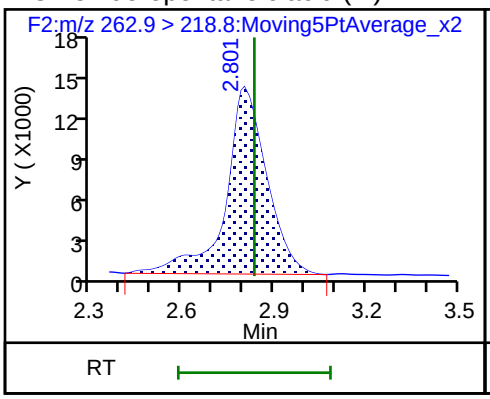


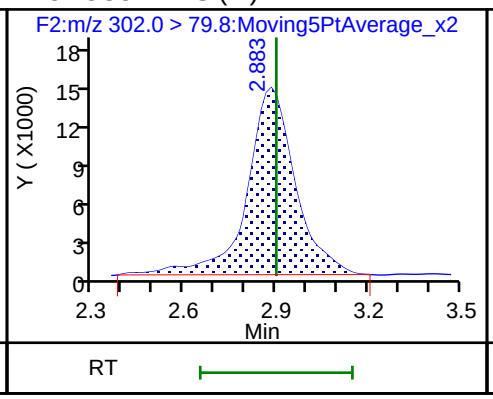
D 4 13C5-PFPeA



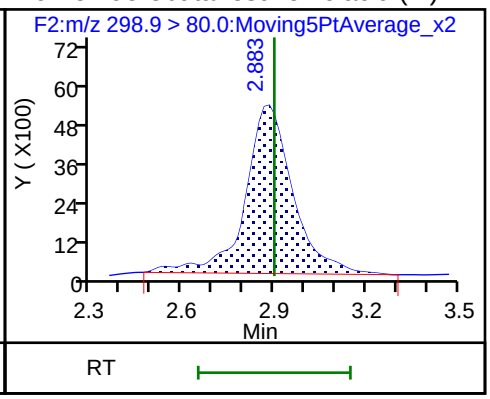
3 Perfluoropentanoic acid (M)



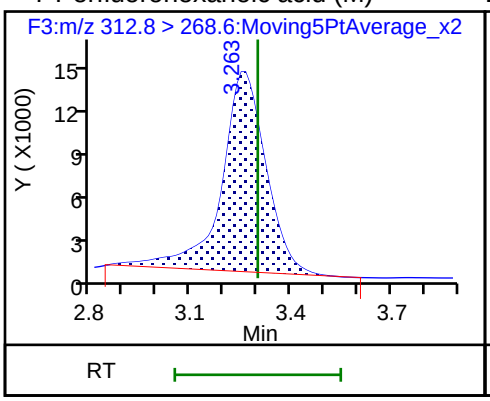
D 5 13C3-PFBS (M)



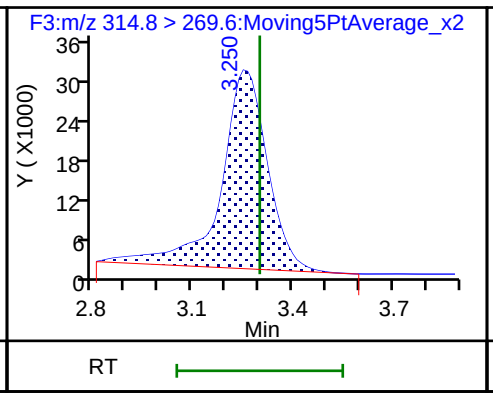
6 Perfluorobutanesulfonic acid (M)



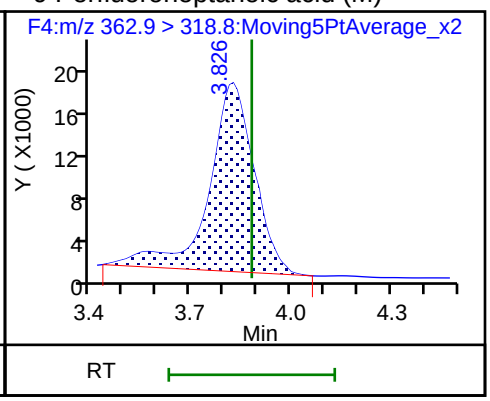
7 Perfluorohexanoic acid (M)



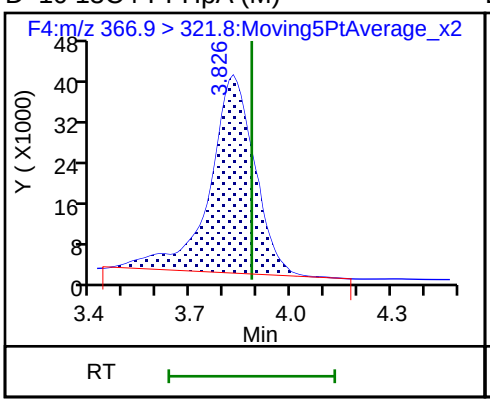
D 8 13C2 PFHxA



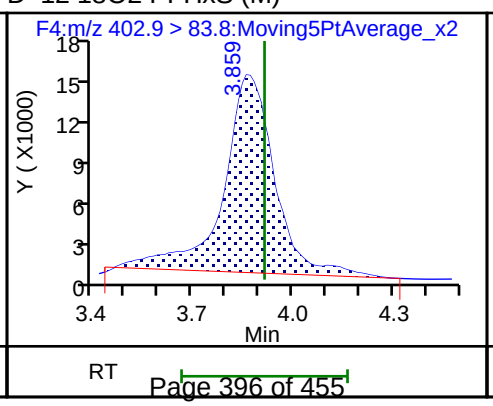
9 Perfluoroheptanoic acid (M)



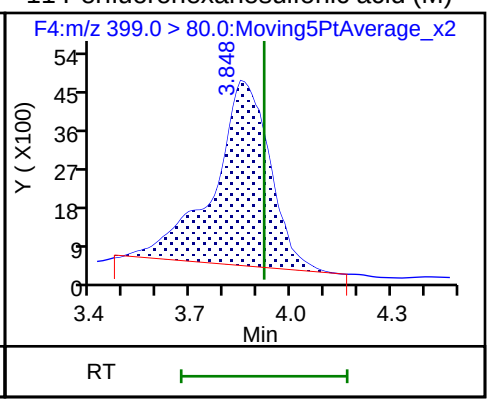
D 10 13C4-PFHpA (M)



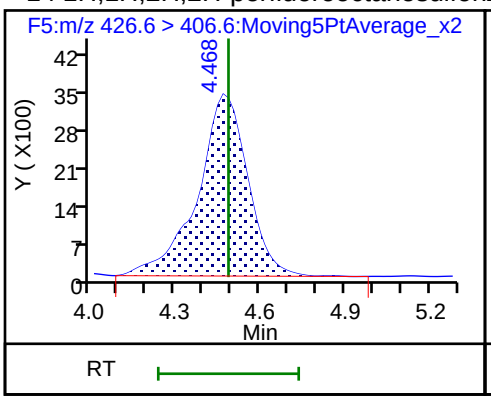
D 12 18O2 PFHxS (M)



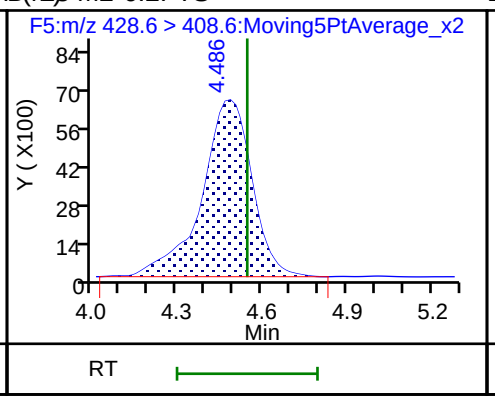
11 Perfluorohexanesulfonic acid (M)



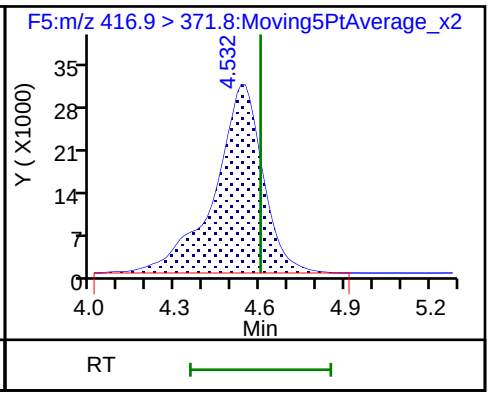
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



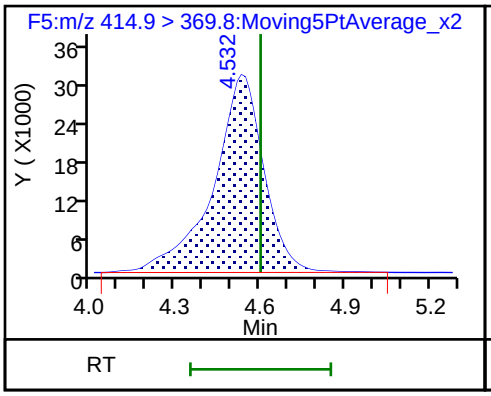
D 13 M2-6:2FTS



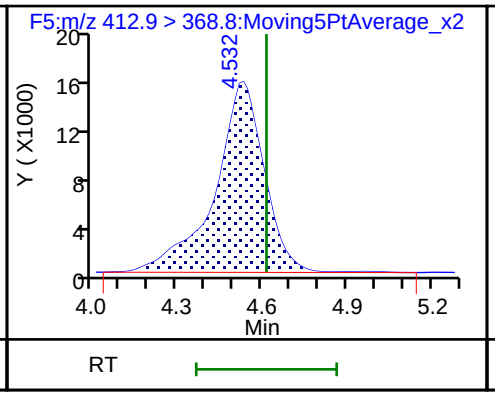
D 16 13C4 PFOA



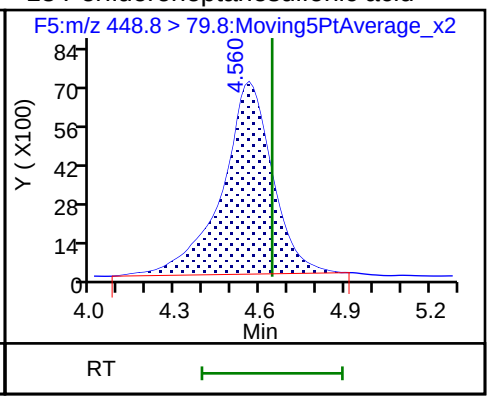
* 17 13C2-PFOA



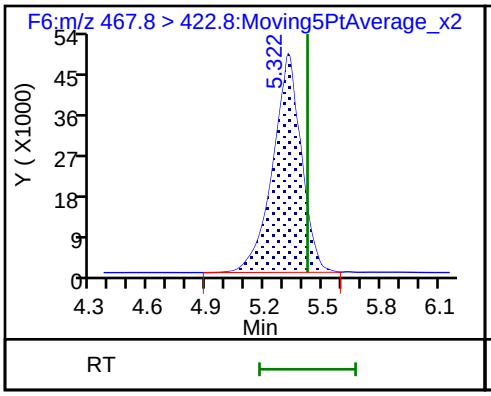
15 Perfluorooctanoic acid



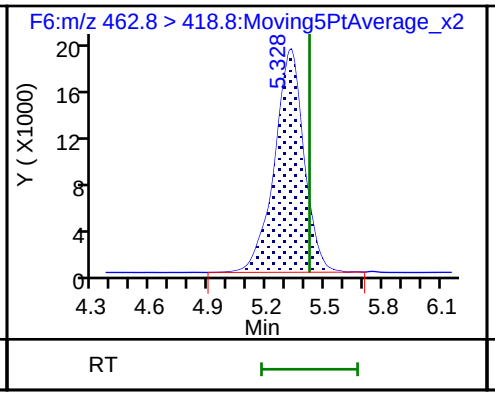
18 Perfluoroheptanesulfonic acid



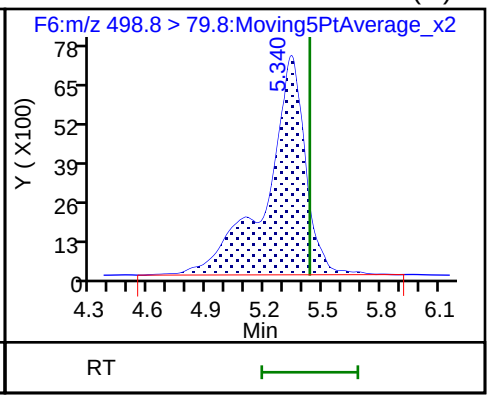
D 19 13C5 PFNA



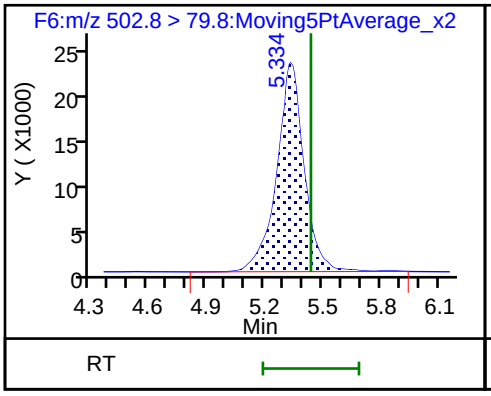
20 Perfluorononanoic acid



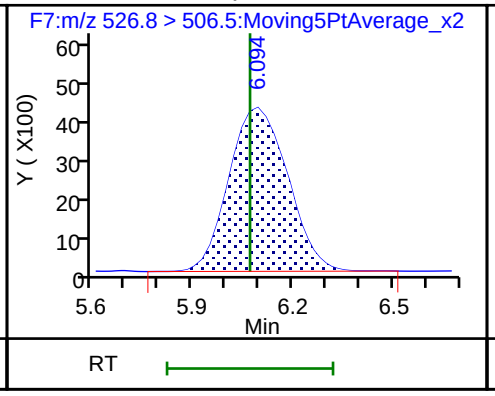
22 Perfluorooctane sulfonic acid (M)



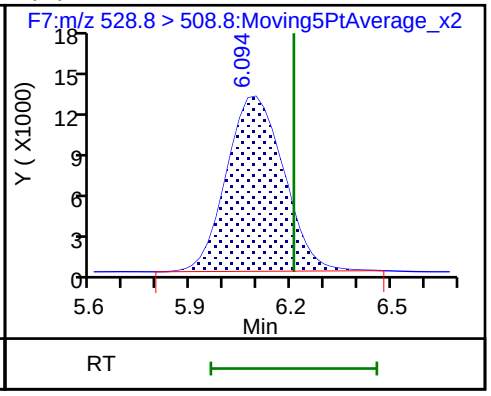
D 21 13C4 PFOS



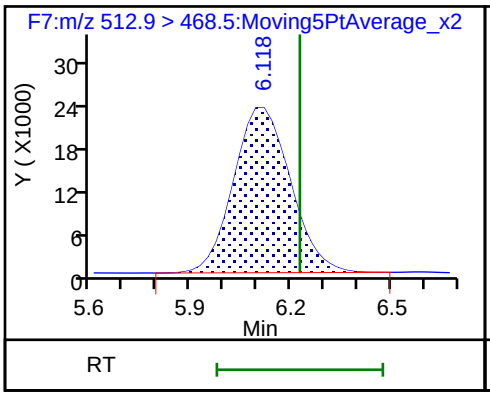
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



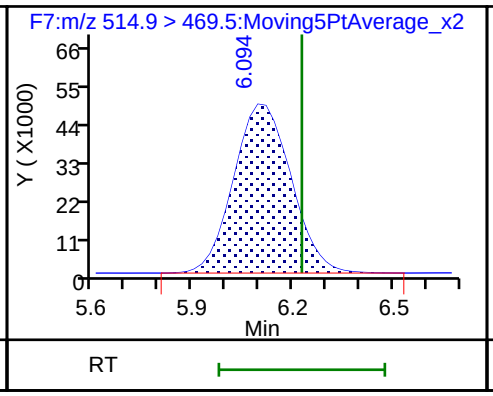
D 24 M2-8:2FTS



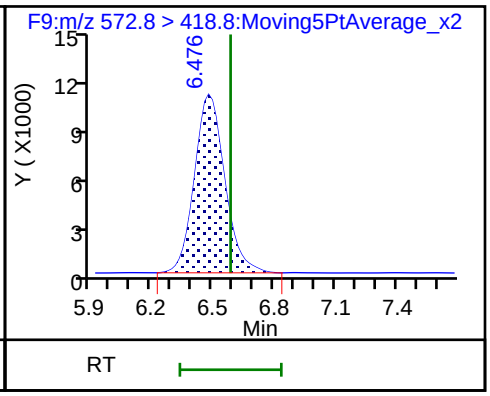
25 Perfluorodecanoic acid



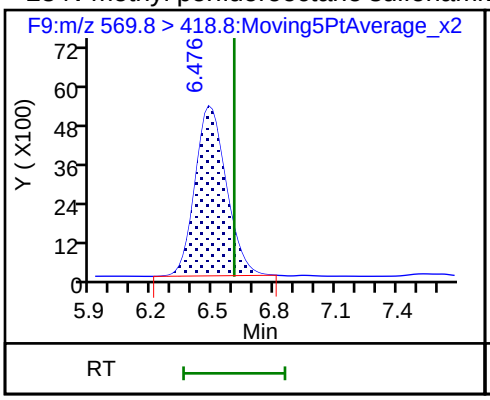
D 26 13C2 PFDA



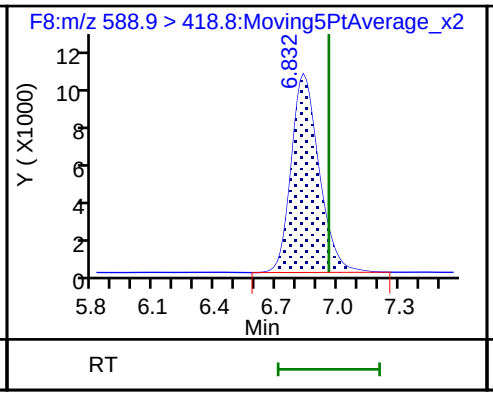
D 27 d3-NMeFOSAA



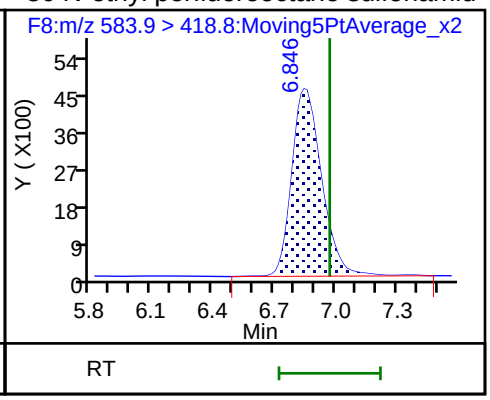
28 N-methyl perfluorooctane sulfonami



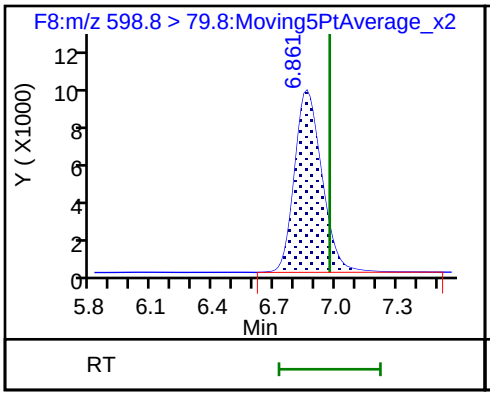
D 29 d5-NEtFOSAA



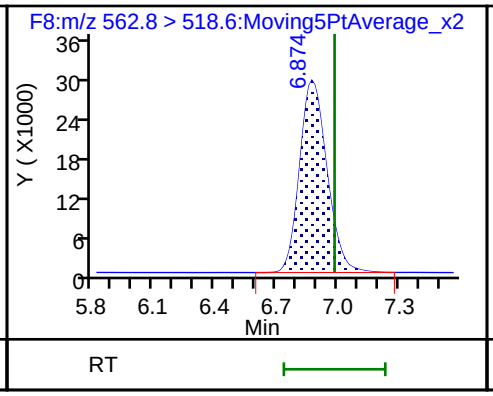
30 N-ethyl perfluorooctane sulfonamid



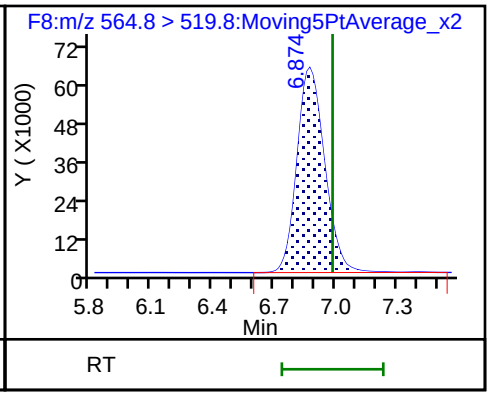
31 Perfluorodecane Sulfonic acid



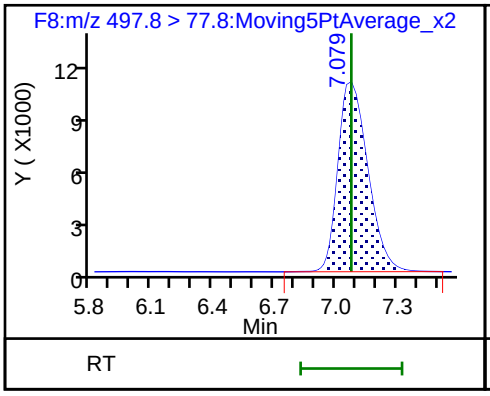
32 Perfluoroundecanoic acid



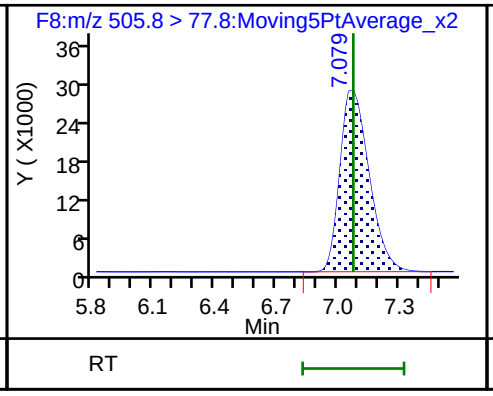
D 33 13C2 PFUnA



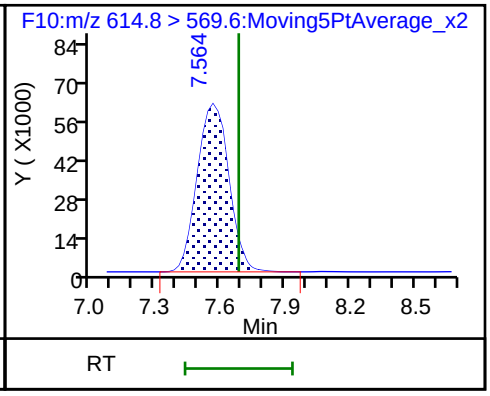
34 Perfluorooctane Sulfonamide



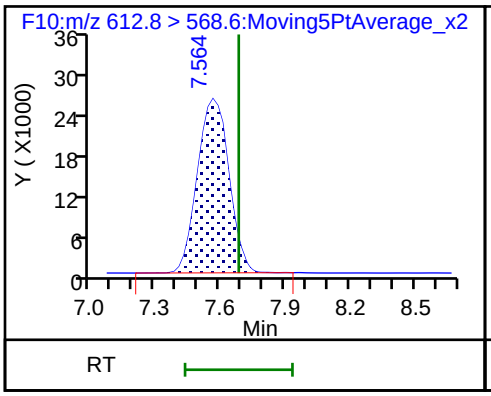
D 35 13C8 FOSA



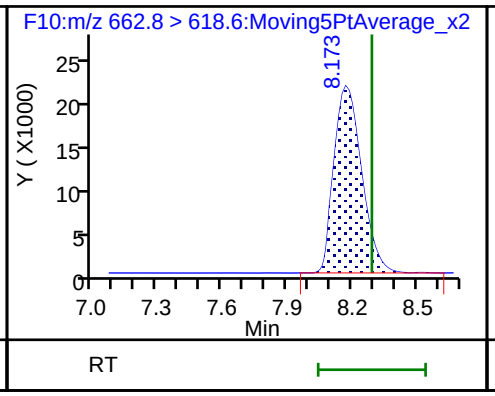
D 36 13C2 PFDoA



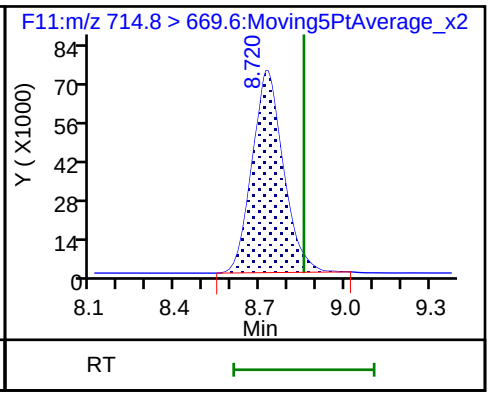
37 Perfluorododecanoic acid



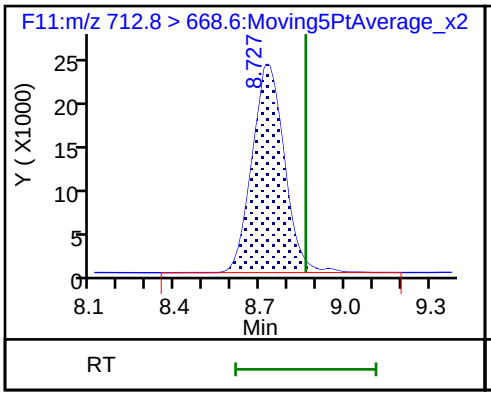
38 Perfluorotridecanoic acid



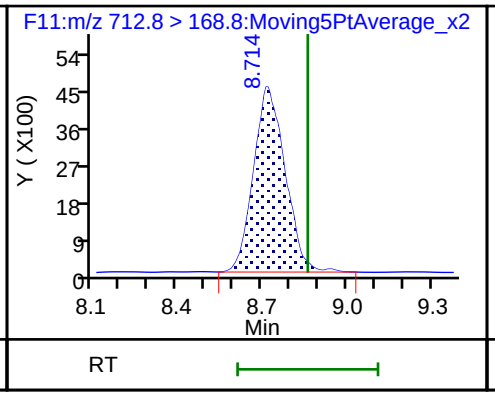
D 39 13C2-PFTeDA



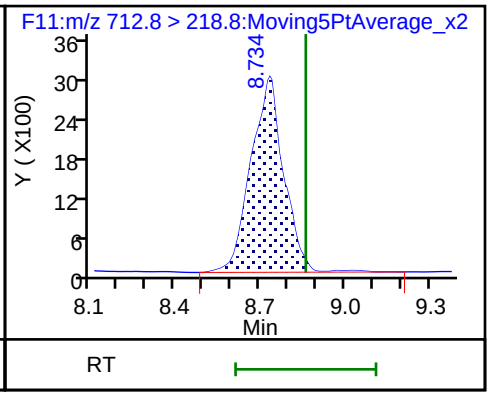
40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



Manual Integration/User Assign Peak Report

TestAmerica Burlington

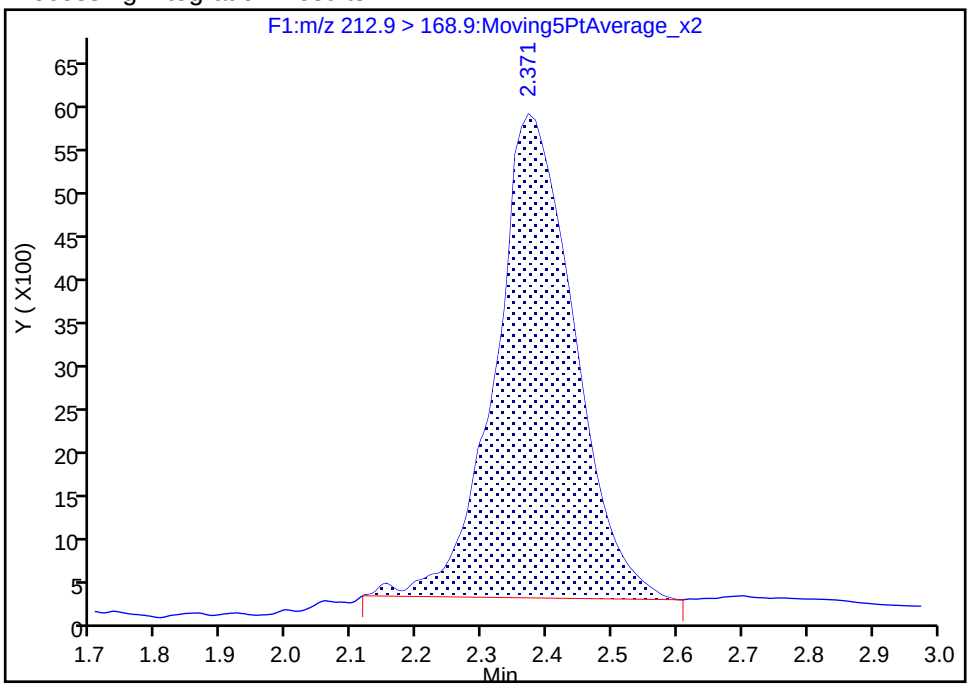
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

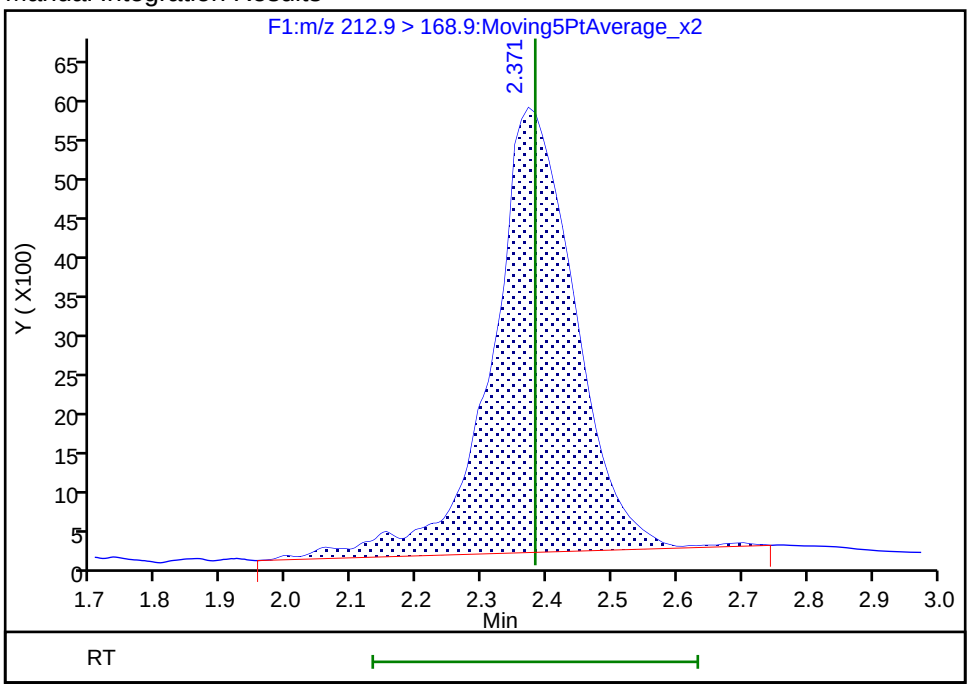
Processing Integration Results

RT: 2.37
Area: 47053
Amount: 19.136141
Amount Units: ng/ml



Manual Integration Results

RT: 2.37
Area: 50941
Amount: 20.707115
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:21:59
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

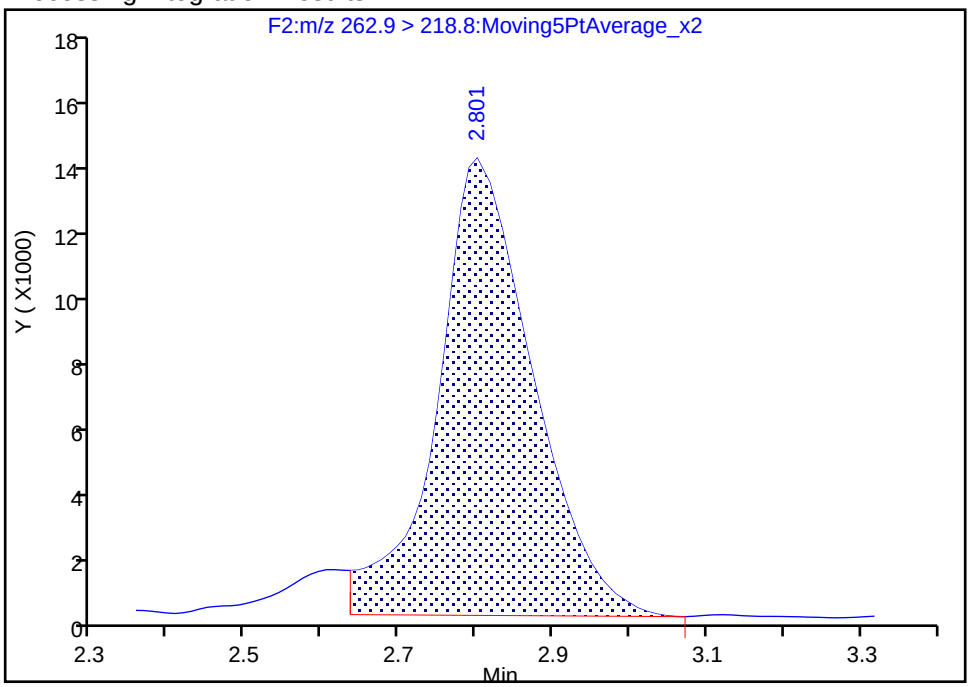
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

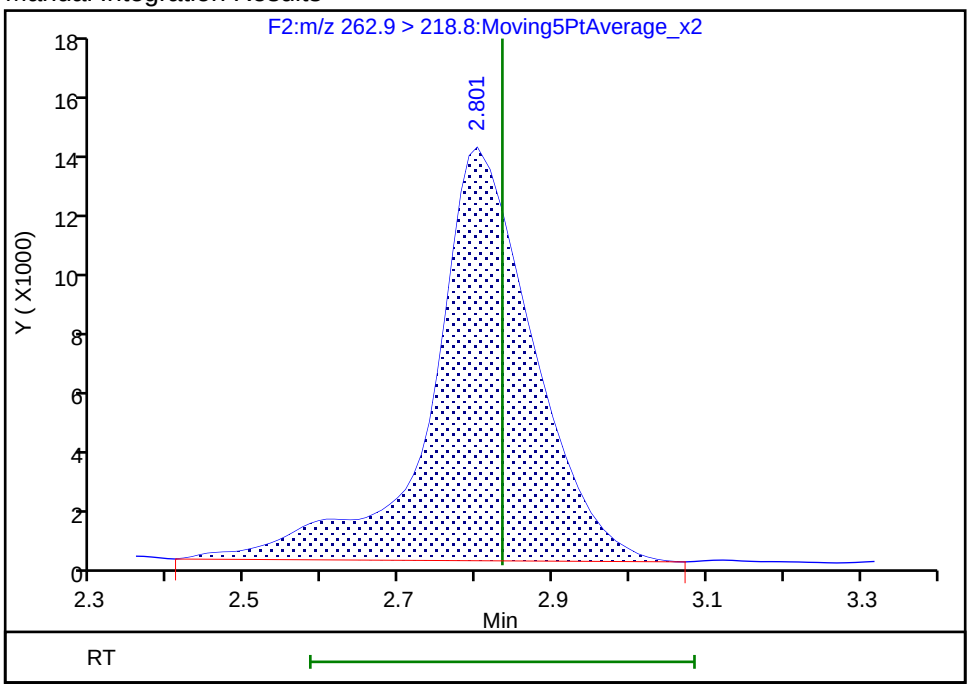
Processing Integration Results

RT: 2.80
Area: 120233
Amount: 18.638384
Amount Units: ng/ml



Manual Integration Results

RT: 2.80
Area: 128801
Amount: 19.953984
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:03
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

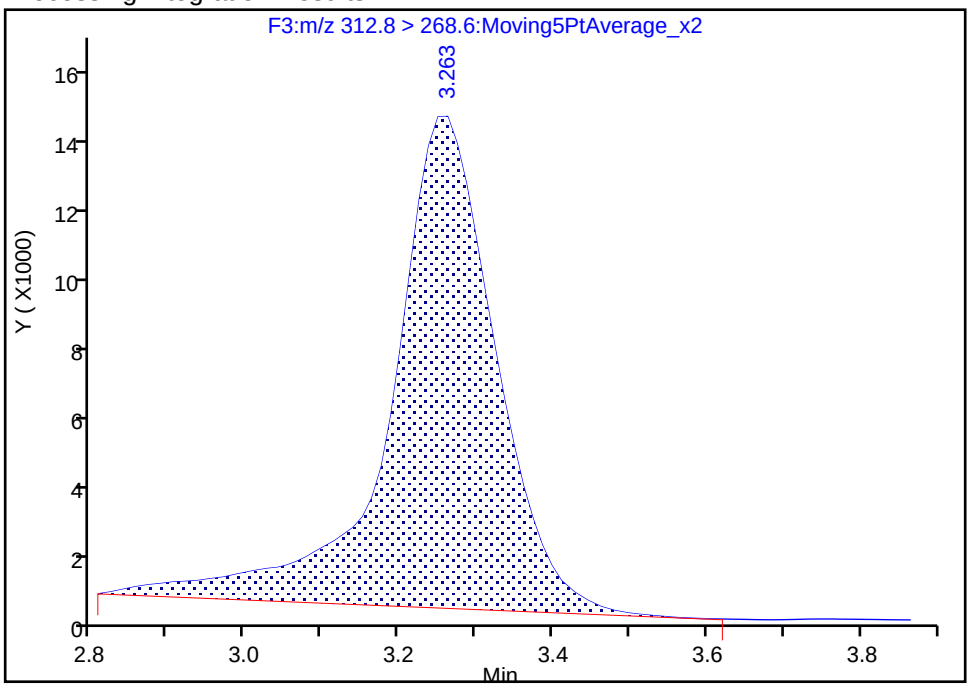
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F3:MRM

7 Perfluorohexanoic acid, CAS: 307-24-4

Signal: 1

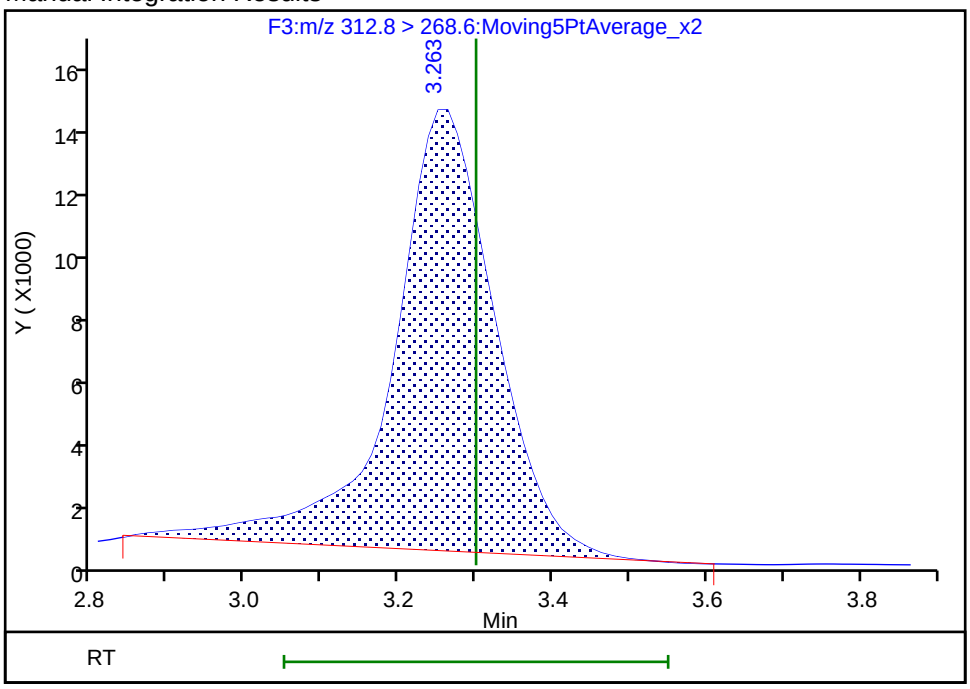
Processing Integration Results

RT: 3.26
Area: 135946
Amount: 20.870239
Amount Units: ng/ml



Manual Integration Results

RT: 3.26
Area: 130433
Amount: 20.037193
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:17
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

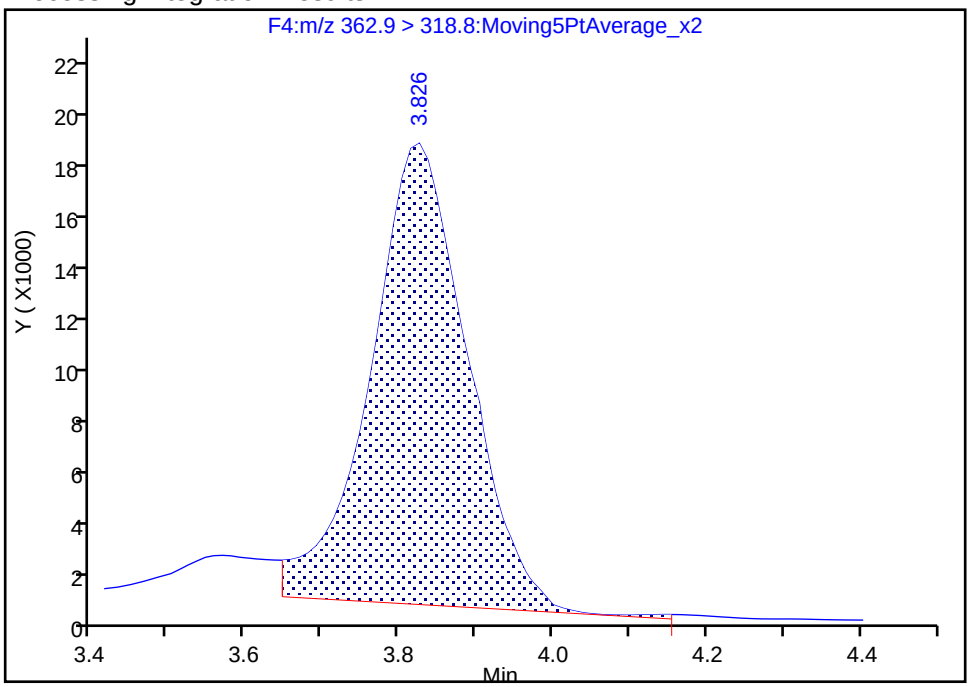
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

9 Perfluoroheptanoic acid, CAS: 375-85-9

Signal: 1

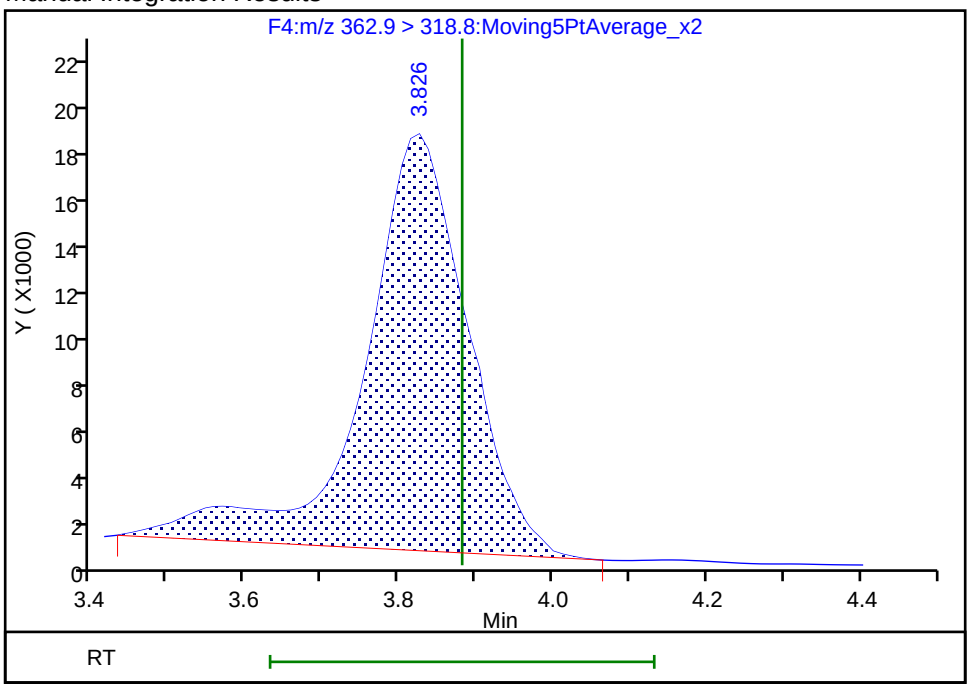
Processing Integration Results

RT: 3.83
Area: 159869
Amount: 20.967289
Amount Units: ng/ml



Manual Integration Results

RT: 3.83
Area: 171870
Amount: 21.516188
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:20
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington

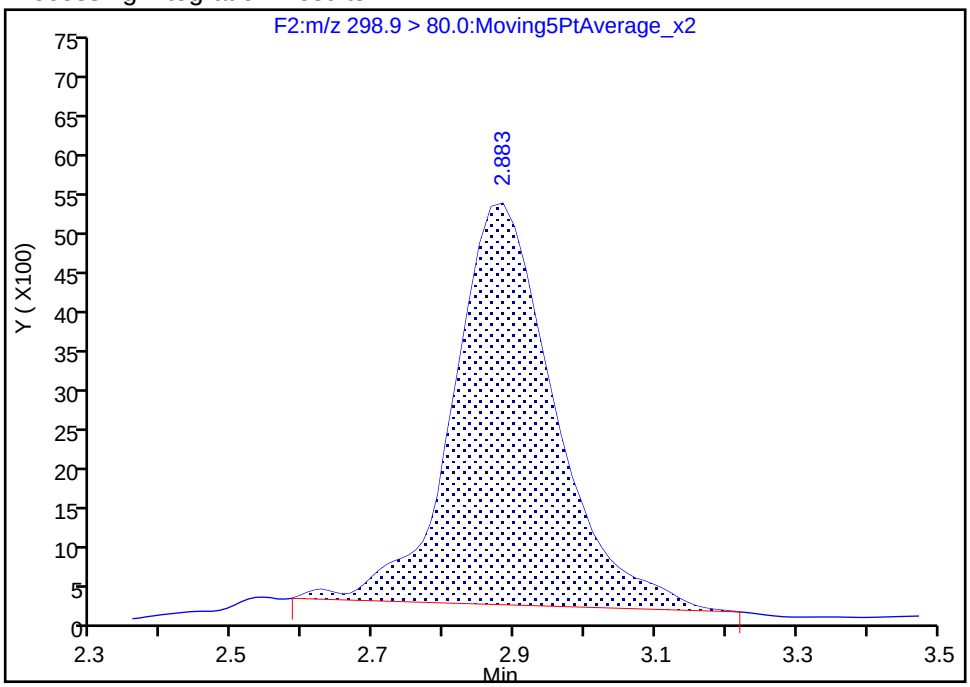
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

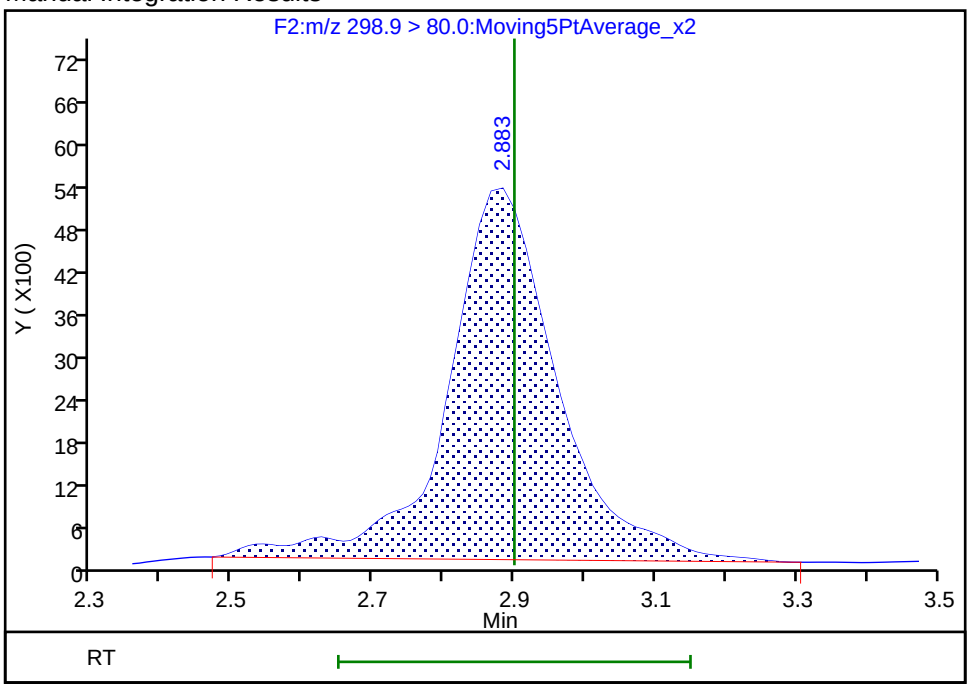
Processing Integration Results

RT: 2.88
Area: 51146
Amount: 17.293426
Amount Units: ng/ml



Manual Integration Results

RT: 2.88
Area: 56521
Amount: 19.110815
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:13
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

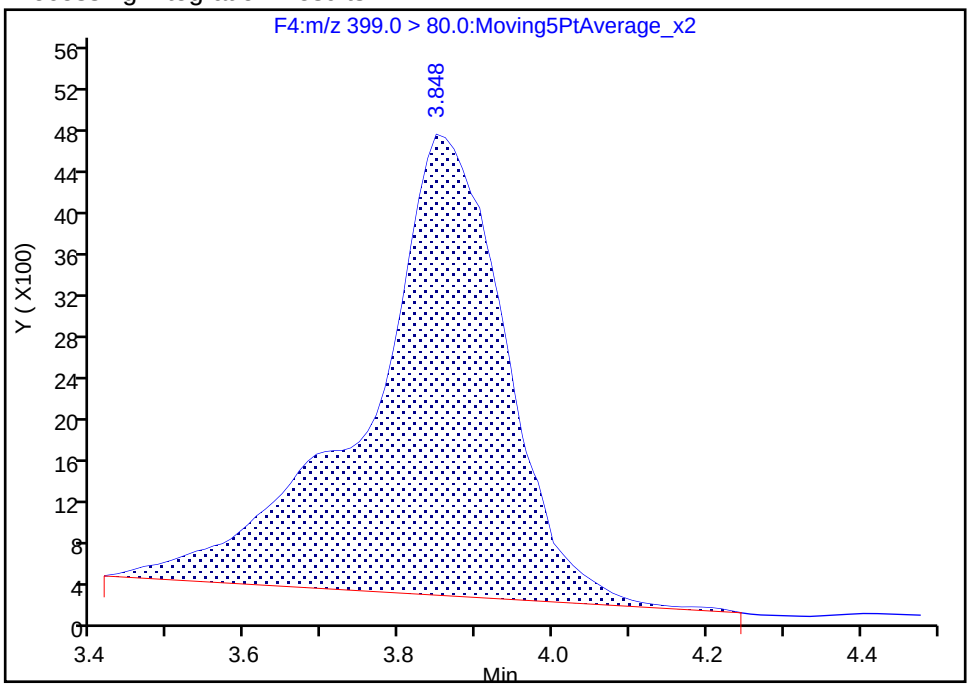
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

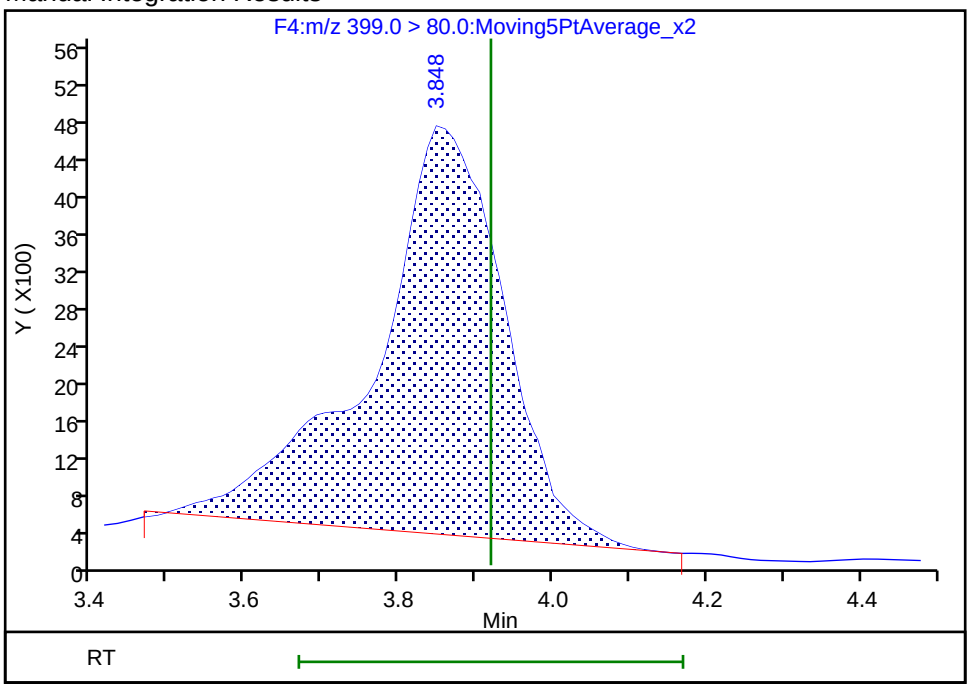
Processing Integration Results

RT: 3.85
Area: 55710
Amount: 15.617432
Amount Units: ng/ml



Manual Integration Results

RT: 3.85
Area: 51497
Amount: 15.636373
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:28
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

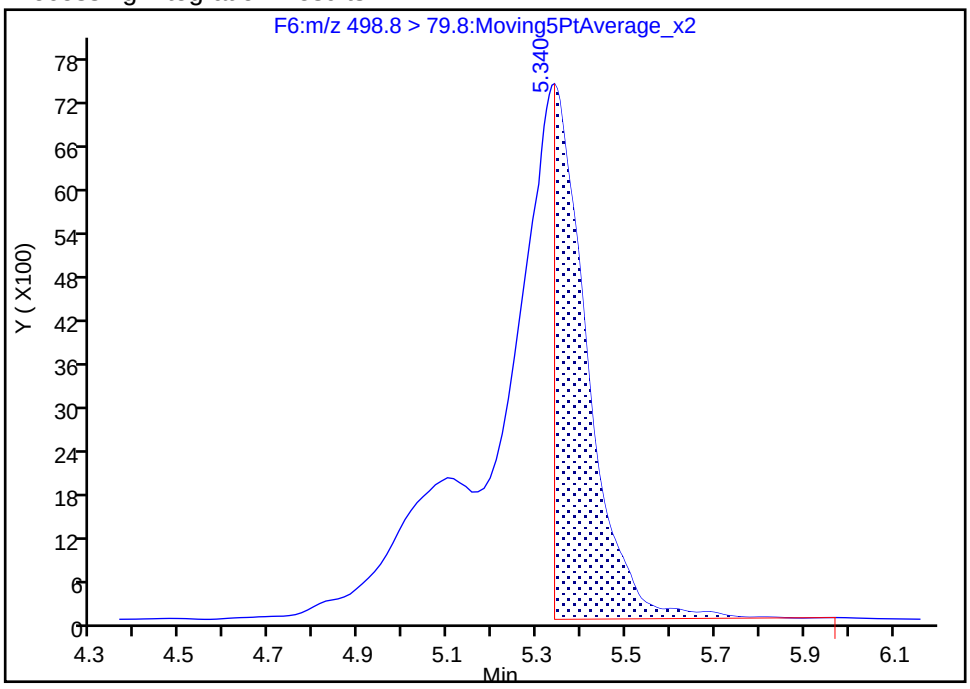
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

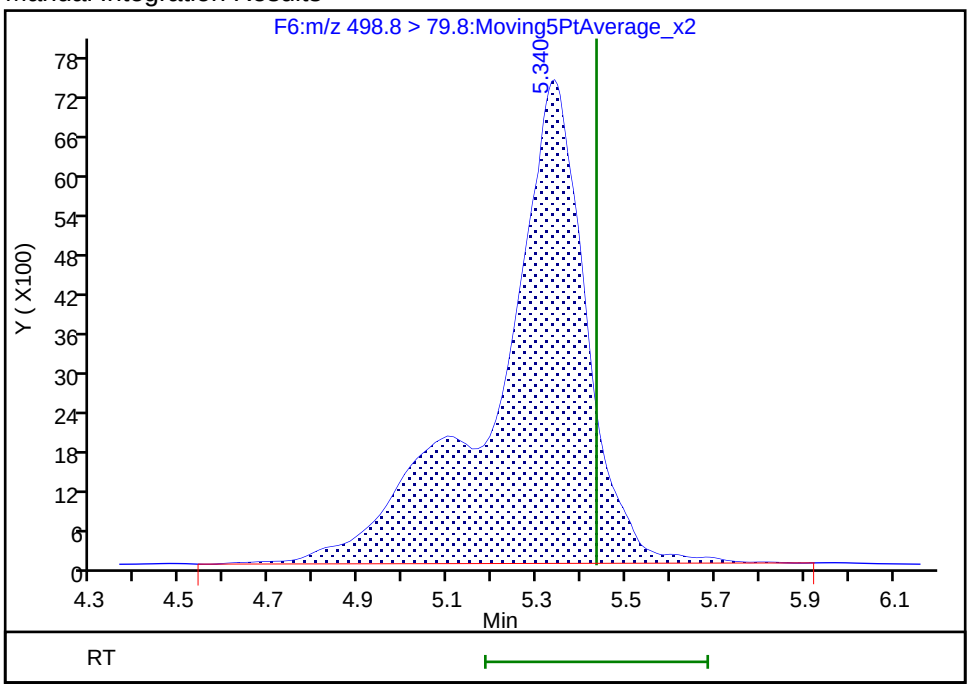
Processing Integration Results

RT: 5.34
Area: 37228
Amount: 7.226024
Amount Units: ng/ml



Manual Integration Results

RT: 5.34
Area: 103969
Amount: 20.088321
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:39
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

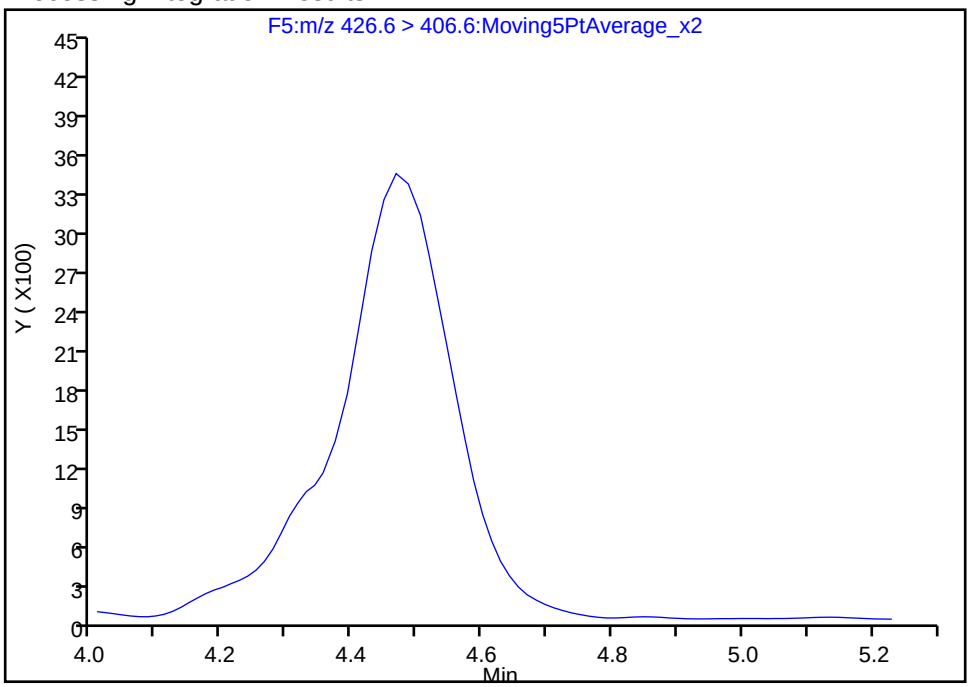
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

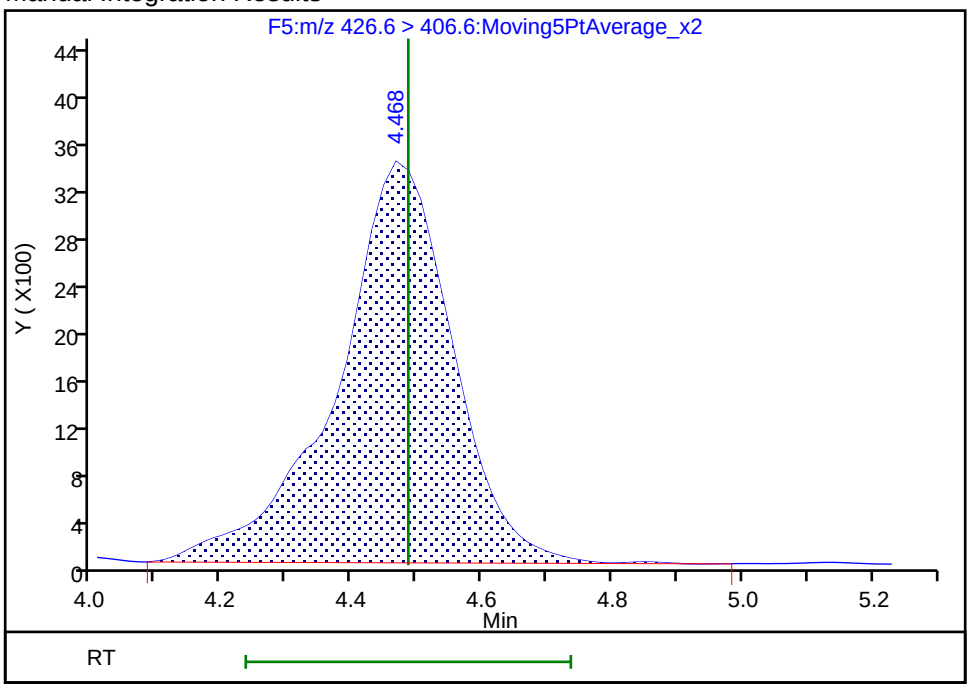
Processing Integration Results

Not Detected
Expected RT: 4.49



Manual Integration Results

RT: 4.47
Area: 41133
Amount: 23.684569
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:18:20
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

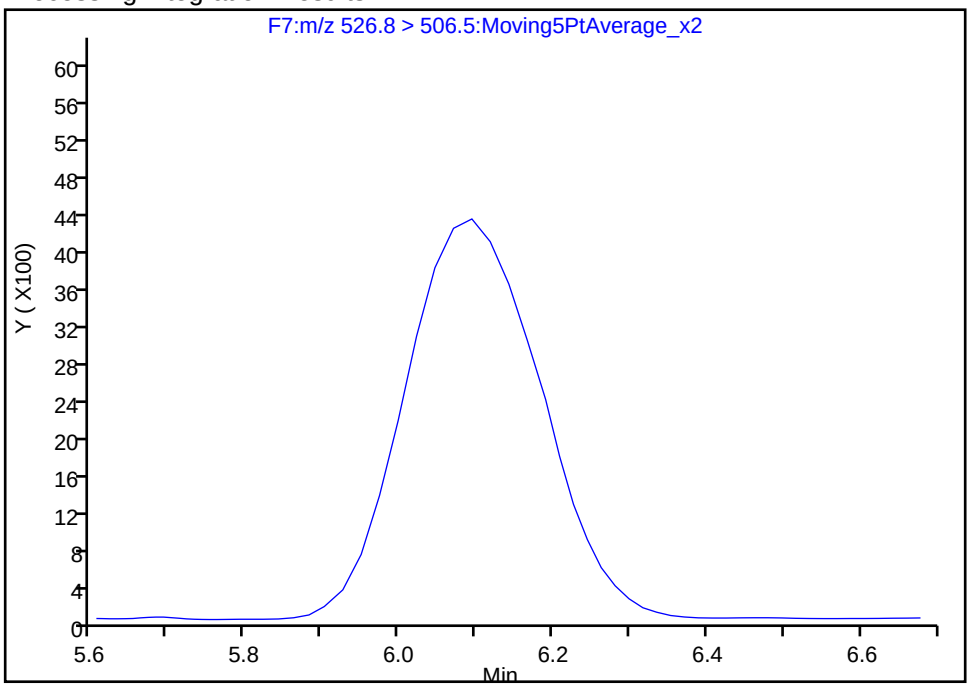
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

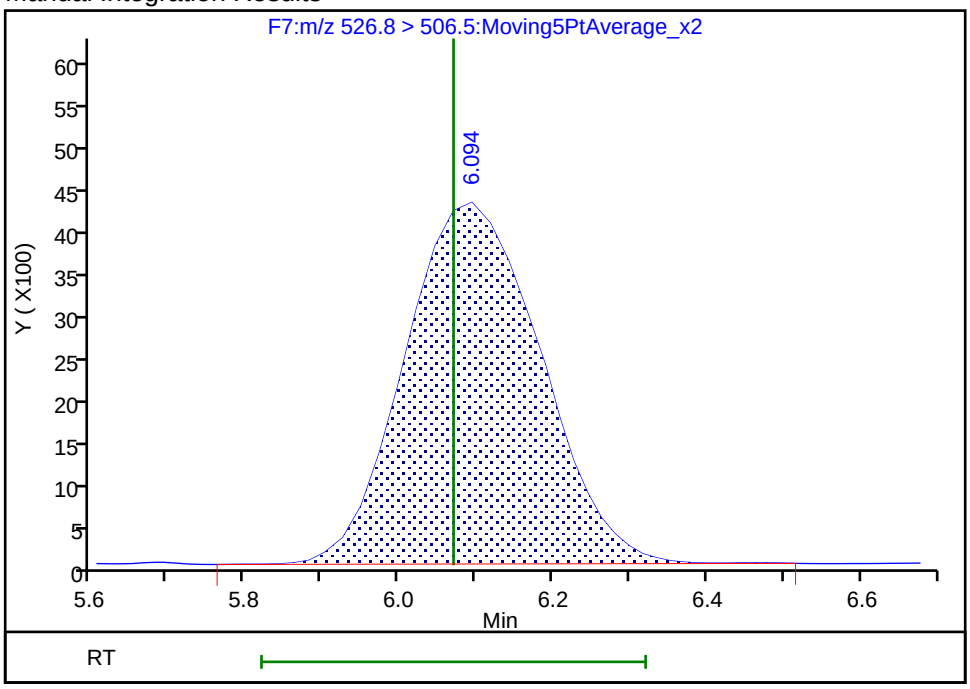
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.09
Area: 52494
Amount: 19.075757
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:18:22
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

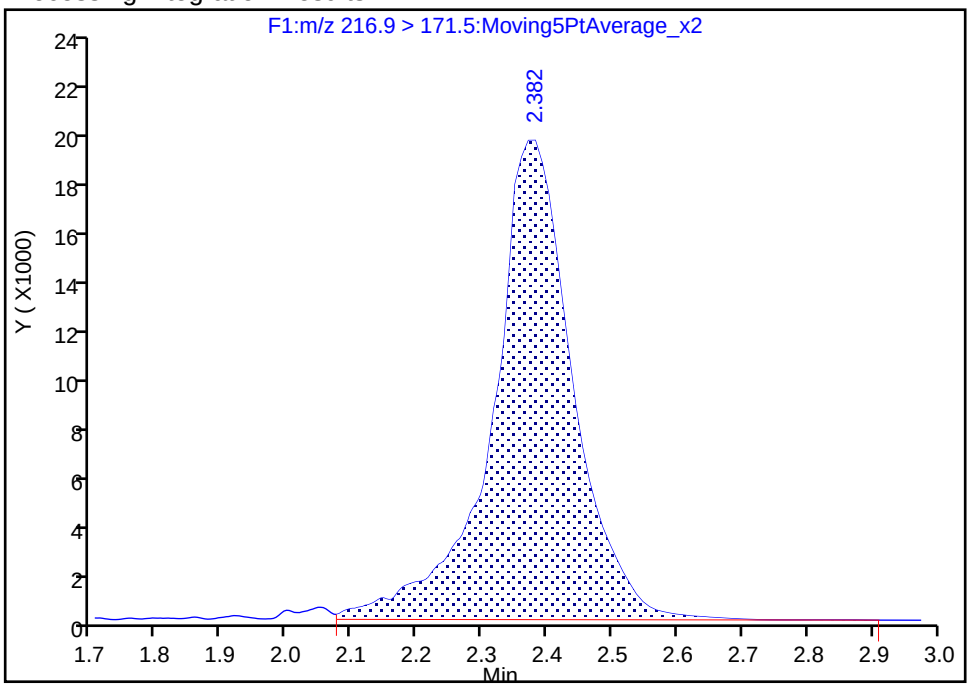
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

D 1 13C4 PFBA, CAS: STL00992

Signal: 1

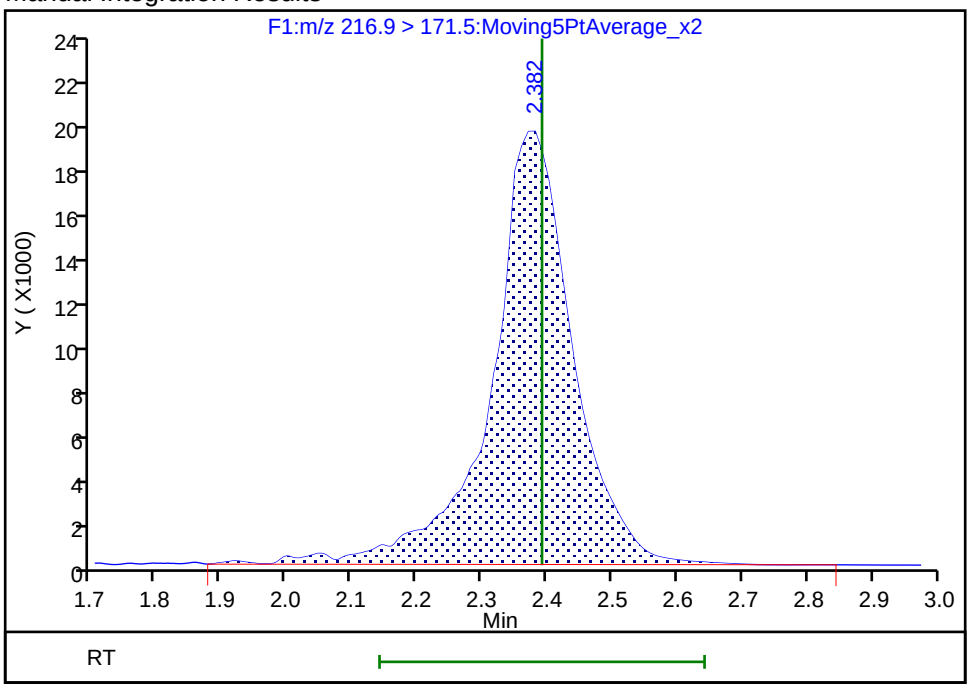
Processing Integration Results

RT: 2.38
Area: 164903
Amount: 33.306493
Amount Units: ng/ml



Manual Integration Results

RT: 2.38
Area: 166853
Amount: 33.700347
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:21:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

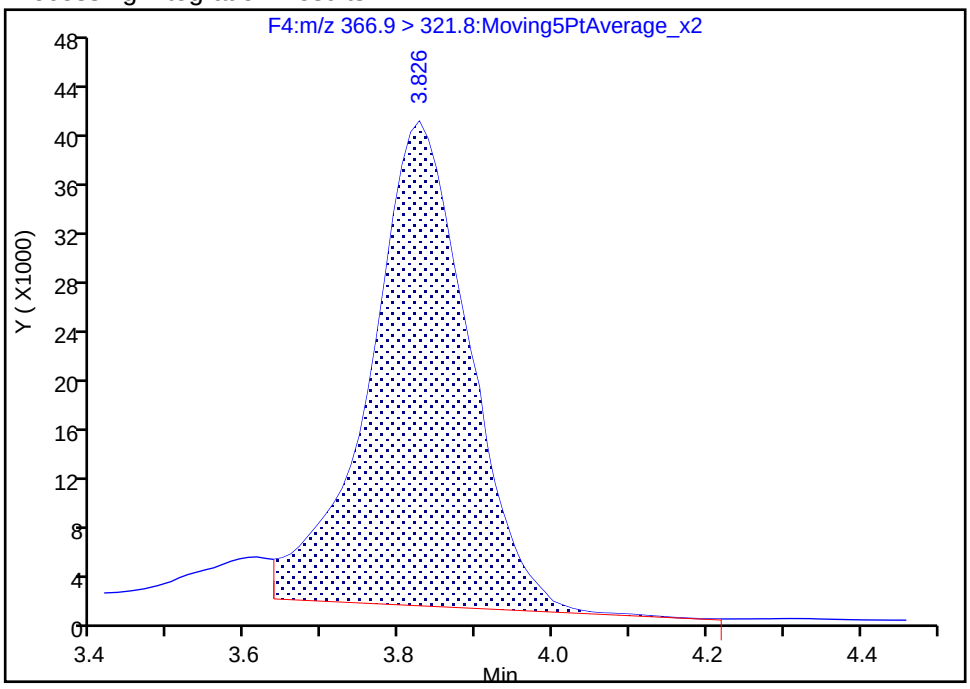
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 10 13C4-PFHpA, CAS: STL01892

Signal: 1

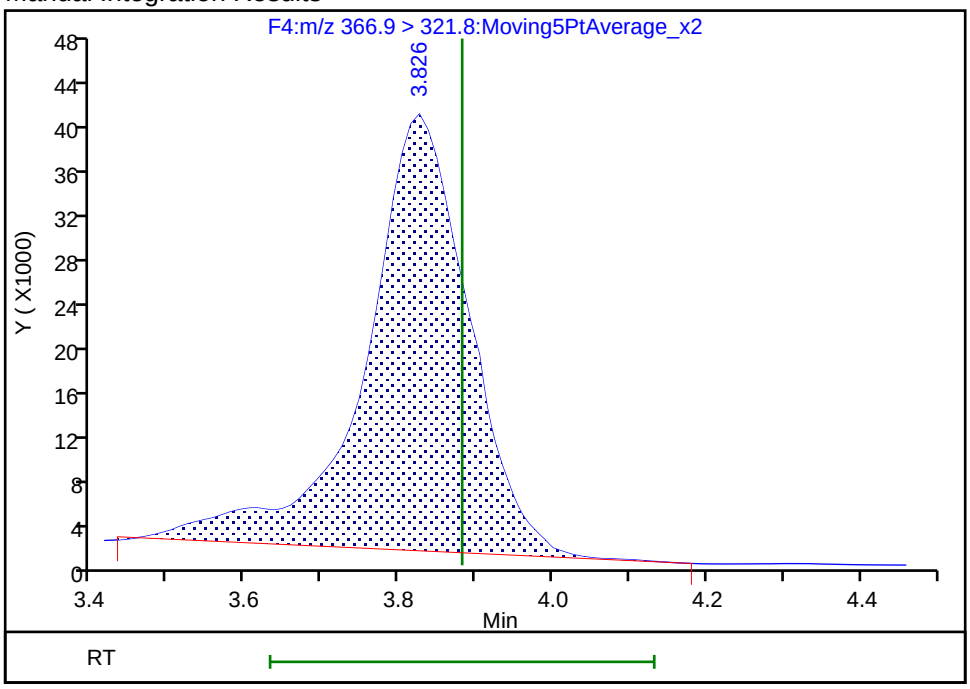
Processing Integration Results

RT: 3.83
Area: 351738
Amount: 36.087775
Amount Units: ng/ml



Manual Integration Results

RT: 3.83
Area: 368424
Amount: 37.799733
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:23
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

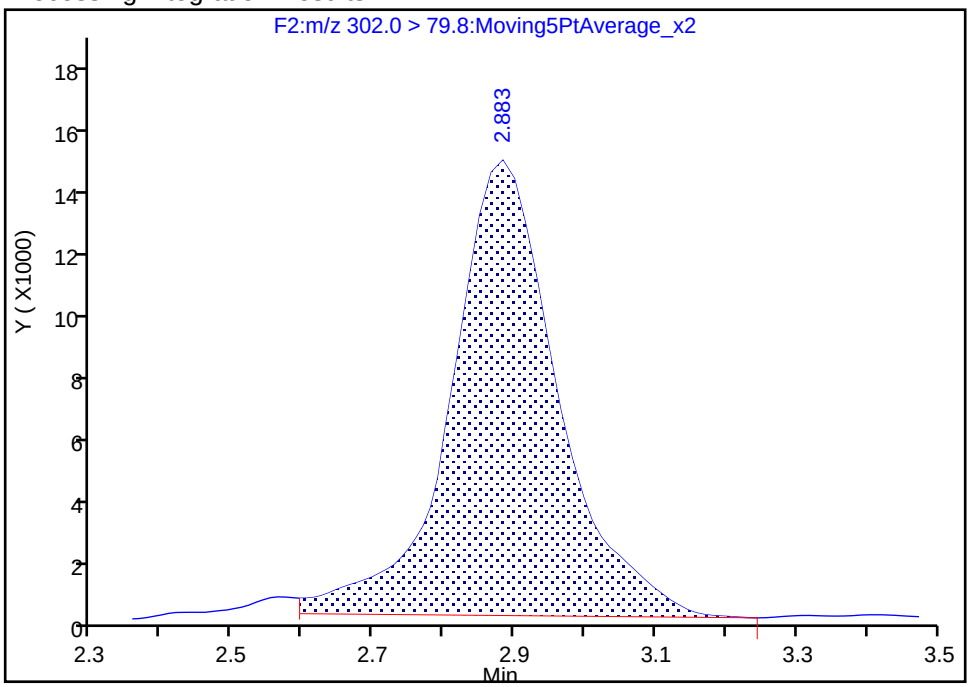
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

D 5 13C3-PFBS, CAS: STL02337

Signal: 1

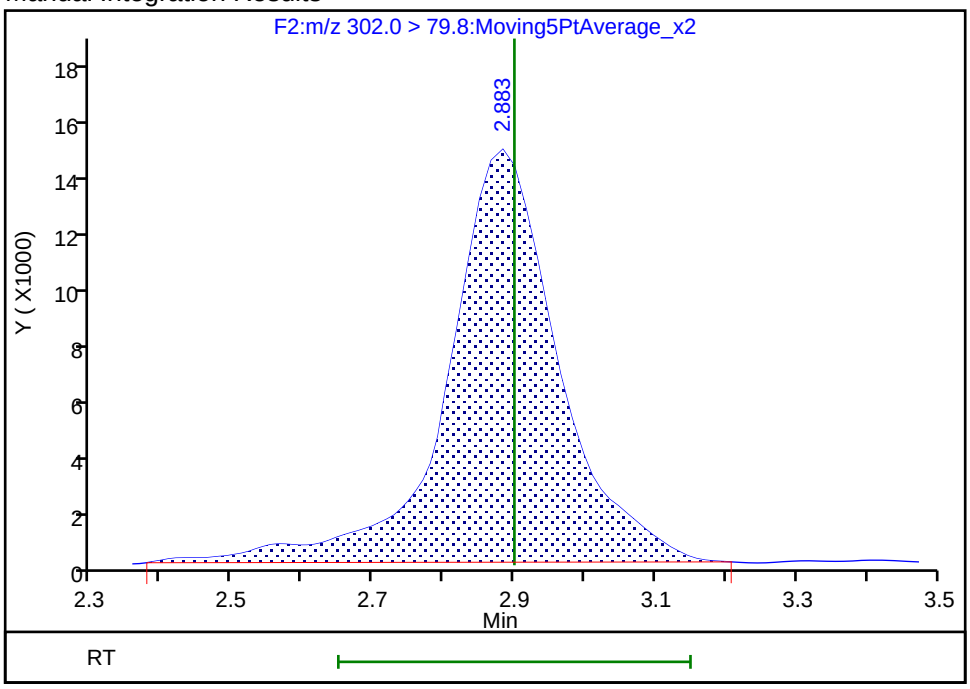
Processing Integration Results

RT: 2.88
Area: 157434
Amount: 32.752967
Amount Units: ng/ml



Manual Integration Results

RT: 2.88
Area: 163233
Amount: 33.959406
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:09
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

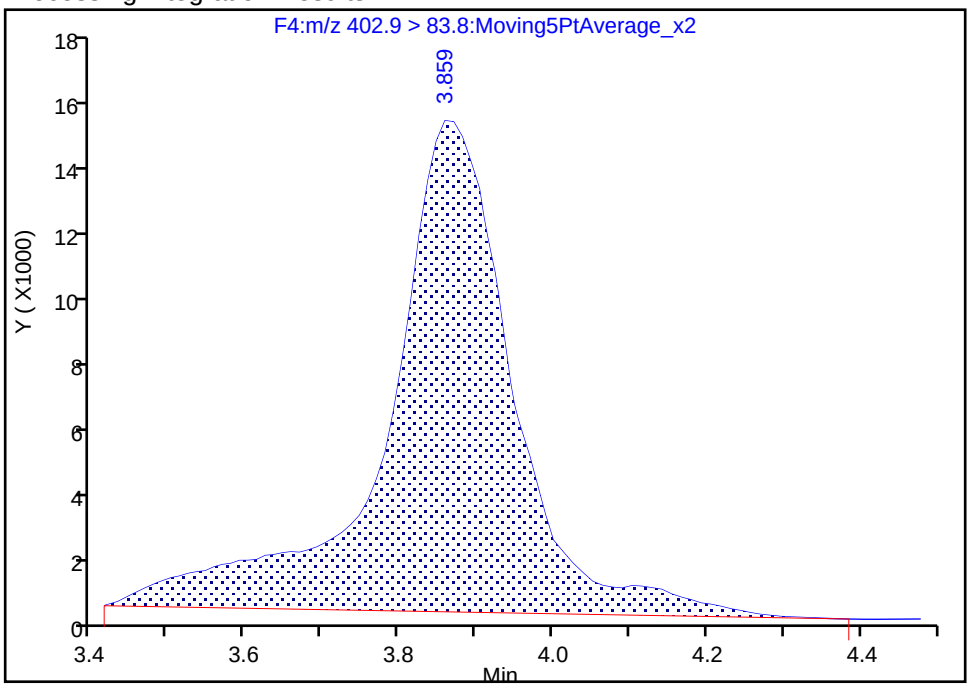
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A32.d
Injection Date: 12-Jun-2018 16:36:43 Instrument ID: LC410
Lims ID: LCS 200-130388/2-A
Client ID:
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 32
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

D 12 18O2 PFHxS, CAS: STL00994

Signal: 1

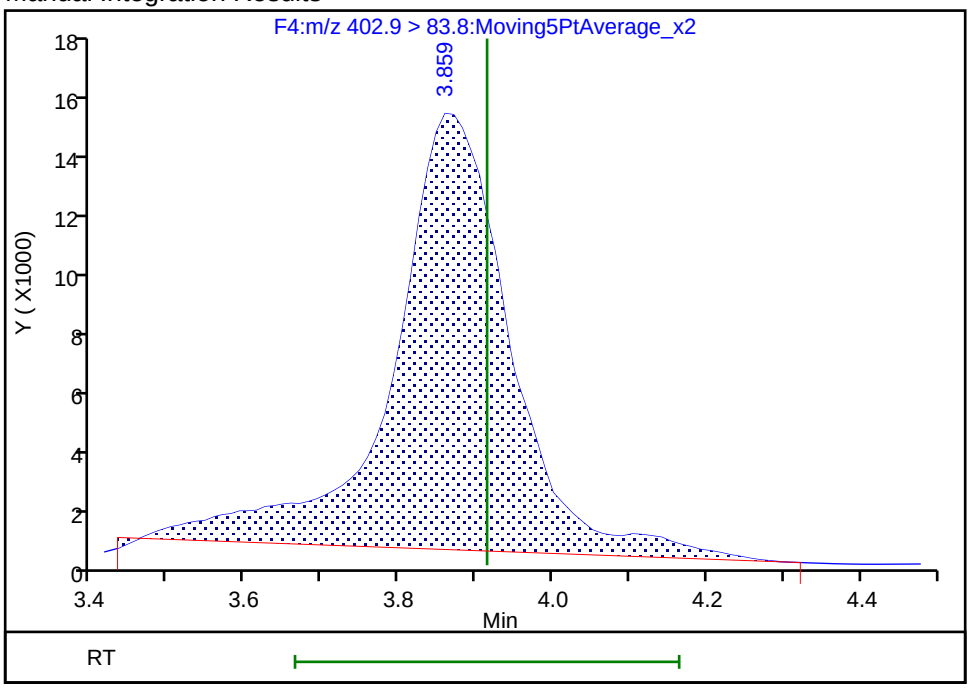
Processing Integration Results

RT: 3.86
Area: 166499
Amount: 36.223875
Amount Units: ng/ml



Manual Integration Results

RT: 3.86
Area: 153716
Amount: 33.442779
Amount Units: ng/ml



Reviewer: chirgwinb, 13-Jun-2018 13:22:31
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: LMS-3 MS | Lab Sample ID: 200-43678-2 MS

Matrix: Water | Lab File ID: PF061218A47.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 12:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 275.1(mL) | Date Analyzed: 06/12/2018 20:38

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	43.52		1.82	0.40
2706-90-3	Perfluoropentanoic acid (PFPeA)	59.21		1.82	0.40
307-24-4	Perfluorohexanoic acid (PFHxA)	47.79		1.82	0.40
375-85-9	Perfluoroheptanoic acid (PFHpA)	46.24		1.82	0.26
335-67-1	Perfluorooctanoic acid (PFOA)	50.13		1.82	0.43
375-95-1	Perfluorononanoic acid (PFNA)	45.74		1.82	0.24
335-76-2	Perfluorodecanoic acid (PFDA)	38.23		1.82	0.40
2058-94-8	Perfluoroundecanoic acid (PFUnA)	43.26		1.82	0.40
307-55-1	Perfluorododecanoic acid (PFDoA)	38.00		1.82	0.40
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	36.35		1.82	0.40
376-06-7	Perfluorotetradecanoic acid (PFTeA)	37.27		1.82	0.40
375-73-5	Perfluorobutanesulfonic acid (PFBS)	48.14		1.82	0.80
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	46.24		1.82	0.25
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	37.52		1.82	0.40
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	64.38		1.82	0.27
335-77-3	Perfluorodecanesulfonic acid (PFDS)	27.00		1.82	0.40
754-91-6	Perfluorooctane Sulfonamide (FOSA)	38.82		1.82	0.40
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	32.60		1.82	0.55
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	33.64		1.82	0.55
27619-97-2	6:2 FTS	36.11		1.82	0.55
39108-34-4	8:2 FTS	37.93		1.82	0.55

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: LMS-3 MS | Lab Sample ID: 200-43678-2 MS

Matrix: Water | Lab File ID: PF061218A47.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 12:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 275.1(mL) | Date Analyzed: 06/12/2018 20:38

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	26		25-150
STL01893	13C5 PFPeA	47		25-150
STL00993	13C2 PFHxA	68		25-150
STL01892	13C4-PFHpA	83		25-150
STL00990	13C4 PFOA	101		25-150
STL00995	13C5 PFNA	99		25-150
STL00996	13C2 PFDA	94		25-150
STL00997	13C2 PFUnA	86		25-150
STL00998	13C2 PFDoA	83		25-150
STL02116	13C2-PFTeDA	87		25-150
STL02337	13C3-PFBS	71		25-150
STL00994	18O2 PFHxS	89		25-150
STL00991	13C4 PFOS	99		25-150
STL01056	13C8 FOSA	65		25-150
STL02118	d3-NMeFOSAA	71		25-150
STL02117	d5-NEtFOSAA	75		25-150
STL02279	M2-6:2FTS	299		25-150
STL02280	M2-8:2FTS	149		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Sample Type: MS
Inject. Date: 12-Jun-2018 20:38:45 ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-047 2 MS
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:22:16 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 19-Jun-2018 14:37:38

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.351	2.382	-0.031	1.003	17327	23.9		120	28.5	M
D 1 13C4 PFBA										
216.9 > 171.5	2.343	2.392	-0.049	1.000	49035	12.8		25.7	41.2	
D 4 13C5-PFPeA										
267.7 > 222.6	2.781	2.818	-0.037	1.000	132391	23.6		47.3	495	
3 Perfluoropentanoic acid										M
262.9 > 218.8	2.781	2.834	-0.053	1.000	106399	32.6		163	92.1	M
D 5 13C3-PFBS										M
302.0 > 79.8	2.850	2.900	-0.050	1.000	122585	33.1		71.1	108	M
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.850	2.900	-0.050	1.000	58834	26.5		150	32.6	M
7 Perfluorohexanoic acid										
312.8 > 268.6	3.226	3.300	-0.074	1.000	131190	26.3		131	73.1	
D 8 13C2 PFHxA										
314.8 > 269.6	3.226	3.300	-0.074	1.000	223439	34.1		68.3	3121	
9 Perfluoroheptanoic acid										
362.9 > 318.8	3.804	3.882	-0.078	1.000	173214	25.4		127	76.5	
D 10 13C4-PFHpA										
366.9 > 321.8	3.804	3.882	-0.078	1.000	313692	41.7		83.5	1305	
D 12 18O2 PFHxS										
402.9 > 83.8	3.859	3.914	-0.055	1.000	148438	41.9		88.5	405	
11 Perfluorohexanesulfonic acid										
399.0 > 80.0	3.848	3.919	-0.071	0.997	81799	25.4		140	353	
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.468	4.486	-0.018	1.000	60450	19.9		0.0	630	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.468	4.546	-0.078	1.000	141417	142.2		299	784	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.519	4.601	-0.082	1.000	289400	50.3		101	745	
* 17 13C2-PFOA										
414.9 > 369.8	4.519	4.601	-0.082		302053	50.0			647	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.519	4.615	-0.096	1.000	182556	27.6		138	152	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.546	4.642	-0.096	0.853	74334	20.6		108	194	
D 19 13C5 PFNA										
467.8 > 422.8	5.334	5.422	-0.088	1.000	376029	49.7		99.3	1293	
20 Perfluorononanoic acid										
462.8 > 418.8	5.328	5.422	-0.094	0.999	186100	25.2		126	449	
22 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.334	5.434	-0.100	1.001	148743	35.4		191	383	M
D 21 13C4 PFOS										
502.8 > 79.8	5.328	5.440	-0.112	1.000	180701	47.1		98.5	457	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.094	6.070	0.024	1.000	55198	20.9		0.0	1203	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	146909	71.4		149	1300	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.118	6.227	-0.109	1.000	223601	21.0		105	1752	
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	515970	46.8		93.6	3829	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	82254	35.4		70.8	888	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.494	6.602	-0.108	1.003	37249	17.9		89.7	283	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.861	6.959	-0.098	1.000	74159	37.3		74.6	787	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.861	6.973	-0.112	1.000	30543	18.5		92.5	1150	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.874	6.973	-0.099	1.290	58992	14.9		77.1	431	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.888	6.987	-0.099	1.000	231226	23.8		119	1021	
D 33 13C2 PFUnA										
564.8 > 519.8	6.888	6.987	-0.099	1.000	436241	43.2		86.5	4001	
34 Perfluorooctane Sulfonamide										
497.8 > 77.8	7.079	7.079	0.0	1.000	122524	21.4		107	1136	
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	277394	32.7		65.4	2745	
D 36 13C2 PFDoA										M
614.8 > 569.6	7.586	7.684	-0.098	1.000	503339	41.3		82.6	5109	M
37 Perfluorododecanoic acid										
612.8 > 568.6	7.586	7.684	-0.098	1.000	199117	20.9		105	2053	
38 Perfluorotridecanoic acid										
662.8 > 618.6	8.188	8.294	-0.106	1.079	201930	20.0		100	1357	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 39 13C2-PFTeDA										
714.8 > 669.6	8.734	8.855	-0.121	1.000	537132	43.5		86.9	812	
40 Perfluorotetradecanoic acid										
712.8 > 668.6	8.747	8.862	-0.115	1.002	199728	20.5		103	1749	
712.8 > 168.8	8.747	8.862	-0.115	1.002	41127		4.86(0.00-0.00)		892	
712.8 > 218.8	8.740	8.862	-0.122	1.001	23701		8.43(0.00-0.00)		346	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:22:17 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d

Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410

Lims ID: 200-43678-A-2-B MS

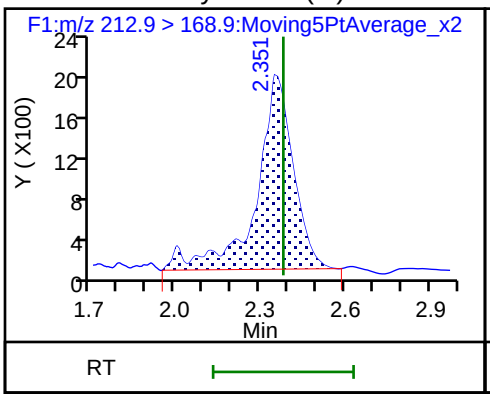
Client ID: LMS-3

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47

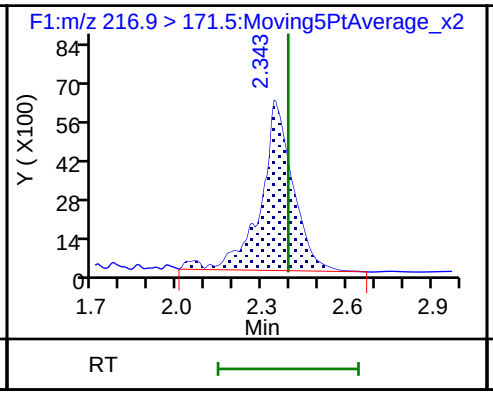
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

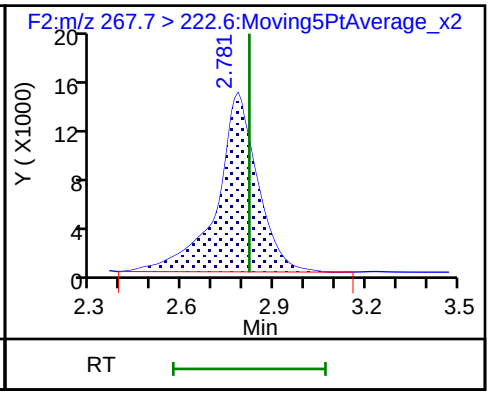
2 Perfluorobutyric acid (M)



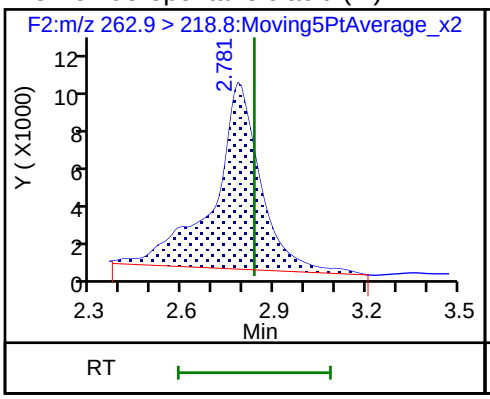
D 1 13C4 PFBA



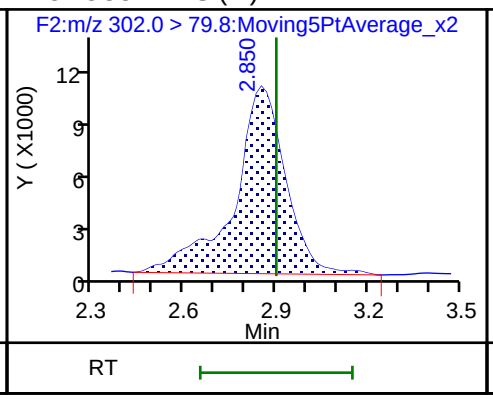
D 4 13C5-PFPeA



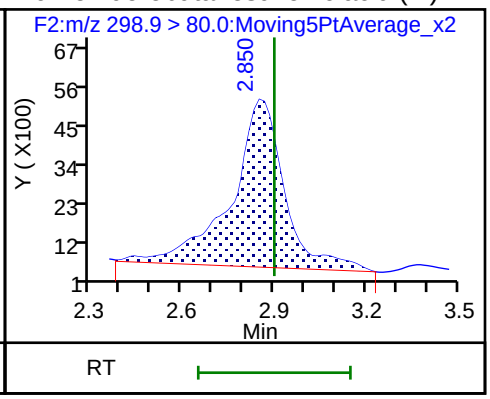
3 Perfluoropentanoic acid (M)



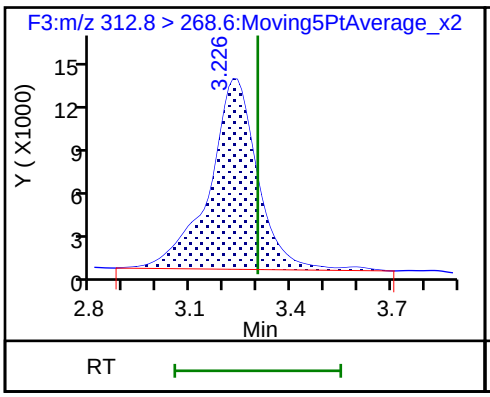
D 5 13C3-PFBS (M)



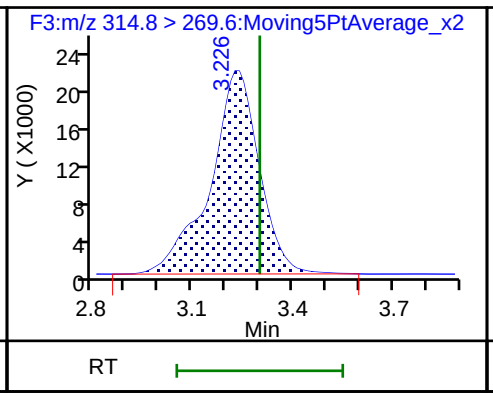
6 Perfluorobutanesulfonic acid (M)



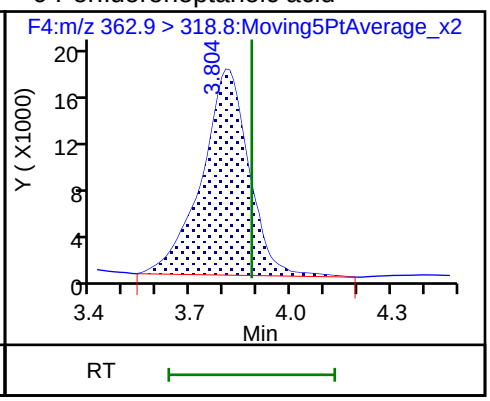
7 Perfluorohexanoic acid



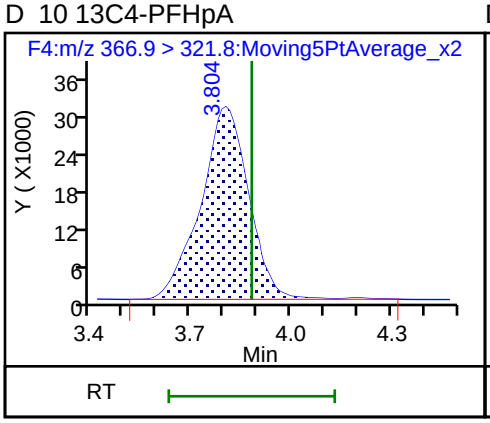
D 8 13C2 PFHxA



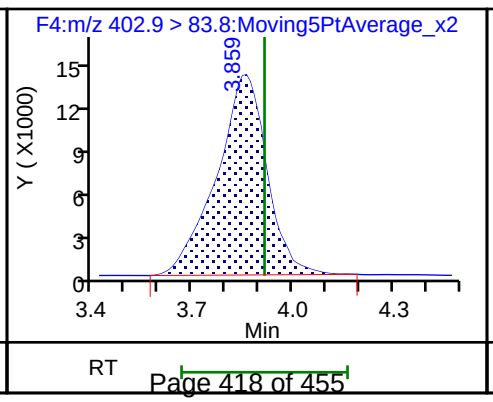
9 Perfluoroheptanoic acid



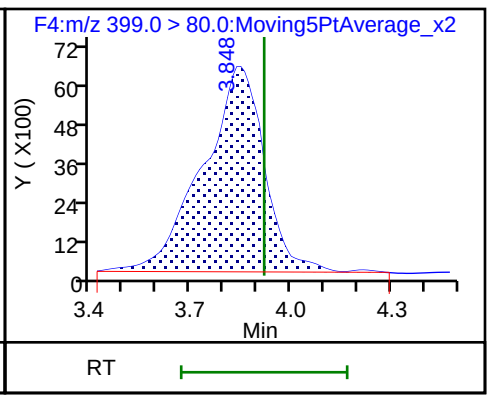
D 10 13C4-PFHpA



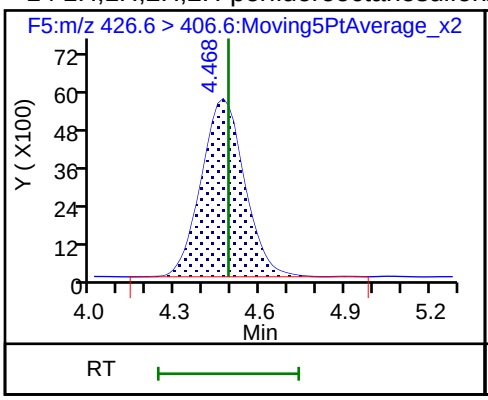
D 12 18O2 PFHxS



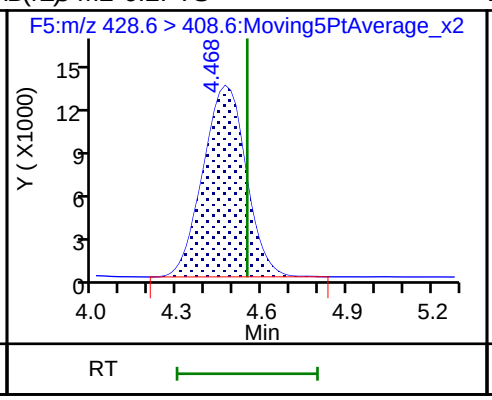
11 Perfluorohexanesulfonic acid



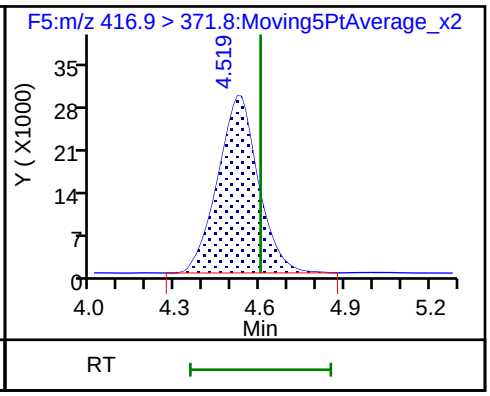
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



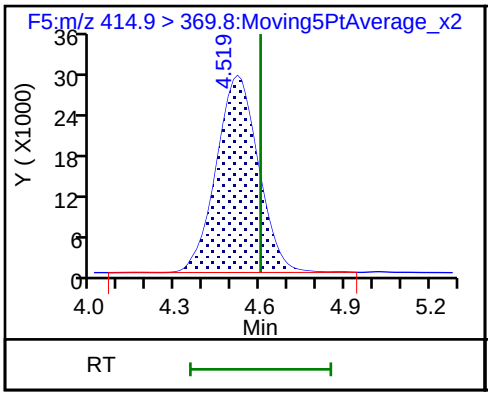
D 13 M2-6:2FTS



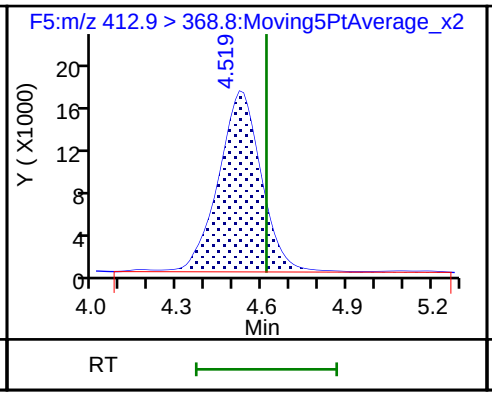
D 16 13C4 PFOA



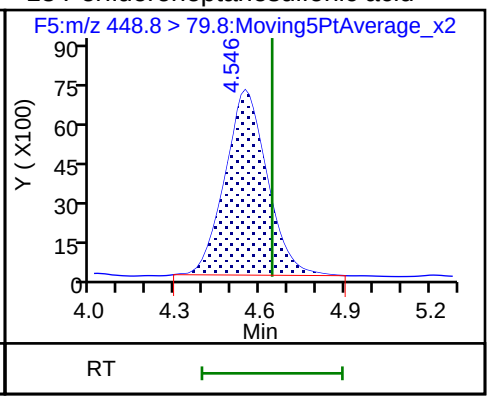
* 17 13C2-PFOA



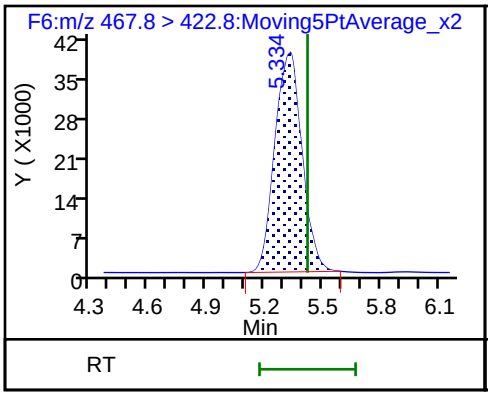
15 Perfluorooctanoic acid



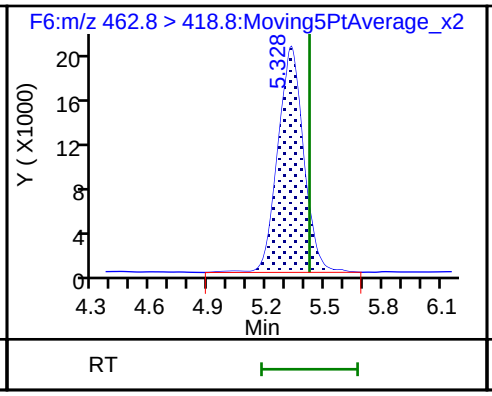
18 Perfluoroheptanesulfonic acid



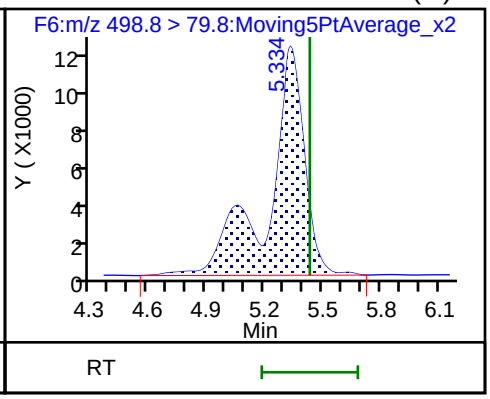
D 19 13C5 PFNA



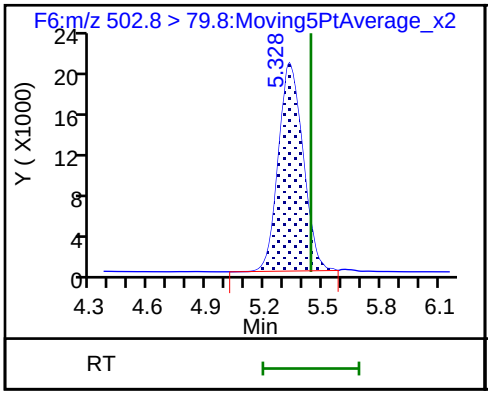
20 Perfluorononanoic acid



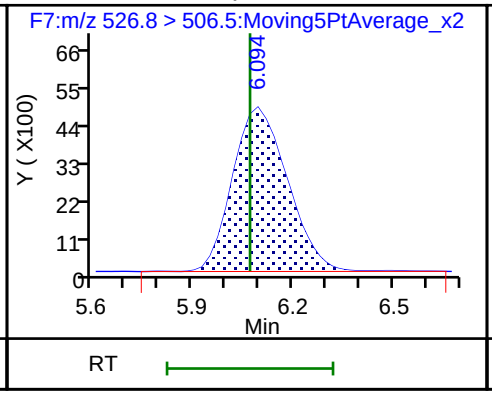
22 Perfluorooctane sulfonic acid (M)



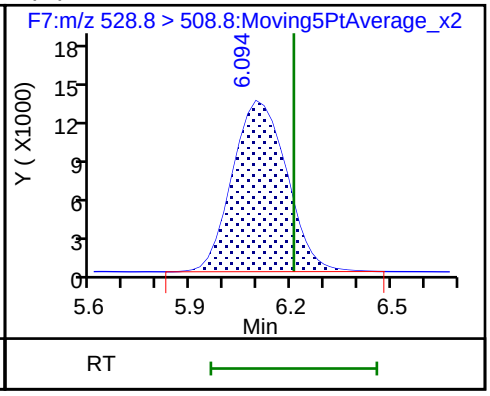
D 21 13C4 PFOS



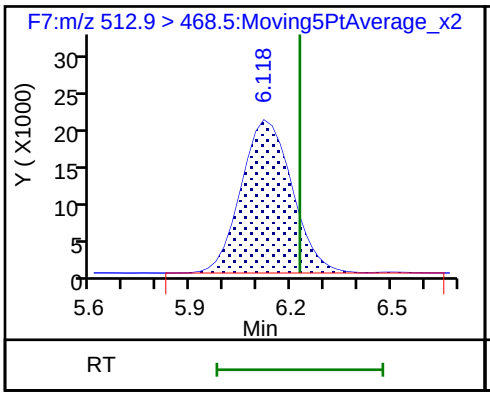
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



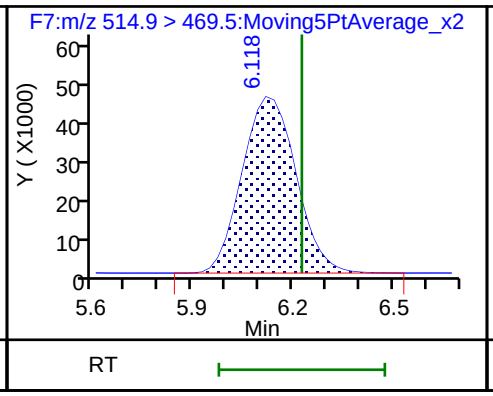
D 24 M2-8:2FTS



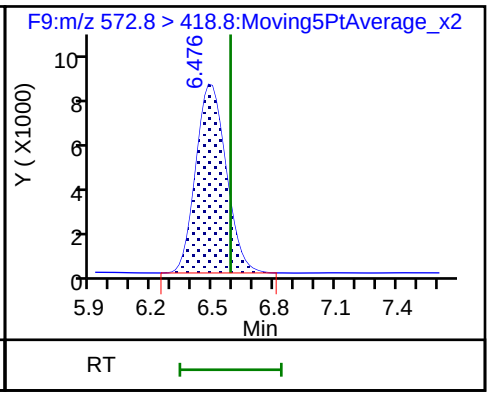
25 Perfluorodecanoic acid



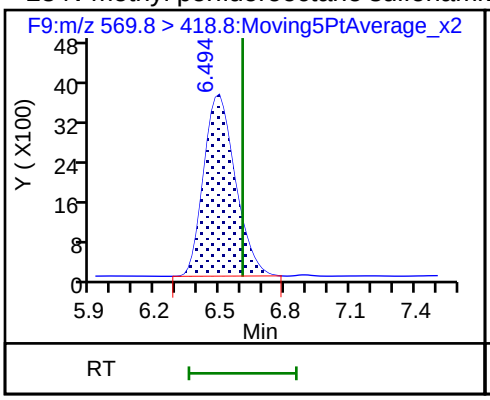
D 26 13C2 PFDA



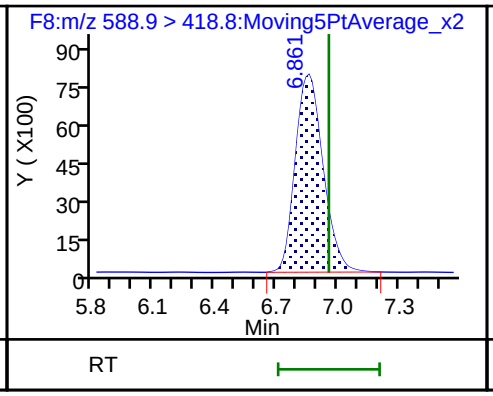
D 27 d3-NMeFOSAA



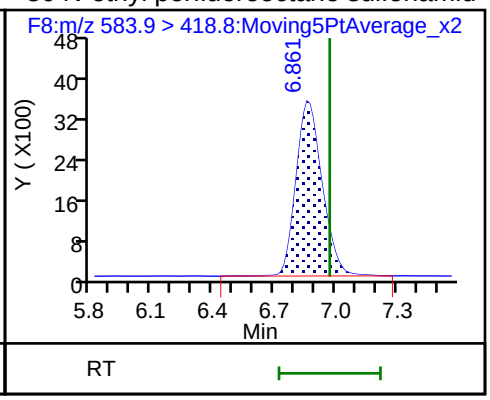
28 N-methyl perfluorooctane sulfonami



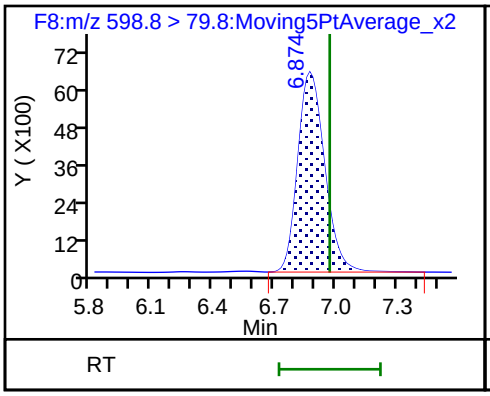
D 29 d5-NEtFOSAA



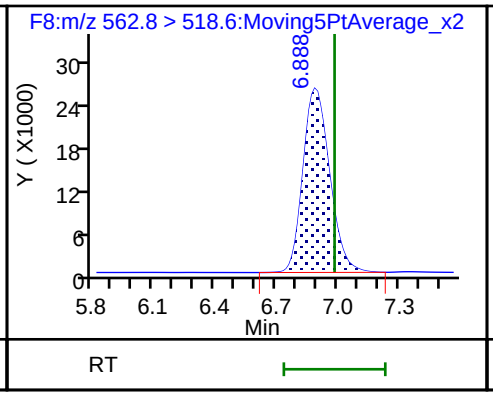
30 N-ethyl perfluorooctane sulfonamid



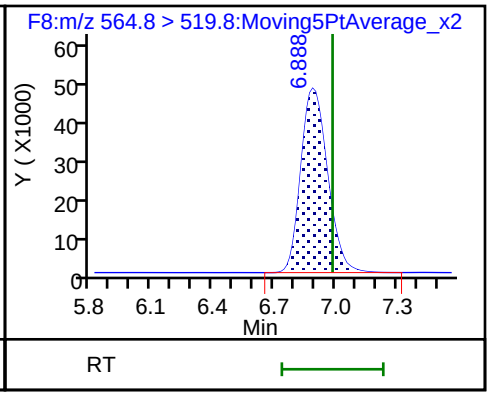
31 Perfluorodecane Sulfonic acid



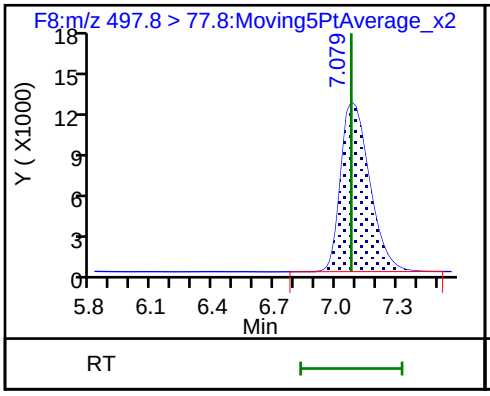
32 Perfluoroundecanoic acid



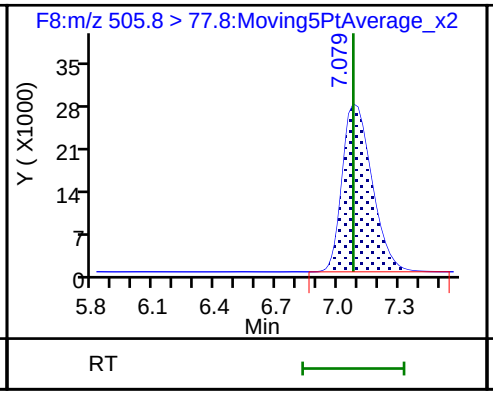
D 33 13C2 PFUnA



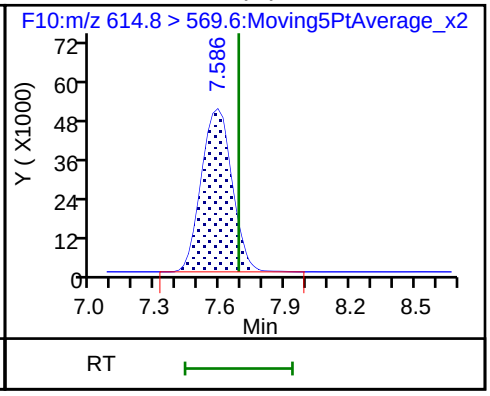
34 Perfluorooctane Sulfonamide



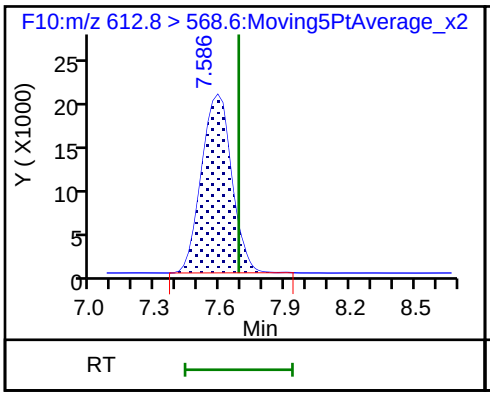
D 35 13C8 FOSA



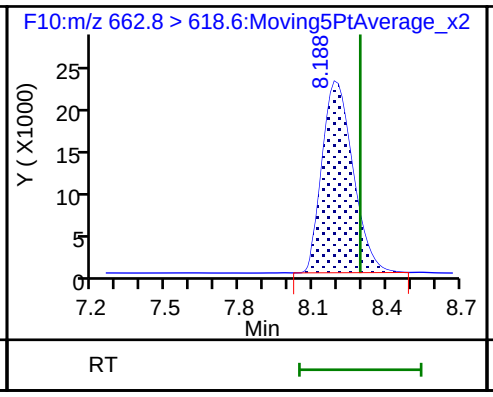
D 36 13C2 PFDoA (M)



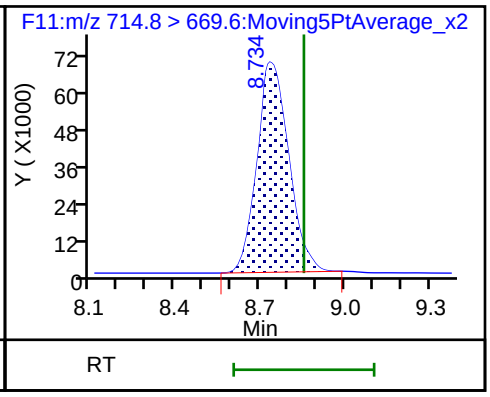
37 Perfluorododecanoic acid



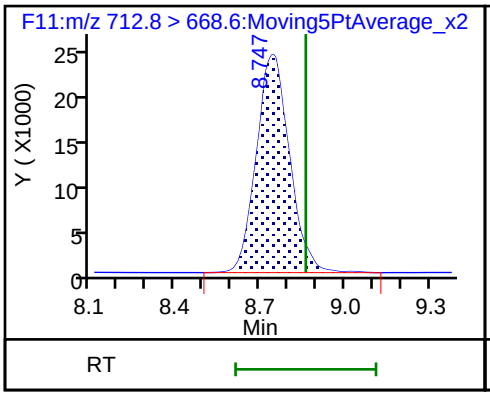
38 Perfluorotridecanoic acid



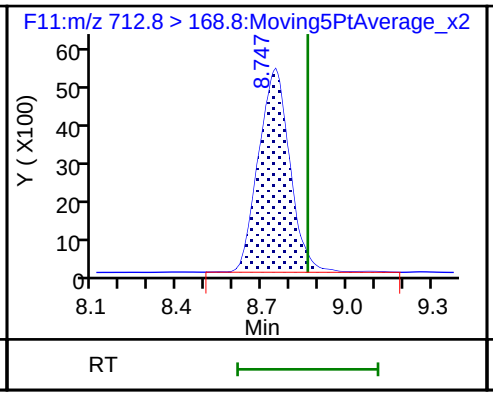
D 39 13C2-PFTeDA



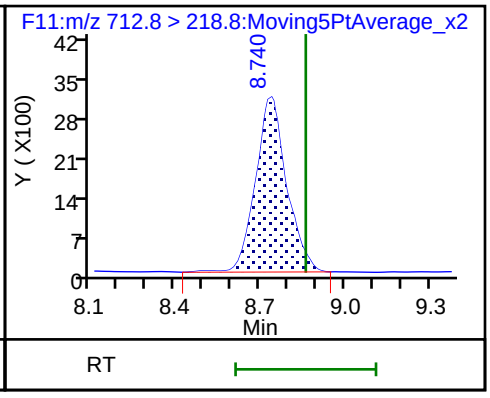
40 Perfluorotetradecanoic acid



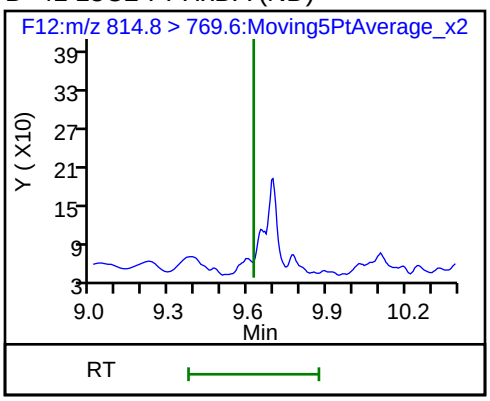
40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



D 41 13C2-PFHxDA (ND)



Manual Integration/User Assign Peak Report

TestAmerica Burlington

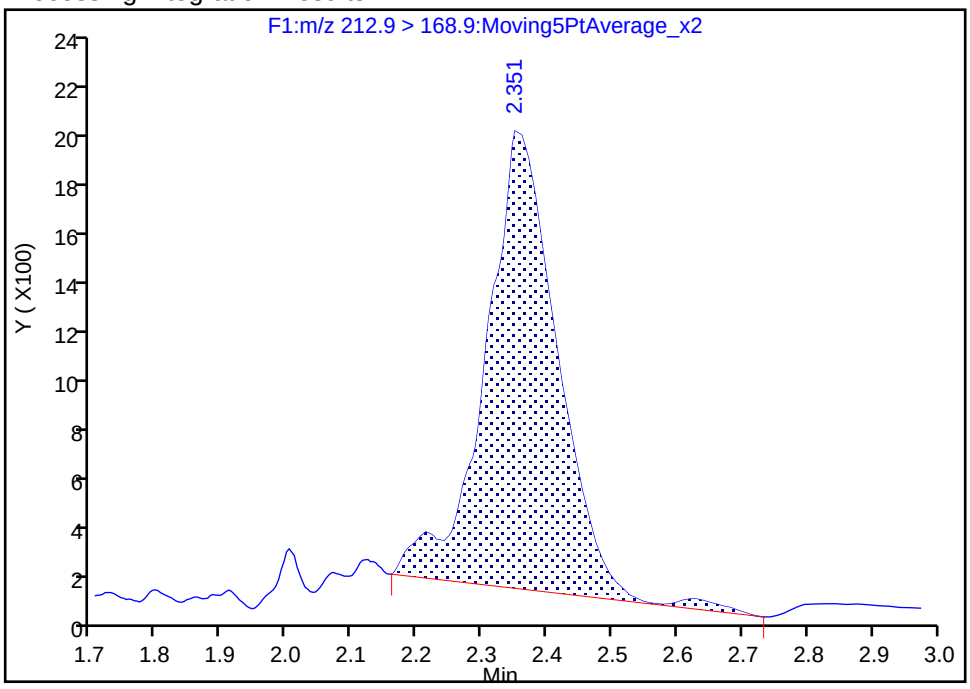
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

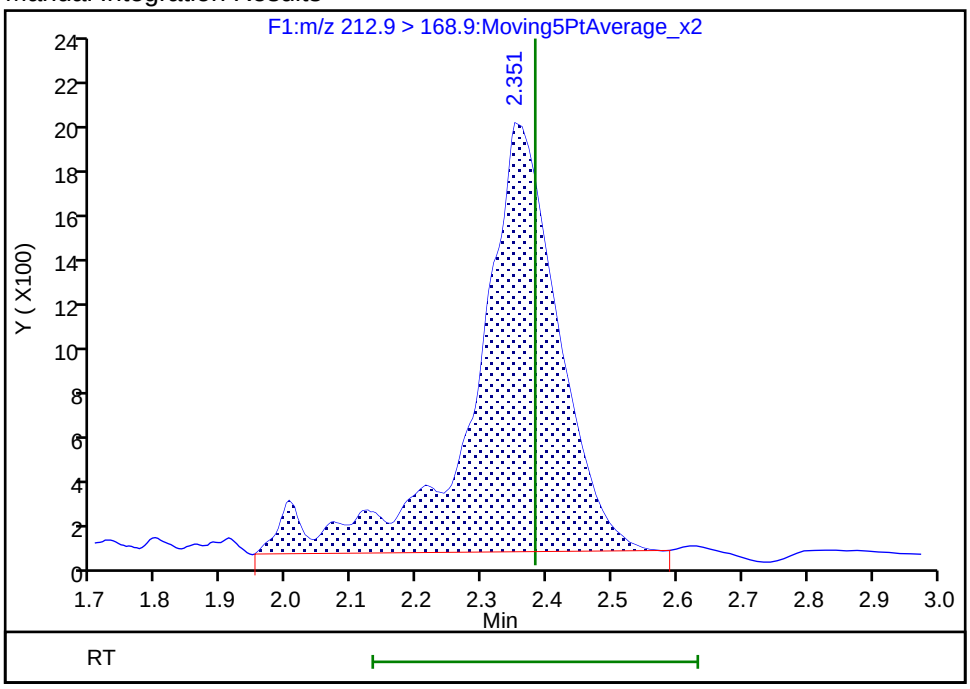
Processing Integration Results

RT: 2.35
Area: 14363
Amount: 19.871707
Amount Units: ng/ml



Manual Integration Results

RT: 2.35
Area: 17327
Amount: 23.946906
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:04:51
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

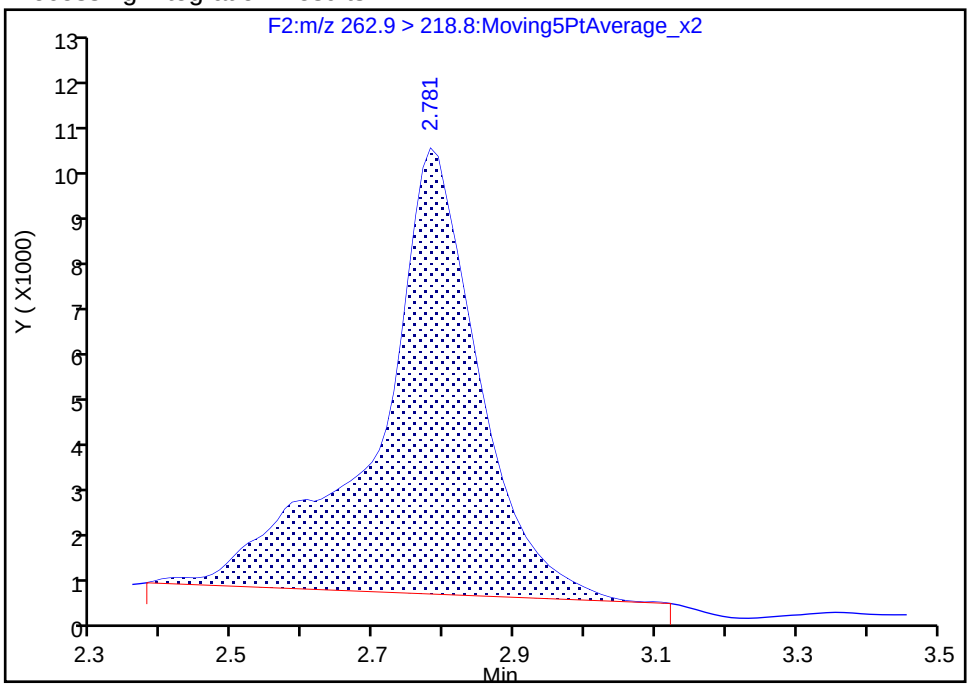
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

3 Perfluoropentanoic acid, CAS: 2706-90-3

Signal: 1

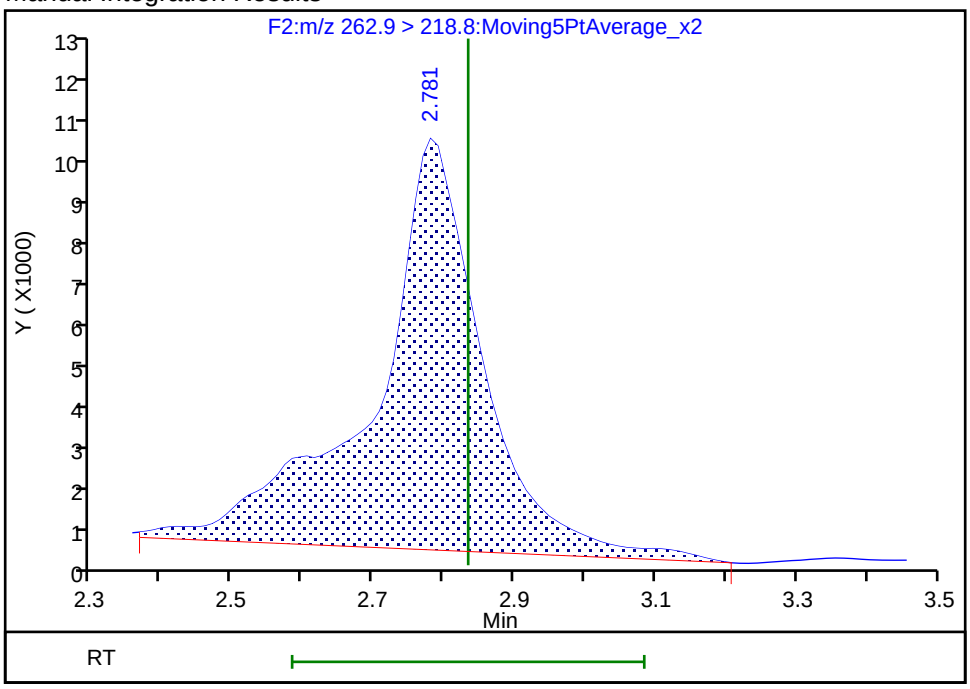
Processing Integration Results

RT: 2.78
Area: 97044
Amount: 29.730268
Amount Units: ng/ml



Manual Integration Results

RT: 2.78
Area: 106399
Amount: 32.579205
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:04:59
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

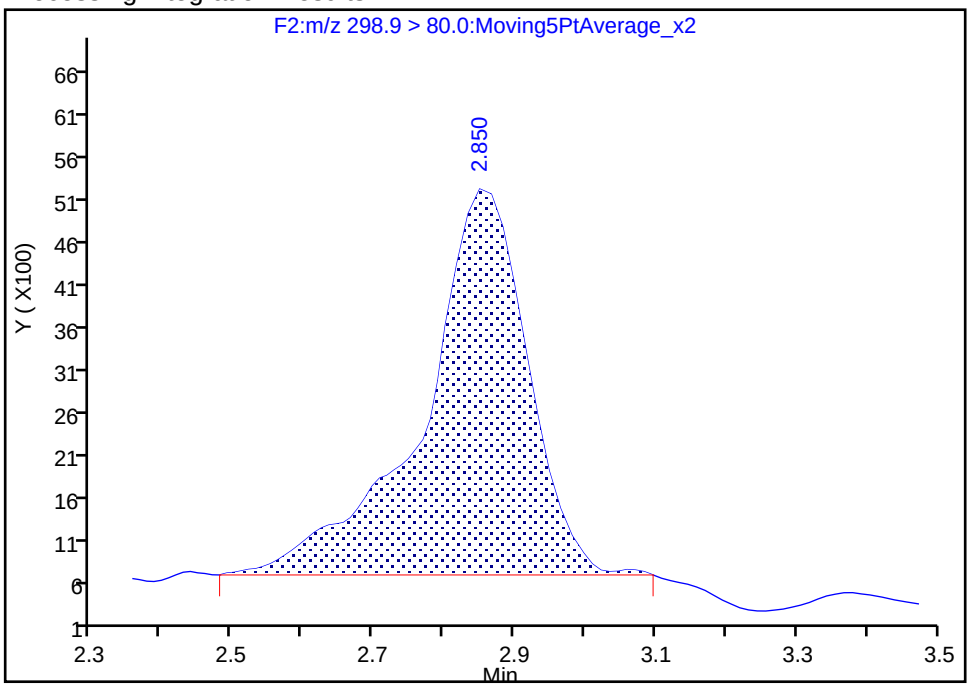
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

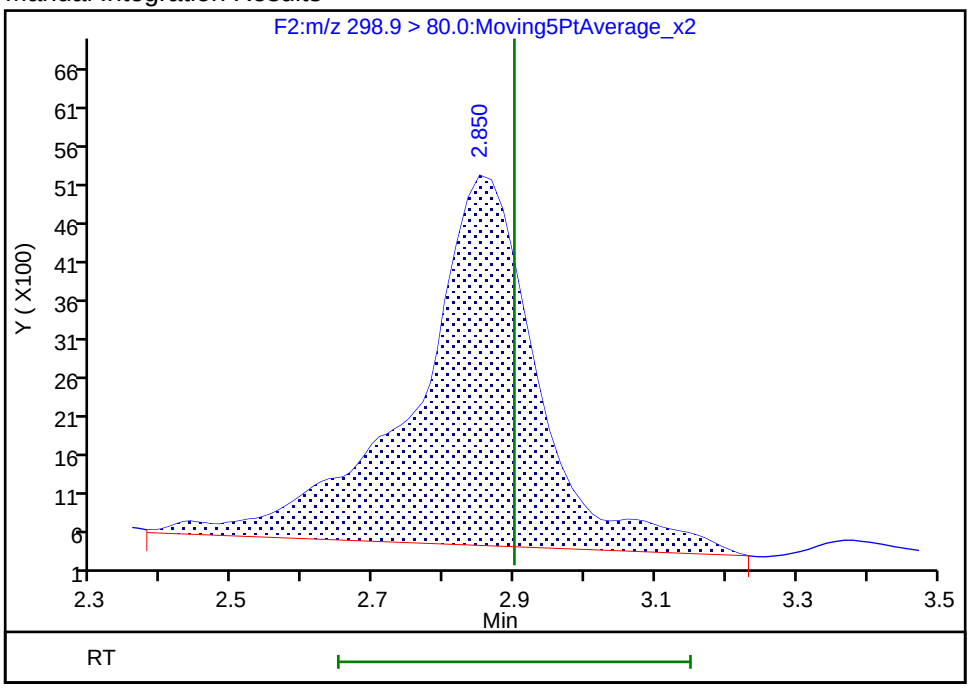
Processing Integration Results

RT: 2.85
Area: 47152
Amount: 21.229517
Amount Units: ng/ml



Manual Integration Results

RT: 2.85
Area: 58834
Amount: 26.489171
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:05:07
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

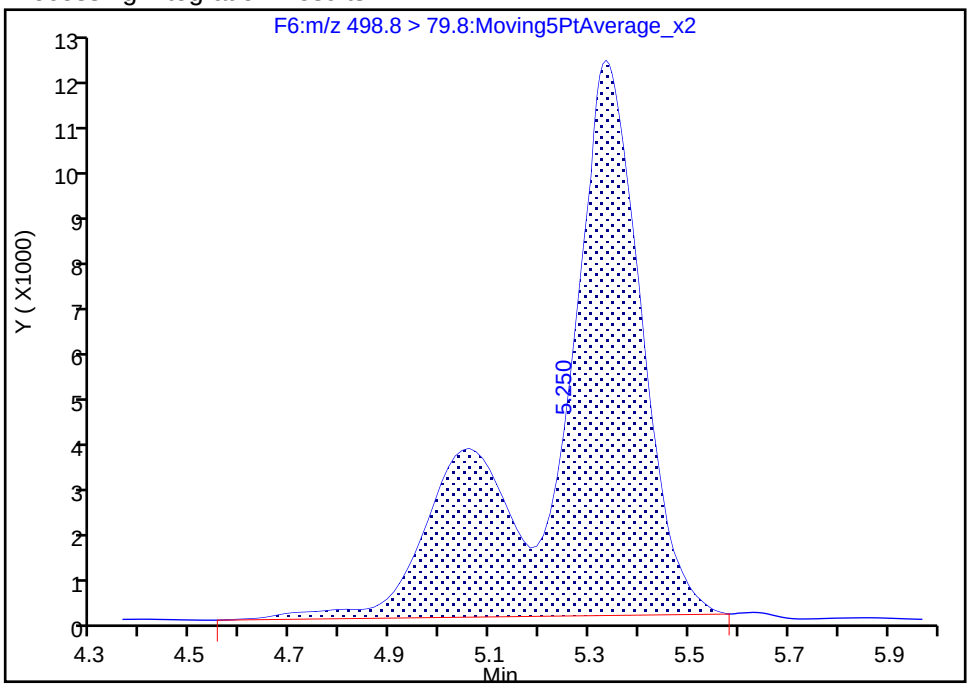
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F6:MRM

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

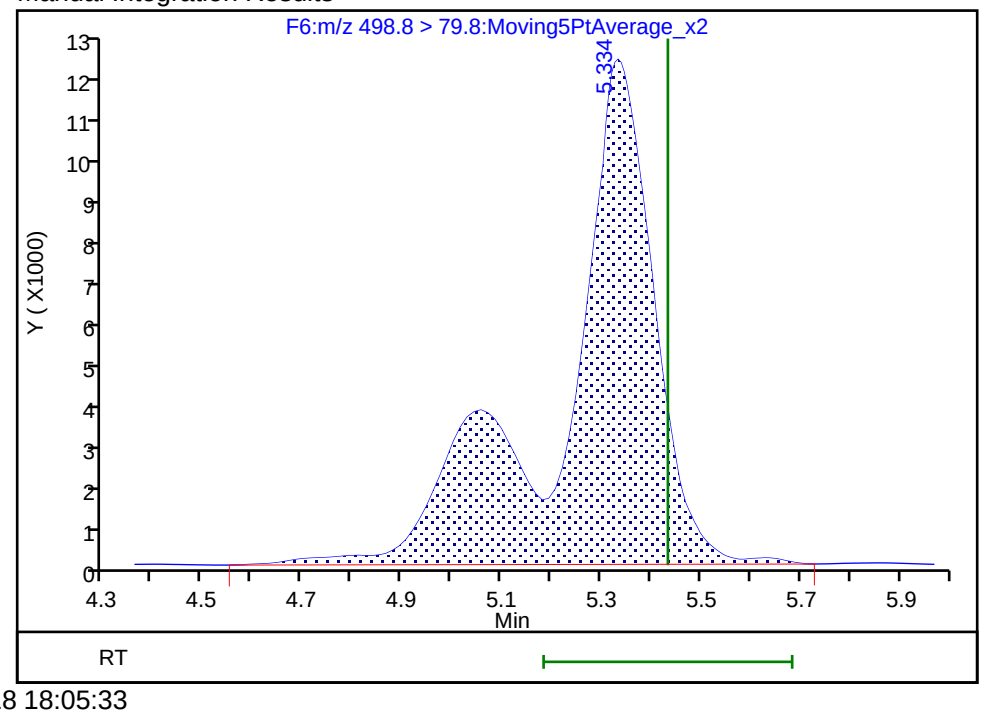
Processing Integration Results

RT: 5.25
Area: 144769
Amount: 34.474583
Amount Units: ng/ml



Manual Integration Results

RT: 5.33
Area: 148743
Amount: 35.419519
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:05:33
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

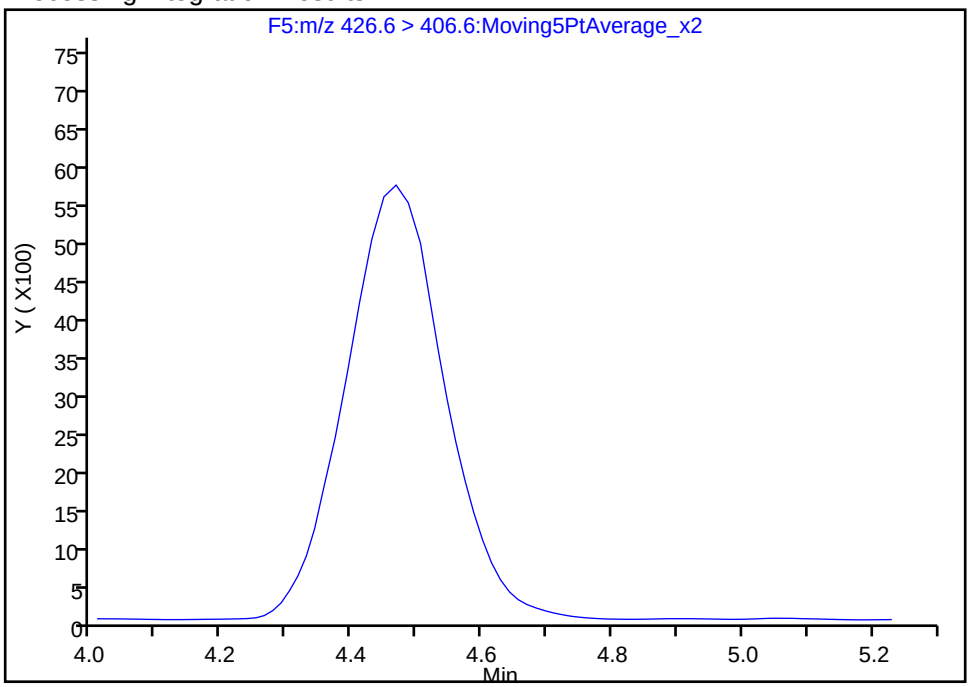
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

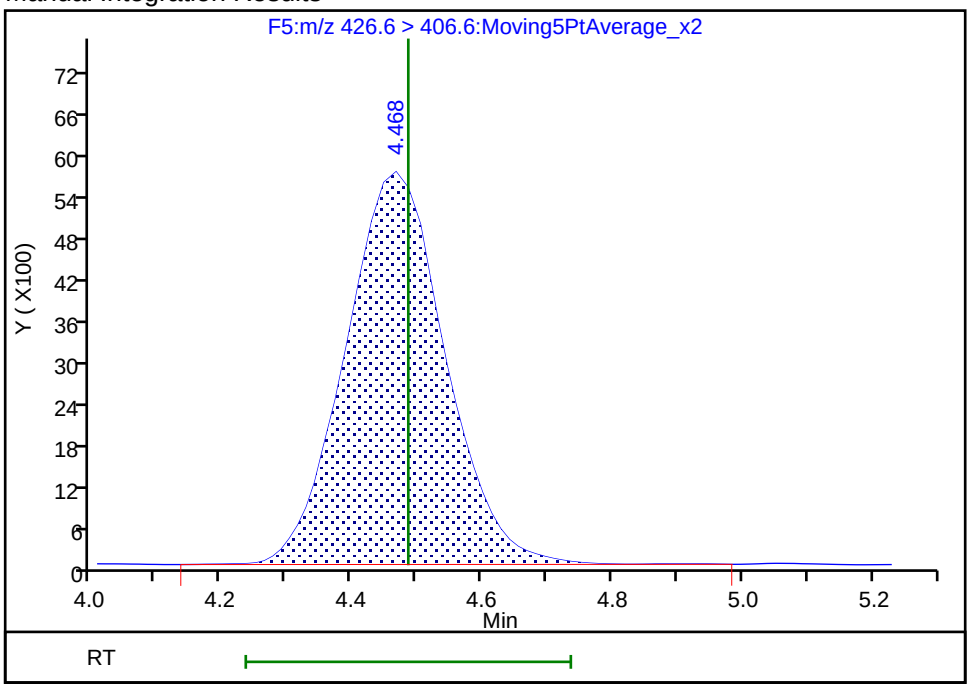
Not Detected
Expected RT: 4.49

Processing Integration Results



Manual Integration Results

RT: 4.47
Area: 60450
Amount: 19.866317
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:22:12
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

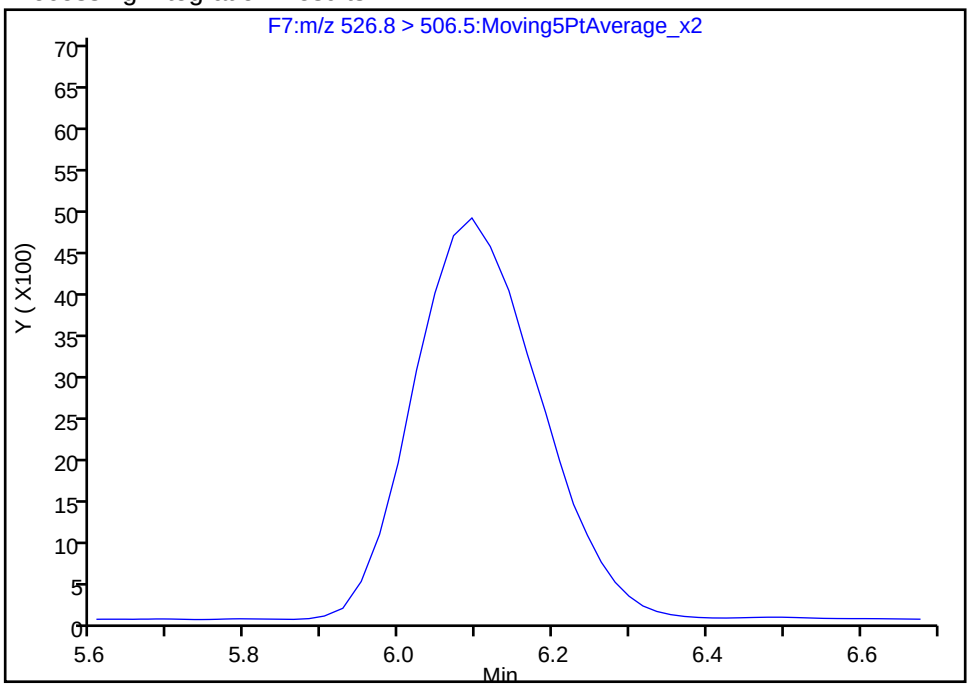
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

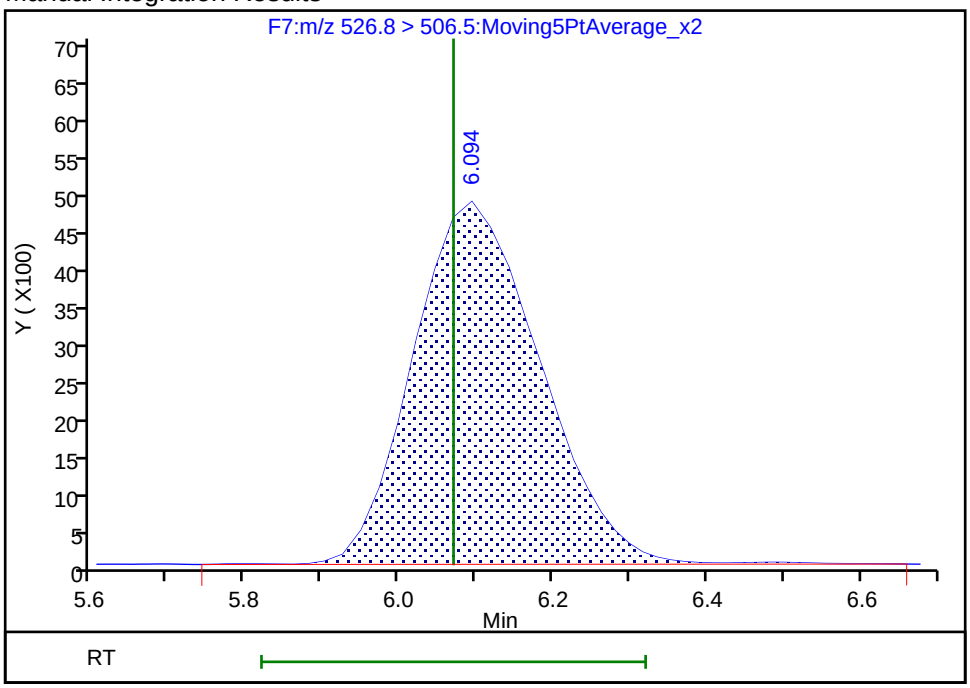
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.09
Area: 55198
Amount: 20.866769
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:22:14
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

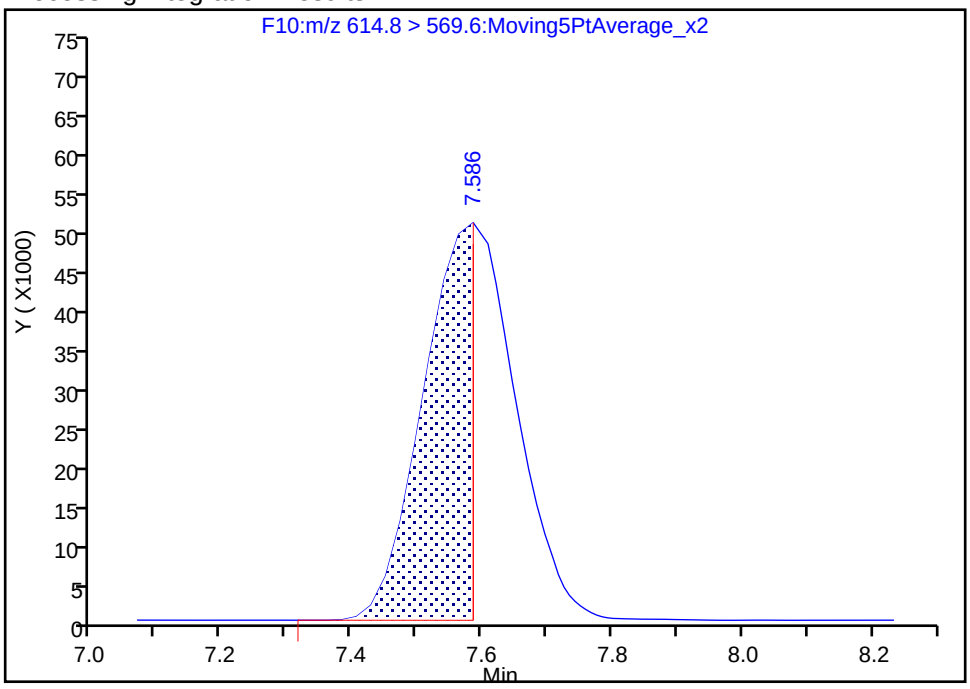
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F10:MRM

D 36 13C2 PFDoA, CAS: STL00998

Signal: 1

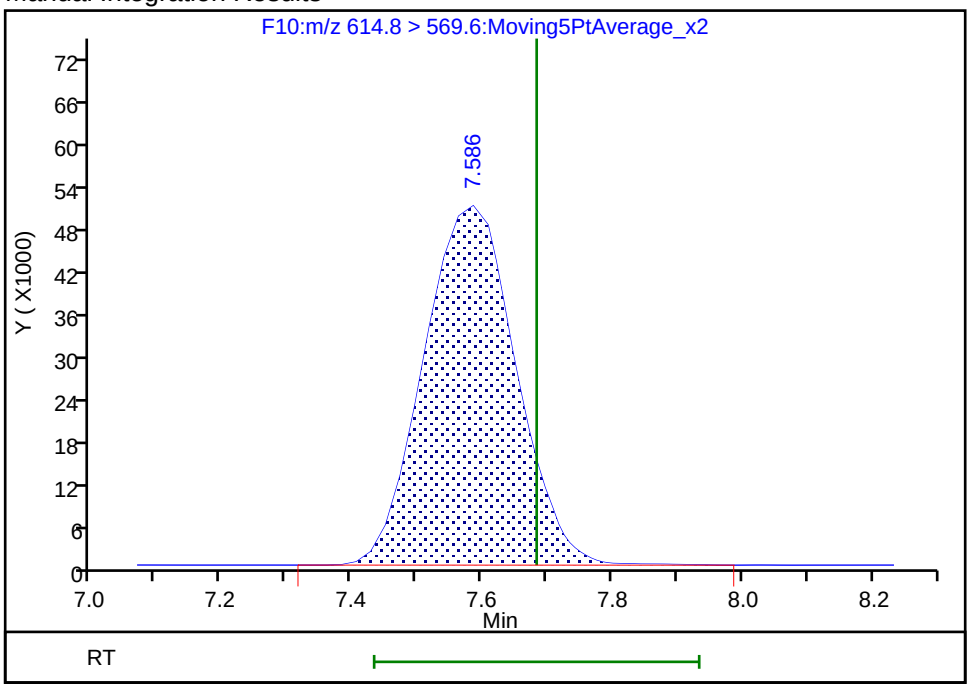
Processing Integration Results

RT: 7.59
Area: 264942
Amount: 21.751497
Amount Units: ng/ml



Manual Integration Results

RT: 7.59
Area: 503339
Amount: 41.323673
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:05:46
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington

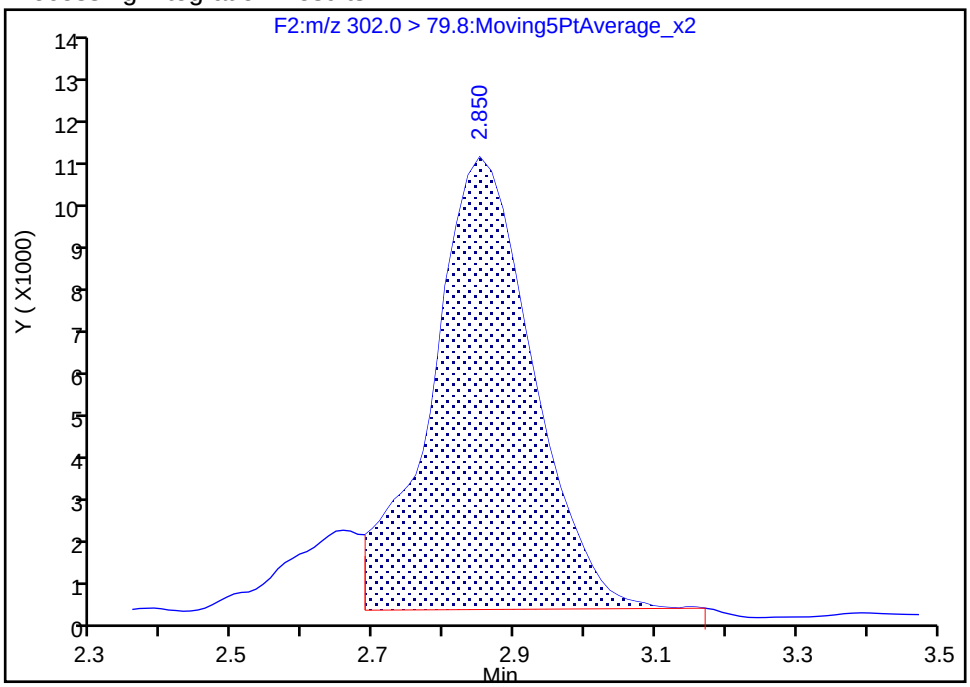
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A47.d
Injection Date: 12-Jun-2018 20:38:45 Instrument ID: LC410
Lims ID: 200-43678-A-2-B MS
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 47
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

D 5 13C3-PFBS, CAS: STL02337

Signal: 1

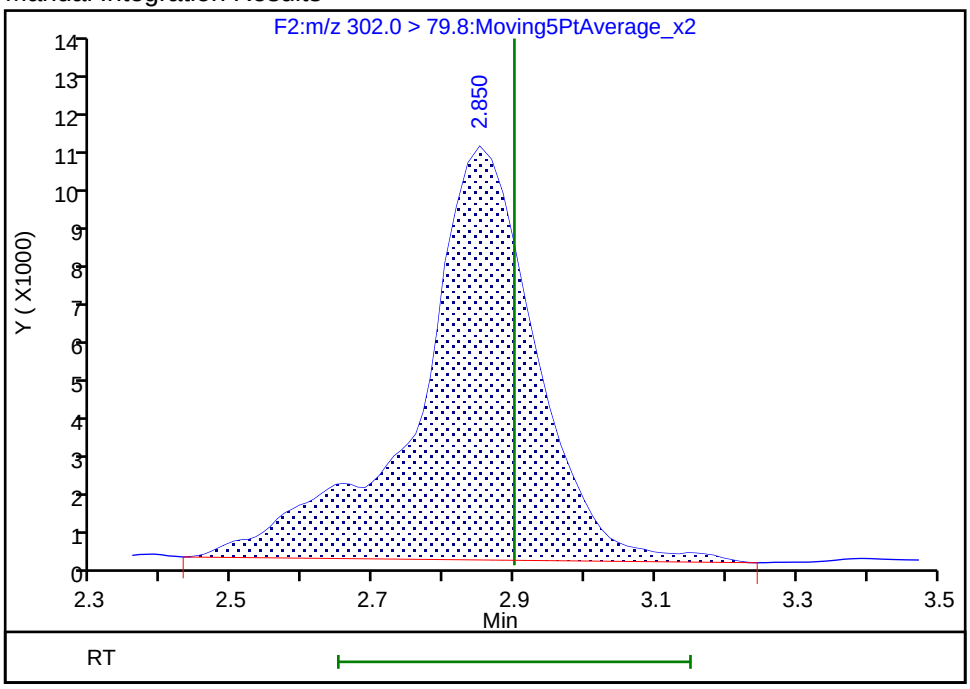
Processing Integration Results

RT: 2.85
Area: 103819
Amount: 28.011760
Amount Units: ng/ml



Manual Integration Results

RT: 2.85
Area: 122585
Amount: 33.075079
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:05:05
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: LMS-3 MSD | Lab Sample ID: 200-43678-2 MSD

Matrix: Water | Lab File ID: PF061218A48.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 12:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 281.2(mL) | Date Analyzed: 06/12/2018 20:54

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	44.73		1.78	0.39
2706-90-3	Perfluoropentanoic acid (PFPeA)	47.33		1.78	0.39
307-24-4	Perfluorohexanoic acid (PFHxA)	46.56		1.78	0.39
375-85-9	Perfluoroheptanoic acid (PFHpA)	44.15		1.78	0.26
335-67-1	Perfluorooctanoic acid (PFOA)	53.49		1.78	0.42
375-95-1	Perfluorononanoic acid (PFNA)	42.93		1.78	0.23
335-76-2	Perfluorodecanoic acid (PFDA)	36.71		1.78	0.39
2058-94-8	Perfluoroundecanoic acid (PFUnA)	41.69		1.78	0.39
307-55-1	Perfluorododecanoic acid (PFDoA)	34.43		1.78	0.39
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	35.21		1.78	0.39
376-06-7	Perfluorotetradecanoic acid (PFTeA)	35.91		1.78	0.39
375-73-5	Perfluorobutanesulfonic acid (PFBS)	49.71		1.78	0.78
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	43.85		1.78	0.25
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	36.03		1.78	0.39
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	60.84		1.78	0.27
335-77-3	Perfluorodecanesulfonic acid (PFDS)	23.75		1.78	0.39
754-91-6	Perfluorooctane Sulfonamide (FOSA)	34.07		1.78	0.39
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	32.54		1.78	0.53
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	34.37		1.78	0.53
27619-97-2	6:2 FTS	36.09		1.78	0.53
39108-34-4	8:2 FTS	43.81		1.78	0.53

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: LMS-3 MSD | Lab Sample ID: 200-43678-2 MSD

Matrix: Water | Lab File ID: PF061218A48.d

Analysis Method: 537 (modified) | Date Collected: 05/31/2018 12:35

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 281.2(mL) | Date Analyzed: 06/12/2018 20:54

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
STL00992	13C4 PFBA	20		25-150
STL01893	13C5 PFPeA	42		25-150
STL00993	13C2 PFHxA	61		25-150
STL01892	13C4-PFHpA	77		25-150
STL00990	13C4 PFOA	89		25-150
STL00995	13C5 PFNA	104		25-150
STL00996	13C2 PFDA	100		25-150
STL00997	13C2 PFUnA	85		25-150
STL00998	13C2 PFDoA	80		25-150
STL02116	13C2-PFTeDA	87		25-150
STL02337	13C3-PFBS	62		25-150
STL00994	18O2 PFHxS	84		25-150
STL00991	13C4 PFOS	100		25-150
STL01056	13C8 FOSA	68		25-150
STL02118	d3-NMeFOSAA	72		25-150
STL02117	d5-NEtFOSAA	68		25-150
STL02279	M2-6:2FTS	318		25-150
STL02280	M2-8:2FTS	141		25-150

TestAmerica Burlington
Target Compound Quantitation Report

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d
Lims ID: 200-43678-A-2-C MSD
Client ID: LMS-3
Sample Type: MSD
Inject. Date: 12-Jun-2018 20:54:51 ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Sample Info: 200-0030865-048 2 MSD
Misc. Info.: PFAS21 061218A
Operator ID: BC Instrument ID: LC410

Method: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PFCISO_12MRM.m
Limit Group: LC_PFC_ICAL
Last Update: 21-Jun-2018 21:22:47 Calib Date: 06-Jun-2018 19:22:01
Integrator: Picker
Quant Method: Isotopic Dilution Quant By: Initial Calibration
Last ICal File: \\ChromNA\Burlington\ChromData\LC410\20180606-30801.b\PF060618A11.d

Column 1 : Det: F1:MRM
Process Host: XAWRK033

First Level Reviewer: chirgwinb Date: 20-Jun-2018 18:08:28

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
2 Perfluorobutyric acid										M
212.9 > 168.9	2.338	2.382	-0.044	0.997	18475	25.2		126	30.4	M
D 1 13C4 PFBA										
216.9 > 171.5	2.347	2.392	-0.045	1.000	49757	10.0		20.1	48.3	
D 4 13C5-PFPeA										
267.7 > 222.6	2.781	2.818	-0.037	1.000	153072	21.1		42.1	448	
3 Perfluoropentanoic acid										
262.9 > 218.8	2.781	2.834	-0.053	1.000	100390	26.6		133	43.5	
D 5 13C3-PFBS										
302.0 > 79.8	2.851	2.900	-0.049	1.000	138109	28.7		61.8	68.3	
6 Perfluorobutanesulfonic acid										M
298.9 > 80.0	2.851	2.900	-0.049	1.000	69951	28.0		158	51.4	M
7 Perfluorohexanoic acid										
312.8 > 268.6	3.226	3.300	-0.074	1.000	151558	26.2		131	391	
D 8 13C2 PFHxA										
314.8 > 269.6	3.226	3.300	-0.074	1.000	259213	30.5		61.0	359	
9 Perfluoroheptanoic acid										
362.9 > 318.8	3.804	3.882	-0.078	1.003	202199	24.8		124	92.7	
D 10 13C4-PFHpA										
366.9 > 321.8	3.793	3.882	-0.089	1.000	375196	38.5		76.9	566	
D 12 18O2 PFHxS										
402.9 > 83.8	3.837	3.914	-0.077	1.000	183323	39.9		84.3	292	
11 Perfluorohexanesulfonic acid										M
399.0 > 80.0	3.848	3.919	-0.071	1.003	97871	24.7		136	99.4	M
14 1H,1H,2H,2H-perfluorooctanesulfoni										a
426.6 > 406.6	4.468	4.486	-0.018	1.004	85228	20.3		0.0	822	a
D 13 M2-6:2FTS										
428.6 > 408.6	4.449	4.546	-0.097	1.000	195178	151.2		318	1147	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 16 13C4 PFOA										
416.9 > 371.8	4.519	4.601	-0.082	1.000	332946	44.6		89.2	644	
* 17 13C2-PFOA										
414.9 > 369.8	4.519	4.601	-0.082		391945	50.0			590	
15 Perfluorooctanoic acid										
412.9 > 368.8	4.519	4.615	-0.096	1.000	229178	30.1		150	651	
18 Perfluoroheptanesulfonic acid										
448.8 > 79.8	4.560	4.642	-0.082	0.853	96322	20.3		106	272	
D 19 13C5 PFNA										
467.8 > 422.8	5.316	5.422	-0.106	1.000	513089	52.2		104	3144	
20 Perfluorononanoic acid										
462.8 > 418.8	5.322	5.422	-0.100	1.001	243506	24.1		121	609	
22 Perfluorooctane sulfonic acid										M
498.8 > 79.8	5.328	5.434	-0.106	0.997	189676	34.2		184	1031	M
D 21 13C4 PFOS										
502.8 > 79.8	5.346	5.440	-0.094	1.000	238550	47.9		100	559	
23 1H,1H,2H,2H-perfluorodecanesulfoni										a
526.8 > 506.5	6.094	6.070	0.024	1.000	80467	24.6		0.0	698	a
D 24 M2-8:2FTS										
528.8 > 508.8	6.094	6.209	-0.115	1.000	180905	67.7		141	1122	
25 Perfluorodecanoic acid										
512.9 > 468.5	6.118	6.227	-0.109	1.000	305591	20.6		103	1219	
D 26 13C2 PFDA										
514.9 > 469.5	6.118	6.227	-0.109	1.000	718613	50.2		100	1186	
D 27 d3-NMeFOSAA										
572.8 > 418.8	6.476	6.584	-0.108	1.000	108850	36.1		72.2	849	
28 N-methyl perfluorooctane sulfonami										
569.8 > 418.8	6.476	6.602	-0.126	1.000	50321	18.3		91.5	383	
D 29 d5-NEtFOSAA										
588.9 > 418.8	6.847	6.959	-0.112	1.000	88275	34.2		68.4	1915	
30 N-ethyl perfluorooctane sulfonamid										
583.9 > 418.8	6.861	6.973	-0.112	1.002	37994	19.3		96.6	970	
31 Perfluorodecane Sulfonic acid										
598.8 > 79.8	6.861	6.973	-0.112	1.283	69974	13.4		69.3	766	
32 Perfluoroundecanoic acid										
562.8 > 518.6	6.889	6.987	-0.098	1.000	289284	23.4		117	1313	
D 33 13C2 PFUnA										
564.8 > 519.8	6.889	6.987	-0.098	1.000	554058	42.3		84.7	6212	
34 Perfluorooctane Sulfonamide										M
497.8 > 77.8	7.079	7.079	0.0	1.000	146910	19.2		95.8	1209	M
D 35 13C8 FOSA										
505.8 > 77.8	7.079	7.079	0.0	1.000	371449	33.8		67.5	3705	
D 36 13C2 PFDoA										
614.8 > 569.6	7.564	7.684	-0.120	1.000	634301	40.1		80.3	2102	
37 Perfluorododecanoic acid										
612.8 > 568.6	7.586	7.684	-0.098	1.003	232314	19.4		96.8	1433	
38 Perfluorotridecanoic acid										
662.8 > 618.6	8.188	8.294	-0.106	1.083	251935	19.8		99.0	1715	

Signal	RT	EXP RT	DLT RT	REL RT	Response	Amount ng/ml	Ratio(Limits)	%Rec	S/N	Flags
D 39 13C2-PFTeDA										
714.8 > 669.6	8.734	8.855	-0.121	1.000	696685	43.4		86.9	2166	
40 Perfluorotetradecanoic acid										
712.8 > 668.6	8.720	8.862	-0.142	0.998	255163	20.2		101	2560	
712.8 > 168.8	8.734	8.862	-0.128	1.000	47413		5.38(0.00-0.00)		558	
712.8 > 218.8	8.727	8.862	-0.135	0.999	31094		8.21(0.00-0.00)		465	

QC Flag Legend

Review Flags

M - Manually Integrated

a - User Assigned ID

Report Date: 21-Jun-2018 21:22:49 Chrom Revision: 2.2 07-Jun-2018 07:41:54

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d

Injection Date: 12-Jun-2018 20:54:51 Instrument ID: LC410

Lims ID: 200-43678-A-2-C MSD

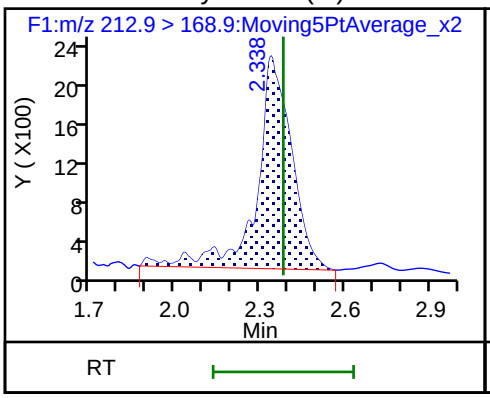
Client ID: LMS-3

Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 48

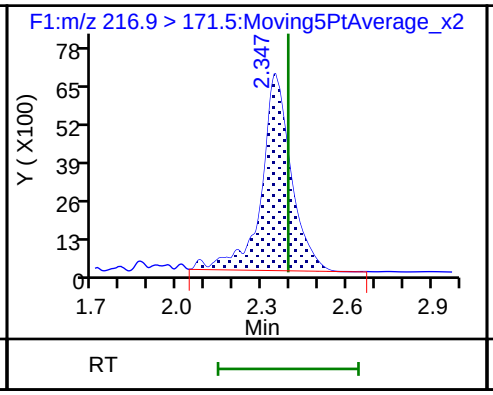
Injection Vol: 20.0 ul Dil. Factor: 1.0000

Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL

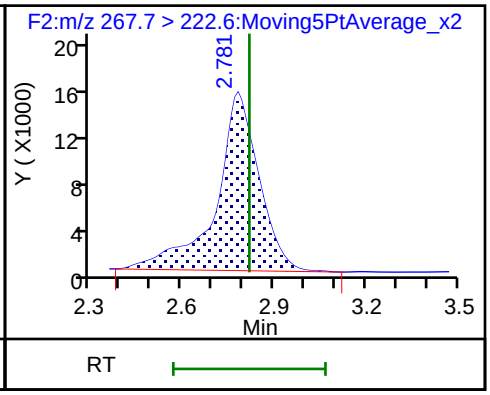
2 Perfluorobutyric acid (M)



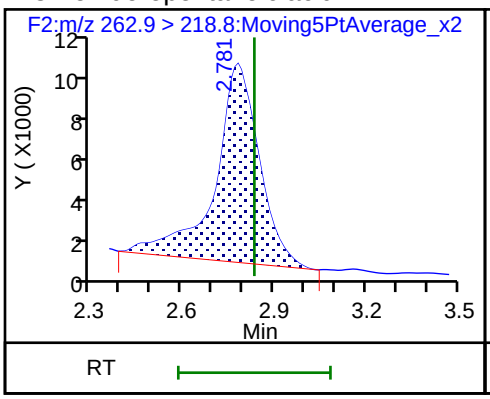
D 1 13C4 PFBA



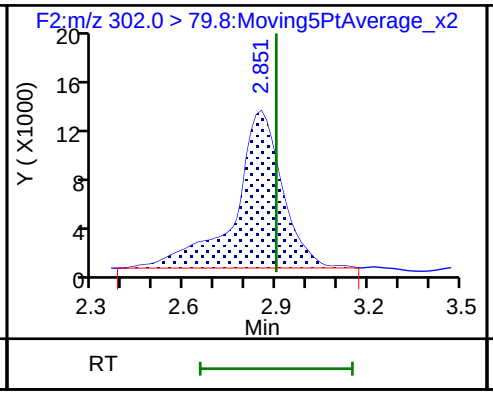
D 4 13C5-PFPeA



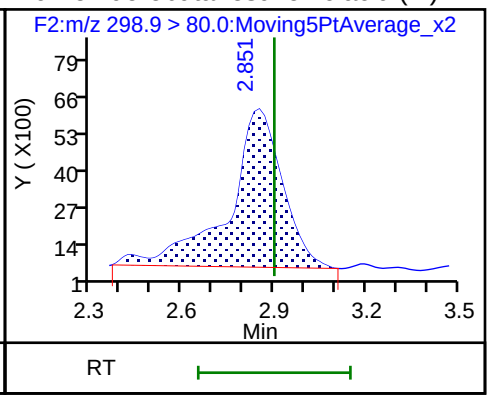
3 Perfluoropentanoic acid



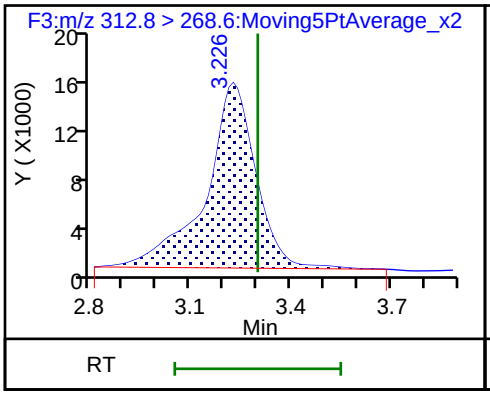
D 5 13C3-PFBS



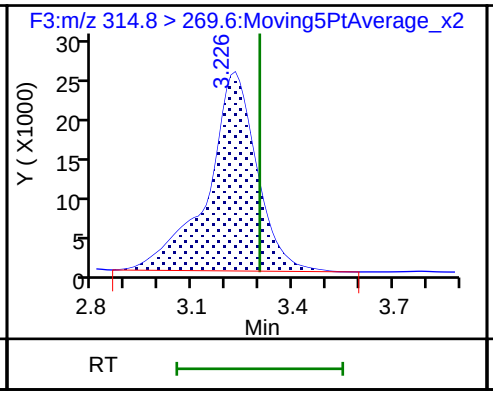
6 Perfluorobutanesulfonic acid (M)



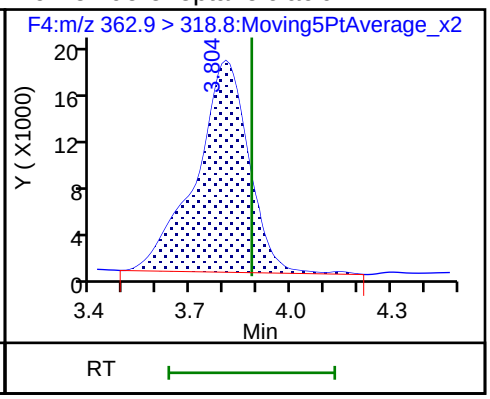
7 Perfluorohexanoic acid



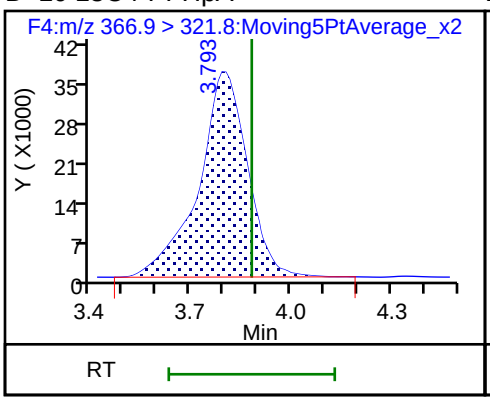
D 8 13C2 PFHxA



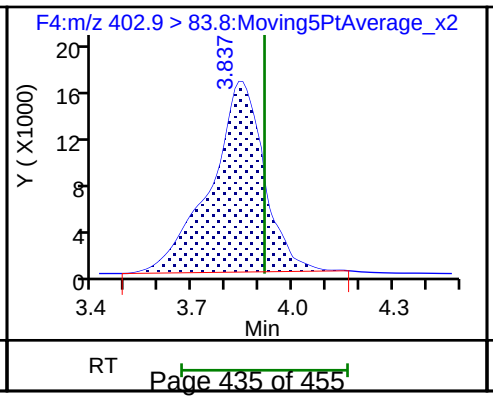
9 Perfluoroheptanoic acid



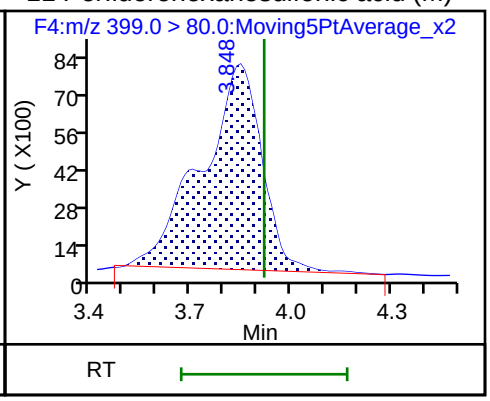
D 10 13C4-PFHpA



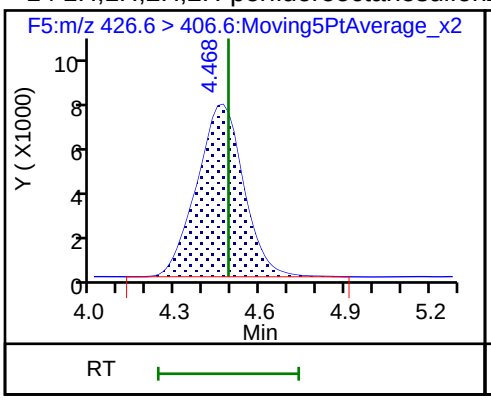
D 12 18O2 PFHxS



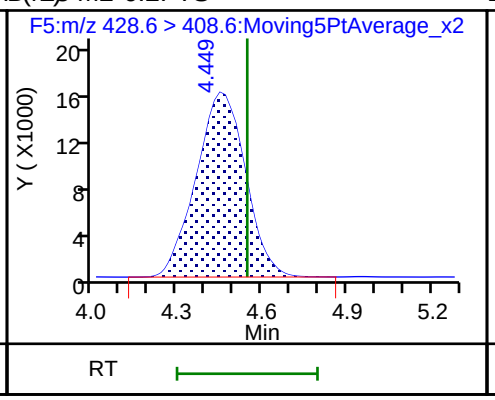
11 Perfluorohexanesulfonic acid (M)



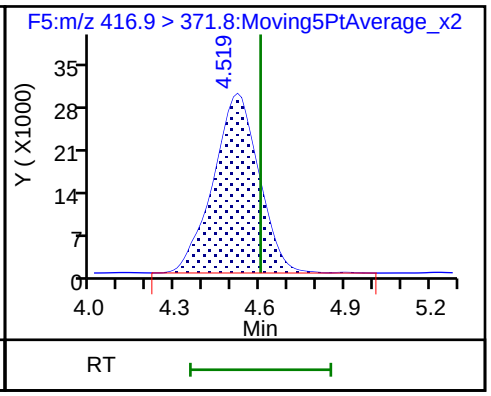
14 1H,1H,2H,2H-perfluorooctanesulfonic (M)



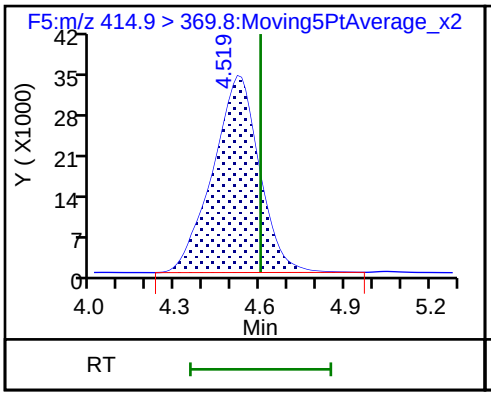
D 13 M2-6:2FTS



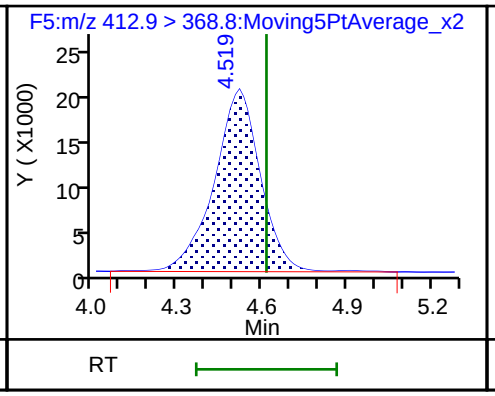
D 16 13C4 PFOA



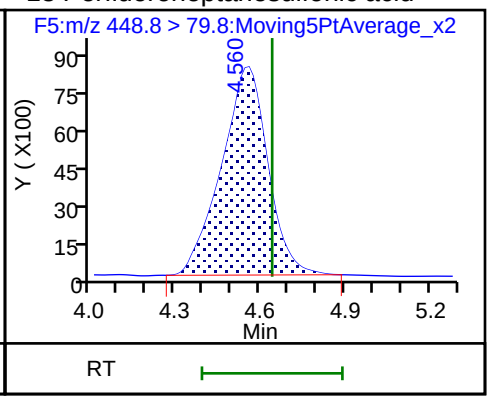
* 17 13C2-PFOA



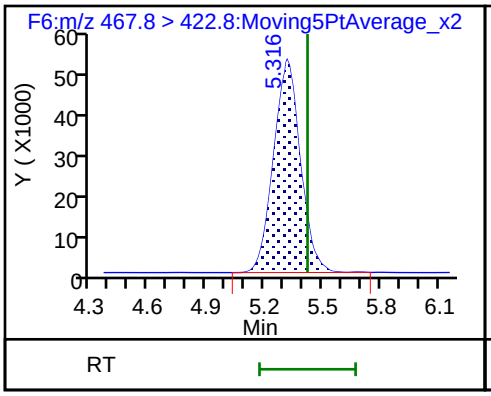
15 Perfluorooctanoic acid



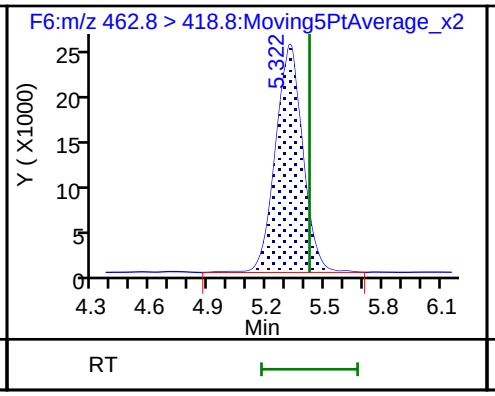
18 Perfluoroheptanesulfonic acid



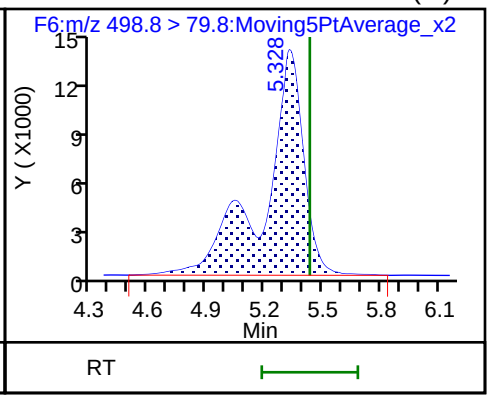
D 19 13C5 PFNA



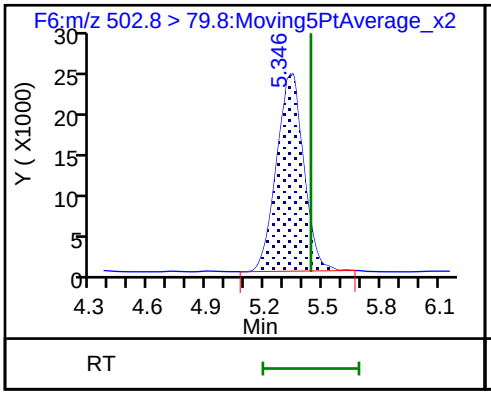
20 Perfluorononanoic acid



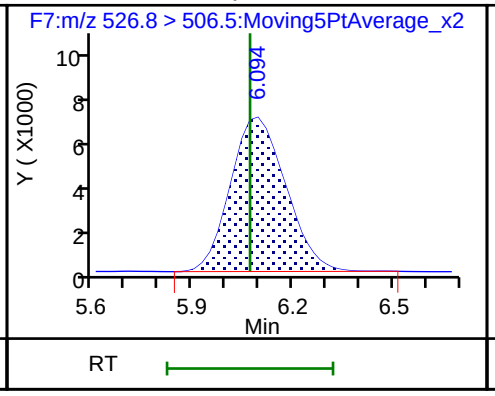
22 Perfluorooctane sulfonic acid (M)



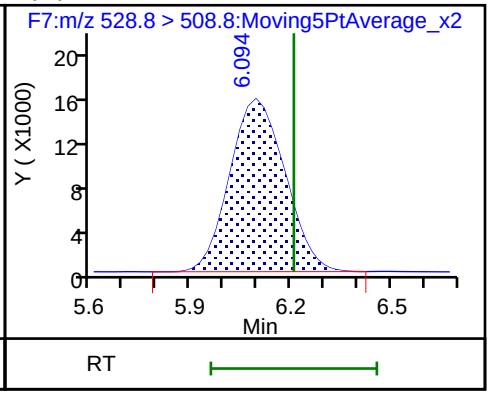
D 21 13C4 PFOS



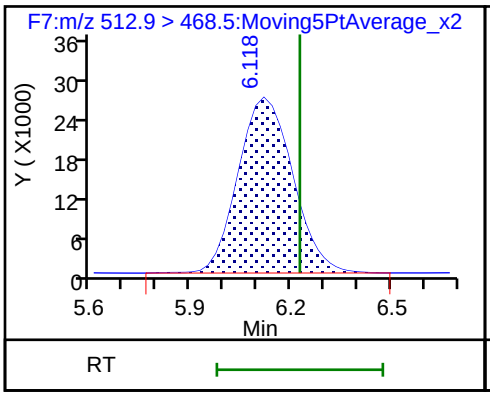
23 1H,1H,2H,2H-perfluorodecanesulfonic (M)



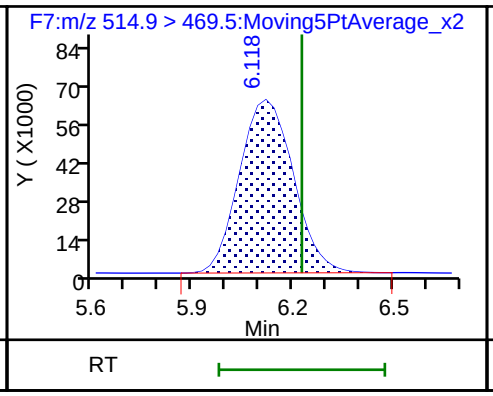
D 24 M2-8:2FTS



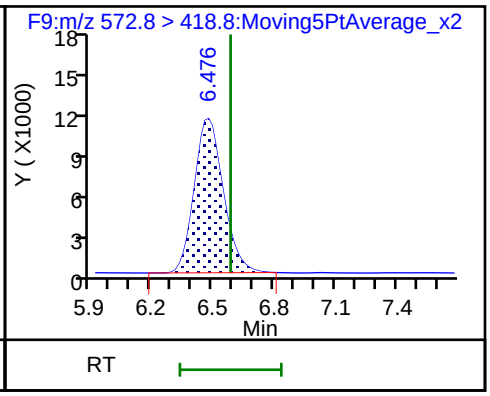
25 Perfluorodecanoic acid



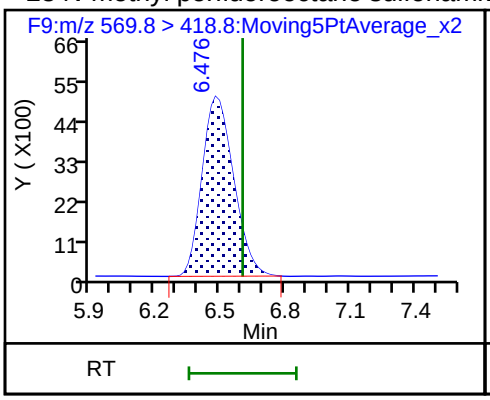
D 26 13C2 PFDA



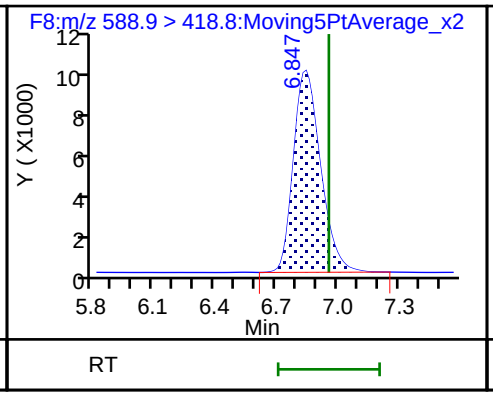
D 27 d3-NMeFOSAA



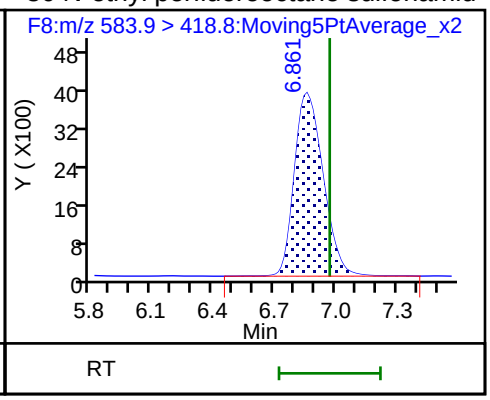
28 N-methyl perfluorooctane sulfonami



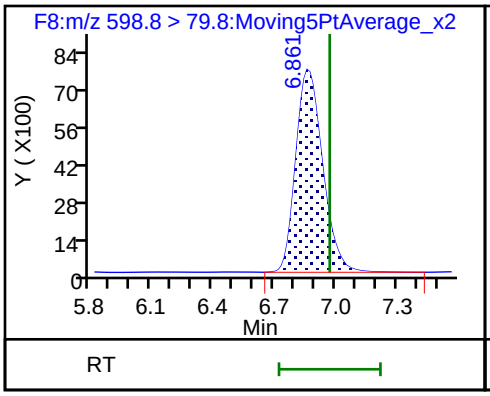
D 29 d5-NEtFOSAA



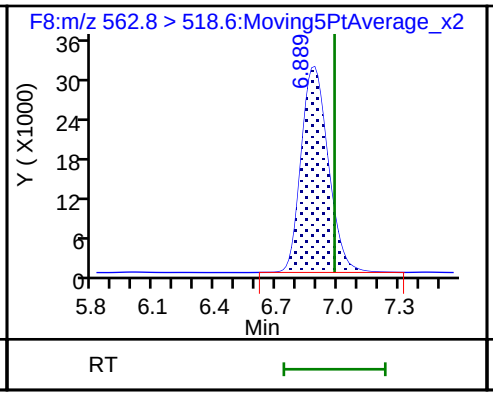
30 N-ethyl perfluorooctane sulfonamid



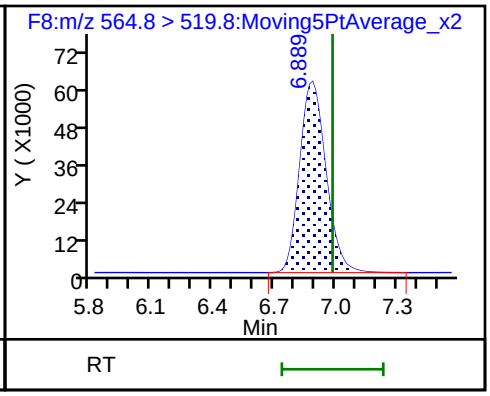
31 Perfluorodecane Sulfonic acid



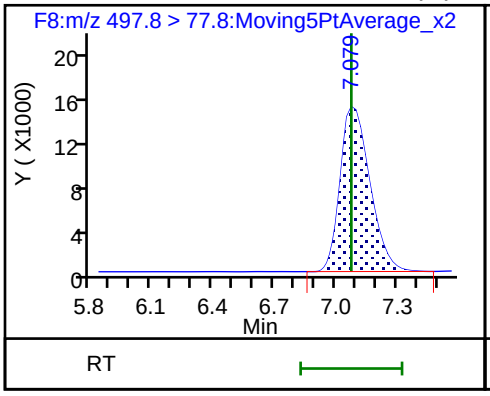
32 Perfluoroundecanoic acid



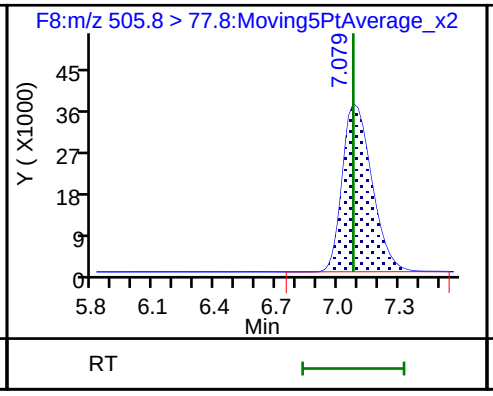
D 33 13C2 PFUnA



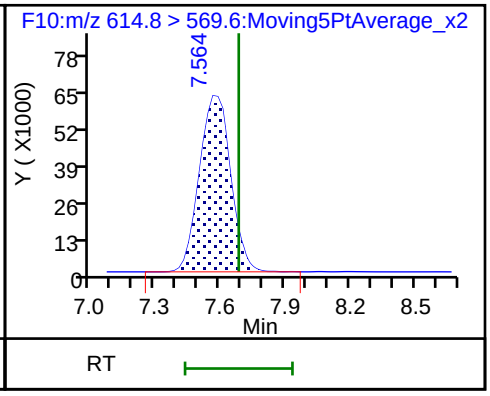
34 Perfluorooctane Sulfonamide (M)



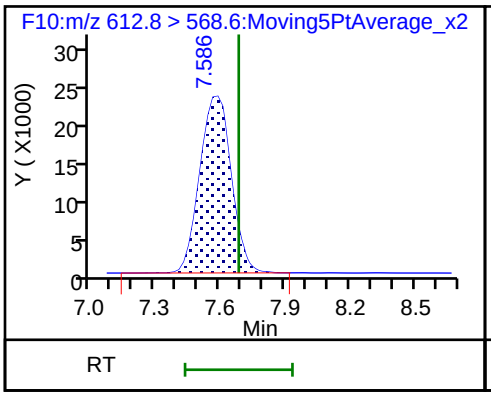
D 35 13C8 FOSA



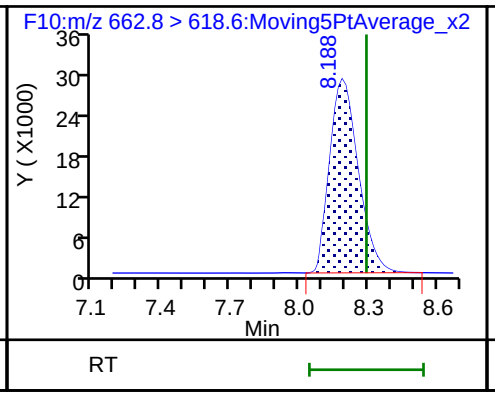
D 36 13C2 PFDoA



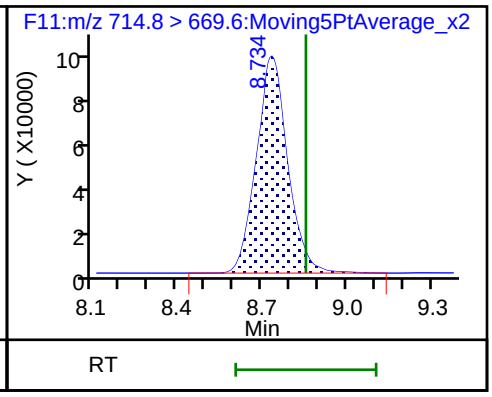
37 Perfluorododecanoic acid



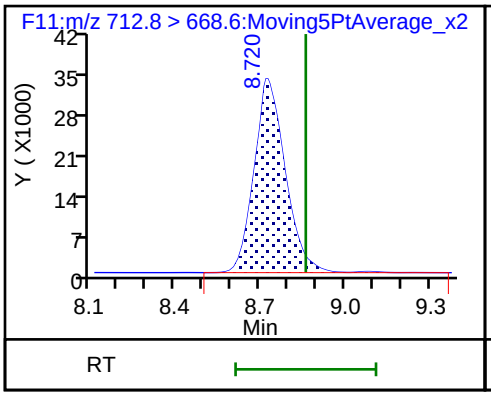
38 Perfluorotridecanoic acid



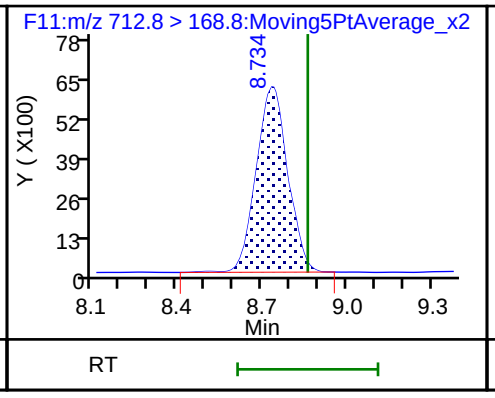
D 39 13C2-PFTeDA



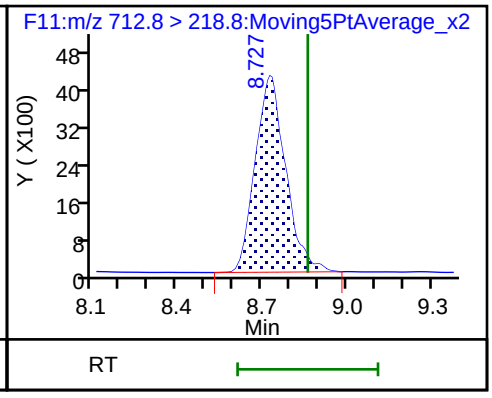
40 Perfluorotetradecanoic acid



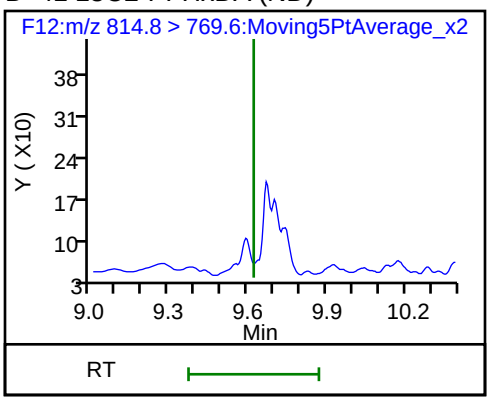
40 Perfluorotetradecanoic acid



40 Perfluorotetradecanoic acid



D 41 13C2-PFHxDA (ND)



Manual Integration/User Assign Peak Report

TestAmerica Burlington

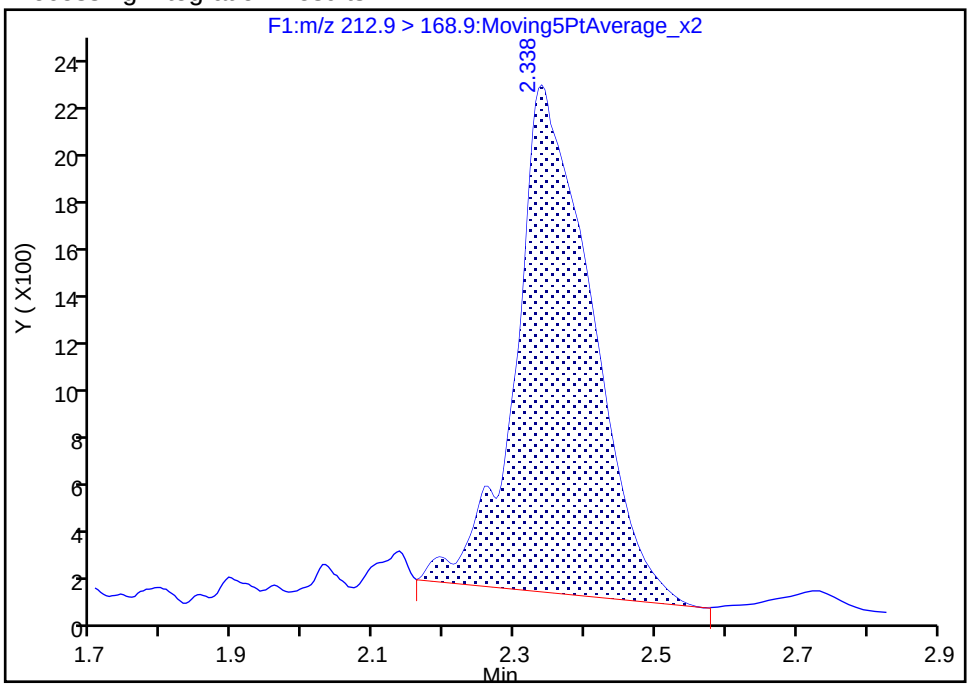
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d
Injection Date: 12-Jun-2018 20:54:51 Instrument ID: LC410
Lims ID: 200-43678-A-2-C MSD
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F1:MRM

2 Perfluorobutyric acid, CAS: 375-22-4

Signal: 1

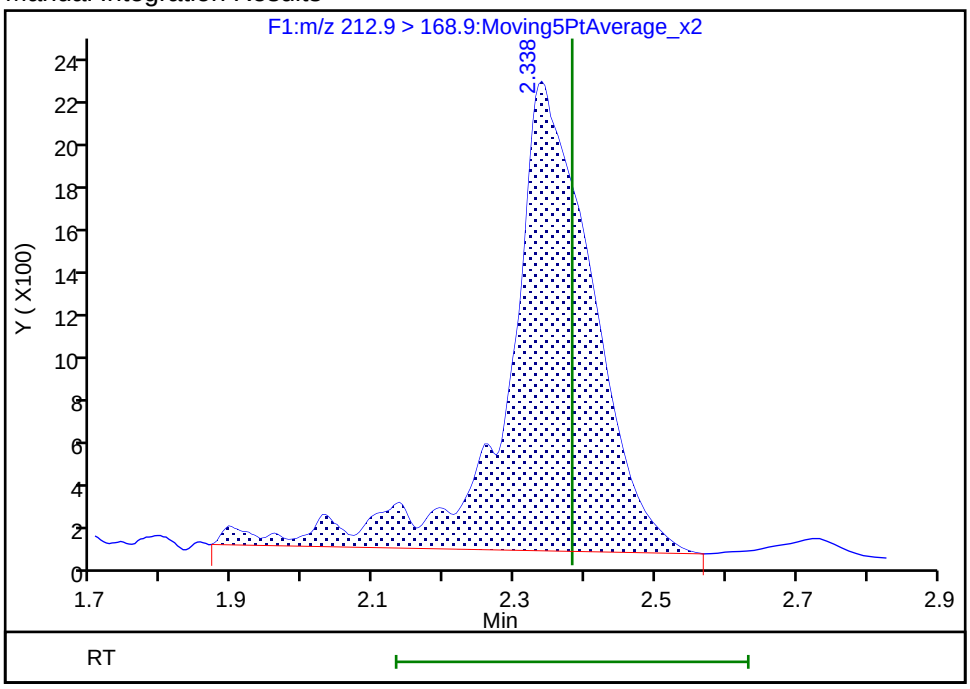
Processing Integration Results

RT: 2.34
Area: 15837
Amount: 43.040666
Amount Units: ng/ml



Manual Integration Results

RT: 2.34
Area: 18475
Amount: 25.156705
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:06:12
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

TestAmerica Burlington

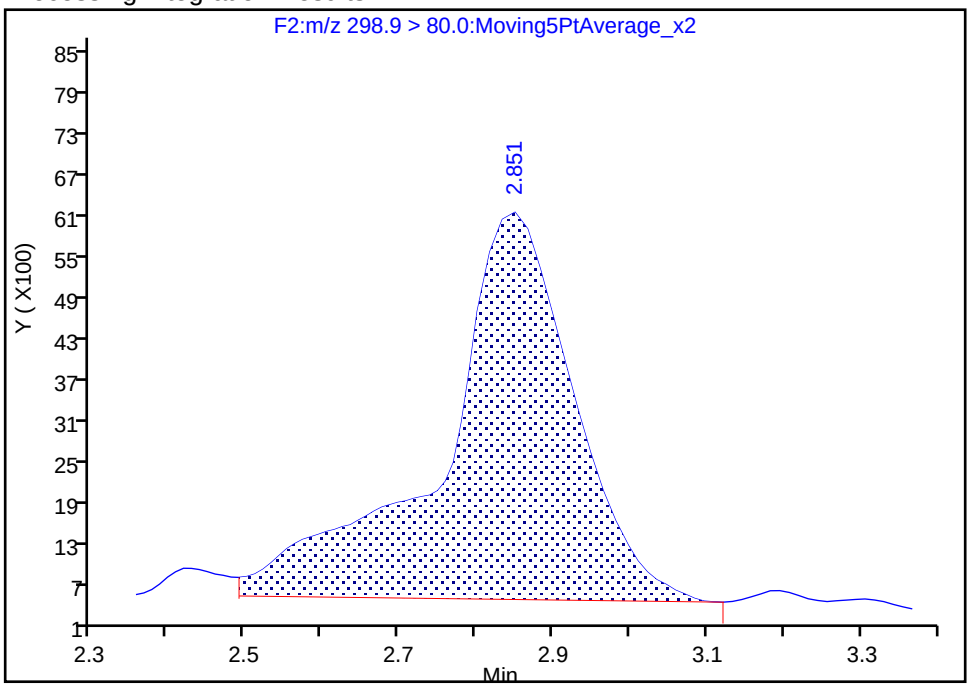
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d
Injection Date: 12-Jun-2018 20:54:51 Instrument ID: LC410
Lims ID: 200-43678-A-2-C MSD
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F2:MRM

6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

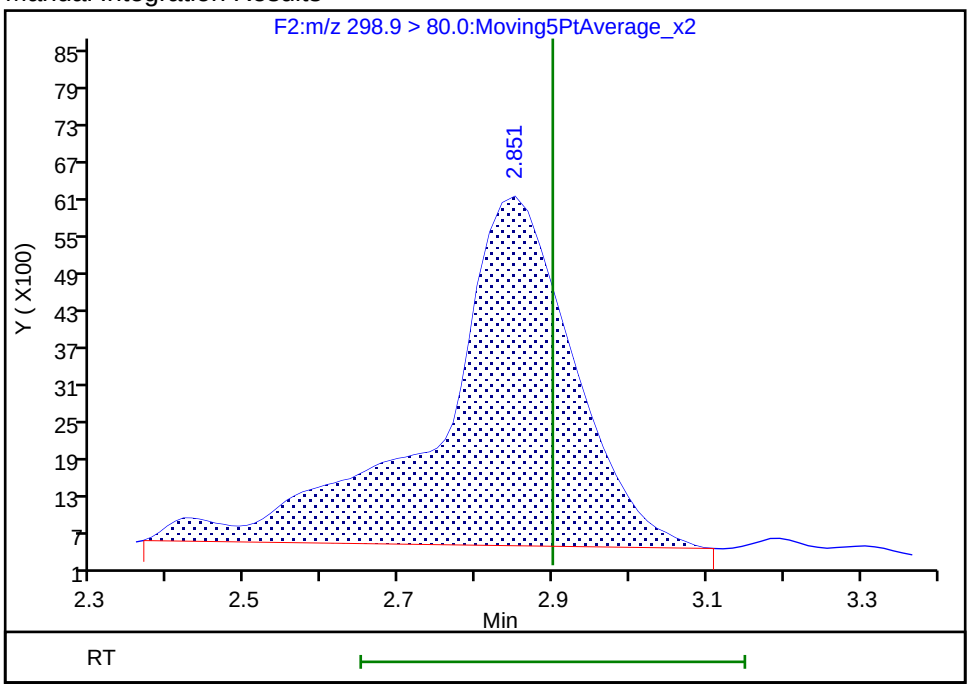
Processing Integration Results

RT: 2.85
Area: 68454
Amount: 54.712199
Amount Units: ng/ml



Manual Integration Results

RT: 2.85
Area: 69951
Amount: 27.954342
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:06:31
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

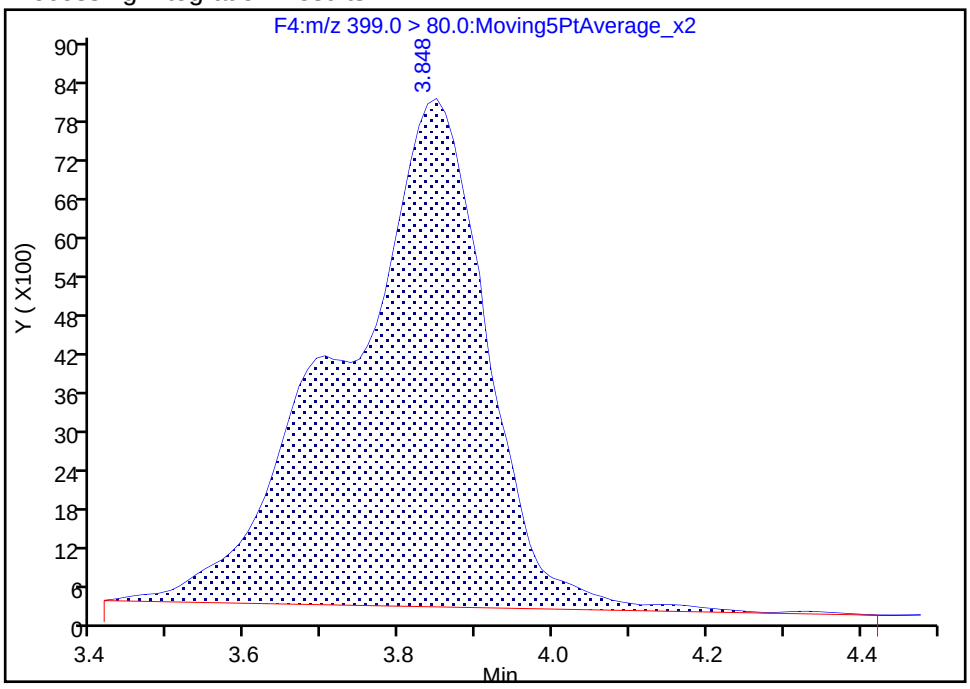
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d
Injection Date: 12-Jun-2018 20:54:51 Instrument ID: LC410
Lims ID: 200-43678-A-2-C MSD
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F4:MRM

11 Perfluorohexanesulfonic acid, CAS: 355-46-4

Signal: 1

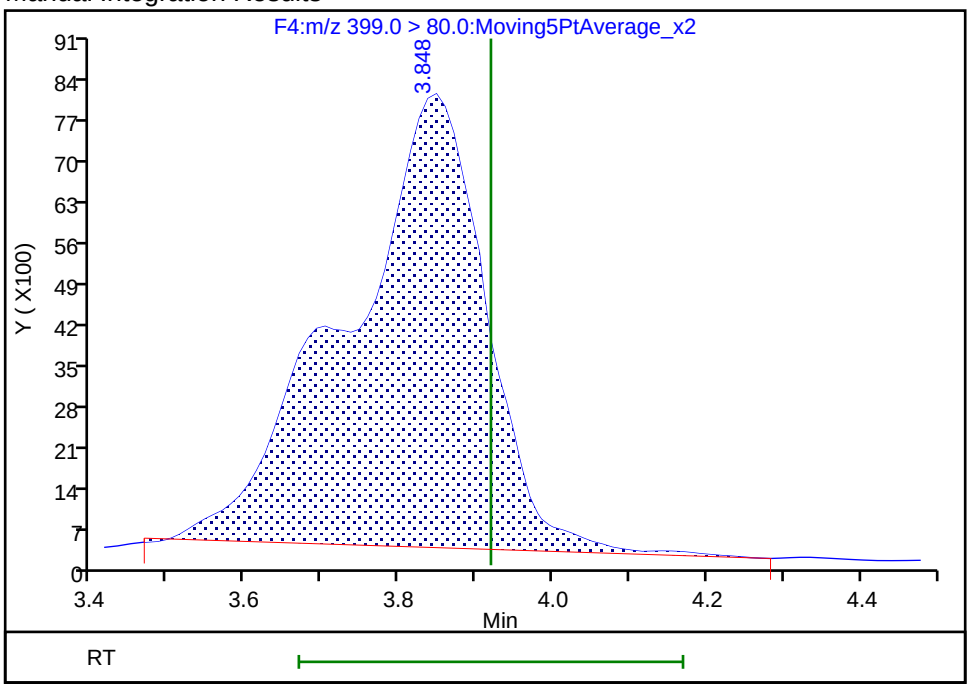
Processing Integration Results

RT: 3.85
Area: 102344
Amount: 51.108667
Amount Units: ng/ml



Manual Integration Results

RT: 3.85
Area: 97871
Amount: 24.662204
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:06:43
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

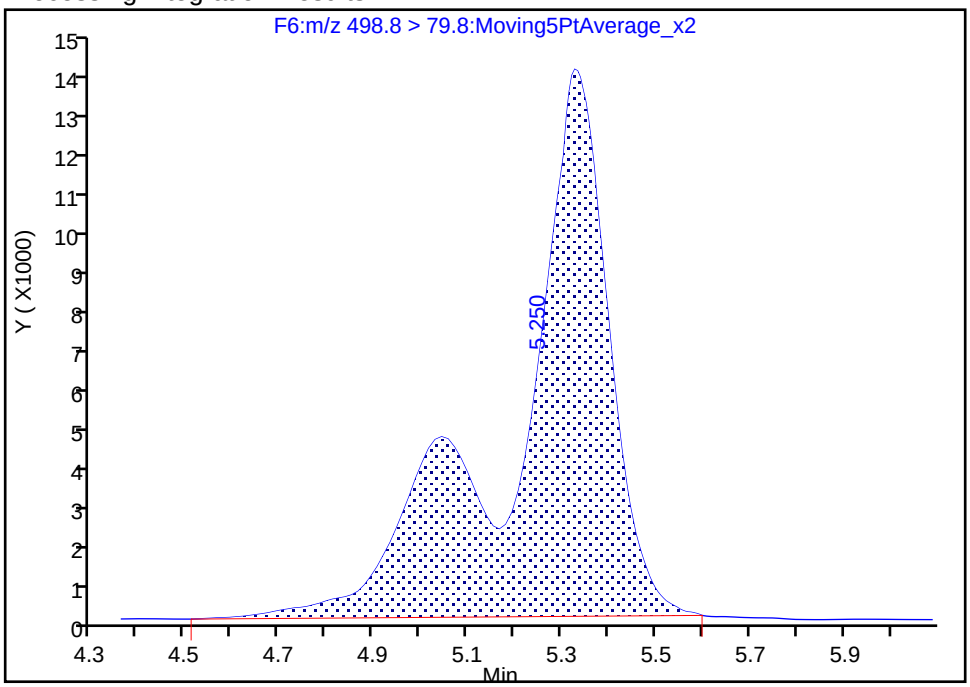
Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d				
Injection Date:	12-Jun-2018 20:54:51	Instrument ID:	LC410		
Lims ID:	200-43678-A-2-C MSD				
Client ID:	LMS-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	48
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F6:MRM		

22 Perfluorooctane sulfonic acid, CAS: 1763-23-1

Signal: 1

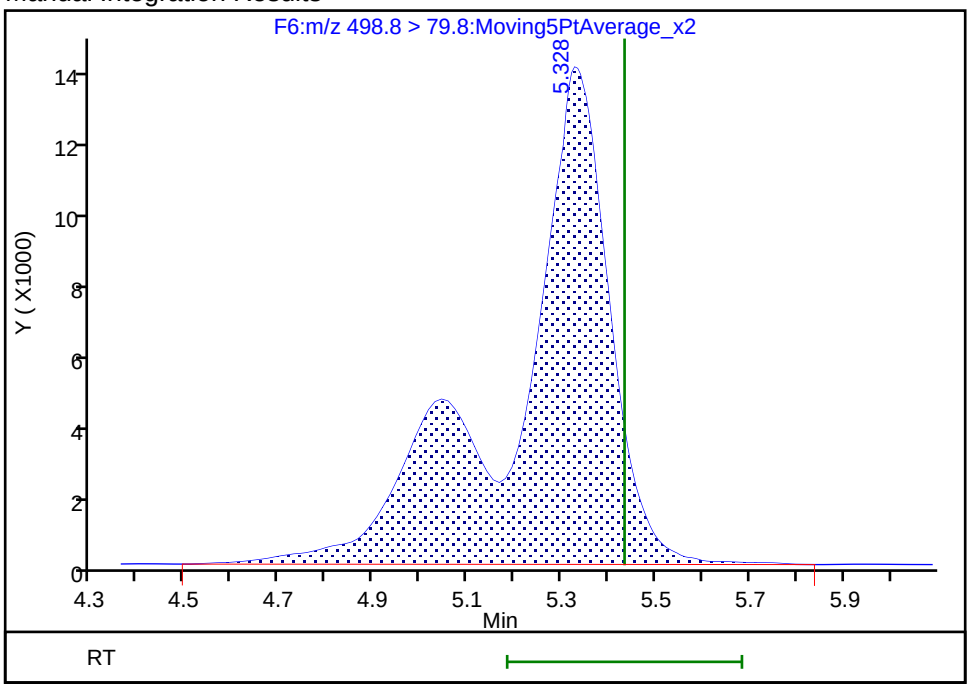
Processing Integration Results

RT: 5.25
Area: 185777
Amount: 33.513142
Amount Units: ng/ml



Manual Integration Results

RT: 5.33
Area: 189676
Amount: 34.215420
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:07:41

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

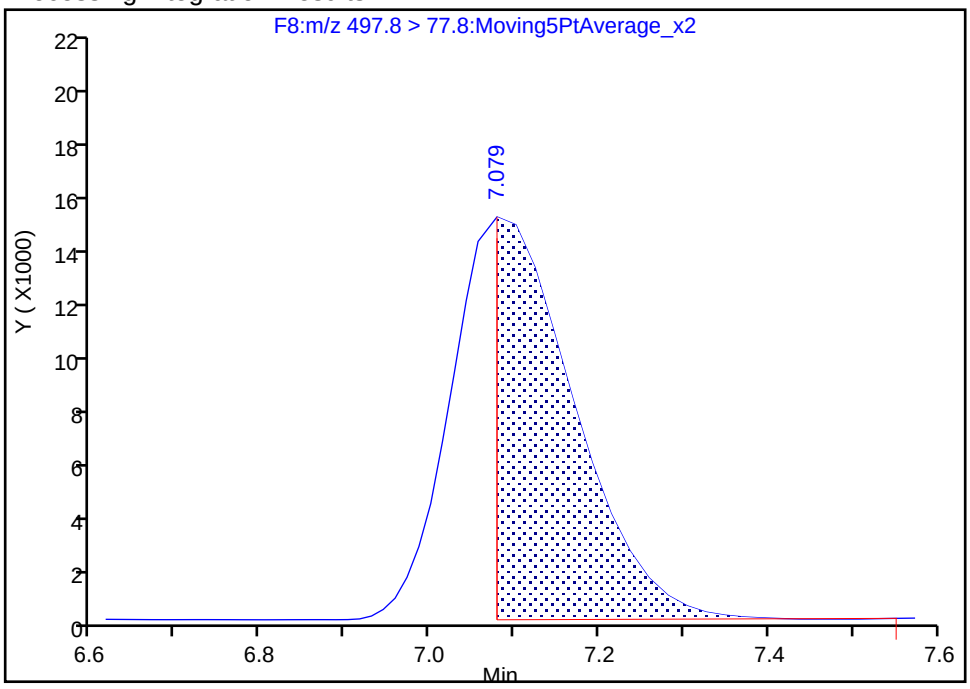
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d
Injection Date: 12-Jun-2018 20:54:51 Instrument ID: LC410
Lims ID: 200-43678-A-2-C MSD
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F8:MRM

34 Perfluorooctane Sulfonamide, CAS: 754-91-6

Signal: 1

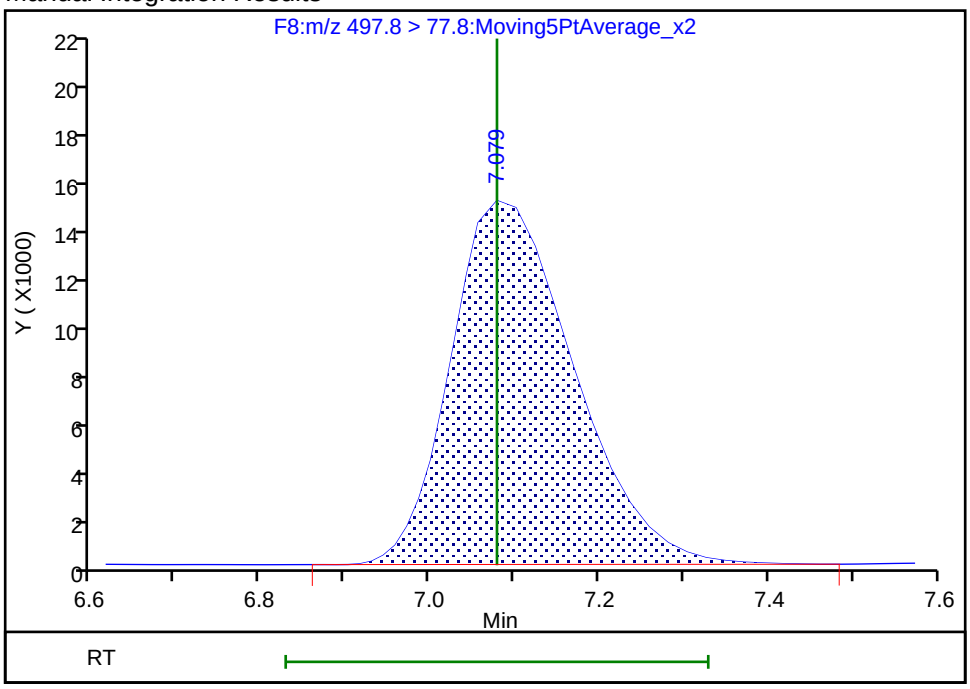
Processing Integration Results

RT: 7.08
Area: 91382
Amount: 12.040034
Amount Units: ng/ml



Manual Integration Results

RT: 7.08
Area: 146910
Amount: 19.159383
Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:07:56
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

TestAmerica Burlington

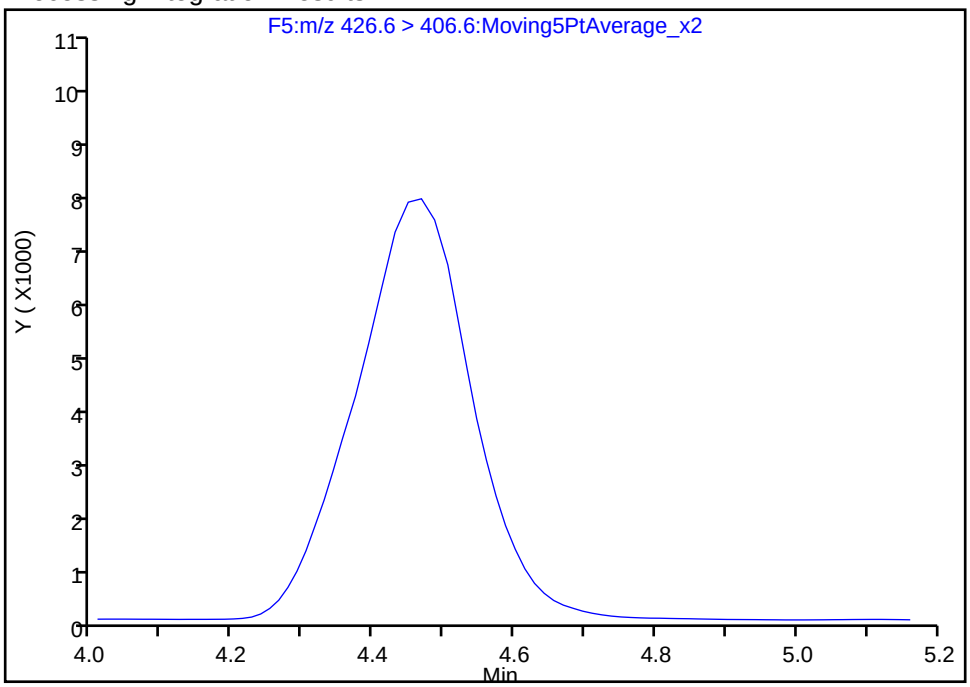
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d
Injection Date: 12-Jun-2018 20:54:51 Instrument ID: LC410
Lims ID: 200-43678-A-2-C MSD
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F5:MRM

14 1H,1H,2H,2H-perfluorooctanesulfonic acid (6:, CAS: 27619-97-2

Signal: 1

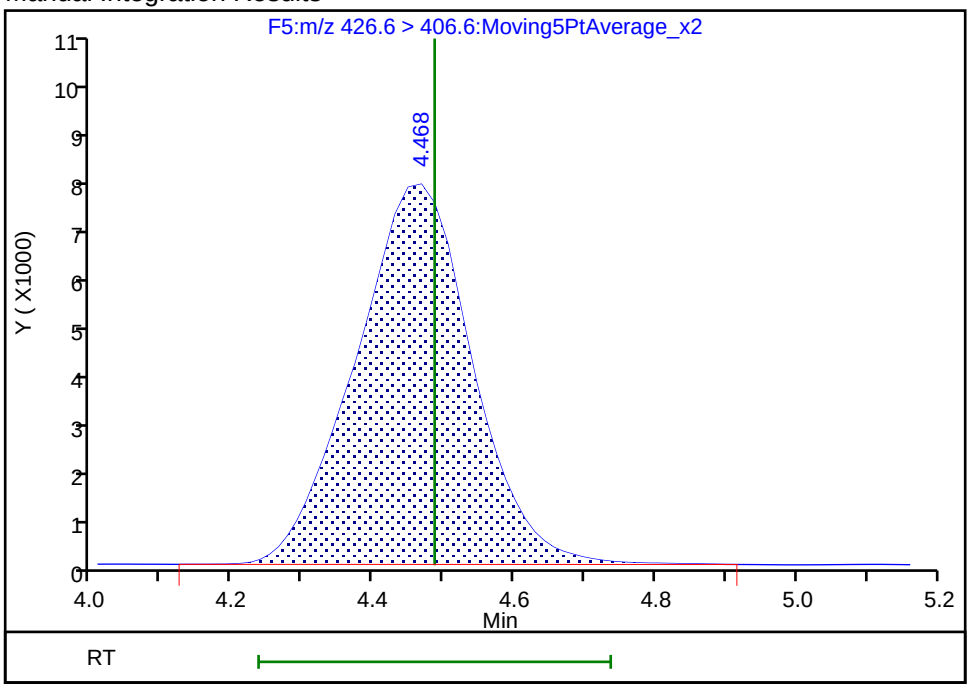
Not Detected
Expected RT: 4.49

Processing Integration Results



Manual Integration Results

RT: 4.47
Area: 85228
Amount: 20.298722
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:22:44
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

Manual Integration/User Assign Peak Report

TestAmerica Burlington

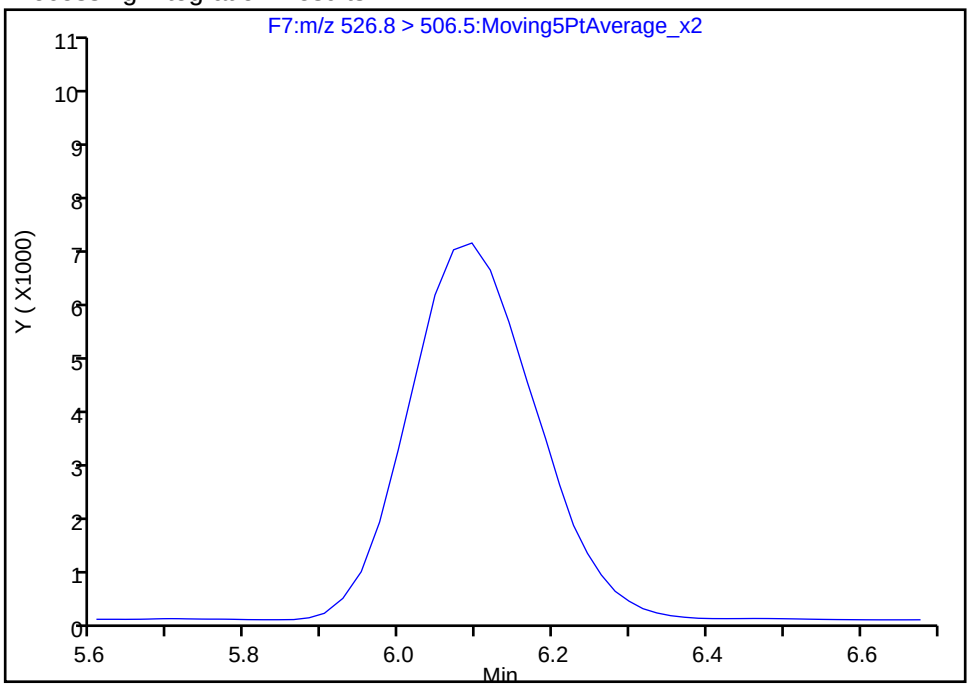
Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A48.d
Injection Date: 12-Jun-2018 20:54:51 Instrument ID: LC410
Lims ID: 200-43678-A-2-C MSD
Client ID: LMS-3
Operator ID: BC ALS Bottle#: 0 Worklist Smp#: 48
Injection Vol: 20.0 ul Dil. Factor: 1.0000
Method: PFCISO_12MRM Limit Group: LC_PFC_ICAL
Column: Detector F7:MRM

23 1H,1H,2H,2H-perfluorodecanesulfonic acid (8:, CAS: 39108-34-4

Signal: 1

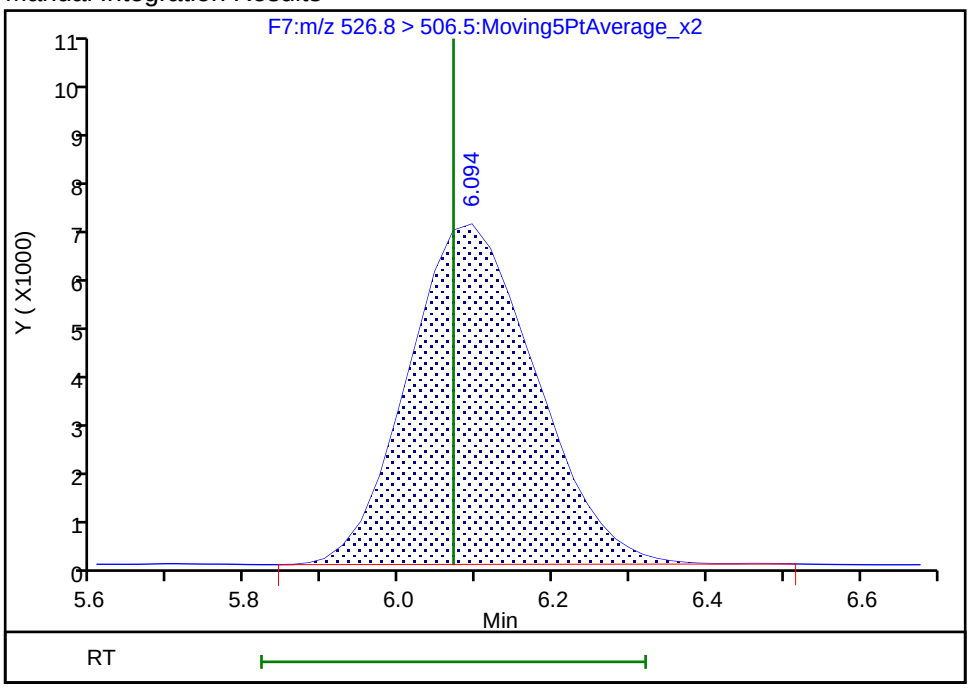
Not Detected
Expected RT: 6.07

Processing Integration Results



Manual Integration Results

RT: 6.09
Area: 80467
Amount: 24.638794
Amount Units: ng/ml



Reviewer: kirchnerb, 21-Jun-2018 21:22:46
Audit Action: Assigned Compound ID Audit Reason: Peak assignment corrected

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Instrument ID: LC410 Start Date: 06/06/2018 18:01

Analysis Batch Number: 130333 End Date: 06/07/2018 16:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 200-130333/6		06/06/2018 18:01	1	PF060618A06.d	C-18 4.6(mm)
IC 200-130333/7		06/06/2018 18:17	1	PF060618A07.d	C-18 4.6(mm)
IC 200-130333/8		06/06/2018 18:33	1	PF060618A08.d	C-18 4.6(mm)
IC 200-130333/9		06/06/2018 18:49	1	PF060618A09.d	C-18 4.6(mm)
IC 200-130333/10		06/06/2018 19:05	1	PF060618A10.d	C-18 4.6(mm)
IC 200-130333/11		06/06/2018 19:22	1	PF060618A11.d	C-18 4.6(mm)
ICB 200-130333/12		06/06/2018 19:38	1		C-18 4.6(mm)
ICV 200-130333/13		06/06/2018 19:54	1	PF060618A13.d	C-18 4.6(mm)
ZZZZZ		06/06/2018 20:10	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 20:26	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 20:42	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 20:58	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 21:14	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 21:30	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 21:47	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 22:03	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 22:19	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 22:35	1		C-18 4.6(mm)
CCV 200-130333/24		06/06/2018 22:51	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 23:07	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 23:23	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 23:39	1		C-18 4.6(mm)
ZZZZZ		06/06/2018 23:55	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 00:12	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 00:28	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 00:44	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 01:00	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 01:16	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 01:32	1		C-18 4.6(mm)
CCV 200-130333/35		06/07/2018 01:48	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 02:04	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 02:20	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 02:36	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 02:53	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 03:09	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 03:25	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 03:41	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 03:57	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 04:13	1		C-18 4.6(mm)
CCV 200-130333/45		06/07/2018 04:29	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 04:46	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 05:02	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 05:18	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 05:34	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 05:50	1		C-18 4.6(mm)

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Instrument ID: LC410 Start Date: 06/06/2018 18:01

Analysis Batch Number: 130333 End Date: 06/07/2018 16:24

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		06/07/2018 06:06	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 06:23	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 06:39	1		C-18 4.6(mm)
CCV 200-130333/54		06/07/2018 06:55	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 07:11	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 07:27	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 07:43	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 08:00	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 08:16	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 08:32	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 08:48	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 09:04	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 09:20	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 09:36	1		C-18 4.6(mm)
CCV 200-130333/65		06/07/2018 09:53	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 10:09	10		C-18 4.6(mm)
ZZZZZ		06/07/2018 10:25	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 10:41	50		C-18 4.6(mm)
ZZZZZ		06/07/2018 10:57	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 11:13	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 11:30	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 11:46	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 12:02	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 12:18	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 12:34	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 12:50	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 13:07	1		C-18 4.6(mm)
CCV 200-130333/78		06/07/2018 13:23	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 13:39	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 13:55	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 14:11	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 14:27	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 14:43	5		C-18 4.6(mm)
ZZZZZ		06/07/2018 14:59	5		C-18 4.6(mm)
ZZZZZ		06/07/2018 15:19	1		C-18 4.6(mm)
ZZZZZ		06/07/2018 15:35	2		C-18 4.6(mm)
ZZZZZ		06/07/2018 15:51	10		C-18 4.6(mm)
RINSE 200-130333/88		06/07/2018 16:07	1		C-18 4.6(mm)
CCV 200-130333/89		06/07/2018 16:24	1		C-18 4.6(mm)

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Instrument ID: LC410 Start Date: 06/12/2018 09:20

Analysis Batch Number: 130505 End Date: 06/12/2018 22:15

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		06/12/2018 09:20	1		C-18 4.6(mm)
CCVL 200-130505/6		06/12/2018 09:36	1	PF061218A06.d	C-18 4.6(mm)
CCV 200-130505/7		06/12/2018 09:52	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 10:09	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 10:25	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 10:41	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 10:57	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 11:13	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 11:30	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 11:46	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 12:02	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 12:18	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 12:34	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 12:50	1		C-18 4.6(mm)
CCV 200-130505/19		06/12/2018 13:06	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 13:23	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 13:39	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 13:55	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 14:11	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 14:27	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 14:43	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 14:59	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 15:15	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 15:32	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 15:48	1		C-18 4.6(mm)
CCV 200-130505/30		06/12/2018 16:04	1	PF061218A30.d	C-18 4.6(mm)
MB 200-130388/1-A		06/12/2018 16:20	1	PF061218A31.d	C-18 4.6(mm)
LCS 200-130388/2-A		06/12/2018 16:36	1	PF061218A32.d	C-18 4.6(mm)
ZZZZZ		06/12/2018 16:52	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 17:09	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 17:25	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 17:41	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 17:57	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 18:13	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 18:29	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 18:45	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 19:01	1		C-18 4.6(mm)
CCV 200-130505/42		06/12/2018 19:18	1	PF061218A42.d	C-18 4.6(mm)
ZZZZZ		06/12/2018 19:34	1		C-18 4.6(mm)
ZZZZZ		06/12/2018 19:50	1		C-18 4.6(mm)
200-43678-1		06/12/2018 20:06	1	PF061218A45.d	C-18 4.6(mm)
200-43678-2		06/12/2018 20:22	1	PF061218A46.d	C-18 4.6(mm)
200-43678-2 MS		06/12/2018 20:38	1	PF061218A47.d	C-18 4.6(mm)
200-43678-2 MSD		06/12/2018 20:54	1	PF061218A48.d	C-18 4.6(mm)
200-43678-3		06/12/2018 21:10	1	PF061218A49.d	C-18 4.6(mm)

537 (modified)

LCMS ANALYSIS RUN LOG

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Instrument ID: LC410 Start Date: 06/12/2018 09:20

Analysis Batch Number: 130505 End Date: 06/12/2018 22:15

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
200-43678-4		06/12/2018 21:27	1	PF061218A50.d	C-18 4.6(mm)
200-43678-5		06/12/2018 21:43	1	PF061218A51.d	C-18 4.6(mm)
200-43678-6		06/12/2018 21:59	1	PF061218A52.d	C-18 4.6(mm)
CCV 200-130505/53		06/12/2018 22:15	1	PF061218A53.d	C-18 4.6(mm)

537 (modified)

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Batch Number: 130388 Batch Start Date: 06/08/18 11:00 Batch Analyst: Murray, John W

Batch Method: 3535 Batch End Date: 06/08/18 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	GrossWeight	TareWeight	InitialAmount	FinalAmount	LCMPFCIDA21 00002	LCPFC_21SP 00001
MB 200-130388/1		3535, 537 (modified)		250 g	0 g	250 mL	0.5 mL	0.025 mL	
LCS 200-130388/2		3535, 537 (modified)		250 g	0 g	250 mL	0.5 mL	0.025 mL	0.01 mL
200-43678-A-1	ERM-3	3535, 537 (modified)	T	307.33 g	27.52 g	279.8 mL	0.5 mL	0.025 mL	
200-43678-A-2	LMS-3	3535, 537 (modified)	T	303.81 g	27.59 g	276.2 mL	0.5 mL	0.025 mL	
200-43678-A-2 MS	LMS-3	3535, 537 (modified)	T	302.63 g	27.52 g	275.1 mL	0.5 mL	0.025 mL	0.01 mL
200-43678-A-2 MSD	LMS-3	3535, 537 (modified)	T	308.86 g	27.71 g	281.2 mL	0.5 mL	0.025 mL	0.01 mL
200-43678-A-3	LMS-4	3535, 537 (modified)	T	318.53 g	27.59 g	290.9 mL	0.5 mL	0.025 mL	
200-43678-A-4	MW-1	3535, 537 (modified)	T	332.51 g	28.05 g	304.5 mL	0.5 mL	0.025 mL	
200-43678-A-5	MW-X	3535, 537 (modified)	T	304.81 g	29.68 g	275.1 mL	0.5 mL	0.025 mL	
200-43678-A-6	EQUIPMENT BLANK	3535, 537 (modified)	T	305.90 g	27.38 g	278.5 mL	0.5 mL	0.025 mL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	PFAS21 IS Stk 00002					
MB 200-130388/1		3535, 537 (modified)		0.005 mL					
LCS 200-130388/2		3535, 537 (modified)		0.005 mL					
200-43678-A-1	ERM-3	3535, 537 (modified)	T	0.005 mL					
200-43678-A-2	LMS-3	3535, 537 (modified)	T	0.005 mL					
200-43678-A-2 MS	LMS-3	3535, 537 (modified)	T	0.005 mL					
200-43678-A-2 MSD	LMS-3	3535, 537 (modified)	T	0.005 mL					
200-43678-A-3	LMS-4	3535, 537 (modified)	T	0.005 mL					
200-43678-A-4	MW-1	3535, 537 (modified)	T	0.005 mL					
200-43678-A-5	MW-X	3535, 537 (modified)	T	0.005 mL					

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

LCMS BATCH WORKSHEET

Lab Name: TestAmerica Burlington Job No.: 200-43678-1

SDG No.:

Batch Number: 130388 Batch Start Date: 06/08/18 11:00 Batch Analyst: Murray, John W

Batch Method: 3535 Batch End Date: 06/08/18 12:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	PFAS21 IS Stk 00002					
200-43678-A-6	EQUIPMENT BLANK	3535, 537 (modified)	T	0.005 mL					

Batch Notes	
Balance ID	M02926
First End time	1200
H2O ID	041018C
Hexane ID	1138942
Manifold ID	IDA 1, IDA 2
Methanol ID	198321
Pipette ID	V05476
Analyst ID - Reagent Drop	JWM
Analyst ID - SU Reagent Drop	JWM
Analyst ID - SU Reagent Drop Witness	BC
Solvent Lot #	1156858
Solvent Name	0.3% NH4OH in MeOH
SOP Number	BR-LC-009r1
SPE Cartridge Type	Waters Oasis WAX 500mg Lot 003837354A
First Start time	1100

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Shipping and Receiving Documents

TestAmerica Burlington
30 Community Drive, Suite 11
South Burlington, VT 05403
Phone 802-660-1990

BUT

Chain of Custody Record

NYSC 460501

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: BCL HS	Lab PM: Haas, Melissa	Carrier Tracking No(s):	COC No: 460-97631-62084.1
Client Contact: Mr. Stephen Goetz	Phone:	E-Mail: melissa.haas@testamericainc.com		Page: Page of
Company: Environmental Assessment & Remediations				Job #:
Address: dba Env Assessment & Remediation 225 Atlantic Avenue	Due Date Requested:			
City: Patchogue	TAT Requested (days): 10 days			
State, Zip: NY, 11772				
Phone: 631-447-6400(Tel)	PO #: Callout:122038; Site:130027			
Email: goetz@enviro-asmnt.com	WO #:			
Project Name: DEC-HICKSVILLE270 Site:130027 PFAS	Project #: 46013163			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	PFC_IDA - PFAS, Standard List (21 Analytes)	Total Number of containers	Special Instructions/Note:
			Preservation Code			N		
ERM-3	5/31/18	1050	G	Water	N	X		2
LMS-3	↓	1235	↓	Water	Y	↓		6
LMS-4	↓	1135	↓	Water	N	↓		2
MW-1	↓	0915	↓	Water	N	↓		2
MW-X	↓	—	↓	Water	N	↓		2
Equipment Blank	↓	1335	↓	Water	N	↓		2
				Water				
				Water				
				Water				
				Water				
				Water				

200-43678 COC

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify) -NY Cat B

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	5/31/18 / 1700	EAR	EAR Cooler	5/31/18 / 1700	EAR
EAR SAMPLE FRIDGE	6-0178	EAR	WILLIAM A VIGLIOTTA	6-0178	EAR
WILLIAM A. VIGLIOTTA	6-0178	EAR	[signature]	6/1/18 11:17	TA

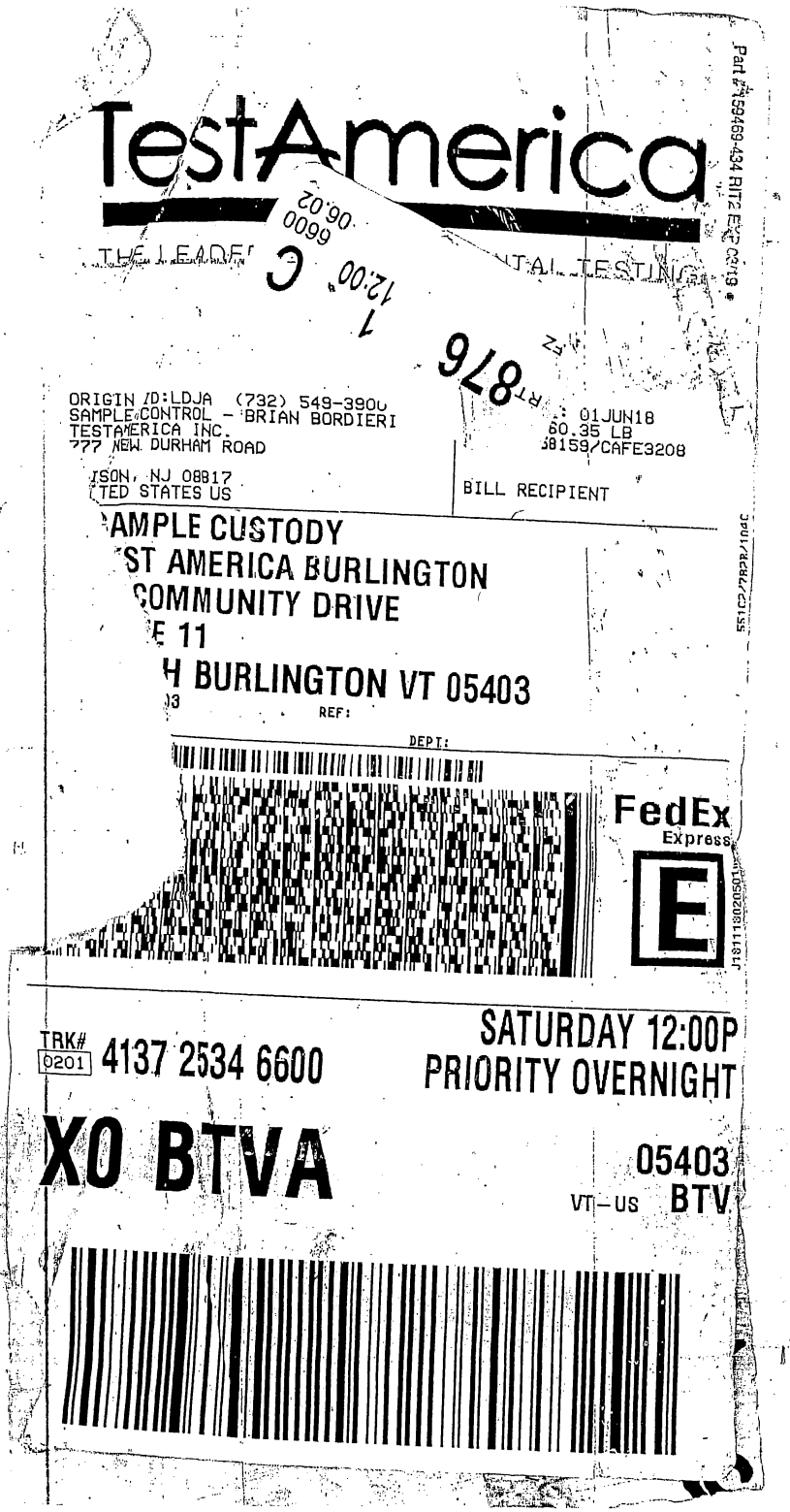
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		2.5

PO 6-1-18/1500
BW 6/1/18 1700 TA

[signature] TA 6/1/18 1800

Rec'd By: [signature] TAB on 6/2/18 0935

Ver: 08/04/2016


TestAmerica
THE LEADER
ORIGIN ID:LDJA (732) 549-3900
SAMPLE CONTROL - BRIAN BORDIERI
TESTAMERICA INC.
777 NEW DURHAM ROAD
ISON, NJ 08817
TED STATES US
01JUN18
60.35 LB
58159/CAFE3208
BILL RECIPIENT
AMPLE CUSTODY
ST AMERICA BURLINGTON
COMMUNITY DRIVE
E 11
H BURLINGTON VT 05403
REF:
DEPT:
FedEx
Express
TRK# 0201 4137 2534 6600
SATURDAY 12:00P
PRIORITY OVERNIGHT
XO BTVA
05403
VT-US BTV

Login Sample Receipt Checklist

Client: New York State D.E.C. Job Number: 200-43678-1

Login Number: 43678 **List Source: TestAmerica Burlington**
List Number: 1
Creator: Hahl, Victoria L

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	Not present
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.5ºC
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	BCC HS
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	No analysis requiring residual chlorine check assigned.

APPENDIX C—DUSR

Providing Tomorrow's Solutions, Today.

225 Atlantic Avenue
Patchogue, NY 11772
Office: 631.447.6400
Fax: 631.447.6497
Toll-Free: 1.888.EAR.6789

www.Enviro-Asmnt.com

ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

To: Steve Goetz
Environmental Assessment &
Remediations
225 Atlantic Avenue
Patchogue, NY 11772

From: Tracey Evans

Data: 7/16/2018

Subject: Data Usability Summary Report for Project DEC-HICKSVILLE270

The Following Items Are Being Transmitted:
Data Packages

Originals	Copies	Description of Materials	Electronic/ Hard Copy
1		460-157434-2 Ny_CatB_Package_Mini_Final Report.pdf	Electronic
1		example: 460-157434-2_EquNysdec.xls	Electronic

Signature:

Tracey Evans
Chemist
evans@enviro-asmnt.com
Enviromental Assessment and Remediation
225 Atlantic Avenu
Patchogue, New York 11772
631-447-6400

DEC-Hicksville270 Data Usability Summary Report for May 31, 2018 Samples

Client: Environmental Assessment & Remediations, Patchogue, New York
Laboratory: TestAmerica, (NYDOH lab id 11452)
Site: DEC-Hicksville270 (Site#130027)

Lab Job ID: 460-157434-2 Methods Evaluated				
Lab ID	**Field ID**	**Collection Date**	**Matrix**	**8270D**
460-157434-1	MW-1	5/31/2018	water	x
460-157434-2	ERM-3	5/31/2018	water	x
460-157434-3	LMS-4	5/31/2018	water	x
460-157434-4	LMS-3	5/31/2018	water	x
460-157434-5	AMS-2	5/31/2018	water	x
460-157434-6	ERM-1	5/31/2018	water	x
460-157434-7	MW-X	5/31/2018	water	x
460-157434-8	Equipment Blank	5/31/2018	water	x
460-157434-10	MW-2	5/31/2018	water	x
460-157434-11	LMS-5	5/31/2018	water	x

Samples were analyzed under (depends on testing):

- USEPA Region 2 *Semivolatile Data Validation,* SOP HW-35A, Revised 1 (September 2016)

- USEPA Contract Laboratory Program National Functional Guidance for Super Organic Methods Data Review, EPA 540-R-2017-002 (January 2017)

It should be noted that this method, 8270D while it has a SOP for validation that was used to guide the evaluation of data the addition of isotope dilution is not covered under the QA/QC.

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Criteria for Data Usability Summary Report

Completeness:
A complete data package is one that has all relevant and related material packaged for distribution to its client in accordance to the Analytical Service Protocol (ASP) Category B Deliverables guidelines.

Compliant:
A compliant data package is one that is determined to have all work that pertains to the production of the laboratory data in a manner that is consistent with the Quality Assurance Program Plan.

Overall Usability Issues
Data validation was completed in accordance to the New York State Department of Environmental Conservation Analytical Service Protocol (NYSDEC ASP) Category B Data Deliverable requirements and reviewer's professional judgment.
This analytical report is in compliance to the following points:

1. Holding Time and Analysis Time
2. Sample Analysis and Quality Control.

- There was no rejection of data.

In conclusion, the data reviewed in this report is usable and valid as it passes all stated criterion for compliance for method 8270D.

Data Completeness

- A complete Category B data package under the NYSDEC ASP has been reported.

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Data Validation Acronyms

AA	Atomic Absorption, Flame Technique
BHC	Hexachlorocylcohexane
BFB	Bromofluorobenzene (Tune check analyte)
CCC	Continuing Calibration Check
CCV	Continuing Calibration Verification
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
CVAA	Atomic Absorbtion, Cold Vapor
DCAA	2,4-Dichlorophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine (Tune check analyte)
DL	Detection Limit
ECD	Electron Capture Detector
FAA	Atomic Absorption, Furnace Technique
FID	Flame Ionization Detector
FNP	1-Fluoronapthalene
GC	Gas Chromatography
GC/MS	Gas Chromatography/ Mass Spectrometry
GPC	Gel Permeation Chromatography
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma – Atomic Emission Spectrometer
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ICAL	Initial Calibration Curve
IS	Internal Standard
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LCS/LCSD	Laboratory Control Sample/ Laboratory Control Sample Duplicate
MB	Method Blank
MS	Matrix Spike
BNAMS11	Method of Standard Additions
MSD	Matrix Spike Duplicate
MS/MSD	Matrix Spike/ Matrix Spike Duplicate

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Data Validation Acronyms

ND	Non-detected or Not Detected
PID	Photo Ionization Detector
PCB	Polychlorinated biphenyl
PCDD	Polychlorinated dibenzodioxins
PCDF	Polychlorinated dibenzofurans
PQL	Practical Quantitation Limit
QA	Quality Assurance
QA/QC	Quality Assurance/ Quality Control
QC	Quality Control
RF	Response Factor
RPD	Relative Percent Difference
RL	Reporting Limit
RRF	Relative Response Factor
RT	Retention Time
RRT	Relative Retention Time
SDG	Sample Delivery Group
SMC	System Monitoring Compounds/ Surrogates
SPCC	Sample Performance Check Compound
TCX	Tetrachloro-m-xylene
%D	Percent Drift
%R	Percent Recovery
%RSD	Percent Relative Standard Deviation

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Data Validation Qualifiers

U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
C	This qualifier applies to results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS)
X	This qualifier applies to results when GC/MS analysis was attempted but unsuccessful

Note:

1. These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

2. The EDDs are assigned these data validation qualifiers and refer to the valid value list supplied by the specific agency or informational data system.

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Client: Environmental Assessment & Remediations, Patchogue, New York
L**aboratory:** TESTAMERICA -EDISON, (NYDOH lab id 11452)
Site: DEC-HICKSVILLE270 (Site# 130027)

Method Review: 8270D SIM, Isotope Dilution

Lab Job ID: 460-157434-2		Methods Evaluated		
Lab ID	Field ID	Collection Date	Matrix	8270D
460-157434-1	MW-1	5/31/2018	water	x
460-157434-2	ERM-3	5/31/2018	water	x
460-157434-3	LMS-4	5/31/2018	water	x
460-157434-4	LMS-3	5/31/2018	water	x
460-157434-5	AMS-2	5/31/2018	water	x
460-157434-6	ERM-1	5/31/2018	water	x
460-157434-7	MW-X	5/31/2018	water	x
460-157434-8	Equipment Blank	5/31/2018	water	x
460-157434-10	MW-2	5/31/2018	water	x
460-157434-11	LMS-5	5/31/2018	water	x

Reviewer Summary :
Samples were handled and analyzed properly under EPA Region 2 protocol Standard Operating Procedure (SOP) HW-35A along with the EPA's National Functional Guideline for Organic Compounds. While 1,4 dioxane was observed in equipment blank no qualification was necessary. All data is within category B criterion and usable.

Blind Duplicate Compareson

	Original Sample	Blind Duplicate	Relative Percent Difference
Well	ERM-3	MW-X	
Data Collected			
1,4-Dioxane	0.13	0.14	7.41 %
1,4-Dioxane-D8	13	12	8 %

Reviewer comment: Comparing Duplicate pair ERM-3 and MW-X samples results are within acceptable quantities.

Client: Environmental Assessment & Remediations, Patchogue, New York
Laboratory: TESTAMERICA-Edison, (NYDOH lab id 11452)
Site: DEC-HICKSVILLE270 (SITE:130027)
Job ID: 460-157434-2

8270D SIM/Isotope Dilutions

Criteria	Y	N	NA	Comment
A. Sample Receipt				
Were samples within technical hold time and extraction period?	x			
Cooling Temp = 4°C ± 2°C .	x			
B. GC/MS Instrument Performance Check				
Were DFTPP performance results within criteria?	x			
Were all samples analyzed within the 12 hour time period?	x			
C. Initial Calibration				
Was a 5 point calibration conducted?	x			
RSD% within acceptable criterion?	x			
Was curve fit used for evaluation? If yes did the I.C. meet the curve fit acceptability of ≥0.990 ?	x			
Was the Initial Calibration Verification (ICV) done after the I.C?	x			
D. Continuing Calibration				
Was it done every 12 hours after Initial Calibration to verify it?	x			
Were (%D) and relative respond factors (RRF) within acceptable criteria?	x			
E. Laboratory Blanks				
Was a lab blank associated with each sample of SDG?	x			
Was blank analyzed every 20 samples?	x			
Were contamination found, if so qualification may be necessary?				

Criteria	Y	N	NA	Comment
F. Field Blanks/Trip Blank				**Equipment Blank**
Was a field blanks associated with each sample of SDG?	x			Within the equipment blank 1,4-dioxane was detected as a estimate. No qualification was needed. Please see attachment.
Were target compounds detected in it?	x			
G. Surrogate spikes (Isotope Dilution Recovery)				
Were Surrogate percent recovery (%R) within QC limits?(I,4-Dioxane-d8)	x			
If the (R%) for one or more surrogates were out of QC, was reanalysis performed to confirm %R?			x	
H. Matrix Spike/Matrix duplicate				
Were MS and MSD analyzed for SGD?	x			
Was MS/MSD done every 20 samples ?	x			
Were MS/MSD (%R) and RPD within QC?	x			
subsect.: Laboratory control sample				
Was LCS analysis for this SDG?	x			
Was LCS analysis per analysis batch?	x			
Was LCS (R%) within QC Limits?	x			
I. Field Duplicate				
Were field duplicates identified in this SGD?	x			Duplicate pair ERM-3 and MW-X samples were within acceptable %RPD. Please see chart.
Were target compounds detected in it?	x			
J. Internal Compounds				
Were counts within ≥50% to ≤%200 of associated calibration standard?	x			
Were retention times within ± 30 sec of cal. standard?	x			
K. Compound quantitation				
Were correct internal standards, quantitation ions and RRF used in quantitate compounds?	x			
Were compound quantitates and RLs adjusted to reflect sample dilutions and dry weights to continuous calibration?	x			

Criteria	Y	N	NA	Comment
L. Target Compound Identification				
Were relative retention times (RRTs) within ±0.06 units of standard?	x			
Did the spectrum meet EPA "Functional Guidelines"?	x			
Were chromatograms peaks verified and accounted?	x			
M. Overall assessment of data				
Was Overall assessment of data found to be acceptable?	x			

Comments: While the equipment blank 1,4 dioxan concentration was below the CRQL (RL) value it was above the MDL value and larger than many of the samples. This does not lead to qualification of data. All results were within Cat. B criterion and usable.

Attachments for Method Review

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Edison | Job No.: 460-157434-2
SDG No.:
Client Sample ID: Equipment Blank | Lab Sample ID: 460-157434-8
Matrix: Water | Lab File ID: C29824.D
Analysis Method: 8270D SIM ID | Date Collected: 05/31/2018 13:35
Extract. Method: 3510C | Date Extracted: 06/05/2018 08:01
Sample wt/vol: 250(mL) | Date Analyzed: 06/05/2018 18:20
Con. Extract Vol.: 2(mL) | Dilution Factor: 1
Injection Volume: 5(uL) | Level: (low/med) Low
% Moisture: | GPC Cleanup:(Y/N) N
Analysis Batch No.: 525311 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.14	J	0.20	0.016

CAS NO.	ISOTOPE DILUTION	%REC	Q	LIMITS
17647-74-4	1,4-Dioxane-d8	36		10-150

Reviewer comment: While still a estimated value lower than 'RL' it should be noted that the blank of the equipment is higher than that of most of the samples. While qualification is not necessary it is noted that this sample was taken directly after sample ERM-3 which had similar value. It suggested that equipment blanks should be taken before sampling.

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ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

To: Steve Goetz
Environmental Assessment &
Remediations
225 Atlantic Avenue
Patchogue, NY 11772

From: Tracey Evans

Data: 7/16/2018

Subject: Data Usability Summary Report for Project DEC-HICKVILLE270

The Following Items Are Being Transmitted:
Data Packages

Originals	Copies	Description of Materials	Electronic/ Hard Copy
1		200-43678-1 Ny_CatB_Package_Mini_Final Report.pdf	Electronic
1		200-43678-1_EquNysdec.xls	Electronic

Signature:

Tracey Evans
Chemist
evans@enviro-asmnt.com
Environmental Assessment and Remediation
225 Atlantic Avenue
Patchogue, New York 11772
631-447-6400 ext.146

DEC-Hicksville270 Data Usability Summary Report for May 31, 2018 Water Samples

Client: Environmental Assessment & Remediations, Patchogue, New York
Laboratory: TestAmerica, (NYDOH lab id 11452)
Site:DEC-Hicksville270 (Site# 130027)

Lab Job ID: **200-43678-1**				
		Methods Evaluated		
Lab ID	**Field ID**	**Collection Date**	**Matrix**	**537 Modified**
200-43678-1	ERM-3	5/31/18	water	x
200-43678-2	LMS-3	5/31/18	water	x
200-43678-3	LMS-4	5/31/18	water	x
200-43678-4	MW-1	5/31/18	water	x
200-43678-5	MW-x	5/31/18	water	x
200-43678-6	Equipment Blank	5/31/18	water	x

Samples were analyzed under (depends on testing):

- USEPA Contract Laboratory Program National Functional Guidance for Super Organic Methods Data Review, EPA 540-R-2017-002 (January 2017)

It should be noted that this method, 537 Modified has not been yet defined by the EPA for a standard operational procedure to guide the evaluation of data which can be referred to for isotope dilution and liquid chromatography QA/QC.

Criteria for Data Usability Summary Report

Completeness:
A complete data package is one that has all relevant and related material packaged for distribution to its client in accordance to the Analytical Service Protocol (ASP) Category B Deliverables guidelines.

Compliant:
A compliant data package is one that is determined to have all work that pertains to the production of the laboratory data in a manner that is consistent with the Quality Assurance Program Plan.

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Overall Usability Issues:

Data validation was completed in accordance to the New York State Department of Environmental Conservation Analytical Service Protocol (NYSDEC ASP) Category B Data Deliverable requirements and reviewer's professional judgment.

This analytical report is in compliance to the following points:

1. Holding Time and Analysis Time
2. Sample Analysis and Quality Control.

- There was no rejection of data.

In conclusion, the data reviewed in this report is usable and valid as it passes all stated criterion for compliance for method 537 Modifies.

Data Completeness

- A complete Category B data package under the NYSDEC ASP has been reported.

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Data Validation Acronyms

AA	Atomic Absorption, Flame Technique
BHC	Hexachlorocylcohexane
BFB	Bromofluorobenzene (Tune check analyte)
CCC	Continuing Calibration Check
CCV	Continuing Calibration Verification
CRDL	Contract Required Detection Limit
CRQL	Contract Required Quantitation Limit
CVAA	Atomic Absorbtion, Cold Vapor
DCAA	2,4-Dichlorophenylacetic acid
DCB	Decachlorobiphenyl
DFTPP	Decafluorotriphenyl phosphine (Tune check analyte)
DL	Detection Limit
ECD	Electron Capture Detector
FAA	Atomic Absorption, Furnace Technique
FID	Flame Ionization Detector
FNP	1-Fluoronapthalene
GC	Gas Chromatography
GC/MS	Gas Chromatography/ Mass Spectrometry
GPC	Gel Permeation Chromatography
ICB	Initial Calibration Blank
ICP	Inductively Coupled Plasma – Atomic Emission Spectrometer
ICV	Initial Calibration Verification
IDL	Instrument Detection Limit
ICAL	Initial Calibration Curve
IS	Internal Standard
LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
LCS/LCSD	Laboratory Control Sample/ Laboratory Control Sample Duplicate
MB	Method Blank
MS	Matrix Spike
BNAMS11	Method of Standard Additions
MSD	Matrix Spike Duplicate
MS/MSD	Matrix Spike/ Matrix Spike Duplicate

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PCDF	Polychlorinated dibenzofurans
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QA/QC	Quality Assurance/ Quality Control
QC	Quality Control
RF	Response Factor
RPD	Relative Percent Difference
RL	Reporting Limit
RRF	Relative Response Factor
RT	Retention Time
RRT	Relative Retention Time
SDG	Sample Delivery Group
SMC	System Monitoring Compounds/ Surrogates
SPCC	Sample Performance Check Compound
TCX	Tetrachloro-m-xylene
%D	Percent Drift
%R	Percent Recovery
%RSD	Percent Relative Standard Deviation

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Data Validation Qualifiers

U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
C	This qualifier applies to results when the identification has been confirmed by Gas Chromatograph/Mass Spectrometer (GC/MS)
X	This qualifier applies to results when GC/MS analysis was attempted but unsuccessful

Note:

1. These qualifiers are used for data validation purposes. The data validation qualifiers may differ from the qualifiers that the laboratory assigns to the data. Refer to the laboratory analytical report for the definitions of the laboratory qualifiers.

2. The EDDs are assigned these data validation qualifiers and refer to the valid value list supplied by the specific agency or informational data system.

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Client: Environmental Assessment & Remediations, Patchogue, New York
L**aboratory:** TESTAMERICA -Burlington, (NYDOH lab id 11452)
Site: DEC-HICKSVILLE270 (Site# 130027)

Method Review :537 Modified

Lab Job ID: 200-43678-1

Lab ID	Field ID	Collection Date	Matrix
200-43678-1	ERM-3	5/31/2018	water
200-43678-2	LMS-3	5/31/2018	water
200-43678-3	LMS-4	5/31/2018	water
200-43678-4	MW-1	5/31/2018	water
200-43678-5	MW-X	5/31/2018	water
200-43678-6	Equipment Blank	5/31/2018	water

Reviewer Summary :
Samples were handled and analyzed properly under EPA's National Functional Guideline for Organic Compounds. While the field blank did contain compound , they were in low concentration as estimation and do not require any further qualification. Within the blind field duplicate there was only one compound which failed to be within bounds, but is identified properly, with no qualification to data. All data is within category B criterion and usable.

Blind Duplicate Compareson

	Original Sample	Blind Duplicate	Relative Percent Difference
Well	ERM-3	MW-X	
Compounds			
13C2-Perfluorodecanoic acid	71.4	73.2	2.49 %
13C2-Perfluorododecanoic acid	58.3	63.8	9.01 %
13C2-Perfluorohexanoic acid	63.6	67.2	5.5 %
13C2-Perfluorotetradecanoic acid	58.5	58	0.86 %
13C2-Perfluoroundecanoic acid	73.7	73.7	-
13C3-PERFLUOROBUTANE SULFONATE	58.9	67.2	13.16 %
13C4-Perfluorobutanoic acid	26.1	27.7	5.95 %
13C4-Perfluoroheptanoic acid	71.1	72.7	2.23 %
13C4-Perfluorooctanesulfonate	80.7	80.1	0.75 %
13C4-Perfluorooctanoic acid	79	79.7	0.88 %
13C5-Perfluorononanoic acid	80.8	84.5	4.48 %
13C5-Perfluoropentanoic acid	45.2	51.1	12.25 %
13C8-Perfluorooctanesulfonamide	49.5	46.9	5.39 %
18O2-Perfluorohexanesulfonic acid	67.4	70.4	4.35 %
2-(N-methyl perfluorooctanesulfonamido) acetic acid	0.68	<1.82	-
Combined PFOA & PFOS	20.66	19.72	4.66 %
N-deuterioethylperfluoro-1-octanesulfonamidoacetic acid	61.3	60.2	1.81 %
N-deuteriomethylperfluoro-1-octanesulfonamidoacetic acid	58.8	59	0.34 %
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	0.62	<1.82	-
Perfluorobutanesulfonic Acid (PFBS)	1.29	2.44	61.66 %
Perfluorobutyric Acid (PFBA)	7.21	7.32	1.51 %
Perfluorodecane Sulfonic Acid	<1.79	<1.82	-
Perfluorodecanoic Acid (PFDA)	5.12	4.55	11.79 %
Perfluorododecanoic Acid (PFDoA)	<1.79	<1.82	-
Perfluoroheptane Sulfonate (PFHpS)	0.58	<1.82	-
Perfluoroheptanoic Acid (PFHpA)	6.33	6.43	1.57 %
Perfluorohexanesulfonic Acid (PFHxS)	2.53	1.63	43.27 %
Perfluorohexanoic Acid (PFHxA)	8.58	8.07	6.13 %
Perfluorononanoic Acid (PFNA)	2.74	3.04	10.38 %
Perfluorooctane Sulfonamide (FOSA)	0.64	0.65	1.55 %
Perfluorooctanesulfonic Acid (PFOS)	8.76	8.52	2.78 %
Perfluorooctanoic Acid (PFOA)	11.9	11.2	6.06 %

	Original Sample	Blind Duplicate	Relative Percent Difference
Well	ERM-3	MW-X	
Perfluoropentanoic Acid (PFPeA)	15.4	16.3	5.68 %
Perfluorotetradecanoic Acid (PFTeA)	<1.79	<1.82	-
Perfluorotridecanoic Acid (PFTriA)	<1.79	<1.82	-
Perfluoroundecanoic Acid (PFUnA)	1.24	1.59	24.73 %
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-13C2]-decane sulfonate (6:2)	107	97.6	9.19 %
Sodium 1H,1H,2H,2H-perfluoro-1-[1,2-13C2]-octane sulfonate (6:2)	179	193	7.53 %
SODIUM 1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2)	0.75	0.77	2.63 %
SODIUM 1H,1H,2H,2H-PERFLUOROOCTANE SULFONATE (6:2)	<1.79	<1.82	-

Reviewer comment: Comparing Duplicate pair ERM-3 and MW-X samples results are within acceptable quantities. Most of the compound were within RSD except for Perfluorobutanesulfonic Acid (PFBS). This fell outside of the acceptable 50%of % RSD. Looking at the peaks, one can understand the difference based on manual intergration. These peaks fall within the 30 sec of expected compound retention. There are no qualification which will be added to this data.

Client: Environmental Assessment & Remediations, Patchogue, New York
Laboratory: TESTAMERICA-Burlington, (NYDOH lab id 11452)
Site: DEC-HICKSVILLE270 (SITE:130027)
Job ID: 200-43678-1

537 PFC IDA

Criteria	Y	N	NA	Comment
A. Sample Receipt				
Were samples within technical hold time and extraction period?	x			
Cooling Temp = 4°C ± 2°C .	x			
B. Initial Calibration				
Was a 5 point calibration conducted?	x			
RSD% within acceptable criterion?	x			
Was curve fit used for evaluation? If yes did the I.C. meet the curve fit acceptability of ≥0.990 ?	x			
Was the Initial Calibration Verification (ICV) done after the I.C?	x			
C. Continuing Calibration				
Was it done every 12 hours after Initial Calibration to verify it?	x			
Were (%D) and relative respond factors (RRF) within acceptable criteria?	x			
D. Laboratory Blanks				
Was a lab blank associated with each sample of SDG?	x			
Was blank analyzed every 20 samples?	x			
Were contamination found, if so qualification may be necessary?	x			
E. Field Blanks/Trip Blank				**Equipment Blank**
Was a field blanks associated with each sample of SDG?	x			Sample was taken at the end of the day thus compounds were dectected mostlike due to usage. No action needed.Please see attachment.
Were target compounds detected in it?	x			

Criteria	Y	N	NA	Comment
F. Surrogate spikes (Isotope Dilution Recovery)				
Were Surrogates percent recovery (%R) within QC limits?	x			
If the (R%) for one or more surrogates were out of QC, was reanalysis performed to confirm %R?		x		
H. Matrix Spike/Matrix duplicate				
Were MS and MSD analyzed for SGD?	x			
Was MS/MSD done every 20 samples ?	x			
Were MS/MSD (%R) and RPD within QC?	x			
subsect.: Laboratory control sample				
Was LCS analysis for this SDG?	x			
Was LCS analysis per analysis batch?	x			
Was LCS (R%) within QC Limits?	x			
I. Field Duplicate				
Were field duplicates identified in this SGD?	x			Field duplicated ERM-3 and MW-X compared well except for one compound falling out of 50% bounds of %RSD range. No qualification. Please see attachment.
Were target compounds detected in it?	x			
K. Compound quantitation				
Were correct internal standards, quantitation ions and RRF used in quantitate compounds?	x			
Were compound quantitates and RLs adjusted to reflect sample dilutions and dry weights to continuous calibration?	x			
L. Target Compound Identification				
Were relative retention times (RRTs) with in ±0.06 units of standard?	x			
Did the spectrum meet EPA "Functional Guidelines"?	x			
Were chromatograms peaks verified and accounted?	x			
N. Overall assessment of data				

Criteria	Y	N	NA	Comment
Was Overall assessment of data found to be acceptable?	x			

Comments: Field duplicate compared well except for one compound which fails to be within acceptable %RSD but no qualification was needed. The equipment blank was below the CRQL (RL) value yet detected above the MDL of many of the compounds. This does not lead to qualification of data. The equipment blank should probably be collect at the begain of the sampling day in the future most likely lowering background. All results were within Cat. B criterion and usable.

Attachments for Method Review

FORM I
LCMS ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Burlington | Job No.: 200-43678-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 200-130388/1-A

Matrix: Water | Lab File ID: PF061218A31.d

Analysis Method: 537 (modified) | Date Collected:

Extraction Method: 3535 | Date Extracted: 06/08/2018 11:00

Sample wt/vol: 250(mL) | Date Analyzed: 06/12/2018 16:20

Con. Extract Vol.: 0.5(mL) | Dilution Factor: 1

Injection Volume: 20(uL) | GC Column: C-18 ID: 4.6(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 130505 | Units: ng/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
375-22-4	Perfluorobutanoic acid (PFBA)	2.00	U	2.00	0.44
2706-90-3	Perfluoropentanoic acid (PFPeA)	1.195	J	2.00	0.44
307-24-4	Perfluorohexanoic acid (PFHxA)	0.849	J	2.00	0.44
375-85-9	Perfluoroheptanoic acid (PFHpA)	2.00	U	2.00	0.29
335-67-1	Perfluorooctanoic acid (PFOA)	0.735	J	2.00	0.47
375-95-1	Perfluorononanoic acid (PFNA)	2.00	U	2.00	0.26
335-76-2	Perfluorodecanoic acid (PFDA)	2.00	U	2.00	0.44
2058-94-8	Perfluoroundecanoic acid (PFUnA)	2.00	U	2.00	0.44
307-55-1	Perfluorododecanoic acid (PFDoA)	2.00	U	2.00	0.44
72629-94-8	Perfluorotridecanoic Acid (PFTriA)	2.00	U	2.00	0.44
376-06-7	Perfluorotetradecanoic acid (PFTeA)	2.00	U	2.00	0.44
375-73-5	Perfluorobutanesulfonic acid (PFBS)	2.00	U	2.00	0.88
355-46-4	Perfluorohexanesulfonic acid (PFHxS)	1.161	J	2.00	0.28
375-92-8	Perfluoroheptanesulfonic Acid (PFHpS)	2.00	U	2.00	0.44
1763-23-1	Perfluorooctanesulfonic acid (PFOS)	2.00	U	2.00	0.30
335-77-3	Perfluorodecanesulfonic acid (PFDS)	2.00	U	2.00	0.44
754-91-6	Perfluorooctane Sulfonamide (FOSA)	2.00	U	2.00	0.44
2355-31-9	N-methyl perfluorooctane sulfonamidoacetic acid (NMeFOSAA)	2.00	U	2.00	0.60
2991-50-6	N-ethyl perfluorooctane sulfonamidoacetic acid (NEtFOSAA)	2.00	U	2.00	0.60
27619-97-2	6:2 FTS	2.00	U	2.00	0.60
39108-34-4	8:2 FTS	0.804	J	2.00	0.60

Reviewer comment: Highlighted compounds were higher than detected limit yet below compound reporting limits. While these results are low it is noted that the equipment blank was taken after sampling which may have caused higher than normal readings. This could lead to qualification in future samples if compounds are found to be above the reporting limit.

Original TestAmerica Data

Report Date: 21-Jun-2018 21:20:50 Chrom Revision: 2.2 07-Jun-2018 07:41:54

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File:	\\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A45.d				
Injection Date:	12-Jun-2018 20:06:34	Instrument ID:	LC410		
Lims ID:	200-43678-A-1-A	Lab Sample ID:	200-43678-1		
Client ID:	ERM-3				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	45
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

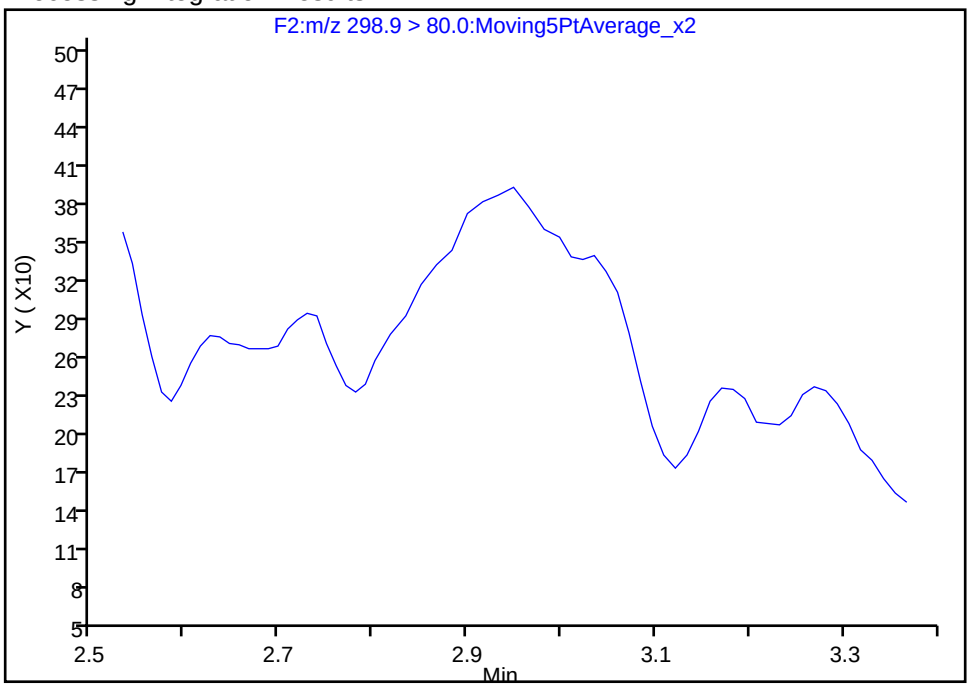
6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

Not Detected

Expected RT: 2.90

Processing Integration Results



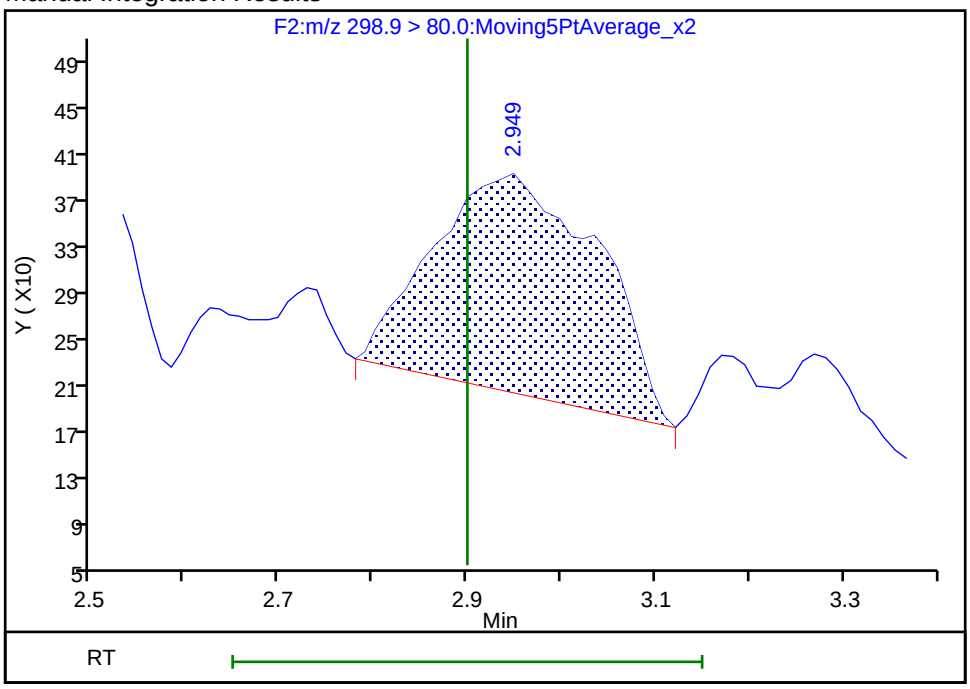
Manual Integration Results

RT: 2.95

Area: 2251

Amount: 0.719838

Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:01:44

Audit Action: Manually Integrated Audit Reason: Missed Peak

Report Date: 21-Jun-2018 21:24:25 Chrom Revision: 2.2 07-Jun-2018 07:41:54

Manual Integration/User Assign Peak Report

TestAmerica Burlington

Data File: \\ChromNA\Burlington\ChromData\LC410\20180612-30865.b\PF061218A51.d

Injection Date:	12-Jun-2018 21:43:10	Instrument ID:	LC410		
Lims ID:	200-43678-A-5-A	Lab Sample ID:	200-43678-5		
Client ID:	MW-X				
Operator ID:	BC	ALS Bottle#:	0	Worklist Smp#:	51
Injection Vol:	20.0 ul	Dil. Factor:	1.0000		
Method:	PFCISO_12MRM	Limit Group:	LC_PFC_ICAL		
Column:		Detector	F2:MRM		

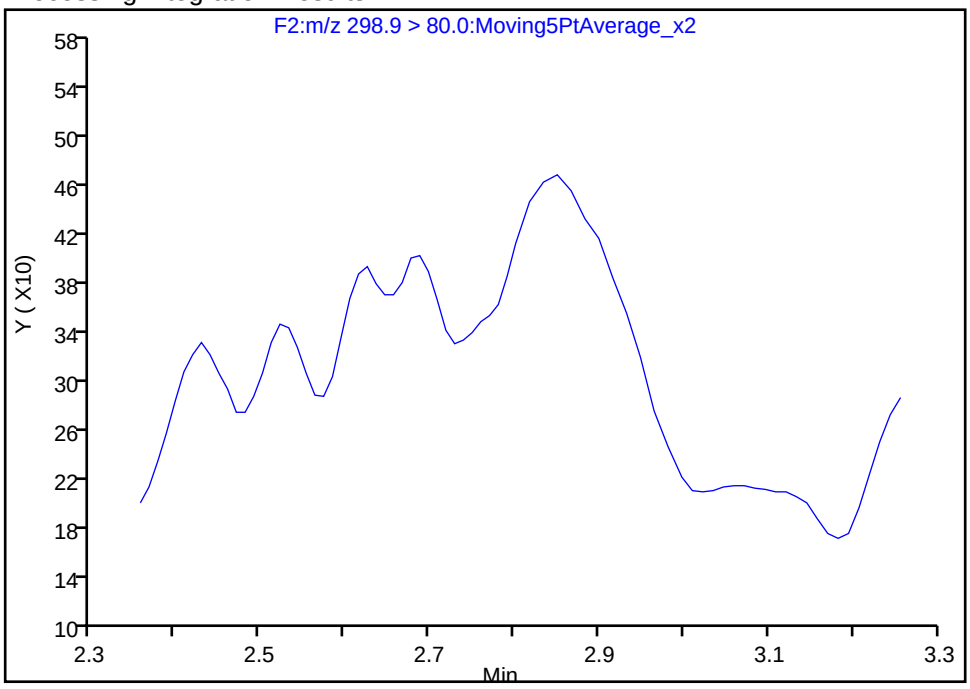
6 Perfluorobutanesulfonic acid, CAS: 375-73-5

Signal: 1

Not Detected

Expected RT: 2.90

Processing Integration Results



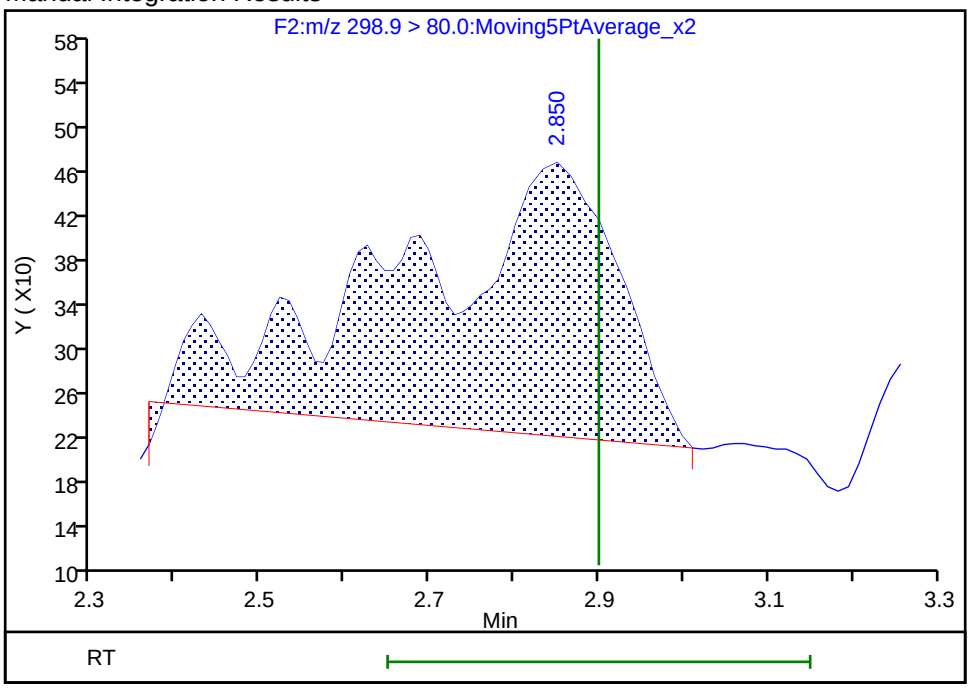
Manual Integration Results

RT: 2.85

Area: 4448

Amount: 1.344955

Amount Units: ng/ml



Reviewer: chirgwinb, 20-Jun-2018 18:18:23

Audit Action: Manually Integrated Audit Reason: Missed Peak

Reviewer comment: As observed these peaks are manual integrated by the lab and based on the nature of the lower concentration it is easy to see why one would not have completed agreement between peak as one has one peak, and another has several peaks. This is a judgment call by lab is an attempt to capture all possible results. As this is LC-MS there is no secondary chorographic identification. Compounds match retention time within 30 sec. A more accurate SOP for identification will be needed to be developed by the EPA for qualification of this data. No qualification is needed.

APPENDIX D—QA/QC TABLES

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results (µg/L)
TestAmerica, Inc.
Methods: SW8260C

Location	Date Collected	Acetone	Chloroform	m + p Xylene	Methylene Chloride	o-Xylene
Equipment Blank	05/31/18	**7.6**	**0.62 J**	**0.63 J**	**4.1**	**0.34 J**
Trip Blank	05/31/18	<5	<1	<1	**0.28 J**	**<1**

NYSDEC TOGS 1.1.1 Class GA Standard/Guidance Values	50	7	5*	5	5

Notes:
J-Laboratory estimated value
n/a-No value established
*The standard aplies to each isomer separately.

The chemicals listed below were reported below the LRL:

1,1 Dichloroethane	Benzene	Dichlorodifluoromethane
1,1 Dichloroethene	Bromochloromethane	Ethylbenzene
1,1,1 Trichloroethane	Bromodichloromethane	Freon 113
1,1,2 Trichloroethane	Bromoform	Isopropylbenzene
1,1,2,2 Tetrachloroethane	Bromomethane	Methyl acetate
1,2 Dibromoethane	c 1,3 Dichloropropene	Methyl Ethyl Ketone
1,2 Dichlorobenzene	Carbon Disulfide	MTBE
1,2 Dichloroethane	Carbon Tetrachloride	Styrene
1,2 Dichloropropane	Chlorobenzene	t 1,3 Dichloropropene
1,2,3 Trichlorobenzene	Chloroethane	Tetrachloroethene
1,2,4 Trichlorobenzene	Chloromethane	Toluene
1,3 Dichlorobenzene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene
1,4 Dichlorobenzene	Cyclohexane	Trichloroethylene
1,4-Dioxane	Cyclohexane, methyl-	Trichlorofluoromethane
2-Hexanone	Dibromochloromethane	Vinyl Chloride
4-Methyl-2-Pentanone	Dibromochloropropane	

Alsy Manufacturing
270/280 Duffy Avenue
Hicksville, NY
Spill #130027

ENVIRONMENTAL
ASSESSMENT &
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Groundwater Analytical Results (µg/L)
TestAmerica, Inc.
Methods: SW6010C (Metals), SW7470A (Mercury), SW9012 (Total Cyanide)

Location	Date Collected	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chromium (total)	Cobalt	Copper	Cyanide	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Selenium	Silver	Sodium	Thallium	Vanadium	Zinc
Equipment Blank	05/31/18	<200	<20	<15	<200	<2	<4	<5,000	<10	<50	<25	<10	<150	<10	<5,000	<15	<0.2	<40	<5,000	<20	<10	<5,000	<20	<50	<30
NYSDEC TOGS 1.1.1 Class GA Standard/Guidance Values		n/a	**3**	**25**	**1,000**	**3**	**5**	n/a	**50**	n/a	**200**	**200**	**300**	**25**	**35,000**	**300**	**0.7**	**100**	n/a	**10**	**50**	**20,000**	**0.5**	n/a	**2,000**

Notes:
n/a-No value established

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL
ASSESSMENT &
REMEDIATIONS

Groundwater Analytical Results (µg/L)
TestAmerica, Inc.
Methods: SW8270D-SIM

Location	Date Collected	1,4-Dioxane
Equipment Blank	05/31/18	0.14 J

Notes:
J-Laboratory estimated value

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

Groundwater Analytical Results (ng/L)
TestAmerica, Inc.
Methods: E537-LL

Parameter	Location	EPA Health Advisory Level for Drinking Water
	Equipment Blank	
Date Collected	05/31/18	
2-(N-methyl perfluorooctanesulfonamido) acetic acid	<1.8	n/a
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	<1.8	n/a
Perfluorobutanesulfonic Acid (PFBS)	<1.8	n/a
Perfluorobutyric Acid (PFBA)	**0.65 J**	n/a
Perfluorodecane Sulfonic Acid	<1.8	n/a
Perfluorodecanoic Acid (PFDA)	<1.8	n/a
Perfluorododecanoic Acid (PFDoA)	<1.8	n/a
Perfluoroheptane Sulfonate (PFHpS)	**0.4 J**	n/a
Perfluoroheptanoic Acid (PFHpA)	**0.38 J**	n/a
Perfluorohexanesulfonic Acid (PFHxS)	**1.03 BJ**	n/a
Perfluorohexanoic Acid (PFHxA)	**0.78 BJ**	n/a
Perfluorononanoic Acid (PFNA)	<1.8	n/a
Perfluorooctane Sulfonamide (FOSA)	<1.8	n/a
Perfluorooctanesulfonic Acid (PFOS)	<1.8	**70**
Perfluorooctanoic Acid (PFOA)	**0.64 BJ**	**70**
Perfluoropentanoic Acid (PFPeA)	<1.8	n/a
Perfluorotetradecanoic Acid (PFTeA)	<1.8	n/a
Perfluorotridecanoic Acid (PFTriA)	<1.8	n/a
Perfluoroundecanoic Acid (PFUnA)	<1.8	n/a
SODIUM 1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2)	**0.76 BJ**	n/a
SODIUM 1H,1H,2H,2H-PERFLUOROOCTANE SULFONATE (6:2)	<1.8	n/a
Combined PFOA & PFOS	**0.64 BJ**	**70**

Notes:
J-Laboratory estimated value.
B-Analyte was detected in associated laboratory blank.
n/a-No value established

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

QA/QC Analytical Results (µg/L): Relative Percent Difference
TestAmerica, Inc.
Methods: SW6010C, SW7470A, SW8260C, SW8270DSIM, SW9012

Location	Date Collected	Acetone	1,4-Dioxane	Aluminum	Arsenic	Barium	Beryllium	Calcium	Chromium (total)	Copper	Cyanide	Iron	Magnesium	Manganese	Nickel	Potassium	Selenium	Sodium	Vanadium	Zinc
ERM-3	05/31/18	**3.80 J**	**0.13 J**	**2,230**	**4.40 J**	**227**	**0.31 J**	**25,000**	**2.10 J**	**8.40 J**	**6.2 J**	**7,110**	**2840 J**	**99.8**	**1,170**	**5,890**	**35.8**	**58,900**	**5.70 J**	**90.3**
MW-X	05/31/18	**5.2**	**0.14 J**	**783**	<15	**228**	<2	**25,500**	<10	<25	**6.4 BJ**	**3,980**	**2840 J**	**70.7**	**1,110**	**6,010**	**35.8**	**59,700**	**2.80 J**	**102**
Relative Percent Difference		-	-	**96%**	-	**0%**	-	**2%**	-	-	-	**56%**	-	**34%**	**5%**	**2%**	**0%**	**1%**	-	**12%**

Notes:
J-Laboratory estimated value.
B-Analyte was detected in associated laboratory blank.

The chemicals listed below were reported below the LRL:

1,1 Dichloroethane	1,2,4 Trichlorobenzene	Bromomethane	Cobalt	m + p Xylene	Tetrachloroethene
1,1 Dichloroethene	1,3 Dichlorobenzene	c 1,3 Dichloropropene	Cyclohexane	Mercury	Thallium
1,1,1 Trichloroethane	1,4 Dichlorobenzene	Cadmium	Cyclohexane, methyl-	Methyl acetate	Toluene
1,1,2 Trichloroethane	2-Hexanone	Carbon Disulfide	Dibromochloromethane	Methyl Ethyl Ketone	Total BTEX
1,1,2,2 Tetrachloroethane	4-Methyl-2-Pentanone	Carbon Tetrachloride	Dibromochloropropane	Methylene Chloride	trans-1,2-Dichloroethene
1,2 Dibromoethane	Antimony	Chlorobenzene	Dichlorodifluoromethane	MTBE	Trichloroethylene
1,2 Dichlorobenzene	Benzene	Chloroethane	Ethylbenzene	o-Xylene	Trichlorofluoromethane
1,2 Dichloroethane	Bromochloromethane	Chloroform	Freon 113	Silver	Vinyl Chloride
1,2 Dichloropropane	Bromodichloromethane	Chloromethane	Isopropylbenzene	Styrene	
1,2,3 Trichlorobenzene	Bromoform	cis-1,2-Dichloroethene	Lead	t 1,3 Dichloropropene	

Alsy Manufacturing, Inc.
270/280 Duffy Avenue
Hicksville, NY
Site # 130027

ENVIRONMENTAL ASSESSMENT & REMEDIATIONS

QA/QC Analytical Results (µg/L): Relative Percent Difference
TestAmerica, Inc.
Methods: E537-LL

Parameter	Location		Relative Percent Difference
	ERM-3	MW-X	
Date Collected	5/31/2018	5/31/2018	
2-(N-methyl perfluorooctanesulfonamido) acetic acid	0.68 J	<1.82	-
N-Ethyl-N-((heptadecafluorooctyl)sulphonyl) glycine	0.62 J	<1.82	-
Perfluorobutanesulfonic Acid (PFBS)	1.29 J	2.44	-
Perfluorobutyric Acid (PFBA)	7.21	7.32	2%
Perfluorodecane Sulfonic Acid	<1.79	<1.82	-
Perfluorodecanoic Acid (PFDA)	5.12	4.55	12%
Perfluorododecanoic Acid (PFDoA)	<1.79	<1.82	-
Perfluoroheptane Sulfonate (PFHpS)	0.58 J	<1.82	-
Perfluoroheptanoic Acid (PFHpA)	6.33	6.43	2%
Perfluorohexanesulfonic Acid (PFHxS)	2.53	1.63 BJ	-
Perfluorohexanoic Acid (PFHxA)	8.58	8.07	6%
Perfluorononanoic Acid (PFNA)	2.74	3.04	10%
Perfluorooctane Sulfonamide (FOSA)	0.64 J	0.65 J	-
Perfluorooctanesulfonic Acid (PFOS)	8.76	8.52	3%
Perfluorooctanoic Acid (PFOA)	11.9	11.2	6%
Perfluoropentanoic Acid (PFPeA)	15.4	16.3	6%
Perfluorotetradecanoic Acid (PFTeA)	<1.79	<1.82	-
Perfluorotridecanoic Acid (PFTriA)	<1.79	<1.82	-
Perfluoroundecanoic Acid (PFUnA)	1.24 J	1.59 J	-
SODIUM 1H,1H,2H,2H-PERFLUORODECANE SULFONATE (8:2)	0.75 BJ	0.77 BJ	-
SODIUM 1H,1H,2H,2H-PERFLUOROOCTANE SULFONATE (6:2)	<1.79	<1.82	-

Notes:
J-Laboratory estimated value.
B-Analyte was detected in associated laboratory blank.