

Periodic Review Report- 2018/2019

Former Rochester Metal Etching Company
State Superfund Project #828100
City of Rochester
New York

Prepared for:
The Brotherhood MC, Inc.
100 Lake Avenue
Rochester, NY 14608

Prepared by:

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August 2020

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Executive Summary

The former Rochester Metal Etching Company (hereinafter referred to as the "Site"), located at 100 Lake Avenue in the City of Rochester, Monroe County, New York, is approximately 0.22-acres. The Site is owned by The Brotherhood MC, Inc. and consists of a two-story building with a basement. The remainder of the Site is comprised of asphalt pavement and concrete sidewalks. The Site was formerly owned by the Rochester Metal Etching Company which manufactured metal nameplates from 1967 to 1996. Operations involved reported use of acidic solutions and degreasing agents, including tetrachloroethene (PCE), trichloroethene (TCE), and 1,1,1-trichloroethane (1,1,1-TCA).

A preliminary investigation of the Site was completed by the New York State Department of Conservation (NYSDEC) from 1998-1999 and a Site Characterization was subsequently conducted by the NYSDEC from 1999-2000. Volatile organic compound (VOC) and metal impacts were detected in exceedance of applicable standards with respect to subsurface and surface soil, groundwater, and soil vapor. Findings generated from the Site Characterization are discussed in the Site Investigation Report (NYSDEC, September 2000). Based upon investigation findings, the Site was listed as a Class 2 Inactive Hazardous Waste Disposal Site and a Remedial Investigation/Feasibility Study (RI/FS) was completed by 2007.

No Interim Remedial Measures (IRM) were conducted as part of the RI/FS. However, a Site cover system, consisting of asphalt paving, was installed on the entire site and basement sumps and trenches were filled with concrete by The Brotherhood, MC, Inc., prior to issuance of the Record of Decision (ROD) in May 2011.

Remedial Actions were completed at the Site by Groundwater & Environmental Services, Inc. (GES) in accordance to the NYSDEC-approved Remedial Action Work Plan (RAWP), dated January 14, 2013 and the ROD. Following completion of remedial work, a Site Management Plan (SMP) was developed to manage remaining contamination. Completed remedial work is discussed in the Final Engineering Report (FER) prepared by GES (December 2017).

The effectiveness of the remedial program as outlined in the SMP has been monitored through a Site inspection which involves evaluation of the Site cover system and sub-slab depressurization systems. Additionally, in November 2019, one (1) well was sampled and analyzed for 1,4-dioxane and per/poly fluoroalkyl substances (PFAs) as requested by the NYSDEC in a letter dated June 13, 2019. 1,4-Dioxane and all analyzed PFAS were detected below applicable regulatory criteria.

This Periodic Review Report (PRR) covers a Site inspection event conducted in November 2019 for the period of December 26, 2018 to December 26, 2019. The implemented remedies to manage remaining contamination are effective, protective, and are progressing towards the remedial action objectives. The Institutional Controls and Engineering Controls (ICs and ECs) and procedures outlined in the Monitoring Plan and Operation and Maintenance Plan were complied with during this reporting period.



1.0 Periodic Review Report

This PRR was prepared by Lu Engineers, on behalf of The Brotherhood MC, Inc. pursuant to NYSDEC Department of Environmental Remediation (DER)-10 Technical Guidance for Site Investigation and Remediation, dated May, 2010 and the guidelines provided by the NYSDEC. The following items are included in this PRR:

- Identification, assessment, and certification of each IC/EC required by the remedy for the Site;
- Results of the required annual Site inspection and severe condition inspections, if applicable;
- All applicable inspection forms and other records generated for the Site during the reporting period in electronic format;
- A summary of any discharge monitoring data and/or information generated during the reporting period with comments and conclusions;
- If media sampling is requested, data summary tables and graphical representations of contaminants of concern by media (groundwater, soil vapor) which include a listing of all compounds analyzed, along with the applicable standards, with all exceedances highlighted. These will include a presentation of past data as part of an evaluation of contaminant concentration trends;
- If media sampling is requested, results of all analyses, copies of all laboratory data sheets, and the required laboratory data deliverables for all samples collected during the reporting period will be submitted electronically in a NYSDEC-approved format;
- A Site evaluation, which includes the following:
 - I. The compliance of the remedy with the requirements of the Site-specific RAWP, ROD or Decision Document;
 - II. The operation and the effectiveness of each treatment unit, etc., including identification of any needed repairs or modifications;
 - III. Any new conclusions or observations regarding Site contamination based on inspection or lab data generated by the Monitoring Plan for media being monitored;
 - IV. Recommendations regarding any necessary changes to the remedy and/or SMP; and
 - V. The overall performance and effectiveness of the remedy.

2.0 Site Overview

The former Rochester Metal Etching Company Site, located at 100 Lake Avenue in the City of Rochester, Monroe County, New York, consists of approximately 0.22-acres and is currently occupied by a recreational club (The Brotherhood MC, Inc.) for commercial use (Figure 1). The Site was formerly the Rochester Metal Etching Company, which occupied the Site from 1967 to 1996. Acidic solutions, including ferric chloride, hydrofluoric acid, and hydrochloric acid were



used to etch aluminum and steel. Degreasing agents (PCE, TCE, and 1,1,1-TCA) were also used at the Site. Plating activities occurred in the basement of the Site building where sumps and trenches were presumably used for improper wastewater disposal, as suggested by RI data.

The Site is bounded by Lake Avenue to the west, Spencer Street the north, and lies within a commercialized area of the City of Rochester referred to as the Community Zoning District. The Genesee River is located approximately 600-feet east of the Site. The topography of the Site is generally flat, with a slight dip on the southeast portion. Groundwater reportedly flows east towards the Genesee River.

The Site is surrounded by mixed use (commercial/residential) structures to the north on Spencer Street, Lake Avenue to the west, a food facility to the east, and a restaurant to the south. The Site is covered with asphalt pavement, concrete sidewalks, and a two-story building with a basement.

Impacted soil and groundwater was found during a preliminary investigation conducted by the NYSDEC from 1998-1999 and the Site was subsequently listed as a Class 2 Inactive Hazardous Waste Disposal Site. An RI/FS was initiated to delineate the nature and extent of affected media and was completed by 2007.

Findings of the RI are documented in the RI/FS Report (O'Brien & Gere Engineers, Inc., 2007). The following summarizes RI media analytical findings:

Groundwater

Analytical results from the RI identified VOC concentrations, specifically chlorinated volatile organic compounds (CVOCs) in groundwater in exceedance of 6 NYCRR Part 703.5 groundwater standards. A maximum CVOC concentration in TCE was detected at a monitoring well (MW-2) located north of the Site building at 460 µg/L. Elevated CVOC concentrations surrounding MW-2 indicated a nearby unidentified source area. Analytical results did not indicate the presence of TCE in an off-Site, downgradient, bedrock monitoring well.

Analytical findings also indicated elevated concentrations of metals, including copper and chromium, in exceedance of applicable groundwater standards from locations of overburden, overburden/bedrock interface, and downgradient bedrock groundwater.

Semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and pesticides were not detected above 6 NYCRR Part 703.5 groundwater standards.

Off-Site grab groundwater samples collected west of the Site along Lake Avenue and Spencer Street (north of the Site) indicated elevated concentrations of benzene-toluene-ethylbenzene-xylenes (BTEX) constituents in exceedance of 6 NYCRR Part 703.5 groundwater standards; however, no Site contaminants were detected.



Indoor Air

A 2004 soil vapor intrusions (SVI) sampling event within the on-Site building indicated the presence of TCE and methylene chloride in exceedance of New York State Department of Health (NYSDOH) guidelines. Exceedances were present within the basement and first floor of the building. SVI sampling was also completed in three (3) off-Site buildings in 2006; no NYSDOH guideline exceedances were detected at these locations.

Subsurface Soil

With the exception of acetone, soil analytical results did not indicate levels of VOCs in exceedance of 6 NYCRR Part 703.5-6.8(a) Unrestricted Use Soil Cleanup Objectives (SCOs). Soil sampling from beneath the building footprint did indicate elevated levels of copper and chromium in exceedance of 6 NYCRR Part 375-6.8(b) Commercial Use SCOs. Additional metals detected at concentrations exceeding 6 NYCRR Part 375-6.8(b) Commercial Use included arsenic, chromium (hexavalent), and lead. A maximum concentration of copper (13,400 mg/kg) was detected at a location adjacent to a trench at a depth of 3 to 5-feet below ground surface (bgs)

SVOCs, including pentachlorophenol and phenol, were detected at elevated concentrations in exceedance of 6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs from soil borings and a basement trench.

PCBs and pesticides were either not detected or detected at concentrations beneath 6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs.

Surface Soil

Surfaces soil samples were collected from depths of 0-2 inches beneath vegetation along the southeast corner of the Site, adjacent to the basement door. Concentrations of chromium, copper, lead, mercury, and zinc were detected in exceedance of 6 NYCRR Part 375-6.8(a) Unrestricted Use SCOs. 6 NYCRR Part 375-6.8(b) Commercial Use SCOs exceedances occurred with respect to arsenic, chromium, copper, and lead. Based upon these findings, it was presumed that metal etching wastes were improperly disposed to soil adjacent to the basement door.

Waste Material

Water samples were collected from accumulated waste material within basement sumps and trenches. Metals, including copper and chromium, were detected at elevated concentrations in exceedance of applicable standards. VOCs were not detected from these locations at elevated concentrations. These features presumably served as a possible contaminant conveyance pathway and were appropriately cleaned and filled/capped with concrete prior to issuance of the ROD.

The following primary contaminants of concern were identified based off RI findings:

- I. VOCs- PCE, TCE, and 1,1,1-TCA
- II. Inorganics- copper and chromium

A complete pathway from overburden groundwater from the Site to the Genesee River was identified from RI findings. As discussed in the ROD, this pathway is partially limited by the lack of reported contiguous overburden groundwater. The migration of bedrock groundwater was also determined complete, but unlikely to affect concentrations in the river due to the site cover system preventing water infiltration.

While no IRMs were completed as part of the RI/FS, The Brotherhood MC, Inc. completed the following activities (prior to issuance of the ROD to eliminate potential contaminant migration and exposure pathways:

- I. Installation of a Site cover system which involved asphalt paving over the entire Site, including formerly exposed surface soil locations
- II. Installation of concrete in sumps and trenches located in the basement of the Site building

Based on RI findings, the following Remedial Actions were implemented per requirements set forth in the ROD:

- I. Construction and maintenance of a soil cover system comprised of asphalt paving, concrete, and the building footprint;
- II. Installation of a sub slab depressurization system (SSDS) within the Site building located at 100 Lake Avenue;
- III. Execution of an Environmental Notice outlining land use restriction;
- IV. Development and implementation of an SMP; and
- V. Periodic Certification of IC/ECs.
- VI. Removal of contaminated materials:
 - Removal and disposal of sub-slab soil from locations of SSDS suction cavities
 - Disposal of a former groundwater treatment system as residential waste
 - Disposal of one (1) 55 gallon steel drum containing granular activated carbon (GAC).

Remedial activities were completed at the Site by February 2013, in accordance to the NYSDEC-approved RAWP, dated January 14, 2013. The FER (GES, December 2017) summarizes completed remedial actions. Remaining contamination at the Site includes all constituents outlined above and as discussed in the SMP.

The SMP requires ICs the form of an Environmental Notice that states a) compliance with the environmental notice and the SMP by the Grantor and the Grantor's successors and assigns; b) all ECs must be operated and maintained as specified in the SMP; c) all ECs on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP; d) data and information pertinent to the Site management of the Controls Property must be reported at the frequency and in a manner defined in the SMP.



Long term management of remaining contamination, as required by the Environmental Notice, includes the following plans for ECs; 1) Monitoring; 2) Operation and maintenance; and 3) Reporting. The specific ECs implemented at the Site include: a) management and inspection of the existing Site cover system; and b) inspection and maintenance of the SSDS.

3.0 Remedy Performance, Effectiveness, and Protectiveness

The ICs established for the Site have been and continue to be in compliance with the SMP. Though remaining contamination exists in groundwater, subsurface soil, and surface soil at the Site, these controls reduce the potential for Site contaminant migration and human exposure. The ECs established for the Site are also effective in limiting the potential for human exposure to known Site contaminants.

4.0 Institutional Controls/Engineering Control Plan Compliance

Since remaining contaminated soil, groundwater, and soil vapor exists beneath the Site, ICs/ECs are required to protect public health and the environment. The IC/EC Plan is one (1) component of the SMP and is subject to revision by NYSDEC.

Institutional Controls (ICs)

A series of ICs is required by the ROD to: (1) implement, maintain and monitor EC systems; (2) prevent exposure to remaining contamination by controlling disturbances of subsurface soils and groundwater; and (3) limit the use and development of the Site to commercial and industrial uses only; (4) restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the NYSDEC or County DOH; (5) prohibit agriculture or vegetable gardens on the controlled property; and (6) require the remedial party or Site owner to completed and submit to the NYSDEC a periodic certification of institutional and engineering controls in accordance with Part 375-1.8(h)(3). Adherence to these ICs on the Site is required by the Environmental Notice and implemented under the SMP. These requirements are:

- I. Compliance with the environmental notice and the SMP by the Grantor and the Grantor's successors and assigns;
- II. All ECs must be operated and maintained as specified in the SMP;
- III. All ECs on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP (annually); and
- IV. Data and information pertinent to the Site management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP.

ICs identified in the Environmental Notice may not be discontinued without an amendment to or extinguishment of the Environmental Easement.

The Site has a series of ICs in the form of Site restrictions. Adherence to these ICs is required by the Environmental Notice. These ICs include:

- I. The property may only be used for commercial and/or industrial use provided that the long-term IC/ECs included in the SMP are employed;
- II. The property may not be used for a higher level of use, such as unrestricted commercial or restricted-residential without additional remediation and amendment of the environmental notice, as approved by the NYSDEC;
- III. All future activities on the property that will disturb remaining contaminated material must be conducted in accordance to the SMP;
- IV. The use of the groundwater underlying the property is prohibited without necessary water quality treatment as determined by the NYSDEC, NYSDOH, or County DOH;
- V. Vegetable gardens and farming on the property are prohibited; and
- VI. The Site owner or remedial party will submit to the NYSDEC a written statement that clarifies, under penalty of perjury, that: (1) 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 (2) nothing has occurred that impairs the ability of the controls to protect public health and 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 initially submitted one year from execution of the Environmental Notice, and then as stipulated by the NYSDEC following review of an initial certification and periodic review report.

Engineering Controls (ECs)

- I. Cover System – Exposure to remaining contamination in subsurface soil/fill, groundwater and soil vapor at the Site is prevented by a soil cover system placed over the Site. This cover system consists of asphalt pavement, concrete-covered sidewalks, and the building footprint. Procedures for maintaining the cover system are documented in the Engineering and Institutional Control Plan in Section 3 of the SMP.

The Excavation Work Plan (EWP) in Appendix C of the SMP outlines the procedures required to be implemented in the event the cover system is breached, penetrated or temporarily removed, and underlying remaining contamination is disturbed. Procedures for the inspection, maintenance and monitoring of this cover are provided in the Monitoring Plan included in Section 3 of the SMP.

As indicated on the Site Inspection Form, included as Attachment A, the cover system was in good condition in January 2019. The asphalt cover had only minor cracks and the concrete walkway surrounding the building was in good condition (refer to Attachment C Site Photographs). The conditions of the basement floor and walls were also in good condition with no areas of significant cracking and/or penetrations.



- II. SSDS – Two (2) multi-point SSDSs were installed in the current building in February 2013 in accordance with the NYSDEC-approved Remedial Action Plan (GES, January 2013) and the NYSDOH “Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006, Revised May 2017). The systems were installed by Mitigation Tech, a National Environmental Health Association (NEHA) certified mitigation contractor to prevent exposure to soil vapor beneath the building. Procedures for maintaining the SSDS are documented in the Operation and Maintenance Plan (Section 4 of the SMP). The Operation and Maintenance Plan addresses severe condition inspections in the event that a severe condition, which may affect controls at the Site, occurs. Figure 2 of the SMP provides a layout of the two (2) SSDSs.

As indicated on the Site Inspection Form, the SSDSs were operating as normal during the Site inspection of this reporting period. Both fans were operating and system piping was in good condition and appropriately labeled and the vacuum gauges was at the recommended pressure level. The owner reported that the system is kept active at all times and is periodically checked. No deficiencies were observed during the Site inspection.

The required IC/EC certification has been completed as a component of this report and a copy is included as Attachment B.

5.0 Monitoring Plan Compliance Report

The Monitoring Plan describes the measures for evaluating the performance and effectiveness of the remedy to reduce or mitigate contamination at the Site, the soil cover system, and all affected Site media identified in the table below.

Monitoring/Inspection Schedule

Monitoring Program	Frequency*	Matrix	Analysis
1	Annual	Soil Cover	Integrity via inspection Form
2	Annual	Equipment/Piping	Integrity via Inspection Form
3	Annual	Air	Integrity via Inspection Form

* The frequency of events will be conducted as specified until otherwise approved by NYSDEC and NYSDOH

Monitoring activities completed during this reporting period included annual inspection of the Site cover system and SSDS, as well as groundwater sampling for PFAS and 1,4-dioxane.

In the referenced letter dated June 13, 2019, the NYSDEC initially requested sampling of multiple on and off-Site wells. Inspection of the off-Site wells (MW-01 & MW-02) prior to sampling indicated they were damaged to the point such that sample results would be invalid. On-Site well MW-03 was sampled on November 13, 2019 in accordance with NYSDEC



“Guidance for Sampling and Analysis of PFAS (January 2020)”. Multiple attempts were made to sample the remaining on-Site well MW-04, however, a sample was not able to be obtained. An initial attempt to sample MW-04 was made in November 2019 along with the sampling of MW-03, but at that time the well head was frozen and not able to be opened. Secondary attempts were made in May and July 2020 to obtain a sample, however, due to the shallow depth of the well and dry seasonal conditions, the well was dry and a sample was not obtained. Per email correspondence with the NYSDEC in July 2020, Lu Engineers was directed to abandon sampling of MW-04 for PFAS and 1,4-dioxane.

6.0 Operation and Maintenance Plan Compliance Report

ECs in place at the Site are the building footprint, asphalt pavement, concrete pavement, and sidewalks, collectively referred to as the cover system as well as the SSDS. During this reporting period, operation and maintenance is documented using the Site Inspection Form, included as Attachment A. The Operation and Maintenance Plan located in the SMP describes the measures necessary to operate, monitor and maintain the mechanical components of the remedy selected for the Site. Descriptions of Site inspections and conditions are provided in Section 4.0 of this report.

7.0 Groundwater Sampling Results

Analytical results for 1,4-dioxane and PFAS were below criteria set forth by NYSEC “Guidance for Sampling and Analysis of PFAS (January 2020);” refer to the attached tables. A copy of the laboratory analytical report is included as Attachment D.

8.0 Conclusions and Recommendations

IC/EC Compliance

The requirements and regulations set forth in the SMP for ICs were complied with during this reporting period. This includes the following:

- I. Land Use Restriction – The Site is currently used as a commercial facility for the Brotherhood MC, Inc. and has met the requirements of this restriction in this reporting period.
- II. Groundwater Use Restriction – The Site is currently connected to a supplied potable water source and does not use the Site groundwater in any capacity, therefore meeting the requirements of this restriction in this reporting period.
- III. SMP – The Site is currently in compliance with all components of the Site-specific SMP and all requirements have been met during this reporting period.

The requirements set forth in the SMP for all ECs were met during this reporting period. This includes the following:

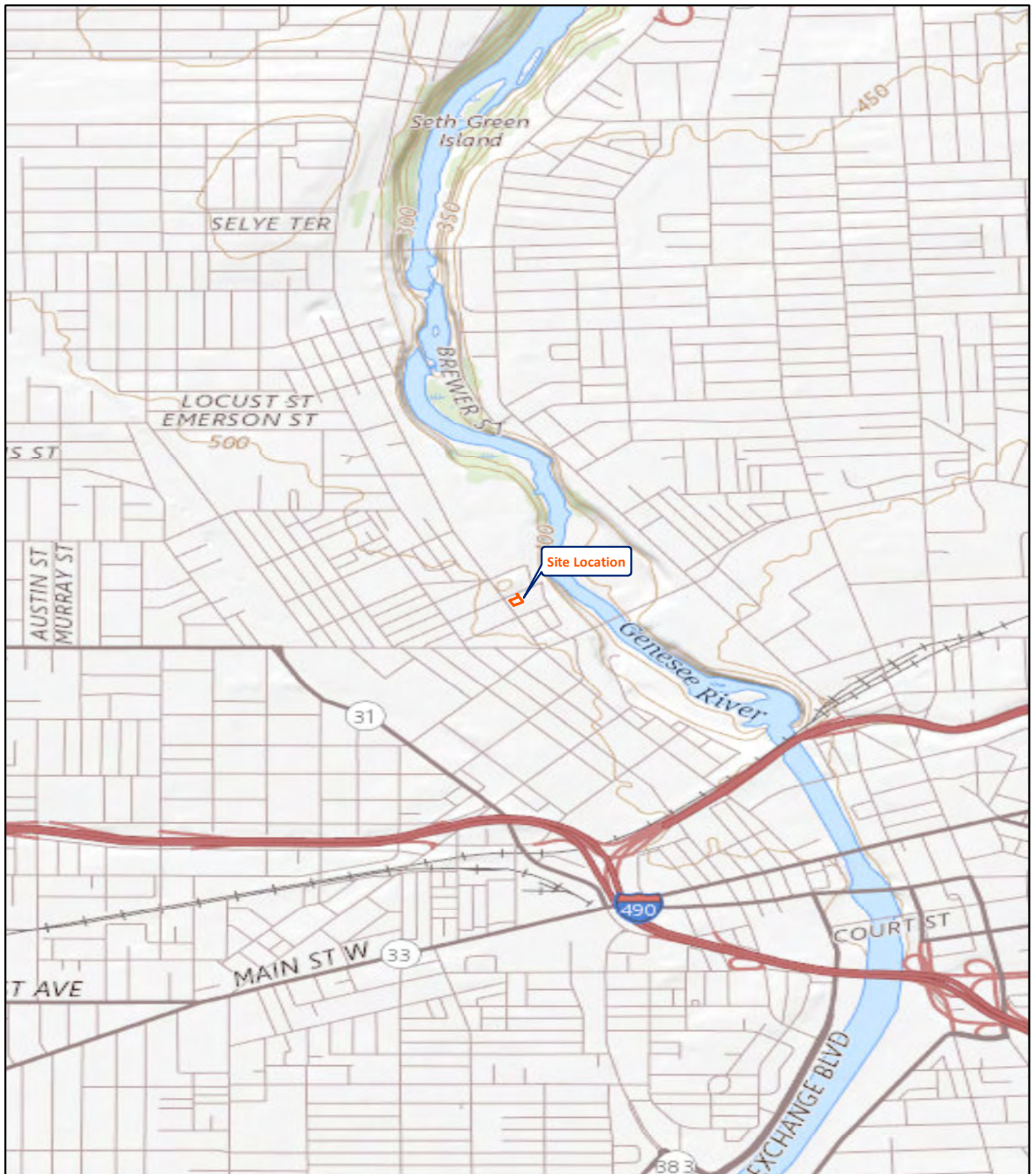
- I. Cover System – The Site cover system was in compliance with the SMP during this reporting period. No breached areas were observed and all requirements have been met during this reporting period.



- II. SSDS – The SSDS has operated as normal during this reporting period. All requirements have been met during this reporting period.

The previously discussed Site-specific ICs and ECs for the Site continue to meet the remedial objectives while establishing protection of public health and the environment. The continued effectiveness of the ICs/ECs have allowed the remedial objectives at the Site to be met for this reporting period.

Lu Engineers requests that consideration be given to the reduction of monitoring to a two-year PRR reporting period.



Contour Interval: 50 feet

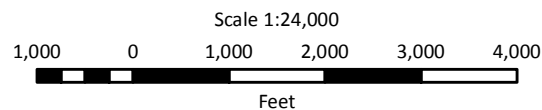


Figure 1. Site Location Map
Former Rochester Metal Etching Company#828100
100 Lake Ave
Rochester, NY

DATE: August 2020
PROJECT #: 50382-01
DRAWN/CHECKED: BGS/GLA
DATA SOURCE: ESRI online basemap



Emerging Contaminant Sample Results
Former Rochester Metal Etching Site #828100
Rochester, NY

Table 1- 1,4-Dioxane and Perfluorinated Compounds Detected in Groundwater

Analytical Parameter	USEPA Method	Units	Guidance Value	MW-03	Field Blank
				11/13/2019	11/13/2019
Volatile Organics ¹					
1,4-Dioxane	8270D SIM	ug/L	5	0.089	ND
Perfluorinated Compounds ²					
Perfluorobutanesulfonic acid (PFBS)	EPA 537	ng/L	10	1.6 J	ND
Perfluorohexanesulfonic acid (PFHxS)	EPA 537	ng/L	10	1.4 J	ND
Perfluoroheptanesulfonic acid (PFHpS)	EPA 537	ng/L	10	ND	ND
Perfluorooctanesulfonic acid (PFOS)	EPA 537	ng/L	10	4.0	ND
Perfluorodecanesulfonic acid	EPA 537	ng/L	10	ND	ND
Perfluorobutanoic acid (PFBA)	EPA 537	ng/L	10	5.6	ND
Perfluoropentanoic acid (PFPeA)	EPA 537	ng/L	10	5.1	ND
Perfluorohexanoic acid (PFHxA)	EPA 537	ng/L	10	ND	ND
Perfluoroheptanoic acid (PFHpA)	EPA 537	ng/L	10	4.5	ND
Perfluorooctanoic acid (PFOA)	EPA 537	ng/L	10	6.9	ND
Perfluorononanoic acid (PFNA)	EPA 537	ng/L	10	2.2 J	ND
Perfluorodecanoic acid (PFDA)	EPA 537	ng/L	10	8.4	ND
Perfluoroundecanoic acid	EPA 537	ng/L	10	ND	ND
Perfluorododecanoic acid	EPA 537	ng/L	10	ND	ND
Perfluorotridecanoic acid	EPA 537	ng/L	10	ND	ND
Perfluorotetradecanoic acid	EPA 537	ng/L	10	ND	ND
6:2 Fluorotelomer sulfonate	EPA 537	ng/L	10	ND	ND
8:2 Fluorotelomer sulfonate	EPA 537	ng/L	10	ND	ND
Perfluorooctanesulfonate	EPA 537	ng/L	10	ND	ND
Perfluorooctane sulfonamide	EPA 537	ng/L	10	ND	ND
N-methyl perfluorooctanesulfonamidoacetic acid	EPA 537	ng/L	10	ND	ND
N-ethyl perfluorooctanesulfonamidoacetic acid	EPA 537	ng/L	10	ND	ND

Notes:

ug/L: micrograms per liter

ng/L: nanograms per liter

1- NYS Class GA Groundwater Standards (6 NYCRR Part 703.5) Guidance Value

2- NYSDEC Guidance Value

ND = No detection

J = Estimated value. Concentration is between the MRL and the MDL.

 Exceeds Standard or Guidance Value

Attachment A
Site Inspection Form

INSPECTION REPORT FORM
Former Rochester Metal Etching Site
100 Lake Ave, Rochester, NY

Reason for Inspection:	Annual PRR
Date/Time of Inspection:	11/13/2019 1:30pm
Inspector Name/Company:	Ben Seifert; Lu Engineers

Inspection Of:	Condition		Action Required		Comments/Location
	Adequate	Damaged	Yes	No	
1.Facility Access Control					
1. Facility Security	X			X	
2.Final Cover System					
A.Vegetative Cover Prohibited (present)?	X			X	
B.Pavement Cover/Side Walk	X			X	
1. Cracks/Holes	X			X	
C.Settlement	X			X	
D.Erosion	X			X	
F.Presence of Excavation or Surface Penetration (interior & exterior)	X			X	
1. Interior	X			X	
3.SVE/SSD System					
A.Fans					
1. Running?	X			X	
Fan 1 Vacuum Reading	X			X	
Fan 2 Vacuum Reading	X			X	
2. Secured?	X			X	
B.Piping					
1. Integrity	X			X	
2. Building Penetration	X			X	
3. GES & NYSDEC Signage	X			X	
C.Presence of new air intake near SVE/SSDS discharge points	X			X	



Periodic Operations Visit Form

☐ Check box if
new sys info

System ID: _____

Date of Visit: 11/13/2020

Owner Name: THE BROTHERHOOD M.C., INC

Date Installed: FEBRUARY 2013

System Address: 100 LAKE AVENUE

Telephone: 585-750-0235

City: ROCHESTER, NY

Zip: 14608

Alt. Telephone: _____

Performed By: Ben Seifert

Site No: 828100

Company: LM ENGINEERS

Site Name: FORMER ROCHESTER METAL
ETCHING CO.

Fan Operation Confirmation

EXTERIOR

	Fan #1	Fan #2	Fan #3
Fan Model No(s).	<u>RP145</u>	<u>RP265</u>	
Is Fan Operating (arrival)?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No
Confirmation Method	<u>Other</u>	<u>Other</u>	
Is Fan Operating (departure)?	☒ Yes ☐ No	☒ Yes ☐ No	☐ Yes ☐ No

Requested to inspect interior system components? ☐ Yes ☒ No

If yes, when and by whom? _____ Date: _____

INTERIOR

Structural Review

Notes

- Change in building footprint since last inspection? ☐ Yes ☒ No
- Basement occupied (>4 hrs per day)? ☐ Yes ☒ No
- Heating/ventilation system modifications? ☐ Yes ☒ No
- Crawlspace inspected? ☐ Yes ☒ No
- Large cracks in floor or near sumps? ☐ Yes ☒ No
- Wall penetrations or cracks noted? ☐ Yes ☒ No

Piping, Slab & Wall

- Are system suction points sealed? ☒ Yes ☐ No
- Is piping system in need of repair? ☐ Yes ☒ No

Miscellaneous

- Are manometer levels equal? ☐ Yes ☒ No
- Are system labels accurate and applied correctly? ☒ Yes ☐ No

Maintenance completed (check all that apply): ☐ Replace fan ☐ Seal pipe ☐ Electrical ☒ Other None

Describe repairs made and any proposed actions requiring a subsequent visit (if necessary):

Attachment B

IC/EC Form



Enclosure 2
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



	Site Details	Box 1
Site No.	828100	
Site Name Former Rochester Metal Etching Company		
Site Address: 100 Lake Avenue Zip Code: 14608		
City/Town: Rochester		
County: Monroe		
Site Acreage: 0.2		
Reporting Period: December 26, 2018 to December 26, 2019		
		YES NO
1. Is the information above correct?	☒	☐
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	☐	☒
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	☐	☒
4. 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. Is the site currently undergoing development?	☐	☒

		Box 2
		YES NO
6. Is the current site use consistent with the use(s) listed below? Commercial and Industrial	☒	☐
7. Are all ICs/ECs in place and functioning as designed?	☒	☐

**IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

Description of Institutional ControlsParcelOwnerInstitutional Control**105.600-0002-013**

The Brotherhood MC, Inc.

O&M Plan

Landuse Restriction
 Site Management Plan
 Ground Water Use Restriction

Engineering Controls:

1. A soil cap over the limits of the site property which includes asphalt paving, concrete paving, sidewalks, and the building footprint.
2. Subslab depressurization (SSD) systems that mitigate the current or potential exposure of vapor intrusion.
3. The operation of the components of the remedy would continue until the remedial objectives have been achieved, or until the Department determines that continued operation is technically impracticable or not feasible.

Institutional Controls:

1. Imposition of an institutional control in the form of an environmental easement for the controlled property that would include:
 - (a) limit the use and development of the controlled property to: commercial use
 - (b) restrict the use of groundwater as a source of potable or process water, without necessary water quality treatment as determined by the Department, NYSDOH or County DOH;
 - (c) prohibit agriculture or vegetable gardens on the controlled property;
 - (d) require compliance to the Department approved Site Management Plan;
 - (e) require the remedial party or site owner to complete and submit to the Department a periodic certification of institutional and engineering controls in accordance with Part 375-1.8 (h)(3).
2. The remedy would require the development, Department approval, and implementation of a Site Management Plan for the site which would include the following:
 - (a) an Institutional and Engineering Control Plan that identifies all use restrictions and engineering systems for the site and manages future development of the site including:
 - (i) provisions for management of future excavations in area of residual contamination,
 - (ii) groundwater restrictions,
 - (iii) management and inspection of the final engineering cover system,
 - (iv) and maintaining site access controls and Department notification;
 - (b) a Monitoring Plan to assess performance and effectiveness of the remedy for soil vapor. The plan would include:
 - (i) monitoring to assure protection of the environmental and/or public health,
 - (ii) a schedule of monitoring and frequency of submittals to the Department,
 - (iii) provision to evaluate of the potential for vapor intrusion for any buildings developed on the site, including provision for mitigation of any impacts identified;
 - (c) an Operation and Maintenance Plan to assure continued operation, maintenance, monitoring, inspection, and reporting of the active components of the remedy.
 - (i) provisions to maintain all active components of the operation, maintenance, monitoring plan.
 - (ii) maintaining site access controls and Department notification;
 - (iii) providing the Department access to the site and O&M records.

Description of Engineering ControlsParcelEngineering Control**105.600-0002-013**

Vapor Mitigation
 Cover System

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;
- 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 complete.

YES NO

X

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) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;
- (d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and
- (e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

X

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM. Otherwise continue.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 828100

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 1, 2, and 3 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 Gregory L Andrus, P.G. at 339 East Ave. Rochester, NY 14604
print name print business address

am certifying as Owner's Representative (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.


Signature of Owner, Remedial Party, or Designated Representative
Rendering Certification

08/20/2020

Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 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 Gregory L. Andrus P.G. at 339 East Ave, Suite 200 Rochester, NY 14604
print name print business address

am certifying as a Qualified Environmental Professional for the Owner
(Owner or Remedial Party)


Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering Certification

Stamp
(Required for PE)

08/20/2020

Date



December 13, 2019

Service Request No:R1911314

Mr. Greg Andrus
LU Engineers
339 East Avenue
Suite 200
Rochester, NY 14604

Laboratory Results for: Brotherhood MC

Dear Mr.Andrus,

Enclosed are the results of the sample(s) submitted to our laboratory November 18, 2019
For your reference, these analyses have been assigned our service request number **R1911314**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Brady Kalkman
For
Janice Jaeger
Project Manager

ADDRESS

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

PHONE +1 585 288 5380 | **FAX** +1 585 288 8475

ALS Group USA, Corp.
dba ALS Environmental



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Narrative Documents

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Received: 11/18/2019

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Two water samples were received for analysis at ALS Environmental on 11/18/2019. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Semivolatiles by GC/MS:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

One or more samples were subcontracted to another laboratory for testing. The certified analytical report from the subcontractor has been included in its entirety at the end of this report and includes the name and address of the subcontracted laboratory.

A handwritten signature in black ink, appearing to read "Jamaica" or similar, written over a horizontal line.

Approved by _____

Date 12/13/2019



SAMPLE DETECTION SUMMARY

CLIENT ID: MW-03			Lab ID: R1911314-001			

Analyte	Results	Flag	MDL	MRL	Units	Method
1,4-Dioxane	0.089		0.027	0.040	ug/L	8270D SIM



Sample Receipt Information

ALS Environmental—Rochester Laboratory

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Phone (585) 288-5380 Fax (585) 288-8475

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Client: LU Engineers
Project: Brotherhood MC

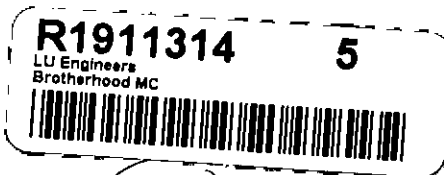
Service Request:R1911314

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R1911314-001	MW-03	11/13/2019	1154
R1911314-002	Field Blank	11/13/2019	1150



Cooler Receipt and Preservation Check Form



Project/Client Brotherhood MC/ LU Engineers Folder Number _____

Cooler received on 11/18/19 by: GB

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y ☒ N ☐
2	Custody papers properly completed (ink, signed)?	Y ☒ N ☐
3	Did all bottles arrive in good condition (unbroken)?	Y ☒ N ☐
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	Y ☒ N ☐

5a	Perchlorate samples have required headspace?	Y ☐ N ☒ NA ☐
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	Y ☐ N ☒ NA ☐
6	Where did the bottles originate?	ALS/ROC CLIENT
7	Soil VOA received as: Bulk Encore 5035set	NA ☒

8. Temperature Readings Date: 11/18 Time: 1153 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>5.1</u>	<u>4.9</u>					
Within 0-6°C?	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐
If <0°C, were samples frozen?	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐	Y ☐ N ☐

If out of Temperature, note packing/ice condition: _____ Ice melted _____ Poorly Packed (described below) _____ Same Day Rule
 & Client Approval to Run Samples: _____ Standing Approval _____ Client aware at drop-off _____ Client notified by: _____

All samples held in storage location: R002 by GB on 11/18 at 1157
 5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 11/18/19 Time: 1700 by: dlw

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
 10. Did all bottle labels and tags agree with custody papers? YES NO
 11. Were correct containers used for the tests indicated? YES NO
 12. Were 5035 vials acceptable (no extra labels, not leaking)? YES NO N/A
 13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2		H ₂ SO ₄								
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).

Bottle lot numbers: 077719-11346

Explain all Discrepancies/ Other Comments: _____

HPROD	BULK
HTR	FLDT
<u>SUB</u>	HGFB
ALS	LL3541

Labels secondary reviewed by: dl
 PC Secondary Review: _____

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

ALS Group USA, Corp.
dba ALS Environmental

Internal Chain of Custody Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1911314-001.01					
		11/18/2019	1700	SMO / DWARD	
		11/18/2019	1702	R-002 / DWARD	
		11/23/2019	1519	OLC 127 / SMO2	
		11/23/2019	1520	K-OLC / SMO2	
R1911314-001.02					
		11/18/2019	1700	SMO / DWARD	12/2/2019
		11/18/2019	1702	R-002 / DWARD	12/2/2019
		11/23/2019	1519	OLC 127 / SMO2	12/2/2019
		11/23/2019	1520	K-OLC / SMO2	12/2/2019
		12/2/2019	0835	K-Disposed / KLMILLER	12/2/2019
R1911314-001.06					
	8270D SIM				
		11/18/2019	1700	SMO / DWARD	
		11/18/2019	1702	R-002 / DWARD	
		11/19/2019	1102	In Lab / AFELSER	
		11/19/2019	1456	R-002 / AFELSER	
		11/23/2019	1519	OLC 127 / SMO2	
		11/23/2019	1520	K-OLC / SMO2	
R1911314-001.07					
		11/18/2019	1700	SMO / DWARD	
		11/18/2019	1702	R-002 / DWARD	
		11/19/2019	1102	In Lab / AFELSER	
		11/19/2019	1457	R-002 / AFELSER	
R1911314-001.08					
		11/18/2019	1702	SMO / DWARD	
		11/18/2019	1702	R-002 / DWARD	
R1911314-001.09					
		11/18/2019	1702	SMO / DWARD	
		11/18/2019	1702	R-002 / DWARD	
R1911314-001.10					
		11/18/2019	1702	SMO / DWARD	12/2/2019
		11/18/2019	1702	R-002 / DWARD	12/2/2019
		11/23/2019	1519	OLC 127 / SMO2	12/2/2019
		11/23/2019	1520	K-OLC / SMO2	12/2/2019

ALS Group USA, Corp.
dba ALS Environmental
Internal Chain of Custody Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1911314-001.11	PFC/537M	12/2/2019	0835	K-Disposed / KLMILLER	12/2/2019
		11/18/2019	1702	SMO / DWARD	12/2/2019
		11/18/2019	1702	R-002 / DWARD	12/2/2019
		11/23/2019	1519	OLC 127 / SMO2	12/2/2019
		11/23/2019	1520	K-OLC / SMO2	12/2/2019
		12/2/2019	0835	K-Disposed / KLMILLER	12/2/2019
R1911314-001.12		11/18/2019	1702	SMO / DWARD	
		11/18/2019	1702	R-002 / DWARD	
		11/23/2019	1519	OLC 127 / SMO2	
		11/23/2019	1520	K-OLC / SMO2	
R1911314-002.01	PFC/537M	11/18/2019	1700	SMO / DWARD	12/2/2019
		11/18/2019	1702	R-002 / DWARD	12/2/2019
		11/23/2019	1519	OLC 127 / SMO2	12/2/2019
		11/23/2019	1520	K-OLC / SMO2	12/2/2019
		12/2/2019	0835	K-Disposed / KLMILLER	12/2/2019



Miscellaneous Forms

ALS Environmental—Rochester Laboratory

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REPORT QUALIFIERS AND DEFINITIONS

U	Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.	+	Correlation coefficient for MSA is <0.995.
J	Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
D	Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.	P	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (100% Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		MRL	Method Reporting Limit. Also known as:
		LOQ	Limit of Quantitation (LOQ) The lowest concentration at which the method analyte may be reliably quantified under the method conditions.
		MDL	Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.



Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

ALS Group USA, Corp.
dba ALS Environmental

Analyst Summary report

Client: LU Engineers
Project: Brotherhood MC/

Service Request: R1911314

Sample Name: MW-03
Lab Code: R1911314-001
Sample Matrix: Water

Date Collected: 11/13/19
Date Received: 11/18/19

Analysis Method
8270D SIM
PFC/537M

Extracted/Digested By
AFELSER
KLMILLER

Analyzed By
AFELSER
LDMREIS

Sample Name: Field Blank
Lab Code: R1911314-002
Sample Matrix: Water

Date Collected: 11/13/19
Date Received: 11/18/19

Analysis Method
PFC/537M

Extracted/Digested By
KLMILLER

Analyzed By
LDMREIS



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.



Sample Results

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Semivolatile Organic Compounds by GC/MS

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: 11/13/19 11:54
Date Received: 11/18/19 11:50

Sample Name: MW-03
Lab Code: R1911314-001

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.089	0.040	0.027	1	11/20/19 16:18	11/19/19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	111	64 - 124	11/20/19 16:18	



QC Summary Forms

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Semivolatile Organic Compounds by GC/MS

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ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314

SURROGATE RECOVERY SUMMARY
1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Extraction Method: EPA 3535A

Sample Name	Lab Code	1,4-Dioxane-d8
		64-124
MW-03	R1911314-001	111
Method Blank	RQ1913571-01	95
Lab Control Sample	RQ1913571-02	93
Duplicate Lab Control Sample	RQ1913571-03	95
MW-03 MS	RQ1913571-04	119
MW-03 DMS	RQ1913571-05	101

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: 11/13/19
Date Received: 11/18/19
Date Analyzed: 11/20/19
Date Extracted: 11/19/19

Duplicate Matrix Spike Summary
1,4-Dioxane by GC/MS

Sample Name: MW-03
Lab Code: R1911314-001
Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Units: ug/L
Basis: NA

Matrix Spike RQ1913571-04					Duplicate Matrix Spike RQ1913571-05					
Analyte Name	Sample Result	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	0.089	11.6	10.0	116	9.33	10.0	92	33-146	22	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Analyzed: 11/20/19 11:00
Date Extracted: 11/19/19

Method Blank Summary**1,4-Dioxane by GC/MS****Sample Name:** Method Blank**Instrument ID:** R-MS-56**Lab Code:** RQ1913571-01**File ID:** I:\ACQUDATA\5975E\data\112019\AU542.D**Analysis Method:** 8270D SIM**Analysis Lot:** 660730**Prep Method:** EPA 3535A**Extraction Lot:** 348953

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	RQ1913571-02	I:\ACQUDATA\5975E\data\112019\AU543.D\	11/20/19 11:19
Duplicate Lab Control Sample	RQ1913571-03	I:\ACQUDATA\5975E\data\112019\AU544.D\	11/20/19 11:37
MW-03	R1911314-001	I:\ACQUDATA\5975E\data\112019\AU559.D\	11/20/19 16:18
MW-03MS	RQ1913571-04	I:\ACQUDATA\5975E\data\112019\AU560.D\	11/20/19 16:37
MW-03DMS	RQ1913571-05	I:\ACQUDATA\5975E\data\112019\AU561.D\	11/20/19 16:55

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: RQ1913571-01

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	ND U	0.040	0.027	1	11/20/19 11:00	11/19/19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	95	64 - 124	11/20/19 11:00	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Analyzed: 11/20/19 11:19
Date Extracted: 11/19/19

Lab Control Sample Summary
1,4-Dioxane by GC/MS

Sample Name: Lab Control Sample
Lab Code: RQ1913571-02
Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Instrument ID: R-MS-56
File ID: I:\ACQUDATA\5975E\data\112019\AU543.D\
Analysis Lot: 660730
Extraction Lot: 348953

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	RQ1913571-01	I:\ACQUDATA\5975E\data\112019\AU542.D\	11/20/19 11:00
Duplicate Lab Control Sample	RQ1913571-03	I:\ACQUDATA\5975E\data\112019\AU544.D\	11/20/19 11:37
MW-03	R1911314-001	I:\ACQUDATA\5975E\data\112019\AU559.D\	11/20/19 16:18
MW-03MS	RQ1913571-04	I:\ACQUDATA\5975E\data\112019\AU560.D\	11/20/19 16:37
MW-03DMS	RQ1913571-05	I:\ACQUDATA\5975E\data\112019\AU561.D\	11/20/19 16:55

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314**Date Analyzed:** 11/20/19

Duplicate Lab Control Sample Summary
1,4-Dioxane by GC/MS

Units:ug/L**Basis:**NA**Lab Control Sample**

RQ1913571-02

Duplicate Lab Control Sample

RQ1913571-03

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,4-Dioxane	8270D SIM	8.35	10.0	84	8.40	10.0	84	58-124	<1	30

ALS Group USA, Corp.
dba ALS Environmental

QC/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 11/20/19 10:17

Tune Summary
1,4-Dioxane by GC/MS

File ID: I:\ACQUDATA\5975E\data\112019\AU540.D\
Instrument ID: R-MS-56

Analytical Method: 8270D SIM
Analysis Lot: 660730

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	55.23	138233	Pass
68	69	0.00	2	1.82	2605	Pass
69	198	0.00	100	57.05	142776	Pass
70	69	0.00	2	0.52	742	Pass
127	198	10	80	59.93	149987	Pass
197	198	0.00	2	0.00	0	Pass
198	198	100	100	100.00	250283	Pass
199	198	5	9	6.62	16575	Pass
275	198	10	60	23.19	58045	Pass
365	198	1	100	3.31	8284	Pass
441	442	0.01	24	16.94	33699	Pass
442	442	100	100	100.00	198891	Pass
443	442	15	24	18.77	37325	Pass

Sample Name	Lab Code	File ID:	Date Analyzed:	Q
Continuing Calibration Verification	RQ1913704-02	I:\ACQUDATA\5975E\data\112019\AU541.D\	11/20/19 10:42	
Method Blank	RQ1913571-01	I:\ACQUDATA\5975E\data\112019\AU542.D\	11/20/19 11:00	
Lab Control Sample	RQ1913571-02	I:\ACQUDATA\5975E\data\112019\AU543.D\	11/20/19 11:19	
Duplicate Lab Control Sample	RQ1913571-03	I:\ACQUDATA\5975E\data\112019\AU544.D\	11/20/19 11:37	
Continuing Calibration Verification	RQ1913704-03	I:\ACQUDATA\5975E\data\112019\AU551.D\	11/20/19 13:48	
MW-03	R1911314-001	I:\ACQUDATA\5975E\data\112019\AU559.D\	11/20/19 16:18	
MW-03	RQ1913571-04	I:\ACQUDATA\5975E\data\112019\AU560.D\	11/20/19 16:37	
MW-03	RQ1913571-05	I:\ACQUDATA\5975E\data\112019\AU561.D\	11/20/19 16:55	
Continuing Calibration Verification	RQ1913704-04	I:\ACQUDATA\5975E\data\112019\AU562.D\	11/20/19 17:14	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 11/20/19 10:42

Internal Standard Area and RT SUMMARY
1,4-Dioxane by GC/MS

File ID: I:\ACQUDATA\5975E\data\112019\AU541.D\
Instrument ID: R-MS-56
Analysis Method: 8270D SIM

Lab Code: RQ1913704-02
Analysis Lot: 660730
Signal ID: 1

	Tetrahydrofuran-d8	
	Area	RT
Result ==>	46,207	2.70
Upper Limit ==>	92,414	3.20
Lower Limit ==>	23,104	2.20

Associated Analyses

Continuing Calibration Verification	RQ1913704-02	46207	2.70
Method Blank	RQ1913571-01	45300	2.72
Lab Control Sample	RQ1913571-02	43016	2.69
Duplicate Lab Control Sample	RQ1913571-03	47556	2.72

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 11/20/19 13:48

Internal Standard Area and RT SUMMARY
1,4-Dioxane by GC/MS

File ID: I:\ACQUDATA\5975E\data\112019\AU551.D\
Instrument ID: R-MS-56
Analysis Method: 8270D SIM

Lab Code: RQ1913704-03
Analysis Lot: 660730
Signal ID: 1

	Tetrahydrofuran-d8	
	Area	RT
Result ==>	42,188	2.66
Upper Limit ==>	84,376	3.16
Lower Limit ==>	21,094	2.16

Associated Analyses

Continuing Calibration Verification	RQ1913704-03	42188	2.66
MW-03	R1911314-001	36199	2.67
MW-03MS	RQ1913571-04	35872	2.66
MW-03DMS	RQ1913571-05	39885	2.69



Raw Data

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com



Semivolatile Organic Compounds by GC/MS

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: 11/13/19 11:54
Date Received: 11/18/19 11:50

Sample Name: MW-03
Lab Code: R1911314-001

Units: ug/L
Basis: NA

1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
1,4-Dioxane	0.089	0.040	0.027	1	11/20/19 16:18	11/19/19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,4-Dioxane-d8	111	64 - 124	11/20/19 16:18	

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU559.D
Acq On : 20 Nov 2019 4:18 pm
Operator : JMisiurewicz
Sample : R1911314-001
Misc : 348953 8270 DIOX
ALS Vial : 71 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:38:13 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

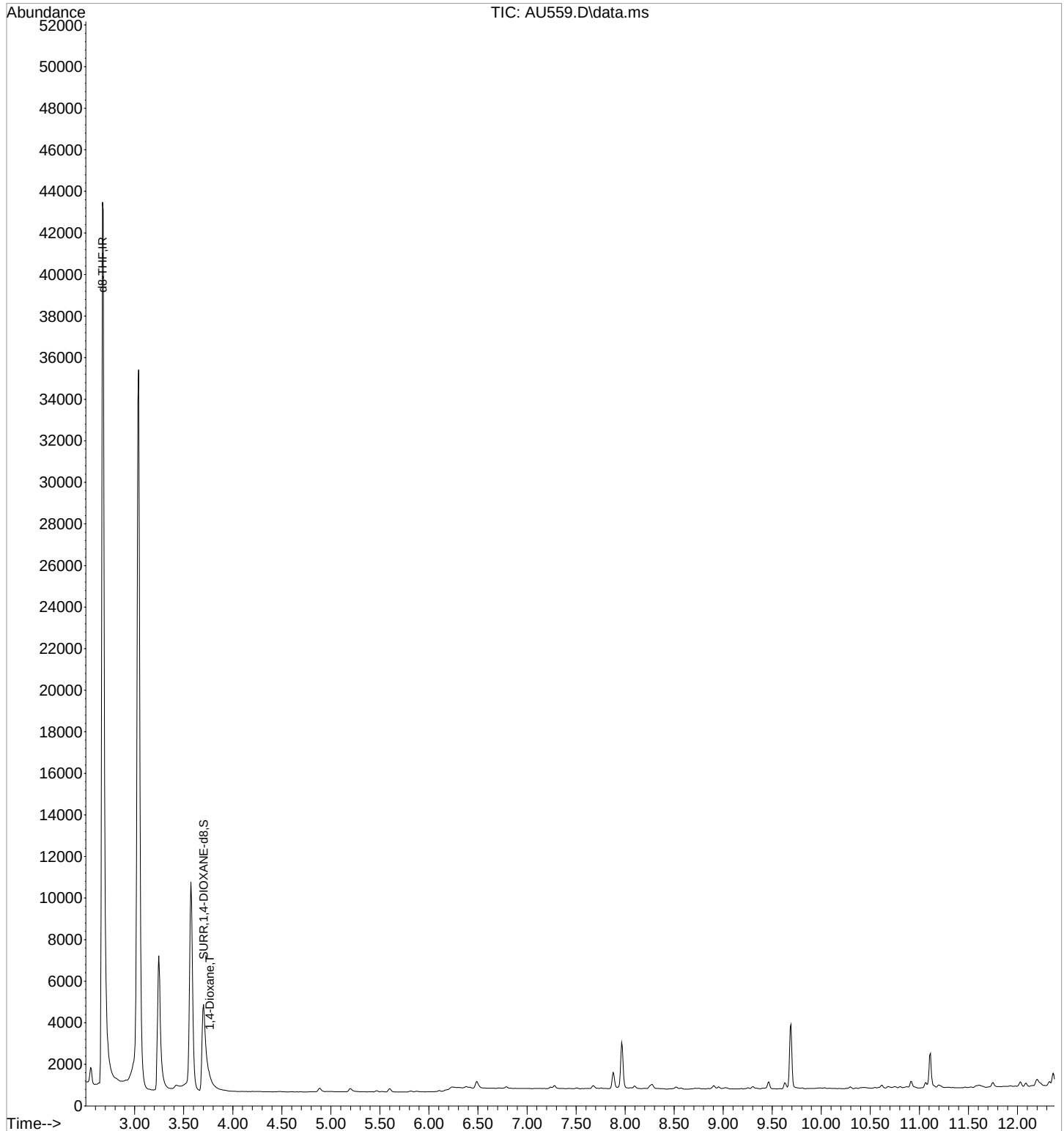
Internal Standards						
1) d8-THF	2.671	46	36199	500.00	PPB	0.07
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.702	96	6305	111.43	PPB	0.09
Spiked Amount 100.000	Range 70 - 130		Recovery	=	111.43%	
Target Compounds						Qvalue
2) 1,4-Dioxane	3.765	88	290	4.46	PPB	93

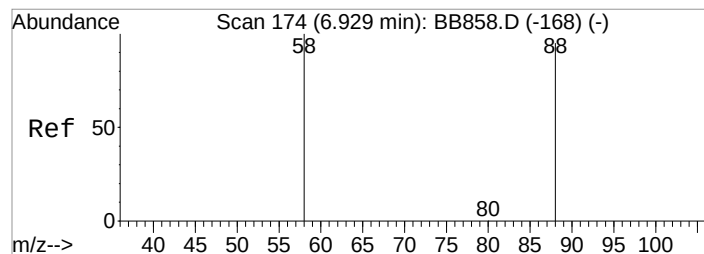
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU559.D
Acq On : 20 Nov 2019 4:18 pm
Operator : JMisiurewicz
Sample : R1911314-001
Misc : 348953 8270 DIOX
ALS Vial : 71 Sample Multiplier: 1

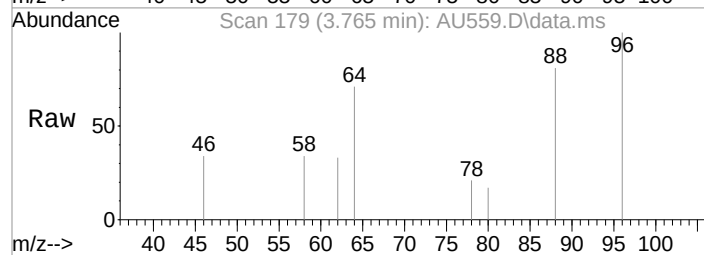
Inst : 5975 E

Quant Time: Nov 21 09:38:13 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

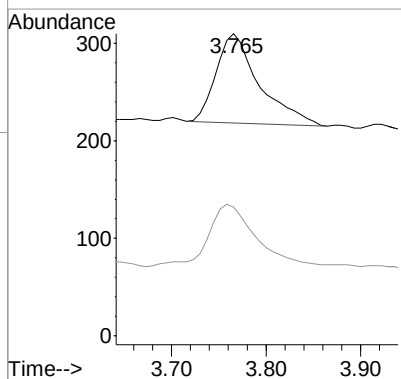
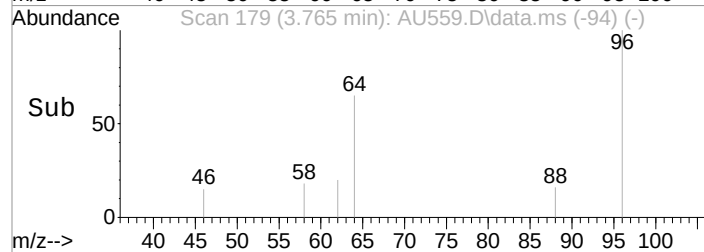




#2
 1,4-Dioxane
 Concen: 4.46 PPB
 RT: 3.765 min Scan# 179
 Delta R.T. 0.103 min
 Lab File: AU559.D
 Acq: 20 Nov 2019 4:18 pm



Tgt Ion: 88 Resp: 290
 Ion Ratio Lower Upper
 88 100
 58 62.2 37.0 77.0



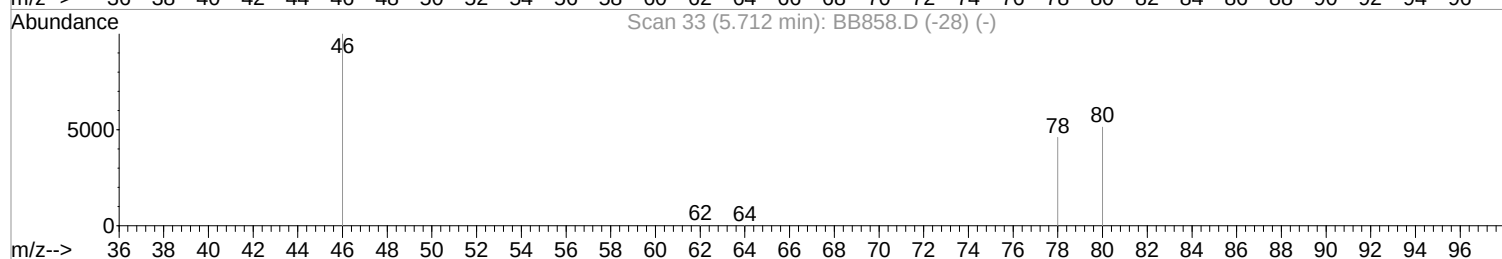
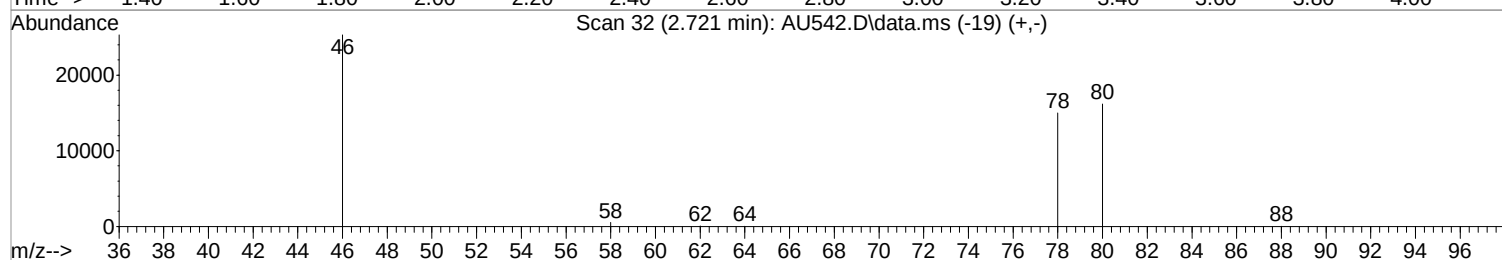
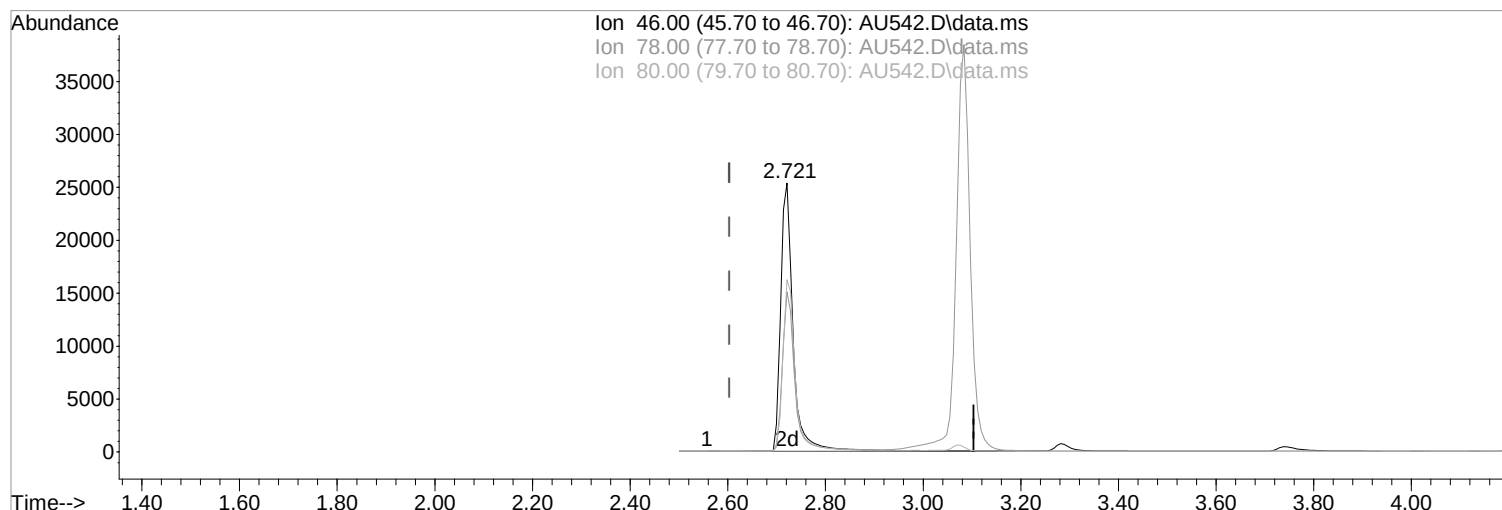
Quantitation Report (Qedit)

1st **AF** 11/21/19
2nd **DM** 11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU542.D
Acq On : 20 Nov 2019 11:00 am
Operator : JMisiurewicz
Sample : RQ1913571-01
Misc : 348953 8270 DIOX
ALS Vial : 55 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:38 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration



TIC: AU542.D\data.ms

(1) d8-THF (IR)

2.721min (+ 0.118) 500.00 PPB m

response 45300

Ion	Exp%	Act%
46.00	100.00	100.00
78.00	72.70	59.56
80.00	80.50	64.01
0.00	0.00	0.00

Manual Integration:

After

Wrong peak selected.

11/21/19

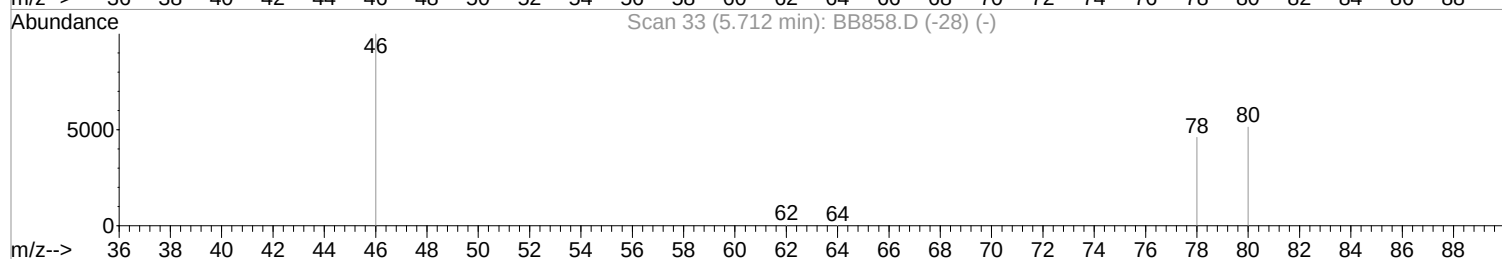
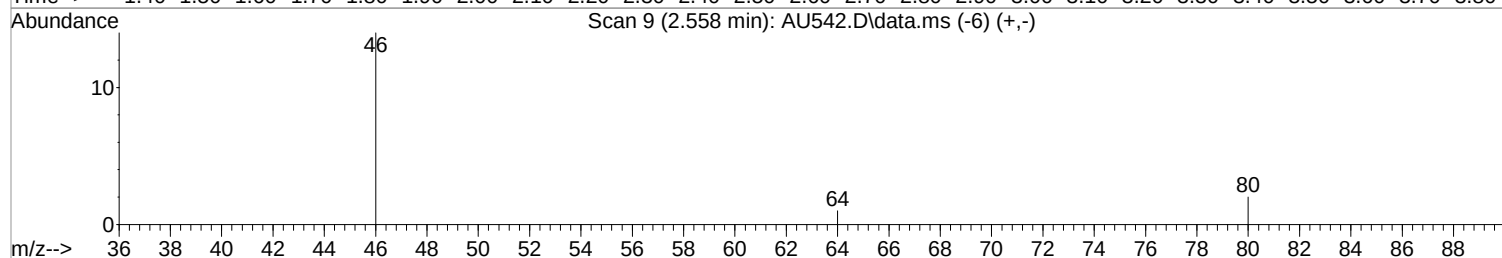
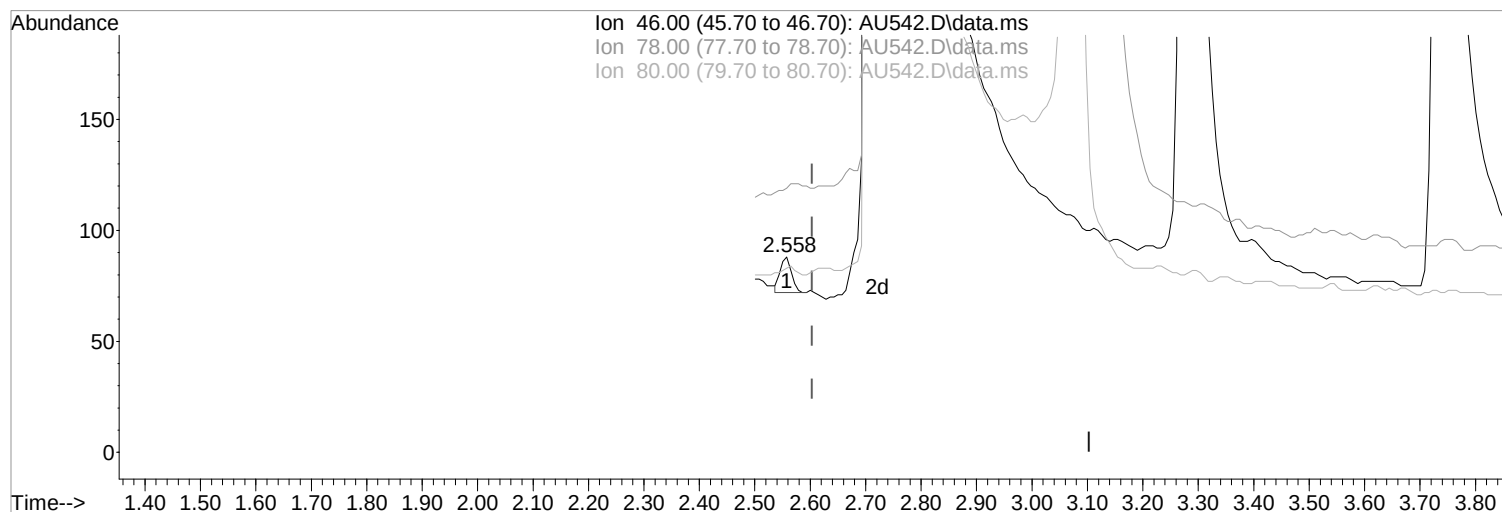
Quantitation Report (Qedit)

1st AF 11/21/19
2nd DM 11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU542.D
Acq On : 20 Nov 2019 11:00 am
Operator : JMisiurewicz
Sample : RQ1913571-01
Misc : 348953 8270 DIOX
ALS Vial : 55 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:38 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration



TIC: AU542.D\data.ms

(1) d8-THF (IR)

2.558min (-0.045) 500.00 PPB

response 23

Ion	Exp%	Act%
46.00	100.00	100.00
78.00	72.70	3.45#
80.00	80.50	17.24#
0.00	0.00	0.00

Manual Integration:

Before

11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU542.D
Acq On : 20 Nov 2019 11:00 am
Operator : JMisiurewicz
Sample : RQ1913571-01
Misc : 348953 8270 DIOX
ALS Vial : 55 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:41:59 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

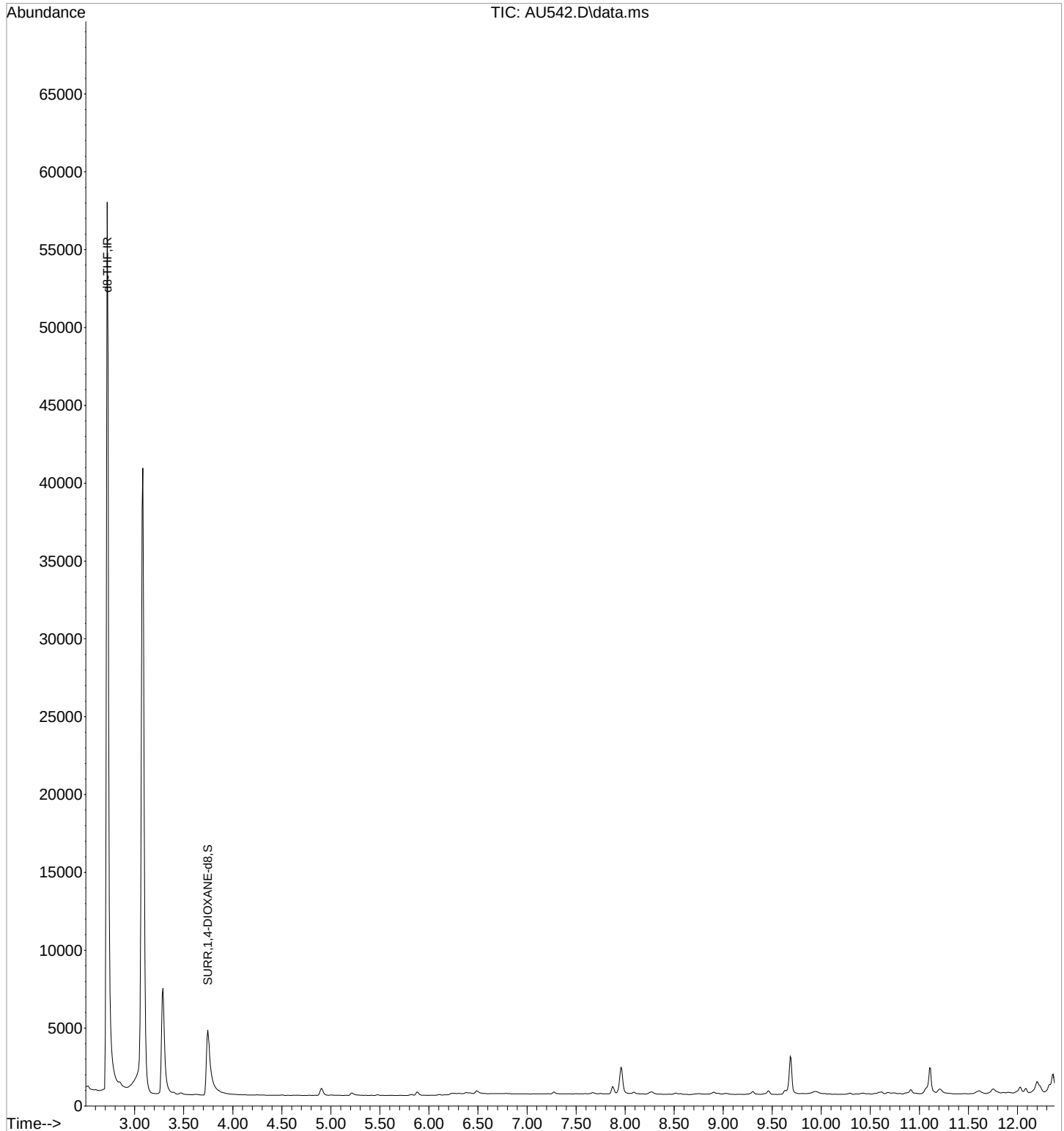
Internal Standards						
1) d8-THF	2.721	46	45300m	500.00	PPB	0.12
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.744	96	6736	95.13	PPB	0.13
Spiked Amount 100.000	Range 70 - 130		Recovery	=	95.13%	
Target Compounds						Qvalue
2) 1,4-Dioxane	0.000		0	N.D.		

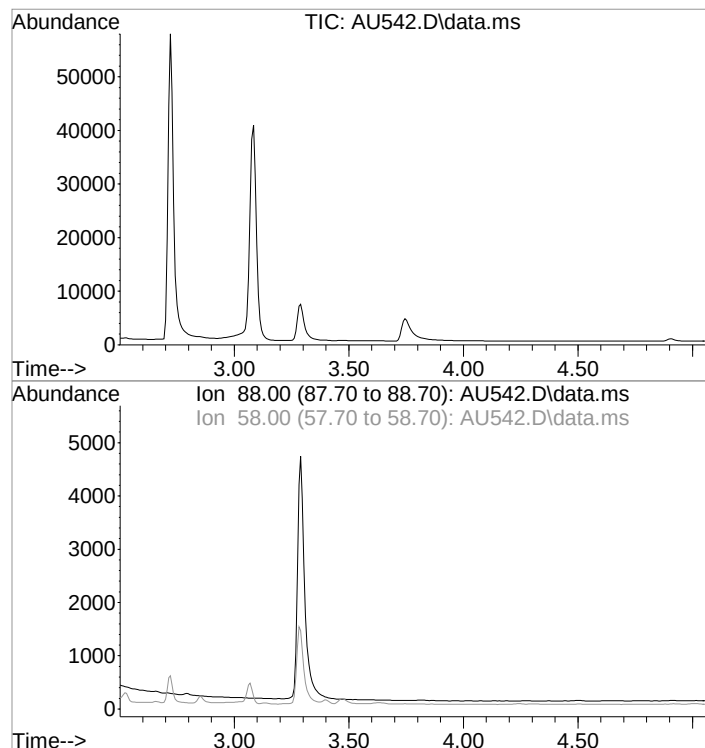
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU542.D
Acq On : 20 Nov 2019 11:00 am
Operator : JMisiurewicz
Sample : RQ1913571-01
Misc : 348953 8270 DIOX
ALS Vial : 55 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:41:59 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration





#2
 1,4-Dioxane
 Concen: N.D.
 Expected RT: 3.66 min

Lab File: AU542.D
 Acq: 20 Nov 2019 11:00 am

Tgt Ion: 88
 Sig Exp Ratio
 88 100
 58 57.0

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU543.D
Acq On : 20 Nov 2019 11:19 am
Operator : JMisiurewicz
Sample : RQ1913571-02
Misc : 348953 8270 DIOX
ALS Vial : 56 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:41 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

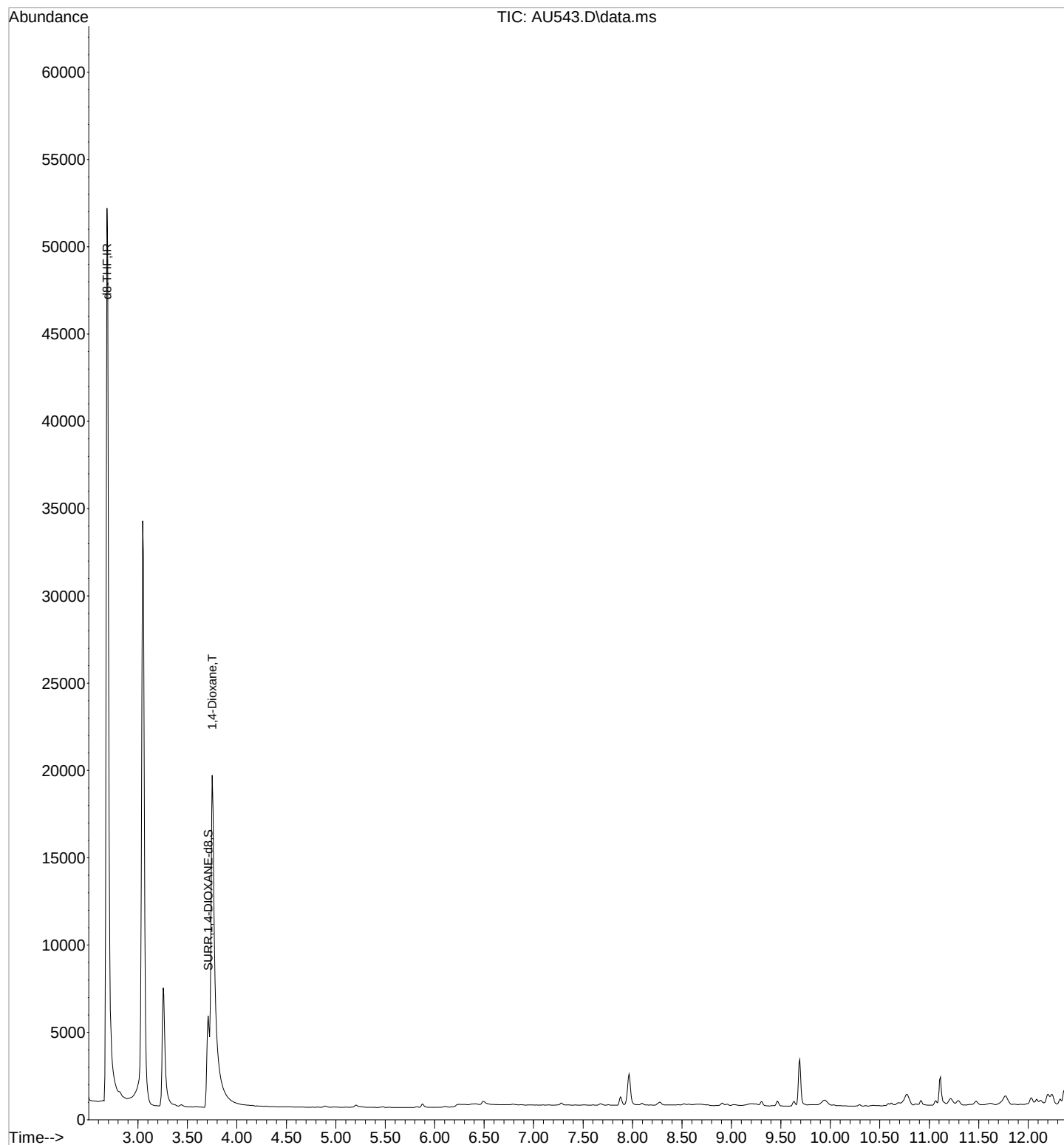
Internal Standards						
1) d8-THF	2.686	46	43016	500.00	PPB	0.08
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.709	96	6244	92.86	PPB	0.10
Spiked Amount 100.000	Range 70 - 130		Recovery	=	92.86%	
Target Compounds						
2) 1,4-Dioxane	3.751	88	31565	417.70	PPB	Qvalue 84

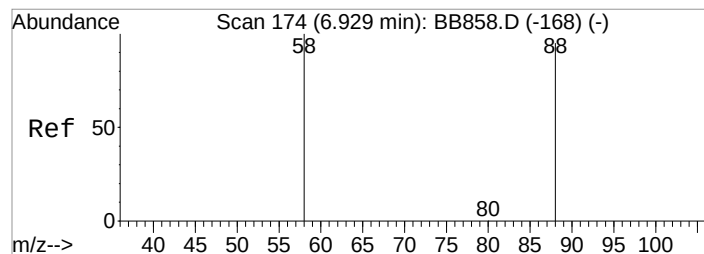
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU543.D
Acq On : 20 Nov 2019 11:19 am
Operator : JMisiurewicz
Sample : RQ1913571-02
Misc : 348953 8270 DIOX
ALS Vial : 56 Sample Multiplier: 1

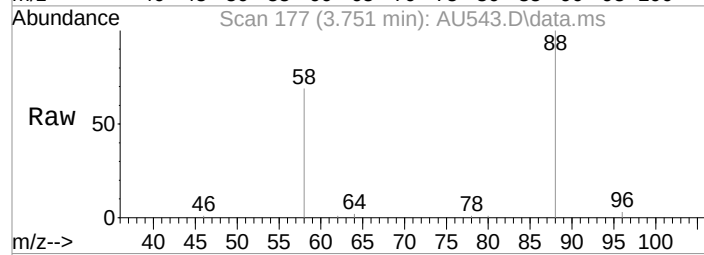
Inst : 5975 E

Quant Time: Nov 21 09:37:41 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

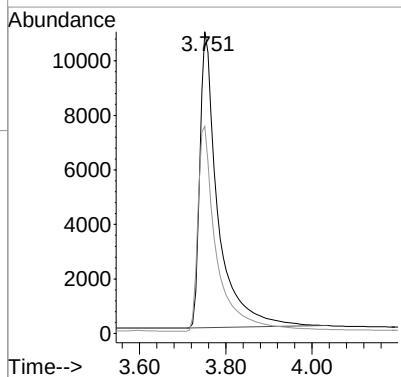
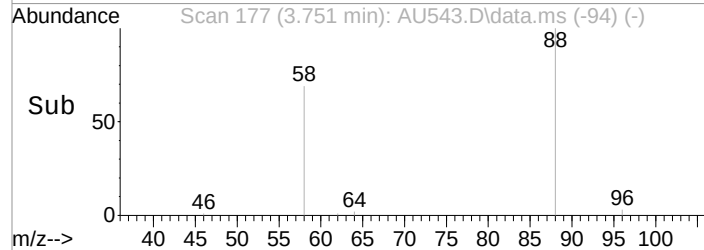




#2
1,4-Dioxane
Concen: 417.70 PPB
RT: 3.751 min Scan# 177
Delta R.T. 0.089 min
Lab File: AU543.D
Acq: 20 Nov 2019 11:19 am



Tgt Ion: 88 Resp: 31565
Ion Ratio Lower Upper
88 100
58 69.0 37.0 77.0



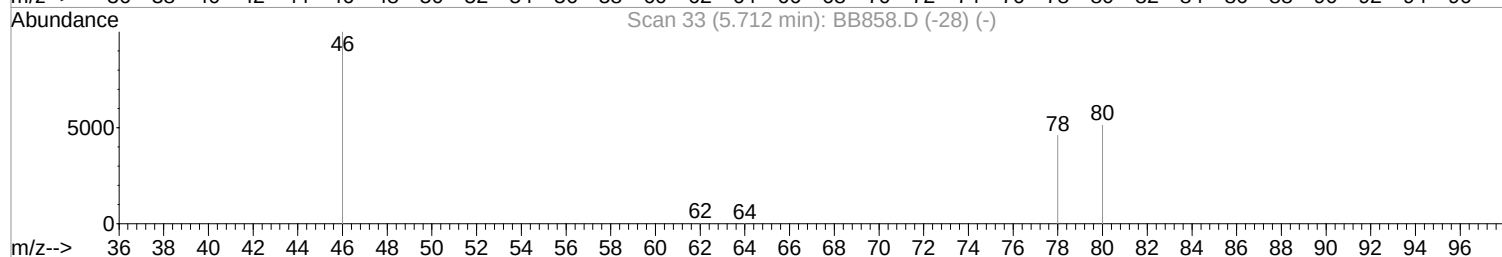
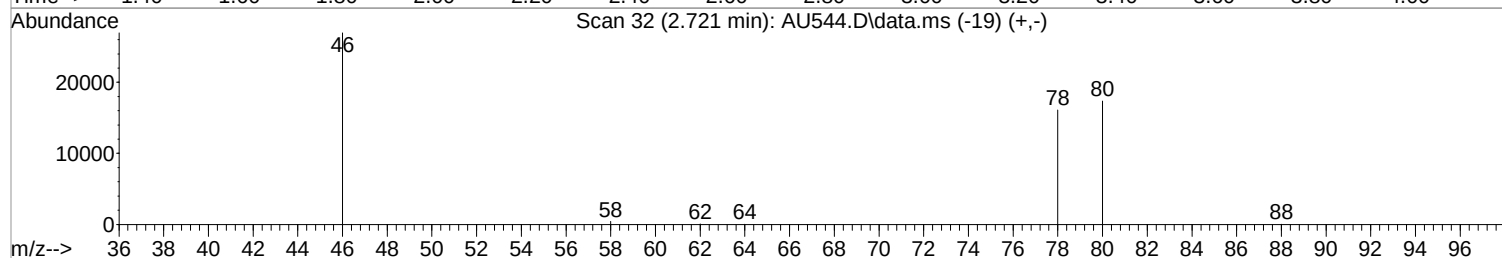
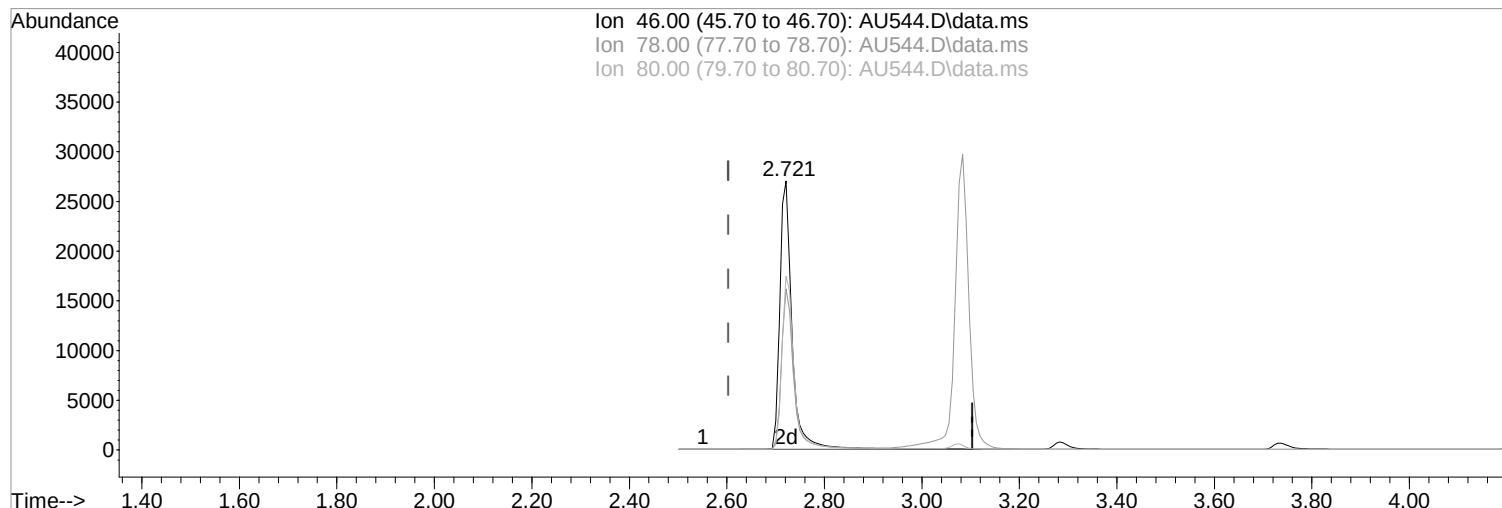
Quantitation Report (Qedit)

1st AF 11/21/19
2nd DM 11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU544.D
Acq On : 20 Nov 2019 11:37 am
Operator : JMisiurewicz
Sample : RQ1913571-03
Misc : 348953 8270 DIOX
ALS Vial : 57 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:43 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration



TIC: AU544.D\data.ms

(1) d8-THF (IR)

2.721min (+ 0.118) 500.00 PPB m

response 47556

Ion	Exp%	Act%
46.00	100.00	100.00
78.00	72.70	59.88
80.00	80.50	64.52
0.00	0.00	0.00

Manual Integration:

After

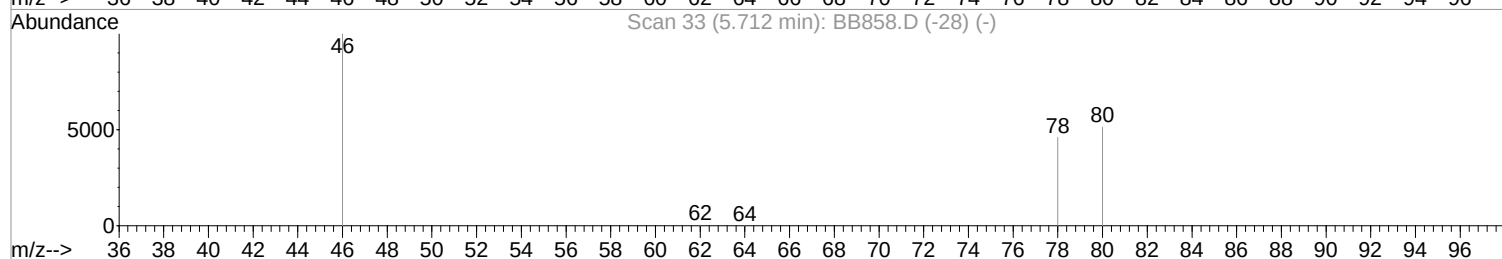
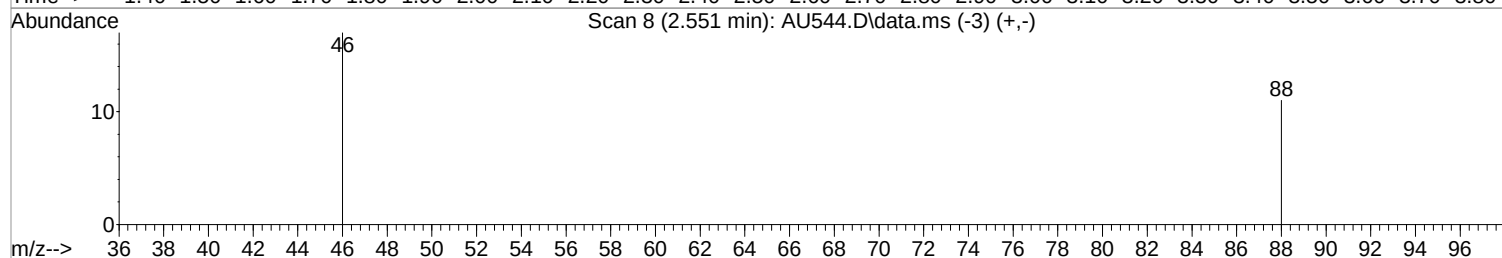
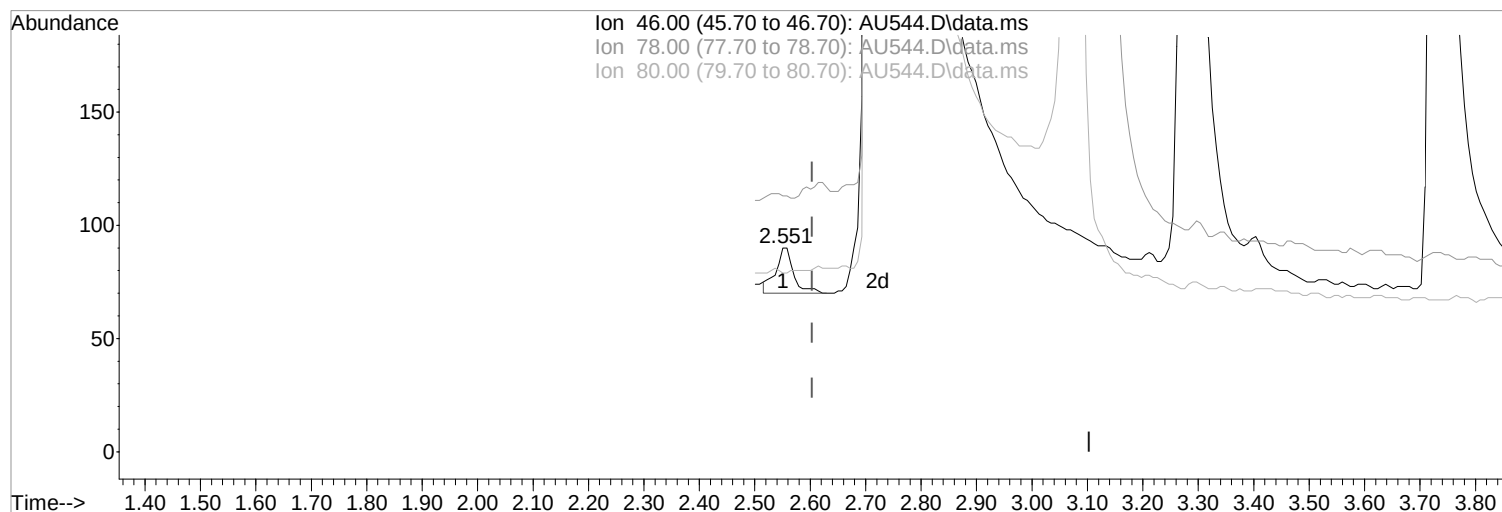
Wrong peak selected.

11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU544.D
Acq On : 20 Nov 2019 11:37 am
Operator : JMisiurewicz
Sample : RQ1913571-03
Misc : 348953 8270 DIOX
ALS Vial : 57 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:43 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration



TIC: AU544.D\data.ms

(1) d8-THF (IR)

2.551min (-0.052) 500.00 PPB

response 45

Manual Integration:

Before

11/21/19

Ion	Exp%	Act%
46.00	100.00	100.00
78.00	72.70	0.00#
80.00	80.50	0.00#
0.00	0.00	0.00

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU544.D
Acq On : 20 Nov 2019 11:37 am
Operator : JMisiurewicz
Sample : RQ1913571-03
Misc : 348953 8270 DIOX
ALS Vial : 57 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:42:46 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

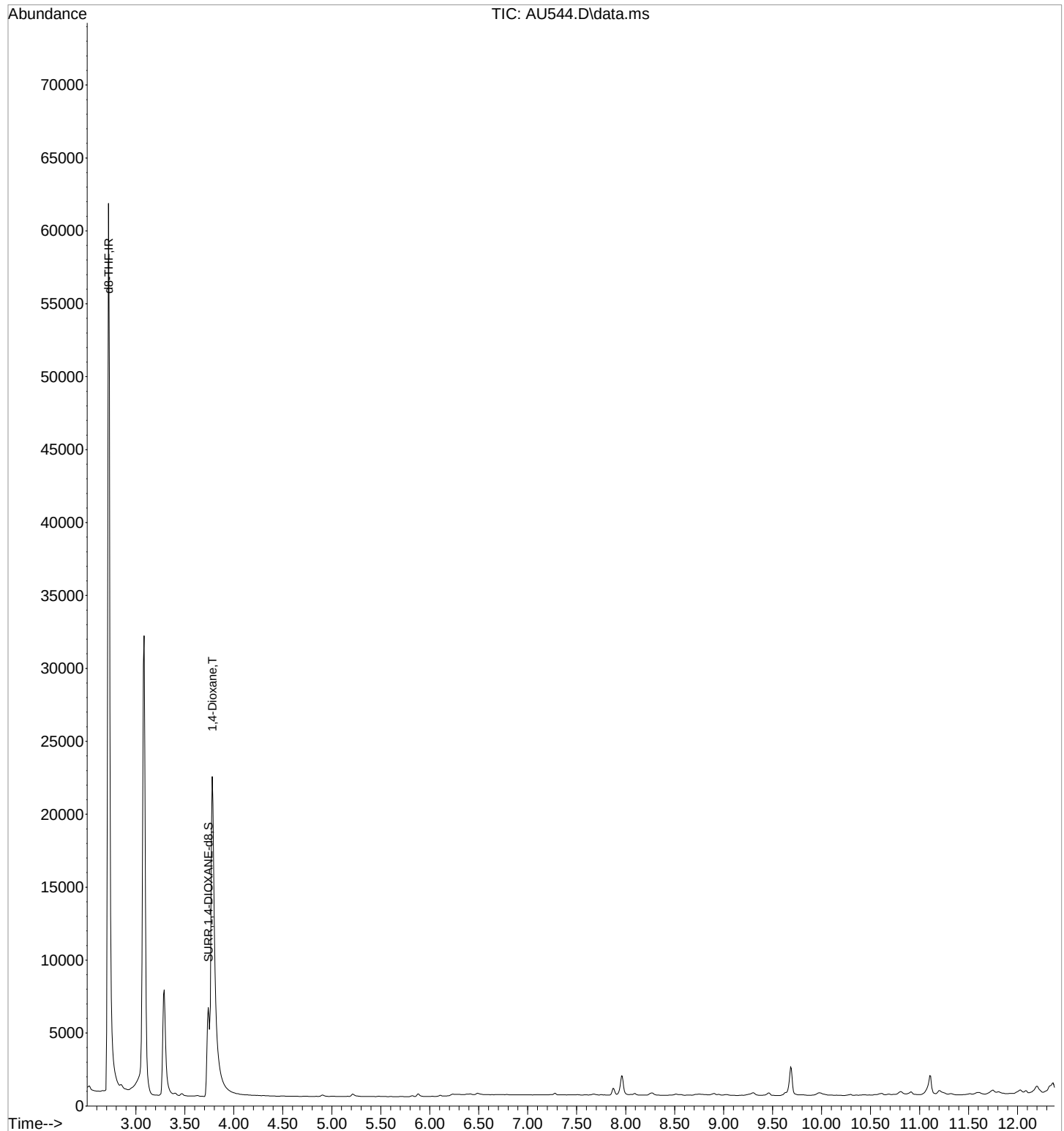
Internal Standards						
1) d8-THF	2.721	46	47556m	500.00	PPB	0.12
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.737	96	7077	95.20	PPB	0.13
Spiked Amount 100.000	Range 70 - 130		Recovery	=	95.20%	
Target Compounds						Qvalue
2) 1,4-Dioxane	3.780	88	35070	419.78	PPB	82

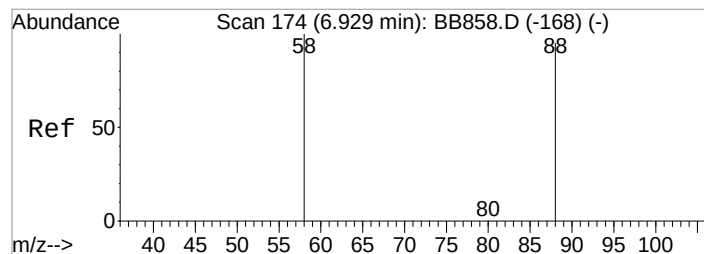
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU544.D
Acq On : 20 Nov 2019 11:37 am
Operator : JMisiurewicz
Sample : RQ1913571-03
Misc : 348953 8270 DIOX
ALS Vial : 57 Sample Multiplier: 1

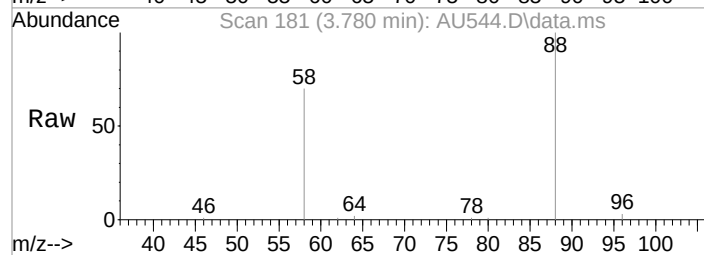
Inst : 5975 E

Quant Time: Nov 21 09:42:46 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

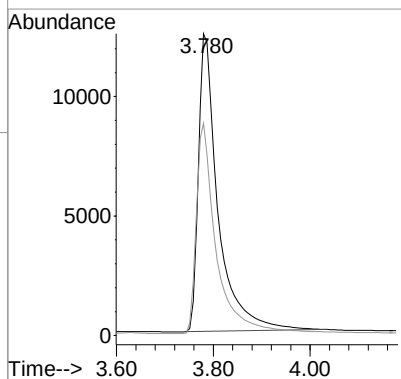
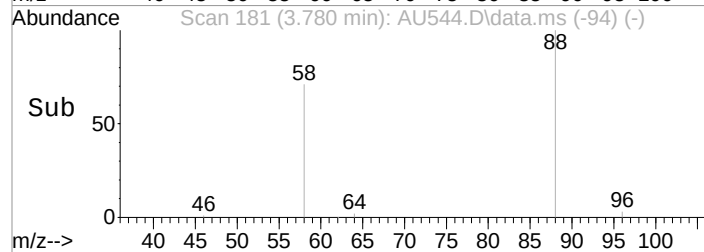




#2
1,4-Dioxane
Concen: 419.78 PPB
RT: 3.780 min Scan# 181
Delta R.T. 0.118 min
Lab File: AU544.D
Acq: 20 Nov 2019 11:37 am



Tgt Ion: 88 Resp: 35070
Ion Ratio Lower Upper
88 100
58 70.4 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU560.D
Acq On : 20 Nov 2019 4:37 pm
Operator : JMisiurewicz
Sample : RQ1913571-04
Misc : 348953 8270 DIOX
ALS Vial : 72 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:38:15 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

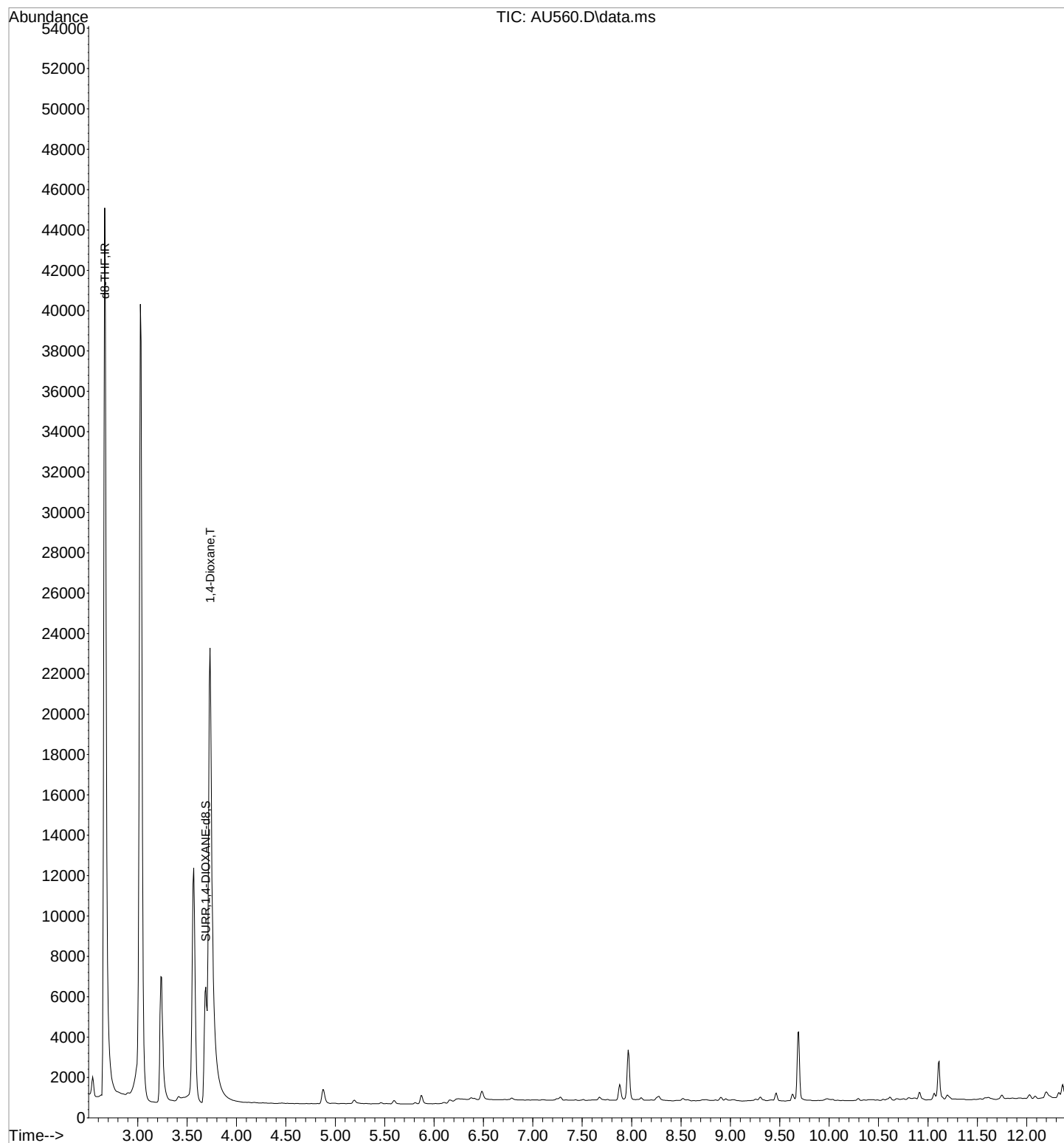
Internal Standards						
1) d8-THF	2.665	46	35872	500.00	PPB	# 0.06
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.688	96	6657	118.72	PPB	0.08
Spiked Amount 100.000	Range 70 - 130		Recovery	=	118.72%	
Target Compounds						
2) 1,4-Dioxane	3.730	88	36641	581.96	PPB	Qvalue 86

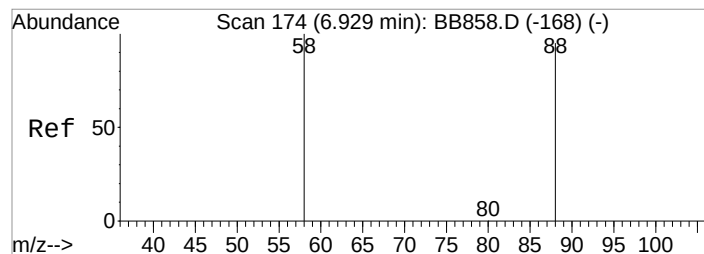
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU560.D
Acq On : 20 Nov 2019 4:37 pm
Operator : JMisiurewicz
Sample : RQ1913571-04
Misc : 348953 8270 DIOX
ALS Vial : 72 Sample Multiplier: 1

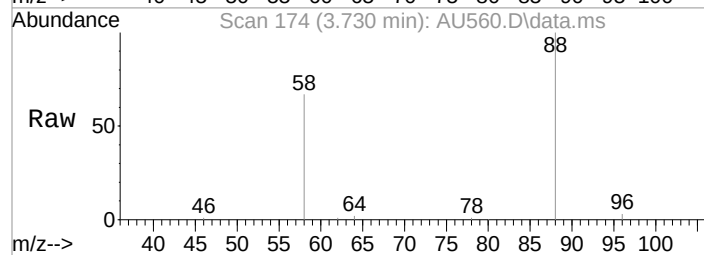
Inst : 5975 E

Quant Time: Nov 21 09:38:15 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

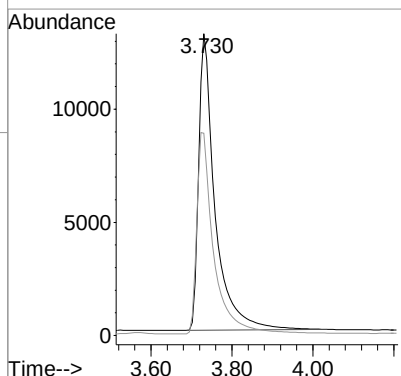
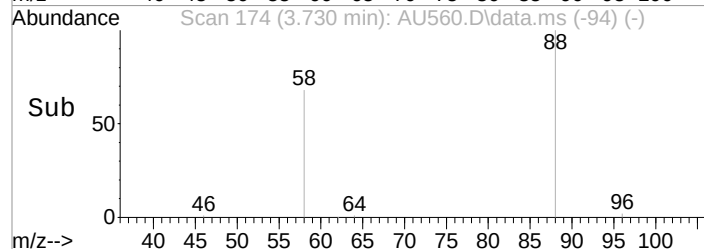




#2
1,4-Dioxane
Concen: 581.96 PPB
RT: 3.730 min Scan# 174
Delta R.T. 0.068 min
Lab File: AU560.D
Acq: 20 Nov 2019 4:37 pm



Tgt Ion: 88 Resp: 36641
Ion Ratio Lower Upper
88 100
58 67.5 37.0 77.0



Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU561.D
Acq On : 20 Nov 2019 4:55 pm
Operator : JMisiurewicz
Sample : RQ1913571-05
Misc : 348953 8270 DIOX
ALS Vial : 73 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:38:17 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

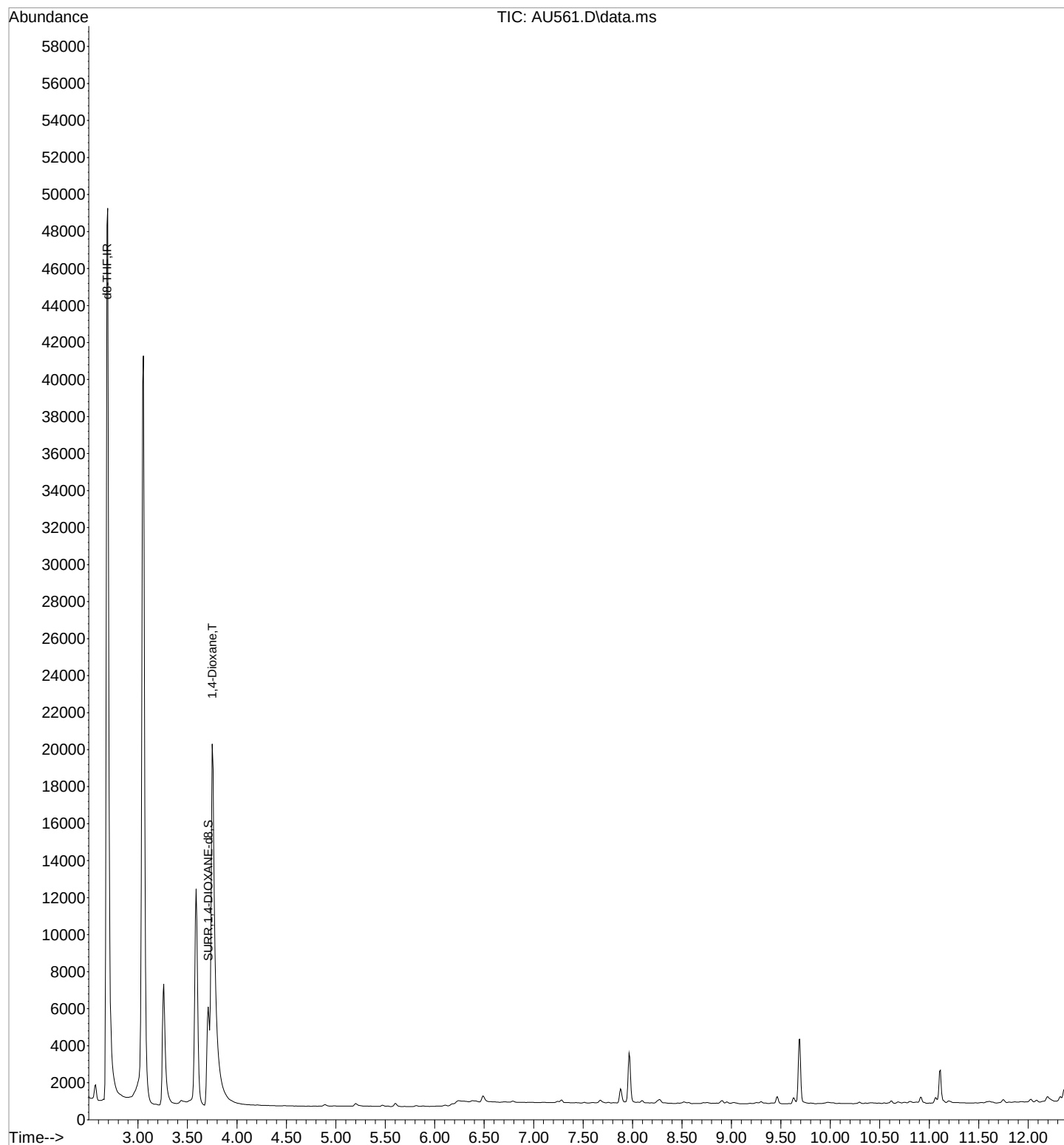
Internal Standards						
1) d8-THF	2.685	46	39885	500.00	PPB	# 0.08
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.709	96	6316	101.31	PPB	0.10
Spiked Amount 100.000	Range 70 - 130		Recovery	=	101.31%	
Target Compounds						
2) 1,4-Dioxane	3.751	88	32679	466.51	PPB	Qvalue 82

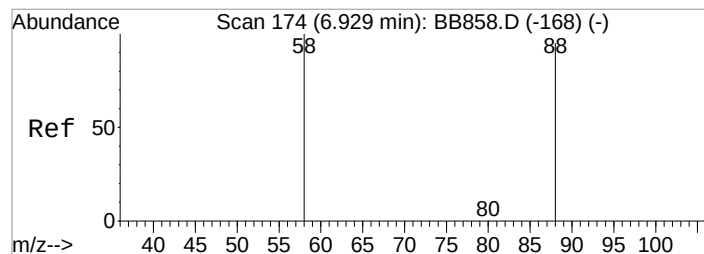
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU561.D
Acq On : 20 Nov 2019 4:55 pm
Operator : JMisiurewicz
Sample : RQ1913571-05
Misc : 348953 8270 DIOX
ALS Vial : 73 Sample Multiplier: 1

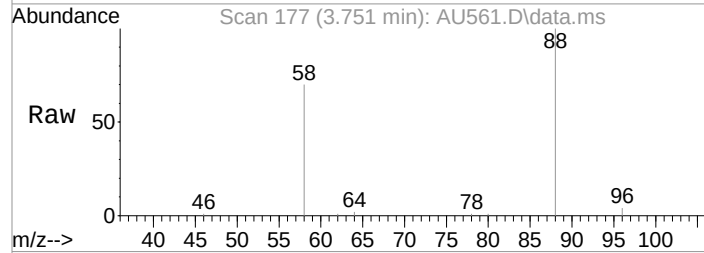
Inst : 5975 E

Quant Time: Nov 21 09:38:17 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

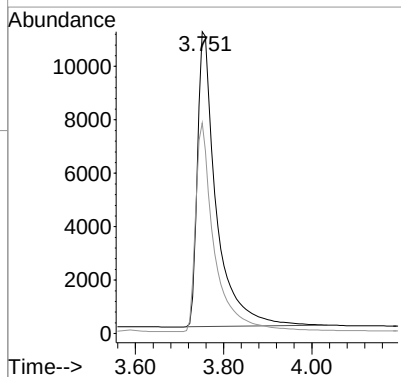
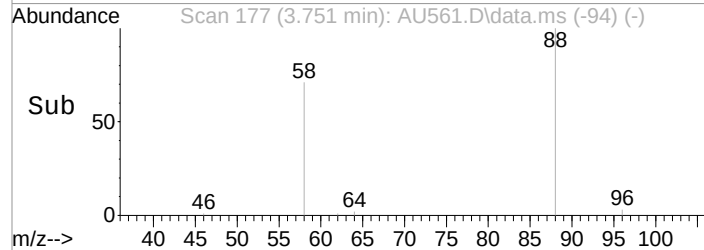




#2
1,4-Dioxane
Concen: 466.51 PPB
RT: 3.751 min Scan# 177
Delta R.T. 0.089 min
Lab File: AU561.D
Acq: 20 Nov 2019 4:55 pm



Tgt Ion: 88 Resp: 32679
Ion Ratio Lower Upper
88 100
58 70.5 37.0 77.0



Evaluate Continuing Calibration Report

1st AF 11/21/19
2nd DM 11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU541.D
Acq On : 20 Nov 2019 10:42 am
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:37 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 IR	d8-THF	500.000	500.000	0.0	132	0.10
2 T	1,4-Dioxane	200.000	200.306	-0.2	137	0.10
3 S	SURR,1,4-DIOXANE-d8	200.000	209.839	-4.9	144	0.11

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU541.D
Acq On : 20 Nov 2019 10:42 am
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:37 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

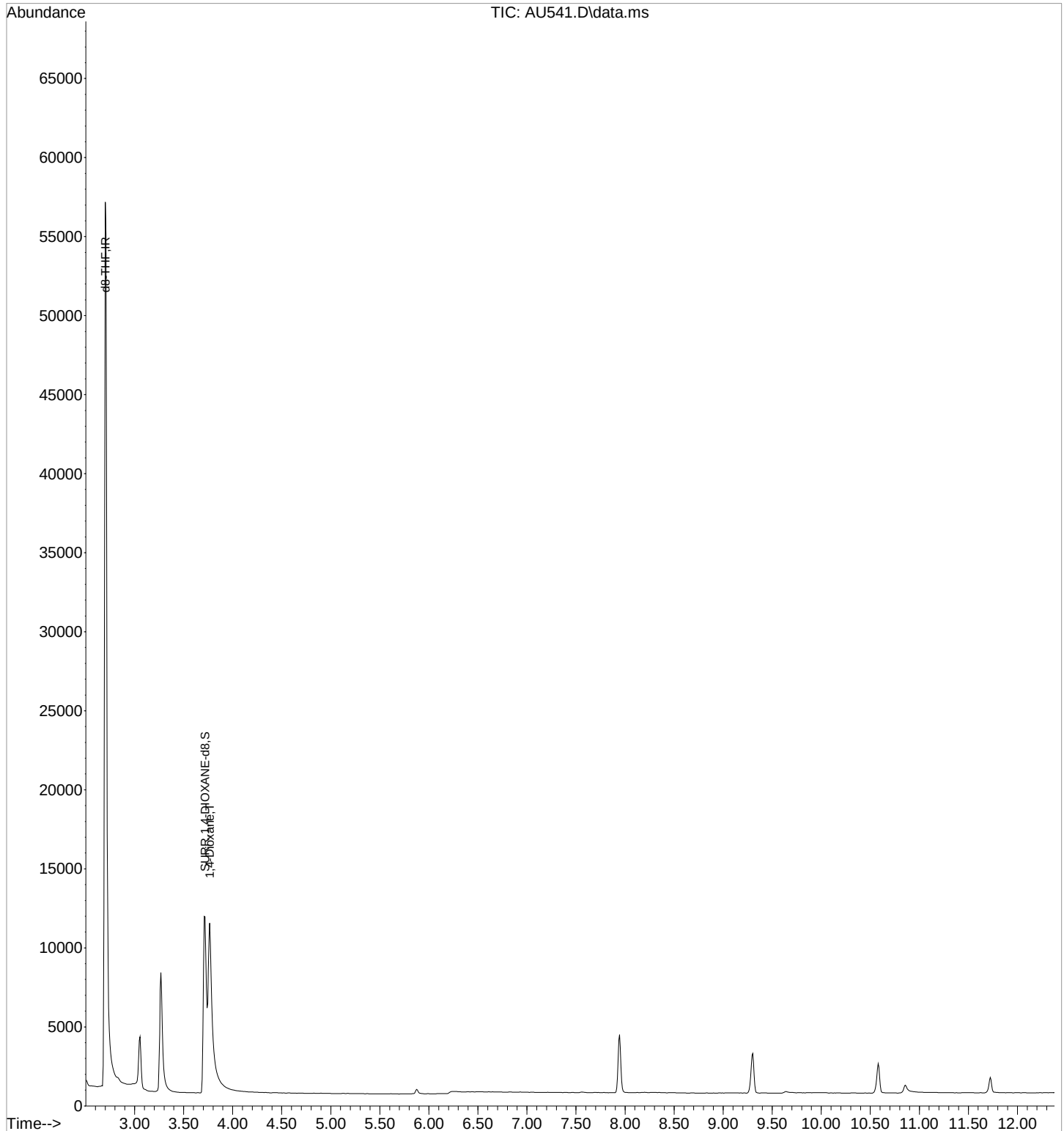
Internal Standards						
1) d8-THF	2.700	46	46207	500.00	PPB	0.10
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.716	96	15155	209.84	PPB	0.11
Spiked Amount 100.000	Range 70 - 130		Recovery	=	209.84%#	
Target Compounds						
2) 1,4-Dioxane	3.766	88	16282	200.31	PPB	Qvalue 84

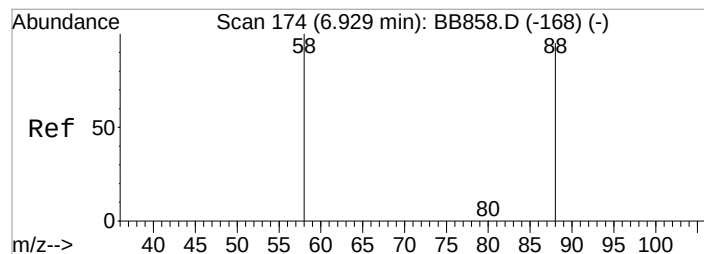
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU541.D
Acq On : 20 Nov 2019 10:42 am
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

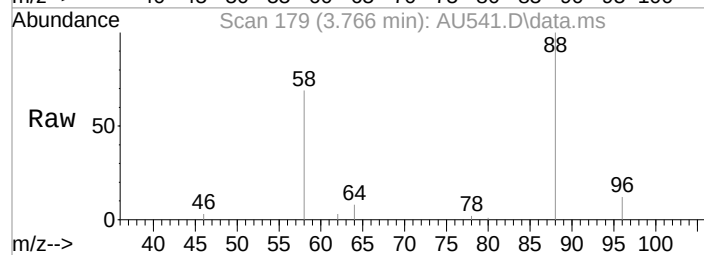
Inst : 5975 E

Quant Time: Nov 21 09:37:37 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

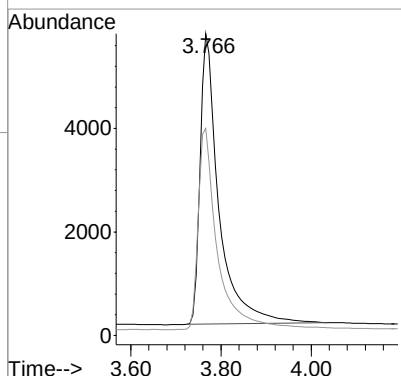
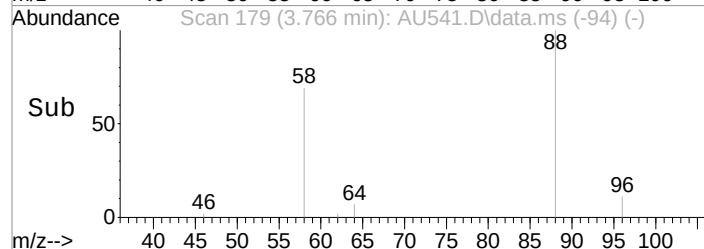




#2
1,4-Dioxane
Concen: 200.31 PPB
RT: 3.766 min Scan# 179
Delta R.T. 0.104 min
Lab File: AU541.D
Acq: 20 Nov 2019 10:42 am



Tgt Ion: 88 Resp: 16282
Ion Ratio Lower Upper
88 100
58 69.0 37.0 77.0



Evaluate Continuing Calibration Report

1st AF 11/21/19
2nd OM 11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU551.D
Acq On : 20 Nov 2019 1:48 pm
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:57 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 IR	d8-THF	500.000	500.000	0.0	121	0.06
2 T	1,4-Dioxane	200.000	213.332	-6.7	134	0.08
3 S	SURR,1,4-DIOXANE-d8	200.000	219.643	-9.8	138	0.08

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU551.D
Acq On : 20 Nov 2019 1:48 pm
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:37:57 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

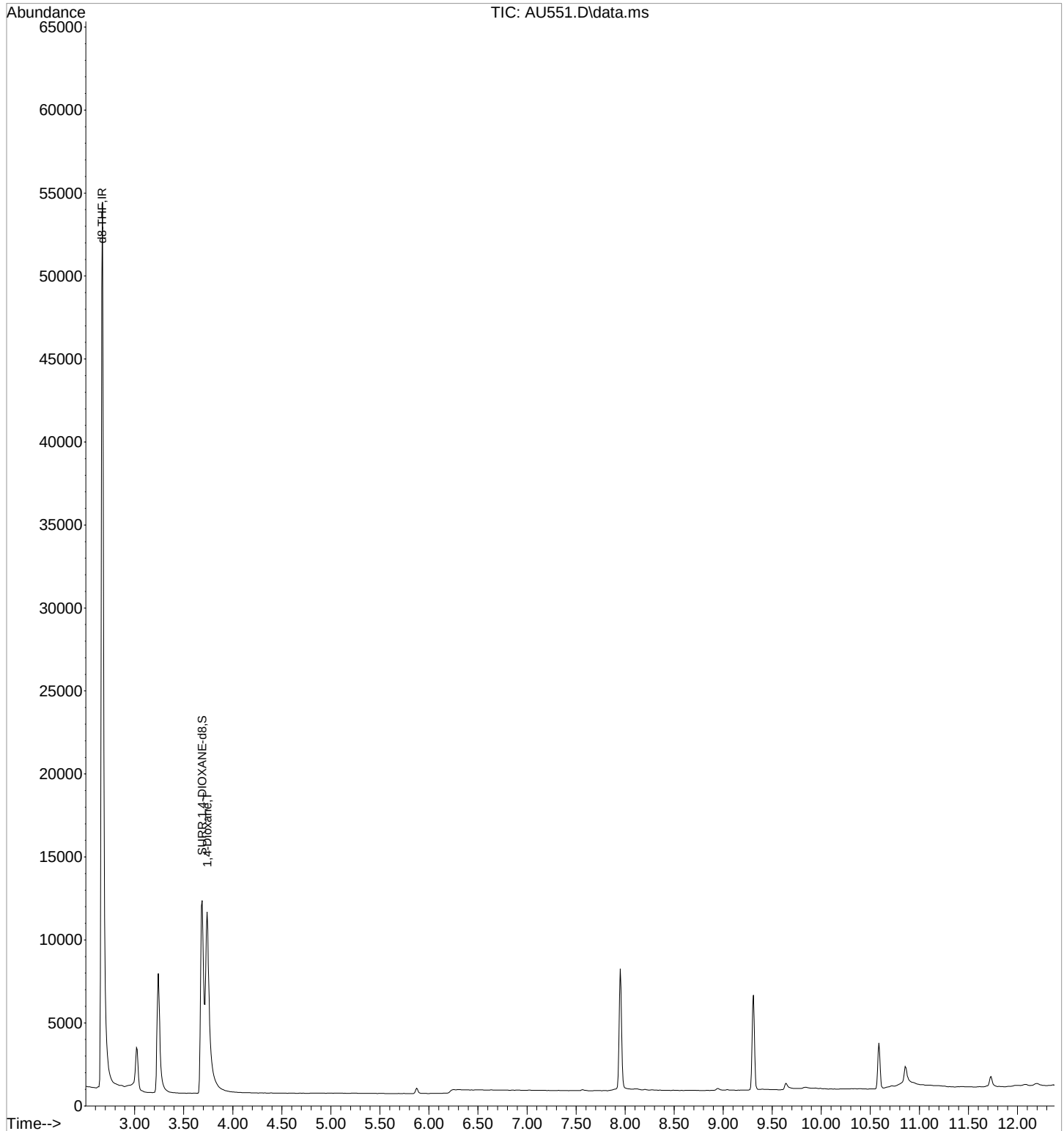
Internal Standards						
1) d8-THF	2.664	46	42188	500.00	PPB	0.06
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.687	96	14483	219.64	PPB	0.08
Spiked Amount 100.000	Range 70 - 130		Recovery	=	219.64%#	
Target Compounds						
2) 1,4-Dioxane	3.737	88	15831	213.33	PPB	Qvalue 82

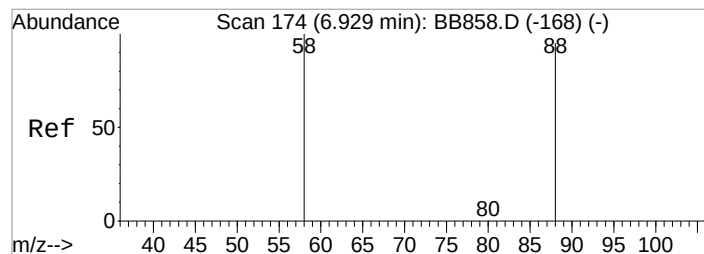
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU551.D
Acq On : 20 Nov 2019 1:48 pm
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

Inst : 5975 E

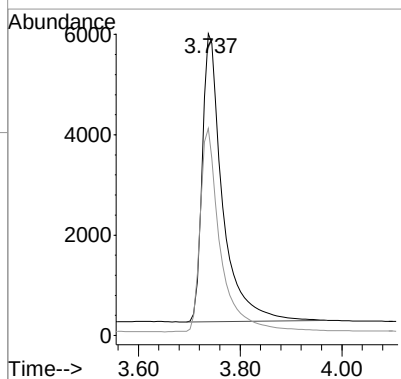
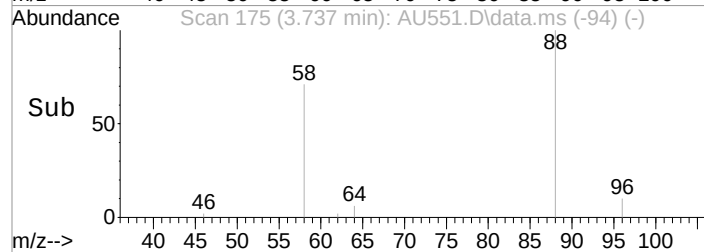
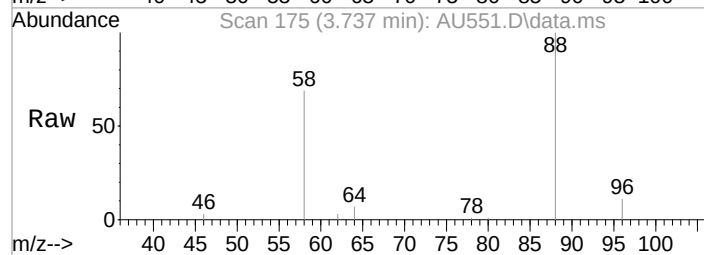
Quant Time: Nov 21 09:37:57 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration





#2
1,4-Dioxane
Concen: 213.33 PPB
RT: 3.737 min Scan# 175
Delta R.T. 0.075 min
Lab File: AU551.D
Acq: 20 Nov 2019 1:48 pm

Tgt Ion: 88 Resp: 15831
Ion Ratio Lower Upper
88 100
58 70.4 37.0 77.0



Evaluate Continuing Calibration Report

1st AF 11/21/19
2nd DM 11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU562.D
Acq On : 20 Nov 2019 5:14 pm
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:38:19 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

	Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1 IR	d8-THF	500.000	500.000	0.0	80	-0.04
2 T	1,4-Dioxane	200.000	163.557	18.2	68	-0.02
3 S	SURR,1,4-DIOXANE-d8	200.000	168.146	15.9	70	-0.01

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU562.D
Acq On : 20 Nov 2019 5:14 pm
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 21 09:38:19 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

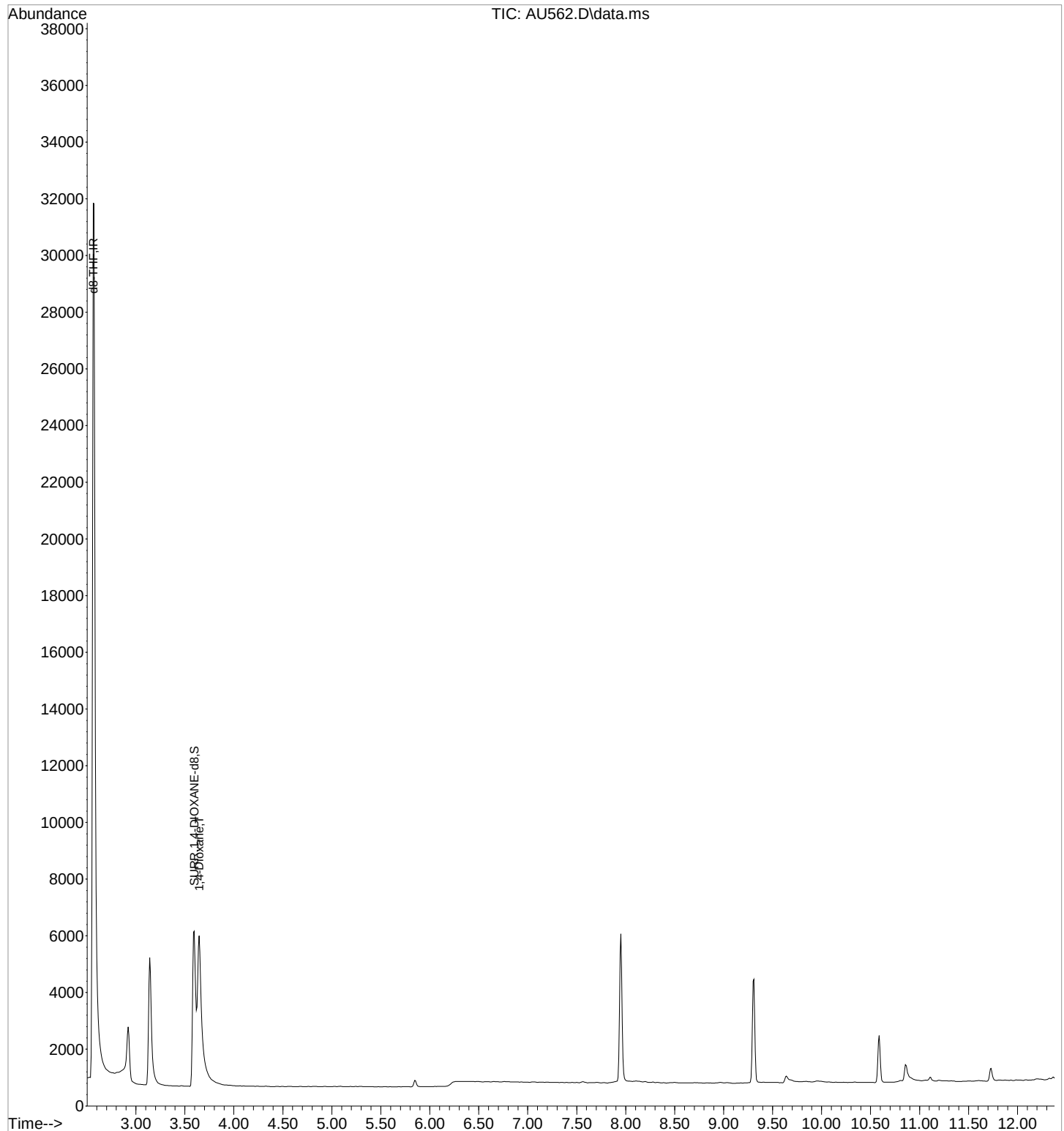
Internal Standards						
1) d8-THF	2.565	46	27911	500.00	PPB	-0.04
System Monitoring Compounds						
3) SURR,1,4-DIOXANE-d8	3.595	96	7336	168.15	PPB	-0.01
Spiked Amount 100.000	Range 70 - 130		Recovery	=	168.15%#	
Target Compounds						
2) 1,4-Dioxane	3.645	88	8033	163.56	PPB	Qvalue 83

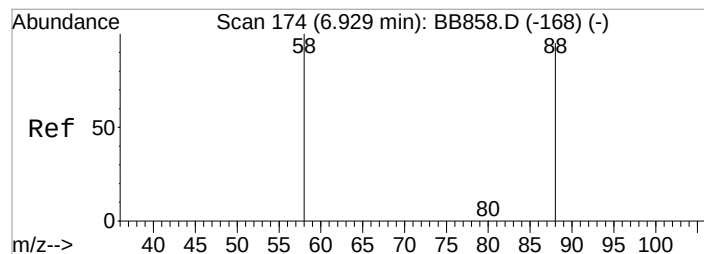
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU562.D
Acq On : 20 Nov 2019 5:14 pm
Operator : JMisiurewicz
Sample : CCV
Misc : 8270 200ppb
ALS Vial : 14 Sample Multiplier: 1

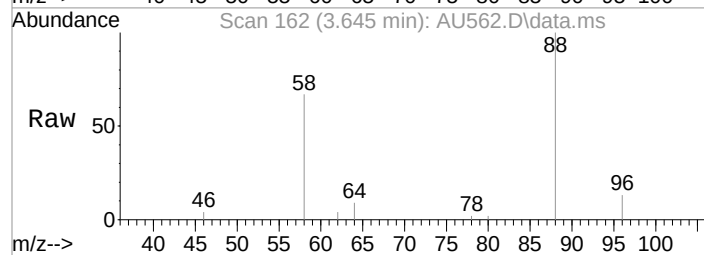
Inst : 5975 E

Quant Time: Nov 21 09:38:19 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\SDIOX110819.M
Quant Title : 8270 BNA ANALYSIS
QLast Update : Fri Nov 08 11:55:32 2019
Response via : Initial Calibration

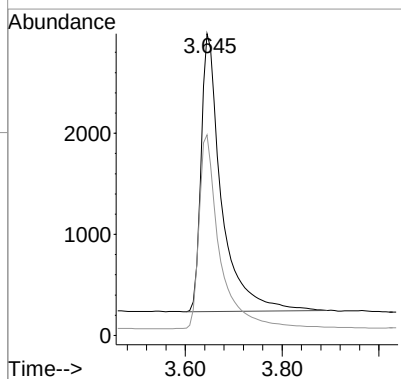
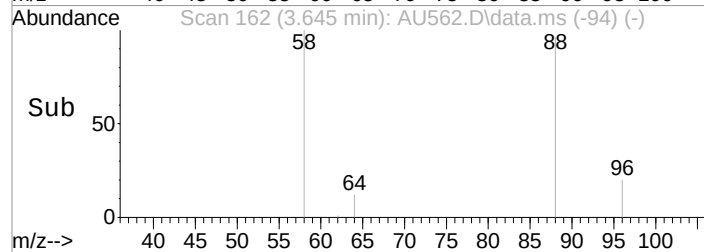




#2
 1,4-Dioxane
 Concen: 163.56 PPB
 RT: 3.645 min Scan# 162
 Delta R.T. -0.017 min
 Lab File: AU562.D
 Acq: 20 Nov 2019 5:14 pm



Tgt Ion: 88 Resp: 8033
 Ion Ratio Lower Upper
 88 100
 58 69.5 37.0 77.0

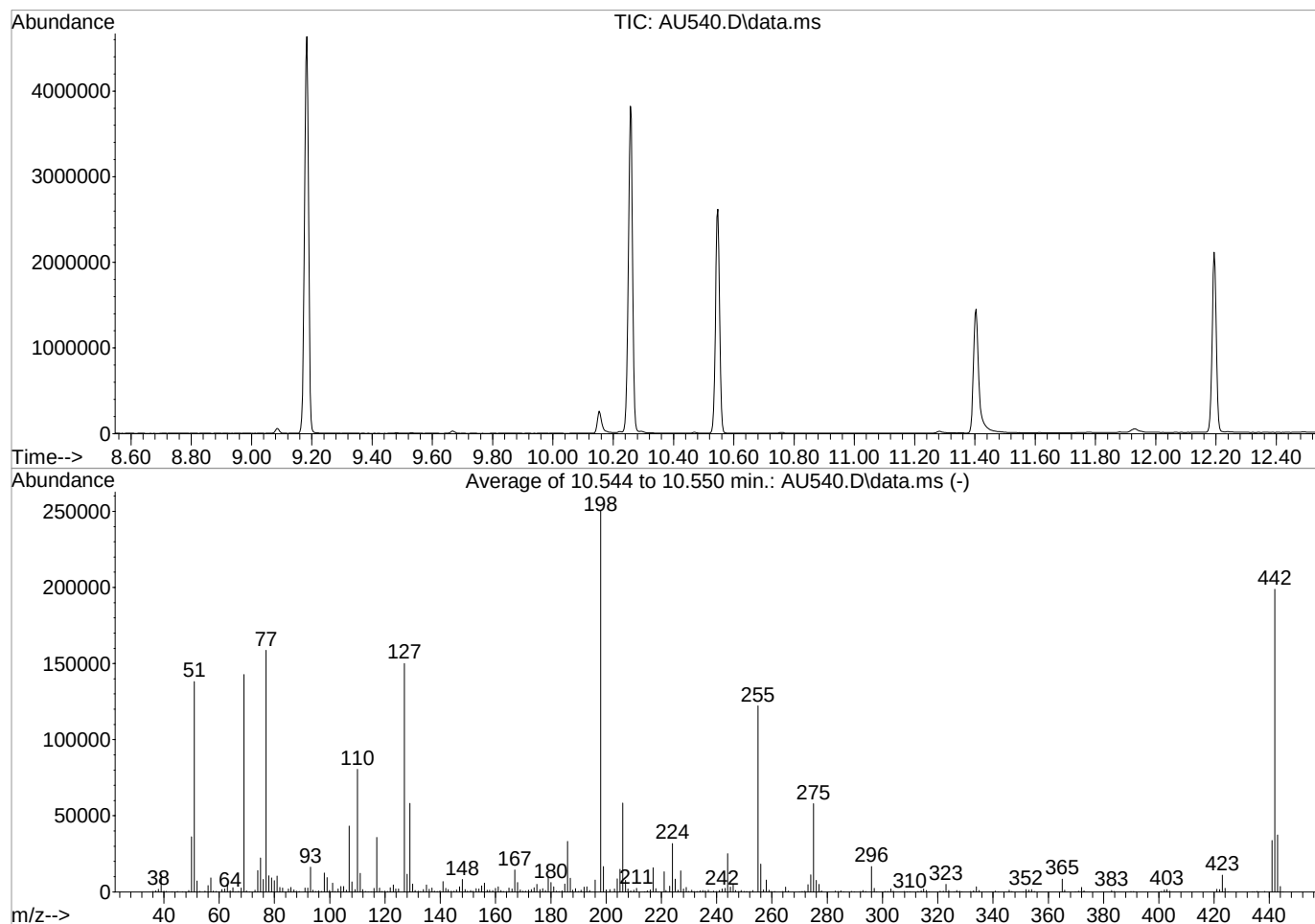


Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU540.D
Acq On : 20 Nov 2019 10:17 am
Operator : JMisiurewicz
Sample : TUNE
Misc : DFTPPTUNE
ALS Vial : 54 Sample Multiplier: 1

Inst : 5975 E

Integration File: events.e

Method : I:\ACQUDATA\5975E\METHODS\DFTPPDI0.M
Title :
Last Update : Mon Nov 11 07:01:58 2019



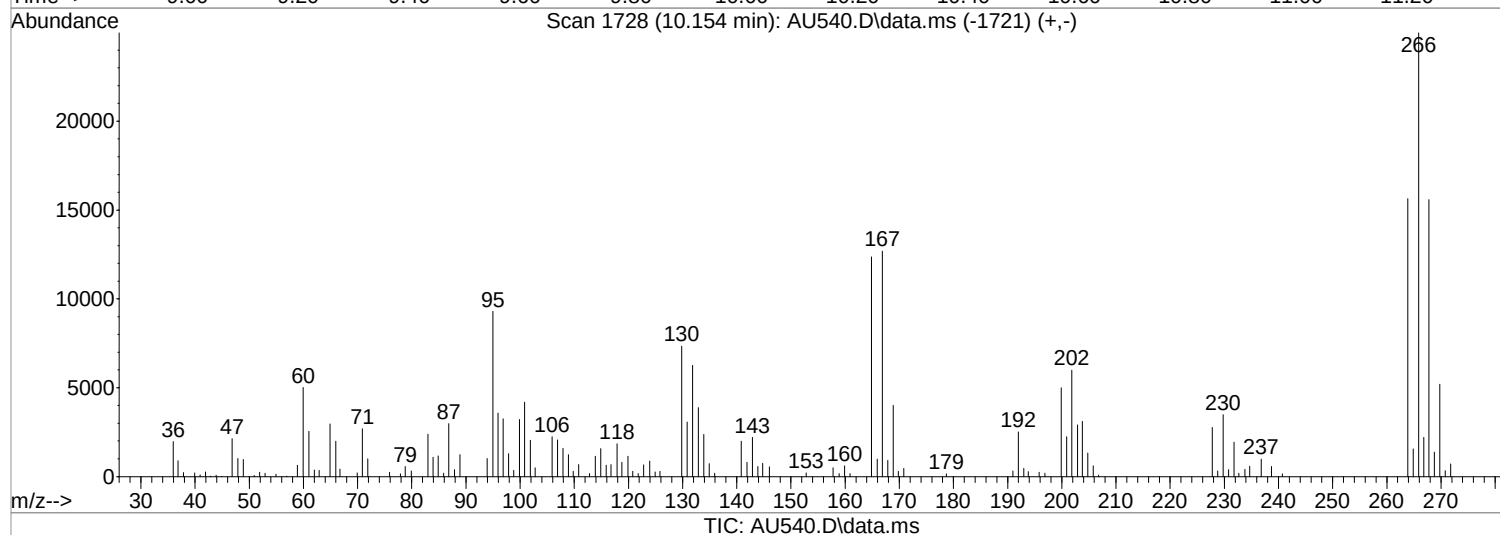
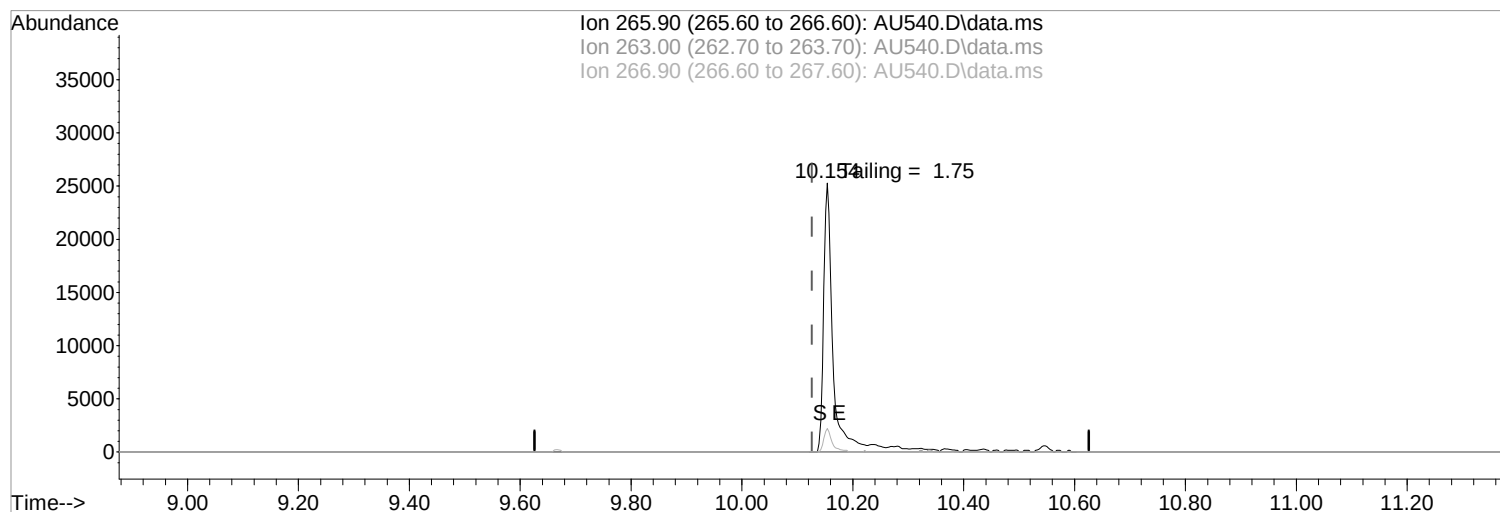
Spectrum Information: Average of 10.544 to 10.550 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	55.2	138233	PASS
68	69	0.00	2	1.8	2605	PASS
70	69	0.00	2	0.5	742	PASS
127	198	10	80	59.9	149987	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	250283	PASS
199	198	5	9	6.6	16575	PASS
275	198	10	60	23.2	58045	PASS
365	198	1	500	3.3	8284	PASS
441	442	0.01	24	16.9	33699	PASS
442	442	100	100	100.0	198891	PASS
443	442	15	24	18.8	37325	PASS

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU540.D
Acq On : 20 Nov 2019 10:17 am
Operator : JMisiurewicz
Sample : TUNE
Misc : DFTPPTUNE
ALS Vial : 54 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 20 10:39:50 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Nov 11 07:01:58 2019
Response via : Initial Calibration



TIC: AU540.D\data.ms

(5) Pentachlorophenol (T)

10.155min (+ 0.029) 32.13 ppm

response 269425

Ion	Exp%	Act%
265.90	100.00	100.00
263.00	0.00	0.00
266.90	7.70	8.80
0.00	0.00	0.00

Manual Integration:

After

Other - TAILING

11/20/19

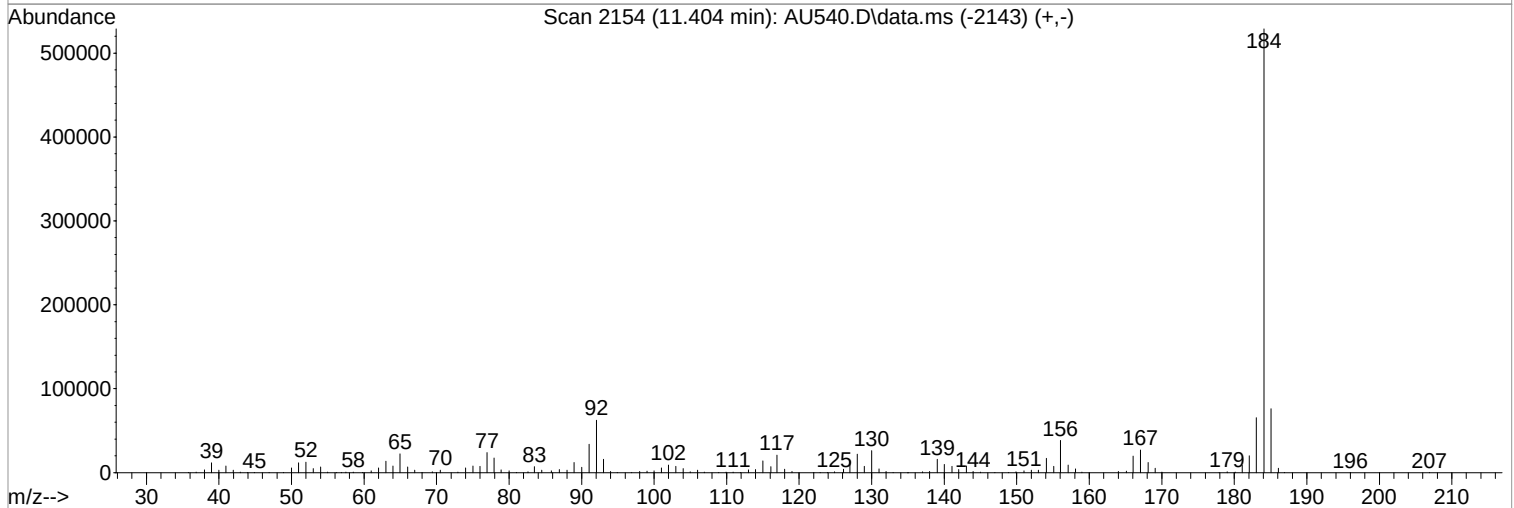
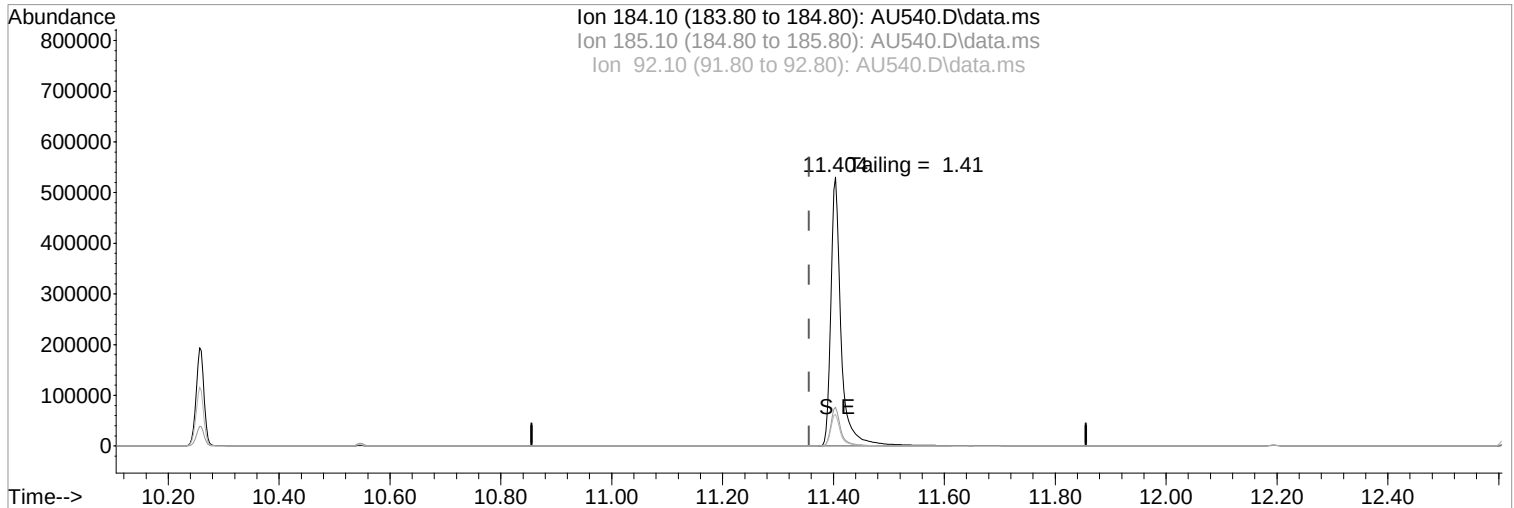
Quantitation Report (Qedit)

1st AF 11/21/19
2nd DM 11/21/19

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU540.D
Acq On : 20 Nov 2019 10:17 am
Operator : JMisiurewicz
Sample : TUNE
Misc : DFTPPTUNE
ALS Vial : 54 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 20 10:39:50 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Nov 11 07:01:58 2019
Response via : Initial Calibration



TIC: AU540.D\data.ms

(8) Benzidine (T)

11.404min (+ 0.049) 49.46 ppm

response 6589017

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	13.80	14.42
92.10	10.70	11.76
0.00	0.00	0.00

Manual Integration:

After

Other - TAILING

11/20/19

Data Path : I:\ACQUDATA\5975E\data\112019\
 Data File : AU540.D
 Acq On : 20 Nov 2019 10:17 am
 Operator : JMisiurewicz
 Sample : TUNE
 Misc : DFTPPTUNE
 ALS Vial : 54 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 20 10:39:50 2019
 Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
 Quant Title :
 QLast Update : Mon Nov 11 07:01:58 2019
 Response via : Initial Calibration

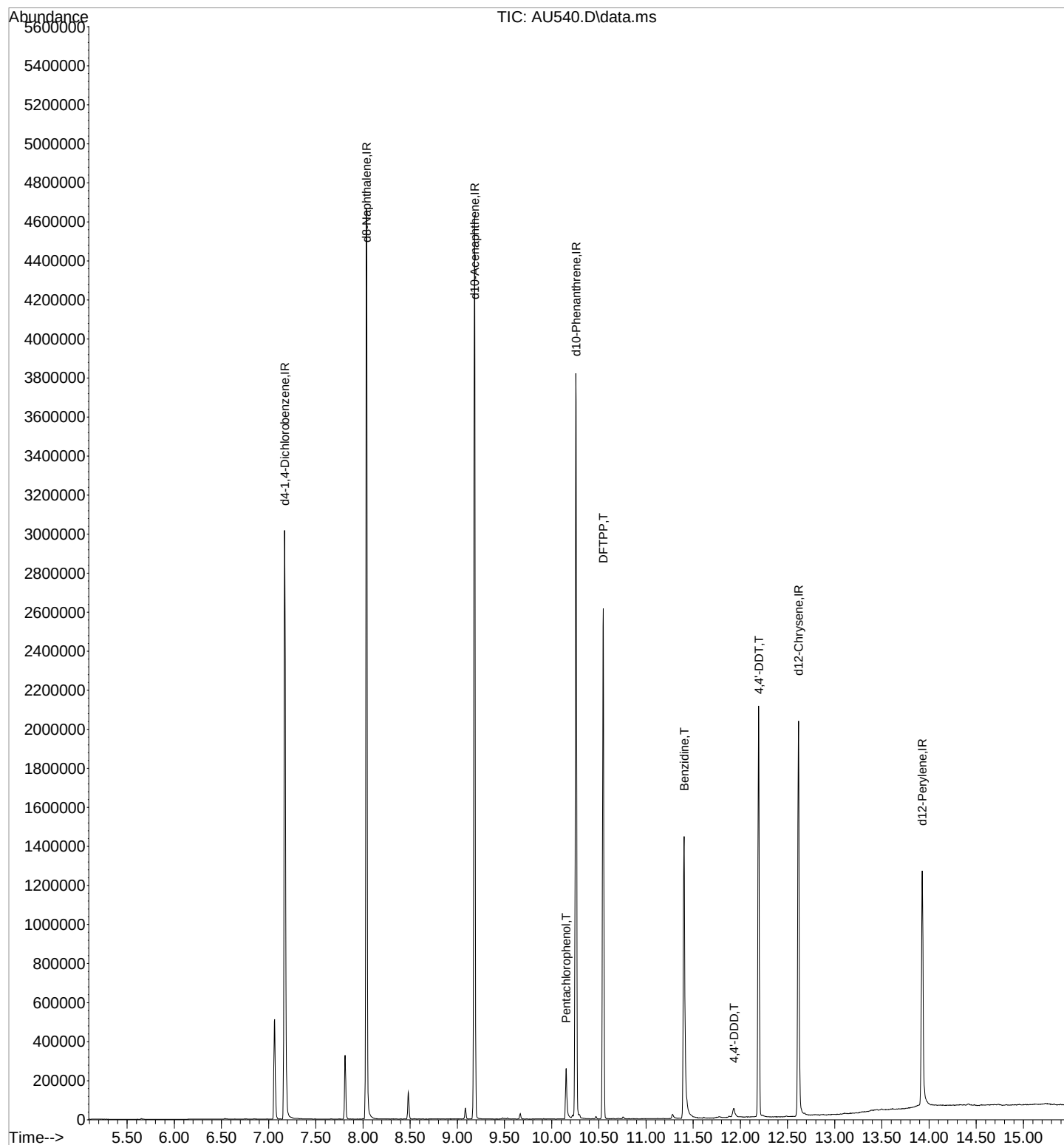
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) d4-1,4-Dichlorobenzene	7.172	152	5109271	20.00	ppm	0.00
2) d8-Naphthalene	8.039	136	18868964	20.00	ppm	0.00
3) d10-Acenaphthene	9.184	164	9295031	20.00	ppm	0.01
4) d10-Phenanthrene	10.259	188	13329190	20.00	ppm	0.03
7) d12-Chrysene	12.617	240	6406308	20.00	ppm	0.06
12) d12-Perylene	13.930	264	4660208	20.00	ppm	0.08
Target Compounds						
5) Pentachlorophenol	10.155	266	269425	32.13	ppm	Qvalue 97
6) DFTPP	10.547	198	2545283	49.49	ppm	# 82
8) Benzidine	11.404	184	6589017	49.46	ppm	98
9) 4,4'-DDE	0.000		0	N.D.		
10) 4,4'-DDD	11.932	235	132365	2.59	ppm	97
11) 4,4'-DDT	12.196	235	3335784	65.27	ppm	97

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

Data Path : I:\ACQUDATA\5975E\data\112019\
Data File : AU540.D
Acq On : 20 Nov 2019 10:17 am
Operator : JMisiurewicz
Sample : TUNE
Misc : DFTPPTUNE
ALS Vial : 54 Sample Multiplier: 1

Inst : 5975 E

Quant Time: Nov 20 10:39:50 2019
Quant Method : I:\ACQUDATA\5975E\METHODS\DFTPPDIO.M
Quant Title :
QLast Update : Mon Nov 11 07:01:58 2019
Response via : Initial Calibration



Analysis: 8270 Diox / 522 Analyst: AFelver Run Method: SDIOX1062-F / DETP1010 / DETP102
 Date: 11/08/99 Instr. 5975 E Quant Method: SDIOX1062-F.M
 Syringes: _____ LIMS Run#: 659188 659211

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
2	TUNE OFFP		204432	Am173	Y	
3	TUNE OFF		203445	174	N	
3	TUNE OFF		203445	75	Y	
4	DLK			76	Y	
5	JSD 1		203723	77	Y	
6	2		203446	78	Y	
7	3		203724	79	Y	
8	4		203725	80	Y	
9	5		203726	81	Y	
10	6		203727	82	Y	
11	7		203728	83	Y	
12	8		203729	84	Y	
13	9		203730	85	Y	
14	ICV		203731	86	Y	
15	2 ppb std		203446	87	Y	
15	CCV 2 ppb		↓	88	Y	
16	RQ1912817-01			89	Y	
17	-02			90	Y	
18	-03			91	Y	
19	-04			92	Y	
20	RQ1912817-01			93	Y	
21	-002			94	Y	
22	-003			95	Y	
23	RQ1912817-05			96	Y	
24	↓ -06			97	Y	
19	↓ -04			98	Y	
25	CCV 200 ppb		203447	99	Y	
26	RQ1912943-02			200	Y	
27	↓ -03			201	Y	
28	RQ1912817-03			02	Y	
29	↓ -004			03	Y	
30	↓ -005			04	Y	
31	↓ -006			05	Y	
32	↓ -007			06	Y	
33	↓ -008			07	Y	
34	RQ1912943-06			08	Y	
35	L -07			09	Y	
36	RQ1910787-09			10	Y	
37	↓ -010			11	Y	Out of Time Run
38	↓ -011			12	Y	↓

All samples = _____ mL + _____ uL Combined IS/Surr.;

Primary: _____ exp: _____

Secondary: _____ exp: _____

Primary: _____ exp: _____

Secondary: _____ exp: _____

Reagents: _____

Runlog GCEXT r2 4/27/17

ALS Group USA, Corp.

DBA ALS Environmental

QC/QC Report

Date Analyzed: 11/8/19 7:25

ICAL Tune Summary
Semi Volatile Organic Compounds by GC/MSFile ID: I:\ACQUDATA\5975E\data\110819\AU173.D
Instrument ID: R-MS-56

Analytical Method: 8270D

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Results Pass/Fail
51	198	10	80	52.9	127515	PASS
68	69	0	2	1.7	2256	PASS
69	198	0	100	55.6	134024	PASS
70	69	0	2	0.7	979	PASS
127	198	10	80	59.1	142550	PASS
197	198	0	2	0.0	0	PASS
198	198	100	100	100.0	241003	PASS
199	198	5	9	6.9	16556	PASS
275	198	10	60	23.3	56125	PASS
365	198	1	100	3.4	8271	PASS
441	442	0.01	24	17.3	34384	PASS
442	442	100	100	100.0	198400	PASS
443	442	15	24	19.3	38336	PASS

Sample Name	Lab Code	File ID:	Date Analyzes: Q
BLK	BLK	I:\ACQUDATA\5975E\data\110819\AU176.D	11/8/19 8:35
STD 1 1ppb	STD 1 1ppb	I:\ACQUDATA\5975E\data\110819\AU177.D	11/8/19 8:55
STD 2 2ppb	STD 2 2ppb	I:\ACQUDATA\5975E\data\110819\AU178.D	11/8/19 9:13
STD 3 10ppb	STD 3 10ppb	I:\ACQUDATA\5975E\data\110819\AU179.D	11/8/19 9:31
STD 4 20ppb	STD 4 20ppb	I:\ACQUDATA\5975E\data\110819\AU180.D	11/8/19 9:49
STD 5 100ppb	STD 5 100ppb	I:\ACQUDATA\5975E\data\110819\AU181.D	11/8/19 10:07
STD 6 200ppb	STD 6 200ppb	I:\ACQUDATA\5975E\data\110819\AU182.D	11/8/19 10:25
STD 7 500ppb	STD 7 500ppb	I:\ACQUDATA\5975E\data\110819\AU183.D	11/8/19 10:44
STD 8 1000ppb	STD 8 1000ppb	I:\ACQUDATA\5975E\data\110819\AU184.D	11/8/19 11:02
STD 9 5000ppb	STD 9 5000ppb	I:\ACQUDATA\5975E\data\110819\AU185.D	11/8/19 11:20
ICV	ICV	I:\ACQUDATA\5975E\data\110819\AU186.D	11/8/19 11:39

ALS Group USA, Corp.

DBA ALS Environmental

QC/QC Report

Date Analyzed: 11/8/19 8:12

ICAL Tune Summary
Semi Volatile Organic Compounds by GC/MSFile ID: I:\ACQUDATA\5975E\data\110819\AU175.D
Instrument ID: R-MS-56

Analytical Method: 522

Target Mass	Relative to Mass	Lower Limit %	Upper Limit %	Relative Abundance %	Raw Abundance	Results Pass/Fail
50	95	15	40	20.0	13193	PASS
75	95	30	60	49.5	32579	PASS
95	95	100	100	100.0	65816	PASS
96	95	5	9	6.7	4426	PASS
173	174	0	2	0.0	0	PASS
174	95	50	120	66.7	43883	PASS
175	174	5	9	8.1	3557	PASS
176	174	95	101	100.4	44075	PASS
177	176	5	9	6.4	2811	PASS

Sample Name	Lab Code	File ID:	Date Analyzes: Q
BLK	BLK	I:\ACQUDATA\5975E\data\110819\AU176.D	11/8/19 8:35
STD 1 1ppb	STD 1 1ppb	I:\ACQUDATA\5975E\data\110819\AU177.D	11/8/19 8:55
STD 2 2ppb	STD 2 2ppb	I:\ACQUDATA\5975E\data\110819\AU178.D	11/8/19 9:13
STD 3 10ppb	STD 3 10ppb	I:\ACQUDATA\5975E\data\110819\AU179.D	11/8/19 9:31
STD 4 20ppb	STD 4 20ppb	I:\ACQUDATA\5975E\data\110819\AU180.D	11/8/19 9:49
STD 5 100ppb	STD 5 100ppb	I:\ACQUDATA\5975E\data\110819\AU181.D	11/8/19 10:07
STD 6 200ppb	STD 6 200ppb	I:\ACQUDATA\5975E\data\110819\AU182.D	11/8/19 10:25
STD 7 500ppb	STD 7 500ppb	I:\ACQUDATA\5975E\data\110819\AU183.D	11/8/19 10:44
STD 8 1000ppb	STD 8 1000ppb	I:\ACQUDATA\5975E\data\110819\AU184.D	11/8/19 11:02
STD 9 5000ppb	STD 9 5000ppb	I:\ACQUDATA\5975E\data\110819\AU185.D	11/8/19 11:20
ICV	ICV	I:\ACQUDATA\5975E\data\110819\AU186.D	11/8/19 11:39

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 11/8/2019

Initial Calibration Summary
1,4-Dioxane by GC/MS

Calibration ID: RC1900137

Signal ID: 1

Instrument ID: R-MS-56

#	Lab Code	Sample Name	File Location	Acquisition Date
01	RC1900137-01	STD 1 1ppb	I:\ACQUDATA\5975E\data\110819\AU177.D	11/08/2019 08:55
02	RC1900137-02	STD 2 2ppb	I:\ACQUDATA\5975E\data\110819\AU178.D	11/08/2019 09:13
03	RC1900137-03	STD 3 10ppb	I:\ACQUDATA\5975E\data\110819\AU179.D	11/08/2019 09:31
04	RC1900137-04	STD 4 20ppb	I:\ACQUDATA\5975E\data\110819\AU180.D	11/08/2019 09:49
05	RC1900137-05	STD 5 100ppb	I:\ACQUDATA\5975E\data\110819\AU181.D	11/08/2019 10:07
06	RC1900137-06	STD 6 200ppb	I:\ACQUDATA\5975E\data\110819\AU182.D	11/08/2019 10:25
07	RC1900137-07	STD 7 500ppb	I:\ACQUDATA\5975E\data\110819\AU183.D	11/08/2019 10:44
08	RC1900137-08	STD 8 1000ppb	I:\ACQUDATA\5975E\data\110819\AU184.D	11/08/2019 11:02
09	RC1900137-09	STD 9 5000ppb	I:\ACQUDATA\5975E\data\110819\AU185.D	11/08/2019 11:20

Analyte

1,4-Dioxane

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	0.9575	02	2.000	0.9387	03	10.000	0.8703	04	20.000	0.8998
05	100.000	0.9176	06	200.000	0.8479	07	500.000	0.854	08	1000.000	0.8872
09	5000.000	0.8582									

1,4-Dioxane-d8

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	1.000	0.7044	02	2.000	0.8206	03	10.000	0.7686	04	20.000	0.7734
05	100.000	0.8145	06	200.000	0.7515	07	500.000	0.7536	08	1000.000	0.7846
09	5000.000	0.7704									

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 11/8/2019

Initial Calibration Summary
1,4-Dioxane by GC/MS

Calibration ID: RC1900137

Signal ID: 1

Instrument ID: R-MS-56

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
1,4-Dioxane	TRG	Quadratic	COD	1.0000	≥0.99	0.8923	
1,4-Dioxane-d8	SURR	Quadratic	COD	1.0000	≥0.99	0.7713	

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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 11/8/2019

Initial Calibration Verification Summary
1,4-Dioxane by GC/MS

Calibration ID: RC1900137
Instrument ID: R-MS-56

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
10	RC1900137-10	ICV	I:\ACQUDATA\5975E\data\110819\AU186.D	11/08/2019 11:39

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,4-Dioxane	200	230	8.923E-1	1.012E0	15.04	±20	Quadratic

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
1,4-Dioxane-d8	200	219	7.713E-1	8.556E-1	9.49	±20	Quadratic

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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 11/20/19 10:42

Continuing Calibration Verification (CCV) Summary
1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
File ID: I:\ACQUDATA\5975E\data\112019\AU541.D\
Signal ID: 1

Calibration Date: 11/8/2019
Calibration ID: RC1900137
Analysis Lot: 660730
Units: ppb

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane	200	200	0.8923	0.8813	100	0.0	±20	Quadratic

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane-d8	200	210	0.7713	0.8216	105	4.9	±20	Quadratic

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 11/20/19 13:48

Continuing Calibration Verification (CCV) Summary
1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
File ID: I:\ACQUDATA\5975E\data\112019\AU551.D\
Signal ID: 1

Calibration Date: 11/8/2019
Calibration ID: RC1900137
Analysis Lot: 660730
Units: ppb

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane	200	213	0.8923	0.9385	106	6.5	±20	Quadratic

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane-d8	200	220	0.7713	0.86	110	9.8	±20	Quadratic

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 11/20/19 17:14

Continuing Calibration Verification (CCV) Summary
1,4-Dioxane by GC/MS

Analysis Method: 8270D SIM
File ID: I:\ACQUDATA\5975E\data\112019\AU562.D\
Signal ID: 1

Calibration Date: 11/8/2019
Calibration ID: RC1900137
Analysis Lot: 660730
Units: ppb

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane	200	164	0.8923	0.7198	81.6	-18.4	±20	Quadratic

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
1,4-Dioxane-d8	200	168	0.7713	0.6584	84.1	-15.9	±20	Quadratic

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314

**Analysis Run Log
1,4-Dioxane by GC/MS**

Analysis Method:

Analysis Lot: 660730

Instrument ID: R-MS-56

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
I:\ACQU\DATA\5975E\data\112019\AU540.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	10:17:00	
I:\ACQU\DATA\5975E\data\112019\AU541.D\	Continuing Calibration Verification	RQ1913704-02	11/20/2019	10:42:00	
I:\ACQU\DATA\5975E\data\112019\AU542.D\	Method Blank	RQ1913571-01	11/20/2019	11:00:00	
I:\ACQU\DATA\5975E\data\112019\AU543.D\	Lab Control Sample	RQ1913571-02	11/20/2019	11:19:00	
I:\ACQU\DATA\5975E\data\112019\AU544.D\	Duplicate Lab Control Sample	RQ1913571-03	11/20/2019	11:37:00	
I:\ACQU\DATA\5975E\data\112019\AU545.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	11:55:00	
I:\ACQU\DATA\5975E\data\112019\AU546.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	12:13:00	
I:\ACQU\DATA\5975E\data\112019\AU547.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	12:32:00	
I:\ACQU\DATA\5975E\data\112019\AU548.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	12:50:00	
I:\ACQU\DATA\5975E\data\112019\AU549.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	13:10:00	
I:\ACQU\DATA\5975E\data\112019\AU550.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	13:29:00	
I:\ACQU\DATA\5975E\data\112019\AU551.D\	Continuing Calibration Verification	RQ1913704-03	11/20/2019	13:48:00	
I:\ACQU\DATA\5975E\data\112019\AU552.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	14:08:00	
I:\ACQU\DATA\5975E\data\112019\AU553.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	14:27:00	
I:\ACQU\DATA\5975E\data\112019\AU554.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	14:46:00	
I:\ACQU\DATA\5975E\data\112019\AU555.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	15:04:00	
I:\ACQU\DATA\5975E\data\112019\AU556.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	15:23:00	
I:\ACQU\DATA\5975E\data\112019\AU557.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	15:42:00	
I:\ACQU\DATA\5975E\data\112019\AU559.D\	MW-03	R1911314-001	11/20/2019	16:18:00	
I:\ACQU\DATA\5975E\data\112019\AU560.D\	MW-03 MS	RQ1913571-04	11/20/2019	16:37:00	
I:\ACQU\DATA\5975E\data\112019\AU561.D\	MW-03 DMS	RQ1913571-05	11/20/2019	16:55:00	
I:\ACQU\DATA\5975E\data\112019\AU562.D\	Continuing Calibration Verification	RQ1913704-04	11/20/2019	17:14:00	
I:\ACQU\DATA\5975E\data\112019\AU563.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	17:32:00	
I:\ACQU\DATA\5975E\data\112019\AU564.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	17:50:00	
I:\ACQU\DATA\5975E\data\112019\AU565.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	18:09:00	
I:\ACQU\DATA\5975E\data\112019\AU566.D\	ZZZZZZZZ	ZZZZZZZZ	11/20/2019	18:27:00	

Analysis: 8270/522 Analyst: AF/low Run Method: SDMXA12-C/DEPTUNE/DFTTAD10
 Date: 11/20/19 Instr. 5475C Quant Method: SDMX110819.M
 Syringes: _____ LIMS Run#: 660730

Pos.	Sample	Diln.	Stds. ID	File#	OK?	Comments
54	DFTPTUNE		204726	AUG40	Y	
14	CCV 200ppb		203447	41	Y	
55	RQ1913571-01			42	Y	
56	↓ -02			43	Y	
57	↓ -03			44	Y	
58	R1911124-001			45	Y	
59	↓ -003			46	Y	
60	↓ -007			47	Y	
61	↓ -009			48	Y	
62	R1911305-003			49	Y	
63	↓ -004			50	Y	
14	CCV 200ppb		203447	51	Y	
64	R1911312-001			52	Y	
65	↓ -002			53	Y	
66	↓ -003			54	Y	
67	↓ -004			55	Y	
68	↓ -005			56	Y	
69	↓ -006			57	Y	
70	↓ -007			58	N	lat spotted K2
71	R1911314-001			59	Y	
72	RQ1913571-04			60	Y	
73	↓ -05			61	Y	
14	CCV 200ppb		203447	62	Y	
74	RQ1913652-01			63	Y	
75	↓ -02			64	Y	
76	↓ -03			65	Y	
77	R1911273-004			66	Y	
2	DFTTUNE		203415	67	Y	
3	CCV 2ppb		203446	68	Y	
4	RQ1913651-01			69	Y	
5	↓ -02			70	Y	
6	↓ -03			71	Y	
7	↓ -04			72	Y	
8	R1911203-007			73	Y	
9	R1911295-001			74	Y	
10	↓ -001 M3			75	Y	
11	↓ -001 PM3			76	Y	
12	↓ -002			77	Y	
14	CCV 200ppb		203447	78	Y	
15	LCS 348858			79	Y	

All samples = _____ mL + _____ uL Combined IS/Surr.;

Primary: _____ exp: _____ Secondary: _____ exp: _____
 Primary: _____ exp: _____ Secondary: _____ exp: _____
 Reagents: _____

Runlog GCEXT r2 4/27/17

ALS Group USA, Corp.
dba ALS Environmental

Prep Summary Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request:R1911314

1,4-Dioxane by GC/MS

Prep Method: EPA 3535A
Analytical Method: 8270D SIM

Extraction Lot: 348953
Extraction Date: 11/19/19 13:30

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
MW-03	R1911314-001	11/13/19	11/18/19	100 mL	2 mL	
Method Blank	RQ1913571-01MB	NA	NA	100 mL	2 mL	
Lab Control Sample	RQ1913571-02LCS	NA	NA	100 mL	2 mL	
Duplicate Lab Control Sample	RQ1913571-03DLCS	NA	NA	100 mL	2 mL	
Matrix Spike	RQ1913571-04MS	11/13/19	11/18/19	100 mL	2 mL	
Duplicate Matrix Spike	RQ1913571-05DMS	11/13/19	11/18/19	100 mL	2 mL	

Preparation Information Benchsheet

Prep Run#: 348953
Team: Semiova GCMS/AFELSER

Prep Workflow: OrgExSPEag(7)
Prep Method: EPA 3535A

Status: Prepped
Prep Date/Time: 11/19/19 13:30

#	Lab Code	Client ID	B#	Amt. Ext.	Method / Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	Spike Amt./Inv. ID	Comments
1	RQ1913571-01	MB		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL		200.0000 uL/203925; 10.0000 uL/203439	
2	RQ1913571-01	MB		100mL	8270D/1,4-Dioxane DOD	7	X		2.00mL		200.0000 uL/203925; 10.0000 uL/203439	
3	RQ1913571-02	LCS		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL		200.0000 uL/203925; 200.0000 uL/204619; 10.0000 uL/203439	
4	RQ1913571-02	LCS		100mL	8270D/1,4-Dioxane DOD	7	X		2.00mL		200.0000 uL/203925; 10.0000 uL/203439; 200.0000 uL/204619	
5	RQ1913571-03	DLCS		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL		10.0000 uL/203439; 200.0000 uL/203925; 200.0000 uL/204619	
6	RQ1913571-03	DLCS		100mL	8270D/1,4-Dioxane DOD	7	X		2.00mL		200.0000 uL/203925; 200.0000 uL/204619; 10.0000 uL/203439	
7	RI911124-001RE	L-3P (Primary)		10mL	8270D SIM/1,4-Dioxane	8	X		2.00mL	Red-Brown, clear	10.0000 uL/203439; 200.0000 uL/203925	
8	RI911124-003RE	L-4P		10mL	8270D SIM/1,4-Dioxane	8	X		2.00mL	Yellow-Brown, Clear, Black Sediment	10.0000 uL/203439; 200.0000 uL/203925	
9	RI911124-007	L-5P		10mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Red-Brown, Clear	200.0000 uL/203925; 10.0000 uL/203439	
10	RI911124-009	L-6P		10mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Yellow, Cloudy	10.0000 uL/203439; 200.0000 uL/203925	
11	RI911305-003	OSL-MW10-111419		100mL	8270D/1,4-Dioxane DOD	7	X		2.00mL	Clear, Colorless	10.0000 uL/203439; 200.0000 uL/203925	
12	RI911305-004	OSL-MW9A-111419		100mL	8270D/1,4-Dioxane DOD	7	X		2.00mL	Clear, Colorless	200.0000 uL/203925; 10.0000 uL/203439	
13	RI911312-001	2INBR2-TMW50GW-D75 76AQ		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Clear, Colorless	200.0000 uL/203925; 10.0000 uL/203439	
14	RI911312-002	1EAL-TMW61GW-D60-6 1AQ		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Clear, Colorless	10.0000 uL/203439; 200.0000 uL/203925	
15	RI911312-003	1EAL-TMW61GW-D60-6 1AQ-DUP		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Clear, Colorless	10.0000 uL/203439; 200.0000 uL/203925	
16	RI911312-004	2EAL-TMW59GW-D61-6 2AQ		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Clear, Colorless	200.0000 uL/203925; 10.0000 uL/203439	
17	RI911312-005	2IPAL-TMW57GW-D70-7 1AQ		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Clear, Colorless	10.0000 uL/203439; 200.0000 uL/203925	
18	RI911312-006	2INBR1-TMW53GW-D11 7-118AQ		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Cloudy, Colorless	10.0000 uL/203439; 200.0000 uL/203925	
19	RI911312-007	2INBR2-TMW63GW-D17 9-180AQ		100mL	8270D SIM/1,4-Dioxane	7	X		2.00mL	Clear, Colorless	200.0000 uL/203925; 10.0000 uL/203439	
20	RI911314-001	MW-03		100mL	8270D SIM/1,4-Dioxane	6	X		2.00mL	Clear, Colorless	10.0000 uL/203439; 200.0000 uL/203925	

Preparation Information Benchsheet

Prep Run#: 348953

Team: SemiVOA GCMS/AFELSER

Prep Workflow: OrgExtSPEaq(7)
Prep Method: EPA 3535A

Status: Prepped
Prep Date/Time: 11/19/19 13:30

21RQ1913571-04	R1911314-001 MS	.07	100mL	8270D SIM/1,4-Dioxane	6	X	2.00mL	Clear, Colorless	200.0000 uL/203925;	
22RQ1913571-05	R1911314-001 DMS	.07	100mL	8270D SIM/1,4-Dioxane	6	X	2.00mL	Clear, Colorless	10.0000 uL/203439; 200.0000 uL/204619	
									10.0000 uL/203439; 200.0000 uL/204619; 200.0000 uL/203925	

Spiking Solutions

Name: SVOA Tetrahydrofuran-D8 100ppm Inventory ID: 203439 Logbook Ref: 203925 Expires On: 03/30/2020
 Name: 1,4-Dioxane-d8 1ppm Sur. Std. Inventory ID: 203925 Logbook Ref: 203925 Expires On: 04/14/2020
 Name: EPA 522 LCS Spike 5ppm Inventory ID: 204619 Logbook Ref: 204619 Expires On: 05/09/2020

Preparation Materials

Method 522 400mg charcoal filters (204725) Eppendorf Pipette Repeater EXT #20 (201733) 2mL Graduated Vials (204190)
 Water Deionized H2O Millipore System (2263) Dichloromethane (Methylene Chloride) 99.9% MeCl2 canister (204534) pH Paper 0-14 (204002)
 Prepared Sodium Sulfate Na2SO4 (204655) Sodium Bisulfate Monohydrate RG (202367) Methanol Purge & Trap MeOH 199615 (199615)

Preparation Steps

Step: Extraction
 Started: 11/19/19 13:30
 Finished: 11/19/19 14:47
 By: AFELSER
 Comments

Comments:

Reviewed By: AFELSER Date: 11/19/19

Chain of Custody Spike Witness: KSERCU

Relinquished By: AFELSER Date: 11/19/19 Extractions Examined

Received By: AFELSER Date: 11/19/19 Yes No



Subcontracted Analytical Parameters

ALS Environmental—Rochester Laboratory

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

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December 11, 2019

Analytical Report for Service Request No: R1911314

Janice Jaeger
ALS Environmental
1565 Jefferson Rd, Building 300
Suite 360
Rochester, NY 14623

RE: Brotherhood MC

Dear Janice Jaeger,

Enclosed are the results of the sample(s) submitted to our laboratory November 23, 2019
For your reference, these analyses have been assigned our service request number **R1911314**.

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 3275. You may also contact me via email at Chris.Leaf@ALSGlobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

for Chris Leaf
Project Manager



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PFAS by HPLC/MS/MS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdwlabservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Received: 11/23/2019

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier level IV requested by the client.

Sample Receipt:

Two water samples were received for analysis at ALS Environmental on 11/23/2019. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Organic LC:

Method PFC/537M, 12/04/2019: The control criteria were exceeded for 13C2-6:2 FTS in MW-03 DMS KQ1917554-02. The associated matrix spike recoveries of target compounds were in control, indicating the analysis was in control. The surrogate outlier was flagged accordingly. No further corrective action was appropriate.

Method PFC/537M, 12/04/2019: The Relative Percent Differences (RPD) for N-Ethyl perfluorooctane sulfonamidoacetic acid for sample MW-03 were outside control criteria. The high RPD values were attributed to an apparent lower bias in the MS but still within control criteria. Recoveries in the Lab Control Sample (LCS) were acceptable, which indicated the analytical batch was in control. The RPD outliers suggested increased variability for the analysis of this analyte in this matrix. No further corrective action was appropriate.

Approved by Noel D. Darr

Date 12/11/2019



Chain of Custody

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Intra-Network Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Janice Jaeger

Project Name: Brotherhood MC
Project Number:
Project Manager: Greg Andrus
Company: LU Engineers
QAP: LAB QAP

PFAS
PFC/537M

Lab Code	Client Sample ID	# of Cont.	Matrix	Sample		Date Received	Send To	
				Date	Time			
R1911314-001	MW-03	6	Water	11/13/19	1154	11/18/19	KELSO	IV
R1911314-002	Field Blank	1	Water	11/13/19	1150	11/18/19	KELSO	IV

MS/MSD

Test Comments

PFAS - PFC/537M R1911314-001,2

NY list of 21, report PFOA/PFOS to 2 ppt

Run QC on sample R1911314-001 for PFC/537M/PFAS

Special Instructions/Comments pH Checked _____	Turnaround Requirements ____ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 ____ STANDARD Requested FAX Date: _____ Requested Report Date: <u>12/05/19</u>	Report Requirements ____ I. Results Only ~~____~~ II. Results + QC Summaries ____ III. Results + QC and Calibration Summaries ☒ IV. Data Validation Report with Raw Data PQL/MDL/J <u>Y</u> EDD <u>Y</u> MS SEL Equ's v4	Invoice Information PO# 58R1911314 Bill to

Relinquished By: shel mnd 11/22/19/ 1440

Received By: Heiderstein 11/23/19

Airbill Number: _____



PC CL

Cooler Receipt and Preservation Form

Client ALS Rochester Service Request K19 R1911314
Received: 11/23/19 Opened: 11/23/19 By: MP Unloaded: 11/23/19 By: MP

Samples were received via? USPS ~~Fed Ex~~ UPS DHL PDX Courier Hand Delivered

Samples were received in: (circle) Cooler Box Envelope Other NA

Were custody seals on coolers? NA Y N If yes, how many and where? 1 front

If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
-0.4	-0.3	-	-	0.3	396	3of3	4846 1685 1756		
-0.7	-0.1	-	-	0.2	398	1of3	4846 1685 1734		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
If applicable, tissue samples were received: Frozen Partially Thawed Thawed
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: _____



PFAS by HPLC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: 11/13/19 11:54
Date Received: 11/18/19 11:50

Sample Name: MW-03
Lab Code: R1911314-001

Units: ng/L
Basis: NA

Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	1.6 J	4.1	0.28	1	12/04/19 23:28	11/26/19	
Perfluorohexane sulfonic acid (PFHxS)	1.4 J	4.1	1.3	1	12/04/19 23:28	11/26/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	4.1	0.44	1	12/04/19 23:28	11/26/19	
Perfluorooctane sulfonic acid (PFOS)	4.0	1.6	0.44	1	12/04/19 23:28	11/26/19	
Perfluorodecane sulfonic acid (PFDS)	ND U	4.1	0.30	1	12/04/19 23:28	11/26/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	5.6	4.1	0.40	1	12/04/19 23:28	11/26/19	
Perfluoropentanoic acid (PFPeA)	5.1	4.1	1.7	1	12/04/19 23:28	11/26/19	
Perfluorohexanoic acid (PFHxA)	ND U	9.2	8.8	1	12/04/19 23:28	11/26/19	
Perfluoroheptanoic acid (PFHpA)	4.5	4.1	0.63	1	12/04/19 23:28	11/26/19	
Perfluorooctanoic acid (PFOA)	6.9	1.6	0.35	1	12/04/19 23:28	11/26/19	
Perfluorononanoic acid (PFNA)	2.2 J	4.1	1.1	1	12/04/19 23:28	11/26/19	
Perfluorodecanoic acid (PFDA)	8.4	4.1	1.2	1	12/04/19 23:28	11/26/19	
Perfluoroundecanoic acid (PFUnDA)	ND U	4.1	1.5	1	12/04/19 23:28	11/26/19	
Perfluorododecanoic acid (PFDoDA)	ND U	4.1	1.3	1	12/04/19 23:28	11/26/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	4.1	1.3	1	12/04/19 23:28	11/26/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	4.1	2.0	1	12/04/19 23:28	11/26/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	ND U	4.1	0.52	1	12/04/19 23:28	11/26/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	4.1	1.4	1	12/04/19 23:28	11/26/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	4.1	0.50	1	12/04/19 23:28	11/26/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ND U	4.1	0.55	1	12/04/19 23:28	11/26/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	4.1	0.15	1	12/04/19 23:28	11/26/19	

ALS Group USA, Corp.
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Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: 11/13/19 11:54
Date Received: 11/18/19 11:50

Sample Name: MW-03
Lab Code: R1911314-001

Units: ng/L
Basis: NA

Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Prep Method: EPA 3535A

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	41	20 - 109	12/04/19 23:28	
18O2-PFHxS	43	26 - 122	12/04/19 23:28	
13C4-PFOS	58	25 - 121	12/04/19 23:28	
13C4-PFBA	70	27 - 124	12/04/19 23:28	
13C5-PFPeA	46	27 - 138	12/04/19 23:28	
13C2-PFHxA	52	28 - 132	12/04/19 23:28	
13C4-PFHpA	43	19 - 139	12/04/19 23:28	
13C4-PFOA	63	22 - 130	12/04/19 23:28	
13C5-PFNA	60	20 - 127	12/04/19 23:28	
13C2-PFDA	60	24 - 125	12/04/19 23:28	
13C2-PFUnDA	70	22 - 125	12/04/19 23:28	
13C2-PFDoDA	51	19 - 122	12/04/19 23:28	
13C2-PFTeDA	50	13 - 124	12/04/19 23:28	
13C8-FOSA	45	18 - 109	12/04/19 23:28	
D3-MeFOSAA	51	9 - 123	12/04/19 23:28	
D5-EtFOSAA	57	12 - 126	12/04/19 23:28	
13C2-6:2 FTS	154	10 - 226	12/04/19 23:28	
13C2-8:2 FTS	93	10 - 202	12/04/19 23:28	

ALS Group USA, Corp.
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Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: 11/13/19 11:50
Date Received: 11/18/19 11:50

Sample Name: Field Blank
Lab Code: R1911314-002

Units: ng/L
Basis: NA

Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	ND U	4.1	0.28	1	12/04/19 23:59	11/26/19	
Perfluorohexane sulfonic acid (PFHxS)	ND U	4.1	1.3	1	12/04/19 23:59	11/26/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	4.1	0.44	1	12/04/19 23:59	11/26/19	
Perfluorooctane sulfonic acid (PFOS)	ND U	1.6	0.44	1	12/04/19 23:59	11/26/19	
Perfluorodecane sulfonic acid (PFDS)	ND U	4.1	0.30	1	12/04/19 23:59	11/26/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	ND U	4.1	0.40	1	12/04/19 23:59	11/26/19	
Perfluoropentanoic acid (PFPeA)	ND U	4.1	1.7	1	12/04/19 23:59	11/26/19	
Perfluorohexanoic acid (PFHxA)	ND U	9.2	8.8	1	12/04/19 23:59	11/26/19	
Perfluoroheptanoic acid (PFHpA)	ND U	4.1	0.63	1	12/04/19 23:59	11/26/19	
Perfluorooctanoic acid (PFOA)	ND U	1.6	0.35	1	12/04/19 23:59	11/26/19	
Perfluorononanoic acid (PFNA)	ND U	4.1	1.1	1	12/04/19 23:59	11/26/19	
Perfluorodecanoic acid (PFDA)	ND U	4.1	1.2	1	12/04/19 23:59	11/26/19	
Perfluoroundecanoic acid (PFUnDA)	ND U	4.1	1.5	1	12/04/19 23:59	11/26/19	
Perfluorododecanoic acid (PFDoDA)	ND U	4.1	1.3	1	12/04/19 23:59	11/26/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	4.1	1.3	1	12/04/19 23:59	11/26/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	4.1	2.0	1	12/04/19 23:59	11/26/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	ND U	4.1	0.52	1	12/04/19 23:59	11/26/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	4.1	1.4	1	12/04/19 23:59	11/26/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	4.1	0.50	1	12/04/19 23:59	11/26/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ND U	4.1	0.55	1	12/04/19 23:59	11/26/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	4.1	0.15	1	12/04/19 23:59	11/26/19	

ALS Group USA, Corp.
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Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: 11/13/19 11:50
Date Received: 11/18/19 11:50

Sample Name: Field Blank
Lab Code: R1911314-002

Units: ng/L
Basis: NA

Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Prep Method: EPA 3535A

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	36	20 - 109	12/04/19 23:59	
18O2-PFHxS	82	26 - 122	12/04/19 23:59	
13C4-PFOS	86	25 - 121	12/04/19 23:59	
13C4-PFBA	81	27 - 124	12/04/19 23:59	
13C5-PFPeA	58	27 - 138	12/04/19 23:59	
13C2-PFHxA	76	28 - 132	12/04/19 23:59	
13C4-PFHpA	71	19 - 139	12/04/19 23:59	
13C4-PFOA	84	22 - 130	12/04/19 23:59	
13C5-PFNA	84	20 - 127	12/04/19 23:59	
13C2-PFDA	82	24 - 125	12/04/19 23:59	
13C2-PFUnDA	99	22 - 125	12/04/19 23:59	
13C2-PFDoDA	80	19 - 122	12/04/19 23:59	
13C2-PFTeDA	78	13 - 124	12/04/19 23:59	
13C8-FOSA	64	18 - 109	12/04/19 23:59	
D3-MeFOSAA	68	9 - 123	12/04/19 23:59	
D5-EtFOSAA	73	12 - 126	12/04/19 23:59	
13C2-6:2 FTS	79	10 - 226	12/04/19 23:59	
13C2-8:2 FTS	80	10 - 202	12/04/19 23:59	

ALS Group USA, Corp.
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Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ1917554-04

Units: ng/L
Basis: NA

Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Prep Method: EPA 3535A

Analyte Name	Result	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Perfluoroalkane Sulfonic Acids							
Perfluorobutane sulfonic acid (PFBS)	ND U	5.0	0.28	1	12/04/19 20:30	11/26/19	
Perfluorohexane sulfonic acid (PFHxS)	ND U	5.0	1.3	1	12/04/19 20:30	11/26/19	
Perfluoroheptane sulfonic acid (PFHpS)	ND U	5.0	0.44	1	12/04/19 20:30	11/26/19	
Perfluorooctane sulfonic acid (PFOS)	ND U	2.0	0.44	1	12/04/19 20:30	11/26/19	
Perfluorodecane sulfonic acid (PFDS)	ND U	5.0	0.30	1	12/04/19 20:30	11/26/19	
Perfluoroalkane Carboxylic Acids							
Perfluorobutanoic acid (PFBA)	ND U	5.0	0.40	1	12/04/19 20:30	11/26/19	
Perfluoropentanoic acid (PFPeA)	ND U	5.0	1.7	1	12/04/19 20:30	11/26/19	
Perfluorohexanoic acid (PFHxA)	ND U	10	8.8	1	12/04/19 20:30	11/26/19	
Perfluoroheptanoic acid (PFHpA)	ND U	5.0	0.63	1	12/04/19 20:30	11/26/19	
Perfluorooctanoic acid (PFOA)	ND U	2.0	0.35	1	12/04/19 20:30	11/26/19	
Perfluorononanoic acid (PFNA)	ND U	5.0	1.1	1	12/04/19 20:30	11/26/19	
Perfluorodecanoic acid (PFDA)	ND U	5.0	1.2	1	12/04/19 20:30	11/26/19	
Perfluoroundecanoic acid (PFUnDA)	ND U	5.0	1.5	1	12/04/19 20:30	11/26/19	
Perfluorododecanoic acid (PFDoDA)	ND U	5.0	1.3	1	12/04/19 20:30	11/26/19	
Perfluorotridecanoic acid (PFTrDA)	ND U	5.0	1.3	1	12/04/19 20:30	11/26/19	
Perfluorotetradecanoic acid (PFTeDA)	ND U	5.0	2.0	1	12/04/19 20:30	11/26/19	
Perfluoroalkyl Sulfonamides							
Perfluorooctane sulfonamide (FOSA)	ND U	5.0	0.52	1	12/04/19 20:30	11/26/19	
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	5.0	1.4	1	12/04/19 20:30	11/26/19	
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	5.0	0.50	1	12/04/19 20:30	11/26/19	
(n:2) Fluorotelomer Sulfonic Acids							
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ND U	5.0	0.55	1	12/04/19 20:30	11/26/19	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	5.0	0.15	1	12/04/19 20:30	11/26/19	

ALS Group USA, Corp.
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Analytical Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: NA
Date Received: NA

Sample Name: Method Blank
Lab Code: KQ1917554-04

Units: ng/L
Basis: NA

Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Prep Method: EPA 3535A

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
13C3-PFBS	51	20 - 109	12/04/19 20:30	
18O2-PFHxS	87	26 - 122	12/04/19 20:30	
13C4-PFOS	95	25 - 121	12/04/19 20:30	
13C4-PFBA	79	27 - 124	12/04/19 20:30	
13C5-PFPeA	74	27 - 138	12/04/19 20:30	
13C2-PFHxA	83	28 - 132	12/04/19 20:30	
13C4-PFHpA	88	19 - 139	12/04/19 20:30	
13C4-PFOA	90	22 - 130	12/04/19 20:30	
13C5-PFNA	89	20 - 127	12/04/19 20:30	
13C2-PFDA	83	24 - 125	12/04/19 20:30	
13C2-PFUnDA	95	22 - 125	12/04/19 20:30	
13C2-PFDoDA	82	19 - 122	12/04/19 20:30	
13C2-PFTeDA	73	13 - 124	12/04/19 20:30	
13C8-FOSA	76	18 - 109	12/04/19 20:30	
D3-MeFOSAA	65	9 - 123	12/04/19 20:30	
D5-EtFOSAA	78	12 - 126	12/04/19 20:30	
13C2-6:2 FTS	88	10 - 226	12/04/19 20:30	
13C2-8:2 FTS	84	10 - 202	12/04/19 20:30	

ALS Group USA, Corp.
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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC/
Sample Matrix: Water

Service Request: R1911314

SURROGATE RECOVERY SUMMARY
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Extraction Method: EPA 3535A

Surrogate	Control Limits	MW-03 R1911314-001	Field Blank R1911314-002	Method Blank KQ1917554-04
13C3-PFBS	20-109	41	36	51
18O2-PFHxS	26-122	43	82	87
13C4-PFOS	25-121	58	86	95
13C4-PFBA	27-124	70	81	79
13C5-PFPeA	27-138	46	58	74
13C2-PFHxA	28-132	52	76	83
13C4-PFHpA	19-139	43	71	88
13C4-PFOA	22-130	63	84	90
13C5-PFNA	20-127	60	84	89
13C2-PFDA	24-125	60	82	83
13C2-PFUnDA	22-125	70	99	95
13C2-PFDoDA	19-122	51	80	82
13C2-PFTeDA	13-124	50	78	73
13C8-FOSA	18-109	45	64	76
D3-MeFOSAA	9-123	51	68	65
D5-EtFOSAA	12-126	57	73	78
13C2-6:2 FTS	10-226	154	79	88
13C2-8:2 FTS	10-202	93	80	84

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with an pound (#) indicate the control criteria is not acceptable.

ALS Group USA, Corp.
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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC/
Sample Matrix: Water

Service Request: R1911314

SURROGATE RECOVERY SUMMARY
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Extraction Method: EPA 3535A

Surrogate	Control Limits	Lab Control Sample	MW-03	MW-03
		KQ1917554-03	KQ1917554-01	KQ1917554-02
13C3-PFBS	20-109	54	43	44
18O2-PFHxS	26-122	76	66	63
13C4-PFOS	25-121	89	81	81
13C4-PFBA	27-124	77	75	80
13C5-PFPeA	27-138	75	54	58
13C2-PFHxA	28-132	84	62	74
13C4-PFHpA	19-139	79	71	58
13C4-PFOA	22-130	90	69	73
13C5-PFNA	20-127	89	71	81
13C2-PFDA	24-125	86	72	77
13C2-PFUnDA	22-125	97	76	98
13C2-PFDoDA	19-122	81	66	74
13C2-PFTeDA	13-124	80	57	62
13C8-FOSA	18-109	77	54	49
D3-MeFOSAA	9-123	73	69	70
D5-EtFOSAA	12-126	88	65	80
13C2-6:2 FTS	10-226	87	176	243*
13C2-8:2 FTS	10-202	93	105	116

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with an pound (#) indicate the control criteria is not acceptable.

ALS Group USA, Corp.
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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 12/04/19 19:59

Internal Standard Area and RT SUMMARY
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

File ID: J:\LCMS06\Data\191203_b12\191203_167
Instrument ID: K-LCMS-06
Analysis Method: PFC/537M

Lab Code: KQ1917900-01
Analysis Lot: 662103
Signal ID: 1

13C7-PFUnDA		
	Area	RT
Result ==>	3,798,049	5.100
Upper Limit ==>	7,596,098	6.10
Lower Limit ==>	1,899,025	4.10

Associated Analyses

Continuing Calibration Blank	KQ1917900-02	3759147	5.101
Lab Control Sample	KQ1917554-03	4404111	5.103
Method Blank	KQ1917554-04	4324614	5.102
MW-03	R1911314-001	4356319	5.107
MW-03MS	KQ1917554-01	3954777	5.102
MW-03DMS	KQ1917554-02	3985849	5.099
Field Blank	R1911314-002	3963782	5.099

ALS Group USA, Corp.
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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Collected: 11/13/19
Date Received: 11/18/19
Date Analyzed: 12/4/19
Date Extracted: 11/26/19

Duplicate Matrix Spike Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Sample Name: MW-03
Lab Code: R1911314-001
Analysis Method: PFC/537M
Prep Method: EPA 3535A

Units: ng/L
Basis: NA

Analyte Name	Sample Result	Matrix Spike KQ1917554-01			Duplicate Matrix Spike KQ1917554-02			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Perfluorobutane sulfonic acid (PFBS)	1.6 J	25.4	23.7	100	26.0	24.1	101	61-140	3	30
Perfluorohexane sulfonic acid (PFHxS)	1.4 J	28.4	24.3	111	25.3	24.8	96	69-144	12	30
Perfluoroheptane sulfonic acid (PFHpS)	ND U	29.3	25.4	115	32.8	25.9	127	62-178	11	30
Perfluorooctane sulfonic acid (PFOS)	4.0	28.6	24.8	99	31.0	25.2	107	71-139	8	30
Perfluorodecane sulfonic acid (PFDS)	ND U	19.4	25.7	75	22.5	26.2	86	69-146	15	30
Perfluorobutanoic acid (PFBA)	5.6	33.4	26.7	104	33.9	27.1	104	51-157	1	30
Perfluoropentanoic acid (PFPeA)	5.1	31.6	26.7	99	32.1	27.1	100	67-127	2	30
Perfluorohexanoic acid (PFHxA)	ND U	28.1	26.7	106	26.7	27.1	99	71-138	5	30
Perfluoroheptanoic acid (PFHpA)	4.5	28.4	26.7	89	28.8	27.1	90	72-133	2	30
Perfluorooctanoic acid (PFOA)	6.9	31.5	26.7	92	32.0	27.1	93	74-146	2	30
Perfluorononanoic acid (PFNA)	2.2 J	27.8	26.7	96	27.4	27.1	93	69-148	1	30
Perfluorodecanoic acid (PFDA)	8.4	32.8	26.7	91	28.5	27.1	74	73-136	14	30
Perfluoroundecanoic acid (PFUnDA)	ND U	27.6	26.7	103	23.5	27.1	87	76-134	16	30
Perfluorododecanoic acid (PFDoDA)	ND U	27.6	26.7	104	24.2	27.1	89	71-138	13	30
Perfluorotridecanoic acid (PFTTrDA)	ND U	27.1	26.7	102	28.6	27.1	106	65-140	5	30
Perfluorotetradecanoic acid (PFTeDA)	ND U	24.8	26.7	93	25.7	27.1	95	63-139	4	30
Perfluorooctane sulfonamide (FOSA)	ND U	25.6	26.7	96	27.5	27.1	101	64-135	7	30
N-Methyl perfluorooctane sulfonamidoacetic acid	ND U	24.8	26.7	93	28.7	27.1	106	69-151	15	30
N-Ethyl perfluorooctane sulfonamidoacetic acid	ND U	17.2	26.7	65	26.9	27.1	99	58-155	44*	30
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	ND U	26.4	25.4	104	28.3	25.8	110	71-142	7	30
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	ND U	25.0	25.6	98	28.0	26.0	107	69-137	11	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Analyzed: 12/04/19
Date Extracted: 11/26/19

Lab Control Sample Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
Prep Method: EPA 3535A

Units: ng/L
Basis: NA
Analysis Lot: 662103

Lab Control Sample
KQ1917554-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	35.3	30.4	116	71-142
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	31.7	30.7	103	69-137
N-Ethyl perfluorooctane sulfonamidoacetic acid	26.7	32.0	84	58-155
N-Methyl perfluorooctane sulfonamidoacetic acid	37.1	32.0	116	69-151
Perfluorobutane sulfonic acid (PFBS)	30.2	28.4	106	61-140
Perfluorobutanoic acid (PFBA)	35.2	32.0	110	51-157
Perfluorodecane sulfonic acid (PFDS)	27.6	30.9	89	69-146
Perfluorodecanoic acid (PFDA)	31.9	32.0	100	73-136
Perfluorododecanoic acid (PFDoDA)	31.3	32.0	98	71-138
Perfluoroheptane sulfonic acid (PFHpS)	39.0	30.5	128	62-178
Perfluoroheptanoic acid (PFHpA)	32.6	32.0	102	72-133
Perfluorohexane sulfonic acid (PFHxS)	30.5	29.2	104	69-144
Perfluorohexanoic acid (PFHxA)	30.4	32.0	95	71-138
Perfluorononanoic acid (PFNA)	32.9	32.0	103	69-148
Perfluorooctane sulfonamide (FOSA)	34.5	32.0	108	64-135
Perfluorooctane sulfonic acid (PFOS)	33.1	29.7	111	71-139
Perfluorooctanoic acid (PFOA)	32.0	32.0	100	74-146
Perfluoropentanoic acid (PFPeA)	34.2	32.0	107	67-127
Perfluorotetradecanoic acid (PFTeDA)	31.4	32.0	98	63-139
Perfluorotridecanoic acid (PFTrDA)	36.4	32.0	114	65-140
Perfluoroundecanoic acid (PFUnDA)	31.1	32.0	97	76-134

ALS Group USA, Corp.

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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Analyzed: 12/04/19 20:30
Date Extracted: 11/26/19

Method Blank Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Sample Name:	Method Blank	Instrument ID:	K-LCMS-06
Lab Code:	KQ1917554-04	File ID:	J:\LCMS06\Data\191203_b12\191203_170
Analysis Method:	PFC/537M	Analysis Lot:	662103
Prep Method:	EPA 3535A	Extraction Lot:	349491

This Method Blank applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Lab Control Sample	KQ1917554-03	J:\LCMS06\Data\191203_b12\191203_169	12/04/19 20:19
MW-03	R1911314-001	J:\LCMS06\Data\191203_b12\191203_187	12/04/19 23:28
MW-03MS	KQ1917554-01	J:\LCMS06\Data\191203_b12\191203_188	12/04/19 23:38
MW-03DMS	KQ1917554-02	J:\LCMS06\Data\191203_b12\191203_189	12/04/19 23:49
Field Blank	R1911314-002	J:\LCMS06\Data\191203_b12\191203_190	12/04/19 23:59

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314
Date Analyzed: 12/04/19 20:19
Date Extracted: 11/26/19

Lab Control Sample Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Sample Name: Lab Control Sample **Instrument ID:** K-LCMS-06
Lab Code: KQ1917554-03 **File ID:** J:\LCMS06\Data\191203_b12\191203_169
Analysis Method: PFC/537M **Analysis Lot:** 662103
Prep Method: EPA 3535A **Extraction Lot:** 349491

This Lab Control Sample applies to the following analyses.

Sample Name	Lab Code	File ID	Date Analyzed
Method Blank	KQ1917554-04	J:\LCMS06\Data\191203_b12\191203_170	12/04/19 20:30
MW-03	R1911314-001	J:\LCMS06\Data\191203_b12\191203_187	12/04/19 23:28
MW-03MS	KQ1917554-01	J:\LCMS06\Data\191203_b12\191203_188	12/04/19 23:38
MW-03DMS	KQ1917554-02	J:\LCMS06\Data\191203_b12\191203_189	12/04/19 23:49
Field Blank	R1911314-002	J:\LCMS06\Data\191203_b12\191203_190	12/04/19 23:59

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518
Instrument ID: K-LCMS-06

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
01	KC1900518-01	0.05 PPB ICAL	191202_018	12/02/2019 17:39
02	KC1900518-02	0.10 PPB ICAL	191202_019	12/02/2019 17:50
03	KC1900518-03	0.50 PPB ICAL	191202_020	12/02/2019 18:00
04	KC1900518-04	1.0 PPB ICAL	191202_021	12/02/2019 18:11
05	KC1900518-05	5.0 PPB ICAL	191202_022	12/02/2019 18:21
06	KC1900518-06	10.0 PPB ICAL	191202_023	12/02/2019 18:31
07	KC1900518-07	15.0 PPB ICAL	191202_025	12/02/2019 18:52

Analyte

13C2-6:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.07675	02	5.0000	0.07679	03	5.0000	0.07711	04	5.0000	0.0764
05	5.0000	0.07489	06	5.0000	0.07982	07	5.0000	0.0777			

13C2-8:2 FTS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.05843	02	5.0000	0.06025	03	5.0000	0.06359	04	5.0000	0.06203
05	5.0000	0.05801	06	5.0000	0.05903	07	5.0000	0.0571			

13C2-PFDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.7382	02	5.0000	0.7423	03	5.0000	0.7517	04	5.0000	0.7492
05	5.0000	0.6918	06	5.0000	0.7251	07	5.0000	0.6709			

13C2-PFDoDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.9799	02	5.0000	1.01	03	5.0000	1.037	04	5.0000	1.04
05	5.0000	0.9896	06	5.0000	0.9989	07	5.0000	0.9064			

13C2-PFHxA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.138	02	5.0000	1.095	03	5.0000	1.037	04	5.0000	1.043
05	5.0000	1.01	06	5.0000	0.9342	07	5.0000	0.853			

13C2-PFTeDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8517	02	5.0000	0.8716	03	5.0000	0.866	04	5.0000	0.8942
05	5.0000	0.8704	06	5.0000	0.8661	07	5.0000	0.8302			

13C2-PFUnDA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.7321	02	5.0000	0.7374	03	5.0000	0.7359	04	5.0000	0.7951
05	5.0000	0.7357	06	5.0000	0.7446	07	5.0000	0.7709			

13C3-PFBS

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.3332	02	5.0000	0.3437	03	5.0000	0.3426	04	5.0000	0.3486

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

13C3-PFBS											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
05	5.0000	0.3318	06	5.0000	0.3384	07	5.0000	0.3159			
13C4-PFBA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8195	02	5.0000	0.8392	03	5.0000	0.8635	04	5.0000	0.8606
05	5.0000	0.8359	06	5.0000	0.8559	07	5.0000	0.8238			
13C4-PFHpA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.009	02	5.0000	1.173	03	5.0000	1.187	04	5.0000	1.174
05	5.0000	1.099	06	5.0000	1.022	07	5.0000	0.9485			
13C4-PFOA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	1.161	02	5.0000	1.175	03	5.0000	1.197	04	5.0000	1.235
05	5.0000	1.156	06	5.0000	1.157	07	5.0000	1.052			
13C4-PFOS											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1649	02	5.0000	0.1806	03	5.0000	0.1738	04	5.0000	0.1891
05	5.0000	0.1817	06	5.0000	0.1706	07	5.0000	0.1703			
13C5-PFNA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.8587	02	5.0000	0.7878	03	5.0000	0.8472	04	5.0000	0.8087
05	5.0000	0.773	06	5.0000	0.7975	07	5.0000	0.6916			
13C5-PFPeA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.4438	02	5.0000	0.4567	03	5.0000	0.4618	04	5.0000	0.4687
05	5.0000	0.4489	06	5.0000	0.4575	07	5.0000	0.4344			
13C8-FOSA											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.3972	02	5.0000	0.4169	03	5.0000	0.435	04	5.0000	0.4394
05	5.0000	0.4219	06	5.0000	0.4249	07	5.0000	0.4058			
18O2-PFHxS											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1644	02	5.0000	0.1921	03	5.0000	0.1827	04	5.0000	0.1853
05	5.0000	0.1846	06	5.0000	0.1748	07	5.0000	0.1634			
6:2 Fluorotelomer sulfonic acid (6:2 FTS)											
#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0476	1.291	02	0.0951	1.303	03	0.4756	1.26	04	0.9512	1.322
05	4.7558	1.264	06	9.5117	1.202	07	14.2676	1.148			

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

8:2 Fluorotelomer sulfonic acid (8:2 FTS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0480	0.9093	02	0.0960	0.7763	03	0.4800	0.7343	04	0.9600	0.7846
05	4.8002	0.78	06	9.6004	0.7655	07	14.4007	0.7332			

D3-MeFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1467	02	5.0000	0.1541	03	5.0000	0.1608	04	5.0000	0.1545
05	5.0000	0.1579	06	5.0000	0.1629	07	5.0000	0.1478			

D5-EtFOSAA

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	5.0000	0.1281	02	5.0000	0.1248	03	5.0000	0.1282	04	5.0000	0.1322
05	5.0000	0.1274	06	5.0000	0.1316	07	5.0000	0.1108			

N-Ethyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.7448	02	0.1000	0.6421	03	0.5000	0.5963	04	1.0000	0.5953
05	5.0000	0.5303	06	10.0000	0.5331	07	15.0000	0.6145			

N-Methyl perfluorooctane sulfonamidoacetic acid

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.4767	02	0.1000	0.4615	03	0.5000	0.4869	04	1.0000	0.5711
05	5.0000	0.5671	06	10.0000	0.5656	07	15.0000	0.6394			

Perfluorobutane sulfonic acid (PFBS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0444	0.6394	02	0.0887	0.5765	03	0.4437	0.6164	04	0.8874	0.5841
05	4.4368	0.605	06	8.8737	0.6073	07	13.3106	0.6051			

Perfluorobutanoic acid (PFBA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.026	02	0.1000	0.9575	03	0.5000	0.956	04	1.0000	0.9541
05	5.0000	0.9513	06	10.0000	1.011	07	15.0000	1.022			

Perfluorodecane sulfonic acid (PFDS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.0965	0.6689	03	0.4823	0.7137	04	0.9647	0.6696	05	4.8233	0.6583
06	9.6467	0.7104	07	14.4700	0.6569						

Perfluorodecanoic acid (PFDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.579	02	0.1000	1.214	03	0.5000	1.072	04	1.0000	1.003
05	5.0000	1.019	06	10.0000	1.041	07	15.0000	1.065			

Perfluorododecanoic acid (PFDoDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	0.9544	02	0.1000	0.7713	03	0.5000	0.6845	04	1.0000	0.6047
05	5.0000	0.6119	06	10.0000	0.6348	07	15.0000	0.624			

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

Perfluoroheptane sulfonic acid (PFHpS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0477	1.3	02	0.0953	1.091	03	0.4767	1.165	04	0.9534	1.201
05	4.7672	1.104	06	9.5344	1.186	07	14.3016	1.177			

Perfluoroheptanoic acid (PFHpA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.704	02	0.1000	1.117	03	0.5000	0.9726	04	1.0000	0.9752
05	5.0000	0.9131	06	10.0000	0.9736	07	15.0000	0.9825			

Perfluorohexane sulfonic acid (PFHxS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.0913	1.057	03	0.4565	0.9298	04	0.9131	0.8828	05	4.5654	0.8285
06	9.1308	0.8888	07	13.6961	0.8419						

Perfluorohexanoic acid (PFHxA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	2.218	02	0.1000	1.68	03	0.5000	1.35	04	1.0000	1.228
05	5.0000	1.244	06	10.0000	1.29	07	15.0000	1.335			

Perfluorononanoic acid (PFNA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.495	02	0.1000	1.562	03	0.5000	1.072	04	1.0000	1.085
05	5.0000	0.9692	06	10.0000	1.093	07	15.0000	1.022			

Perfluorooctane sulfonamide (FOSA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
02	0.1000	1.183	03	0.5000	1.149	04	1.0000	1.091	05	5.0000	1.104
06	10.0000	1.149	07	15.0000	1.157						

Perfluorooctane sulfonic acid (PFOS)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0465	0.9922	02	0.0929	0.8503	03	0.4646	0.8826	04	0.9292	0.8154
05	4.6461	0.8306	06	9.2923	0.9144	07	13.9384	0.8897			

Perfluorooctanoic acid (PFOA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.937	02	0.1000	1.51	03	0.5000	1.268	04	1.0000	1.207
05	5.0000	1.152	06	10.0000	1.194	07	15.0000	1.207			

Perfluoropentanoic acid (PFPeA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	7.426	02	0.1000	4.761	03	0.5000	2.701	04	1.0000	2.414
05	5.0000	2.19	06	10.0000	2.211	07	15.0000	2.259			

Perfluorotetradecanoic acid (PFTeDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.956	02	0.1000	1.135	03	0.5000	0.6139	04	1.0000	0.5263
05	5.0000	0.4606	06	10.0000	0.4806	07	15.0000	0.4812			

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte

Perfluorotridecanoic acid (PFTrDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.701	02	0.1000	1.344	03	0.5000	1.155	04	1.0000	1.077
05	5.0000	1.015	06	10.0000	1.079	07	15.0000	1.021			

Perfluoroundecanoic acid (PFUnDA)

#	Amount	RF	#	Amount	RF	#	Amount	RF	#	Amount	RF
01	0.0500	1.659	02	0.1000	1.148	03	0.5000	0.8979	04	1.0000	0.8551
05	5.0000	0.8247	06	10.0000	0.8415	07	15.0000	0.874			

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
13C2-6:2 FTS	SURR	Average RF	% RSD	1.9	≤20	0.07707	
13C2-8:2 FTS	SURR	Average RF	% RSD	3.9	≤20	0.05978	
13C2-PFDA	SURR	Average RF	% RSD	4.3	≤20	0.7242	
13C2-PFDoDA	SURR	Average RF	% RSD	4.5	≤20	0.9944	
13C2-PFHxA	SURR	Average RF	% RSD	9.5	≤20	1.016	
13C2-PFTeDA	SURR	Average RF	% RSD	2.3	≤20	0.8643	
13C2-PFUnDA	SURR	Average RF	% RSD	3.2	≤20	0.7502	
13C3-PFBS	SURR	Average RF	% RSD	3.2	≤20	0.3363	
13C4-PFBA	SURR	Average RF	% RSD	2.1	≤20	0.8426	
13C4-PFHpA	SURR	Average RF	% RSD	8.8	≤20	1.088	
13C4-PFOA	SURR	Average RF	% RSD	4.8	≤20	1.162	
13C4-PFOS	SURR	Average RF	% RSD	4.7	≤20	0.1759	
13C5-PFNA	SURR	Average RF	% RSD	6.9	≤20	0.7949	
13C5-PFPeA	SURR	Average RF	% RSD	2.6	≤20	0.4531	
13C8-FOSA	SURR	Average RF	% RSD	3.6	≤20	0.4201	
18O2-PFHxS	SURR	Average RF	% RSD	6.2	≤20	0.1782	
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	TRG	Average RF	% RSD	4.9	≤20	1.256	
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	TRG	Average RF	% RSD	7.6	≤20	0.7833	
D3-MeFOSAA	SURR	Average RF	% RSD	4.0	≤20	0.155	
D5-EtFOSAA	SURR	Average RF	% RSD	5.7	≤20	0.1262	
N-Ethyl perfluorooctane sulfonamidoacetic acid	TRG	Average RF	% RSD	12.0	≤20	0.608	
N-Methyl perfluorooctane sulfonamidoacetic acid	TRG	Linear	R2	0.9959	≥0.99	0.5383	
Perfluorobutane sulfonic acid (PFBS)	TRG	Average RF	% RSD	3.4	≤20	0.6048	
Perfluorobutanoic acid (PFBA)	TRG	Average RF	% RSD	3.6	≤20	0.9825	
Perfluorodecane sulfonic acid (PFDS)	TRG	Average RF	% RSD	3.8	≤20	0.6797	
Perfluorodecanoic acid (PFDA)	TRG	Linear	R2	0.9995	≥0.99	1.142	
Perfluorododecanoic acid (PFDoDA)	TRG	Linear	R2	0.9997	≥0.99	0.6979	
Perfluoroheptane sulfonic acid (PFHpS)	TRG	Average RF	% RSD	5.9	≤20	1.175	
Perfluoroheptanoic acid (PFHpA)	TRG	Linear	R2	0.9991	≥0.99	1.091	
Perfluorohexane sulfonic acid (PFHxS)	TRG	Average RF	% RSD	9.2	≤20	0.9048	
Perfluorohexanoic acid (PFHxA)	TRG	Linear	R2	0.9990	≥0.99	1.478	

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518

Signal ID: 1

Instrument ID: K-LCMS-06

Analyte Name	Compound Type	Calibration Evaluation				Calibration Evaluation	
		Fit Type	Eval	Eval Result	Control Criteria	Average RRF	Minimum RRF
Perfluorononanoic acid (PFNA)	TRG	Linear	R2	0.9980	≥0.99	1.185	
Perfluorooctane sulfonamide (FOSA)	TRG	Average RF	% RSD	3.0	≤20	1.139	
Perfluorooctane sulfonic acid (PFOS)	TRG	Average RF	% RSD	6.8	≤20	0.8822	
Perfluorooctanoic acid (PFOA)	TRG	Linear	R2	0.9997	≥0.99	1.354	
Perfluoropentanoic acid (PFPeA)	TRG	Linear	R2	0.9997	≥0.99	3.423	
Perfluorotetradecanoic acid (PFTeDA)	TRG	Linear	R2	0.9994	≥0.99	0.8077	
Perfluorotridecanoic acid (PFTrDA)	TRG	Linear	R2	0.9992	≥0.99	1.199	
Perfluoroundecanoic acid (PFUnDA)	TRG	Linear	R2	0.9993	≥0.99	1.014	

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Verification Summary Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518
Instrument ID: K-LCMS-06

Signal ID: 1

#	Lab Code	Sample Name	File Location	Acquisition Date
08	KC1900518-08	1.0 PPB ICV 10:2 FTS	191202_027	12/02/2019 19:13
09	KC1900518-09	1.0 PPB ICV NO10:2 FTS	191202_029	12/02/2019 19:34

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.897	6.048E-1	6.112E-1	1.06	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.971	9.048E-1	9.618E-1	6.31	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	1.08	1.175E0	1.331E0	13.32	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.892	8.822E-1	8.466E-1	-4.038	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	1.06	6.797E-1	7.491E-1	10.22	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	0.990	9.825E-1	9.726E-1	-1.016	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	0.991	3.423E0	2.441E0	-0.857	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.928	1.478E0	1.242E0	-7.152	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.970	1.091E0	9.618E-1	-2.995	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.948	1.354E0	1.162E0	-5.214	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.883	1.185E0	9.45E-1	-11.695	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	0.990	1.142E0	1.055E0	-1.034	±30	Linear
Perfluoroundecanoic acid (PFUnDA)	1.00	1.03	1.014E0	9.064E-1	2.56	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.925	6.979E-1	5.923E-1	-7.498	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	1.02	1.199E0	1.091E0	1.88	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.940	8.077E-1	5.127E-1	-5.989	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.998	1.139E0	1.136E0	-0.215	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.23	5.383E-1	7.283E-1	23.15	±30	Linear
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	0.980	6.08E-1	5.959E-1	-1.989	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.993	1.256E0	1.311E0	4.44	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	1.06	7.833E-1	8.686E-1	10.89	±30	Average RF

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C3-PFBS	5.00	4.80	3.363E-1	3.231E-1	-3.936	±30	Average RF
18O2-PFHxS	5.00	4.29	1.782E-1	1.527E-1	-14.286	±30	Average RF
13C4-PFOS	5.00	4.79	1.759E-1	1.684E-1	-4.260	±30	Average RF
13C4-PFBA	5.00	4.63	8.426E-1	7.801E-1	-7.423	±30	Average RF
13C5-PFPeA	5.00	4.69	4.531E-1	4.253E-1	-6.146	±30	Average RF
13C2-PFHxA	5.00	4.67	1.016E0	9.484E-1	-6.637	±30	Average RF
13C4-PFHpA	5.00	4.35	1.088E0	9.468E-1	-12.942	±30	Average RF

ALS Group USA, Corp.
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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Calibration Date: 12/2/2019

Initial Calibration Verification Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Calibration ID: KC1900518
Instrument ID: K-LCMS-06

Signal ID: 1

Analyte Name	Expected	Result	Average RF	SSV RF	% D	Criteria	Curve Fit
13C4-PFOA	5.00	5.04	1.162E0	1.172E0	0.854	±30	Average RF
13C5-PFNA	5.00	4.87	7.949E-1	7.741E-1	-2.617	±30	Average RF
13C2-PFDA	5.00	5.10	7.242E-1	7.383E-1	1.94	±30	Average RF
13C2-PFUnDA	5.00	4.83	7.502E-1	7.242E-1	-3.474	±30	Average RF
13C2-PFDoDA	5.00	4.88	9.944E-1	9.701E-1	-2.437	±30	Average RF
13C2-PFTeDA	5.00	4.76	8.643E-1	8.224E-1	-4.845	±30	Average RF
13C8-FOSA	5.00	4.60	4.201E-1	3.863E-1	-8.054	±30	Average RF
D3-MeFOSAA	5.00	4.68	1.55E-1	1.449E-1	-6.497	±30	Average RF
D5-EtFOSAA	5.00	5.01	1.262E-1	1.264E-1	0.210	±30	Average RF
13C2-6:2 FTS	5.00	4.91	7.707E-2	7.575E-2	-1.700	±30	Average RF
13C2-8:2 FTS	5.00	4.54	5.978E-2	5.426E-2	-9.227	±30	Average RF
13C2-8:2 FTS	5.00	3.92	5.978E-2	4.69E-2	-21.542	±30	Average RF

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 12/04/19 19:59

Continuing Calibration Verification (CCV) Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
File ID: J:\LCMS06\Data\191203_b12\191203_167
Signal ID: 1

Calibration Date: 12/2/2019
Calibration ID: KC1900518
Analysis Lot: 662103
Units: ng/mL

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
Perfluorobutane sulfonic acid (PFBS)	0.887	0.832	0.6048	0.5669	93.7	NA	±30	Average RF
Perfluorohexane sulfonic acid (PFHxS)	0.913	0.874	0.9048	0.8663	95.8	NA	±30	Average RF
Perfluoroheptane sulfonic acid (PFHpS)	0.953	1.06	1.1748	1.3005	111	NA	±30	Average RF
Perfluorooctane sulfonic acid (PFOS)	0.929	0.891	0.8822	0.846	95.9	NA	±30	Average RF
Perfluorodecane sulfonic acid (PFDS)	0.965	0.845	0.6797	0.5954	87.6	NA	±30	Average RF
Perfluorobutanoic acid (PFBA)	1.00	1.03	0.9825	1.0152	103	NA	±30	Average RF
Perfluoropentanoic acid (PFPeA)	1.00	1.07	3.4231	2.6098	107	6.8	±30	Linear
Perfluorohexanoic acid (PFHxA)	1.00	0.915	1.4779	1.2248	91.5	-8.5	±30	Linear
Perfluoroheptanoic acid (PFHpA)	1.00	0.917	1.0911	0.9107	91.7	-8.3	±30	Linear
Perfluorooctanoic acid (PFOA)	1.00	0.904	1.3536	1.1095	90.4	-9.6	±30	Linear
Perfluorononanoic acid (PFNA)	1.00	0.955	1.1854	1.019	95.5	-4.5	±30	Linear
Perfluorodecanoic acid (PFDA)	1.00	1.00	1.1418	1.0653	100	0.0	±30	Linear
Perfluoroundecanoic acid (PFUnDA)	1.00	0.888	1.0143	0.7894	88.8	-11.2	±30	Linear
Perfluorododecanoic acid (PFDoDA)	1.00	0.922	0.6979	0.5904	92.2	-7.8	±30	Linear
Perfluorotridecanoic acid (PFTrDA)	1.00	0.957	1.199	1.026	95.7	-4.4	±30	Linear
Perfluorotetradecanoic acid (PFTeDA)	1.00	0.942	0.8077	0.5137	94.2	-5.8	±30	Linear
Perfluorooctane sulfonamide (FOSA)	1.00	0.894	1.1388	1.0179	89.4	NA	±30	Average RF
N-Methyl perfluorooctane sulfonamidoacetic acid	1.00	1.11	0.5383	0.6543	111	10.9	±30	Linear
N-Ethyl perfluorooctane sulfonamidoacetic acid	1.00	0.874	0.608	0.5314	87.4	NA	±30	Average RF
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	0.951	0.983	1.2556	1.2982	103	NA	±30	Average RF
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	0.960	1.01	0.7833	0.8238	105	NA	±30	Average RF

Analyte Name	Expected	Result	Average RF	CCV RF	Rec.	% Drift	Criteria	Curve Fit
13C3-PFBS	5.00	4.29	0.3363	0.2888	85.9	NA	±30	Average RF
18O2-PFHxS	5.00	3.95	0.1782	0.1409	79.1	NA	±30	Average RF
13C4-PFOS	5.00	4.84	0.1759	0.1704	96.9	NA	±30	Average RF
13C4-PFBA	5.00	4.06	0.8426	0.6836	81.1	NA	±30	Average RF
13C5-PFPeA	5.00	3.92	0.4531	0.3554	78.4	NA	±30	Average RF
13C2-PFHxA	5.00	4.04	1.0158	0.8206	80.8	NA	±30	Average RF
13C4-PFHpA	5.00	3.84	1.0876	0.8362	76.9	NA	±30	Average RF
13C4-PFOA	5.00	4.47	1.1618	1.0391	89.4	NA	±30	Average RF
13C5-PFNA	5.00	3.89	0.7949	0.6186	77.8	NA	±30	Average RF

ALS Group USA, Corp.
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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request: R1911314
Date Analyzed: 12/04/19 19:59

Continuing Calibration Verification (CCV) Summary
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M
File ID: J:\LCMS06\Data\191203_b12\191203_167
Signal ID: 1

Calibration Date: 12/2/2019
Calibration ID: KC1900518
Analysis Lot: 662103
Units: ng/mL

13C2-PFDA	5.00	4.28	0.7242	0.6198	85.6	NA	±30	Average RF
13C2-PFUnDA	5.00	5.38	0.7502	0.8076	108	NA	±30	Average RF
13C2-PFDoDA	5.00	4.51	0.9944	0.8972	90.2	NA	±30	Average RF
13C2-PFTeDA	5.00	4.25	0.8643	0.7353	85.1	NA	±30	Average RF
13C8-FOSA	5.00	4.29	0.4201	0.3608	85.9	NA	±30	Average RF
D3-MeFOSAA	5.00	4.04	0.155	0.1252	80.8	NA	±30	Average RF
D5-EtFOSAA	5.00	4.55	0.1262	0.1148	91.0	NA	±30	Average RF
13C2-6:2 FTS	5.00	3.99	0.0771	0.0615	79.8	NA	±30	Average RF
13C2-8:2 FTS	5.00	4.08	0.0598	0.0488	81.7	NA	±30	Average RF

ALS Group USA, Corp.

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QA/QC Report

Client: LU Engineers
Project: Brotherhood MC

Service Request:R1911314

Analysis Run Log
Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Analysis Method: PFC/537M

Analysis Lot:662103

Instrument ID:K-LCMS-06

Raw Data File	Sample Name	Lab Code	Date Analyzed	Time Analyzed	Q
J:\LCMS06\Data\191203_b12\191203_167	Continuing Calibration Verification	KQ1917900-01	12/4/2019	19:59	
J:\LCMS06\Data\191203_b12\191203_168	Continuing Calibration Blank	KQ1917900-02	12/4/2019	20:09	
J:\LCMS06\Data\191203_b12\191203_169	Lab Control Sample	KQ1917554-03	12/4/2019	20:19	
J:\LCMS06\Data\191203_b12\191203_170	Method Blank	KQ1917554-04	12/4/2019	20:30	
J:\LCMS06\Data\191203_b12\191203_171	ZZZZZZZ	ZZZZZZZ	12/4/2019	20:40	
J:\LCMS06\Data\191203_b12\191203_172	ZZZZZZZ	ZZZZZZZ	12/4/2019	20:51	
J:\LCMS06\Data\191203_b12\191203_173	ZZZZZZZ	ZZZZZZZ	12/4/2019	21:01	
J:\LCMS06\Data\191203_b12\191203_174	ZZZZZZZ	ZZZZZZZ	12/4/2019	21:12	
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J:\LCMS06\Data\191203_b12\191203_176	ZZZZZZZ	ZZZZZZZ	12/4/2019	21:33	
J:\LCMS06\Data\191203_b12\191203_177	ZZZZZZZ	ZZZZZZZ	12/4/2019	21:43	
J:\LCMS06\Data\191203_b12\191203_178	ZZZZZZZ	ZZZZZZZ	12/4/2019	21:54	
J:\LCMS06\Data\191203_b12\191203_179	ZZZZZZZ	ZZZZZZZ	12/4/2019	22:04	
J:\LCMS06\Data\191203_b12\191203_180	ZZZZZZZ	ZZZZZZZ	12/4/2019	22:14	
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J:\LCMS06\Data\191203_b12\191203_184	ZZZZZZZ	ZZZZZZZ	12/4/2019	22:56	
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J:\LCMS06\Data\191203_b12\191203_186	ZZZZZZZ	ZZZZZZZ	12/4/2019	23:17	
J:\LCMS06\Data\191203_b12\191203_187	MW-03	R1911314-001	12/4/2019	23:28	
J:\LCMS06\Data\191203_b12\191203_188	MW-03 MS	KQ1917554-01	12/4/2019	23:38	
J:\LCMS06\Data\191203_b12\191203_189	MW-03 DMS	KQ1917554-02	12/4/2019	23:49	
J:\LCMS06\Data\191203_b12\191203_190	Field Blank	R1911314-002	12/4/2019	23:59	
J:\LCMS06\Data\191203_b12\191203_191	ZZZZZZZ	ZZZZZZZ	12/5/2019	00:09	

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Prep Summary Report

Client: LU Engineers
Project: Brotherhood MC
Sample Matrix: Water

Service Request: R1911314

Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS

Prep Method: EPA 3535A
Analytical Method: PFC/537M

Extraction Lot: 349491
Extraction Date: 11/26/19 08:21

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Amount	Percent Solids
Matrix Spike	KQ1917554-01MS	11/13/19	11/18/19	300.0000 mL	8 mL	
Duplicate Matrix Spike	KQ1917554-02DMS	11/13/19	11/18/19	295.0000 mL	8 mL	
Lab Control Sample	KQ1917554-03LCS	NA	NA	250 mL	8 mL	
Method Blank	KQ1917554-04MB	NA	NA	250 mL	8 mL	
MW-03	R1911314-001	11/13/19	11/18/19	305.0000 mL	8 mL	
Field Blank	R1911314-002	11/13/19	11/18/19	305.0000 mL	8 mL	



Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



PFAS by HPLC/MS/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Preparation Information Benchsheet

Prep Run#: 349491

Team: Organic LC/KLMILLER

Number of Copies to make: 5

Prep Workflow: OrgExAq(14)

Prep Method: EPA 3535A

Status: Prepped

Prep Date/Time: 11/26/19 08:21

Lab Code	Client ID	B#	Method /Test	pH	Matrix	Amt. Ext.	Final Vol	Sample Description
1	K1910780-001		Wastewater_111419		Water	265.0000mL	8.00mL	
2	K1911002-001		FB_DW-KNH		Water	305.0000mL	8.00mL	
3	K1911002-002		FB_BWO-DW-18		Water	285.0000mL	8.00mL	
4	K1911002-003		BWO_DW-18		Water	285.0000mL	8.00mL	
5	K1911002-004		FB_DW-KNH		Water	285.0000mL	8.00mL	
6	K1911002-005		FB_BWO-DW-14A		Water	285.0000mL	8.00mL	
7	K1911002-006		BWO_DW-14A		Water	285.0000mL	8.00mL	
8	K1911002-007		TB_DW-01		Water	280.0000mL	8.00mL	
9	K1911002-008		BWO_DW-16		Water	290.0000mL	8.00mL	
10	K1911002-009		FB_BWO_DW-16		Water	280.0000mL	8.00mL	
11	K1911124-005		L-3P		Water	30.0000mL	8.00mL	
12	K1911124-006		L-4P		Water	29.0000mL	8.00mL	
13	K1911124-007		L-5P		Water	30.0000mL	8.00mL	
14	K1911124-009		L-6P		Water	31.0000mL	8.00mL	
15	K1911124-011		Field Blank		Water	290.0000mL	8.00mL	
16	K1911272-004		EB-02_11142019		Water	305.0000mL	8.00mL	
17	K1911272-005		FB-01_11142019		Water	295.0000mL	8.00mL	
18	K1911314-001		MW-03		Water	305.0000mL	8.00mL	
19	K1911314-002		Field Blank		Water	305.0000mL	8.00mL	
20	KQ1917554-01		R1911314-001 MS		Liquid	300.0000mL	8.00mL	
21	KQ1917554-02		R1911314-001 DMS		Liquid	295.0000mL	8.00mL	
22	KQ1917554-03		LCS		Liquid	250mL	8.00mL	
23	KQ1917554-04		MB		Liquid	250mL	8.00mL	

Spiking Solutions

Name: PFC Targets 200ppb mix	Inventory ID 204511	Logbook Ref: 19-OLC-01-59E	Expires On: 02/28/2020
KQ1917554-01 40.00µL	KQ1917554-02 40.00µL	KQ1917554-03 40.00µL	
Name: PFC Isotopes 2ppm	Inventory ID 204724	Logbook Ref: 19-OLC-02-64A	Expires On: 05/12/2020

K1910780-001 20.00µL	K1911002-001 20.00µL	K1911002-002 20.00µL	K1911002-003 20.00µL	K1911002-004 20.00µL	K1911002-005 20.00µL
K1911002-006 20.00µL	K1911002-007 20.00µL	K1911002-008 20.00µL	K1911002-009 20.00µL	KQ1917554-01 20.00µL	KQ1917554-02 20.00µL
KQ1917554-03 20.00µL	KQ1917554-04 20.00µL	R1911124-005 20.00µL	R1911124-006 20.00µL	R1911124-007 20.00µL	R1911124-009 20.00µL
R1911124-011 20.00µL	R1911272-004 20.00µL	R1911272-005 20.00µL	R1911314-001 20.00µL	R1911314-002 20.00µL	

Preparation Information Benchsheet

Prep Run#: 349491
Team: Organic LC/KLMILLER

Prep Workflow: OrgExTag(14)
Prep Method: EPA 3535A

Status: Prepped
Prep Date/Time: 11/26/19 08:21

Name:	PFC IS	Inventory ID	204931	Logbook Ref:	19-OLC-02-66B	Expires On:	05/21/2020
K1910780-001	10.00µL	K1911002-001	10.00µL	K1911002-003	10.00µL	K1911002-004	10.00µL
K1911002-006	10.00µL	K1911002-007	10.00µL	K1911002-009	10.00µL	KQ1917554-01	10.00µL
KQ1917554-03	10.00µL	KQ1917554-04	10.00µL	R1911124-006	10.00µL	R1911124-007	10.00µL
R1911124-011	10.00µL	R1911272-004	10.00µL	R1911314-001	10.00µL	R1911314-002	10.00µL

Name:	PFC Isotopes 2ppm	Inventory ID	204932	Logbook Ref:	19-OLC-02-63F	Expires On:	12/04/2023
K1910780-001	20.00µL	K1911002-001	20.00µL	K1911002-003	20.00µL	K1911002-004	20.00µL
K1911002-006	20.00µL	K1911002-007	20.00µL	K1911002-009	20.00µL	KQ1917554-01	20.00µL
KQ1917554-03	20.00µL	KQ1917554-04	20.00µL	R1911124-006	20.00µL	R1911124-007	20.00µL
R1911124-011	20.00µL	R1911272-004	20.00µL	R1911314-001	20.00µL	R1911314-002	20.00µL
						R1911124-009	20.00µL

Preparation Steps

Step: Extraction
Started: 11/26/19 08:21
Finished: 11/26/19 16:13
By: KLMILLER

Comments

Step: Final Volume
Started: 12/4/19 13:39
Finished: 12/4/19 13:39
By: KLMILLER

Comments

Comments:

Reviewed By: E. Darnes Date: 12/6/19

Chain of Custody

Relinquished By: [Signature] Date: 12-4-19
Received By: [Signature] Date: 12/19/19

Extracts Examined
Yes ☒ No ☐

Preparation Information Benchsheet

Prep Run#: 349491
Team: Organic LC/KL MILLER

Prep Workflow: OrgExtAq(14)
Prep Method: EPA 3535A

Status: Draft
Prep Date/Time: 11/26/19 08:21 AM

Number of Copies to make: 5

#	Lab Code	Client ID	B#	Method / Test	Matrix	Amt. Ext.	pH	Int. Vol	Final Vol	Surr Amt	Spike Amt
1	KI1910780-001	Wastewater_111419	.06	✓ PFC/537M / PFAS	Water	265 _{ML}	3.5	NA	3	20/20 _{ML}	—
2	KI1911002-001	FB_DW-KNH	.01	✓ PFC/537M / PFAS	Water	305					—
3	KI1911002-002	FB_BWO-DW-18	.01	✓ PFC/537M / PFAS	Water	285					—
4	KI1911002-003	BWO_DW-18	.01	✓ PFC/537M / PFAS	Water	285					—
5	KI1911002-004	FB_DW-KNH	.01	✓ PFC/537M / PFAS	Water	285					—
6	KI1911002-005	FB_BWO-DW-14A	.01	✓ PFC/537M / PFAS	Water	285					—
7	KI1911002-006	BWO_DW-14A	.01	✓ PFC/537M / PFAS	Water	285					—
8	KI1911002-007	TB_DW-01	.01	✓ PFC/537M / PFAS	Water	280					—
9	KI1911002-008	BWO_DW-16	.01	✓ PFC/537M / PFAS	Water	290					—
10	KI1911002-009	FB_BWO_DW-16	.01	✓ PFC/537M / PFAS	Water	280					—
11	KI1911124-005	L-3P	.01	✓ PFC/537M / PFAS	Water	30					—
12	KI1911124-006	L-4P	.01	✓ PFC/537M / PFAS	Water	29					—
13	KI1911124-007	L-5P	.21	✓ PFC/537M / PFAS	Water	30					—
14	KI1911124-009	L-6P	.21	✓ PFC/537M / PFAS	Water	31					—
15	KI1911124-011	Field Blank	.01	✓ PFC/537M / PFAS	Water	290					—
16	KI1911272-004	EB-02_11142019	.04	✓ PFC/537M / PFAS	Water	305					—
17	KI1911272-005	FB-01_11142019	.04	✓ PFC/537M / PFAS	Water	295					—
18	KI1911314-001	MM-03	.11	✓ PFC/537M / PFAS	Water	305					—
19	KI1911314-002	Field Blank	.01	✓ PFC/537M / PFAS	Water	305					—
20	KI1917554-01	R1911314-001 MS	.02	✓ PFC/537M / PFAS	Liquid	300					40 _{μL}
21	KI1917554-02	R1911314-001 DMS	.10	✓ PFC/537M / PFAS	Liquid	295					—
22	KI1917554-03	LCS		✓ PFC/537M / PFAS	Liquid	250					—
23	KI1917554-04	MB		✓ PFC/537M / PFAS	Liquid	250					—

* No ID on label. Checked ccc only 2 bottles sent by client, both same IDm cc.
 1 Strong color of green. Suspended Solids, Visco - Extra fine and Vacuum to load, (overnight to load) centrifuged. LM 12-2-19
 2 5x dilution due to excessive foaming and difficulty pH adjusting (Boylead)
 3 Five layers of sediment on bottom of bottle, centrifuged after extraction to remove H₂O from sediment layer.

Comments: 1 after extraction and EV, noticeable 2 phase in T.T.

Surrogate ID: 19-01C-02-03F 20pm 20 _{μL} XP 12-4-23, 19-01C-02-04H 20pm 20 _{μL} XP 5-000A 5-12-20

Spike ID: 19-01C-01-59E 200ppb 40 _{μL} XP 2-28-20 3pp, DB

Witnessed By:

Analyst: K Assisted By:

Additional prep information for Perfluorinated Compounds
by HPLC/MS/MS – SOP: LCP-PFC (rev. 8)

Waters

Service Request K1910780, 11002, R11121, R11272, R11314 Workgroup KQ1917554

6cc 200mg Strata XL-AW Cartridge Sorbent Lot # S322-0024

Envl-Carb Lot # _____

0.1% NH₄OH in MeOH Lot # 19-01C-01-61C MeOH Lot # Dx010-us

Reagent Water Lot # 59025

Acetic Acid (LCMS Grade) Lot # SHBKT2445

25% NH₄OH Lot # _____

Centrifuge Used? (K-Sir-Spins-A-Lot): ☒ Yes ☐ No

Extraction (Manifold) Start (Time/Date/Initial): 13:15 11-26-19

Extraction (Manifold) Stop (Time/Date/Initial): 9:30 11-27-19

IS solution (13C7-PFunda 500ppb) Lot # 19-01C-02-61B

AK12419

71875103

Nylon Filter Lot # _____

Extract Storage: Douglas Fresh

Completed (Time/Date/Initial): 10:45 / 12-4-19 / AL

Comments/Observations:

Bench Sheet Review Check List	
☐	Hold Times Met (if no, Reason: _____)
☐	Prep date, dept, method, product code correct in stealth
☐	Spike Information correct
☐	Weights/Volumes and units correct on raw and final bench sheets
☐	Sample IDs have been checked—Bottle numbers appended if required
☐	Names present for: Started by, Completed by, Relinquished by, and witnessed by.
☐	Training has been circled
☐	Extract Storage recorded
☐	Additional Prep Sheet completely filled out (NA or line out Blanks)
☐	All clean-ups have been noted on additional prep sheet
☐	Signed service request with Form V, if applicable, has been attached

Validation Report

1st  12/06/19
2nd  12/10/19

Data File: J:\LCMS06\Data\191203_b12\191203_187
Lab ID: R1911314-001
RunType: N/A
Matrix: Water

Date Acquired: 12/4/19 23:28
Batch ID: 662103
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st 12/06/19
2nd 12/10/19

Data File:	J:\LCMS06\Data\191203_b12\191203_187	Instrument:	K-LCMS-06
Acqu Date:	12/4/19 23:28	Vial:	21
Run Type:	N/A	Dilution:	1
Lab ID:	R1911314-001	Raw Units:	ng/mL

Bottle ID:	R1911314-001.11	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	11/13/19	Receive Date:	11/18/19

Analysis Lot:	662103	Prep Lot:	349491	Report Group:	R1911314
Analysis	PFC/537M	Prep Method:	EPA 3535A		
		Prep Date:	11/26/19		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC1900518
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.107	+0.01	4356319	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.014	+0.00	603513	2.0596	41	20 - 109	Y
18O2-PFHxS	4.410	+0.01	330749	2.1304	43	26 - 122	Y
13C4-PFOS	4.737	+0.01	446720	2.9157	58	25 - 121	Y
13C4-PFBA	3.384	-0.01	2559716	3.4866	70	27 - 124	Y
13C5-PFPeA	3.958	0.00	911451	2.3088	46	27 - 138	Y
13C2-PFHxA	4.225	+0.01	2279642	2.5757	52	28 - 132	Y
13C4-PFHpA	4.411	+0.01	2048134	2.1614	43	19 - 139	Y
13C4-PFOA	4.576	+0.01	3208122	3.1693	63	22 - 130	Y
13C5-PFNA	4.749	+0.01	2067916	2.9858	60	20 - 127	Y
13C2-PFDA	4.929	+0.01	1887471	2.9914	60	24 - 125	Y
13C2-PFUnDA	5.108	+0.01	2292333	3.5069	70	22 - 125	Y
13C2-PFDoDA	5.280	+0.01	2212873	2.5543	51	19 - 122	Y
13C2-PFTeDA	5.594	+0.00	1900678	2.5240	50	13 - 124	Y
13C8-FOSA	5.239	+0.01	829815	2.2669	45	18 - 109	Y
D3-MeFOSAA	5.028	+0.01	342824	2.5393	51	9 - 123	Y
D5-EtFOSAA	5.124	+0.01	314342	2.8599	57	12 - 126	Y
13C2-6:2 FTS	4.564	+0.01	516380	7.6906	154	10 - 226	Y
13C2-8:2 FTS	4.924	+0.01	243004	4.6658	93	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.014	+0.00	4560	0.0625	1.6	J	Y
Perfluorohexane sulfonic acid (PFHxS)	4.414	+0.02	3199	0.0535	1.4	J	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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		1st	12/06/19
Data File:	J:\LCMS06\Data\191203_b12\191203_187	Instrument:	K-LCMS06
Acqu Date:	12/4/19 23:28	Vial:	21
Run Type:	N/A	Dilution:	1
Lab ID:	R1911314-001	Raw Units:	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	0		0	0	0	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.737	+0.01	11977	0.1519	4.0		Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	3.385	-0.01	107835	0.2144	5.6		Y
Perfluoropentanoic acid (PFPeA)	3.958	0.00	124657	0.1942	5.1		Y
Perfluorohexanoic acid (PFHxA)	4.223	+0.01	126914	0.1854	4.9	U	Y
Perfluoroheptanoic acid (PFHpA)	4.411	+0.01	78509	0.1712	4.5		Y
Perfluorooctanoic acid (PFOA)	4.575	+0.01	222433	0.2625	6.9		Y
Perfluorononanoic acid (PFNA)	4.749	+0.01	48508	0.0827	2.2	J	Y
Perfluorodecanoic acid (PFDA)	4.929	+0.01	134530	0.3216	8.4		Y
Perfluoroundecanoic acid (PFUnDA)	5.110	+0.01	13023	-0.0071	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.276	+0.00	7521	0.0022	0.058	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.440	+0.00	9265	-0.0092	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.594	+0.00	25971	-0.0054	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.238	+0.01	2994	0.0158	0.41	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.031	+0.01	212	0.0274	0.72	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.561	+0.01	1481	0.0114	0.30	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.929	+0.01	80	0.0021	0.055	U	Y

Prep Amount: 305.0000 mL

Dilution: 1

Prep Final Amount: 8.00 mL

Basis Factor: 100.00

U: Undetected at or above MDL

J: Analyte detected above MDL, but below MRL

B: Hit above MRL also found in Method Blank

E: Analyte concentration above high point of ICAL

N: Presumptive evidence of compound

D: Result from dilution

m: Manual integration performed

d: Compound manually deleted

NR: Analyte not reported from this analysis

*: Result fails acceptance criteria

#: Acceptance criteria not applicable

?: Insufficient information to determine acceptance

e: Result >= MRL, but MRL less than low point of ICAL

c: check for co-elution

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Insight Report

Printed at 12/6/2019 3:10:36 PM

191203_187

Sample ID: R1911314-001

Date acquired: 12/4/2019 11:28:05 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191203_b12\191203_187.lcd

Vial: 19 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.107	4356319	4356319	1	5.0000	ng/mL	----
PFBS_1	Auto	4.014	4560	603513	2	0.0625	ng/mL	----
PFBS-13C	Auto	4.014	603513	4356319	1	2.0596	ng/mL	----
PFBS-13C_IS	Auto	4.014	603513	603513	2	5.0000	ng/mL	----
PFHxS_1	M	4.414	3199	330749	3	0.0535	ng/mL	----
PFHxS-18O	Auto	4.410	330749	4356319	1	2.1304	ng/mL	----
PFHxS-18O_IS	Auto	4.410	330749	330749	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	330749	3	----	ng/mL	----
PFOS_1	M	4.737	11977	446720	4	0.1519	ng/mL	----
PFOS-13C	Auto	4.737	446720	4356319	1	2.9157	ng/mL	----
PFOS-13C_IS	Auto	4.737	446720	446720	4	5.0000	ng/mL	----
PFDS_1	NI	----	----	446720	4	----	ng/mL	----
PFBA	Auto	3.385	107835	2559716	5	0.2144	ng/mL	----
PFBA-13C	Auto	3.384	2559716	4356319	1	3.4866	ng/mL	----
PFBA-13C_IS	Auto	3.384	2559716	2559716	5	5.0000	ng/mL	----
PFPeA	M	3.958	124657	911451	6	0.1942	ng/mL	----
PFPeA-13C	Auto	3.958	911451	4356319	1	2.3088	ng/mL	----
PFPeA-13C_IS	Auto	3.958	911451	911451	6	5.0000	ng/mL	----
PFHxA	M	4.223	126914	2279642	7	0.1854	ng/mL	----
PFHxA-13C	Auto	4.225	2279642	4356319	1	2.5757	ng/mL	----
PFHxA-13C_IS	Auto	4.225	2279642	2279642	7	5.0000	ng/mL	----
PFHpA	Auto	4.411	78509	2048134	8	0.1712	ng/mL	----
PFHpA-13C	Auto	4.411	2048134	4356319	1	2.1614	ng/mL	----
PFHpA-13C_IS	Auto	4.411	2048134	2048134	8	5.0000	ng/mL	----
PFOA	Auto	4.575	222433	3208122	9	0.2625	ng/mL	----
PFOA-13C	Auto	4.576	3208122	4356319	1	3.1693	ng/mL	----
PFOA-13C_IS	Auto	4.576	3208122	3208122	9	5.0000	ng/mL	----
PFNA	M	4.749	48508	2067916	10	0.0827	ng/mL	----
PFNA-13C	Auto	4.749	2067916	4356319	1	2.9858	ng/mL	----
PFNA-13C_IS	Auto	4.749	2067916	2067916	10	5.0000	ng/mL	----
PFDA	Auto	4.929	134530	1887471	11	0.3216	ng/mL	----
PFDA-13C	Auto	4.929	1887471	4356319	1	2.9914	ng/mL	----
PFDA-13C_IS	Auto	4.929	1887471	1887471	11	5.0000	ng/mL	----
PFUnA	M	5.110	13023	2292333	12	-0.0071	ng/mL	----
PFUnA-13C	Auto	5.108	2292333	4356319	1	3.5069	ng/mL	----
PFUnA-13C_IS	Auto	5.108	2292333	2292333	12	5.0000	ng/mL	----
PFDoA	Auto	5.276	7521	2212873	13	0.0022	ng/mL	----
PFDoA-13C	Auto	5.280	2212873	4356319	1	2.5543	ng/mL	----
PFDoA-13C_IS	Auto	5.280	2212873	2212873	13	5.0000	ng/mL	----
PFTeDA	M	5.440	9265	1900678	14	-0.0092	ng/mL	----
PFTeDA	Auto	5.594	25971	1900678	14	-0.0054	ng/mL	----
PFTeDA-13C	Auto	5.594	1900678	4356319	1	2.5240	ng/mL	----
PFTeDA-13C_IS	Auto	5.594	1900678	1900678	14	5.0000	ng/mL	----
FOSA	Auto	5.238	2994	829815	16	0.0158	ng/mL	----
FOSA-13C	Auto	5.239	829815	4356319	1	2.2669	ng/mL	----
FOSA-13C_IS	Auto	5.239	829815	829815	16	5.0000	ng/mL	----
N-MeFOSAA	M	5.031	212	342824	21	0.0274	ng/mL	----
N-MeFOSAA-d3	Auto	5.028	342824	4356319	1	2.5393	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.028	342824	342824	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	314342	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.124	314342	4356319	1	2.8599	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.124	314342	314342	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.561	1481	516380	24	0.0114	ng/mL	----
6_2-FTS-13C	Auto	4.564	516380	4356319	1	7.6906	ng/mL	----
6_2-FTS-13C_IS	Auto	4.564	516380	516380	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.929	80	243004	25	0.0021	ng/mL	----
8_2-FTS-13C	Auto	4.924	243004	4356319	1	4.6658	ng/mL	----
8_2-FTS-13C_IS	Auto	4.924	243004	243004	25	5.0000	ng/mL	----

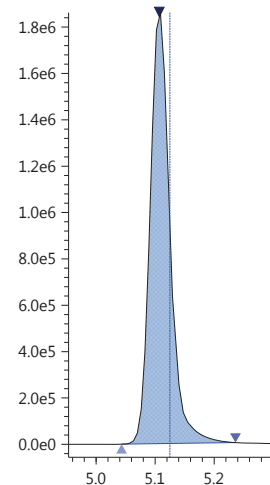
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
RT 5.107 Area 4356319

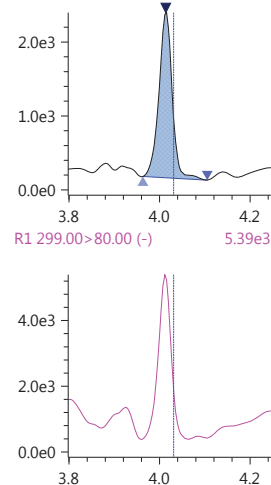
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0625
RT 4.014 Area 4560
R#1 229.21 (0.00)

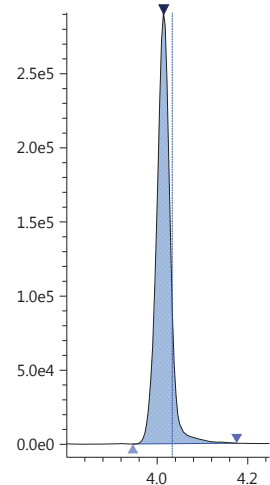
Q 298.80>99.00 (-)



PFBS-13C

Conc 2.0596
RT 4.014 Area 603513

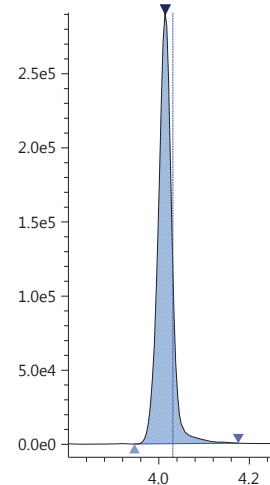
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.014 Area 603513

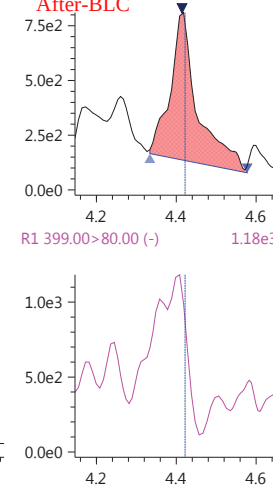
ISTD 301.80>80.00 (-)



PFHxS_1

Conc 0.0535
RT 4.414 Area 3199
R#1 57.90 (0.00)

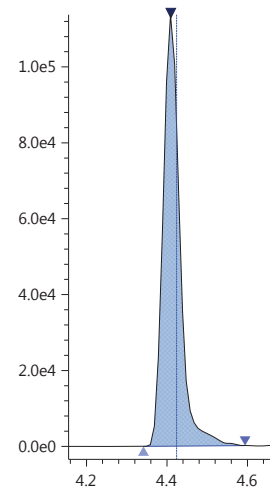
Q 399.00>99.00 (-)



PFHxS-180

Conc 2.1304
RT 4.410 Area 330749

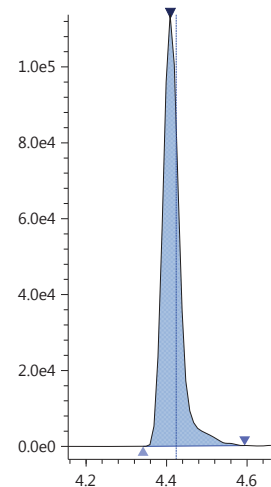
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.410 Area 330749

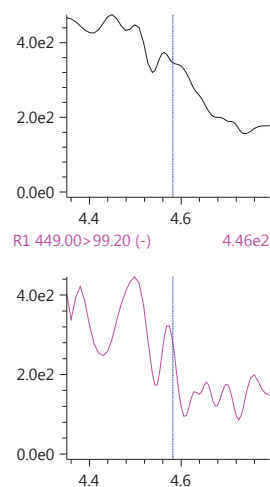
ISTD 402.70>84.05 (-)



PFHpS_1

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

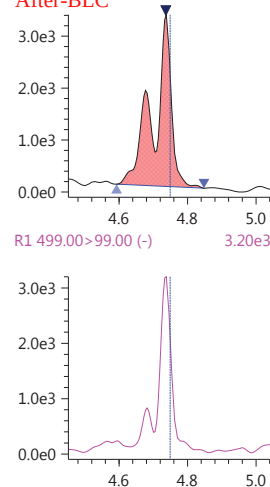
Q 449.00>80.15 (-)



PFOS_1

Conc 0.1519
RT 4.737 Area 11977
R#1 90.85 (0.00)

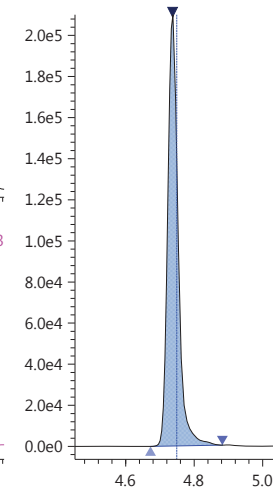
Q 499.00>80.00 (-)



PFOS-13C

Conc 2.9157
RT 4.737 Area 446720

Q 502.80>80.05 (-)



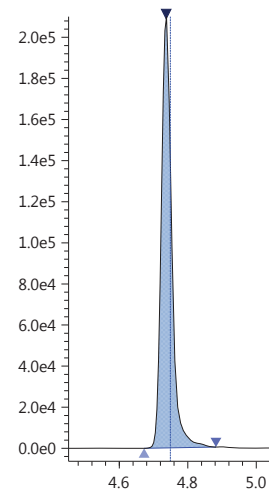
Insight Report

Printed at 12/6/2019 3:10:36 PM

PFOS-13C_IS

Conc 5.0000
RT 4.737 Area 446720

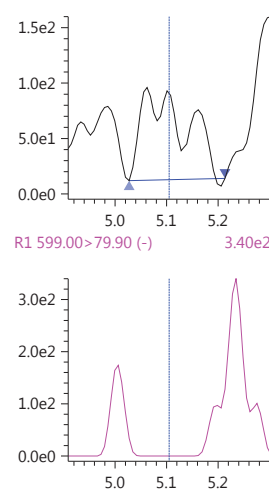
ISTD 502.80>80.05 (-)



PFDS_1

Conc ----
RT ---- Area ----
R#1 0.00 (0.00)

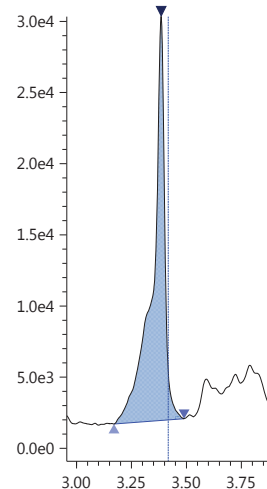
Q 599.00>99.10 (-)



PFBA

Conc 0.2144
RT 3.385 Area 107835

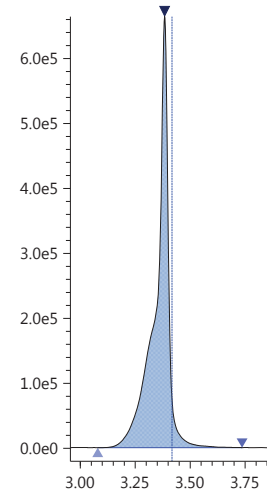
Q 213.00>169.10 (-)



PFBA-13C

Conc 3.4866
RT 3.384 Area 2559716

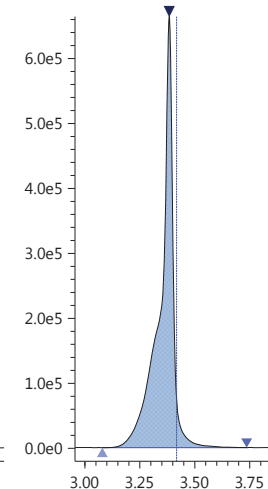
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
RT 3.384 Area 2559716

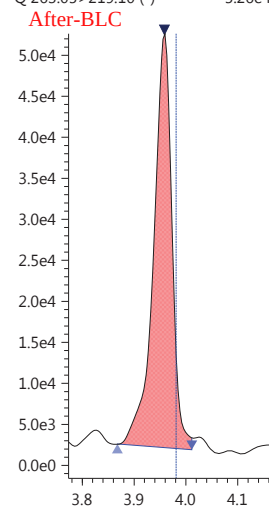
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.1942
RT 3.958 Area 124657

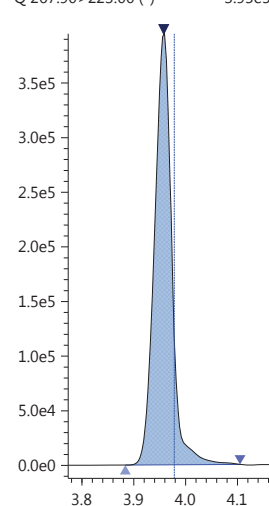
Q 263.05>219.10 (-)



PFPeA-13C

Conc 2.3088
RT 3.958 Area 911451

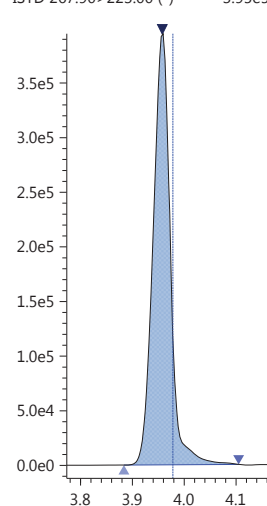
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.958 Area 911451

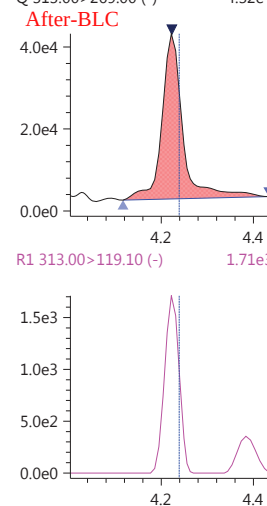
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.1854
RT 4.223 Area 126914
R#1 4.20 (0.00)

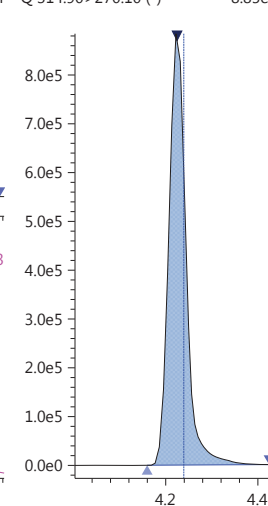
Q 313.00>269.00 (-)



PFHxA-13C

Conc 2.5757
RT 4.225 Area 2279642

Q 314.90>270.10 (-)



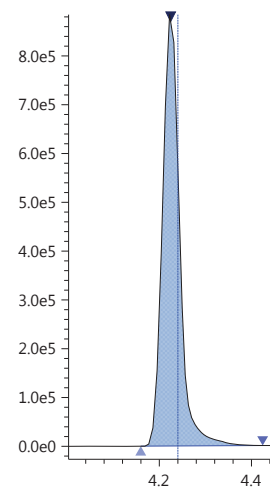
Insight Report

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PFHxA-13C_IS

Conc 5.0000
RT 4.225 Area 2279642

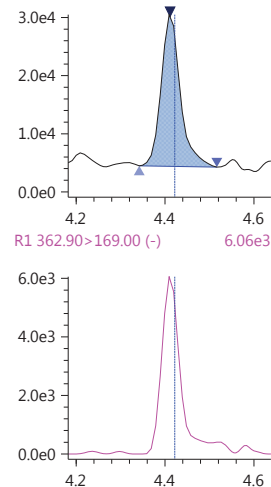
ISTD 314.90>270.10 (-) 8.85e5



PFHpA

Conc 0.1712
RT 4.411 Area 78509
R#1 22.47 (0.00)

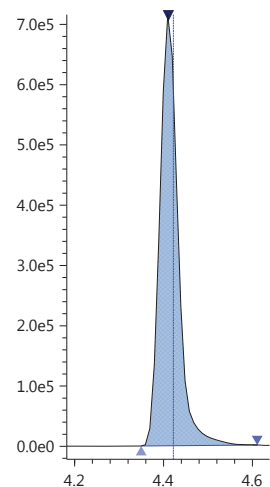
Q 362.90>319.00 (-) 3.05e4



PFHpA-13C

Conc 2.1614
RT 4.411 Area 2048134

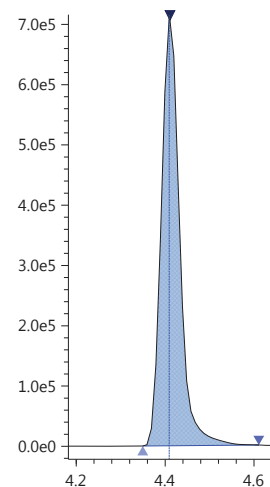
Q 366.90>322.10 (-) 7.16e5



PFHpA-13C_IS

Conc 5.0000
RT 4.411 Area 2048134

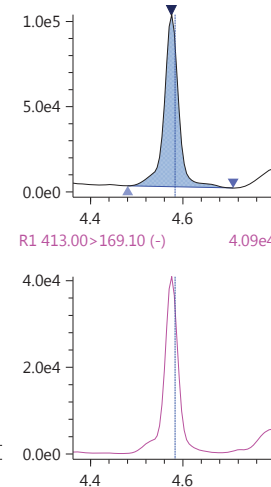
ISTD 366.90>322.10 (-) 7.16e5



PFOA

Conc 0.2625
RT 4.575 Area 222433
R#1 40.26 (0.00)

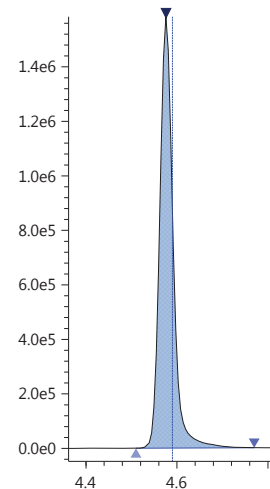
Q 413.00>369.00 (-) 1.04e5



PFOA-13C

Conc 3.1693
RT 4.576 Area 3208122

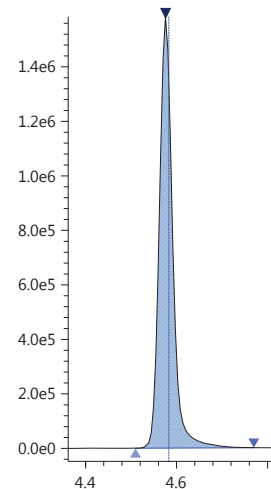
Q 416.80>372.05 (-) 1.58e6



PFOA-13C_IS

Conc 5.0000
RT 4.576 Area 3208122

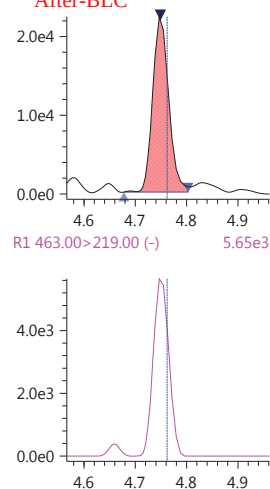
ISTD 416.80>372.05 (-) 1.58e6



PFNA

Conc 0.0827
RT 4.749 Area 48508
R#1 25.68 (0.00)

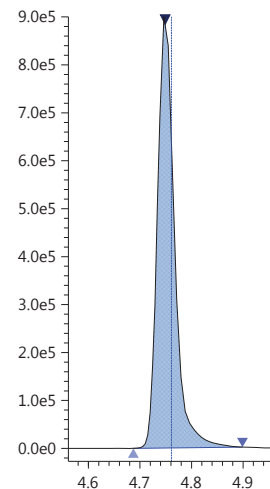
Q 463.00>418.90 (-) 2.25e4



PFNA-13C

Conc 2.9858
RT 4.749 Area 2067916

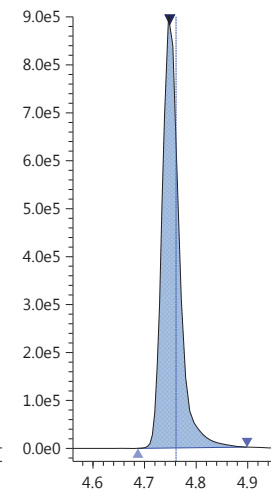
Q 467.80>423.00 (-) 9.00e5



PFNA-13C_IS

Conc 5.0000
RT 4.749 Area 2067916

ISTD 467.80>423.00 (-) 9.00e5



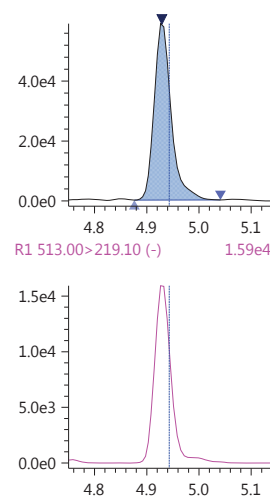
Insight Report

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PFDA

Conc 0.3216
RT 4.929 Area 134530
R#1 27.39 (0.00)

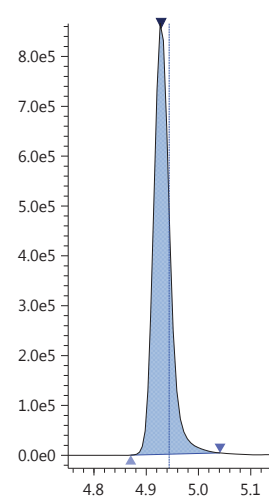
Q 513.00>468.80 (-)



PFDA-13C

Conc 2.9914
RT 4.929 Area 1887471

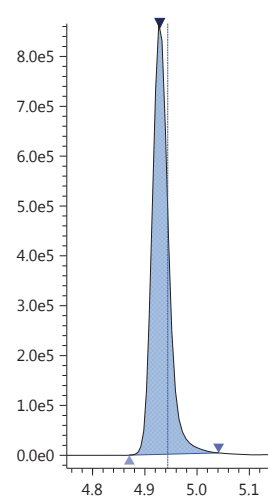
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
RT 4.929 Area 1887471

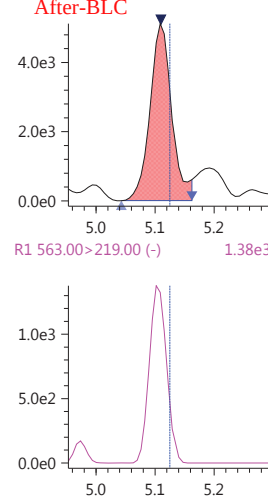
ISTD 514.80>469.95 (-)



PFUnA

Conc -0.0071
RT 5.110 Area 13023
R#1 27.51 (0.00)

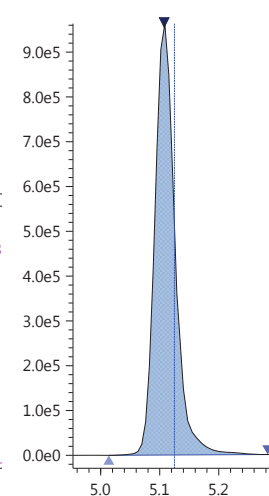
Q 563.00>518.90 (-)



PFUnA-13C

Conc 3.5069
RT 5.108 Area 2292333

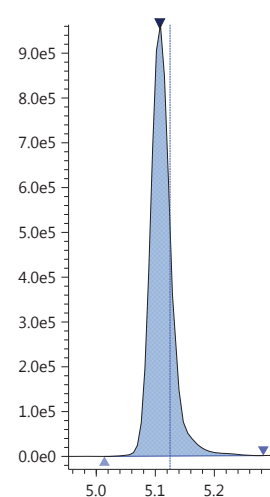
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
RT 5.108 Area 2292333

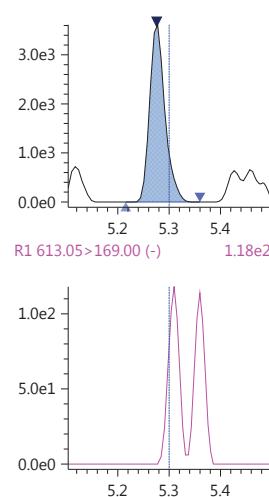
ISTD 564.80>519.95 (-)



PFD0A

Conc 0.0022
RT 5.276 Area 7521
R#1 0.00 (0.00)

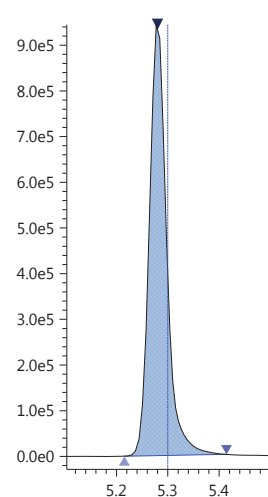
Q 613.05>569.00 (-)



PFD0A-13C

Conc 2.5543
RT 5.280 Area 2212873

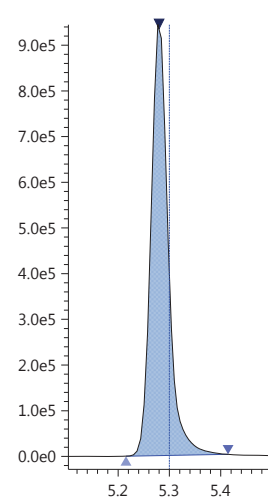
Q 614.80>569.95 (-)



PFD0A-13C_IS

Conc 5.0000
RT 5.280 Area 2212873

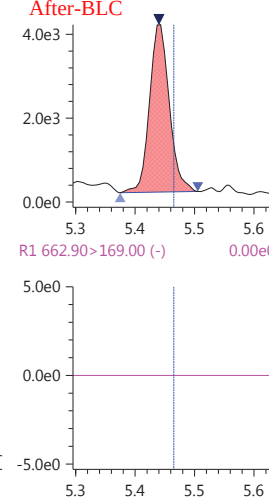
ISTD 614.80>569.95 (-)



PFT0A

Conc -0.0092
RT 5.440 Area 9265
R#1 0.00 (0.00)

Q 663.00>618.90 (-)



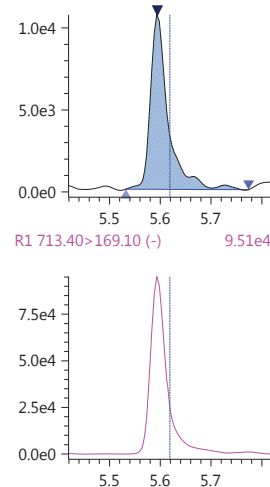
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PFTeDA

Conc -0.0054
RT 5.594 Area 25971
R#1 888.35 (0.00)

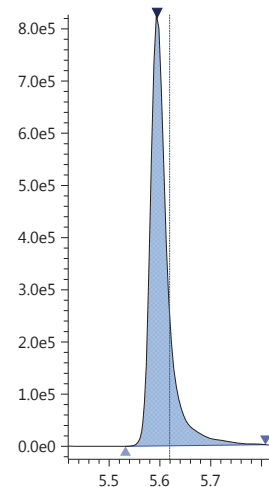
Q 713.40>669.00 (-)



PFTeDA-13C

Conc 2.5240
RT 5.594 Area 1900678

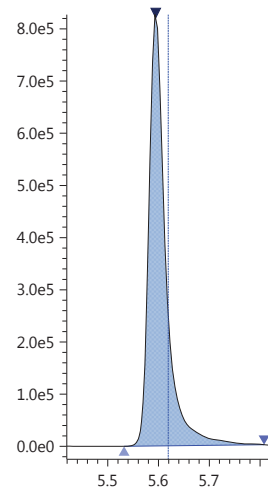
Q 714.70>669.90 (-)



PFTeDA-13C_IS

Conc 5.0000
RT 5.594 Area 1900678

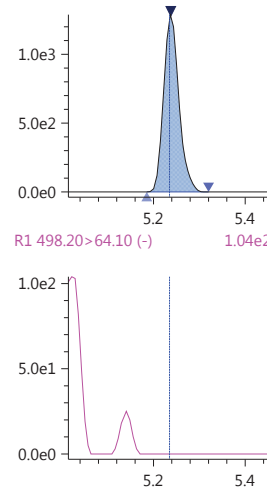
ISTD 714.70>669.90 (-)



FOSA

Conc 0.0158
RT 5.238 Area 2994
R#1 0.00 (0.00)

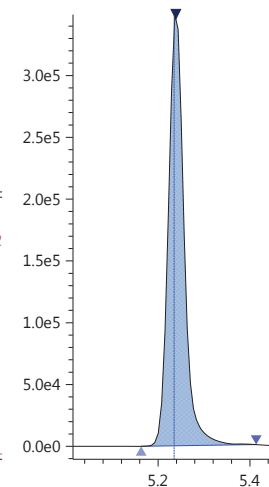
Q 498.20>78.00 (-)



FOSA-13C

Conc 2.2669
RT 5.239 Area 829815

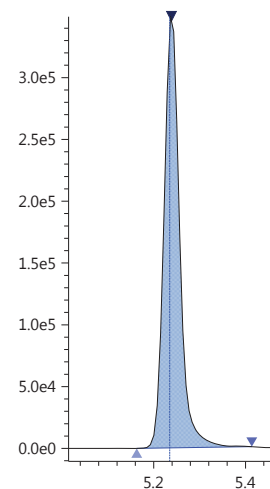
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
RT 5.239 Area 829815

ISTD 506.00>78.05 (-)

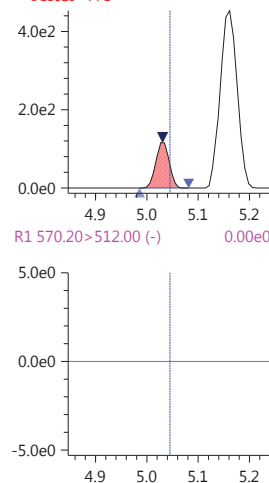


N-MeFOSAA

Conc 0.0274
RT 5.031 Area 212
R#1 0.00 (0.00)

Q 570.20>419.00 (-)

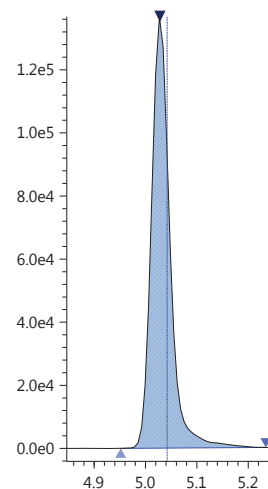
After-WP



N-MeFOSAA-d3

Conc 2.5393
RT 5.028 Area 342824

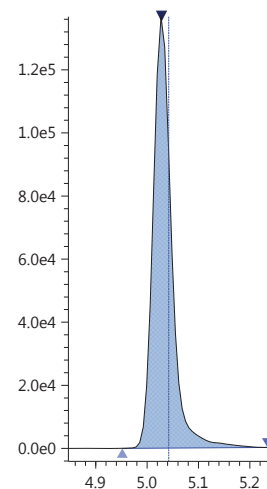
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.028 Area 342824

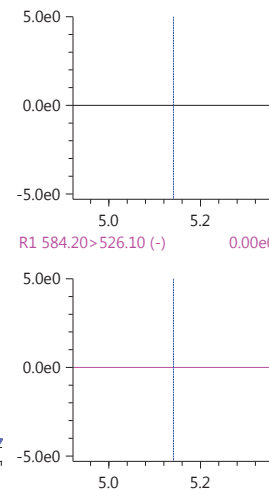
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 584.20>418.95 (-)



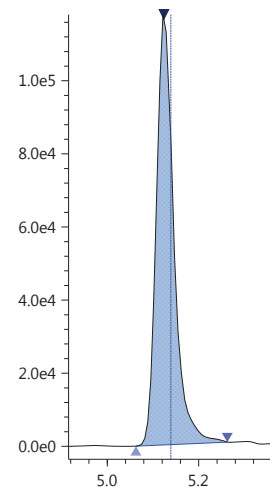
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N-EtFOSAA-d5

Conc 2.8599
RT 5.124 Area 314342

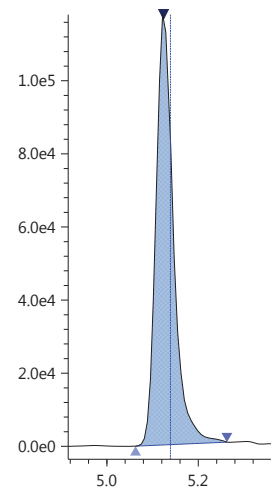
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.124 Area 314342

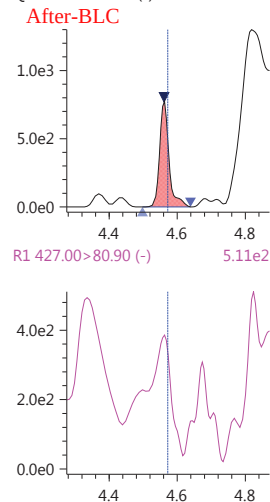
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 0.0114
RT 4.561 Area 1481
R#1 21.44 (0.00)

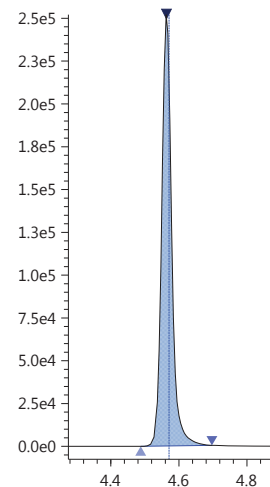
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 7.6906
RT 4.564 Area 516380

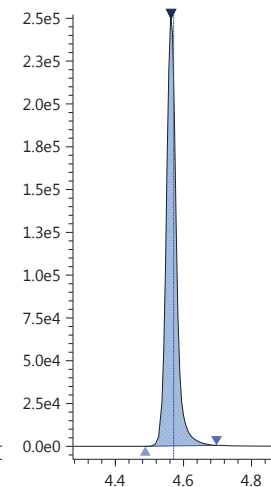
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.564 Area 516380

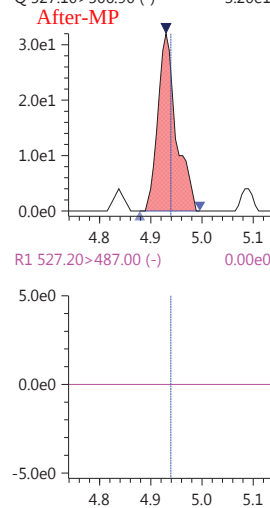
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.0021
RT 4.929 Area 80
R#1 0.00 (0.00)

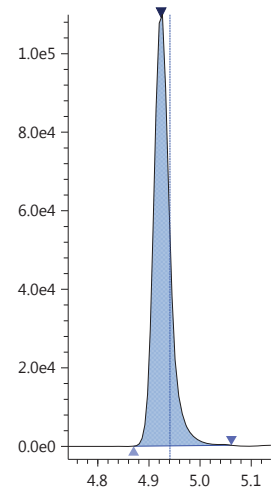
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.6658
RT 4.924 Area 243004

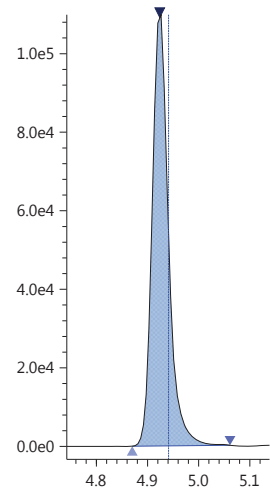
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.924 Area 243004

ISTD 528.80>509.00 (-)



Insight Report

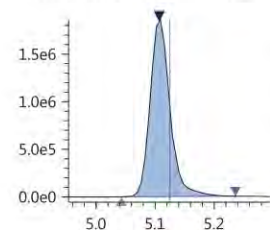
Printed at 12/6/2019 2:23:59 PM

191203_187

Sample ID: R1911314-001
Date acquired: 12/4/2019 11:28:05 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191203_b12\191203_187.lcd
Vial: 19 | Inj. Volume: 15.0000uL | Tray: 3

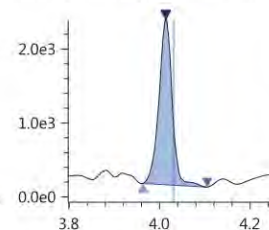
13C7-PFUnDA_IS

Conc 5.0000
RT 5.107 Area 4356319
ISTD 570.00>525.00 (-)



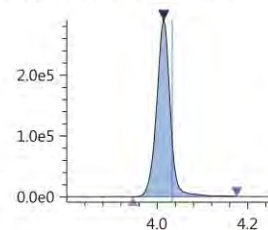
PFBS_1

Conc 0.0625
RT 4.014 Area 4560
Q 298.80>99.00 (-)



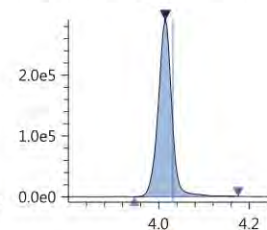
PFBS-13C

Conc 2.0596
RT 4.014 Area 603513
Q 301.80>80.00 (-)



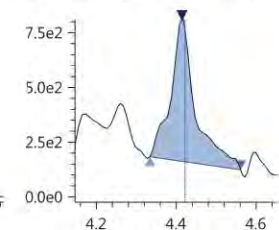
PFBS-13C_IS

Conc 5.0000
RT 4.014 Area 603513
ISTD 301.80>80.00 (-)



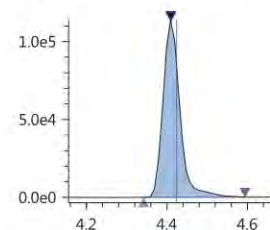
PFHxS_1

Conc 0.0466
RT 4.414 Area 2789
Q 399.00>99.00 (-)



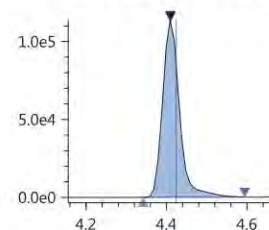
PFHxS-180

Conc 2.1304
RT 4.410 Area 330749
Q 402.70>84.05 (-)



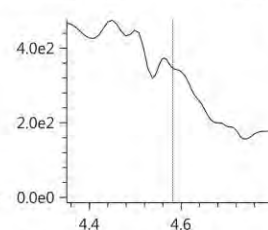
PFHxS-180_IS

Conc 5.0000
RT 4.410 Area 330749
ISTD 402.70>84.05 (-)



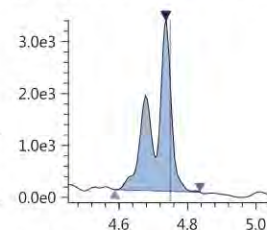
PFHpS_1

Conc ----
RT ---- Area ----
Q 449.00>80.15 (-)



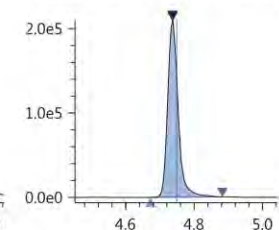
PFOS_1

Conc 0.1496
RT 4.737 Area 11793
Q 499.00>80.00 (-)



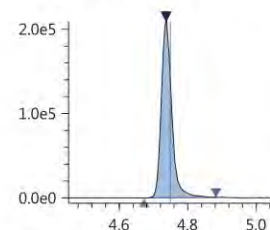
PFOS-13C

Conc 2.9157
RT 4.737 Area 446720
Q 502.80>80.05 (-)



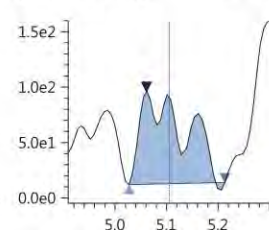
PFOS-13C_IS

Conc 5.0000
RT 4.737 Area 446720
ISTD 502.80>80.05 (-)



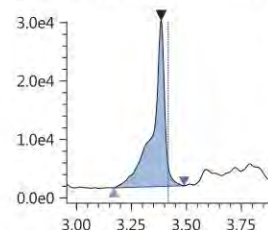
PFDS_1

Conc 0.0082
RT 5.061 Area 499
Q 599.00>99.10 (-)



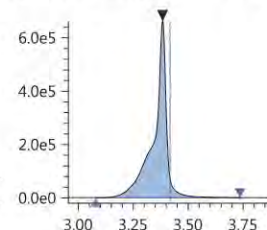
PFBA

Conc 0.2144
RT 3.385 Area 107835
Q 213.00>169.10 (-)



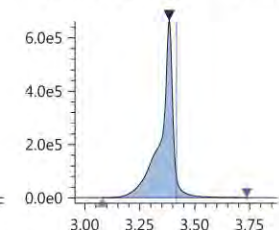
PFBA-13C

Conc 3.4866
RT 3.384 Area 2559716
Q 216.90>172.15 (-)



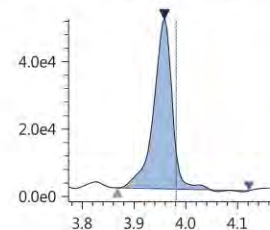
PFBA-13C_IS

Conc 5.0000
RT 3.384 Area 2559716
ISTD 216.90>172.15 (-)



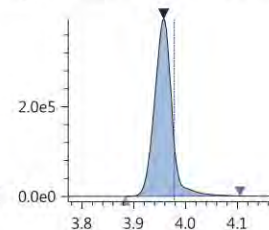
PFPeA

Conc 0.1960
RT 3.958 Area 125353
Q 263.05>219.10 (-)



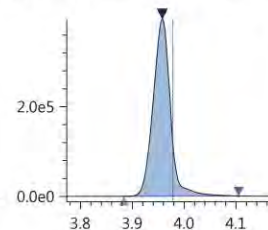
PFPeA-13C

Conc 2.3088
RT 3.958 Area 911451
Q 267.90>223.00 (-)



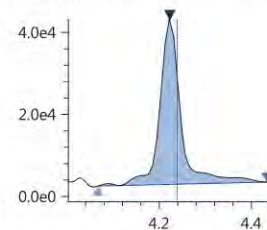
PFPeA-13C_IS

Conc 5.0000
RT 3.958 Area 911451
ISTD 267.90>223.00 (-)



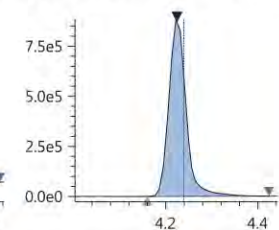
PFHxA

Conc 0.1870
RT 4.223 Area 127896
Q 313.00>269.00 (-)



PFHxA-13C

Conc 2.5757
RT 4.225 Area 2279642
Q 314.90>270.10 (-)

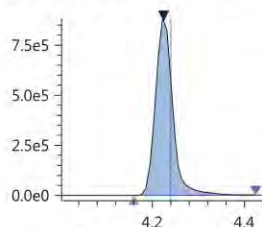


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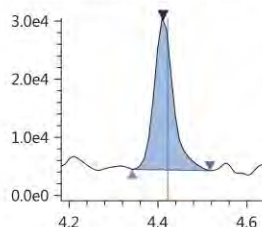
PFHxA-13C_IS

Conc 5.0000
RT 4.225 Area 2279642
ISTD 314.90>270.10 (-)



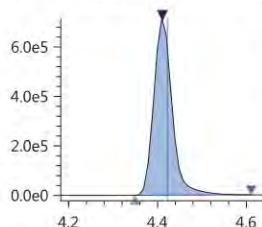
PFHpA

Conc 0.1712
RT 4.411 Area 78509
Q 362.90>319.00 (-)



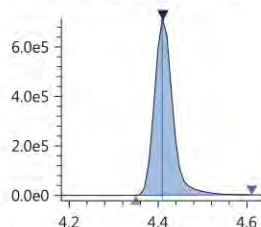
PFHpA-13C

Conc 2.1614
RT 4.411 Area 2048134
Q 366.90>322.10 (-)



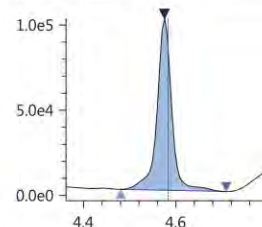
PFHpA-13C_IS

Conc 5.0000
RT 4.411 Area 2048134
ISTD 366.90>322.10 (-)



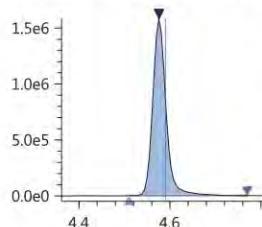
PFOA

Conc 0.2625
RT 4.575 Area 222433
Q 413.00>369.00 (-)



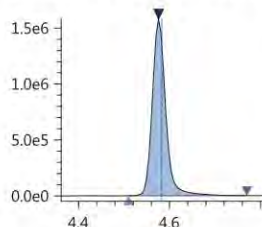
PFOA-13C

Conc 3.1693
RT 4.576 Area 3208122
Q 416.80>372.05 (-)



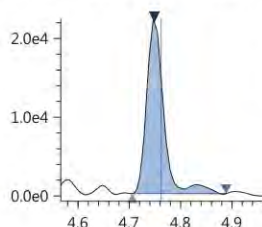
PFOA-13C_IS

Conc 5.0000
RT 4.576 Area 3208122
ISTD 416.80>372.05 (-)



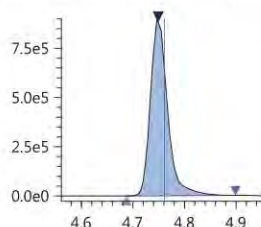
PFNA

Conc 0.0890
RT 4.749 Area 51193
Q 463.00>418.90 (-)



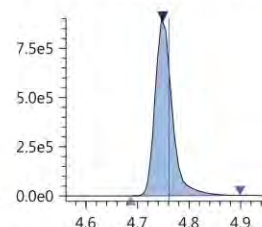
PFNA-13C

Conc 2.9858
RT 4.749 Area 2067916
Q 467.80>423.00 (-)



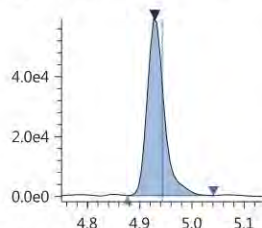
PFNA-13C_IS

Conc 5.0000
RT 4.749 Area 2067916
ISTD 467.80>423.00 (-)



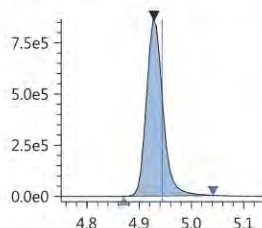
PFDA

Conc 0.3216
RT 4.929 Area 134530
Q 513.00>468.80 (-)



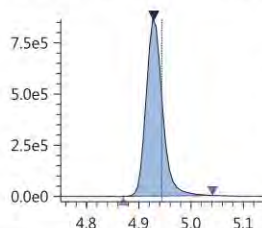
PFDA-13C

Conc 2.9914
RT 4.929 Area 1887471
Q 514.80>469.95 (-)



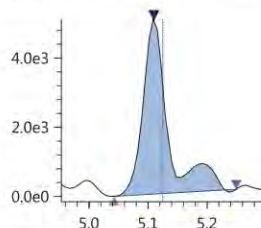
PFDA-13C_IS

Conc 5.0000
RT 4.929 Area 1887471
ISTD 514.80>469.95 (-)



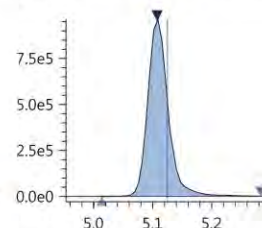
PFUnA

Conc -0.0023
RT 5.110 Area 14897
Q 563.00>518.90 (-)



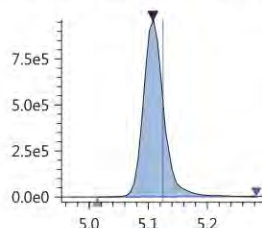
PFUnA-13C

Conc 3.5069
RT 5.108 Area 2292333
Q 564.80>519.95 (-)



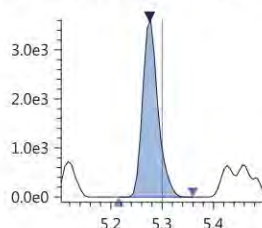
PFUnA-13C_IS

Conc 5.0000
RT 5.108 Area 2292333
ISTD 564.80>519.95 (-)



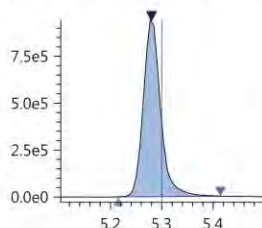
PFDaA

Conc 0.0022
RT 5.276 Area 7521
Q 613.05>569.00 (-)



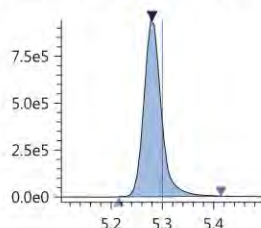
PFDaA-13C

Conc 2.5543
RT 5.280 Area 2212873
Q 614.80>569.95 (-)



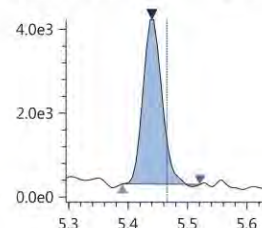
PFDaA-13C_IS

Conc 5.0000
RT 5.280 Area 2212873
ISTD 614.80>569.95 (-)



PFTrDA

Conc -0.0107
RT 5.440 Area 8693
Q 663.00>618.90 (-)

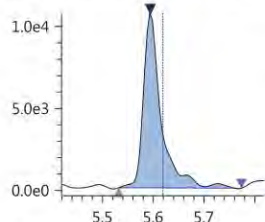


Insight Report

Printed at 12/6/2019 2:23:59 PM

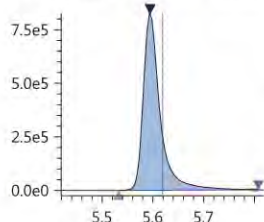
PFTeDA

Conc -0.0054
RT 5.594 Area 25971
Q 713.40>669.00 (-)



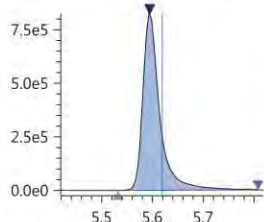
PFTeDA-13C

Conc 2.5240
RT 5.594 Area 1900678
Q 714.70>669.90 (-)



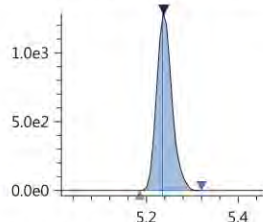
PFTeDA-13C_IS

Conc 5.0000
RT 5.594 Area 1900678
ISTD 714.70>669.90 (-)



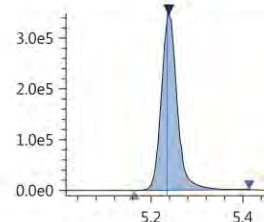
FOSA

Conc 0.0158
RT 5.238 Area 2994
Q 498.20>78.00 (-)



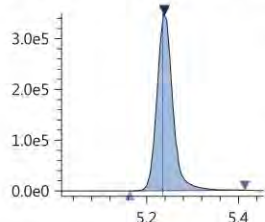
FOSA-13C

Conc 2.2669
RT 5.239 Area 829815
Q 506.00>78.05 (-)



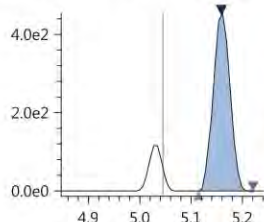
FOSA-13C_IS

Conc 5.0000
RT 5.239 Area 829815
ISTD 506.00>78.05 (-)



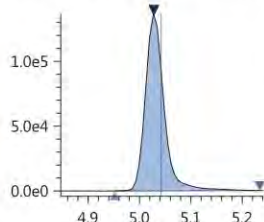
N-MeFOSAA

Conc 0.0475
RT 5.159 Area 1043
Q 570.20>419.00 (-)



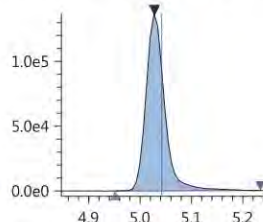
N-MeFOSAA-d3

Conc 2.5393
RT 5.028 Area 342824
Q 572.80>419.05 (-)



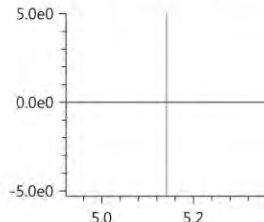
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.028 Area 342824
ISTD 572.80>419.05 (-)



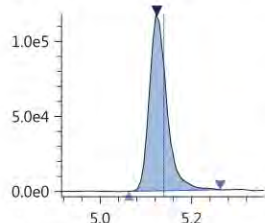
N-EtFOSAA

Conc ----
RT ---- Area ----
Q 584.20>418.95 (-)



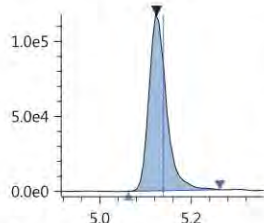
N-EtFOSAA-d5

Conc 2.8599
RT 5.124 Area 314342
Q 588.80>419.00 (-)



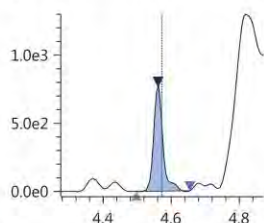
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.124 Area 314342
ISTD 588.80>419.00 (-)



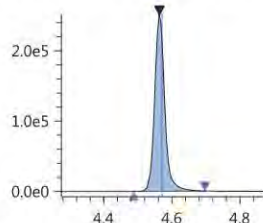
6_2-FTS_1

Conc 0.0112
RT 4.561 Area 1454
Q 427.00>407.00 (-)



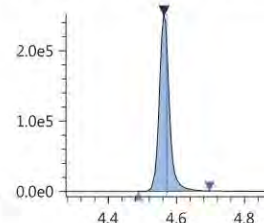
6_2-FTS-13C

Conc 7.6906
RT 4.564 Area 516380
Q 428.90>409.00 (-)



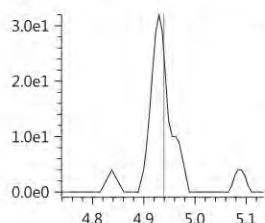
6_2-FTS-13C_IS

Conc 5.0000
RT 4.564 Area 516380
ISTD 428.90>409.00 (-)



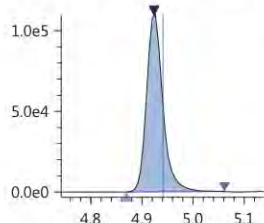
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)



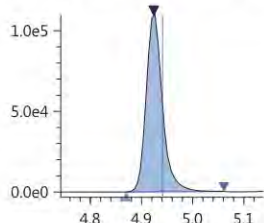
8_2-FTS-13C

Conc 4.6658
RT 4.924 Area 243004
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.924 Area 243004
ISTD 528.80>509.00 (-)



Validation Report

1st  12/06/19
2nd  12/10/19

Data File: J:\LCMS06\Data\191203_b12\191203_190
Lab ID: R1911314-002
RunType: N/A
Matrix: Water

Date Acquired: 12/4/19 23:59
Batch ID: 662103
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
Preparation Hold Time	X	
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Lab Control Sample Recovery	X	
Method Blank	X	
Method Blank Surrogates	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st 12/06/19
2nd 12/10/19

Data File:	J:\LCMS06\Data\191203_b12\191203_190	Instrument:	K-LCMS-06
Acqu Date:	12/4/19 23:59	Vial:	24
Run Type:	N/A	Dilution:	1
Lab ID:	R1911314-002	Raw Units:	ng/mL

Bottle ID:	R1911314-002.01	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	11/13/19	Receive Date:	11/18/19

Analysis Lot:	662103	Prep Lot:	349491	Report Group:	R1911314
Analysis	PFC/537M	Prep Method:	EPA 3535A		
		Prep Date:	11/26/19		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC1900518
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.099	0.00	3963782	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.014	+0.00	474807	1.7808	36	20 - 109	Y
18O2-PFHxS	4.400	0.00	579843	4.1048	82	26 - 122	Y
13C4-PFOS	4.728	0.00	598135	4.2905	86	25 - 121	Y
13C4-PFBA	3.385	-0.01	2713835	4.0626	81	27 - 124	Y
13C5-PFPeA	3.908	-0.05	1041905	2.9006	58	27 - 138	Y
13C2-PFHxA	4.218	+0.00	3055713	3.7944	76	28 - 132	Y
13C4-PFHpA	4.400		3073994	3.5653	71	19 - 139	Y
13C4-PFOA	4.571	+0.00	3879170	4.2117	84	22 - 130	Y
13C5-PFNA	4.742	+0.00	2655656	4.2142	84	20 - 127	Y
13C2-PFDA	4.921	0.00	2344154	4.0832	82	24 - 125	Y
13C2-PFUnDA	5.099	0.00	2943408	4.9489	99	22 - 125	Y
13C2-PFDoDA	5.274		3144881	3.9895	80	19 - 122	Y
13C2-PFTeDA	5.591	+0.00	2682040	3.9143	78	13 - 124	Y
13C8-FOSA	5.232	+0.01	1061705	3.1876	64	18 - 109	Y
D3-MeFOSAA	5.021	+0.00	419825	3.4175	68	9 - 123	Y
D5-EtFOSAA	5.116	+0.00	365166	3.6513	73	12 - 126	Y
13C2-6:2 FTS	4.557	+0.00	240350	3.9341	79	10 - 226	Y
13C2-8:2 FTS	4.917	0.00	190716	4.0245	80	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.013	+0.00	324	0.0056	0.15	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.408	+0.01	1040	0.0099	0.26	U	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 12/6/19 15:49

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		1st	12/06/19
Data File:	J:\LCMS06\Data\191203_b12\191203_190	Instrument:	K-LCMS06
Acqu Date:	12/4/19 23:59	Vial:	24
Run Type:	N/A	Dilution:	1
Lab ID:	R1911314-002	Raw Units:	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.564	+0.00	127	0.0009	0.024	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.727	0.00	382	0.0036	0.094	U	Y
Perfluorodecane sulfonic acid (PFDS)	5.109	+0.03	228	0.0028	0.073	U	Y
Perfluorobutanoic acid (PFBA)	3.384	-0.01	2634	0.0049	0.13	U	Y
Perfluoropentanoic acid (PFPeA)	3.960		55879	0.0056	0.15	U	Y
Perfluorohexanoic acid (PFHxA)	4.202	-0.01	24533	0.0018	0.047	U	Y
Perfluoroheptanoic acid (PFHpA)	4.380	-0.02	14034	-0.0040	0	U	Y
Perfluorooctanoic acid (PFOA)	4.556	-0.01	22639	-0.0044	0	U	Y
Perfluorononanoic acid (PFNA)	4.729	-0.01	6450	-0.0189	0	U	Y
Perfluorodecanoic acid (PFDA)	4.914	-0.01	7538	-0.0040	0	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.094	-0.01	12989	-0.0145	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.272	0.00	5136	-0.0120	0	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.433	0.00	10446	-0.0140	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.590		33927	-0.0161	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.235	+0.01	1169	0.0048	0.13	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.154	+0.04	698	0.0157	0.41	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.559	+0.00	500	0.0083	0.22	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.959	+0.04	13	0.0004	0.010	U	Y

Prep Amount: 305.0000 mL

Dilution: 1

Prep Final Amount: 8.00 mL

Basis Factor: 100.00

U: Undetected at or above MDL

J: Analyte detected above MDL, but below MRL

B: Hit above MRL also found in Method Blank

E: Analyte concentration above high point of ICAL

N: Presumptive evidence of compound

D: Result from dilution

m: Manual integration performed

d: Compound manually deleted

NR: Analyte not reported from this analysis

*: Result fails acceptance criteria

#: Acceptance criteria not applicable

?: Insufficient information to determine acceptance

e: Result >= MRL, but MRL less than low point of ICAL

c: check for co-elution

Printed: 12/6/19 15:49

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Insight Report

Printed at 12/6/2019 3:10:36 PM

191203_190

Sample ID: R1911314-002

Date acquired: 12/4/2019 11:59:25 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191203_b12\191203_190.lcd

Vial: 22 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.099	3963782	3963782	1	5.0000	ng/mL	----
PFBS_1	M	4.013	324	474807	2	0.0056	ng/mL	----
PFBS-13C	Auto	4.014	474807	3963782	1	1.7808	ng/mL	----
PFBS-13C_IS	Auto	4.014	474807	474807	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.408	1040	579843	3	0.0099	ng/mL	----
PFHxS-18O	Auto	4.400	579843	3963782	1	4.1048	ng/mL	----
PFHxS-18O_IS	Auto	4.400	579843	579843	3	5.0000	ng/mL	----
PFHpS_1	M	4.564	127	579843	3	0.0009	ng/mL	----
PFOS_1	Auto	4.727	382	598135	4	0.0036	ng/mL	----
PFOS-13C	Auto	4.728	598135	3963782	1	4.2905	ng/mL	----
PFOS-13C_IS	Auto	4.728	598135	598135	4	5.0000	ng/mL	----
PFDS_1	M	5.109	228	598135	4	0.0028	ng/mL	----
PFBA	M	3.384	2634	2713835	5	0.0049	ng/mL	----
PFBA-13C	Auto	3.385	2713835	3963782	1	4.0626	ng/mL	----
PFBA-13C_IS	Auto	3.385	2713835	2713835	5	5.0000	ng/mL	----
PFPeA	M	3.960	55879	1041905	6	0.0056	ng/mL	----
PFPeA-13C	Auto	3.908	1041905	3963782	1	2.9006	ng/mL	----
PFPeA-13C_IS	Auto	3.908	1041905	1041905	6	5.0000	ng/mL	----
PFHxA	M	4.202	24533	3055713	7	0.0018	ng/mL	----
PFHxA-13C	Auto	4.218	3055713	3963782	1	3.7944	ng/mL	----
PFHxA-13C_IS	Auto	4.218	3055713	3055713	7	5.0000	ng/mL	----
PFHpA	M	4.380	14034	3073994	8	-0.0040	ng/mL	----
PFHpA-13C	Auto	4.400	3073994	3963782	1	3.5653	ng/mL	----
PFHpA-13C_IS	Auto	4.400	3073994	3073994	8	5.0000	ng/mL	----
PFOA	Auto	4.556	22639	3879170	9	-0.0044	ng/mL	----
PFOA-13C	Auto	4.571	3879170	3963782	1	4.2117	ng/mL	----
PFOA-13C_IS	Auto	4.571	3879170	3879170	9	5.0000	ng/mL	----
PFNA	M	4.729	6450	2655656	10	-0.0189	ng/mL	----
PFNA-13C	Auto	4.742	2655656	3963782	1	4.2142	ng/mL	----
PFNA-13C_IS	Auto	4.742	2655656	2655656	10	5.0000	ng/mL	----
PFDA	Auto	4.914	7538	2344154	11	-0.0040	ng/mL	----
PFDA-13C	Auto	4.921	2344154	3963782	1	4.0832	ng/mL	----
PFDA-13C_IS	Auto	4.921	2344154	2344154	11	5.0000	ng/mL	----
PFUnA	Auto	5.094	12989	2943408	12	-0.0145	ng/mL	----
PFUnA-13C	Auto	5.099	2943408	3963782	1	4.9489	ng/mL	----
PFUnA-13C_IS	Auto	5.099	2943408	2943408	12	5.0000	ng/mL	----
PFDoA	M	5.272	5136	3144881	13	-0.0120	ng/mL	----
PFDoA-13C	Auto	5.274	3144881	3963782	1	3.9895	ng/mL	----
PFDoA-13C_IS	Auto	5.274	3144881	3144881	13	5.0000	ng/mL	----
PFTTrDA	M	5.433	10446	2682040	14	-0.0140	ng/mL	----
PFTTeDA	Auto	5.590	33927	2682040	14	-0.0161	ng/mL	----
PFTTeDA-13C	Auto	5.591	2682040	3963782	1	3.9143	ng/mL	----
PFTTeDA-13C_IS	Auto	5.591	2682040	2682040	14	5.0000	ng/mL	----
FOSA	Auto	5.235	1169	1061705	16	0.0048	ng/mL	----
FOSA-13C	Auto	5.232	1061705	3963782	1	3.1876	ng/mL	----
FOSA-13C_IS	Auto	5.232	1061705	1061705	16	5.0000	ng/mL	----
N-MeFOSAA	NI	----	----	419825	21	----	ng/mL	----
N-MeFOSAA-d3	Auto	5.021	419825	3963782	1	3.4175	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.021	419825	419825	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.154	698	365166	22	0.0157	ng/mL	----
N-EtFOSAA-d5	Auto	5.116	365166	3963782	1	3.6513	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.116	365166	365166	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.559	500	240350	24	0.0083	ng/mL	----
6_2-FTS-13C	Auto	4.557	240350	3963782	1	3.9341	ng/mL	----
6_2-FTS-13C_IS	Auto	4.557	240350	240350	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.959	13	190716	25	0.0004	ng/mL	----
8_2-FTS-13C	Auto	4.917	190716	3963782	1	4.0245	ng/mL	----
8_2-FTS-13C_IS	Auto	4.917	190716	190716	25	5.0000	ng/mL	----

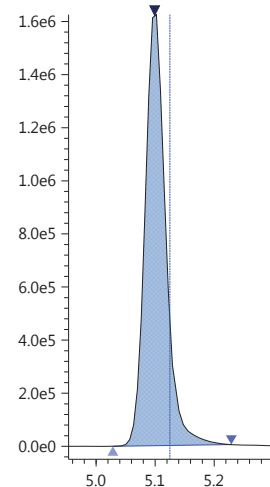
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13C7-PFUnDA_IS

Conc 5.0000
RT 5.099 Area 3963782

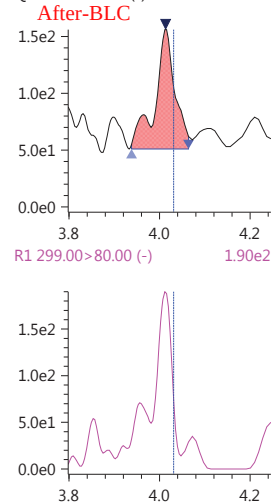
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0056
RT 4.013 Area 324
R#1 147.27 (0.00)

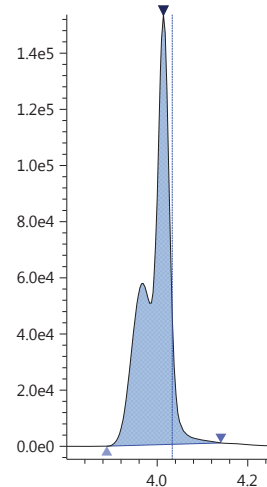
Q 298.80>99.00 (-)



PFBS-13C

Conc 1.7808
RT 4.014 Area 474807

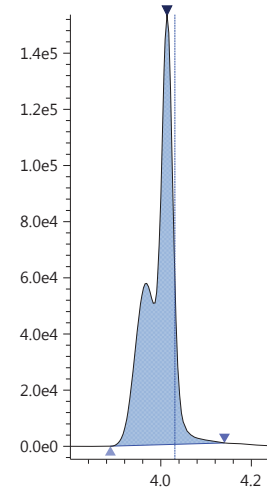
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.014 Area 474807

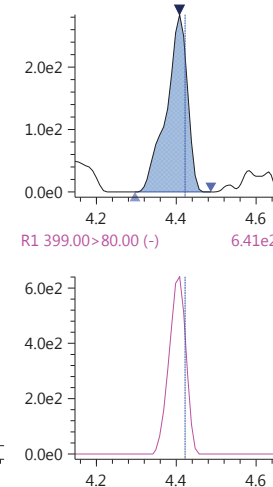
ISTD 301.80>80.00 (-)



PFHxS_1

Conc 0.0099
RT 4.408 Area 1040
R#1 227.08 (0.00)

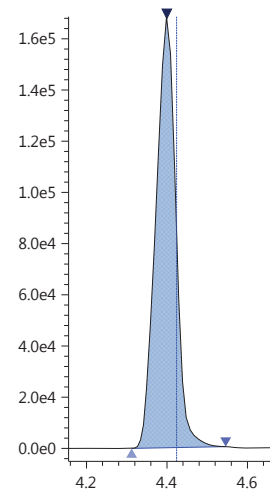
Q 399.00>99.00 (-)



PFHxS-180

Conc 4.1048
RT 4.400 Area 579843

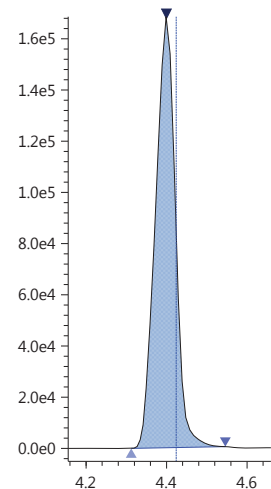
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.400 Area 579843

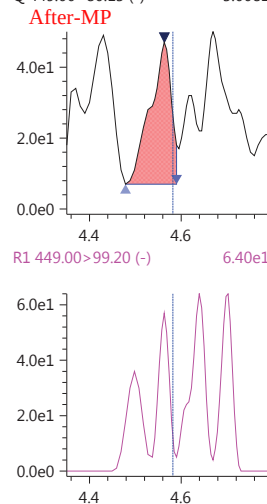
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0009
RT 4.564 Area 127
R#1 166.67 (0.00)

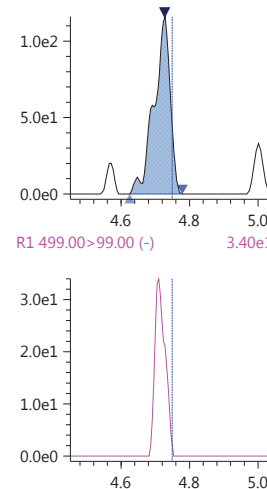
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0036
RT 4.727 Area 382
R#1 17.89 (0.00)

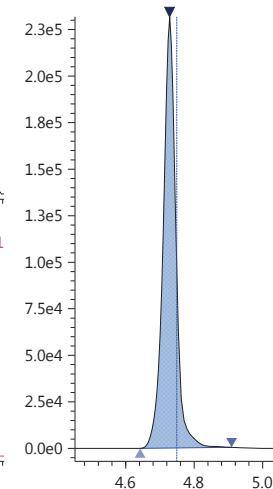
Q 499.00>80.00 (-)



PFOS-13C

Conc 4.2905
RT 4.728 Area 598135

Q 502.80>80.05 (-)

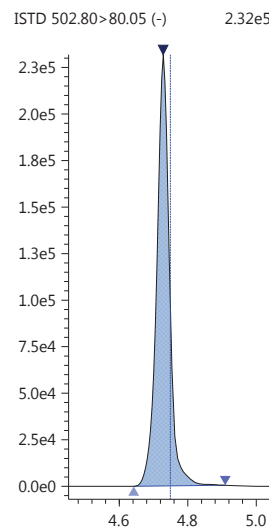


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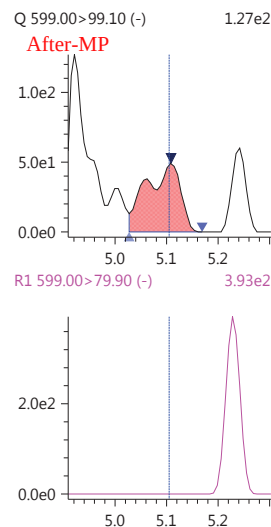
PFOS-13C_IS

Conc 5.0000
RT 4.728 Area 598135



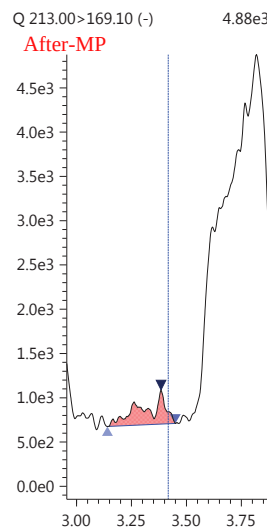
PFDS_1

Conc 0.0028
RT 5.109 Area 228
R#1 0.00 (0.00)



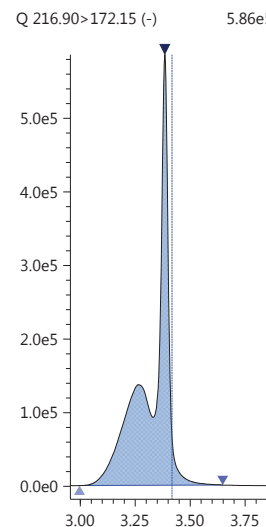
PFBA

Conc 0.0049
RT 3.384 Area 2634



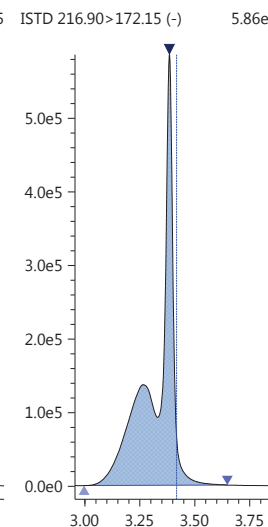
PFBA-13C

Conc 4.0626
RT 3.385 Area 2713835



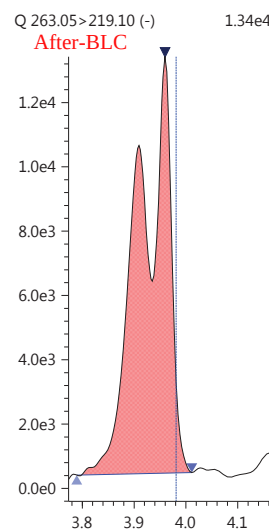
PFBA-13C_IS

Conc 5.0000
RT 3.385 Area 2713835



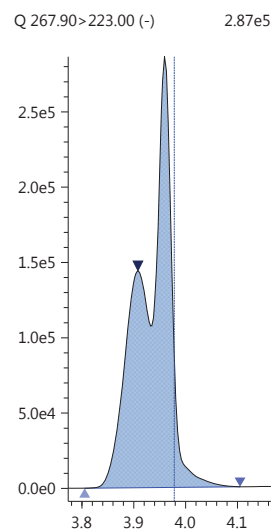
PFPeA

Conc 0.0056
RT 3.960 Area 55879



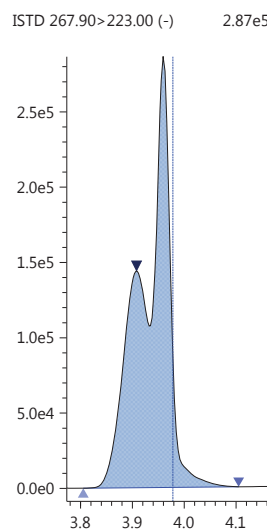
PFPeA-13C

Conc 2.9006
RT 3.908 Area 1041905



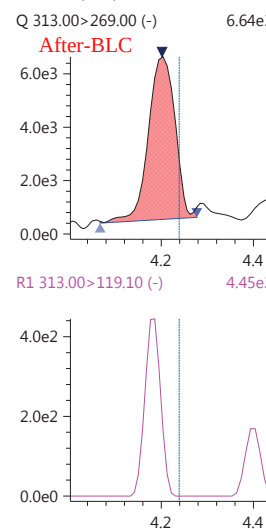
PFPeA-13C_IS

Conc 5.0000
RT 3.908 Area 1041905



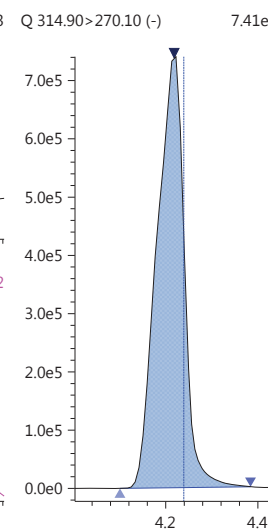
PFHxA

Conc 0.0018
RT 4.202 Area 24533
R#1 3.00 (0.00)



PFHxA-13C

Conc 3.7944
RT 4.218 Area 3055713



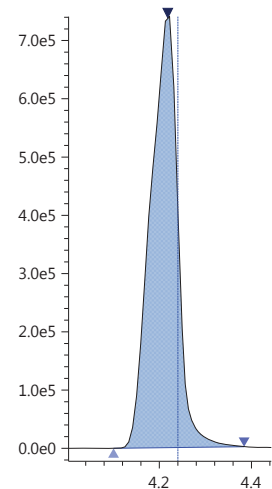
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PFHxA-13C_IS

Conc 5.0000
RT 4.218 Area 3055713

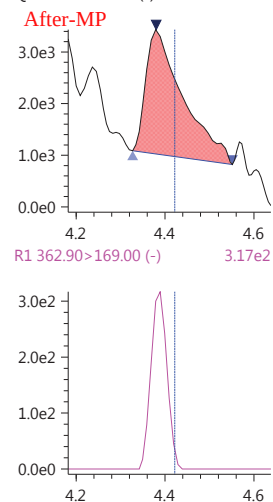
ISTD 314.90>270.10 (-) 7.41e5



PFHpA

Conc -0.0040
RT 4.380 Area 14034
R#1 11.61 (0.00)

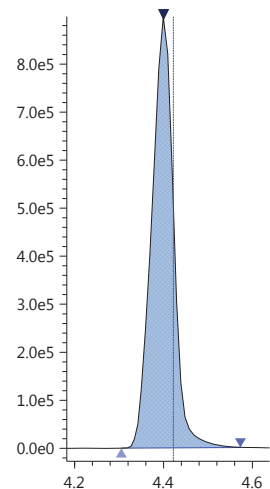
Q 362.90>319.00 (-) 3.43e3



PFHpA-13C

Conc 3.5653
RT 4.400 Area 3073994

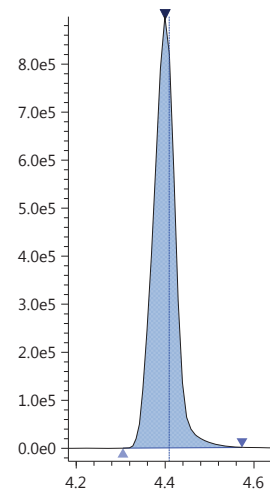
Q 366.90>322.10 (-) 8.99e5



PFHpA-13C_IS

Conc 5.0000
RT 4.400 Area 3073994

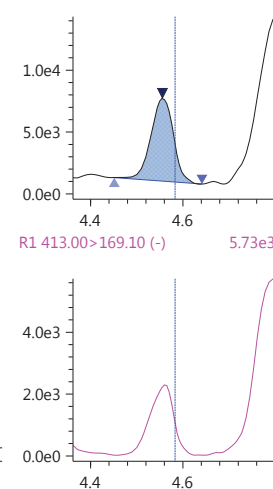
ISTD 366.90>322.10 (-) 8.99e5



PFOA

Conc -0.0044
RT 4.556 Area 22639
R#1 32.23 (0.00)

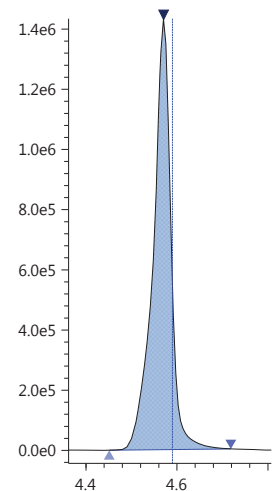
Q 413.00>369.00 (-) 1.43e4



PFOA-13C

Conc 4.2117
RT 4.571 Area 3879170

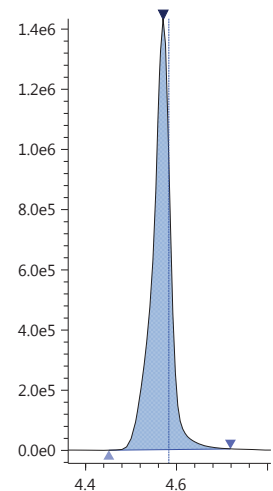
Q 416.80>372.05 (-) 1.43e6



PFOA-13C_IS

Conc 5.0000
RT 4.571 Area 3879170

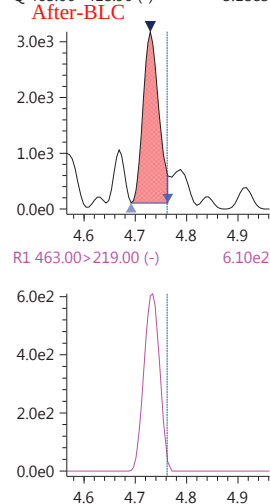
ISTD 416.80>372.05 (-) 1.43e6



PFNA

Conc -0.0189
RT 4.729 Area 6450
R#1 20.27 (0.00)

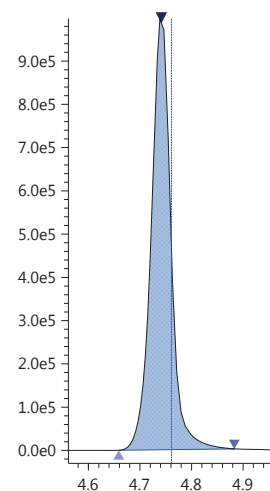
Q 463.00>418.90 (-) 3.18e3



PFNA-13C

Conc 4.2142
RT 4.742 Area 2655656

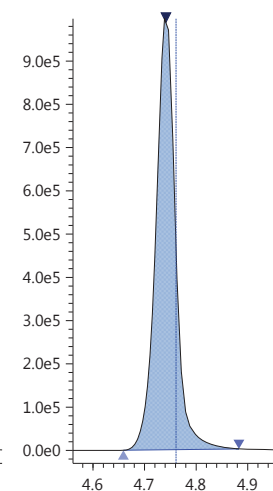
Q 467.80>423.00 (-) 9.98e5



PFNA-13C_IS

Conc 5.0000
RT 4.742 Area 2655656

ISTD 467.80>423.00 (-) 9.98e5



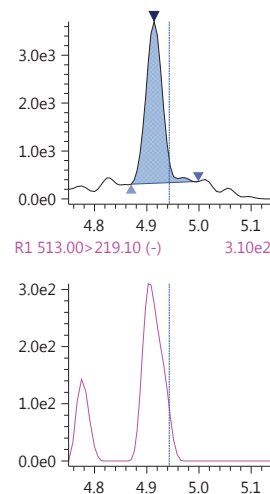
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PFDA

Conc -0.0040
RT 4.914 Area 7538
R#1 7.70 (0.00)

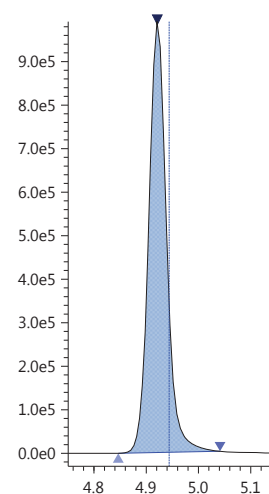
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.0832
RT 4.921 Area 2344154

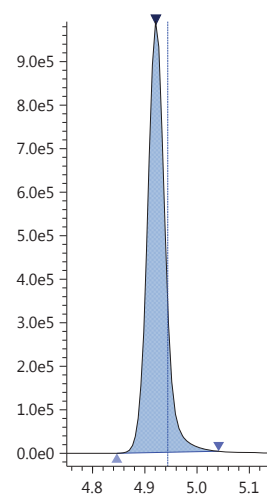
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
RT 4.921 Area 2344154

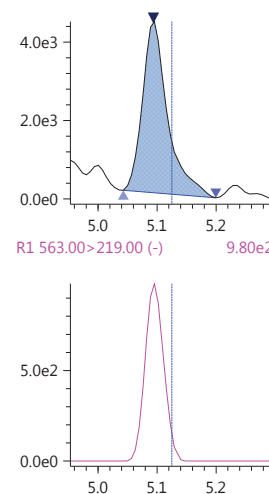
Q 514.80>469.95 (-)



PFUnA

Conc -0.0145
RT 5.094 Area 12989
R#1 22.32 (0.00)

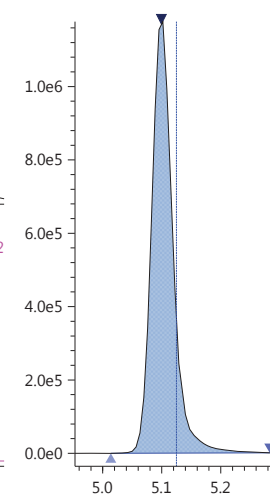
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.9489
RT 5.099 Area 2943408

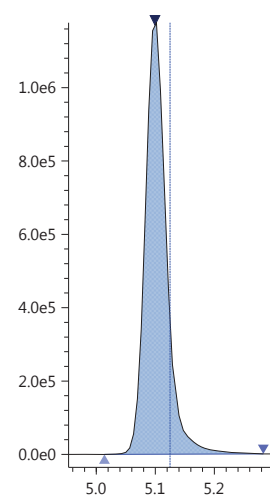
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
RT 5.099 Area 2943408

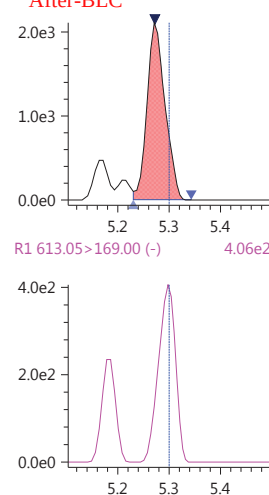
Q 564.80>519.95 (-)



PFDaA

Conc -0.0120
RT 5.272 Area 5136
R#1 6.05 (0.00)

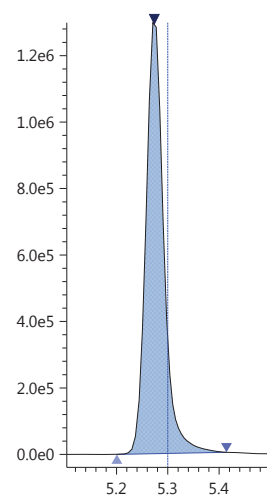
Q 613.05>569.00 (-)
After-BLC



PFDaA-13C

Conc 3.9895
RT 5.274 Area 3144881

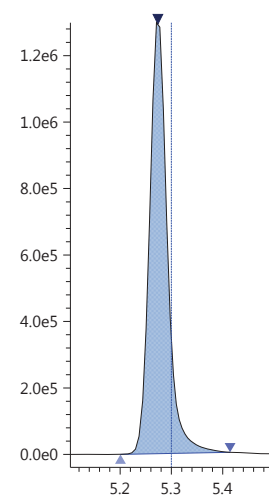
Q 614.80>569.95 (-)



PFDaA-13C_IS

Conc 5.0000
RT 5.274 Area 3144881

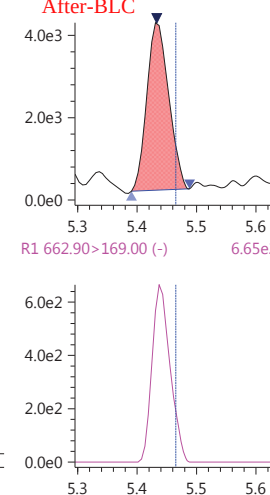
Q 614.80>569.95 (-)



PFTTrDA

Conc -0.0140
RT 5.433 Area 10446
R#1 16.88 (0.00)

Q 663.00>618.90 (-)
After-BLC



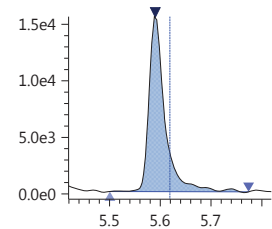
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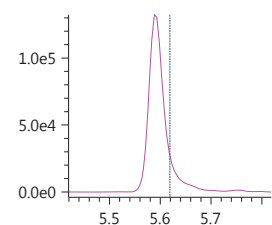
PFTeDA

Conc -0.0161
RT 5.590 Area 33927
R#1 847.80 (0.00)

Q 713.40>669.00 (-) 1.57e4



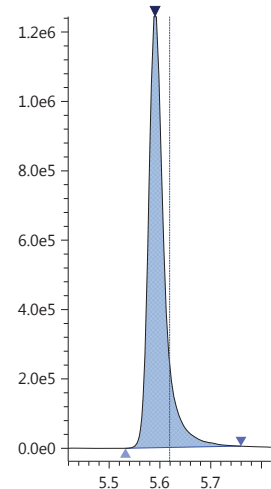
R1 713.40>169.10 (-) 1.32e5



PFTeDA-13C

Conc 3.9143
RT 5.591 Area 2682040

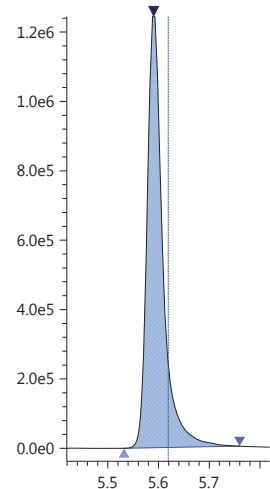
Q 714.70>669.90 (-) 1.24e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.591 Area 2682040

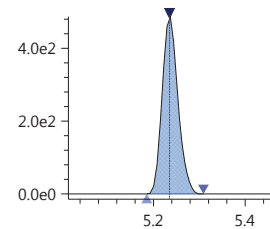
ISTD 714.70>669.90 (-) 1.24e6



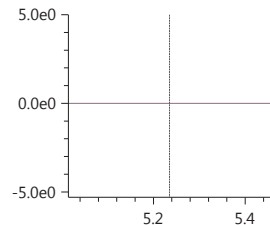
FOSA

Conc 0.0048
RT 5.235 Area 1169
R#1 0.00 (0.00)

Q 498.20>78.00 (-) 4.87e2



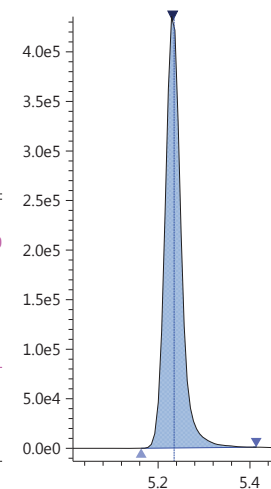
R1 498.20>64.10 (-) 0.00e0



FOSA-13C

Conc 3.1876
RT 5.232 Area 1061705

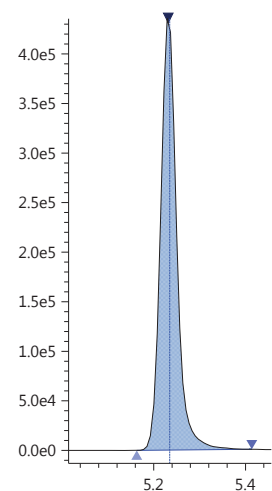
Q 506.00>78.05 (-) 4.36e5



FOSA-13C_IS

Conc 5.0000
RT 5.232 Area 1061705

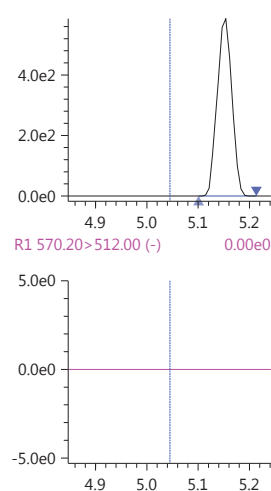
ISTD 506.00>78.05 (-) 4.36e5



N-MeFOSAA

Conc ----
RT ---- Area ----
R#1 0.00 (0.00)

Q 570.20>419.00 (-) 5.86e2

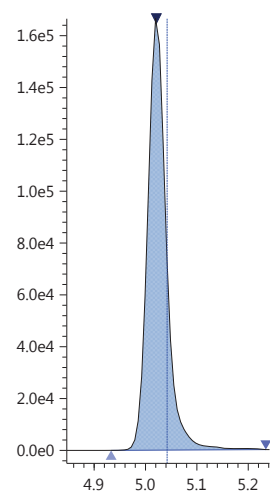


R1 570.20>512.00 (-) 0.00e0

N-MeFOSAA-d3

Conc 3.4175
RT 5.021 Area 419825

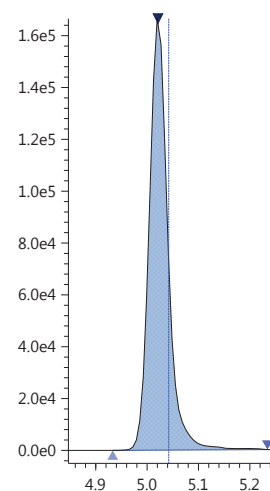
Q 572.80>419.05 (-) 1.67e5



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.021 Area 419825

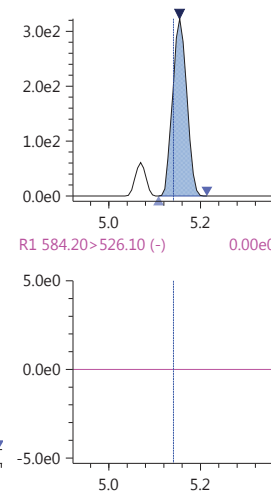
ISTD 572.80>419.05 (-) 1.67e5



N-EtFOSAA

Conc 0.0157
RT 5.154 Area 698
R#1 0.00 (0.00)

Q 584.20>418.95 (-) 3.23e2



R1 584.20>526.10 (-) 0.00e0

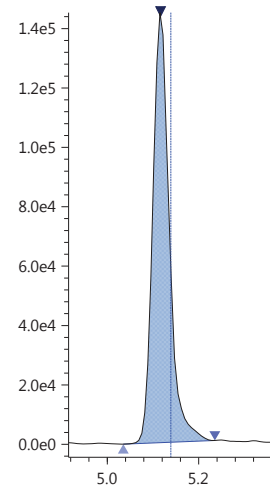
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N-EtFOSAA-d5

Conc 3.6513
RT 5.116 Area 365166

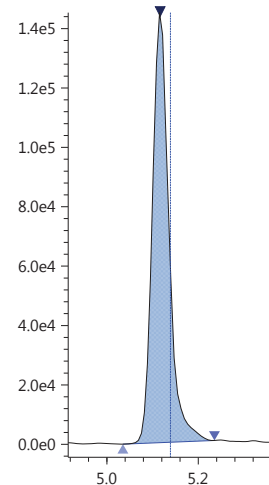
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.116 Area 365166

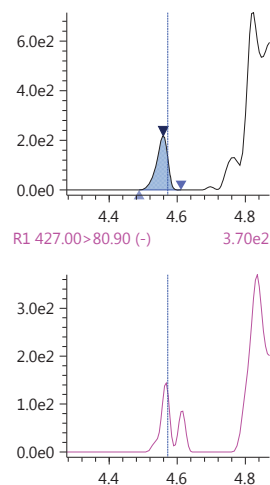
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 0.0083
RT 4.559 Area 500
R#1 19.66 (0.00)

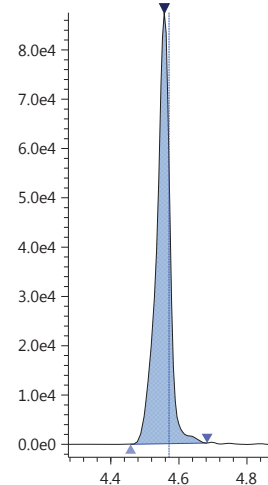
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 3.9341
RT 4.557 Area 240350

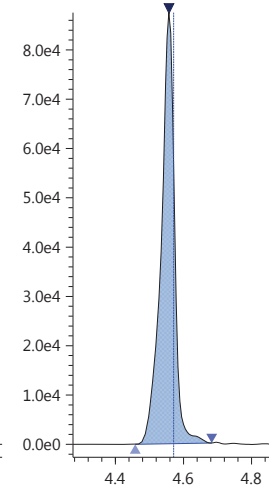
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.557 Area 240350

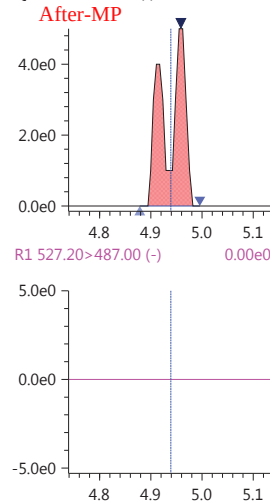
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.0004
RT 4.959 Area 13
R#1 0.00 (0.00)

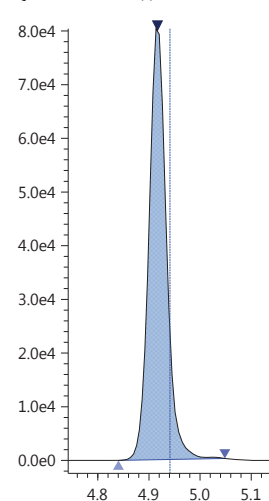
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.0245
RT 4.917 Area 190716

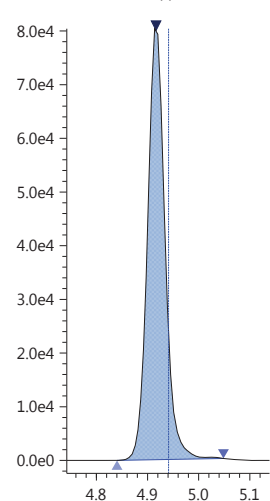
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.917 Area 190716

ISTD 528.80>509.00 (-)



Insight Report

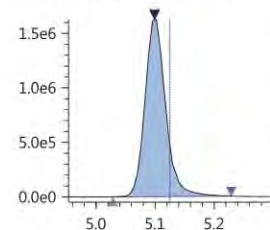
Printed at 12/6/2019 2:23:59 PM

191203_190

Sample ID: R1911314-002
Date acquired: 12/4/2019 11:59:25 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191203_b12\191203_190.lcd
Vial: 22 | Inj. Volume: 15.0000uL | Tray: 3

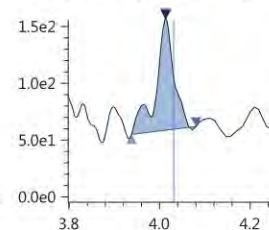
13C7-PFUnDA_IS

Conc 5.0000
RT 5.099 Area 3963782
ISTD 570.00>525.00 (-)



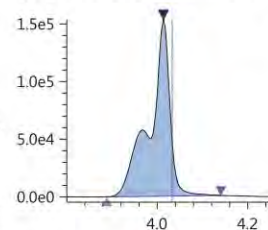
PFBS_1

Conc 0.0047
RT 4.013 Area 269
Q 298.80>99.00 (-)



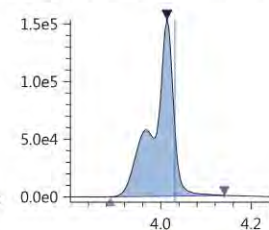
PFBS-13C

Conc 1.7808
RT 4.014 Area 474807
Q 301.80>80.00 (-)



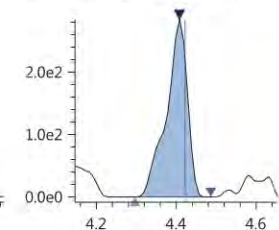
PFBS-13C_IS

Conc 5.0000
RT 4.014 Area 474807
ISTD 301.80>80.00 (-)



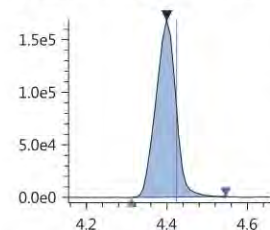
PFHxS_1

Conc 0.0099
RT 4.408 Area 1040
Q 399.00>99.00 (-)



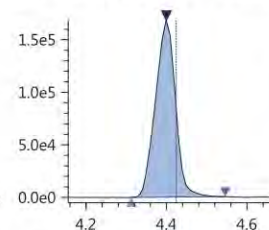
PFHxS-180

Conc 4.1048
RT 4.400 Area 579843
Q 402.70>84.05 (-)



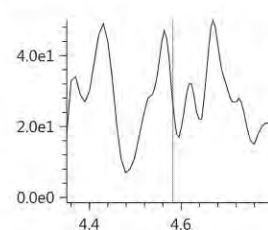
PFHxS-180_IS

Conc 5.0000
RT 4.400 Area 579843
ISTD 402.70>84.05 (-)



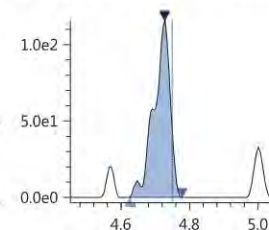
PFHpS_1

Conc ----
RT ---- Area ----
Q 449.00>80.15 (-)



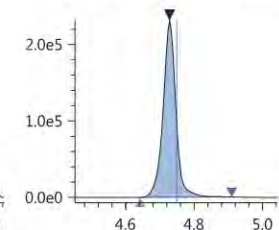
PFOS_1

Conc 0.0036
RT 4.727 Area 382
Q 499.00>80.00 (-)



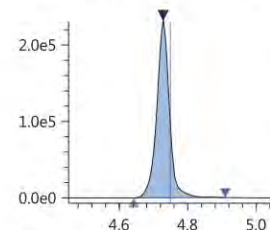
PFOS-13C

Conc 4.2905
RT 4.728 Area 598135
Q 502.80>80.05 (-)



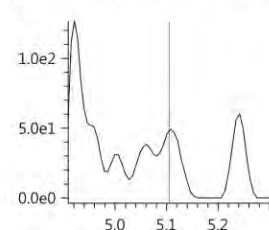
PFOS-13C_IS

Conc 5.0000
RT 4.728 Area 598135
ISTD 502.80>80.05 (-)



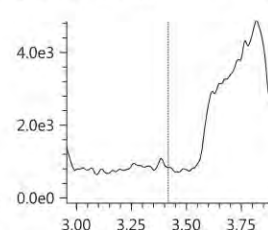
PFDS_1

Conc ----
RT ---- Area ----
Q 599.00>99.10 (-)



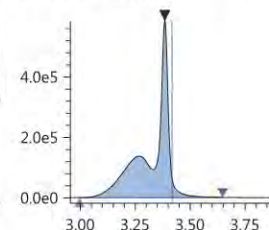
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-)



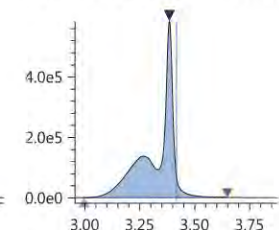
PFBA-13C

Conc 4.0626
RT 3.385 Area 2713835
Q 216.90>172.15 (-)



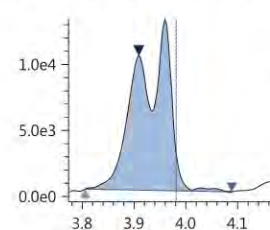
PFBA-13C_IS

Conc 5.0000
RT 3.385 Area 2713835
ISTD 216.90>172.15 (-)



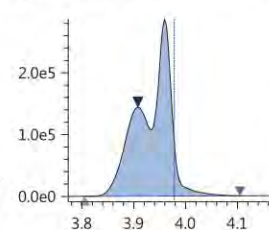
PFPeA

Conc 0.0065
RT 3.909 Area 56286
Q 263.05>219.10 (-)



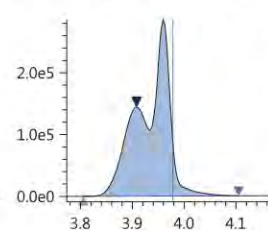
PFPeA-13C

Conc 2.9006
RT 3.908 Area 1041905
Q 267.90>223.00 (-)



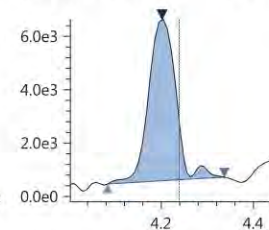
PFPeA-13C_IS

Conc 5.0000
RT 3.908 Area 1041905
ISTD 267.90>223.00 (-)



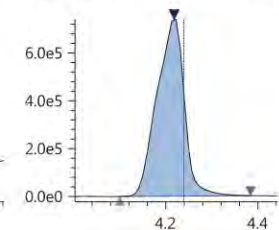
PFHxA

Conc 0.0021
RT 4.202 Area 24825
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.7944
RT 4.218 Area 3055713
Q 314.90>270.10 (-)

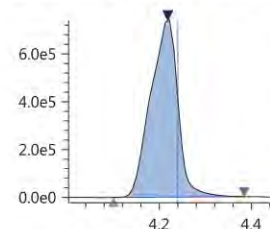


Insight Report

Printed at 12/6/2019 2:23:59 PM

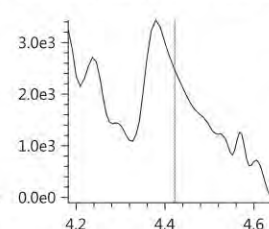
PFHxA-13C_IS

Conc 5.0000
RT 4.218 Area 3055713
ISTD 314.90>270.10 (-)



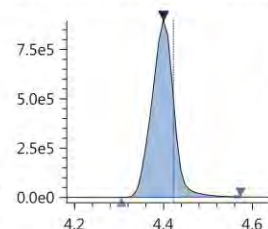
PFHpA

Conc ---
RT --- Area ---
Q 362.90>319.00 (-)



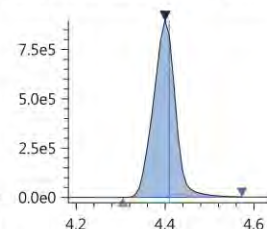
PFHpA-13C

Conc 3.5653
RT 4.400 Area 3073994
Q 366.90>322.10 (-)



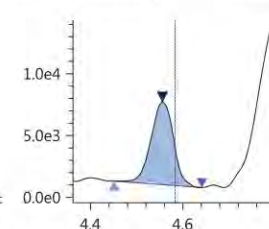
PFHpA-13C_IS

Conc 5.0000
RT 4.400 Area 3073994
ISTD 366.90>322.10 (-)



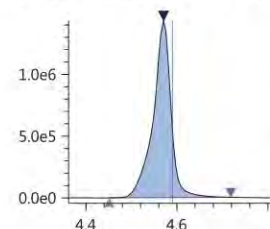
PFOA

Conc -0.0044
RT 4.556 Area 22639
Q 413.00>369.00 (-)



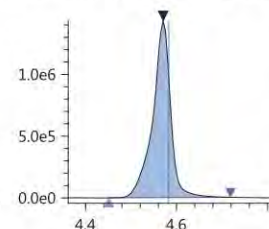
PFOA-13C

Conc 4.2117
RT 4.571 Area 3879170
Q 416.80>372.05 (-)



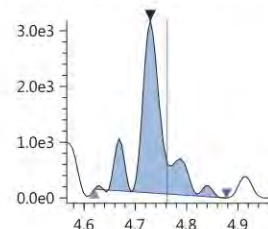
PFOA-13C_IS

Conc 5.0000
RT 4.571 Area 3879170
ISTD 416.80>372.05 (-)



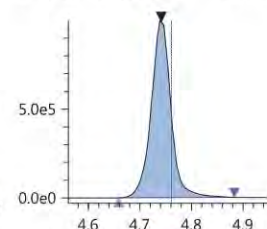
PFNA

Conc -0.0132
RT 4.729 Area 9574
Q 463.00>418.90 (-)



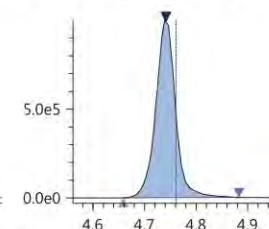
PFNA-13C

Conc 4.2142
RT 4.742 Area 2655656
Q 467.80>423.00 (-)



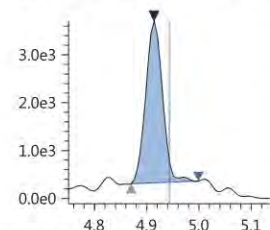
PFNA-13C_IS

Conc 5.0000
RT 4.742 Area 2655656
ISTD 467.80>423.00 (-)



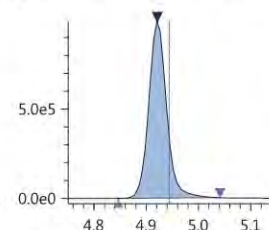
PFDA

Conc -0.0040
RT 4.914 Area 7538
Q 513.00>468.80 (-)



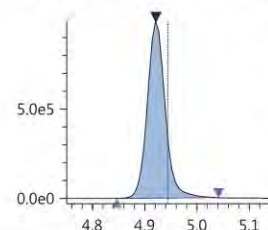
PFDA-13C

Conc 4.0832
RT 4.921 Area 2344154
Q 514.80>469.95 (-)



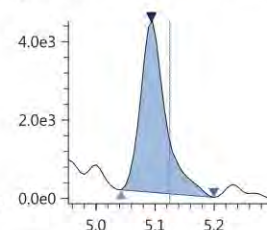
PFDA-13C_IS

Conc 5.0000
RT 4.921 Area 2344154
ISTD 514.80>469.95 (-)



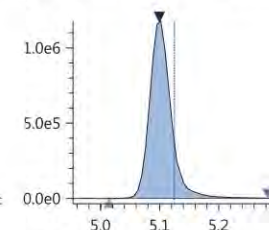
PFUnA

Conc -0.0145
RT 5.094 Area 12989
Q 563.00>518.90 (-)



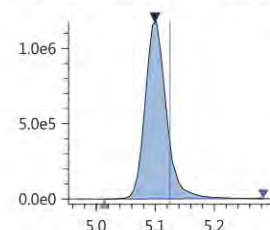
PFUnA-13C

Conc 4.9489
RT 5.099 Area 2943408
Q 564.80>519.95 (-)



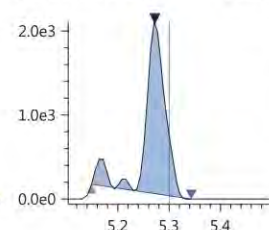
PFUnA-13C_IS

Conc 5.0000
RT 5.099 Area 2943408
ISTD 564.80>519.95 (-)



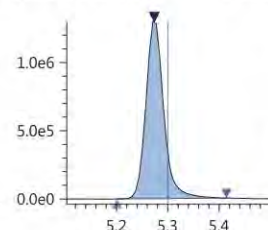
PFDaA

Conc -0.0113
RT 5.272 Area 5417
Q 613.05>569.00 (-)



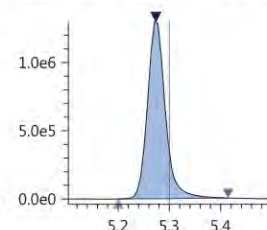
PFDaA-13C

Conc 3.9895
RT 5.274 Area 3144881
Q 614.80>569.95 (-)



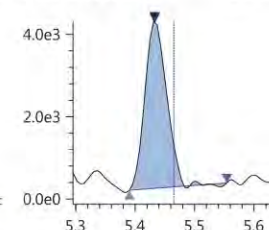
PFDaA-13C_IS

Conc 5.0000
RT 5.274 Area 3144881
ISTD 614.80>569.95 (-)



PFTTrDA

Conc -0.0142
RT 5.433 Area 10302
Q 663.00>618.90 (-)

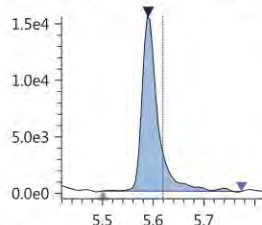


Insight Report

Printed at 12/6/2019 2:23:59 PM

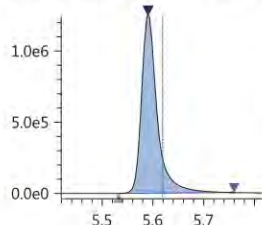
PFTeDA

Conc -0.0161
RT 5.590 Area 33927
Q 713.40>669.00 (-)



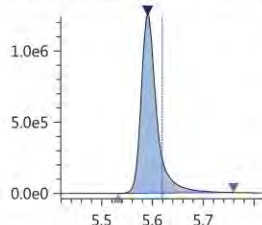
PFTeDA-13C

Conc 3.9143
RT 5.591 Area 2682040
Q 714.70>669.90 (-)



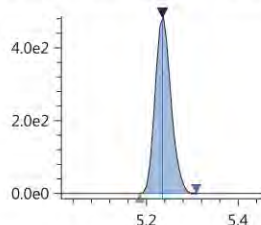
PFTeDA-13C_IS

Conc 5.0000
RT 5.591 Area 2682040
ISTD 714.70>669.90 (-)



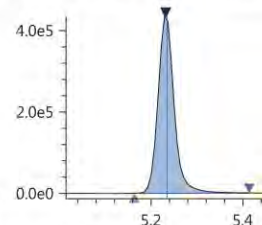
FOSA

Conc 0.0048
RT 5.235 Area 1169
Q 498.20>78.00 (-)



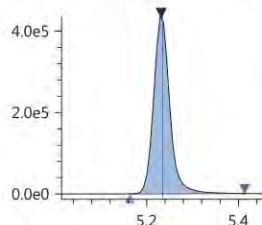
FOSA-13C

Conc 3.1876
RT 5.232 Area 1061705
Q 506.00>78.05 (-)



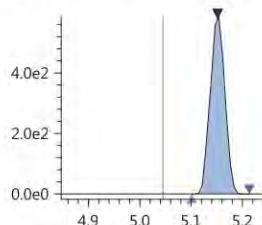
FOSA-13C_IS

Conc 5.0000
RT 5.232 Area 1061705
ISTD 506.00>78.05 (-)



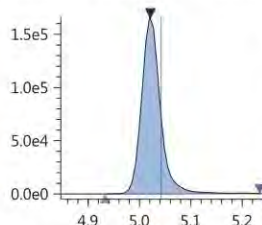
N-MeFOSAA

Conc 0.0456
RT 5.152 Area 1177
Q 570.20>419.00 (-)



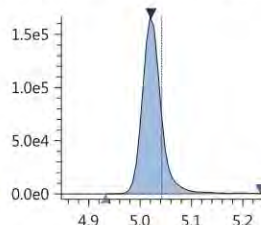
N-MeFOSAA-d3

Conc 3.4175
RT 5.021 Area 419825
Q 572.80>419.05 (-)



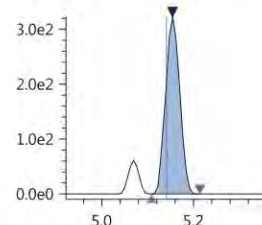
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.021 Area 419825
ISTD 572.80>419.05 (-)



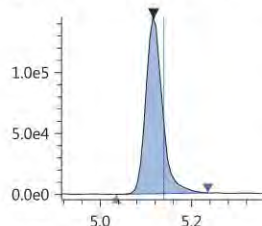
N-EtFOSAA

Conc 0.0157
RT 5.154 Area 698
Q 584.20>418.95 (-)



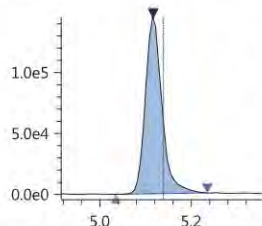
N-EtFOSAA-d5

Conc 3.6513
RT 5.116 Area 365166
Q 588.80>419.00 (-)



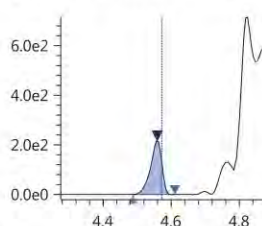
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.116 Area 365166
ISTD 588.80>419.00 (-)



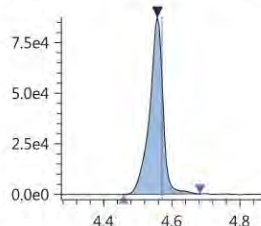
6_2-FTS_1

Conc 0.0083
RT 4.559 Area 500
Q 427.00>407.00 (-)



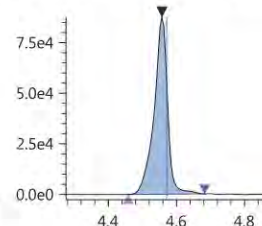
6_2-FTS-13C

Conc 3.9341
RT 4.557 Area 240350
Q 428.90>409.00 (-)



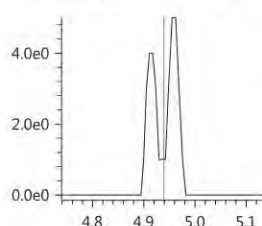
6_2-FTS-13C_IS

Conc 5.0000
RT 4.557 Area 240350
ISTD 428.90>409.00 (-)



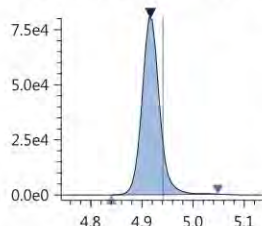
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)



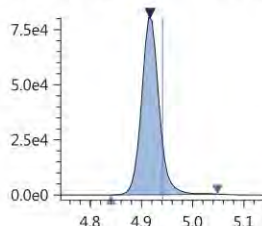
8_2-FTS-13C

Conc 4.0245
RT 4.917 Area 190716
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.917 Area 190716
ISTD 528.80>509.00 (-)



Validation Report

1st  12/06/19
2nd  12/10/19

Data File: J:\LCMS06\Data\191203_b12\191203_170
Lab ID: KQ1917554-04
RunType: MB
Matrix: Water

Date Acquired: 12/4/19 20:30
Batch ID: 662103
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st  12/06/19
2nd  12/10/19

Data File:	J:\LCMS06\Data\191203_b12\191203_170	Instrument:	K-LCMS-06
Acqu Date:	12/4/19 20:30	Vial:	4
Run Type:	MB	Dilution:	1
Lab ID:	KQ1917554-04	Raw Units:	ng/mL

Bottle ID:		Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	11/13/19	Receive Date:	11/18/19

Analysis Lot:	662103	Prep Lot:	349491	Report Group:	KQ1917554
Analysis	PFC/537M	Prep Method:	EPA 3535A		
		Prep Date:	11/26/19		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC1900518
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.102	+0.00	4324614	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.012	0.00	748493	2.5731	51	20 - 109	Y
18O2-PFHxS	4.400	0.00	672159	4.3613	87	26 - 122	Y
13C4-PFOS	4.729	0.00	724949	4.7663	95	25 - 121	Y
13C4-PFBA	3.384	-0.01	2883741	3.9568	79	27 - 124	Y
13C5-PFPeA	3.908	-0.05	1453762	3.7095	74	27 - 138	Y
13C2-PFHxA	4.216	0.00	3667752	4.1744	83	28 - 132	Y
13C4-PFHpA	4.401	+0.00	4142042	4.4032	88	19 - 139	Y
13C4-PFOA	4.570	+0.00	4528088	4.5060	90	22 - 130	Y
13C5-PFNA	4.743	+0.00	3047399	4.4324	89	20 - 127	Y
13C2-PFDA	4.922		2590617	4.1359	83	24 - 125	Y
13C2-PFUnDA	5.102	+0.00	3070525	4.7319	95	22 - 125	Y
13C2-PFDoDA	5.275	+0.00	3525842	4.0996	82	19 - 122	Y
13C2-PFTeDA	5.589	0.00	2715636	3.6326	73	13 - 124	Y
13C8-FOSA	5.233	+0.01	1384556	3.8101	76	18 - 109	Y
D3-MeFOSAA	5.022	+0.00	433088	3.2314	65	9 - 123	Y
D5-EtFOSAA	5.119	+0.01	427708	3.9198	78	12 - 126	Y
13C2-6:2 FTS	4.558	+0.00	293589	4.4046	88	10 - 226	Y
13C2-8:2 FTS	4.918		216080	4.1793	84	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.010	0.00	393	0.0043	0.14	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.399		2305	0.0190	0.61	U	Y

		1st	12/06/19
Data File:	J:\LCMS06\Data\191203_b12\191203_170	Instrument:	K-LCMS06
Acqu Date:	12/4/19 20:30	Vial:	4
Run Type:	MB	Dilution:	1
Lab ID:	KQ1917554-04	Raw Units:	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.568	+0.01	101	0.0006	0.019	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.730		611	0.0048	0.15	U	Y
Perfluorodecane sulfonic acid (PFDS)	0		0	0	0	U	Y
Perfluorobutanoic acid (PFBA)	0		0	0	0	U	Y
Perfluoropentanoic acid (PFPeA)	3.906	-0.05	79838	0.0086	0.28	U	Y
Perfluorohexanoic acid (PFHxA)	4.187	-0.03	30306	0.0027	0.086	U	Y
Perfluoroheptanoic acid (PFHpA)	4.381	-0.02	14907	-0.0090	0	U	Y
Perfluorooctanoic acid (PFOA)	4.557	-0.01	32022	0.0008	0.026	U	Y
Perfluorononanoic acid (PFNA)	4.730	-0.01	15281	-0.0064	0	U	Y
Perfluorodecanoic acid (PFDA)	4.917	-0.01	9664	-0.0016	0	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.101	+0.00	14907	-0.0119	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.277	+0.00	7604	-0.0078	0	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.436		14080	-0.0078	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.589	0.00	37355	-0.0044	0	U	Y
Perfluorooctane sulfonamide (FOSA)	5.238	+0.01	1120	0.0036	0.12	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.131	+0.01	331	0.0064	0.20	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.557	+0.00	1165	0.0158	0.51	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.920	+0.00	149	0.0044	0.14	U	Y

Prep Amount: 250 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Insight Report

Printed at 12/6/2019 3:10:36 PM

191203_170

Sample ID: KQ1917554-04

Date acquired: 12/4/2019 8:30:25 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191203_b12\191203_170.lcd

Vial: 2 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.102	4324614	4324614	1	5.0000	ng/mL	----
PFBS_1	M	4.010	393	748493	2	0.0043	ng/mL	----
PFBS-13C	Auto	4.012	748493	4324614	1	2.5731	ng/mL	----
PFBS-13C_IS	Auto	4.012	748493	748493	2	5.0000	ng/mL	----
PFHxS_1	M	4.399	2305	672159	3	0.0190	ng/mL	----
PFHxS-18O	Auto	4.400	672159	4324614	1	4.3613	ng/mL	----
PFHxS-18O_IS	Auto	4.400	672159	672159	3	5.0000	ng/mL	----
PFHpS_1	M	4.568	101	672159	3	0.0006	ng/mL	----
PFOS_1	Auto	4.730	611	724949	4	0.0048	ng/mL	----
PFOS-13C	Auto	4.729	724949	4324614	1	4.7663	ng/mL	----
PFOS-13C_IS	Auto	4.729	724949	724949	4	5.0000	ng/mL	----
PFDS_1	ND(W/B)	----	----	724949	4	----	ng/mL	----
PFBA	ND(W/B)	----	----	2883741	5	----	ng/mL	----
PFBA-13C	Auto	3.384	2883741	4324614	1	3.9568	ng/mL	----
PFBA-13C_IS	Auto	3.384	2883741	2883741	5	5.0000	ng/mL	----
PFPeA	Auto	3.906	79838	1453762	6	0.0086	ng/mL	----
PFPeA-13C	Auto	3.908	1453762	4324614	1	3.7095	ng/mL	----
PFPeA-13C_IS	Auto	3.908	1453762	1453762	6	5.0000	ng/mL	----
PFHxA	M	4.187	30306	3667752	7	0.0027	ng/mL	----
PFHxA-13C	Auto	4.216	3667752	4324614	1	4.1744	ng/mL	----
PFHxA-13C_IS	Auto	4.216	3667752	3667752	7	5.0000	ng/mL	----
PFHpA	M	4.381	14907	4142042	8	-0.0090	ng/mL	----
PFHpA-13C	Auto	4.401	4142042	4324614	1	4.4032	ng/mL	----
PFHpA-13C_IS	Auto	4.401	4142042	4142042	8	5.0000	ng/mL	----
PFOA	M	4.557	32022	4528088	9	0.0008	ng/mL	----
PFOA-13C	Auto	4.570	4528088	4324614	1	4.5060	ng/mL	----
PFOA-13C_IS	Auto	4.570	4528088	4528088	9	5.0000	ng/mL	----
PFNA	Auto	4.730	15281	3047399	10	-0.0064	ng/mL	----
PFNA-13C	Auto	4.743	3047399	4324614	1	4.4324	ng/mL	----
PFNA-13C_IS	Auto	4.743	3047399	3047399	10	5.0000	ng/mL	----
PFDA	M	4.917	9664	2590617	11	-0.0016	ng/mL	----
PFDA-13C	Auto	4.922	2590617	4324614	1	4.1359	ng/mL	----
PFDA-13C_IS	Auto	4.922	2590617	2590617	11	5.0000	ng/mL	----
PFUnA	M	5.101	14907	3070525	12	-0.0119	ng/mL	----
PFUnA-13C	Auto	5.102	3070525	4324614	1	4.7319	ng/mL	----
PFUnA-13C_IS	Auto	5.102	3070525	3070525	12	5.0000	ng/mL	----
PFDoA	Auto	5.277	7604	3525842	13	-0.0078	ng/mL	----
PFDoA-13C	Auto	5.275	3525842	4324614	1	4.0996	ng/mL	----
PFDoA-13C_IS	Auto	5.275	3525842	3525842	13	5.0000	ng/mL	----
PFTrDA	Auto	5.436	14080	2715636	14	-0.0078	ng/mL	----
PFTeDA	M	5.589	37355	2715636	14	-0.0044	ng/mL	----
PFTeDA-13C	Auto	5.589	2715636	4324614	1	3.6326	ng/mL	----
PFTeDA-13C_IS	Auto	5.589	2715636	2715636	14	5.0000	ng/mL	----
FOSA	Auto	5.238	1120	1384556	16	0.0036	ng/mL	----
FOSA-13C	Auto	5.233	1384556	4324614	1	3.8101	ng/mL	----
FOSA-13C_IS	Auto	5.233	1384556	1384556	16	5.0000	ng/mL	----
N-MeFOSAA	NI	----	----	433088	21	----	ng/mL	----
N-MeFOSAA-d3	Auto	5.022	433088	4324614	1	3.2314	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.022	433088	433088	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.131	331	427708	22	0.0064	ng/mL	----
N-EtFOSAA-d5	Auto	5.119	427708	4324614	1	3.9198	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.119	427708	427708	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.557	1165	293589	24	0.0158	ng/mL	----
6_2-FTS-13C	Auto	4.558	293589	4324614	1	4.4046	ng/mL	----
6_2-FTS-13C_IS	Auto	4.558	293589	293589	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.920	149	216080	25	0.0044	ng/mL	----
8_2-FTS-13C	Auto	4.918	216080	4324614	1	4.1793	ng/mL	----
8_2-FTS-13C_IS	Auto	4.918	216080	216080	25	5.0000	ng/mL	----

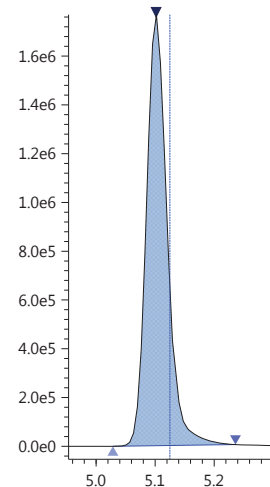
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
RT 5.102 Area 4324614

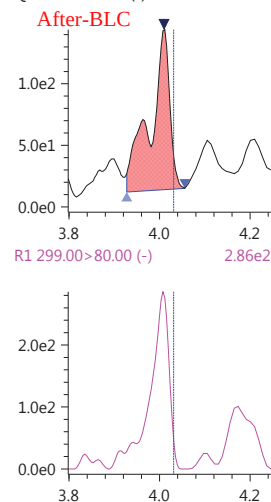
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0043
RT 4.010 Area 393
R#1 217.48 (0.00)

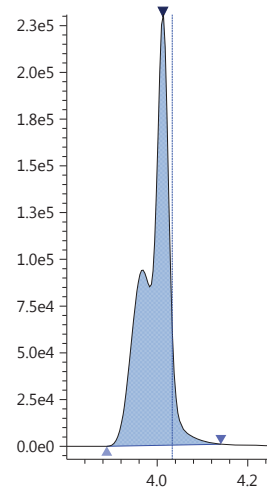
Q 298.80>99.00 (-)



PFBS-13C

Conc 2.5731
RT 4.012 Area 748493

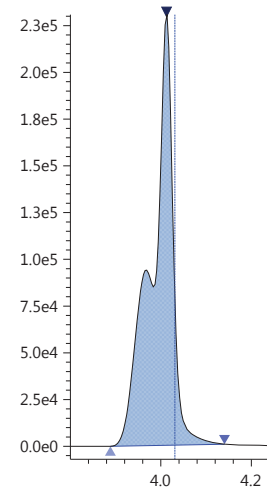
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.012 Area 748493

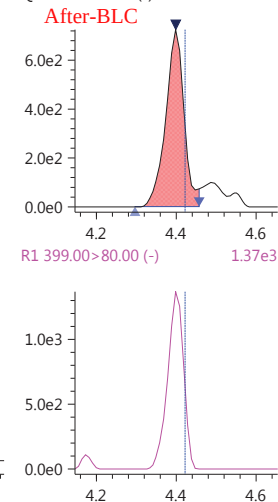
ISTD 301.80>80.00 (-)



PFHxS_1

Conc 0.0190
RT 4.399 Area 2305
R#1 201.07 (0.00)

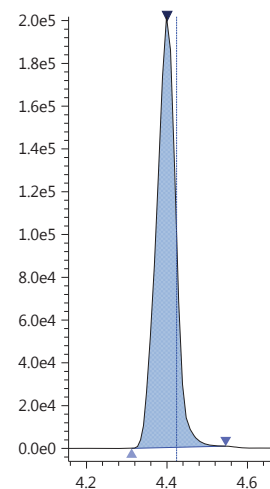
Q 399.00>99.00 (-)



PFHxS-180

Conc 4.3613
RT 4.400 Area 672159

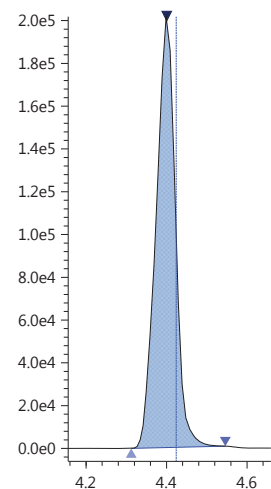
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.400 Area 672159

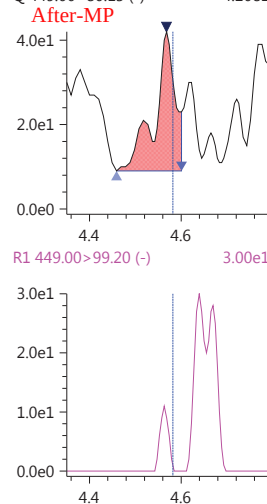
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0006
RT 4.568 Area 101
R#1 40.74 (0.00)

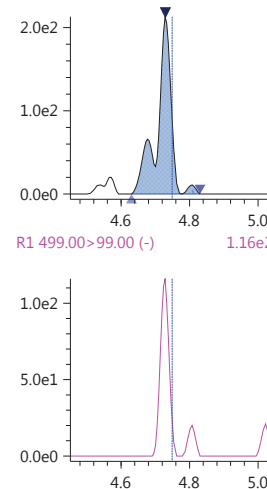
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0048
RT 4.730 Area 611
R#1 56.03 (0.00)

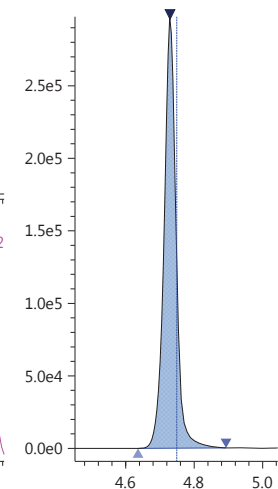
Q 499.00>80.00 (-)



PFOS-13C

Conc 4.7663
RT 4.729 Area 724949

Q 502.80>80.05 (-)



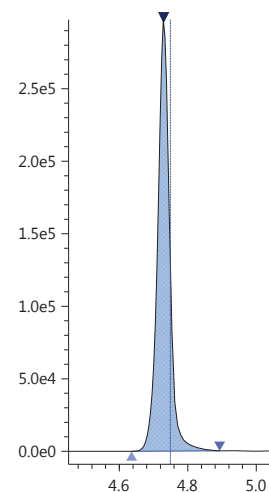
Insight Report

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PFOS-13C_IS

Conc 5.0000
RT 4.729 Area 724949

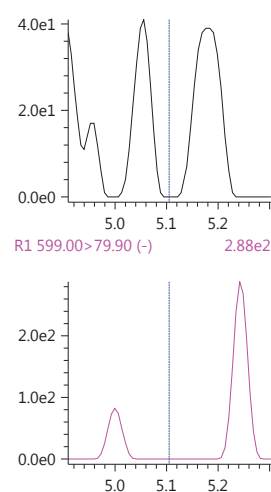
ISTD 502.80>80.05 (-)



PFDS_1

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

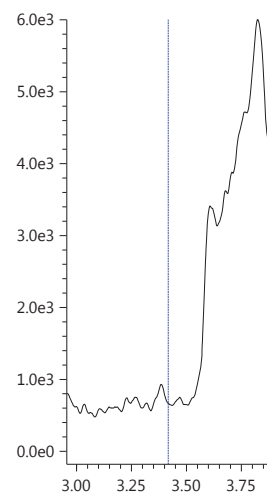
Q 599.00>99.10 (-)



PFBA

Conc ----
RT ---- Area ----

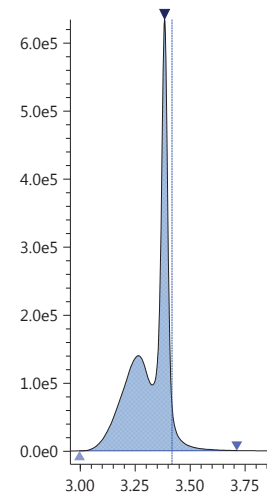
Q 213.00>169.10 (-)



PFBA-13C

Conc 3.9568
RT 3.384 Area 2883741

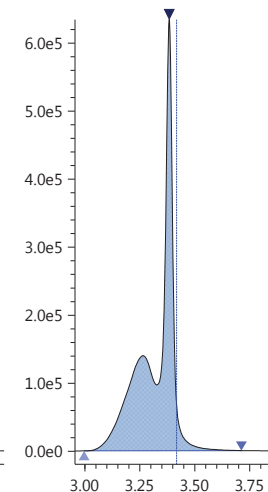
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
RT 3.384 Area 2883741

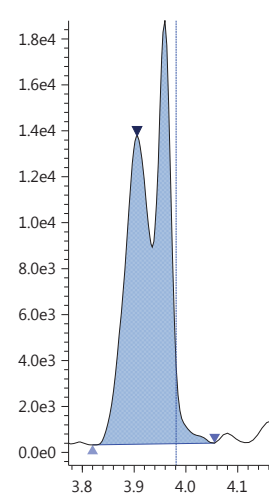
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0086
RT 3.906 Area 79838

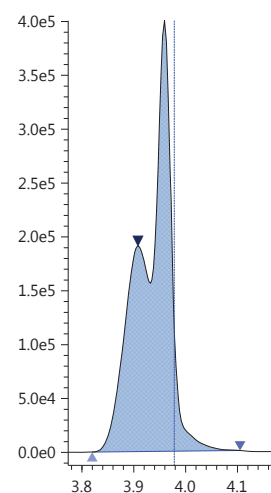
Q 263.05>219.10 (-)



PFPeA-13C

Conc 3.7095
RT 3.908 Area 1453762

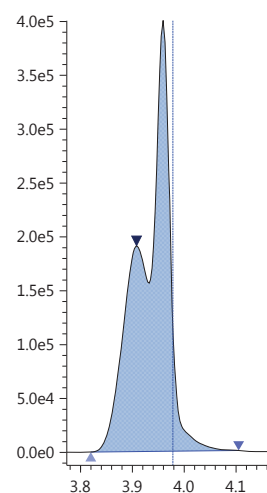
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.908 Area 1453762

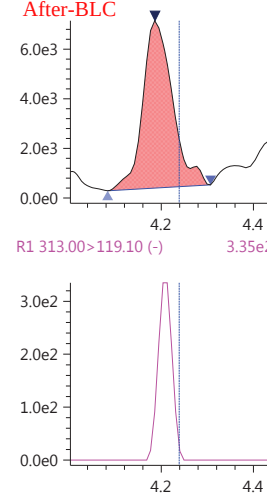
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.0027
RT 4.187 Area 30306
R#1 1.47 (0.00)

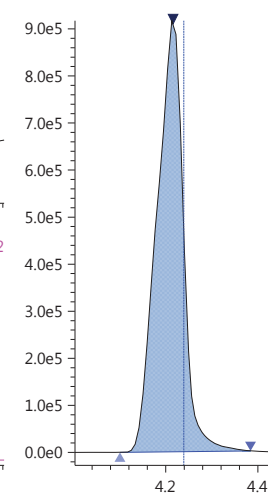
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.1744
RT 4.216 Area 3667752

Q 314.90>270.10 (-)



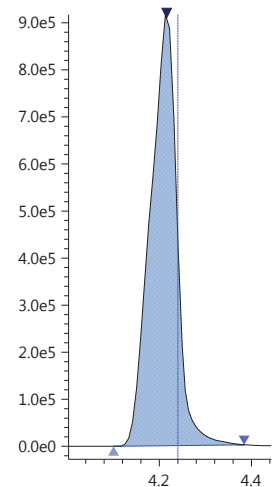
Insight Report

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PFHxA-13C_IS

Conc 5.0000
RT 4.216 Area 3667752

ISTD 314.90>270.10 (-) 9.17e5

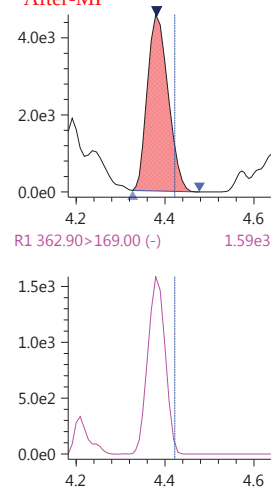


PFHpA

Conc -0.0090
RT 4.381 Area 14907
R#1 33.98 (0.00)

Q 362.90>319.00 (-)

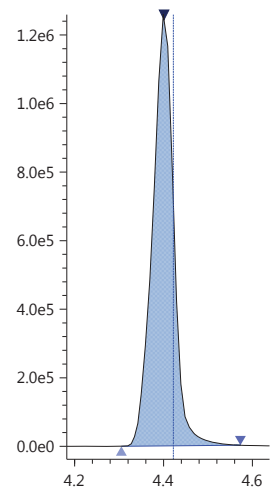
After-MP



PFHpA-13C

Conc 4.4032
RT 4.401 Area 4142042

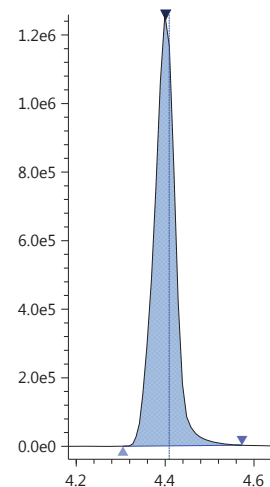
Q 366.90>322.10 (-)



PFHpA-13C_IS

Conc 5.0000
RT 4.401 Area 4142042

ISTD 366.90>322.10 (-) 1.26e6

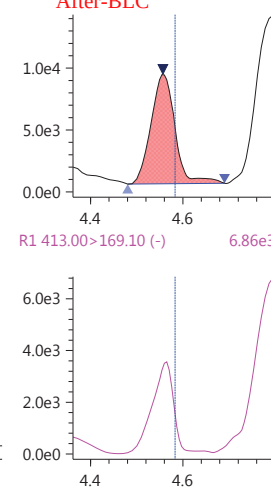


PFOA

Conc 0.0008
RT 4.557 Area 32022
R#1 39.01 (0.00)

Q 413.00>369.00 (-)

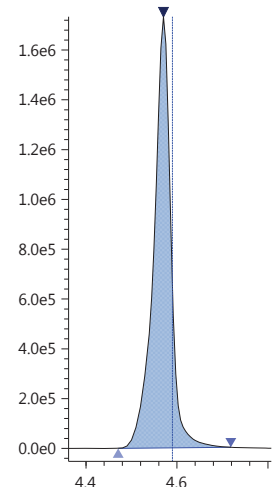
After-BLC



PFOA-13C

Conc 4.5060
RT 4.570 Area 4528088

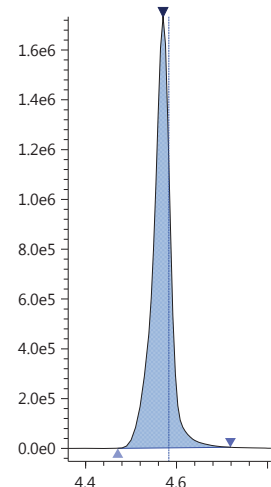
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
RT 4.570 Area 4528088

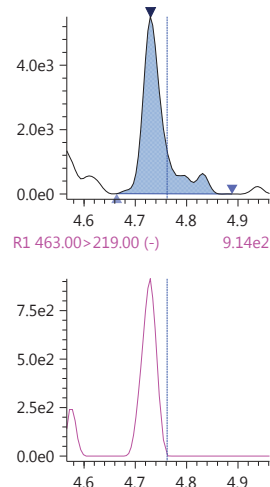
ISTD 416.80>372.05 (-)



PFNA

Conc -0.0064
RT 4.730 Area 15281
R#1 15.69 (0.00)

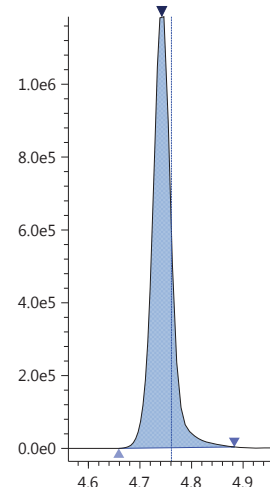
Q 463.00>418.90 (-)



PFNA-13C

Conc 4.4324
RT 4.743 Area 3047399

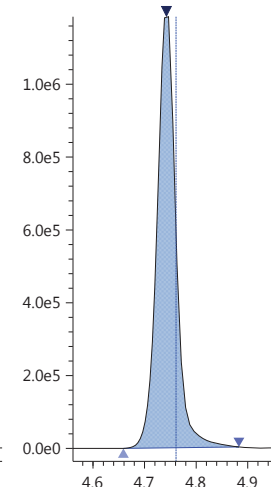
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
RT 4.743 Area 3047399

ISTD 467.80>423.00 (-)

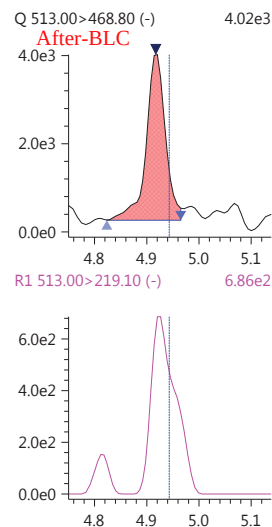


Insight Report

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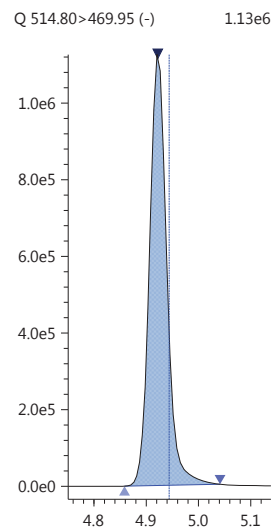
PFDA

Conc -0.0016
RT 4.917 Area 9664
R#1 12.20 (0.00)



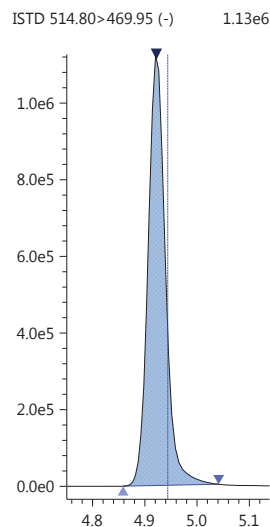
PFDA-13C

Conc 4.1359
RT 4.922 Area 2590617



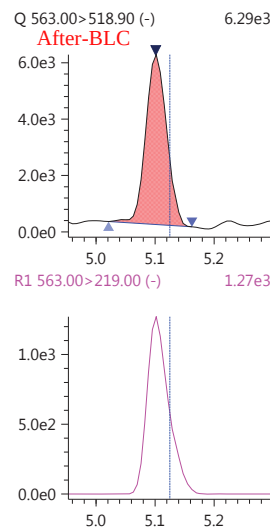
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Conc 5.0000
RT 4.922 Area 2590617



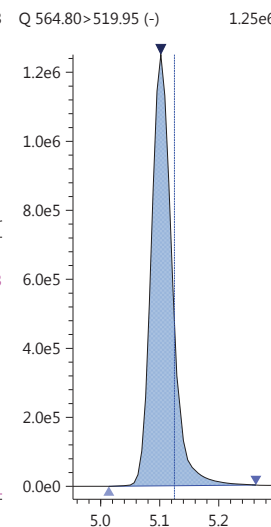
PFUnA

Conc -0.0119
RT 5.101 Area 14907
R#1 20.96 (0.00)



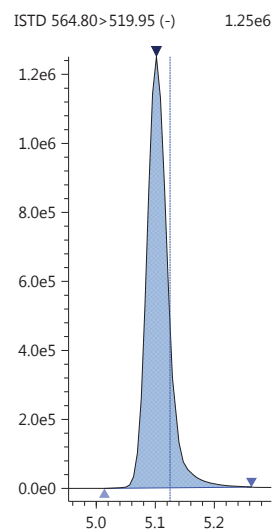
PFUnA-13C

Conc 4.7319
RT 5.102 Area 3070525



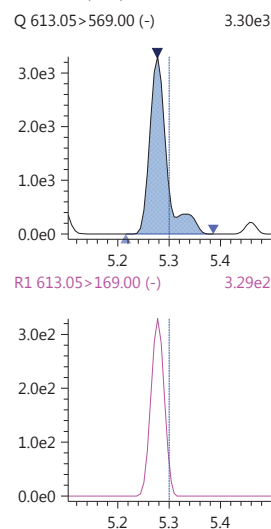
PFUnA-13C_IS

Conc 5.0000
RT 5.102 Area 3070525



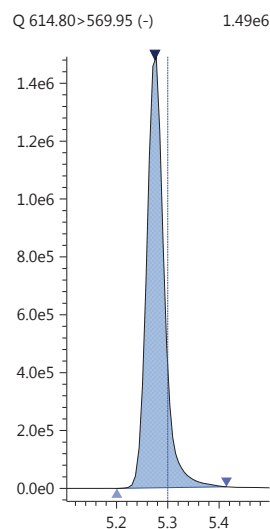
PFD0A

Conc -0.0078
RT 5.277 Area 7604
R#1 10.16 (0.00)



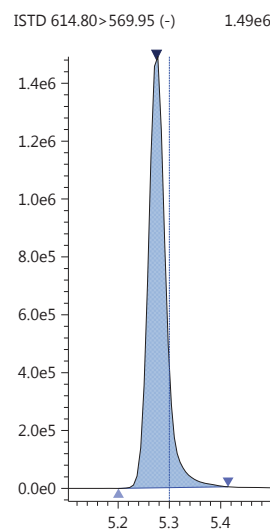
PFD0A-13C

Conc 4.0996
RT 5.275 Area 3525842



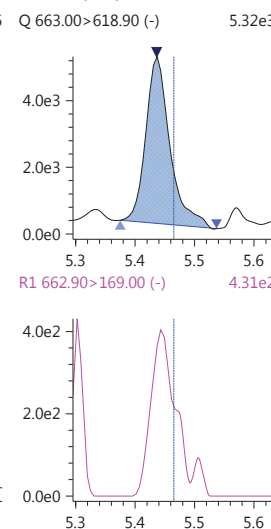
PFD0A-13C_IS

Conc 5.0000
RT 5.275 Area 3525842



PFTrDA

Conc -0.0078
RT 5.436 Area 14080
R#1 7.10 (0.00)

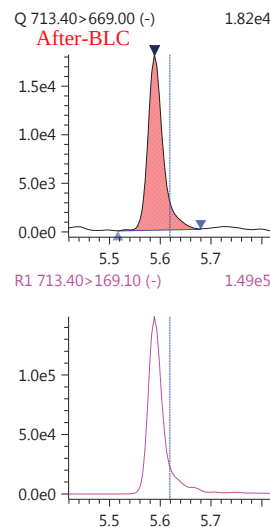


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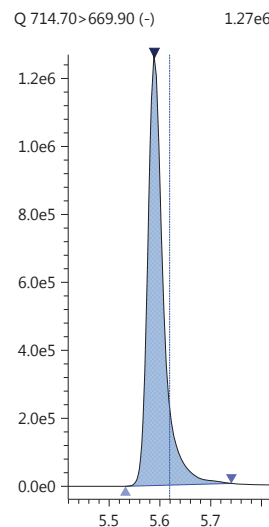
PFTeDA

Conc -0.0044
RT 5.589 Area 37355
R#1 816.19 (0.00)



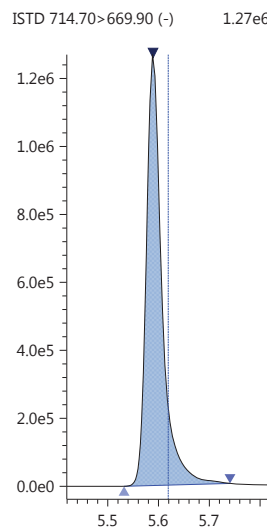
PFTeDA-13C

Conc 3.6326
RT 5.589 Area 2715636



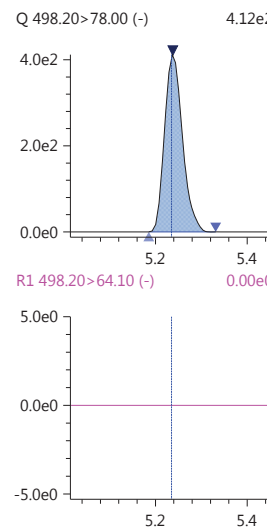
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Conc 5.0000
RT 5.589 Area 2715636



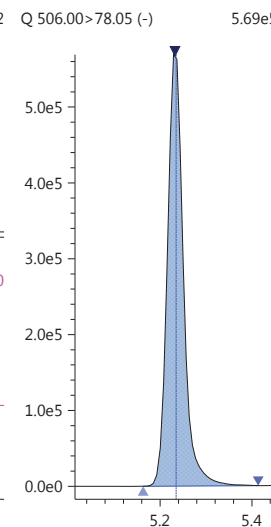
FOSA

Conc 0.0036
RT 5.238 Area 1120
R#1 0.00 (0.00)



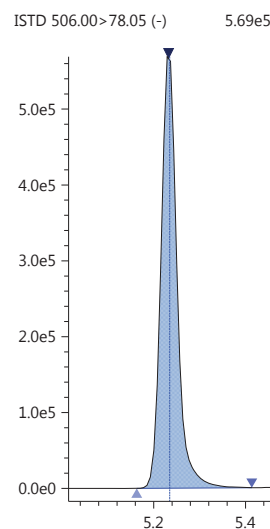
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Conc 3.8101
RT 5.233 Area 1384556



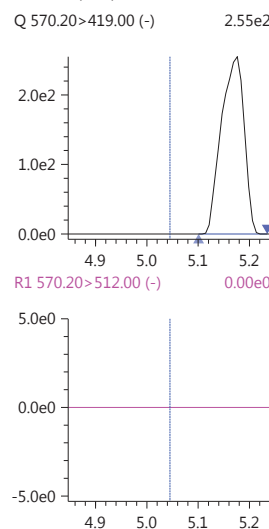
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Conc 5.0000
RT 5.233 Area 1384556



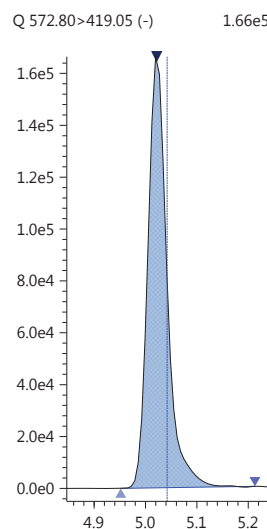
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Conc ----
RT ---- Area ----
R#1 0.00 (0.00)



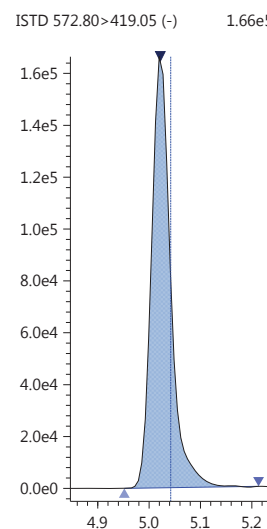
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Conc 3.2314
RT 5.022 Area 433088



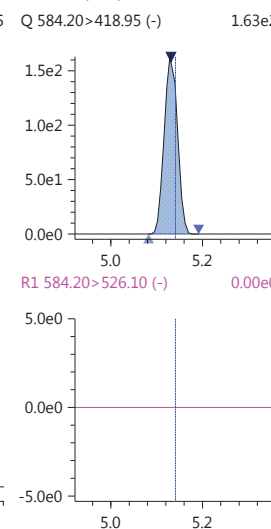
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Conc 5.0000
RT 5.022 Area 433088



N-EtFOSAA

Conc 0.0064
RT 5.131 Area 331
R#1 0.00 (0.00)



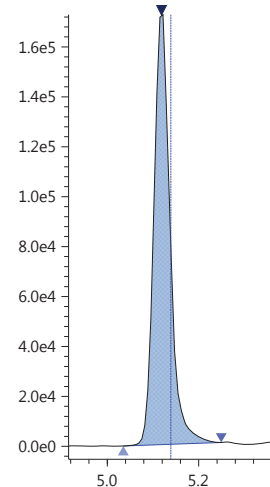
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N-EtFOSAA-d5

Conc 3.9198
RT 5.119 Area 427708

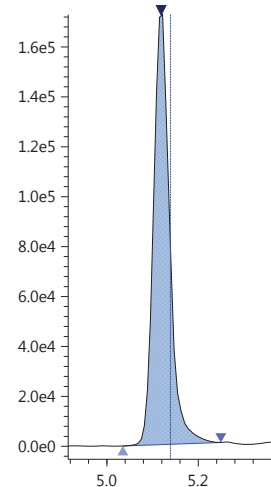
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N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.119 Area 427708

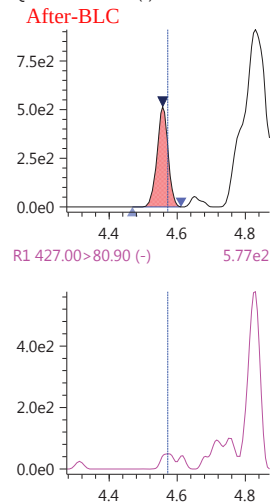
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6_2-FTS_1

Conc 0.0158
RT 4.557 Area 1165
R#1 2.32 (0.00)

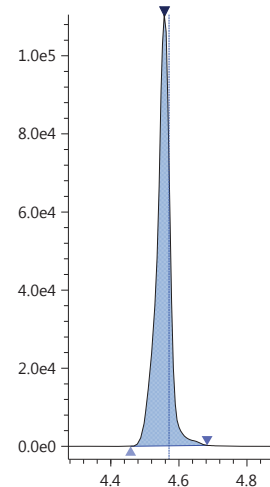
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 4.4046
RT 4.558 Area 293589

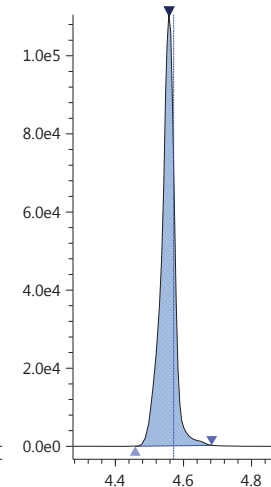
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.558 Area 293589

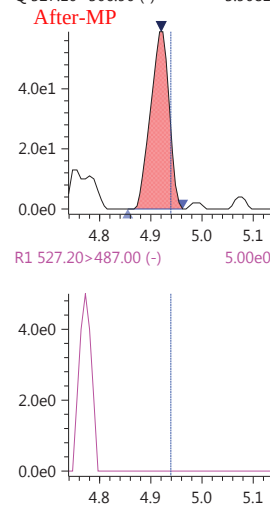
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8_2-FTS_1

Conc 0.0044
RT 4.920 Area 149
R#1 0.00 (0.00)

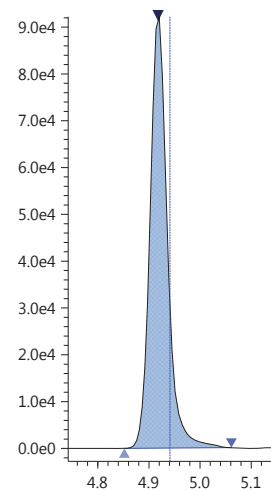
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.1793
RT 4.918 Area 216080

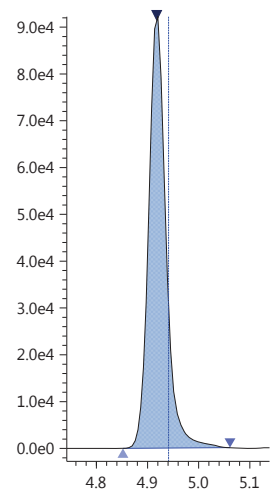
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.918 Area 216080

ISTD 528.80>509.00 (-)



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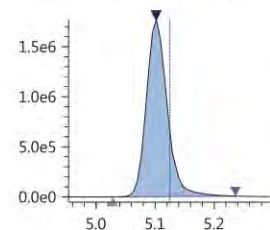
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191203_170

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Date acquired: 12/4/2019 8:30:25 PM
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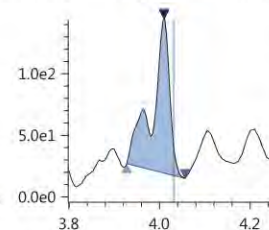
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Conc 5.0000
RT 5.102 Area 4324614
ISTD 570.00>525.00 (-)



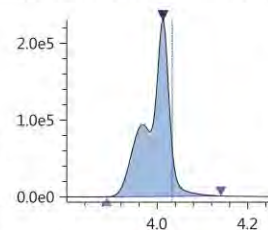
PFBS_1

Conc 0.0037
RT 4.010 Area 336
Q 298.80>99.00 (-)



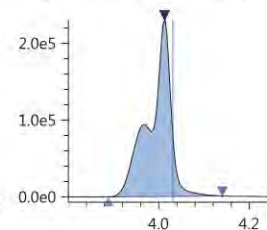
PFBS-13C

Conc 2.5731
RT 4.012 Area 748493
Q 301.80>80.00 (-)



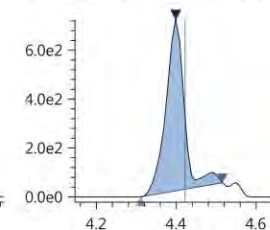
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Conc 5.0000
RT 4.012 Area 748493
ISTD 301.80>80.00 (-)



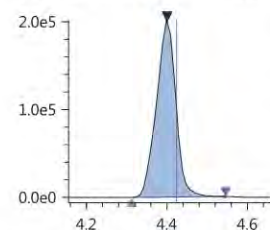
PFHxS_1

Conc 0.0186
RT 4.399 Area 2261
Q 399.00>99.00 (-)



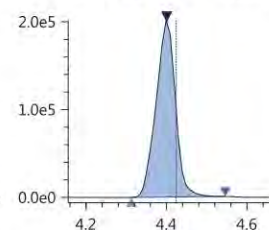
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Conc 4.3613
RT 4.400 Area 672159
Q 402.70>84.05 (-)



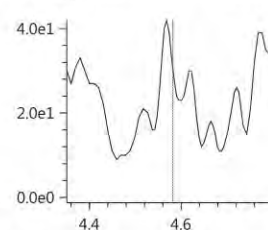
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Conc 5.0000
RT 4.400 Area 672159
ISTD 402.70>84.05 (-)



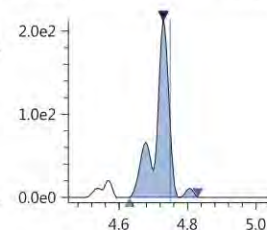
PFHpS_1

Conc ----
RT ---- Area ----
Q 449.00>80.15 (-)



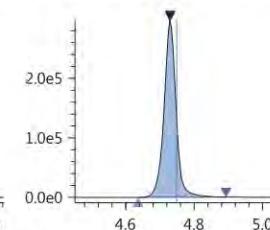
PFOS_1

Conc 0.0048
RT 4.730 Area 611
Q 499.00>80.00 (-)



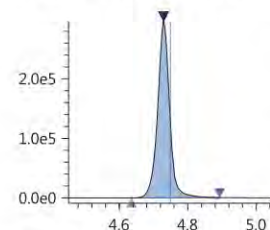
PFOS-13C

Conc 4.7663
RT 4.729 Area 724949
Q 502.80>80.05 (-)



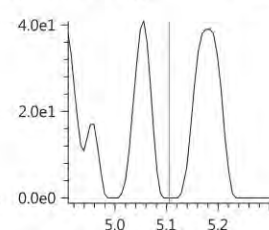
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ISTD 502.80>80.05 (-)



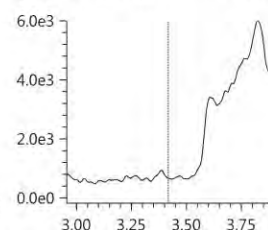
PFDS_1

Conc ----
RT ---- Area ----
Q 599.00>99.10 (-)



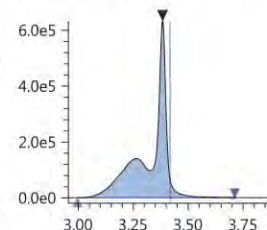
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-)



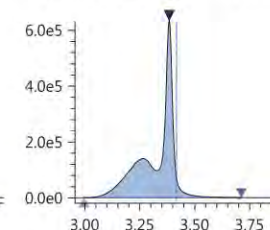
PFBA-13C

Conc 3.9568
RT 3.384 Area 2883741
Q 216.90>172.15 (-)



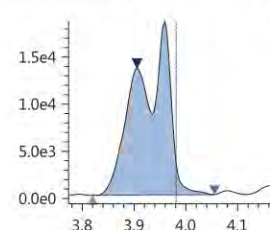
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Conc 5.0000
RT 3.384 Area 2883741
ISTD 216.90>172.15 (-)



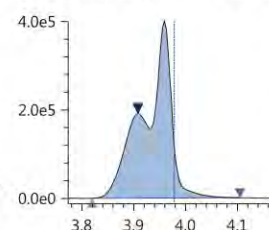
PFPeA

Conc 0.0086
RT 3.906 Area 79838
Q 263.05>219.10 (-)



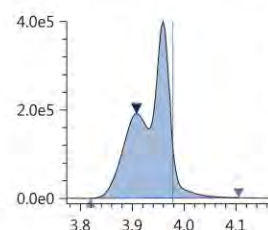
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Conc 3.7095
RT 3.908 Area 1453762
Q 267.90>223.00 (-)



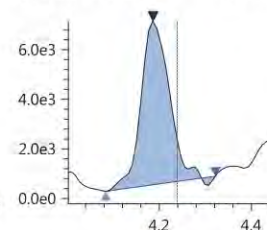
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Conc 5.0000
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ISTD 267.90>223.00 (-)



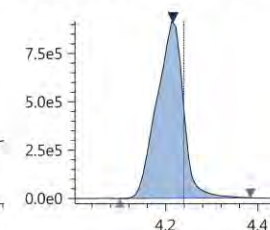
PFHxA

Conc 0.0002
RT 4.187 Area 27930
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.1744
RT 4.216 Area 3667752
Q 314.90>270.10 (-)

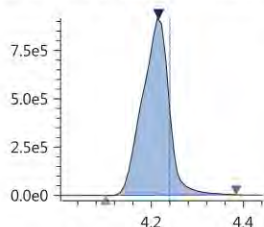


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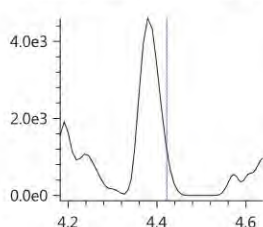
PFHxA-13C_IS

Conc 5.0000
RT 4.216 Area 3667752
ISTD 314.90>270.10 (-)



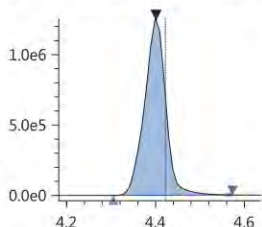
PFHpA

Conc ---
RT --- Area ---
Q 362.90>319.00 (-)



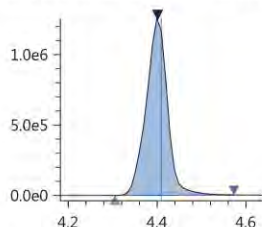
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Conc 4.4032
RT 4.401 Area 4142042
Q 366.90>322.10 (-)



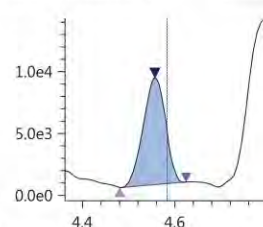
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Conc 5.0000
RT 4.401 Area 4142042
ISTD 366.90>322.10 (-)



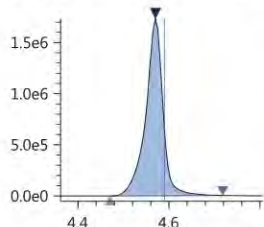
PFOA

Conc -0.0020
RT 4.557 Area 29015
Q 413.00>369.00 (-)



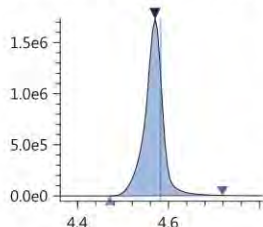
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Conc 4.5060
RT 4.570 Area 4528088
Q 416.80>372.05 (-)



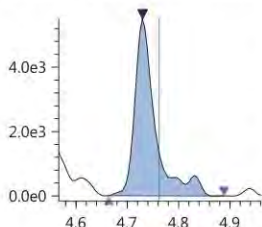
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ISTD 416.80>372.05 (-)



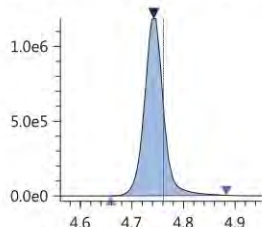
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Conc -0.0064
RT 4.730 Area 15281
Q 463.00>418.90 (-)



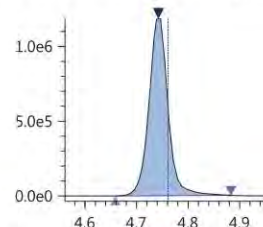
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Conc 4.4324
RT 4.743 Area 3047399
Q 467.80>423.00 (-)



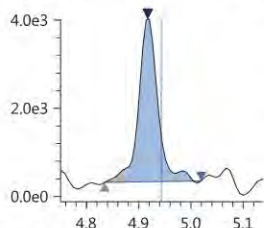
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Conc 5.0000
RT 4.743 Area 3047399
ISTD 467.80>423.00 (-)



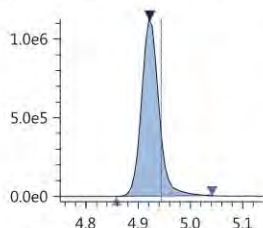
PFDA

Conc -0.0018
RT 4.917 Area 9515
Q 513.00>468.80 (-)



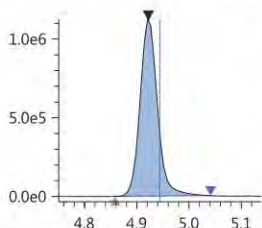
PFDA-13C

Conc 4.1359
RT 4.922 Area 2590617
Q 514.80>469.95 (-)



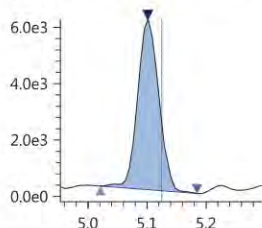
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Conc 5.0000
RT 4.922 Area 2590617
ISTD 514.80>469.95 (-)



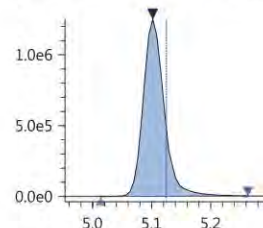
PFUnA

Conc -0.0116
RT 5.101 Area 15100
Q 563.00>518.90 (-)



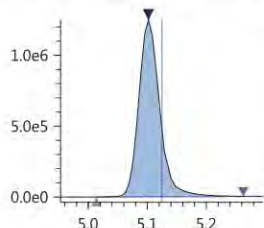
PFUnA-13C

Conc 4.7319
RT 5.102 Area 3070525
Q 564.80>519.95 (-)



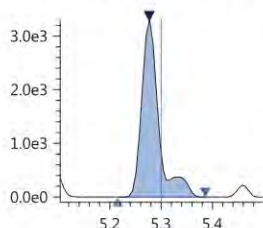
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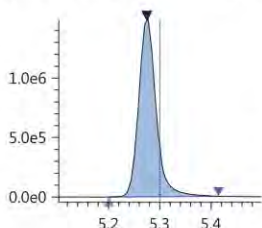
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Conc -0.0078
RT 5.277 Area 7604
Q 613.05>569.00 (-)



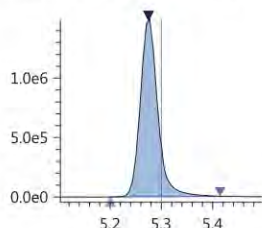
PFDaA-13C

Conc 4.0996
RT 5.275 Area 3525842
Q 614.80>569.95 (-)



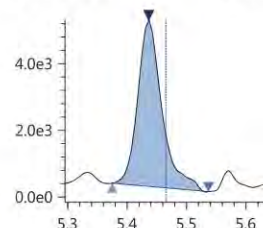
PFDaA-13C_IS

Conc 5.0000
RT 5.275 Area 3525842
ISTD 614.80>569.95 (-)



PFTrDA

Conc -0.0078
RT 5.436 Area 14080
Q 663.00>618.90 (-)

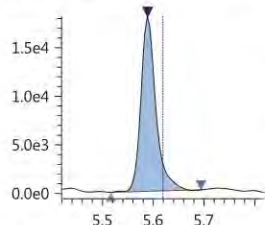


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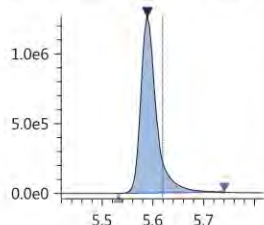
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RT 5.589 Area 36838
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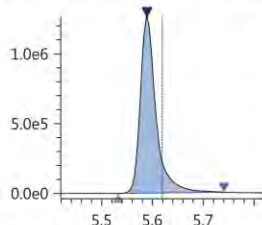
PFTeDA-13C

Conc 3.6326
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Q 714.70>669.90 (-)



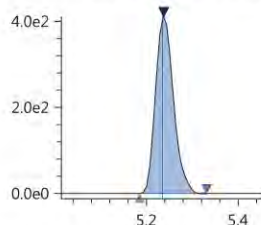
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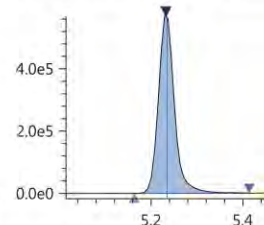
FOSA

Conc 0.0036
RT 5.238 Area 1120
Q 498.20>78.00 (-)



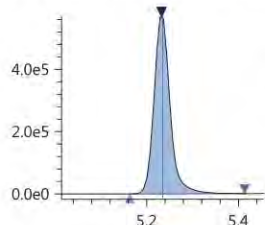
FOSA-13C

Conc 3.8101
RT 5.233 Area 1384556
Q 506.00>78.05 (-)



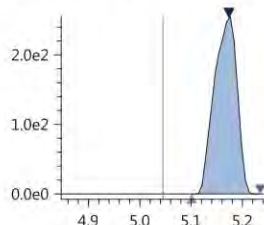
FOSA-13C_IS

Conc 5.0000
RT 5.233 Area 1384556
ISTD 506.00>78.05 (-)



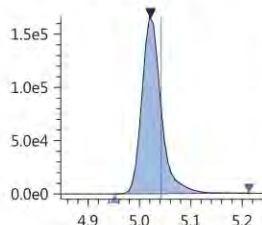
N-MeFOSAA

Conc 0.0375
RT 5.174 Area 792
Q 570.20>419.00 (-)



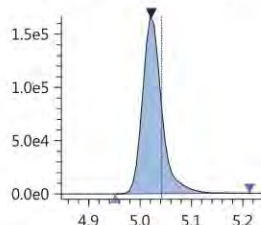
N-MeFOSAA-d3

Conc 3.2314
RT 5.022 Area 433088
Q 572.80>419.05 (-)



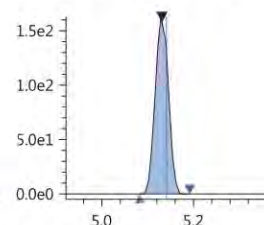
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.022 Area 433088
ISTD 572.80>419.05 (-)



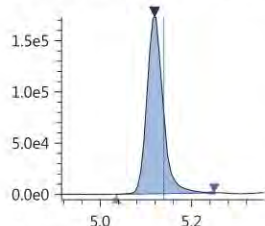
N-EtFOSAA

Conc 0.0064
RT 5.131 Area 331
Q 584.20>418.95 (-)



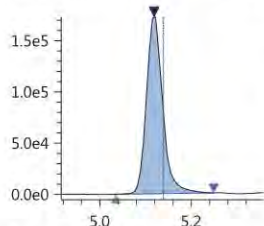
N-EtFOSAA-d5

Conc 3.9198
RT 5.119 Area 427708
Q 588.80>419.00 (-)



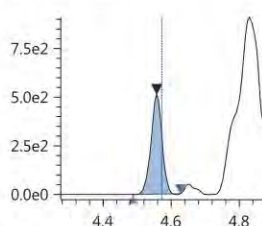
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.119 Area 427708
ISTD 588.80>419.00 (-)



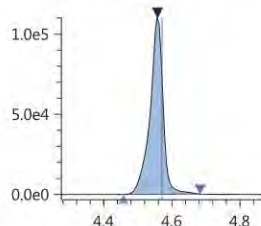
6_2-FTS_1

Conc 0.0156
RT 4.557 Area 1149
Q 427.00>407.00 (-)



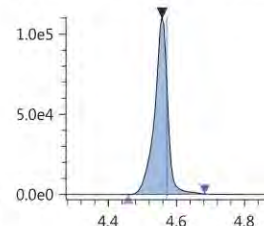
6_2-FTS-13C

Conc 4.4046
RT 4.558 Area 293589
Q 428.90>409.00 (-)



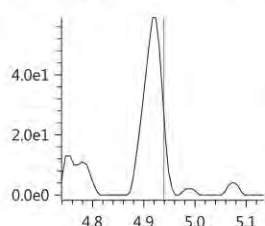
6_2-FTS-13C_IS

Conc 5.0000
RT 4.558 Area 293589
ISTD 428.90>409.00 (-)



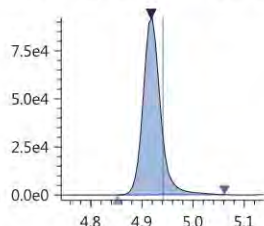
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)



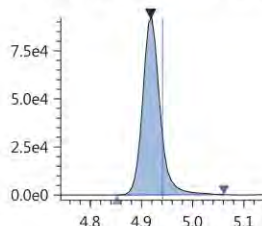
8_2-FTS-13C

Conc 4.1793
RT 4.918 Area 216080
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.918 Area 216080
ISTD 528.80>509.00 (-)



Validation Report

1st  12/06/19
2nd  12/10/19

Data File: J:\LCMS06\Data\191203_b12\191203_169
Lab ID: KQ1917554-03
RunType: LCS
Matrix: Water

Date Acquired: 12/4/19 20:19
Batch ID: 662103
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st 12/06/19
2nd 12/10/19

Data File:	J:\LCMS06\Data\191203_b12\191203_169	Instrument:	K-LCMS-06
Acqu Date:	12/4/19 20:19	Vial:	3
Run Type:	LCS	Dilution:	1
Lab ID:	KQ1917554-03	Raw Units:	ng/mL

Bottle ID:		Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	11/13/19	Receive Date:	11/18/19

Analysis Lot:	662103	Prep Lot:	349491	Report Group:	KQ1917554
Analysis	PFC/537M	Prep Method:	EPA 3535A		
		Prep Date:	11/26/19		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC1900518
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.103	+0.00	4404111	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.015	+0.00	794590	2.6822	54	20 - 109	Y
18O2-PFHxS	4.401		596651	3.8015	76	26 - 122	Y
13C4-PFOS	4.730		686942	4.4349	89	25 - 121	Y
13C4-PFBA	3.387	-0.01	2859617	3.8528	77	27 - 124	Y
13C5-PFPeA	3.910	-0.05	1498950	3.7557	75	27 - 138	Y
13C2-PFHxA	4.221	+0.00	3754281	4.1957	84	28 - 132	Y
13C4-PFHpA	4.402	+0.00	3769176	3.9345	79	19 - 139	Y
13C4-PFOA	4.571	+0.00	4614095	4.5087	90	22 - 130	Y
13C5-PFNA	4.744	+0.00	3129851	4.4701	89	20 - 127	Y
13C2-PFDA	4.924	+0.00	2757701	4.3232	86	24 - 125	Y
13C2-PFUnDA	5.103	+0.00	3219978	4.8726	97	22 - 125	Y
13C2-PFDoDA	5.275	+0.00	3556564	4.0607	81	19 - 122	Y
13C2-PFTeDA	5.592	+0.00	3042249	3.9961	80	13 - 124	Y
13C8-FOSA	5.233	+0.01	1427716	3.8579	77	18 - 109	Y
D3-MeFOSAA	5.022	+0.00	500676	3.6682	73	9 - 123	Y
D5-EtFOSAA	5.119	+0.01	487739	4.3893	88	12 - 126	Y
13C2-6:2 FTS	4.558	+0.00	295663	4.3556	87	10 - 226	Y
13C2-8:2 FTS	4.919	+0.00	244010	4.6343	93	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	3.970	-0.04	90633	0.9429	30.2		Y
Perfluorohexane sulfonic acid (PFHxS)	4.398	0.00	102839	0.9525	30.5		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 12/6/19 15:49

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		1st	12/06/19
Data File:	J:\LCMS06\Data\191203_b12\191203_169	Instrument:	K-LCMS06
Acqu Date:	12/4/19 20:19	Vial:	3
Run Type:	LCS	Dilution:	1
Lab ID:	KQ1917554-03	Raw Units:	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.563	+0.00	170914	1.2192	39.0		Y
Perfluorooctane sulfonic acid (PFOS)	4.730		125406	1.0346	33.1		Y
Perfluorodecane sulfonic acid (PFDS)	5.082	+0.00	80404	0.8610	27.6		Y
Perfluorobutanoic acid (PFBA)	3.388	-0.01	618192	1.1001	35.2		Y
Perfluoropentanoic acid (PFPeA)	3.911	-0.05	783887	1.0703	34.2		Y
Perfluorohexanoic acid (PFHxA)	4.220	+0.00	954670	0.9508	30.4		Y
Perfluoroheptanoic acid (PFHpA)	4.402	+0.00	759769	1.0178	32.6		Y
Perfluorooctanoic acid (PFOA)	4.571	+0.00	1128264	0.9989	32.0		Y
Perfluorononanoic acid (PFNA)	4.743	+0.00	685437	1.0281	32.9		Y
Perfluorodecanoic acid (PFDA)	4.923		585964	0.9971	31.9		Y
Perfluoroundecanoic acid (PFUnDA)	5.103	+0.00	554940	0.9730	31.1		Y
Perfluorododecanoic acid (PFDoDA)	5.276	+0.00	444801	0.9781	31.3		Y
Perfluorotridecanoic acid (PFTrDA)	5.439	+0.00	738607	1.1377	36.4		Y
Perfluorotetradecanoic acid (PFTeDA)	5.592	+0.00	323729	0.9813	31.4		Y
Perfluorooctane sulfonamide (FOSA)	5.233	+0.01	351056	1.0796	34.5		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.024	+0.00	68630	1.1603	37.1		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.121	+0.00	49541	0.8352	26.7		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.558	+0.00	81930	1.1033	35.3		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.918	+0.00	37878	0.9909	31.7		Y

Prep Amount: 250 mL
Prep Final Amount: 8.00 mL

Dilution: 1
Basis Factor: 100.00

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

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Insight Report

Printed at 12/6/2019 3:10:36 PM

191203_169

Sample ID: KQ1917554-03

Date acquired: 12/4/2019 8:19:58 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191203_b12\191203_169.lcd

Vial: 1 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.103	4404111	4404111	1	5.0000	ng/mL	----
PFBS_1	Auto	3.970	90633	794590	2	0.9429	ng/mL	----
PFBS-13C	Auto	4.015	794590	4404111	1	2.6822	ng/mL	----
PFBS-13C_IS	Auto	4.015	794590	794590	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.398	102839	596651	3	0.9525	ng/mL	----
PFHxS-18O	Auto	4.401	596651	4404111	1	3.8015	ng/mL	----
PFHxS-18O_IS	Auto	4.401	596651	596651	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.563	170914	596651	3	1.2192	ng/mL	----
PFOS_1	Auto	4.730	125406	686942	4	1.0346	ng/mL	----
PFOS-13C	Auto	4.730	686942	4404111	1	4.4349	ng/mL	----
PFOS-13C_IS	Auto	4.730	686942	686942	4	5.0000	ng/mL	----
PFDS_1	Auto	5.082	80404	686942	4	0.8610	ng/mL	----
PFBA	Auto	3.388	618192	2859617	5	1.1001	ng/mL	----
PFBA-13C	Auto	3.387	2859617	4404111	1	3.8528	ng/mL	----
PFBA-13C_IS	Auto	3.387	2859617	2859617	5	5.0000	ng/mL	----
PFPeA	Auto	3.911	783887	1498950	6	1.0703	ng/mL	----
PFPeA-13C	Auto	3.910	1498950	4404111	1	3.7557	ng/mL	----
PFPeA-13C_IS	Auto	3.910	1498950	1498950	6	5.0000	ng/mL	----
PFHxA	Auto	4.220	954670	3754281	7	0.9508	ng/mL	----
PFHxA-13C	Auto	4.221	3754281	4404111	1	4.1957	ng/mL	----
PFHxA-13C_IS	Auto	4.221	3754281	3754281	7	5.0000	ng/mL	----
PFHpA	Auto	4.402	759769	3769176	8	1.0178	ng/mL	----
PFHpA-13C	Auto	4.402	3769176	4404111	1	3.9345	ng/mL	----
PFHpA-13C_IS	Auto	4.402	3769176	3769176	8	5.0000	ng/mL	----
PFOA	M	4.571	1128264	4614095	9	0.9989	ng/mL	----
PFOA-13C	Auto	4.571	4614095	4404111	1	4.5087	ng/mL	----
PFOA-13C_IS	Auto	4.571	4614095	4614095	9	5.0000	ng/mL	----
PFNA	M	4.743	685437	3129851	10	1.0281	ng/mL	----
PFNA-13C	Auto	4.744	3129851	4404111	1	4.4701	ng/mL	----
PFNA-13C_IS	Auto	4.744	3129851	3129851	10	5.0000	ng/mL	----
PFDA	Auto	4.923	585964	2757701	11	0.9971	ng/mL	----
PFDA-13C	Auto	4.924	2757701	4404111	1	4.3232	ng/mL	----
PFDA-13C_IS	Auto	4.924	2757701	2757701	11	5.0000	ng/mL	----
PFUnA	Auto	5.103	554940	3219978	12	0.9730	ng/mL	----
PFUnA-13C	Auto	5.103	3219978	4404111	1	4.8726	ng/mL	----
PFUnA-13C_IS	Auto	5.103	3219978	3219978	12	5.0000	ng/mL	----
PFDoA	Auto	5.276	444801	3556564	13	0.9781	ng/mL	----
PFDoA-13C	Auto	5.275	3556564	4404111	1	4.0607	ng/mL	----
PFDoA-13C_IS	Auto	5.275	3556564	3556564	13	5.0000	ng/mL	----
PFTeDA	Auto	5.439	738607	3042249	14	1.1377	ng/mL	----
PFTeDA	Auto	5.592	323729	3042249	14	0.9813	ng/mL	----
PFTeDA-13C	Auto	5.592	3042249	4404111	1	3.9961	ng/mL	----
PFTeDA-13C_IS	Auto	5.592	3042249	3042249	14	5.0000	ng/mL	----
FOSA	Auto	5.233	351056	1427716	16	1.0796	ng/mL	----
FOSA-13C	Auto	5.233	1427716	4404111	1	3.8579	ng/mL	----
FOSA-13C_IS	Auto	5.233	1427716	1427716	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.024	68630	500676	21	1.1603	ng/mL	----
N-MeFOSAA-d3	Auto	5.022	500676	4404111	1	3.6682	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.022	500676	500676	21	5.0000	ng/mL	----
N-EtFOSAA	M	5.121	49541	487739	22	0.8352	ng/mL	----
N-EtFOSAA-d5	Auto	5.119	487739	4404111	1	4.3893	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.119	487739	487739	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.558	81930	295663	24	1.1033	ng/mL	----
6_2-FTS-13C	Auto	4.558	295663	4404111	1	4.3556	ng/mL	----
6_2-FTS-13C_IS	Auto	4.558	295663	295663	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.918	37878	244010	25	0.9909	ng/mL	----
8_2-FTS-13C	Auto	4.919	244010	4404111	1	4.6343	ng/mL	----
8_2-FTS-13C_IS	Auto	4.919	244010	244010	25	5.0000	ng/mL	----

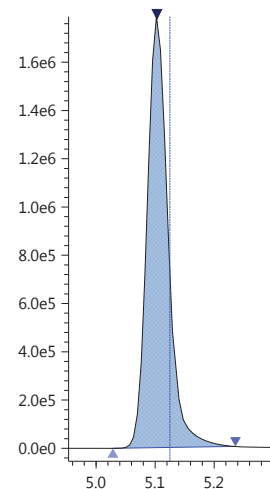
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
RT 5.103 Area 4404111

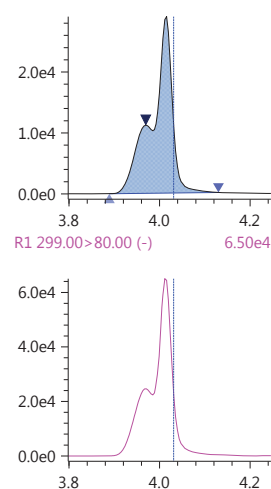
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.9429
RT 3.970 Area 90633
R#1 219.53 (0.00)

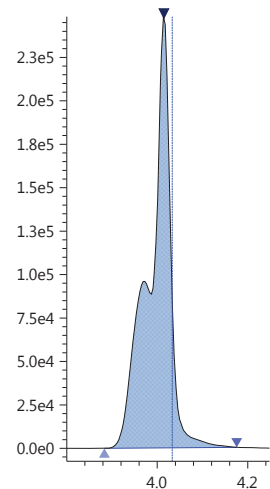
Q 298.80>99.00 (-)



PFBS-13C

Conc 2.6822
RT 4.015 Area 794590

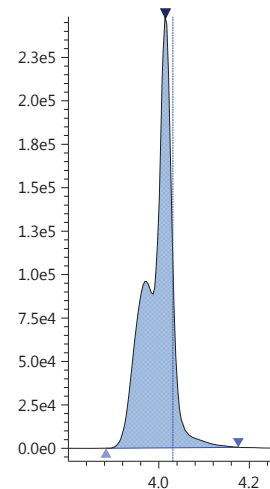
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.015 Area 794590

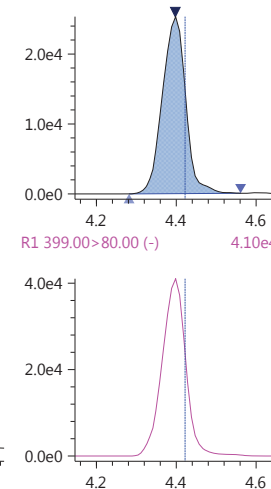
ISTD 301.80>80.00 (-)



PFHxS_1

Conc 0.9525
RT 4.398 Area 102839
R#1 161.90 (0.00)

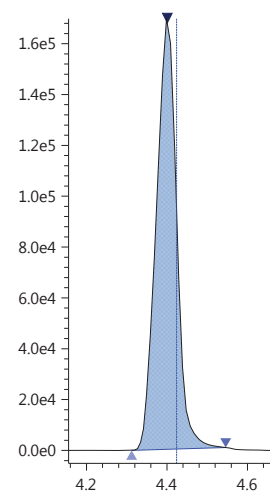
Q 399.00>99.00 (-)



PFHxS-180

Conc 3.8015
RT 4.401 Area 596651

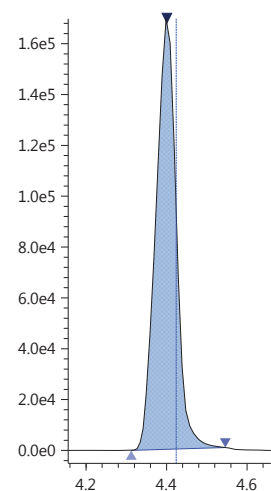
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.401 Area 596651

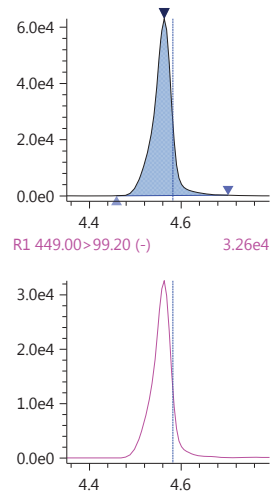
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 1.2192
RT 4.563 Area 170914
R#1 51.85 (0.00)

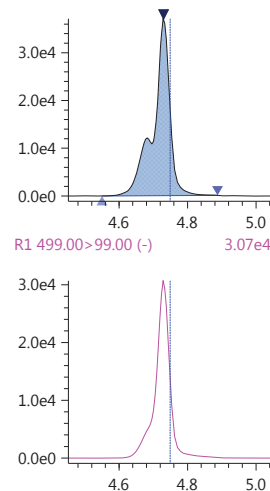
Q 449.00>80.15 (-)



PFOS_1

Conc 1.0346
RT 4.730 Area 125406
R#1 80.52 (0.00)

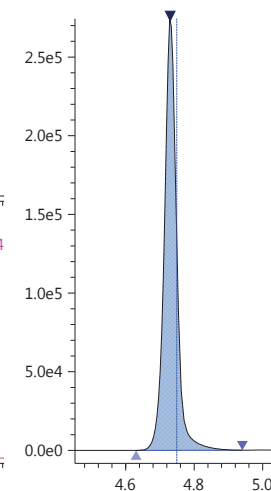
Q 499.00>80.00 (-)



PFOS-13C

Conc 4.4349
RT 4.730 Area 686942

Q 502.80>80.05 (-)



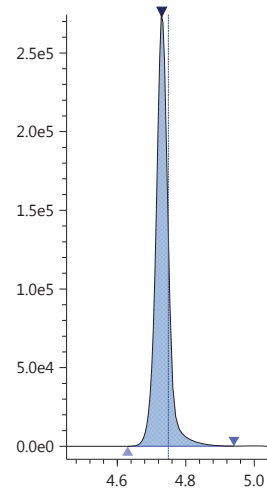
Insight Report

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PFOS-13C_IS

Conc 5.0000
RT 4.730 Area 686942

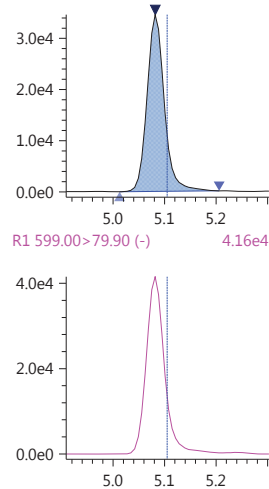
ISTD 502.80>80.05 (-)



PFDS_1

Conc 0.8610
RT 5.082 Area 80404
R#1 119.37 (0.00)

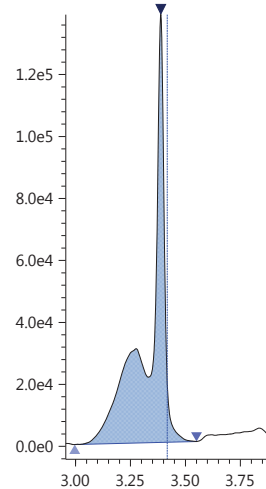
Q 599.00>99.10 (-)



PFBA

Conc 1.1001
RT 3.388 Area 618192

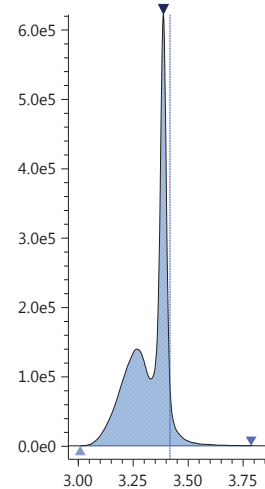
Q 213.00>169.10 (-)



PFBA-13C

Conc 3.8528
RT 3.387 Area 2859617

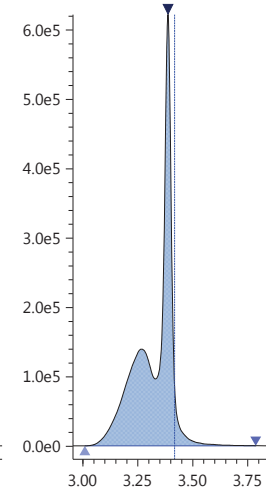
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
RT 3.387 Area 2859617

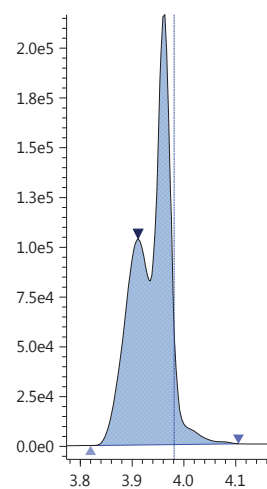
ISTD 216.90>172.15 (-)



PFPeA

Conc 1.0703
RT 3.911 Area 783887

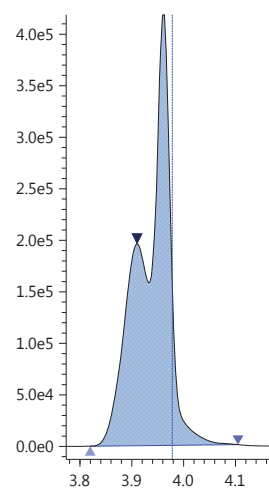
Q 263.05>219.10 (-)



PFPeA-13C

Conc 3.7557
RT 3.910 Area 1498950

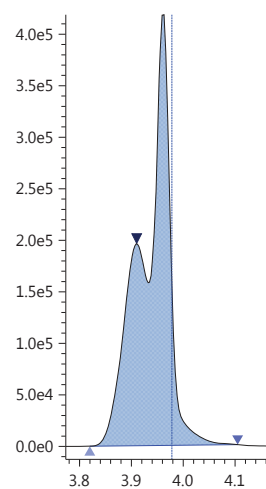
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.910 Area 1498950

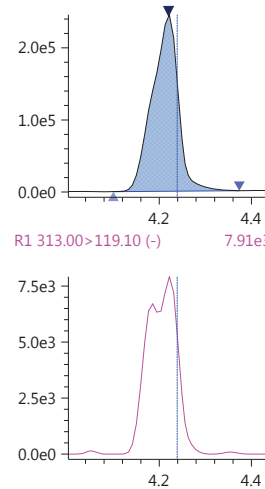
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.9508
RT 4.220 Area 954670
R#1 3.22 (0.00)

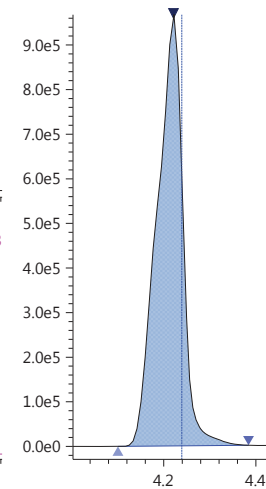
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.1957
RT 4.221 Area 3754281

Q 314.90>270.10 (-)



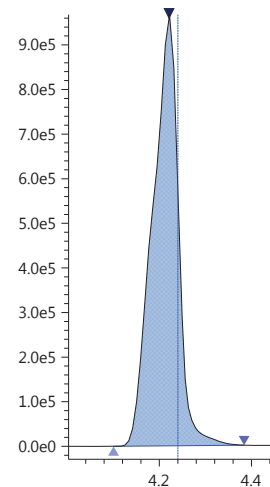
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PFHxA-13C_IS

Conc 5.0000
RT 4.221 Area 3754281

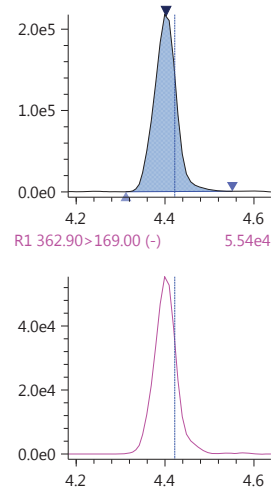
ISTD 314.90>270.10 (-)



PFHpA

Conc 1.0178
RT 4.402 Area 759769
R#1 25.37 (0.00)

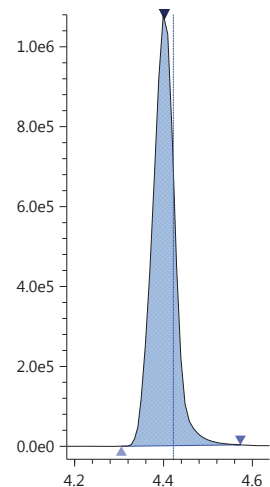
Q 362.90>319.00 (-)



PFHpA-13C

Conc 3.9345
RT 4.402 Area 3769176

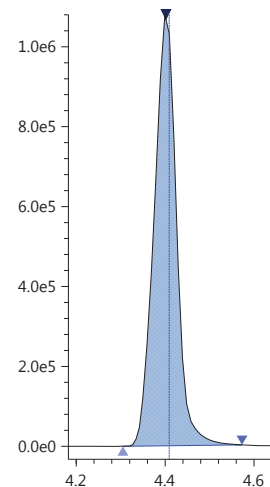
Q 366.90>322.10 (-)



PFHpA-13C_IS

Conc 5.0000
RT 4.402 Area 3769176

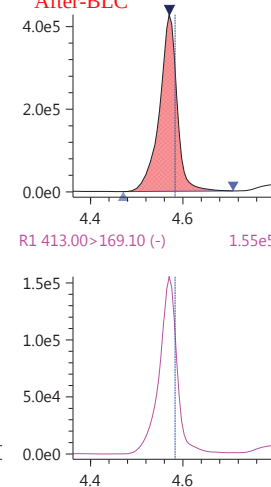
ISTD 366.90>322.10 (-)



PFOA

Conc 0.9989
RT 4.571 Area 1128264
R#1 36.20 (0.00)

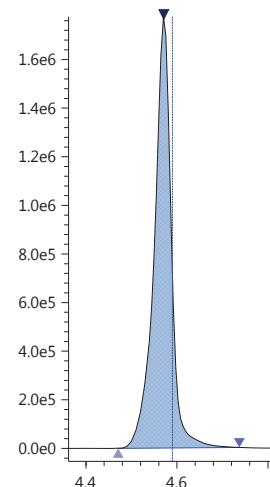
Q 413.00>369.00 (-)



PFOA-13C

Conc 4.5087
RT 4.571 Area 4614095

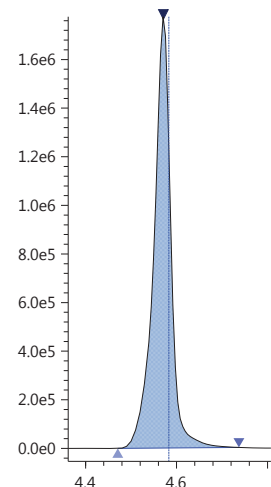
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
RT 4.571 Area 4614095

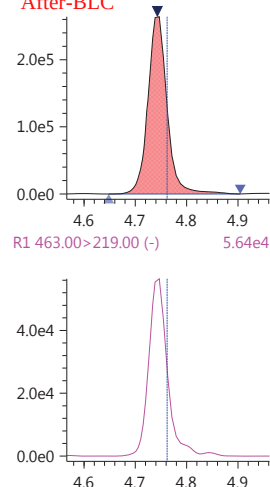
ISTD 416.80>372.05 (-)



PFNA

Conc 1.0281
RT 4.743 Area 685437
R#1 21.38 (0.00)

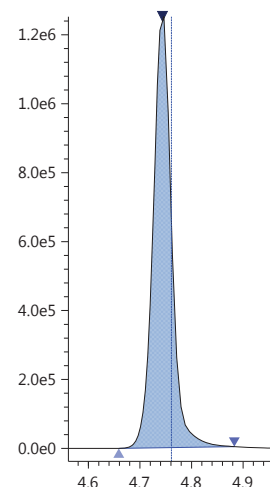
Q 463.00>418.90 (-)



PFNA-13C

Conc 4.4701
RT 4.744 Area 3129851

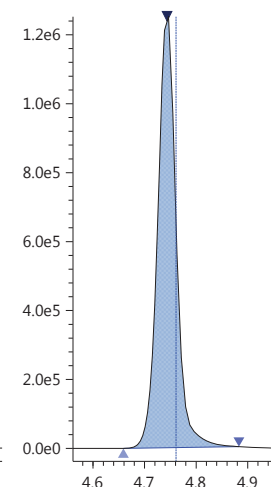
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
RT 4.744 Area 3129851

ISTD 467.80>423.00 (-)

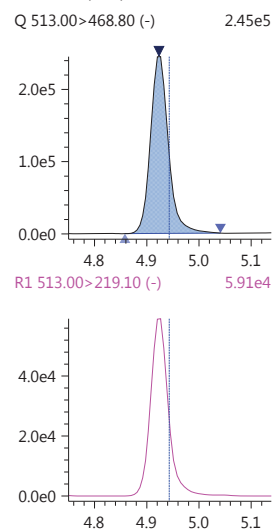


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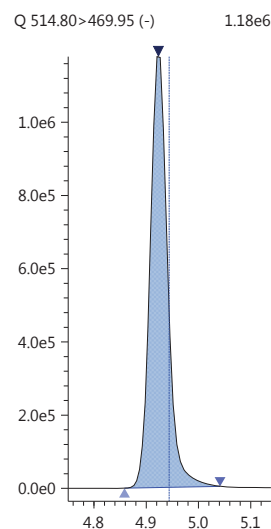
PFDA

Conc 0.9971
RT 4.923 Area 585964
R#1 24.16 (0.00)



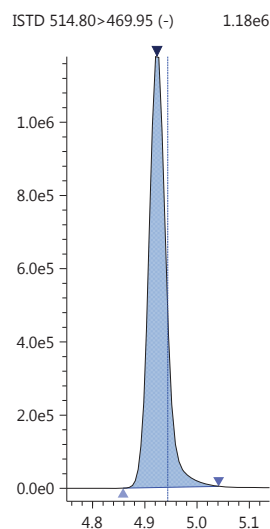
PFDA-13C

Conc 4.3232
RT 4.924 Area 2757701



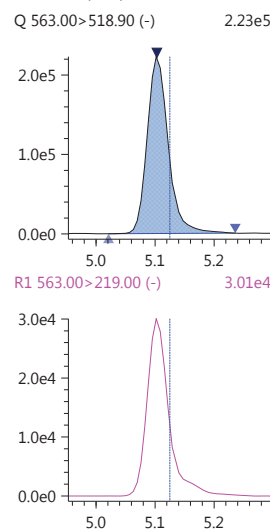
PFDA-13C_IS

Conc 5.0000
RT 4.924 Area 2757701



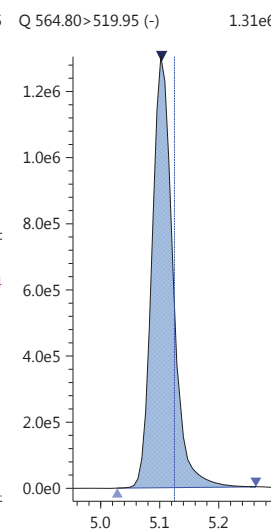
PFUnA

Conc 0.9730
RT 5.103 Area 554940
R#1 13.47 (0.00)



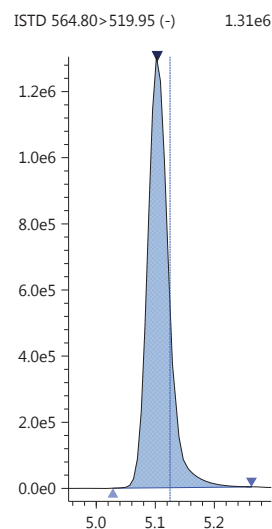
PFUnA-13C

Conc 4.8726
RT 5.103 Area 3219978



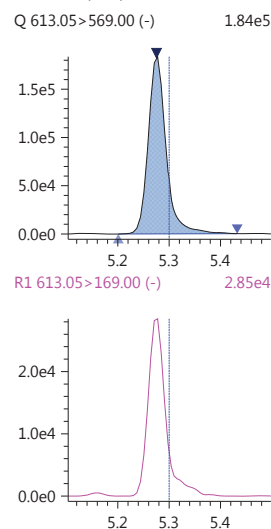
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Conc 5.0000
RT 5.103 Area 3219978



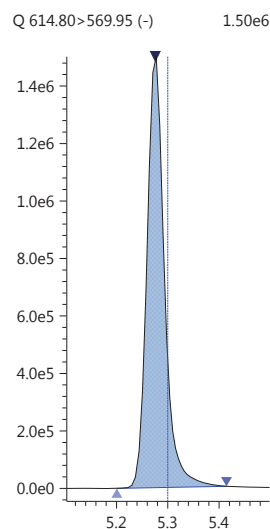
PFD0A

Conc 0.9781
RT 5.276 Area 444801
R#1 15.51 (0.00)



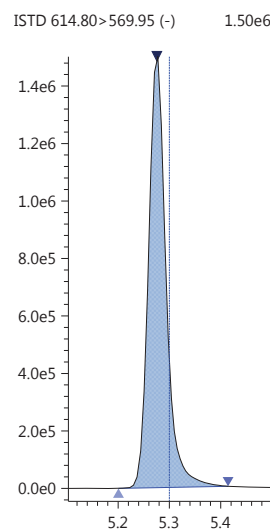
PFD0A-13C

Conc 4.0607
RT 5.275 Area 3556564



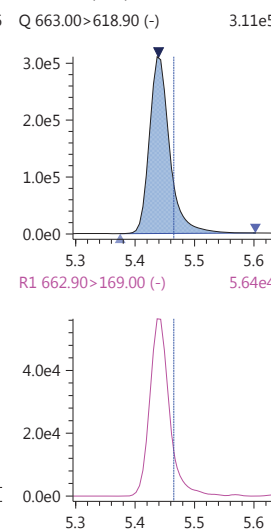
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Conc 5.0000
RT 5.275 Area 3556564



PFTTrDA

Conc 1.1377
RT 5.439 Area 738607
R#1 18.55 (0.00)

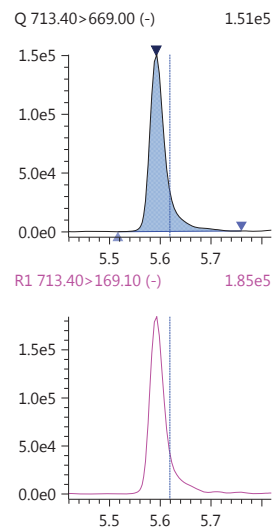


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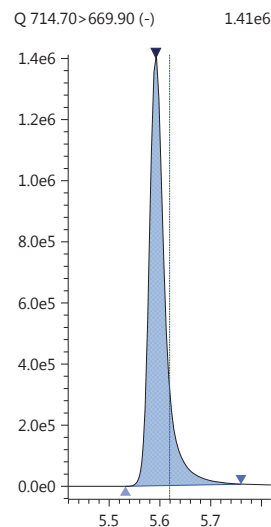
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Conc 0.9813
RT 5.592 Area 323729
R#1 123.07 (0.00)



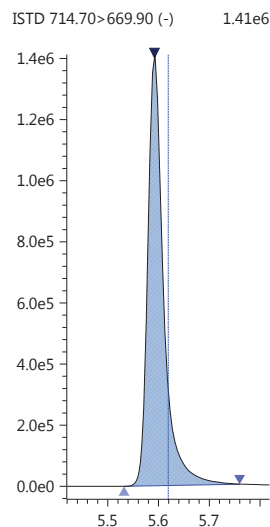
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Conc 3.9961
RT 5.592 Area 3042249



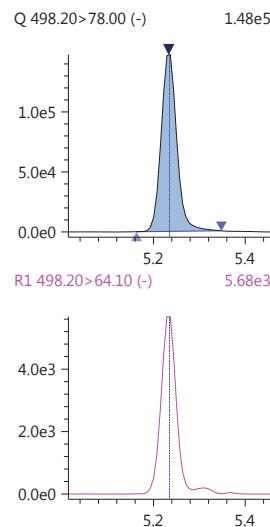
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Conc 5.0000
RT 5.592 Area 3042249



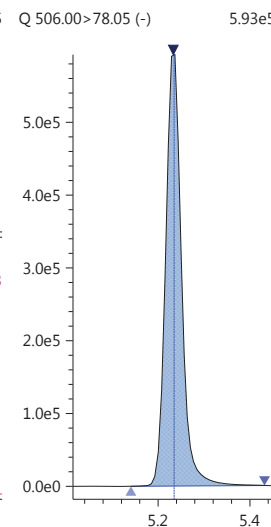
FOSA

Conc 1.0796
RT 5.233 Area 351056
R#1 3.88 (0.00)



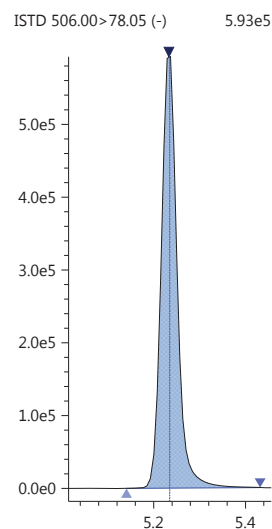
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Conc 3.8579
RT 5.233 Area 1427716



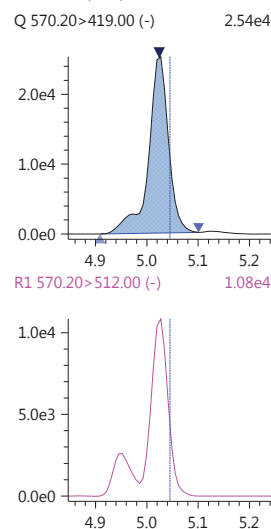
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Conc 5.0000
RT 5.233 Area 1427716



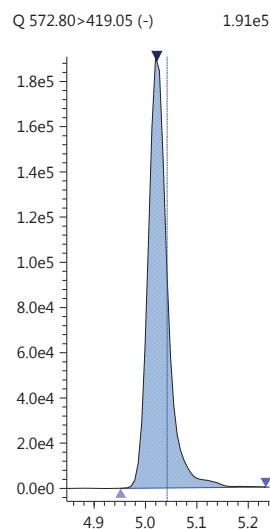
N-MeFOSAA

Conc 1.1603
RT 5.024 Area 68630
R#1 43.15 (0.00)



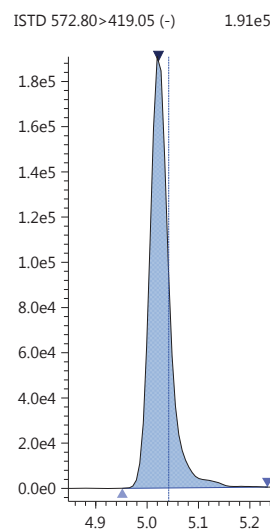
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Conc 3.6682
RT 5.022 Area 500676



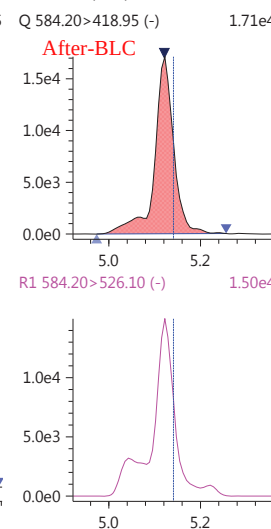
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Conc 5.0000
RT 5.022 Area 500676



N-EtFOSAA

Conc 0.8352
RT 5.121 Area 49541
R#1 88.88 (0.00)

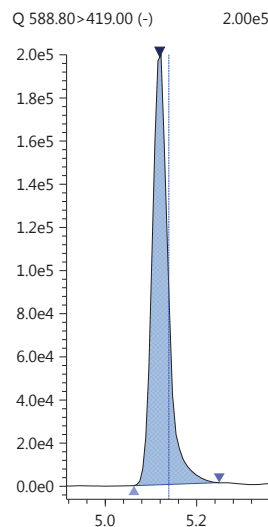


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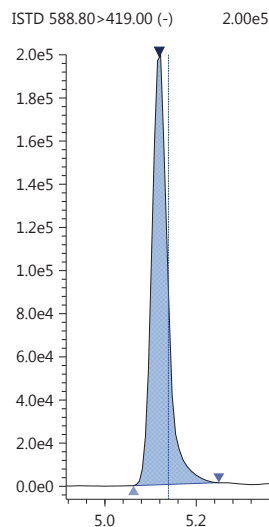
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Conc 4.3893
RT 5.119 Area 487739



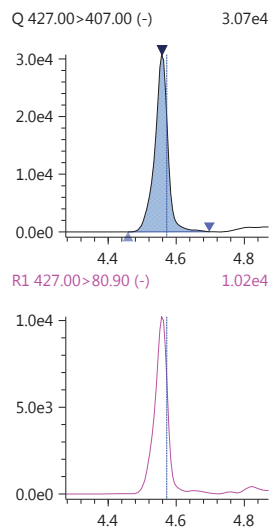
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Conc 5.0000
RT 5.119 Area 487739



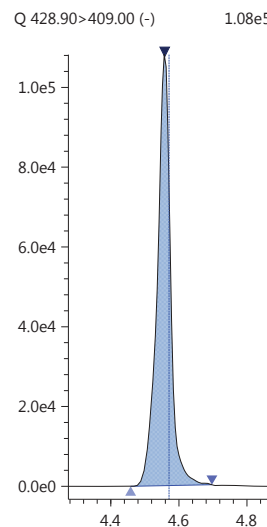
6_2-FTS_1

Conc 1.1033
RT 4.558 Area 81930
R#1 32.92 (0.00)



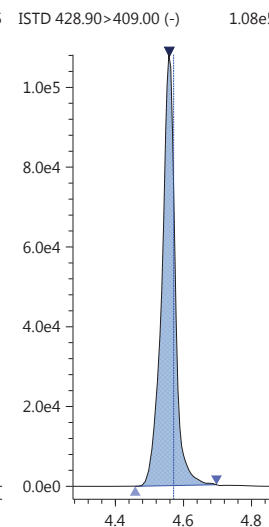
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Conc 4.3556
RT 4.558 Area 295663



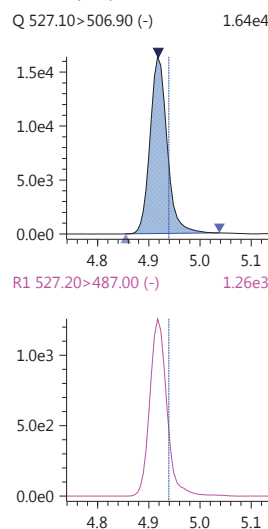
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Conc 5.0000
RT 4.558 Area 295663



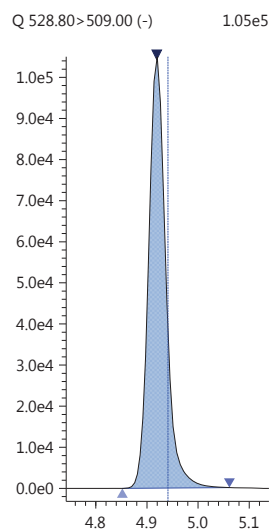
8_2-FTS_1

Conc 0.9909
RT 4.918 Area 37878
R#1 7.64 (0.00)



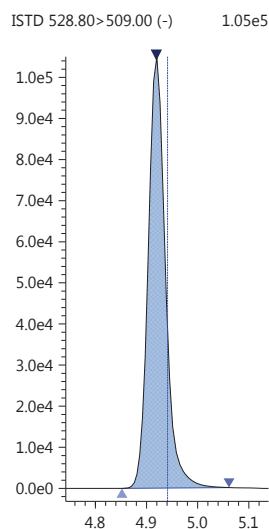
8_2-FTS-13C

Conc 4.6343
RT 4.919 Area 244010



8_2-FTS-13C_IS

Conc 5.0000
RT 4.919 Area 244010



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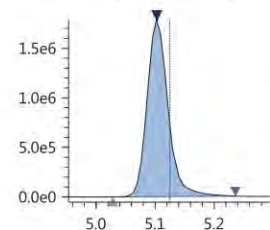
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191203_169

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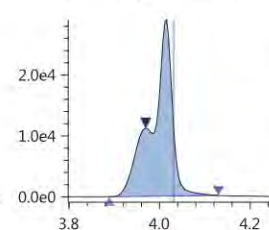
13C7-PFUnDA_IS

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RT 5.103 Area 4404111
ISTD 570.00>525.00 (-)



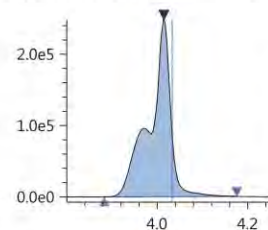
PFBS_1

Conc 0.9429
RT 3.970 Area 90633
Q 298.80>99.00 (-)



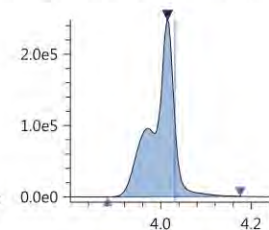
PFBS-13C

Conc 2.6822
RT 4.015 Area 794590
Q 301.80>80.00 (-)



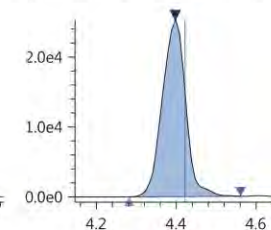
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Conc 5.0000
RT 4.015 Area 794590
ISTD 301.80>80.00 (-)



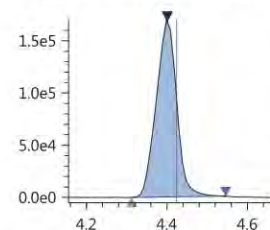
PFHxS_1

Conc 0.9525
RT 4.398 Area 102839
Q 399.00>99.00 (-)



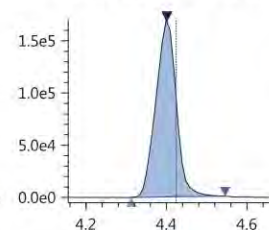
PFHxS-180

Conc 3.8015
RT 4.401 Area 596651
Q 402.70>84.05 (-)



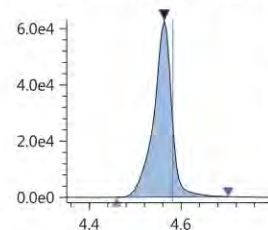
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Conc 5.0000
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ISTD 402.70>84.05 (-)



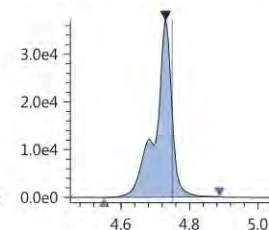
PFHpS_1

Conc 1.2192
RT 4.563 Area 170914
Q 449.00>80.15 (-)



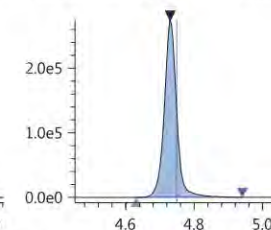
PFOS_1

Conc 1.0346
RT 4.730 Area 125406
Q 499.00>80.00 (-)



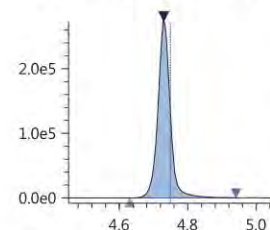
PFOS-13C

Conc 4.4349
RT 4.730 Area 686942
Q 502.80>80.05 (-)



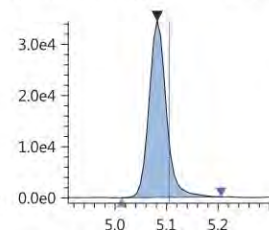
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ISTD 502.80>80.05 (-)



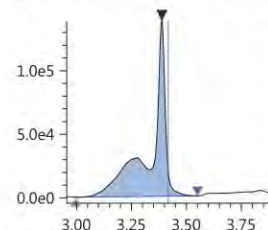
PFDS_1

Conc 0.8610
RT 5.082 Area 80404
Q 599.00>99.10 (-)



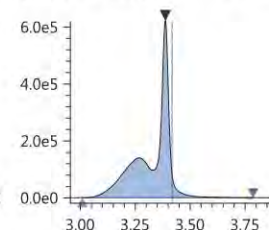
PFBA

Conc 1.1001
RT 3.388 Area 618192
Q 213.00>169.10 (-)



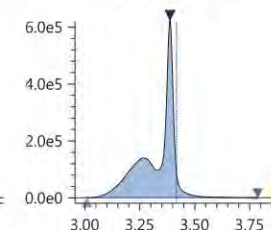
PFBA-13C

Conc 3.8528
RT 3.387 Area 2859617
Q 216.90>172.15 (-)



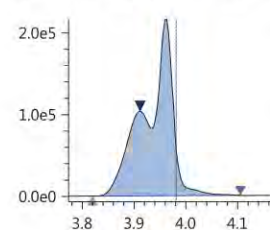
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ISTD 216.90>172.15 (-)



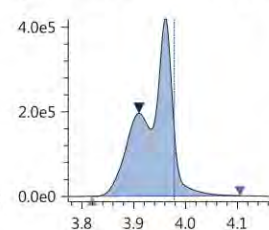
PFPeA

Conc 1.0703
RT 3.911 Area 783887
Q 263.05>219.10 (-)



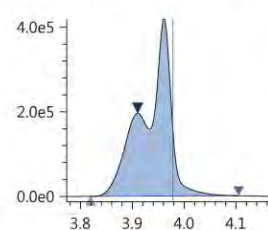
PFPeA-13C

Conc 3.7557
RT 3.910 Area 1498950
Q 267.90>223.00 (-)



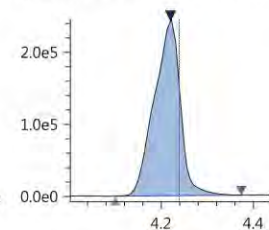
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Conc 5.0000
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ISTD 267.90>223.00 (-)



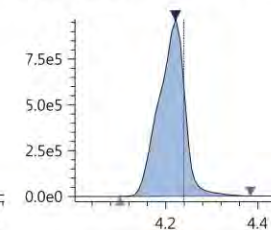
PFHxA

Conc 0.9508
RT 4.220 Area 954670
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.1957
RT 4.221 Area 3754281
Q 314.90>270.10 (-)

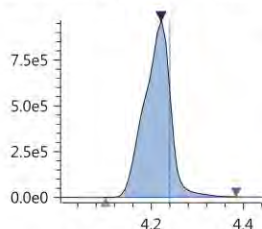


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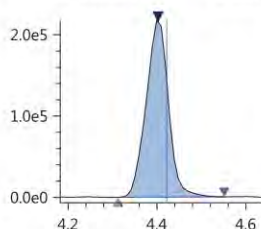
PFHxA-13C_IS

Conc 5.0000
RT 4.221 Area 3754281
ISTD 314.90>270.10 (-)



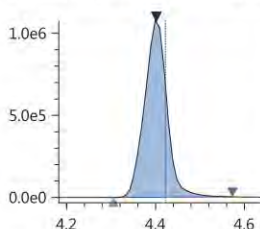
PFHpA

Conc 1.0178
RT 4.402 Area 759769
Q 362.90>319.00 (-)



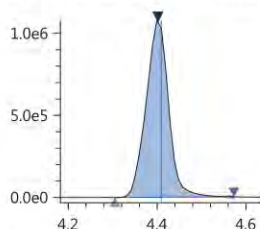
PFHpA-13C

Conc 3.9345
RT 4.402 Area 3769176
Q 366.90>322.10 (-)



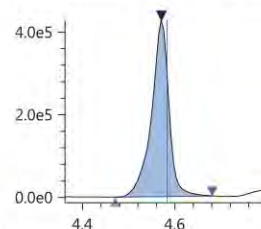
PFHpA-13C_IS

Conc 5.0000
RT 4.402 Area 3769176
ISTD 366.90>322.10 (-)



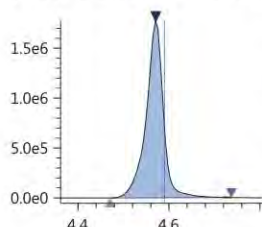
PFOA

Conc 0.9901
RT 4.571 Area 1118551
Q 413.00>369.00 (-)



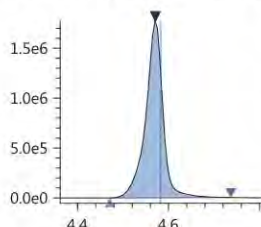
PFOA-13C

Conc 4.5087
RT 4.571 Area 4614095
Q 416.80>372.05 (-)



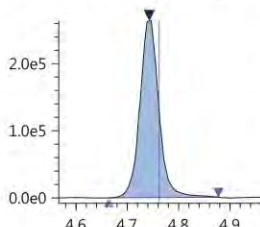
PFOA-13C_IS

Conc 5.0000
RT 4.571 Area 4614095
ISTD 416.80>372.05 (-)



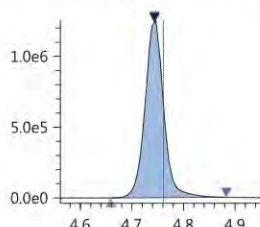
PFNA

Conc 1.0150
RT 4.743 Area 676964
Q 463.00>418.90 (-)



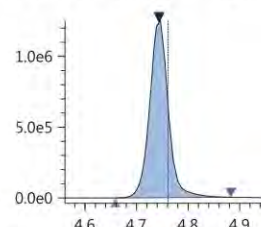
PFNA-13C

Conc 4.4701
RT 4.744 Area 3129851
Q 467.80>423.00 (-)



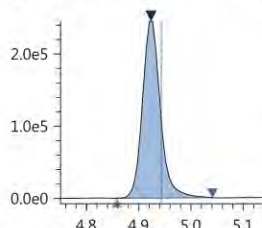
PFNA-13C_IS

Conc 5.0000
RT 4.744 Area 3129851
ISTD 467.80>423.00 (-)



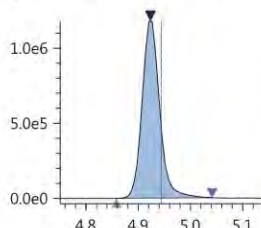
PFDA

Conc 0.9971
RT 4.923 Area 585964
Q 513.00>468.80 (-)



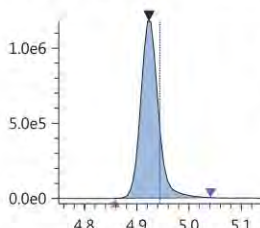
PFDA-13C

Conc 4.3232
RT 4.924 Area 2757701
Q 514.80>469.95 (-)



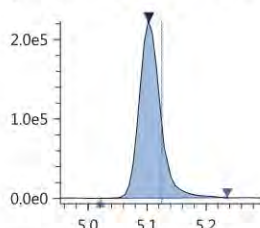
PFDA-13C_IS

Conc 5.0000
RT 4.924 Area 2757701
ISTD 514.80>469.95 (-)



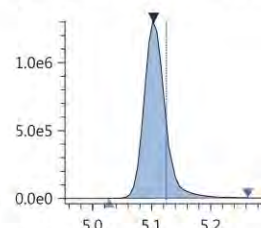
PFUnA

Conc 0.9730
RT 5.103 Area 554940
Q 563.00>518.90 (-)



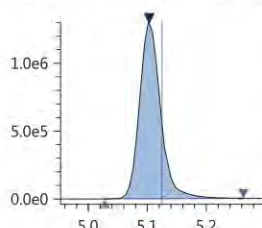
PFUnA-13C

Conc 4.8726
RT 5.103 Area 3219978
Q 564.80>519.95 (-)



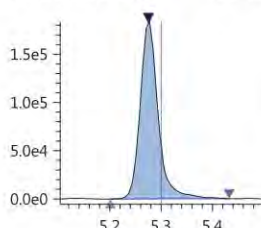
PFUnA-13C_IS

Conc 5.0000
RT 5.103 Area 3219978
ISTD 564.80>519.95 (-)



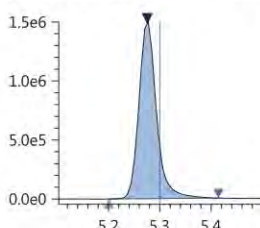
PFDaA

Conc 0.9781
RT 5.276 Area 444801
Q 613.05>569.00 (-)



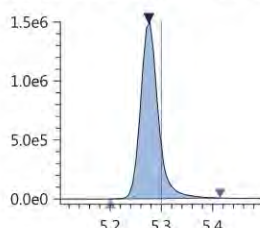
PFDaA-13C

Conc 4.0607
RT 5.275 Area 3556564
Q 614.80>569.95 (-)



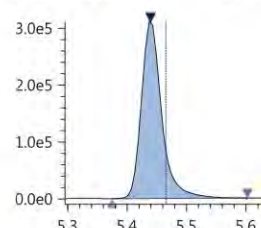
PFDaA-13C_IS

Conc 5.0000
RT 5.275 Area 3556564
ISTD 614.80>569.95 (-)



PFTrDA

Conc 1.1377
RT 5.439 Area 738607
Q 663.00>618.90 (-)

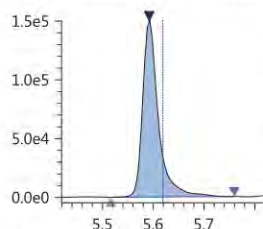


Insight Report

Printed at 12/6/2019 2:23:59 PM

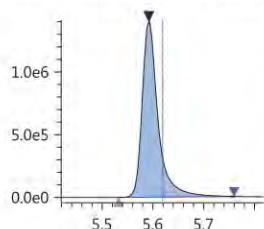
PFTeDA

Conc 0.9813
RT 5.592 Area 323729
Q 713.40>669.00 (-)



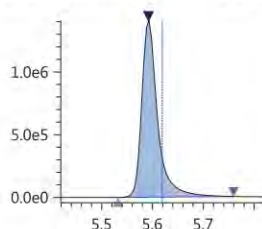
PFTeDA-13C

Conc 3.9961
RT 5.592 Area 3042249
Q 714.70>669.90 (-)



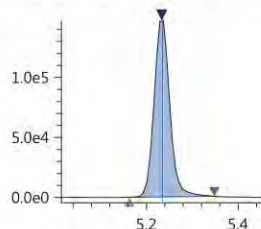
PFTeDA-13C_IS

Conc 5.0000
RT 5.592 Area 3042249
ISTD 714.70>669.90 (-)



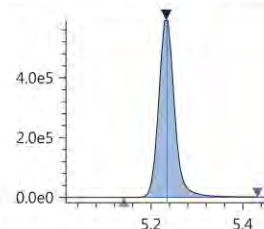
FOSA

Conc 1.0796
RT 5.233 Area 351056
Q 498.20>78.00 (-)



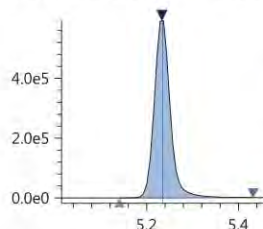
FOSA-13C

Conc 3.8579
RT 5.233 Area 1427716
Q 506.00>78.05 (-)



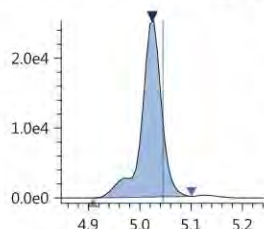
FOSA-13C_IS

Conc 5.0000
RT 5.233 Area 1427716
ISTD 506.00>78.05 (-)



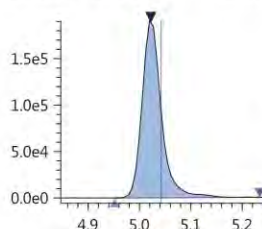
N-MeFOSAA

Conc 1.1603
RT 5.024 Area 68630
Q 570.20>419.00 (-)



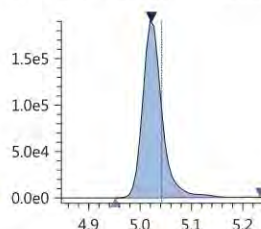
N-MeFOSAA-d3

Conc 3.6682
RT 5.022 Area 500676
Q 572.80>419.05 (-)



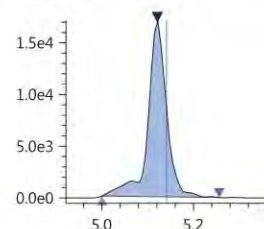
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.022 Area 500676
ISTD 572.80>419.05 (-)



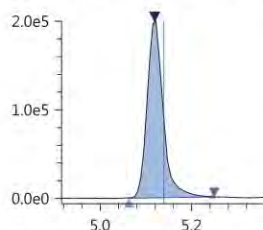
N-EtFOSAA

Conc 0.8117
RT 5.121 Area 48144
Q 584.20>418.95 (-)



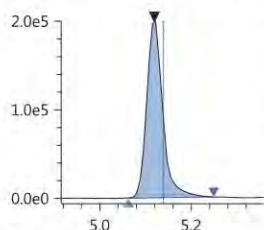
N-EtFOSAA-d5

Conc 4.3893
RT 5.119 Area 487739
Q 588.80>419.00 (-)



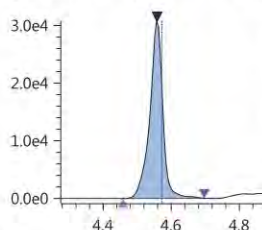
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.119 Area 487739
ISTD 588.80>419.00 (-)



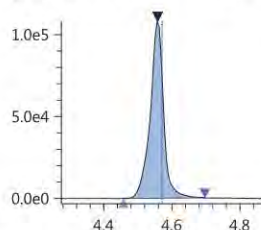
6_2-FTS_1

Conc 1.1033
RT 4.558 Area 81930
Q 427.00>407.00 (-)



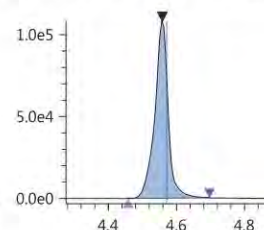
6_2-FTS-13C

Conc 4.3556
RT 4.558 Area 295663
Q 428.90>409.00 (-)



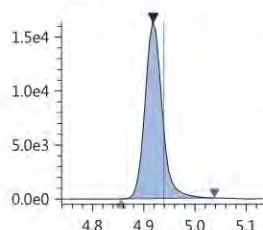
6_2-FTS-13C_IS

Conc 5.0000
RT 4.558 Area 295663
ISTD 428.90>409.00 (-)



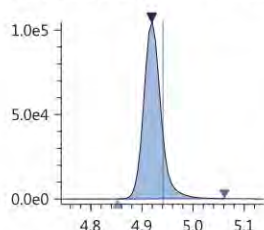
8_2-FTS_1

Conc 0.9909
RT 4.918 Area 37878
Q 527.10>506.90 (-)



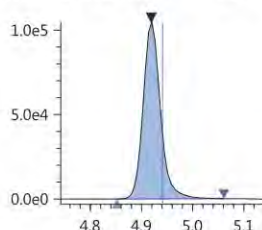
8_2-FTS-13C

Conc 4.6343
RT 4.919 Area 244010
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.919 Area 244010
ISTD 528.80>509.00 (-)



Validation Report

1st  12/06/19
2nd  12/10/19

Data File: J:\LCMS06\Data\191203_b12\191203_188
Lab ID: KQ1917554-01
RunType: MS
Matrix: Water

Date Acquired: 12/4/19 23:38
Batch ID: 662103
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st 12/06/19
2nd 12/10/19

Data File:	J:\LCMS06\Data\191203_b12\191203_188	Instrument:	K-LCMS-06
Acqu Date:	12/4/19 23:38	Vial:	22
Run Type:	MS	Dilution:	1
Lab ID:	KQ1917554-01	Raw Units:	ng/mL

Bottle ID:	R1911314-001.02	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	11/13/19	Receive Date:	11/18/19

Analysis Lot:	662103	Prep Lot:	349491	Report Group:	KQ1917554
Analysis	PFC/537M	Prep Method:	EPA 3535A		
		Prep Date:	11/26/19		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC1900518
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.102	+0.00	3954777	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.012	0.00	565305	2.1251	43	20 - 109	Y
18O2-PFHxS	4.404	+0.00	467938	3.3201	66	26 - 122	Y
13C4-PFOS	4.731	+0.00	560102	4.0269	81	25 - 121	Y
13C4-PFBA	3.383	-0.01	2488046	3.7331	75	27 - 124	Y
13C5-PFPeA	3.957	0.00	968183	2.7015	54	27 - 138	Y
13C2-PFHxA	4.218	+0.00	2489803	3.0987	62	28 - 132	Y
13C4-PFHpA	4.404	+0.00	3065755	3.5639	71	19 - 139	Y
13C4-PFOA	4.571	+0.00	3163554	3.4425	69	22 - 130	Y
13C5-PFNA	4.745	+0.00	2235574	3.5557	71	20 - 127	Y
13C2-PFDA	4.924	+0.00	2047996	3.5754	72	24 - 125	Y
13C2-PFUnDA	5.103	+0.00	2260921	3.8101	76	22 - 125	Y
13C2-PFDoDA	5.275	+0.00	2596441	3.3013	66	19 - 122	Y
13C2-PFTeDA	5.590		1932330	2.8265	57	13 - 124	Y
13C8-FOSA	5.234	+0.01	890471	2.6796	54	18 - 109	Y
D3-MeFOSAA	5.025	+0.01	422192	3.4446	69	9 - 123	Y
D5-EtFOSAA	5.120	+0.01	324966	3.2567	65	12 - 126	Y
13C2-6:2 FTS	4.558	+0.00	535811	8.7903	176	10 - 226	Y
13C2-8:2 FTS	4.919	+0.00	248966	5.2657	105	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.011	0.00	65016	0.9507	25.4		Y
Perfluorohexane sulfonic acid (PFHxS)	4.403	+0.00	90083	1.0639	28.4		Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 12/6/19 15:49

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		1st	12/06/19
Data File:	J:\LCMS06\Data\191203_b12\191203_188	Instrument:	K-LCMS06
Acqu Date:	12/4/19 23:38	Vial:	22
Run Type:	MS	Dilution:	1
Lab ID:	KQ1917554-01	Raw Units:	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.562	+0.00	120743	1.0982	29.3		Y
Perfluorooctane sulfonic acid (PFOS)	4.731	+0.00	105964	1.0722	28.6		Y
Perfluorodecane sulfonic acid (PFDS)	5.082	+0.00	55333	0.7267	19.4		Y
Perfluorobutanoic acid (PFBA)	3.384	-0.01	612618	1.2530	33.4		Y
Perfluoropentanoic acid (PFPeA)	3.958	0.00	554781	1.1839	31.6		Y
Perfluorohexanoic acid (PFHxA)	4.217	+0.00	700779	1.0555	28.1		Y
Perfluoroheptanoic acid (PFHpA)	4.404	+0.00	644802	1.0632	28.4		Y
Perfluorooctanoic acid (PFOA)	4.571	+0.00	910908	1.1814	31.5		Y
Perfluorononanoic acid (PFNA)	4.745	+0.00	495939	1.0418	27.8		Y
Perfluorodecanoic acid (PFDA)	4.924	+0.00	535103	1.2306	32.8		Y
Perfluoroundecanoic acid (PFUnDA)	5.102	+0.00	413484	1.0350	27.6		Y
Perfluorododecanoic acid (PFDoDA)	5.275	+0.00	343748	1.0368	27.6		Y
Perfluorotridecanoic acid (PFTrDA)	5.438	+0.00	420722	1.0170	27.1		Y
Perfluorotetradecanoic acid (PFTeDA)	5.590		196070	0.9287	24.8		Y
Perfluorooctane sulfonamide (FOSA)	5.234	+0.01	194784	0.9604	25.6		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.028	+0.01	46132	0.9294	24.8		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.124	+0.01	25499	0.6452	17.2		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.558	+0.00	133250	0.9902	26.4		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.918	+0.00	36627	0.9391	25.0		Y

Prep Amount: 300.0000 mL

Dilution: 1

Prep Final Amount: 8.00 mL

Basis Factor: 100.00

U: Undetected at or above MDL

J: Analyte detected above MDL, but below MRL

B: Hit above MRL also found in Method Blank

E: Analyte concentration above high point of ICAL

N: Presumptive evidence of compound

D: Result from dilution

m: Manual integration performed

d: Compound manually deleted

NR: Analyte not reported from this analysis

*: Result fails acceptance criteria

#: Acceptance criteria not applicable

?: Insufficient information to determine acceptance

e: Result >= MRL, but MRL less than low point of ICAL

c: check for co-elution

Printed: 12/6/19 15:49

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Insight Report

Printed at 12/6/2019 3:10:36 PM

191203_188

Sample ID: KQ1917554-01

Date acquired: 12/4/2019 11:38:31 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191203_b12\191203_188.lcd

Vial: 20 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.102	3954777	3954777	1	5.0000	ng/mL	----
PFBS_1	Auto	4.011	65016	565305	2	0.9507	ng/mL	----
PFBS-13C	Auto	4.012	565305	3954777	1	2.1251	ng/mL	----
PFBS-13C_IS	Auto	4.012	565305	565305	2	5.0000	ng/mL	----
PFHxS_1	M	4.403	90083	467938	3	1.0639	ng/mL	----
PFHxS-18O	Auto	4.404	467938	3954777	1	3.3201	ng/mL	----
PFHxS-18O_IS	Auto	4.404	467938	467938	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.562	120743	467938	3	1.0982	ng/mL	----
PFOS_1	Auto	4.731	105964	560102	4	1.0722	ng/mL	----
PFOS-13C	Auto	4.731	560102	3954777	1	4.0269	ng/mL	----
PFOS-13C_IS	Auto	4.731	560102	560102	4	5.0000	ng/mL	----
PFDS_1	Auto	5.082	55333	560102	4	0.7267	ng/mL	----
PFBA	Auto	3.384	612618	2488046	5	1.2530	ng/mL	----
PFBA-13C	Auto	3.383	2488046	3954777	1	3.7331	ng/mL	----
PFBA-13C_IS	Auto	3.383	2488046	2488046	5	5.0000	ng/mL	----
PFPeA	Auto	3.958	554781	968183	6	1.1839	ng/mL	----
PFPeA-13C	Auto	3.957	968183	3954777	1	2.7015	ng/mL	----
PFPeA-13C_IS	Auto	3.957	968183	968183	6	5.0000	ng/mL	----
PFHxA	M	4.217	700779	2489803	7	1.0555	ng/mL	----
PFHxA-13C	Auto	4.218	2489803	3954777	1	3.0987	ng/mL	----
PFHxA-13C_IS	Auto	4.218	2489803	2489803	7	5.0000	ng/mL	----
PFHpA	Auto	4.404	644802	3065755	8	1.0632	ng/mL	----
PFHpA-13C	Auto	4.404	3065755	3954777	1	3.5639	ng/mL	----
PFHpA-13C_IS	Auto	4.404	3065755	3065755	8	5.0000	ng/mL	----
PFOA	M	4.571	910908	3163554	9	1.1814	ng/mL	----
PFOA-13C	Auto	4.571	3163554	3954777	1	3.4425	ng/mL	----
PFOA-13C_IS	Auto	4.571	3163554	3163554	9	5.0000	ng/mL	----
PFNA	Auto	4.745	495939	2235574	10	1.0418	ng/mL	----
PFNA-13C	Auto	4.745	2235574	3954777	1	3.5557	ng/mL	----
PFNA-13C_IS	Auto	4.745	2235574	2235574	10	5.0000	ng/mL	----
PFDA	Auto	4.924	535103	2047996	11	1.2306	ng/mL	----
PFDA-13C	Auto	4.924	2047996	3954777	1	3.5754	ng/mL	----
PFDA-13C_IS	Auto	4.924	2047996	2047996	11	5.0000	ng/mL	----
PFUnA	Auto	5.102	413484	2260921	12	1.0350	ng/mL	----
PFUnA-13C	Auto	5.103	2260921	3954777	1	3.8101	ng/mL	----
PFUnA-13C_IS	Auto	5.103	2260921	2260921	12	5.0000	ng/mL	----
PFDoA	Auto	5.275	343748	2596441	13	1.0368	ng/mL	----
PFDoA-13C	Auto	5.275	2596441	3954777	1	3.3013	ng/mL	----
PFDoA-13C_IS	Auto	5.275	2596441	2596441	13	5.0000	ng/mL	----
PFTrDA	Auto	5.438	420722	1932330	14	1.0170	ng/mL	----
PFTeDA	Auto	5.590	196070	1932330	14	0.9287	ng/mL	----
PFTeDA-13C	Auto	5.590	1932330	3954777	1	2.8265	ng/mL	----
PFTeDA-13C_IS	Auto	5.590	1932330	1932330	14	5.0000	ng/mL	----
FOSA	Auto	5.234	194784	890471	16	0.9604	ng/mL	----
FOSA-13C	Auto	5.234	890471	3954777	1	2.6796	ng/mL	----
FOSA-13C_IS	Auto	5.234	890471	890471	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.028	46132	422192	21	0.9294	ng/mL	----
N-MeFOSAA-d3	Auto	5.025	422192	3954777	1	3.4446	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.025	422192	422192	21	5.0000	ng/mL	----
N-EtFOSAA	M	5.124	25499	324966	22	0.6452	ng/mL	----
N-EtFOSAA-d5	Auto	5.120	324966	3954777	1	3.2567	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.120	324966	324966	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.558	133250	535811	24	0.9902	ng/mL	----
6_2-FTS-13C	Auto	4.558	535811	3954777	1	8.7903	ng/mL	----
6_2-FTS-13C_IS	Auto	4.558	535811	535811	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.918	36627	248966	25	0.9391	ng/mL	----
8_2-FTS-13C	Auto	4.919	248966	3954777	1	5.2657	ng/mL	----
8_2-FTS-13C_IS	Auto	4.919	248966	248966	25	5.0000	ng/mL	----

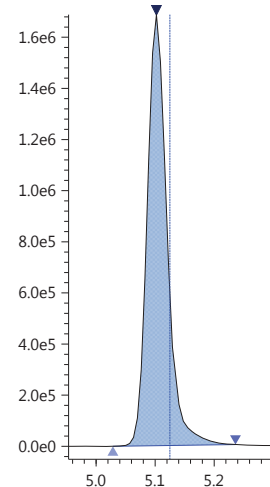
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13C7-PFUnDA_IS

Conc 5.0000
RT 5.102 Area 3954777

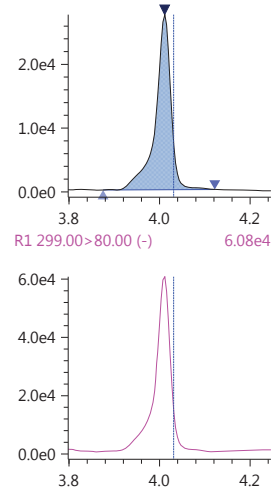
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.9507
RT 4.011 Area 65016
R#1 218.68 (0.00)

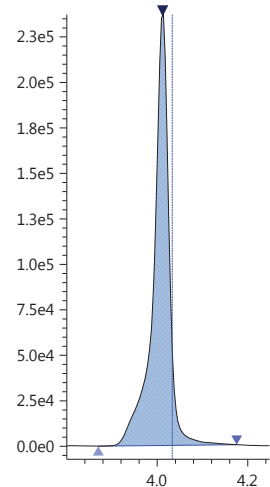
Q 298.80>99.00 (-)



PFBS-13C

Conc 2.1251
RT 4.012 Area 565305

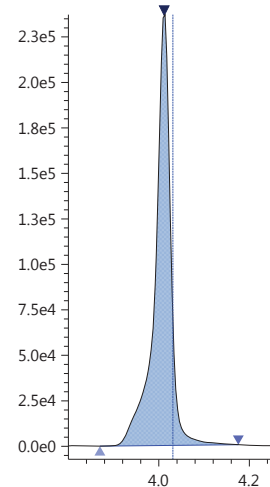
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.012 Area 565305

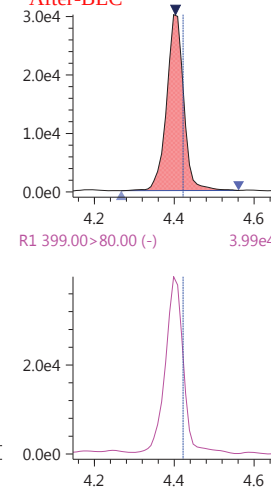
ISTD 301.80>80.00 (-)



PFHxS_1

Conc 1.0639
RT 4.403 Area 90083
R#1 126.74 (0.00)

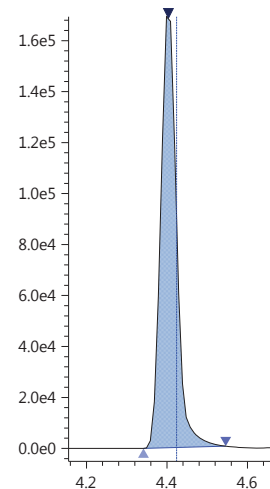
Q 399.00>99.00 (-)



PFHxS-180

Conc 3.3201
RT 4.404 Area 467938

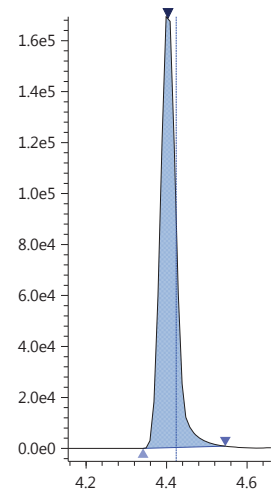
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.404 Area 467938

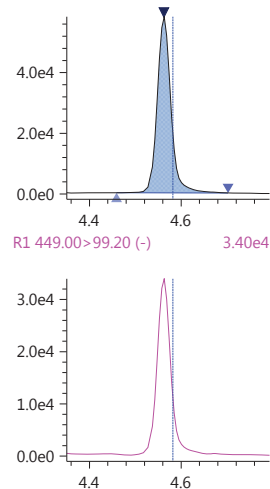
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 1.0982
RT 4.562 Area 120743
R#1 58.02 (0.00)

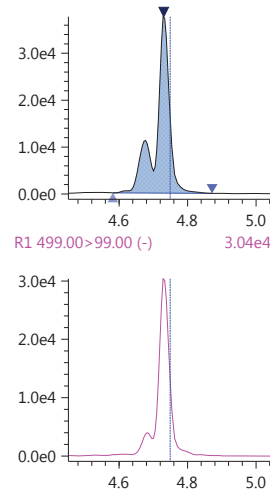
Q 449.00>80.15 (-)



PFOS_1

Conc 1.0722
RT 4.731 Area 105964
R#1 80.24 (0.00)

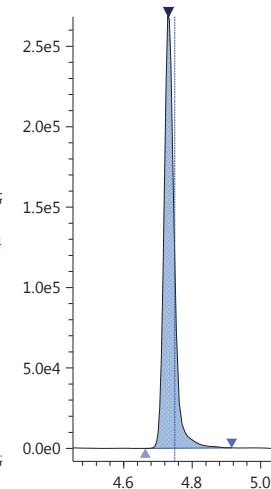
Q 499.00>80.00 (-)



PFOS-13C

Conc 4.0269
RT 4.731 Area 560102

Q 502.80>80.05 (-)



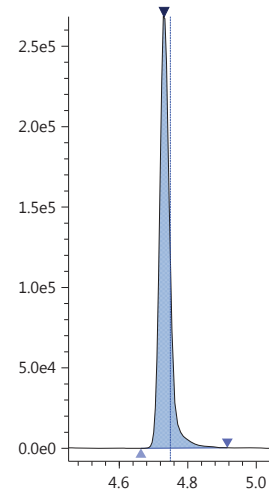
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PFOS-13C_IS

Conc 5.0000
RT 4.731 Area 560102

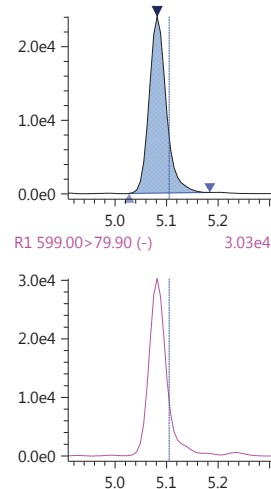
ISTD 502.80>80.05 (-)



PFDS_1

Conc 0.7267
RT 5.082 Area 55333
R#1 125.32 (0.00)

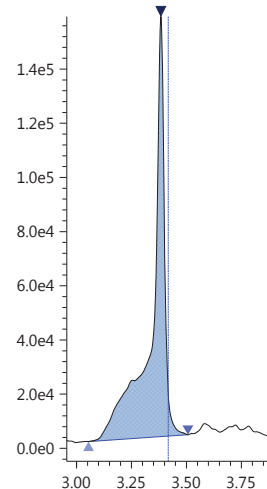
Q 599.00>99.10 (-)



PFBA

Conc 1.2530
RT 3.384 Area 612618

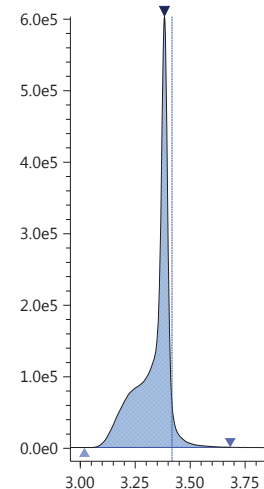
Q 213.00>169.10 (-)



PFBA-13C

Conc 3.7331
RT 3.383 Area 2488046

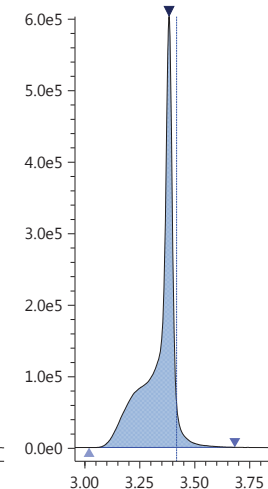
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
RT 3.383 Area 2488046

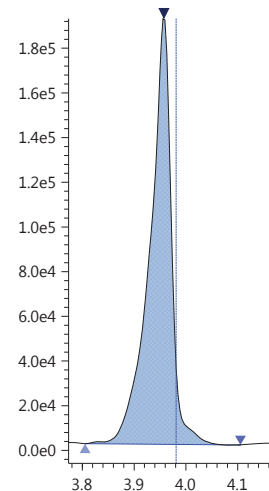
ISTD 216.90>172.15 (-)



PFPeA

Conc 1.1839
RT 3.958 Area 554781

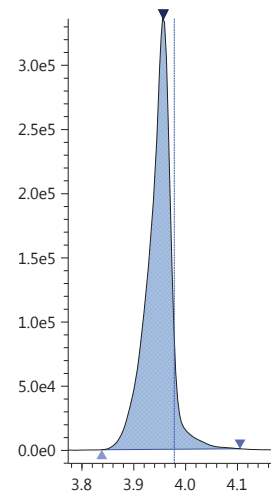
Q 263.05>219.10 (-)



PFPeA-13C

Conc 2.7015
RT 3.957 Area 968183

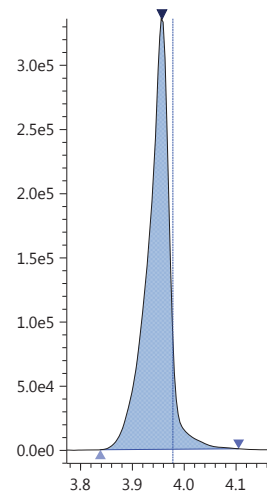
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.957 Area 968183

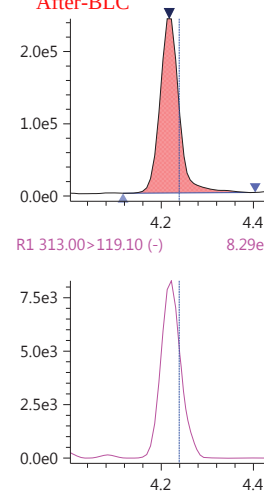
ISTD 267.90>223.00 (-)



PFHxA

Conc 1.0555
RT 4.217 Area 700779
R#1 3.27 (0.00)

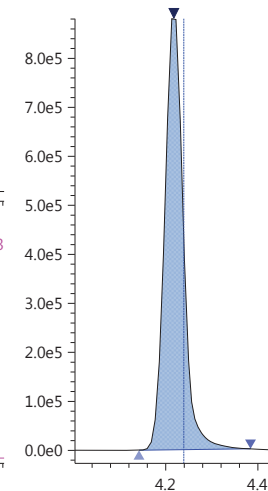
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.0987
RT 4.218 Area 2489803

Q 314.90>270.10 (-)



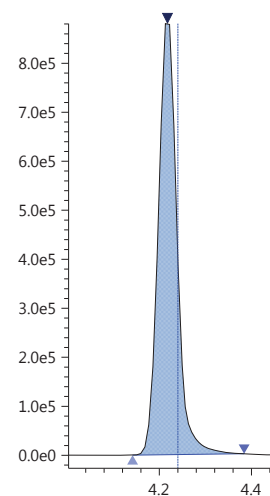
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PFHxA-13C_IS

Conc 5.0000
RT 4.218 Area 2489803

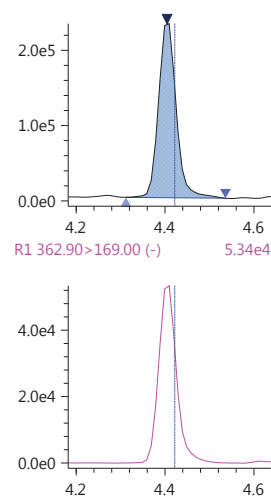
ISTD 314.90>270.10 (-)



PFHpA

Conc 1.0632
RT 4.404 Area 644802
R#1 23.10 (0.00)

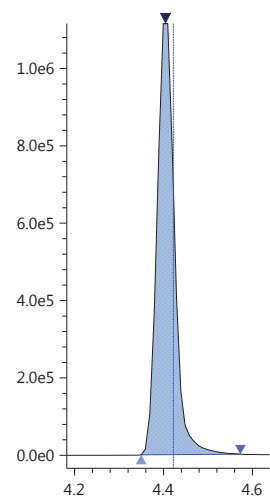
Q 362.90>319.00 (-)



PFHpA-13C

Conc 3.5639
RT 4.404 Area 3065755

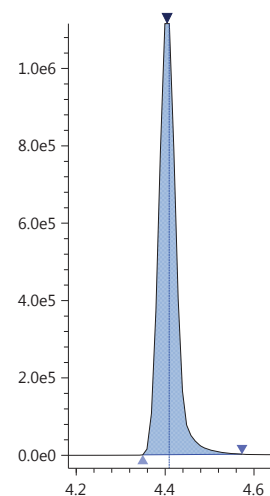
Q 366.90>322.10 (-)



PFHpA-13C_IS

Conc 5.0000
RT 4.404 Area 3065755

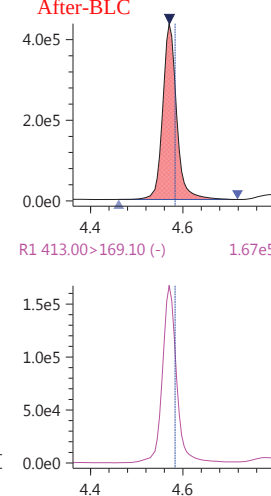
ISTD 366.90>322.10 (-)



PFOA

Conc 1.1814
RT 4.571 Area 910908
R#1 38.15 (0.00)

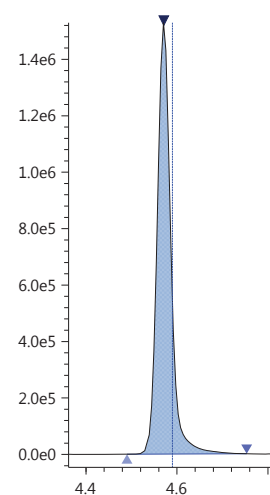
Q 413.00>369.00 (-)



PFOA-13C

Conc 3.4425
RT 4.571 Area 3163554

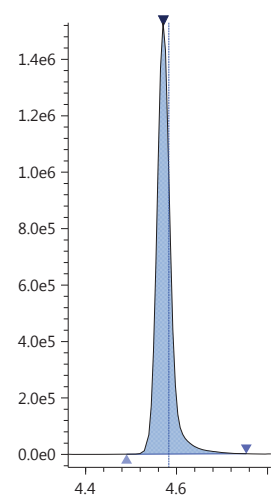
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
RT 4.571 Area 3163554

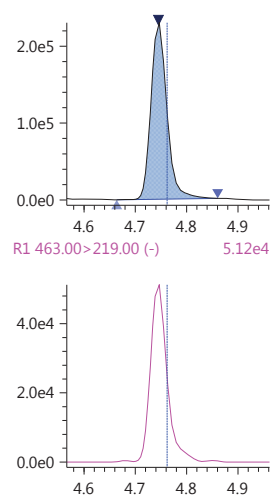
ISTD 416.80>372.05 (-)



PFNA

Conc 1.0418
RT 4.745 Area 495939
R#1 22.14 (0.00)

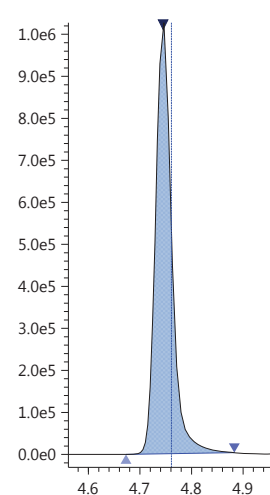
Q 463.00>418.90 (-)



PFNA-13C

Conc 3.5557
RT 4.745 Area 2235574

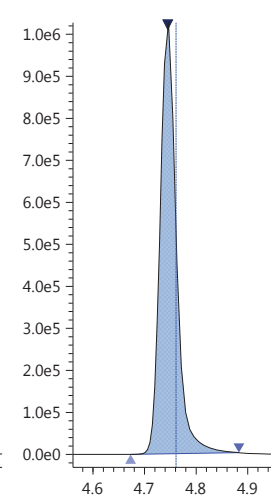
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
RT 4.745 Area 2235574

ISTD 467.80>423.00 (-)



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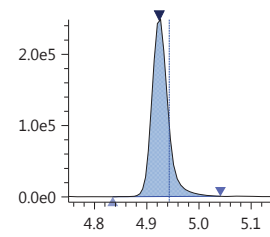
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PFDA

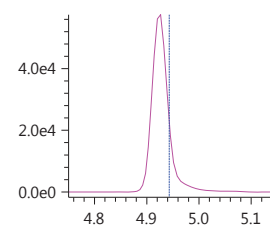
Conc 1.2306
RT 4.924 Area 535103
R#1 23.14 (0.00)

Q 513.00>468.80 (-)

2.49e5



R1 513.00>219.10 (-) 5.75e4

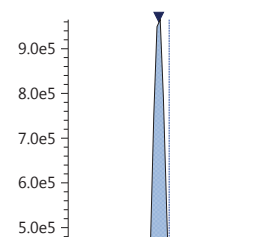


PFDA-13C

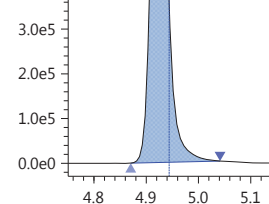
Conc 3.5754
RT 4.924 Area 2047996

Q 514.80>469.95 (-)

9.65e5



R1 514.80>469.95 (-) 5.75e4

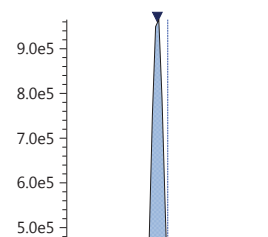


PFDA-13C_IS

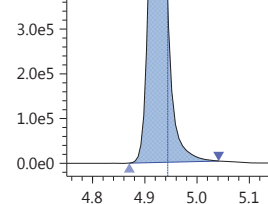
Conc 5.0000
RT 4.924 Area 2047996

ISTD 514.80>469.95 (-)

9.65e5



R1 514.80>469.95 (-) 5.75e4

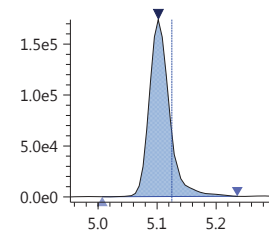


PFUnA

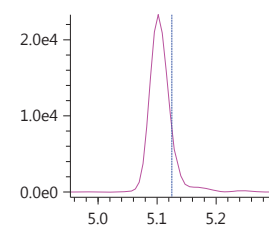
Conc 1.0350
RT 5.102 Area 413484
R#1 13.37 (0.00)

Q 563.00>518.90 (-)

1.74e5



R1 563.00>219.00 (-) 2.33e4

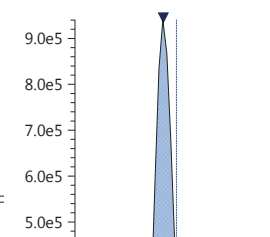


PFUnA-13C

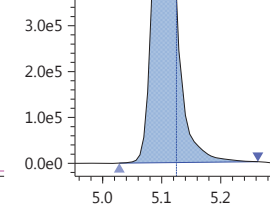
Conc 3.8101
RT 5.103 Area 2260921

Q 564.80>519.95 (-)

9.41e5



R1 564.80>519.95 (-) 2.33e4

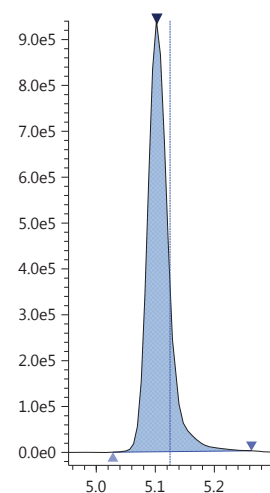


PFUnA-13C_IS

Conc 5.0000
RT 5.103 Area 2260921

ISTD 564.80>519.95 (-)

9.41e5

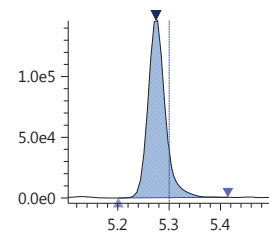


PFD0A

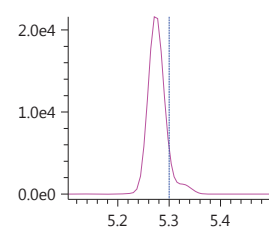
Conc 1.0368
RT 5.275 Area 343748
R#1 14.93 (0.00)

Q 613.05>569.00 (-)

1.46e5



R1 613.05>169.00 (-) 2.16e4

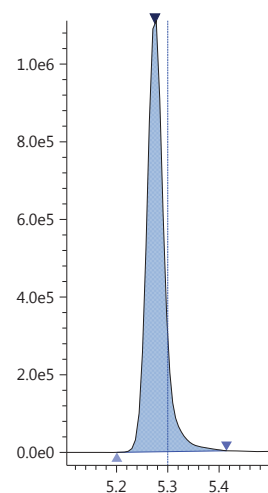


PFD0A-13C

Conc 3.3013
RT 5.275 Area 2596441

Q 614.80>569.95 (-)

1.11e6

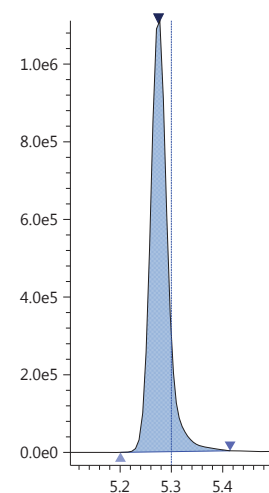


PFD0A-13C_IS

Conc 5.0000
RT 5.275 Area 2596441

ISTD 614.80>569.95 (-)

1.11e6

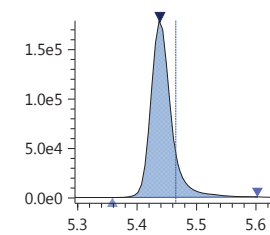


PFTrDA

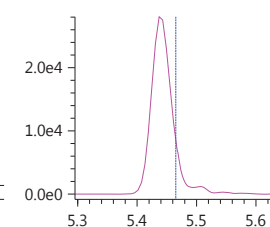
Conc 1.0170
RT 5.438 Area 420722
R#1 16.26 (0.00)

Q 663.00>618.90 (-)

1.79e5



R1 662.90>169.00 (-) 2.81e4



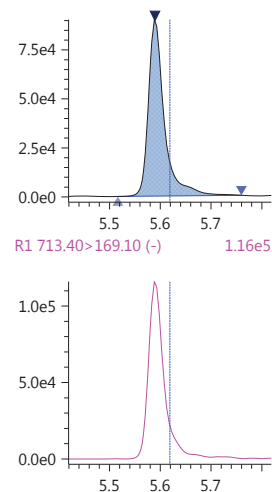
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PFTeDA

Conc 0.9287
RT 5.590 Area 196070
R#1 127.35 (0.00)

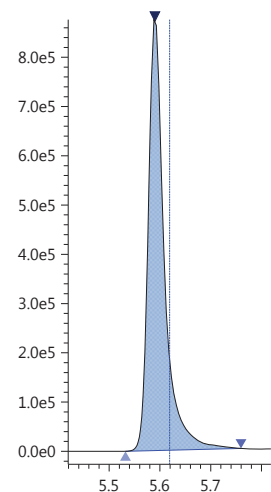
Q 713.40>669.00 (-)



PFTeDA-13C

Conc 2.8265
RT 5.590 Area 1932330

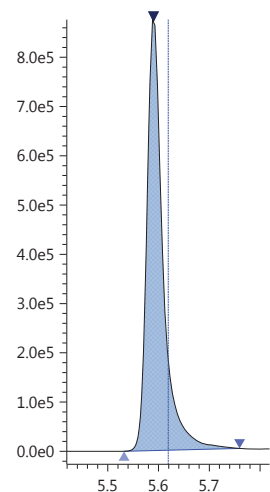
Q 714.70>669.90 (-)



PFTeDA-13C_IS

Conc 5.0000
RT 5.590 Area 1932330

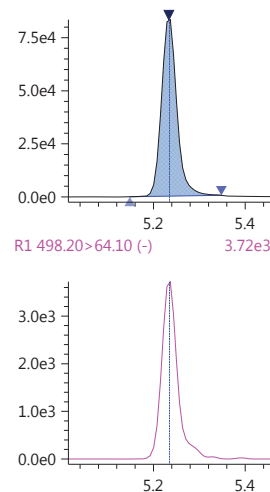
ISTD 714.70>669.90 (-)



FOSA

Conc 0.9604
RT 5.234 Area 194784
R#1 4.40 (0.00)

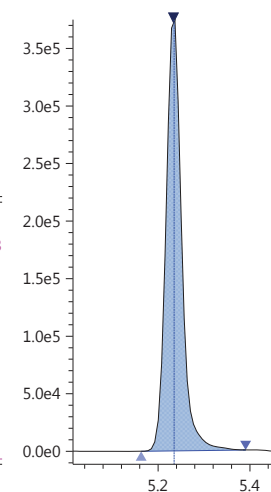
Q 498.20>78.00 (-)



FOSA-13C

Conc 2.6796
RT 5.234 Area 890471

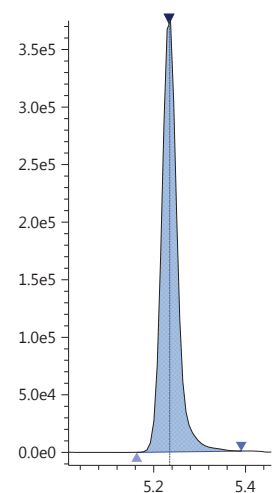
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
RT 5.234 Area 890471

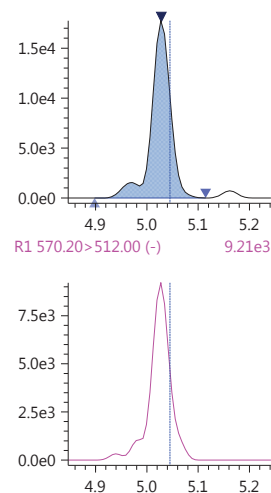
ISTD 506.00>78.05 (-)



N-MeFOSAA

Conc 0.9294
RT 5.028 Area 46132
R#1 51.88 (0.00)

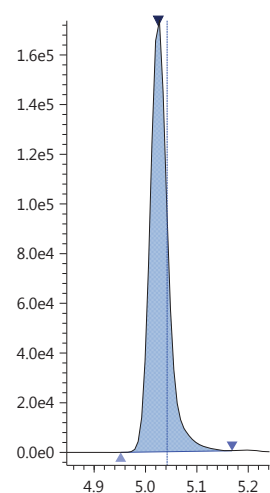
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 3.4446
RT 5.025 Area 422192

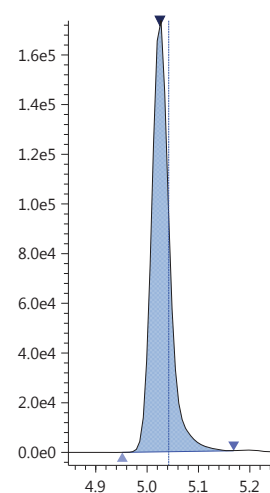
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.025 Area 422192

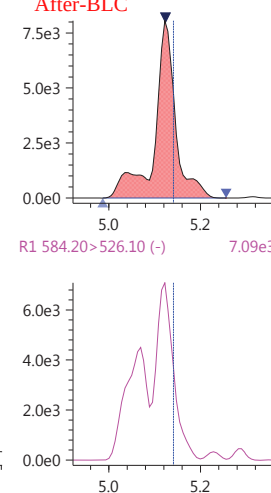
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc 0.6452
RT 5.124 Area 25499
R#1 83.90 (0.00)

Q 584.20>418.95 (-)



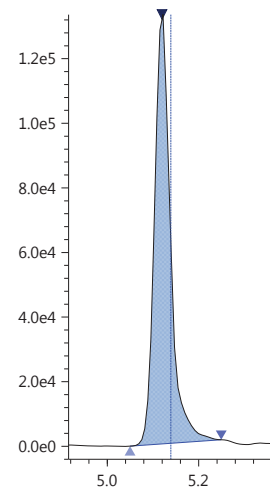
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N-EtFOSAA-d5

Conc 3.2567
RT 5.120 Area 324966

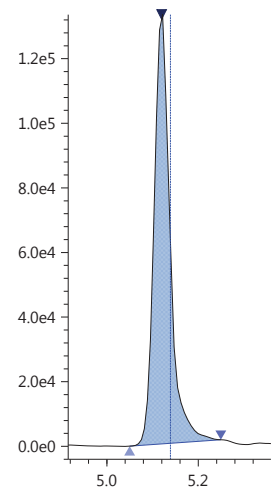
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.120 Area 324966

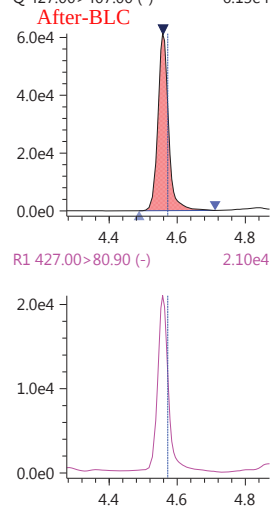
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 0.9902
RT 4.558 Area 133250
R#1 33.80 (0.00)

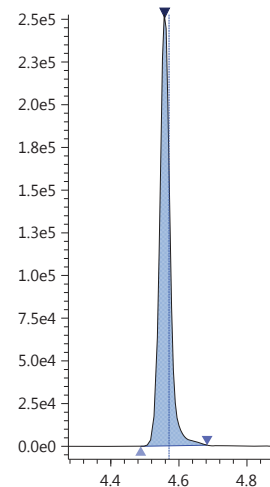
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 8.7903
RT 4.558 Area 535811

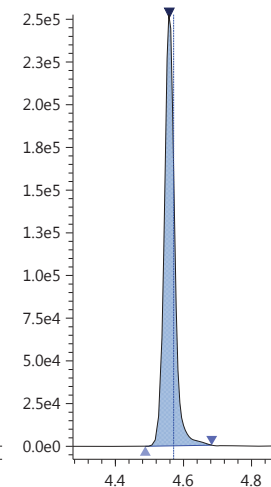
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.558 Area 535811

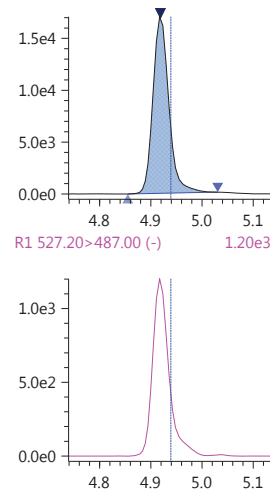
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.9391
RT 4.918 Area 36627
R#1 7.06 (0.00)

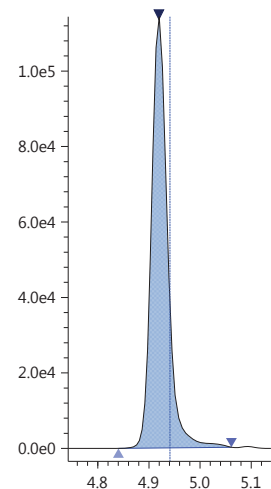
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 5.2657
RT 4.919 Area 248966

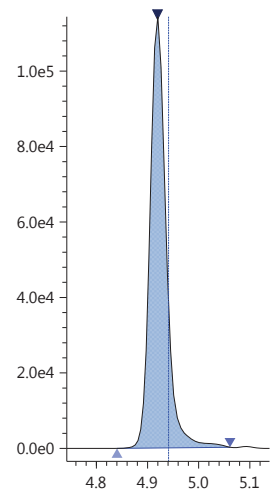
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.919 Area 248966

ISTD 528.80>509.00 (-)



Insight Report

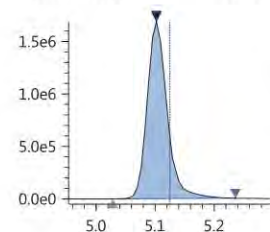
Printed at 12/6/2019 2:23:59 PM

191203_188

Sample ID: KQ1917554-01
Date acquired: 12/4/2019 11:38:31 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191203_b12\191203_188.lcd
Vial: 20 | Inj. Volume: 15.0000uL | Tray: 3

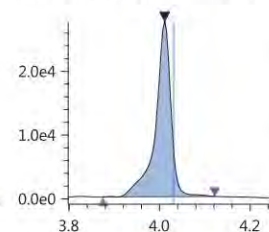
13C7-PFUnDA_IS

Conc 5.0000
RT 5.102 Area 3954777
ISTD 570.00>525.00 (-)



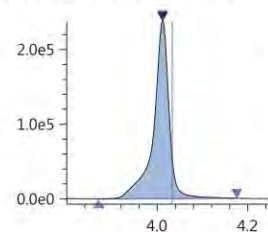
PFBS_1

Conc 0.9507
RT 4.011 Area 65016
Q 298.80>99.00 (-)



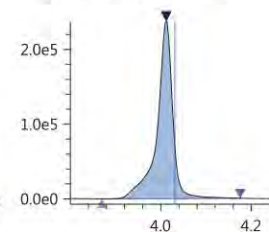
PFBS-13C

Conc 2.1251
RT 4.012 Area 565305
Q 301.80>80.00 (-)



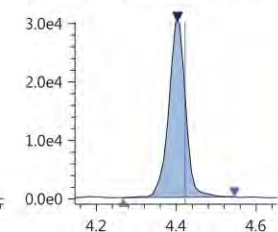
PFBS-13C_IS

Conc 5.0000
RT 4.012 Area 565305
ISTD 301.80>80.00 (-)



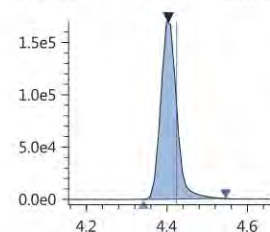
PFHxS_1

Conc 1.0550
RT 4.403 Area 89327
Q 399.00>99.00 (-)



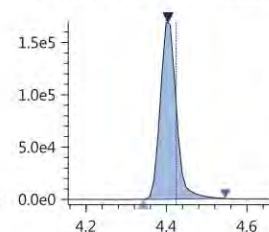
PFHxS-180

Conc 3.3201
RT 4.404 Area 467938
Q 402.70>84.05 (-)



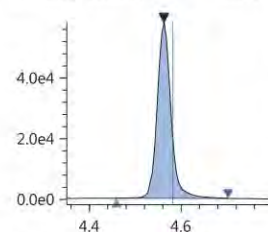
PFHxS-180_IS

Conc 5.0000
RT 4.404 Area 467938
ISTD 402.70>84.05 (-)



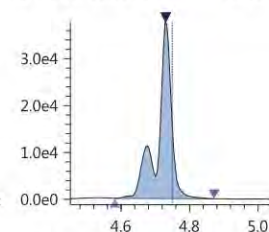
PFHpS_1

Conc 1.0982
RT 4.562 Area 120743
Q 449.00>80.15 (-)



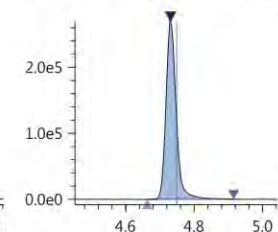
PFOS_1

Conc 1.0722
RT 4.731 Area 105964
Q 499.00>80.00 (-)



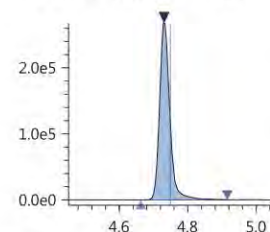
PFOS-13C

Conc 4.0269
RT 4.731 Area 560102
Q 502.80>80.05 (-)



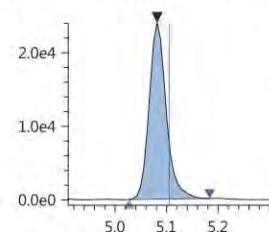
PFOS-13C_IS

Conc 5.0000
RT 4.731 Area 560102
ISTD 502.80>80.05 (-)



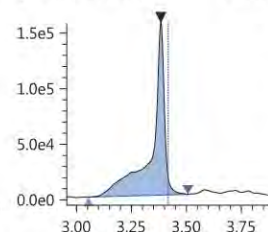
PFDS_1

Conc 0.7267
RT 5.082 Area 55333
Q 599.00>99.10 (-)



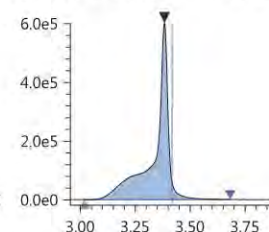
PFBA

Conc 1.2530
RT 3.384 Area 612618
Q 213.00>169.10 (-)



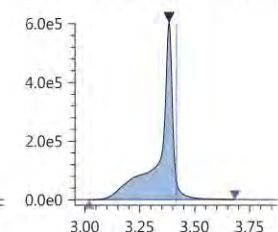
PFBA-13C

Conc 3.7331
RT 3.383 Area 2488046
Q 216.90>172.15 (-)



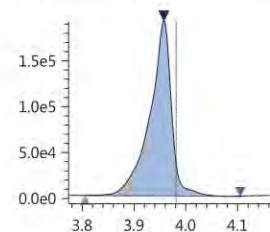
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Conc 5.0000
RT 3.383 Area 2488046
ISTD 216.90>172.15 (-)



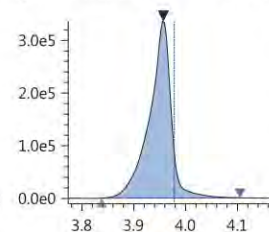
PFPeA

Conc 1.1839
RT 3.958 Area 554781
Q 263.05>219.10 (-)



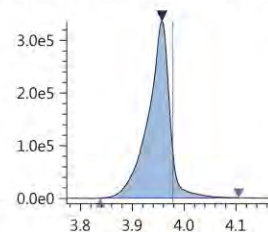
PFPeA-13C

Conc 2.7015
RT 3.957 Area 968183
Q 267.90>223.00 (-)



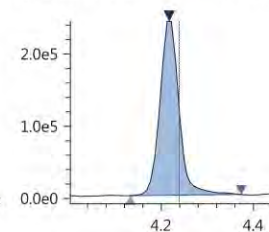
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Conc 5.0000
RT 3.957 Area 968183
ISTD 267.90>223.00 (-)



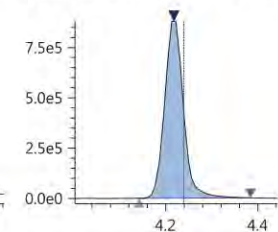
PFHxA

Conc 1.0469
RT 4.217 Area 695215
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.0987
RT 4.218 Area 2489803
Q 314.90>270.10 (-)

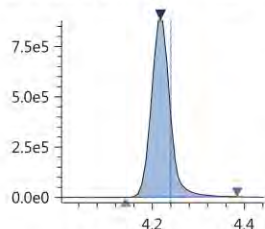


Insight Report

Printed at 12/6/2019 2:23:59 PM

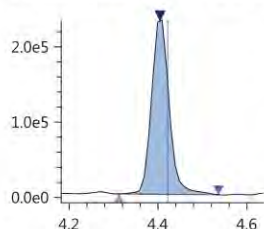
PFHxA-13C_IS

Conc 5.0000
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ISTD 314.90>270.10 (-)



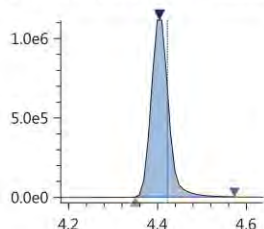
PFHpA

Conc 1.0632
RT 4.404 Area 644802
Q 362.90>319.00 (-)



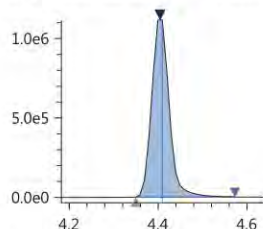
PFHpA-13C

Conc 3.5639
RT 4.404 Area 3065755
Q 366.90>322.10 (-)



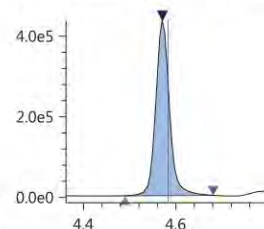
PFHpA-13C_IS

Conc 5.0000
RT 4.404 Area 3065755
ISTD 366.90>322.10 (-)



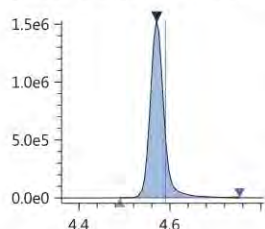
PFOA

Conc 1.1645
RT 4.571 Area 898222
Q 413.00>369.00 (-)



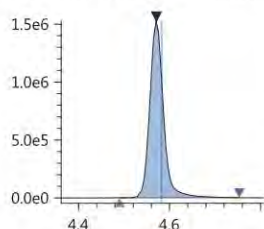
PFOA-13C

Conc 3.4425
RT 4.571 Area 3163554
Q 416.80>372.05 (-)



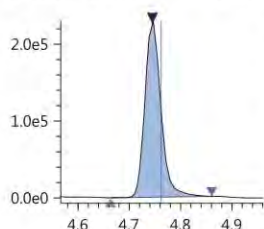
PFOA-13C_IS

Conc 5.0000
RT 4.571 Area 3163554
ISTD 416.80>372.05 (-)



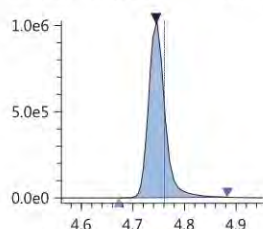
PFNA

Conc 1.0418
RT 4.745 Area 495939
Q 463.00>418.90 (-)



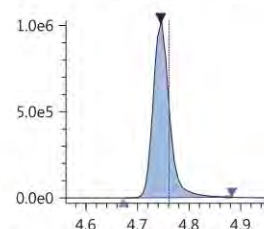
PFNA-13C

Conc 3.5557
RT 4.745 Area 2235574
Q 467.80>423.00 (-)



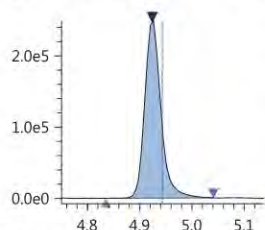
PFNA-13C_IS

Conc 5.0000
RT 4.745 Area 2235574
ISTD 467.80>423.00 (-)



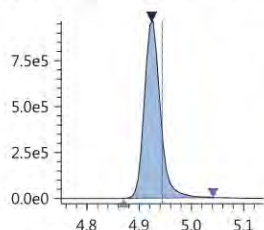
PFDA

Conc 1.2306
RT 4.924 Area 535103
Q 513.00>468.80 (-)



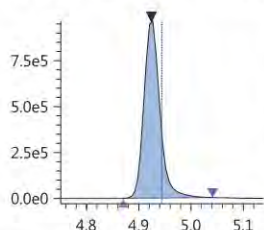
PFDA-13C

Conc 3.5754
RT 4.924 Area 2047996
Q 514.80>469.95 (-)



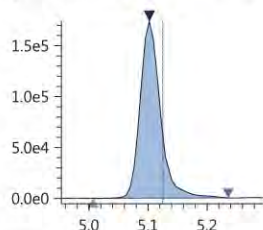
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Conc 5.0000
RT 4.924 Area 2047996
ISTD 514.80>469.95 (-)



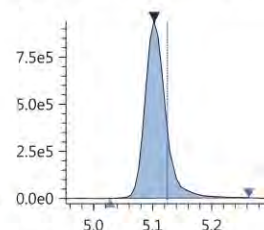
PFUnA

Conc 1.0350
RT 5.102 Area 413484
Q 563.00>518.90 (-)



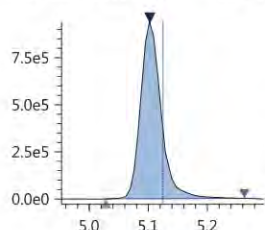
PFUnA-13C

Conc 3.8101
RT 5.103 Area 2260921
Q 564.80>519.95 (-)



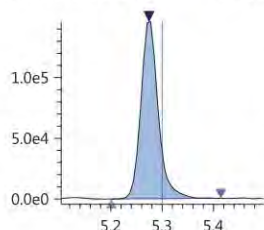
PFUnA-13C_IS

Conc 5.0000
RT 5.103 Area 2260921
ISTD 564.80>519.95 (-)



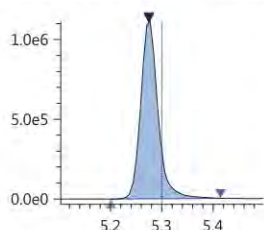
PFDaA

Conc 1.0368
RT 5.275 Area 343748
Q 613.05>569.00 (-)



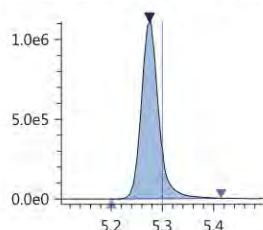
PFDaA-13C

Conc 3.3013
RT 5.275 Area 2596441
Q 614.80>569.95 (-)



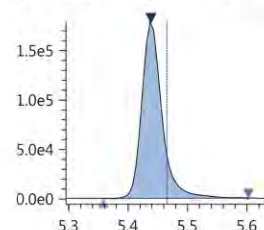
PFDaA-13C_IS

Conc 5.0000
RT 5.275 Area 2596441
ISTD 614.80>569.95 (-)



PFTrDA

Conc 1.0170
RT 5.438 Area 420722
Q 663.00>618.90 (-)

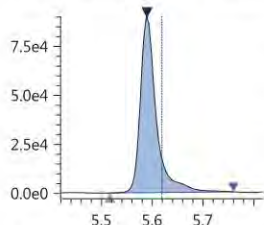


Insight Report

Printed at 12/6/2019 2:23:59 PM

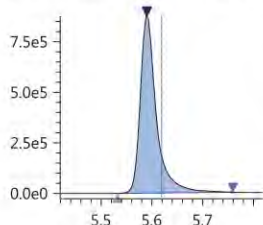
PFTeDA

Conc 0.9287
RT 5.590 Area 196070
Q 713.40>669.00 (-)



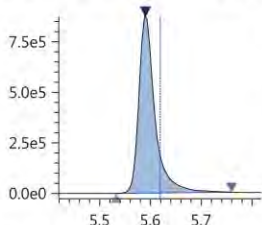
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Conc 2.8265
RT 5.590 Area 1932330
Q 714.70>669.90 (-)



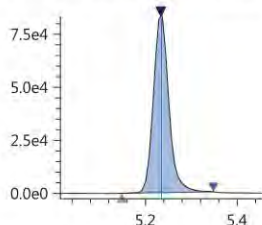
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Conc 5.0000
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ISTD 714.70>669.90 (-)



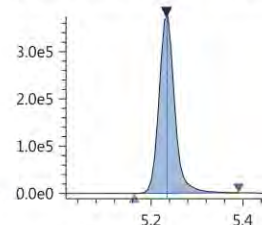
FOSA

Conc 0.9604
RT 5.234 Area 194784
Q 498.20>78.00 (-)



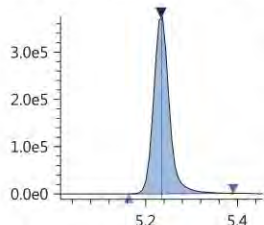
FOSA-13C

Conc 2.6796
RT 5.234 Area 890471
Q 506.00>78.05 (-)



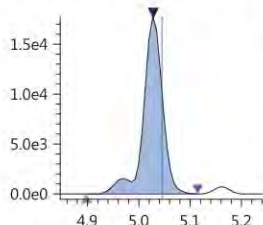
FOSA-13C_IS

Conc 5.0000
RT 5.234 Area 890471
ISTD 506.00>78.05 (-)



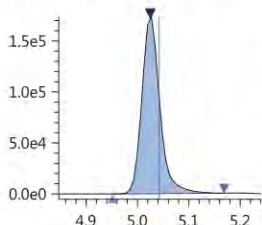
N-MeFOSAA

Conc 0.9294
RT 5.028 Area 46132
Q 570.20>419.00 (-)



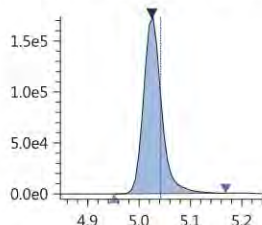
N-MeFOSAA-d3

Conc 3.4446
RT 5.025 Area 422192
Q 572.80>419.05 (-)



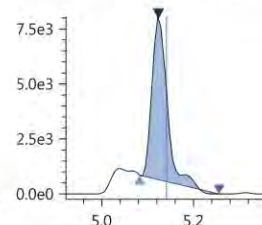
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.025 Area 422192
ISTD 572.80>419.05 (-)



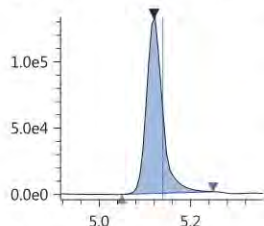
N-EtFOSAA

Conc 0.4267
RT 5.124 Area 16861
Q 584.20>418.95 (-)



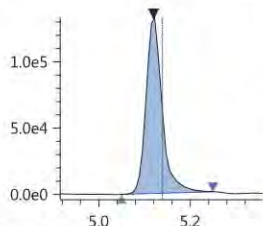
N-EtFOSAA-d5

Conc 3.2567
RT 5.120 Area 324966
Q 588.80>419.00 (-)



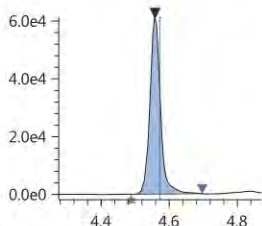
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.120 Area 324966
ISTD 588.80>419.00 (-)



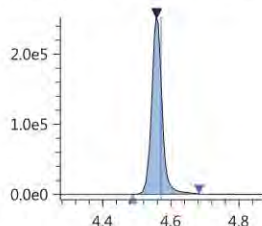
6_2-FTS_1

Conc 0.9839
RT 4.558 Area 132405
Q 427.00>407.00 (-)



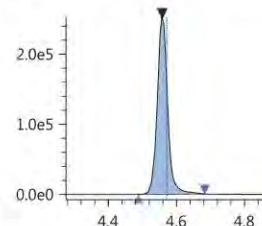
6_2-FTS-13C

Conc 8.7903
RT 4.558 Area 535811
Q 428.90>409.00 (-)



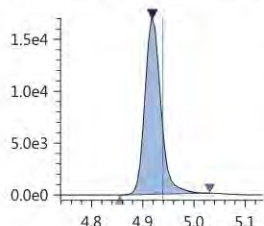
6_2-FTS-13C_IS

Conc 5.0000
RT 4.558 Area 535811
ISTD 428.90>409.00 (-)



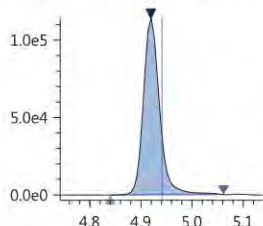
8_2-FTS_1

Conc 0.9391
RT 4.918 Area 36627
Q 527.10>506.90 (-)



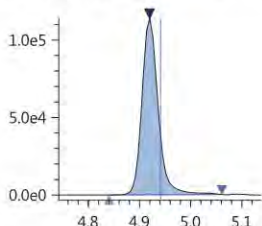
8_2-FTS-13C

Conc 5.2657
RT 4.919 Area 248966
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.919 Area 248966
ISTD 528.80>509.00 (-)



Validation Report

1st  12/06/19
2nd  12/10/19

Data File: J:\LCMS06\Data\191203_b12\191203_189
Lab ID: KQ1917554-02
RunType: DMS
Matrix: Water

Date Acquired: 12/4/19 23:49
Batch ID: 662103
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
Analytical Hold Time	X	
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates		X
Std MRL Unsupported by ICAL	X	
Above Highest ICAL Level	X	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	13C2-6:2 FTS	243	10	226	Narrate native ok

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st  12/06/19
2nd  12/10/19

Data File:	J:\LCMS06\Data\191203_b12\191203_189	Instrument:	K-LCMS-06
Acqu Date:	12/4/19 23:49	Vial:	23
Run Type:	DMS	Dilution:	1
Lab ID:	KQ1917554-02	Raw Units:	ng/mL

Bottle ID:	R1911314-001.10	Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	11/13/19	Receive Date:	11/18/19

Analysis Lot:	662103	Prep Lot:	349491	Report Group:	KQ1917554
Analysis	PFC/537M	Prep Method:	EPA 3535A		
		Prep Date:	11/26/19		

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC1900518
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.099	0.00	3985849	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.007	-0.01	594305	2.2167	44	20 - 109	Y
18O2-PFHxS	4.398	0.00	450526	3.1717	63	26 - 122	Y
13C4-PFOS	4.728	0.00	569374	4.0616	81	25 - 121	Y
13C4-PFBA	3.379	-0.01	2688273	4.0021	80	27 - 124	Y
13C5-PFPeA	3.953	-0.01	1041892	2.8845	58	27 - 138	Y
13C2-PFHxA	4.214	0.00	2984271	3.6852	74	28 - 132	Y
13C4-PFHpA	4.400		2528348	2.9162	58	19 - 139	Y
13C4-PFOA	4.567	0.00	3391926	3.6623	73	22 - 130	Y
13C5-PFNA	4.740	0.00	2557919	4.0366	81	20 - 127	Y
13C2-PFDA	4.920	0.00	2223707	3.8519	77	24 - 125	Y
13C2-PFUnDA	5.099	0.00	2926768	4.8937	98	22 - 125	Y
13C2-PFDoDA	5.272	0.00	2931480	3.6982	74	19 - 122	Y
13C2-PFTeDA	5.587	0.00	2151904	3.1232	62	13 - 124	Y
13C8-FOSA	5.231	+0.00	816463	2.4377	49	18 - 109	Y
D3-MeFOSAA	5.020	+0.00	430372	3.4840	70	9 - 123	Y
D5-EtFOSAA	5.118	+0.00	401403	3.9914	80	12 - 126	Y
13C2-6:2 FTS	4.554	0.00	747447	12.1667	243	10 - 226	Y
13C2-8:2 FTS	4.915	0.00	275472	5.7808	116	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.006	-0.01	68945	0.9590	26.0		Y
Perfluorohexane sulfonic acid (PFHxS)	4.397	0.00	75926	0.9313	25.3		Y

		1st	12/06/19
Data File:	J:\LCMS06\Data\191203_b12\191203_189	Instrument:	K-LCMS06
Acqu Date:	12/4/19 23:49	Vial:	23
Run Type:	DMS	Dilution:	1
Lab ID:	KQ1917554-02	Raw Units:	ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.558	0.00	128035	1.2095	32.8		Y
Perfluorooctane sulfonic acid (PFOS)	4.728	0.00	114831	1.1430	31.0		Y
Perfluorodecane sulfonic acid (PFDS)	5.078	0.00	64234	0.8299	22.5		Y
Perfluorobutanoic acid (PFBA)	3.379	-0.02	659596	1.2486	33.9		Y
Perfluoropentanoic acid (PFPeA)	3.953	-0.01	597468	1.1848	32.1		Y
Perfluorohexanoic acid (PFHxA)	4.213	0.00	786430	0.9864	26.7		Y
Perfluoroheptanoic acid (PFHpA)	4.400		531554	1.0628	28.8		Y
Perfluorooctanoic acid (PFOA)	4.567	0.00	975119	1.1795	32.0		Y
Perfluorononanoic acid (PFNA)	4.740	0.00	551551	1.0118	27.4		Y
Perfluorodecanoic acid (PFDA)	4.921	0.00	497465	1.0508	28.5		Y
Perfluoroundecanoic acid (PFUnDA)	5.099	0.00	451937	0.8676	23.5		Y
Perfluorododecanoic acid (PFDoDA)	5.272	0.00	334832	0.8911	24.2		Y
Perfluorotridecanoic acid (PFTrDA)	5.435	0.00	486141	1.0564	28.6		Y
Perfluorotetradecanoic acid (PFTeDA)	5.587	0.00	222451	0.9490	25.7		Y
Perfluorooctane sulfonamide (FOSA)	5.231	+0.00	188507	1.0137	27.5		Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.023	+0.00	53698	1.0581	28.7		Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.120	+0.00	48430	0.9921	26.9		Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.554	0.00	196214	1.0452	28.3		Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.915	0.00	44490	1.0309	28.0		Y

Prep Amount: 295.0000 mL

Dilution: 1

Prep Final Amount: 8.00 mL

Basis Factor: 100.00

U: Undetected at or above MDL

J: Analyte detected above MDL, but below MRL

B: Hit above MRL also found in Method Blank

E: Analyte concentration above high point of ICAL

N: Presumptive evidence of compound

D: Result from dilution

m: Manual integration performed

d: Compound manually deleted

NR: Analyte not reported from this analysis

*: Result fails acceptance criteria

#: Acceptance criteria not applicable

?: Insufficient information to determine acceptance

e: Result >= MRL, but MRL less than low point of ICAL

c: check for co-elution

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Insight Report

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191203_189

Sample ID: KQ1917554-02

Date acquired: 12/4/2019 11:49:00 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191203_b12\191203_189.lcd

Vial: 21 | Inj. Volume: 15.0000uL | Tray: 3

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.099	3985849	3985849	1	5.0000	ng/mL	----
PFBS_1	Auto	4.006	68945	594305	2	0.9590	ng/mL	----
PFBS-13C	Auto	4.007	594305	3985849	1	2.2167	ng/mL	----
PFBS-13C_IS	Auto	4.007	594305	594305	2	5.0000	ng/mL	----
PFHxS_1	M	4.397	75926	450526	3	0.9313	ng/mL	----
PFHxS-18O	Auto	4.398	450526	3985849	1	3.1717	ng/mL	----
PFHxS-18O_IS	Auto	4.398	450526	450526	3	5.0000	ng/mL	----
PFHpS_1	Auto	4.558	128035	450526	3	1.2095	ng/mL	----
PFOS_1	Auto	4.728	114831	569374	4	1.1430	ng/mL	----
PFOS-13C	Auto	4.728	569374	3985849	1	4.0616	ng/mL	----
PFOS-13C_IS	Auto	4.728	569374	569374	4	5.0000	ng/mL	----
PFDS_1	Auto	5.078	64234	569374	4	0.8299	ng/mL	----
PFBA	Auto	3.379	659596	2688273	5	1.2486	ng/mL	----
PFBA-13C	Auto	3.379	2688273	3985849	1	4.0021	ng/mL	----
PFBA-13C_IS	Auto	3.379	2688273	2688273	5	5.0000	ng/mL	----
PFPeA	Auto	3.953	597468	1041892	6	1.1848	ng/mL	----
PFPeA-13C	Auto	3.953	1041892	3985849	1	2.8845	ng/mL	----
PFPeA-13C_IS	Auto	3.953	1041892	1041892	6	5.0000	ng/mL	----
PFHxA	Auto	4.213	786430	2984271	7	0.9864	ng/mL	----
PFHxA-13C	Auto	4.214	2984271	3985849	1	3.6852	ng/mL	----
PFHxA-13C_IS	Auto	4.214	2984271	2984271	7	5.0000	ng/mL	----
PFHpA	Auto	4.400	531554	2528348	8	1.0628	ng/mL	----
PFHpA-13C	Auto	4.400	2528348	3985849	1	2.9162	ng/mL	----
PFHpA-13C_IS	Auto	4.400	2528348	2528348	8	5.0000	ng/mL	----
PFOA	M	4.567	975119	3391926	9	1.1795	ng/mL	----
PFOA-13C	Auto	4.567	3391926	3985849	1	3.6623	ng/mL	----
PFOA-13C_IS	Auto	4.567	3391926	3391926	9	5.0000	ng/mL	----
PFNA	Auto	4.740	551551	2557919	10	1.0118	ng/mL	----
PFNA-13C	Auto	4.740	2557919	3985849	1	4.0366	ng/mL	----
PFNA-13C_IS	Auto	4.740	2557919	2557919	10	5.0000	ng/mL	----
PFDA	Auto	4.921	497465	2223707	11	1.0508	ng/mL	----
PFDA-13C	Auto	4.920	2223707	3985849	1	3.8519	ng/mL	----
PFDA-13C_IS	Auto	4.920	2223707	2223707	11	5.0000	ng/mL	----
PFUnA	Auto	5.099	451937	2926768	12	0.8676	ng/mL	----
PFUnA-13C	Auto	5.099	2926768	3985849	1	4.8937	ng/mL	----
PFUnA-13C_IS	Auto	5.099	2926768	2926768	12	5.0000	ng/mL	----
PFDoA	Auto	5.272	334832	2931480	13	0.8911	ng/mL	----
PFDoA-13C	Auto	5.272	2931480	3985849	1	3.6982	ng/mL	----
PFDoA-13C_IS	Auto	5.272	2931480	2931480	13	5.0000	ng/mL	----
PFTeDA	Auto	5.435	486141	2151904	14	1.0564	ng/mL	----
PFTeDA	Auto	5.587	222451	2151904	14	0.9490	ng/mL	----
PFTeDA-13C	Auto	5.587	2151904	3985849	1	3.1232	ng/mL	----
PFTeDA-13C_IS	Auto	5.587	2151904	2151904	14	5.0000	ng/mL	----
FOSA	Auto	5.231	188507	816463	16	1.0137	ng/mL	----
FOSA-13C	Auto	5.231	816463	3985849	1	2.4377	ng/mL	----
FOSA-13C_IS	Auto	5.231	816463	816463	16	5.0000	ng/mL	----
N-MeFOSAA	Auto	5.023	53698	430372	21	1.0581	ng/mL	----
N-MeFOSAA-d3	Auto	5.020	430372	3985849	1	3.4840	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.020	430372	430372	21	5.0000	ng/mL	----
N-EtFOSAA	Auto	5.120	48430	401403	22	0.9921	ng/mL	----
N-EtFOSAA-d5	Auto	5.118	401403	3985849	1	3.9914	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.118	401403	401403	22	5.0000	ng/mL	----
6_2-FTS_1	Auto	4.554	196214	747447	24	1.0452	ng/mL	----
6_2-FTS-13C	Auto	4.554	747447	3985849	1	12.1667	ng/mL	----
6_2-FTS-13C_IS	Auto	4.554	747447	747447	24	5.0000	ng/mL	----
8_2-FTS_1	Auto	4.915	44490	275472	25	1.0309	ng/mL	----
8_2-FTS-13C	Auto	4.915	275472	3985849	1	5.7808	ng/mL	----
8_2-FTS-13C_IS	Auto	4.915	275472	275472	25	5.0000	ng/mL	----

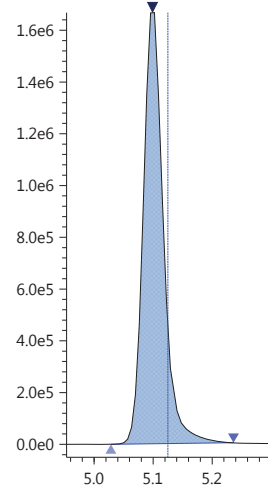
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13C7-PFUnDA_IS

Conc 5.0000
RT 5.099 Area 3985849

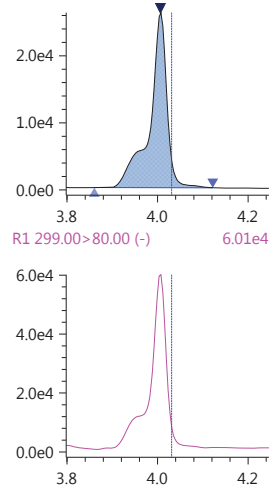
ISTD 570.00>525.00 (-) 1.67e6



PFBS_1

Conc 0.9590
RT 4.006 Area 68945
R#1 233.71 (0.00)

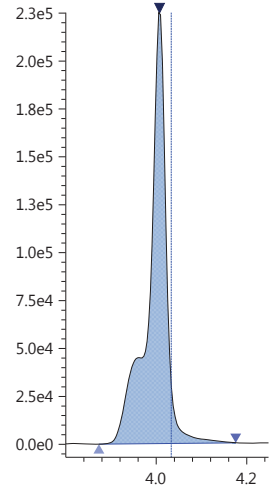
Q 298.80>99.00 (-) 2.64e4



PFBS-13C

Conc 2.2167
RT 4.007 Area 594305

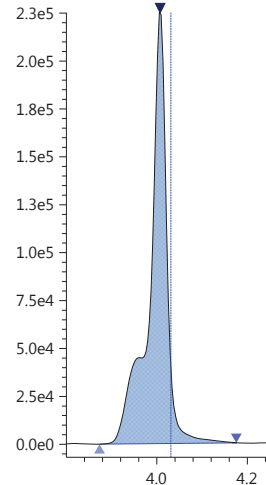
Q 301.80>80.00 (-) 2.25e5



PFBS-13C_IS

Conc 5.0000
RT 4.007 Area 594305

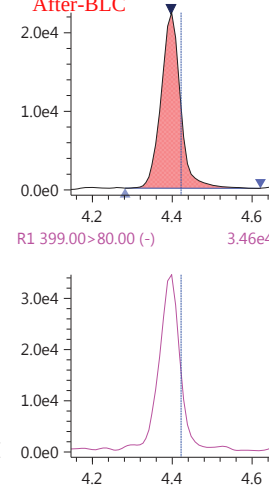
ISTD 301.80>80.00 (-) 2.25e5



PFHxS_1

Conc 0.9313
RT 4.397 Area 75926
R#1 151.16 (0.00)

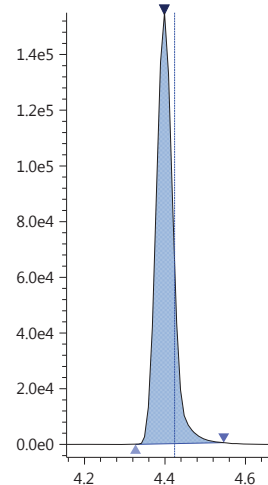
Q 399.00>99.00 (-) 2.26e4



PFHxS-180

Conc 3.1717
RT 4.398 Area 450526

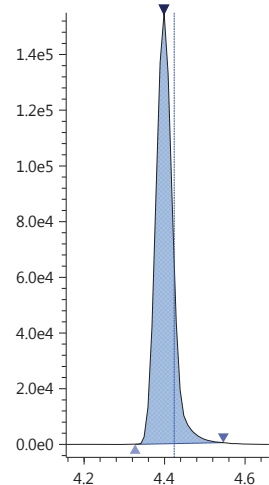
Q 402.70>84.05 (-) 1.55e5



PFHxS-180_IS

Conc 5.0000
RT 4.398 Area 450526

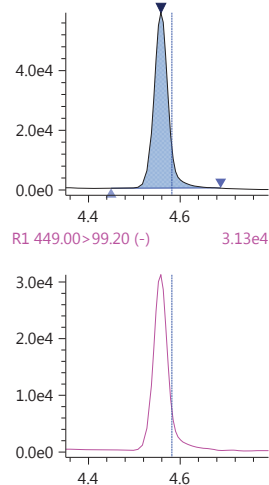
ISTD 402.70>84.05 (-) 1.55e5



PFHpS_1

Conc 1.2095
RT 4.558 Area 128035
R#1 52.29 (0.00)

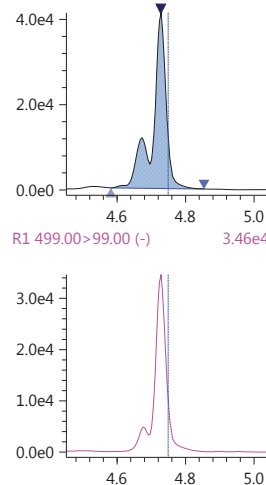
Q 449.00>80.15 (-) 5.94e4



PFOS_1

Conc 1.1430
RT 4.728 Area 114831
R#1 83.58 (0.00)

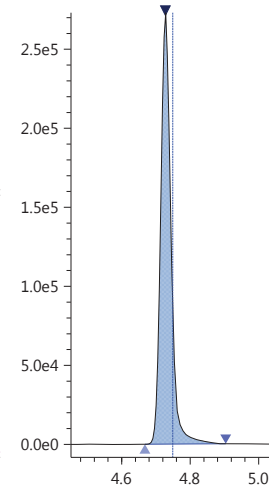
Q 499.00>80.00 (-) 4.16e4



PFOS-13C

Conc 4.0616
RT 4.728 Area 569374

Q 502.80>80.05 (-) 2.73e5



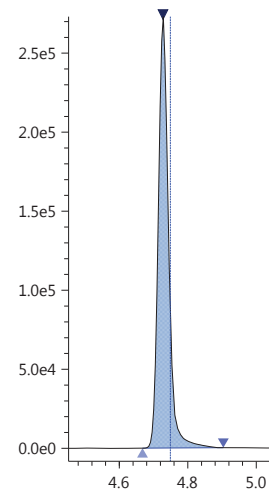
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PFOS-13C_IS

Conc 5.0000
RT 4.728 Area 569374

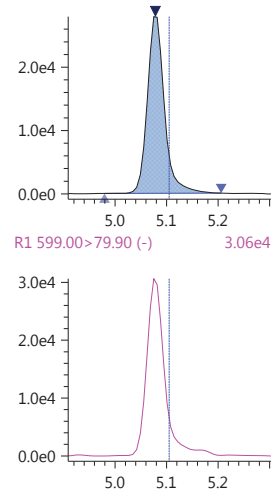
ISTD 502.80>80.05 (-)



PFDS_1

Conc 0.8299
RT 5.078 Area 64234
R#1 105.79 (0.00)

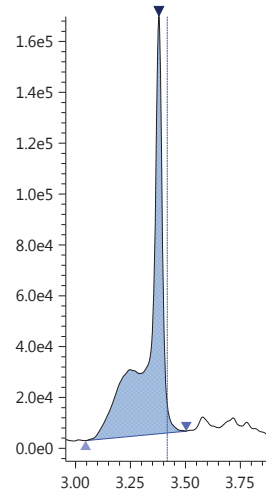
Q 599.00>99.10 (-)



PFBA

Conc 1.2486
RT 3.379 Area 659596

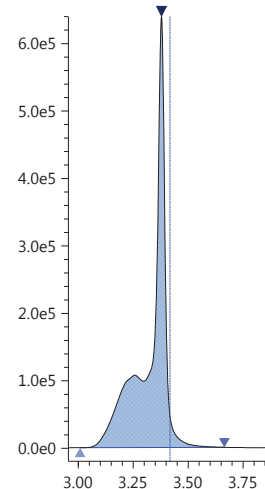
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.0021
RT 3.379 Area 2688273

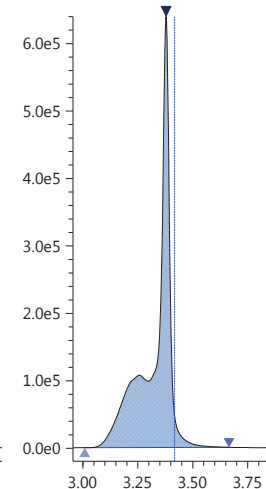
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
RT 3.379 Area 2688273

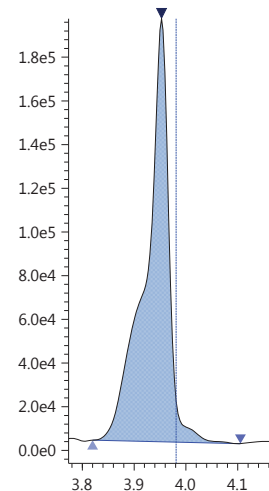
ISTD 216.90>172.15 (-)



PFPeA

Conc 1.1848
RT 3.953 Area 597468

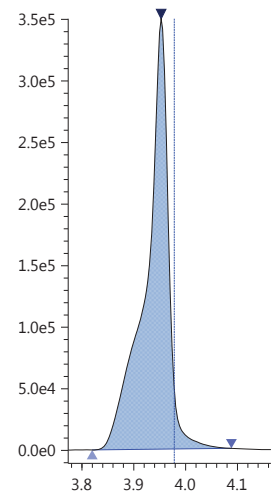
Q 263.05>219.10 (-)



PFPeA-13C

Conc 2.8845
RT 3.953 Area 1041892

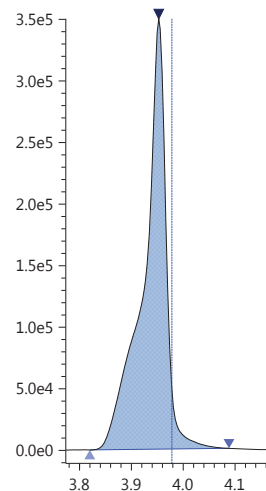
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.953 Area 1041892

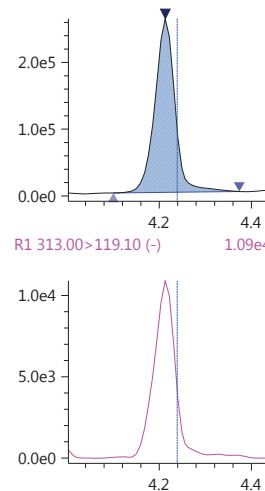
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.9864
RT 4.213 Area 786430
R#1 4.16 (0.00)

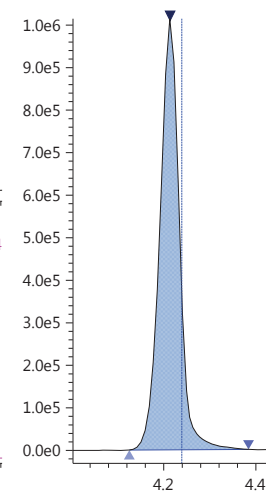
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.6852
RT 4.214 Area 2984271

Q 314.90>270.10 (-)



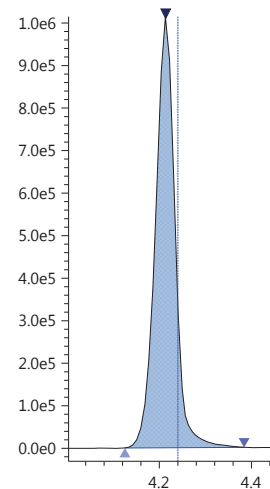
Insight Report

Printed at 12/6/2019 3:10:36 PM

PFHxA-13C_IS

Conc 5.0000
RT 4.214 Area 2984271

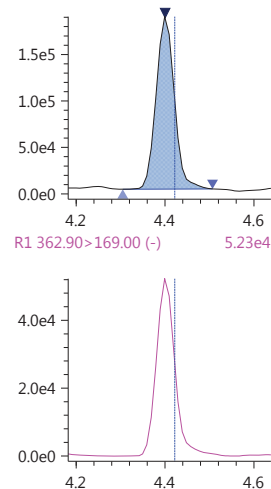
ISTD 314.90>270.10 (-)



PFHpA

Conc 1.0628
RT 4.400 Area 531554
R#1 27.92 (0.00)

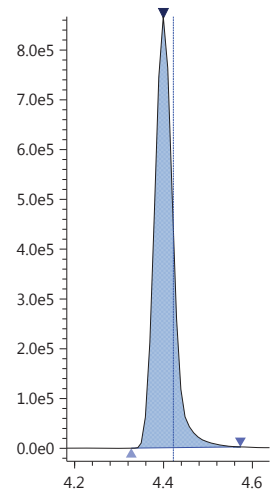
Q 362.90>319.00 (-)



PFHpA-13C

Conc 2.9162
RT 4.400 Area 2528348

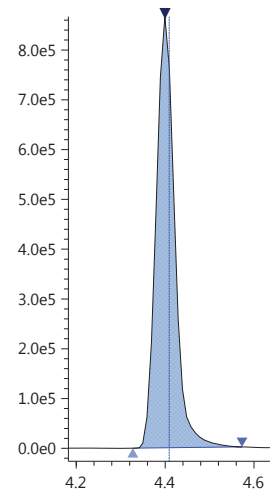
Q 366.90>322.10 (-)



PFHpA-13C_IS

Conc 5.0000
RT 4.400 Area 2528348

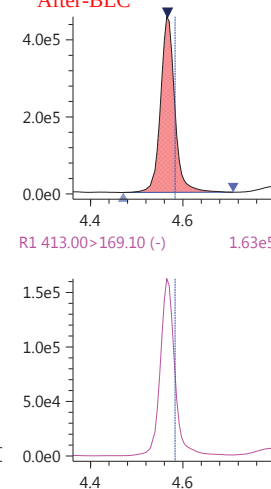
ISTD 366.90>322.10 (-)



PFOA

Conc 1.1795
RT 4.567 Area 975119
R#1 34.87 (0.00)

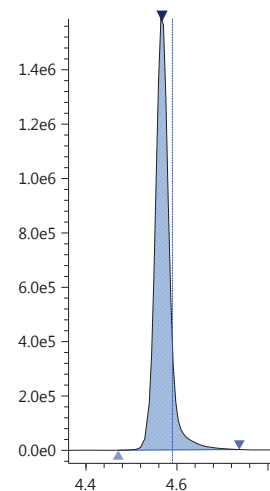
Q 413.00>369.00 (-)



PFOA-13C

Conc 3.6623
RT 4.567 Area 3391926

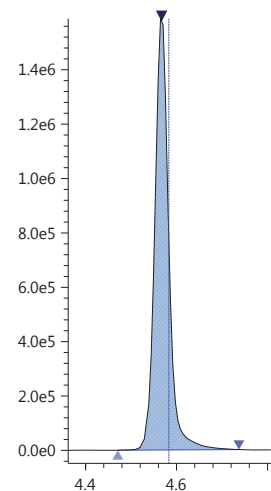
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
RT 4.567 Area 3391926

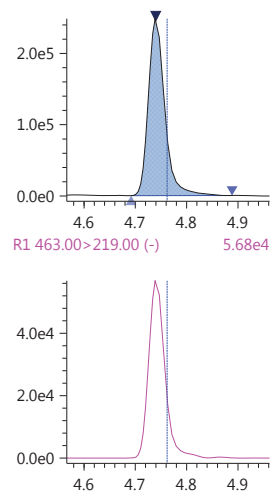
ISTD 416.80>372.05 (-)



PFNA

Conc 1.0118
RT 4.740 Area 551551
R#1 23.17 (0.00)

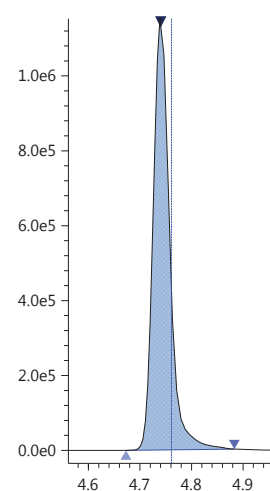
Q 463.00>418.90 (-)



PFNA-13C

Conc 4.0366
RT 4.740 Area 2557919

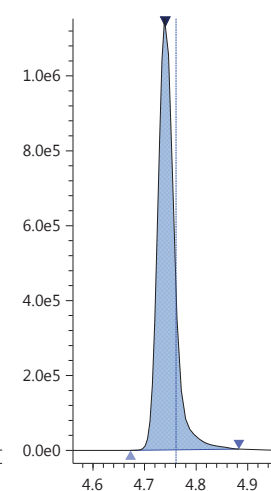
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
RT 4.740 Area 2557919

ISTD 467.80>423.00 (-)

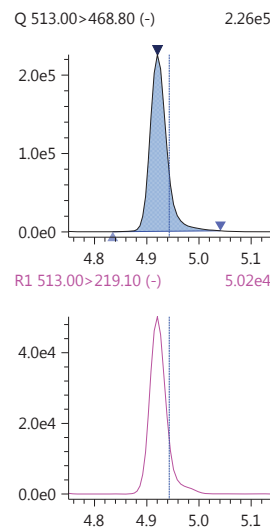


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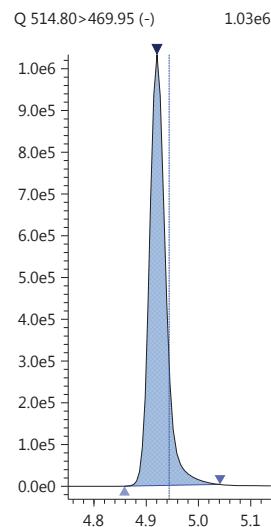
PFDA

Conc 1.0508
RT 4.921 Area 497465
R#1 22.17 (0.00)



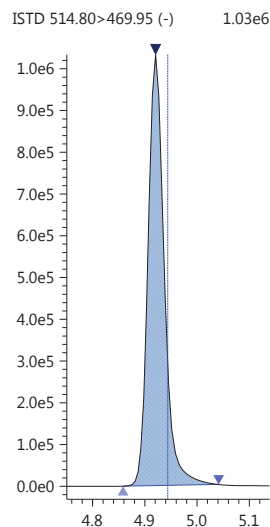
PFDA-13C

Conc 3.8519
RT 4.920 Area 2223707



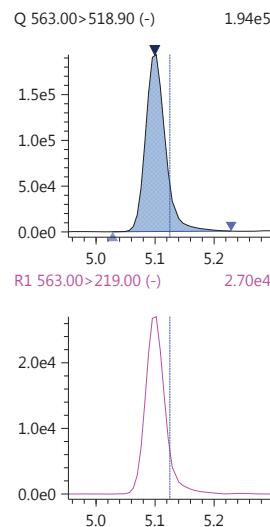
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Conc 5.0000
RT 4.920 Area 2223707



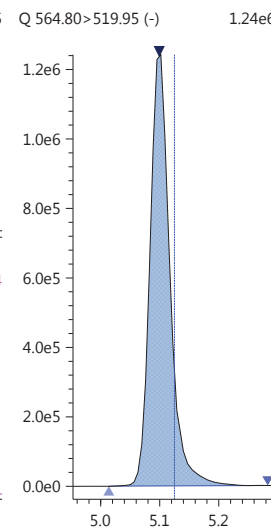
PFUnA

Conc 0.8676
RT 5.099 Area 451937
R#1 14.02 (0.00)



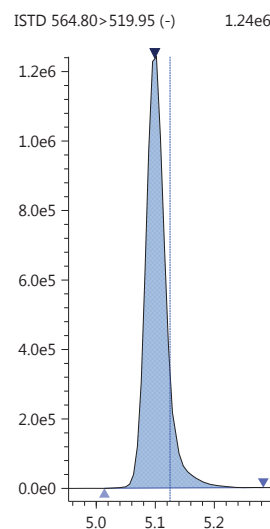
PFUnA-13C

Conc 4.8937
RT 5.099 Area 2926768



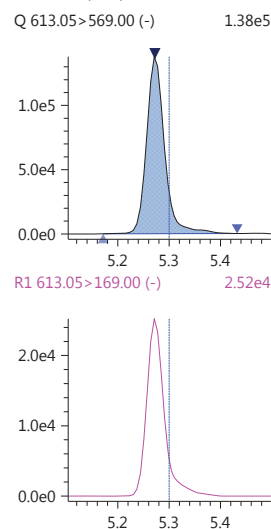
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Conc 5.0000
RT 5.099 Area 2926768



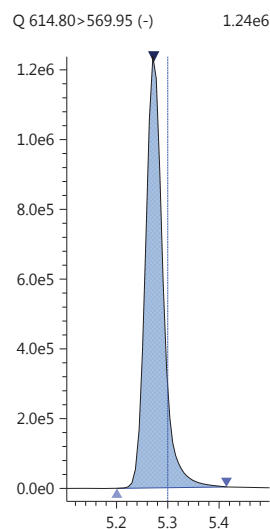
PFD0A

Conc 0.8911
RT 5.272 Area 334832
R#1 18.42 (0.00)



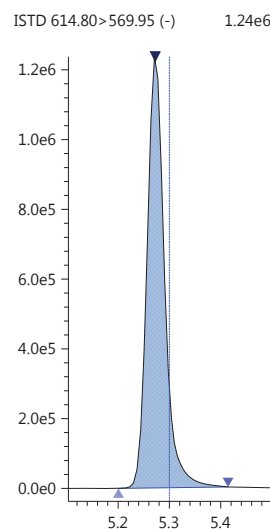
PFD0A-13C

Conc 3.6982
RT 5.272 Area 2931480



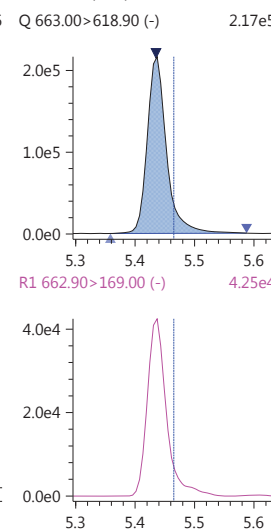
PFD0A-13C_IS

Conc 5.0000
RT 5.272 Area 2931480



PFTrDA

Conc 1.0564
RT 5.435 Area 486141
R#1 19.63 (0.00)



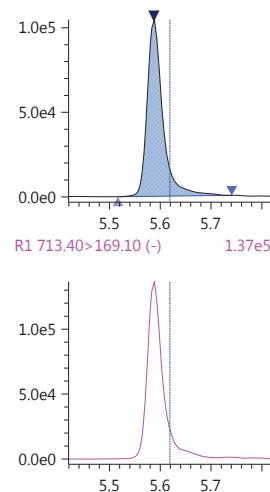
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PFTeDA

Conc 0.9490
RT 5.587 Area 222451
R#1 131.88 (0.00)

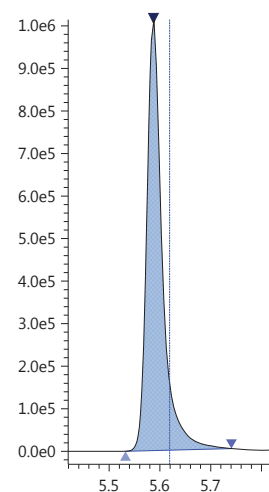
Q 713.40>669.00 (-)



PFTeDA-13C

Conc 3.1232
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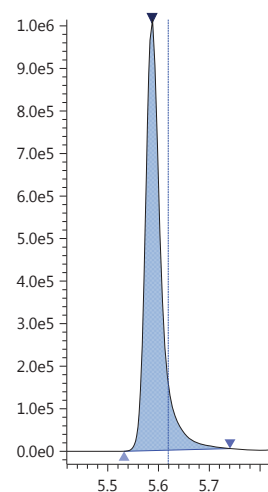
Q 714.70>669.90 (-)



PFTeDA-13C_IS

Conc 5.0000
RT 5.587 Area 2151904

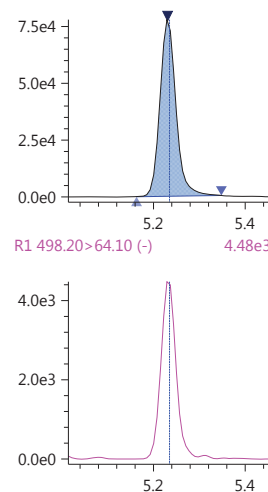
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FOSA

Conc 1.0137
RT 5.231 Area 188507
R#1 5.72 (0.00)

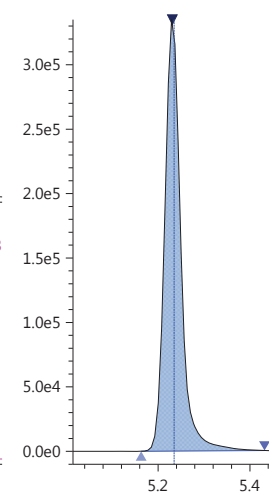
Q 498.20>78.00 (-)



FOSA-13C

Conc 2.4377
RT 5.231 Area 816463

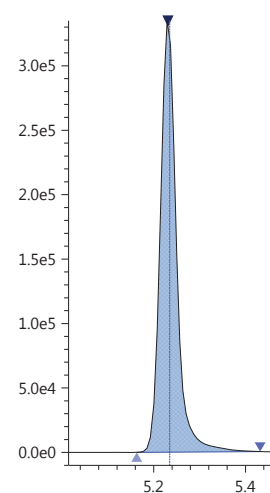
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
RT 5.231 Area 816463

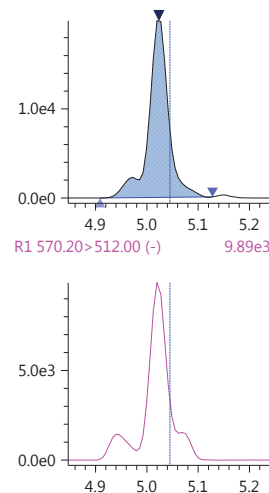
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N-MeFOSAA

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R#1 46.33 (0.00)

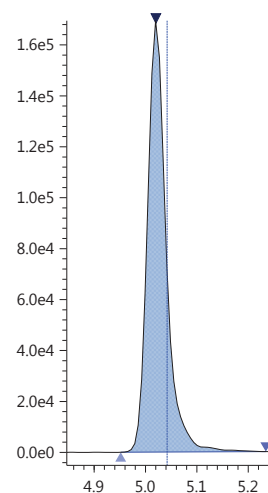
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 3.4840
RT 5.020 Area 430372

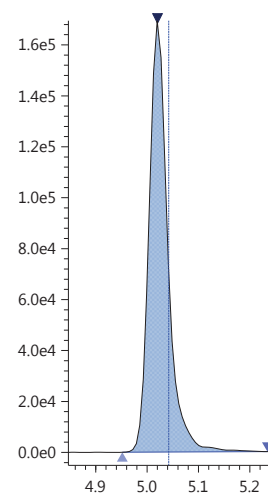
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.020 Area 430372

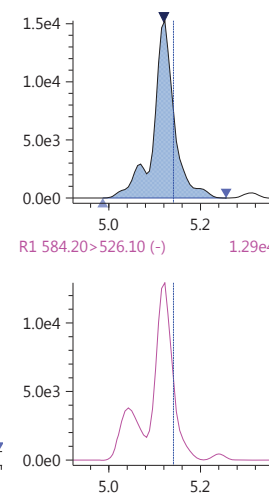
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc 0.9921
RT 5.120 Area 48430
R#1 84.20 (0.00)

Q 584.20>418.95 (-)



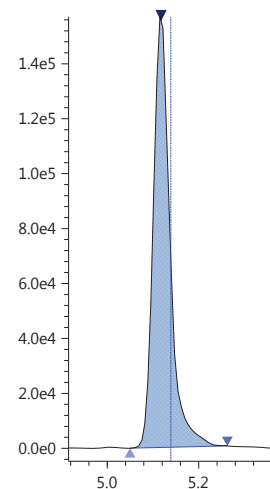
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N-EtFOSAA-d5

Conc 3.9914
RT 5.118 Area 401403

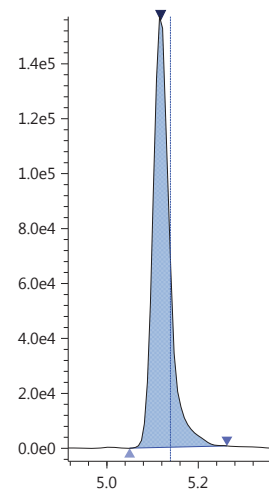
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.118 Area 401403

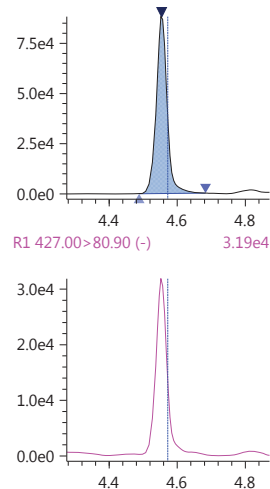
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 1.0452
RT 4.554 Area 196214
R#1 35.82 (0.00)

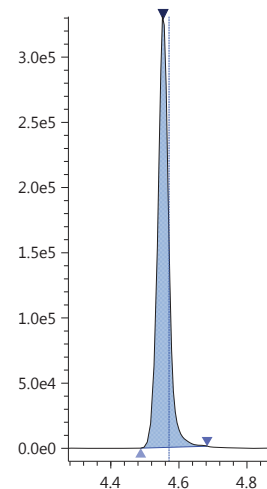
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 12.1667
RT 4.554 Area 747447

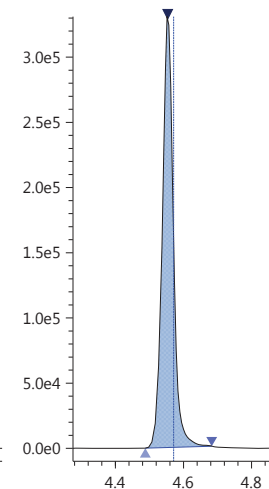
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.554 Area 747447

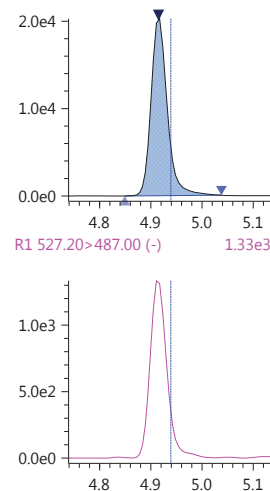
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8_2-FTS_1

Conc 1.0309
RT 4.915 Area 44490
R#1 6.68 (0.00)

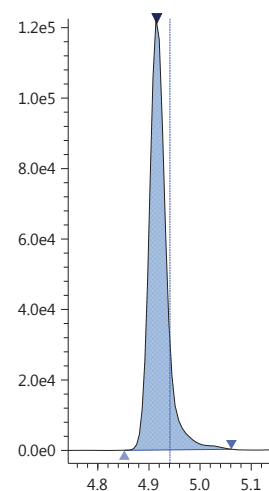
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 5.7808
RT 4.915 Area 275472

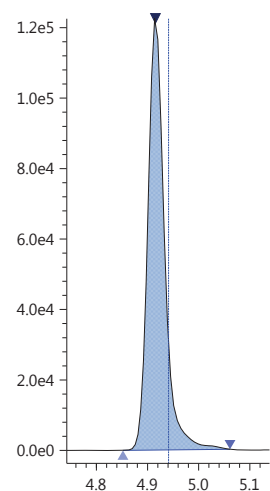
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8_2-FTS-13C_IS

Conc 5.0000
RT 4.915 Area 275472

ISTD 528.80>509.00 (-)



Insight Report

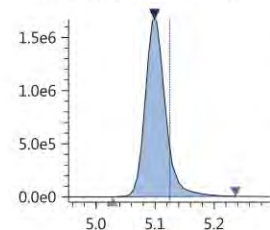
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191203_189

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Date acquired: 12/4/2019 11:49:00 PM
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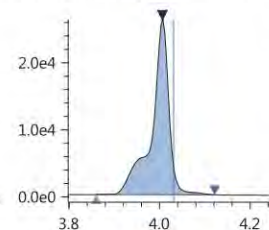
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RT 5.099 Area 3985849
ISTD 570.00>525.00 (-)



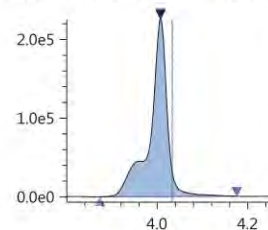
PFBS_1

Conc 0.9590
RT 4.006 Area 68945
Q 298.80>99.00 (-)



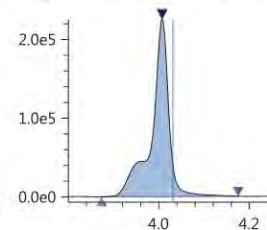
PFBS-13C

Conc 2.2167
RT 4.007 Area 594305
Q 301.80>80.00 (-)



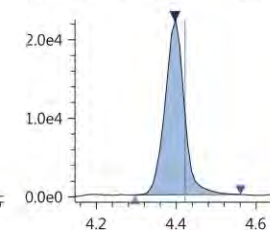
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Conc 5.0000
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ISTD 301.80>80.00 (-)



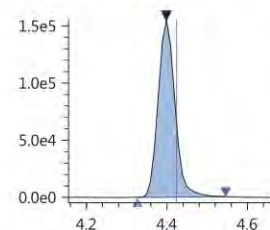
PFHxS_1

Conc 0.9172
RT 4.397 Area 74777
Q 399.00>99.00 (-)



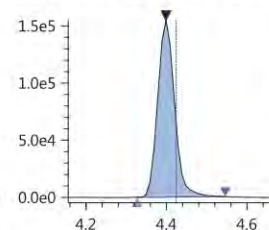
PFHxS-180

Conc 3.1717
RT 4.398 Area 450526
Q 402.70>84.05 (-)



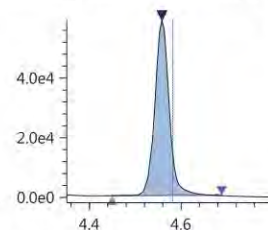
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Conc 5.0000
RT 4.398 Area 450526
ISTD 402.70>84.05 (-)



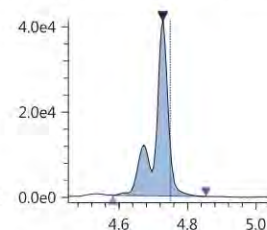
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Conc 1.2095
RT 4.558 Area 128035
Q 449.00>80.15 (-)



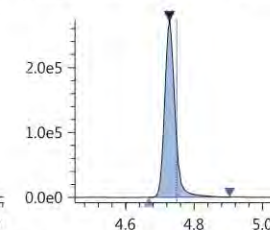
PFOS_1

Conc 1.1430
RT 4.728 Area 114831
Q 499.00>80.00 (-)



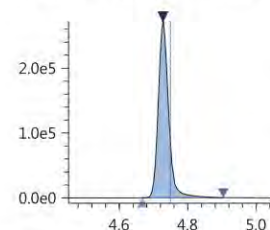
PFOS-13C

Conc 4.0616
RT 4.728 Area 569374
Q 502.80>80.05 (-)



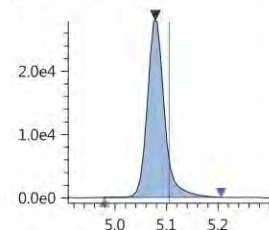
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Conc 5.0000
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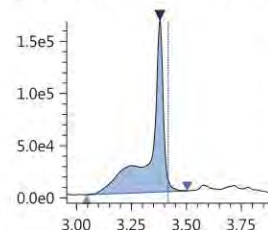
PFDS_1

Conc 0.8299
RT 5.078 Area 64234
Q 599.00>99.10 (-)



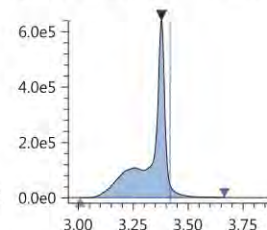
PFBA

Conc 1.2486
RT 3.379 Area 659596
Q 213.00>169.10 (-)



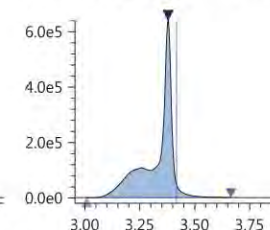
PFBA-13C

Conc 4.0021
RT 3.379 Area 2688273
Q 216.90>172.15 (-)



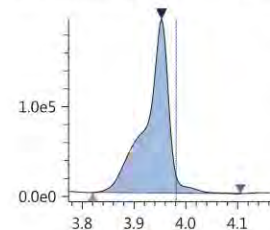
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Conc 5.0000
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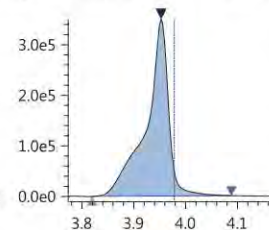
PFPeA

Conc 1.1848
RT 3.953 Area 597468
Q 263.05>219.10 (-)



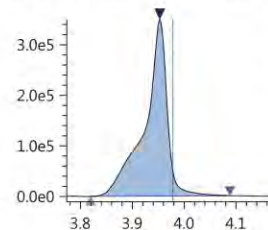
PFPeA-13C

Conc 2.8845
RT 3.953 Area 1041892
Q 267.90>223.00 (-)



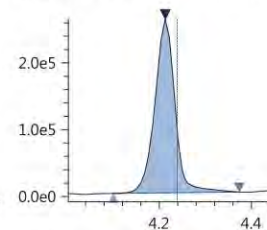
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Conc 5.0000
RT 3.953 Area 1041892
ISTD 267.90>223.00 (-)



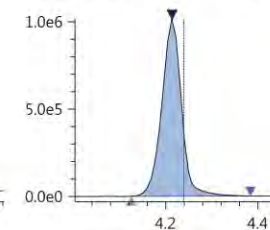
PFHxA

Conc 0.9864
RT 4.213 Area 786430
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.6852
RT 4.214 Area 2984271
Q 314.90>270.10 (-)

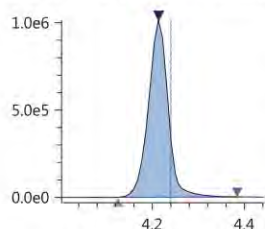


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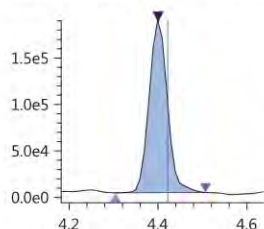
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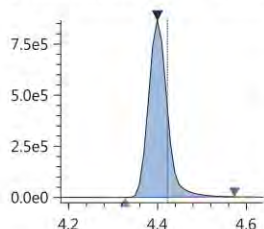
PFHpA

Conc 1.0628
RT 4.400 Area 531554
Q 362.90>319.00 (-)



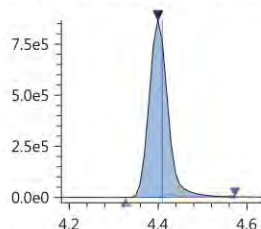
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Conc 2.9162
RT 4.400 Area 2528348
Q 366.90>322.10 (-)



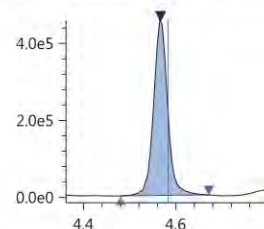
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Conc 5.0000
RT 4.400 Area 2528348
ISTD 366.90>322.10 (-)



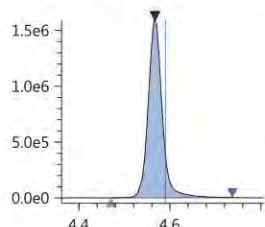
PFOA

Conc 1.1615
RT 4.567 Area 960595
Q 413.00>369.00 (-)



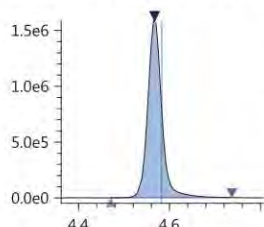
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Conc 3.6623
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Q 416.80>372.05 (-)



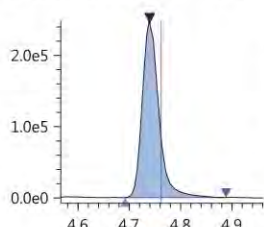
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Conc 5.0000
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ISTD 416.80>372.05 (-)



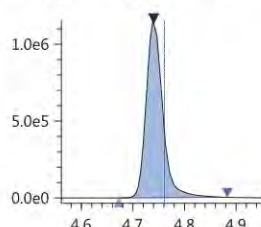
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Conc 1.0118
RT 4.740 Area 551551
Q 463.00>418.90 (-)



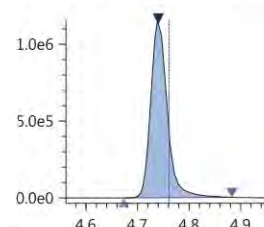
PFNA-13C

Conc 4.0366
RT 4.740 Area 2557919
Q 467.80>423.00 (-)



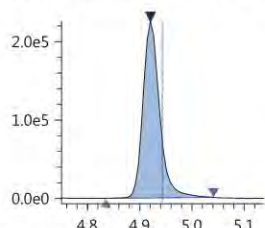
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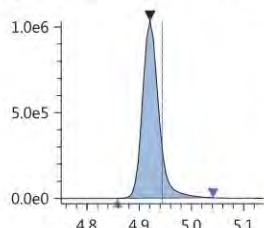
PFDA

Conc 1.0508
RT 4.921 Area 497465
Q 513.00>468.80 (-)



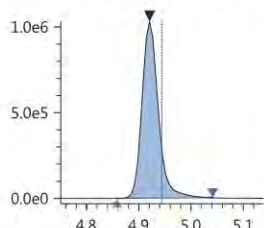
PFDA-13C

Conc 3.8519
RT 4.920 Area 2223707
Q 514.80>469.95 (-)



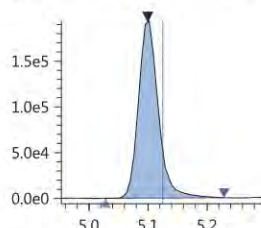
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RT 4.920 Area 2223707
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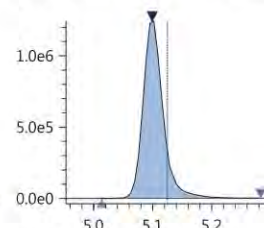
PFUnA

Conc 0.8676
RT 5.099 Area 451937
Q 563.00>518.90 (-)



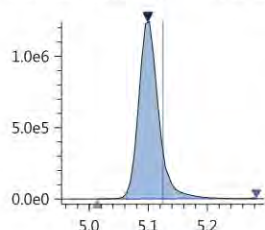
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Conc 4.8937
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Q 564.80>519.95 (-)



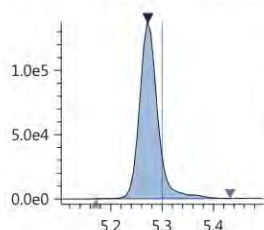
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ISTD 564.80>519.95 (-)



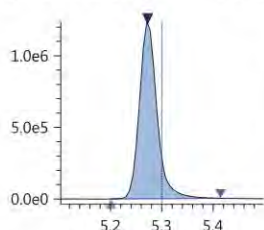
PFDaA

Conc 0.8911
RT 5.272 Area 334832
Q 613.05>569.00 (-)



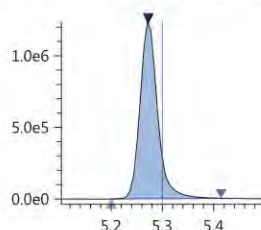
PFDaA-13C

Conc 3.6982
RT 5.272 Area 2931480
Q 614.80>569.95 (-)



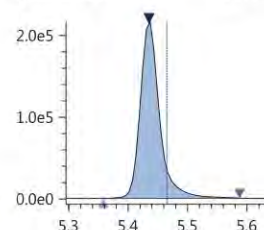
PFDaA-13C_IS

Conc 5.0000
RT 5.272 Area 2931480
ISTD 614.80>569.95 (-)



PFTrDA

Conc 1.0564
RT 5.435 Area 486141
Q 663.00>618.90 (-)

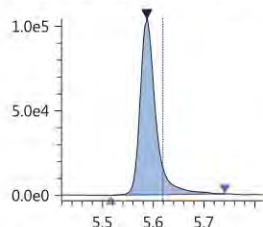


Insight Report

Printed at 12/6/2019 2:23:59 PM

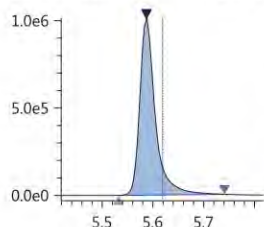
PFTeDA

Conc 0.9490
RT 5.587 Area 222451
Q 713.40>669.00 (-)



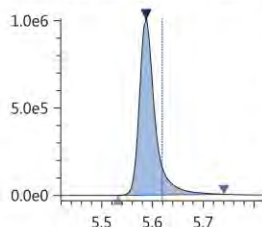
PFTeDA-13C

Conc 3.1232
RT 5.587 Area 2151904
Q 714.70>669.90 (-)



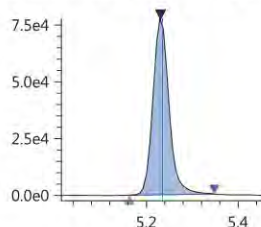
PFTeDA-13C_IS

Conc 5.0000
RT 5.587 Area 2151904
ISTD 714.70>669.90 (-)



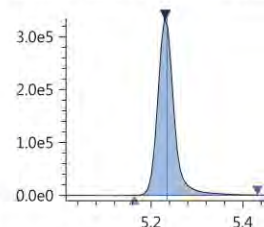
FOSA

Conc 1.0137
RT 5.231 Area 188507
Q 498.20>78.00 (-)



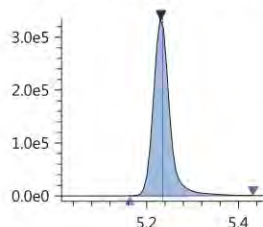
FOSA-13C

Conc 2.4377
RT 5.231 Area 816463
Q 506.00>78.05 (-)



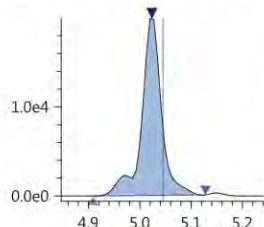
FOSA-13C_IS

Conc 5.0000
RT 5.231 Area 816463
ISTD 506.00>78.05 (-)



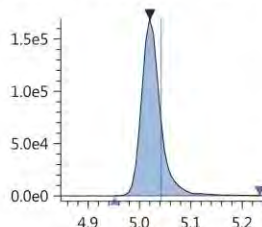
N-MeFOSAA

Conc 1.0581
RT 5.023 Area 53698
Q 570.20>419.00 (-)



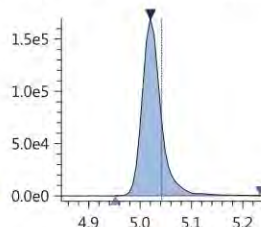
N-MeFOSAA-d3

Conc 3.4840
RT 5.020 Area 430372
Q 572.80>419.05 (-)



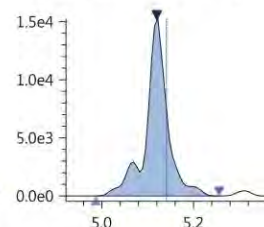
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.020 Area 430372
ISTD 572.80>419.05 (-)



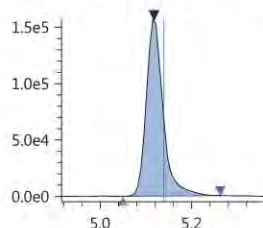
N-EtFOSAA

Conc 0.9921
RT 5.120 Area 48430
Q 584.20>418.95 (-)



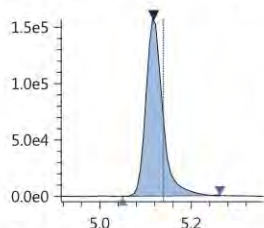
N-EtFOSAA-d5

Conc 3.9914
RT 5.118 Area 401403
Q 588.80>419.00 (-)



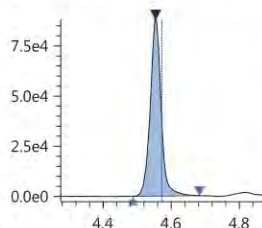
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.118 Area 401403
ISTD 588.80>419.00 (-)



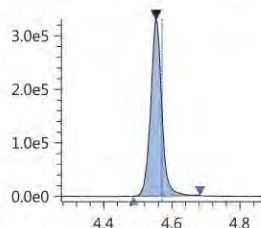
6_2-FTS_1

Conc 1.0452
RT 4.554 Area 196214
Q 427.00>407.00 (-)



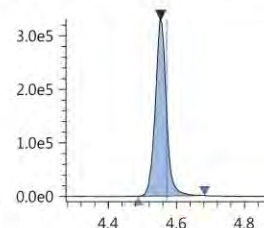
6_2-FTS-13C

Conc 12.1667
RT 4.554 Area 747447
Q 428.90>409.00 (-)



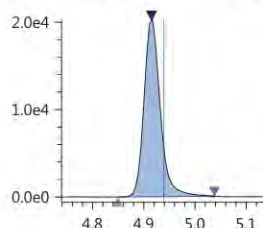
6_2-FTS-13C_IS

Conc 5.0000
RT 4.554 Area 747447
ISTD 428.90>409.00 (-)



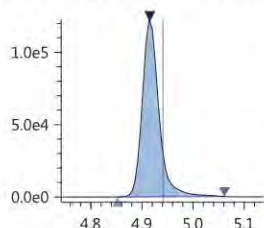
8_2-FTS_1

Conc 1.0309
RT 4.915 Area 44490
Q 527.10>506.90 (-)



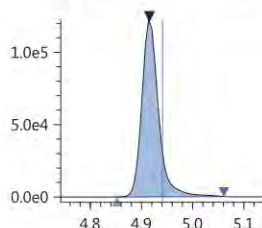
8_2-FTS-13C

Conc 5.7808
RT 4.915 Area 275472
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.915 Area 275472
ISTD 528.80>509.00 (-)



Validation Report

1st  12/06/19
2nd  12/10/19

Data File: J:\LCMS06\Data\191203_b12\191203_168
Lab ID: KQ1917900-02
RunType: CCB
Matrix: Water

Date Acquired: 12/4/19 20:09
Batch ID: 662103
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Continuing Calibration Recovery	X	
Internal Standards	X	
Surrogates	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st 12/06/19
2nd 12/10/19

Data File:	J:\LCMS06\Data\191203_b12\191203_168	Instrument:	K-LCMS-06
Acqu Date:	12/4/19 20:09	Vial:	2
Run Type:	CCB	Dilution:	1
Lab ID:	KQ1917900-02	Raw Units:	ng/mL

Bottle ID:		Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	11/14/19	Receive Date:	11/15/19

Analysis Lot:	662103	Prep Lot:		Report Group:	KQ1917900
Analysis	PFC/537M	Prep Method:			
		Prep Date:			

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC1900518
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.101	+0.00	3759147	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	% Rec	% Rec Criteria	Rpt?
13C3-PFBS	4.012	0.00	1079769	4.2703	85	20 - 109	Y
18O2-PFHxS	4.402	+0.00	568682	4.2449	85	26 - 122	Y
13C4-PFOS	4.730		660847	4.9984	100	25 - 121	Y
13C4-PFBA	3.392	0.00	2564567	4.0481	81	27 - 124	Y
13C5-PFPeA	3.959	0.00	1373486	4.0318	81	27 - 138	Y
13C2-PFHxA	4.217		3016067	3.9491	79	28 - 132	Y
13C4-PFHpA	4.401	+0.00	3454232	4.2244	84	19 - 139	Y
13C4-PFOA	4.569	+0.00	3906393	4.4721	89	22 - 130	Y
13C5-PFNA	4.742	+0.00	2638669	4.4152	88	20 - 127	Y
13C2-PFDA	4.923	+0.00	2501828	4.5950	92	24 - 125	Y
13C2-PFUnDA	5.101	+0.00	3042614	5.3942	108	22 - 125	Y
13C2-PFDoDA	5.274		3596467	4.8108	96	19 - 122	Y
13C2-PFTeDA	5.591	+0.00	2771353	4.2648	85	13 - 124	Y
13C8-FOSA	5.226	0.00	1384421	4.3828	88	18 - 109	Y
D3-MeFOSAA	5.019	+0.00	482350	4.1403	83	9 - 123	Y
D5-EtFOSAA	5.115	+0.00	449354	4.7377	95	12 - 126	Y
13C2-6:2 FTS	4.558	+0.00	242564	4.1865	84	10 - 226	Y
13C2-8:2 FTS	4.919	+0.00	197264	4.3893	88	10 - 202	Y

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.011	0.00	148	0.0011	0.035	U	Y
Perfluorohexane sulfonic acid (PFHxS)	4.403	+0.00	1474	0.0143	0.46	U	Y

Data File: J:\LCMS06\Data\191203_b12\191203_168
Acqu Date: 12/4/19 20:09
Run Type: CCB
Lab ID: KQ1917900-02

Instrument: K-LCMS06
Vial: 2
Dilution: 1
Raw Units: ng/mL

Target Compounds

Final Conc.Units: ng/L

Parameter Name	RT	RT Dev	Response	Solution Conc	Final Conc	Q	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.563	+0.00	104	0.0008	0.026	U	Y
Perfluorooctane sulfonic acid (PFOS)	4.728	0.00	423	0.0036	0.12	U	Y
Perfluorodecane sulfonic acid (PFDS)	5.093	+0.01	59	0.0007	0.022	U	Y
Perfluorobutanoic acid (PFBA)	3.392	0.00	1749	0.0035	0.11	U	Y
Perfluoropentanoic acid (PFPeA)	3.959	0.00	77549	0.0121	0.39	U	Y
Perfluorohexanoic acid (PFHxA)	4.201	-0.02	27858	0.0064	0.20	U	Y
Perfluoroheptanoic acid (PFHpA)	4.382	-0.02	14790	-0.0055	0	U	Y
Perfluorooctanoic acid (PFOA)	4.558	-0.01	27951	0.0011	0.035	U	Y
Perfluorononanoic acid (PFNA)	4.715	-0.03	12559	-0.0077	0	U	Y
Perfluorodecanoic acid (PFDA)	4.912	-0.01	14354	0.0081	0.26	U	Y
Perfluoroundecanoic acid (PFUnDA)	5.097	0.00	15179	-0.0111	0	U	Y
Perfluorododecanoic acid (PFDoDA)	5.267	-0.01	5430	-0.0130	0	U	Y
Perfluorotridecanoic acid (PFTrDA)	5.433	0.00	10926	-0.0137	0	U	Y
Perfluorotetradecanoic acid (PFTeDA)	5.592	+0.00	41108	0.0071	0.23	U	Y
Perfluorooctane sulfonamide (FOSA)	5.226	0.00	845	0.0027	0.086	U	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.021	0.00	413	0.0294	0.94	U	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	0		0	0	0	U	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.562	+0.01	864	0.0142	0.45	U	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.916	0.00	29	0.0009	0.029	U	Y

U: Undetected at or above MDL

J: Analyte detected above MDL, but below MRL

B: Hit above MRL also found in Method Blank

E: Analyte concentration above high point of ICAL

N: Presumptive evidence of compound

D: Result from dilution

m: Manual integration performed

d: Compound manually deleted

NR: Analyte not reported from this analysis

*: Result fails acceptance criteria

#: Acceptance criteria not applicable

?: Insufficient information to determine acceptance

e: Result >= MRL, but MRL less than low point of ICAL

c: check for co-elution

Printed: 12/6/19 15:49

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Insight Report

Printed at 12/6/2019 3:10:36 PM

191203_168

Sample ID: IB

Date acquired: 12/4/2019 8:09:29 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191203_b12\191203_168.lcd

Vial: 51 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.101	3759147	3759147	1	5.0000	ng/mL	----
PFBS_1	M	4.011	148	1079769	2	0.0011	ng/mL	----
PFBS-13C	Auto	4.012	1079769	3759147	1	4.2703	ng/mL	----
PFBS-13C_IS	Auto	4.012	1079769	1079769	2	5.0000	ng/mL	----
PFHxS_1	Auto	4.403	1474	568682	3	0.0143	ng/mL	----
PFHxS-18O	Auto	4.402	568682	3759147	1	4.2449	ng/mL	----
PFHxS-18O_IS	Auto	4.402	568682	568682	3	5.0000	ng/mL	----
PFHpS_1	M	4.563	104	568682	3	0.0008	ng/mL	----
PFOS_1	Auto	4.728	423	660847	4	0.0036	ng/mL	----
PFOS-13C	Auto	4.730	660847	3759147	1	4.9984	ng/mL	----
PFOS-13C_IS	Auto	4.730	660847	660847	4	5.0000	ng/mL	----
PFDS_1	M	5.093	59	660847	4	0.0007	ng/mL	----
PFBA	M	3.392	1749	2564567	5	0.0035	ng/mL	----
PFBA-13C	Auto	3.392	2564567	3759147	1	4.0481	ng/mL	----
PFBA-13C_IS	Auto	3.392	2564567	2564567	5	5.0000	ng/mL	----
PFPeA	Auto	3.959	77549	1373486	6	0.0121	ng/mL	----
PFPeA-13C	Auto	3.959	1373486	3759147	1	4.0318	ng/mL	----
PFPeA-13C_IS	Auto	3.959	1373486	1373486	6	5.0000	ng/mL	----
PFHxA	Auto	4.201	27858	3016067	7	0.0064	ng/mL	----
PFHxA-13C	Auto	4.217	3016067	3759147	1	3.9491	ng/mL	----
PFHxA-13C_IS	Auto	4.217	3016067	3016067	7	5.0000	ng/mL	----
PFHpA	Auto	4.382	14790	3454232	8	-0.0055	ng/mL	----
PFHpA-13C	Auto	4.401	3454232	3759147	1	4.2244	ng/mL	----
PFHpA-13C_IS	Auto	4.401	3454232	3454232	8	5.0000	ng/mL	----
PFOA	Auto	4.558	27951	3906393	9	0.0011	ng/mL	----
PFOA-13C	Auto	4.569	3906393	3759147	1	4.4721	ng/mL	----
PFOA-13C_IS	Auto	4.569	3906393	3906393	9	5.0000	ng/mL	----
PFNA	Auto	4.715	12559	2638669	10	-0.0077	ng/mL	----
PFNA-13C	Auto	4.742	2638669	3759147	1	4.4152	ng/mL	----
PFNA-13C_IS	Auto	4.742	2638669	2638669	10	5.0000	ng/mL	----
PFDA	M	4.912	14354	2501828	11	0.0081	ng/mL	----
PFDA-13C	Auto	4.923	2501828	3759147	1	4.5950	ng/mL	----
PFDA-13C_IS	Auto	4.923	2501828	2501828	11	5.0000	ng/mL	----
PFUnA	M	5.097	15179	3042614	12	-0.0111	ng/mL	----
PFUnA-13C	Auto	5.101	3042614	3759147	1	5.3942	ng/mL	----
PFUnA-13C_IS	Auto	5.101	3042614	3042614	12	5.0000	ng/mL	----
PFDoA	Auto	5.267	5430	3596467	13	-0.0130	ng/mL	----
PFDoA-13C	Auto	5.274	3596467	3759147	1	4.8108	ng/mL	----
PFDoA-13C_IS	Auto	5.274	3596467	3596467	13	5.0000	ng/mL	----
PFTrDA	M	5.433	10926	2771353	14	-0.0137	ng/mL	----
PFTeDA	Auto	5.592	41108	2771353	14	0.0071	ng/mL	----
PFTeDA-13C	Auto	5.591	2771353	3759147	1	4.2648	ng/mL	----
PFTeDA-13C_IS	Auto	5.591	2771353	2771353	14	5.0000	ng/mL	----
FOSA	M	5.226	845	1384421	16	0.0027	ng/mL	----
FOSA-13C	Auto	5.226	1384421	3759147	1	4.3828	ng/mL	----
FOSA-13C_IS	Auto	5.226	1384421	1384421	16	5.0000	ng/mL	----
N-MeFOSAA	M	5.021	413	482350	21	0.0294	ng/mL	----
N-MeFOSAA-d3	Auto	5.019	482350	3759147	1	4.1403	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.019	482350	482350	21	5.0000	ng/mL	----
N-EtFOSAA	NI	----	----	449354	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.115	449354	3759147	1	4.7377	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.115	449354	449354	22	5.0000	ng/mL	----
6_2-FTS_1	M	4.562	864	242564	24	0.0142	ng/mL	----
6_2-FTS-13C	Auto	4.558	242564	3759147	1	4.1865	ng/mL	----
6_2-FTS-13C_IS	Auto	4.558	242564	242564	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.916	29	197264	25	0.0009	ng/mL	----
8_2-FTS-13C	Auto	4.919	197264	3759147	1	4.3893	ng/mL	----
8_2-FTS-13C_IS	Auto	4.919	197264	197264	25	5.0000	ng/mL	----

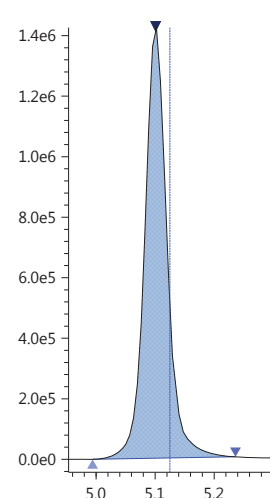
Insight Report

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13C7-PFUnDA_IS

Conc 5.0000
RT 5.101 Area 3759147

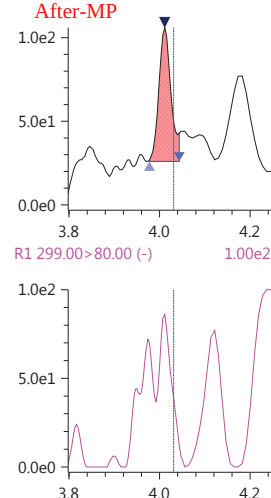
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0011
RT 4.011 Area 148
R#1 69.14 (0.00)

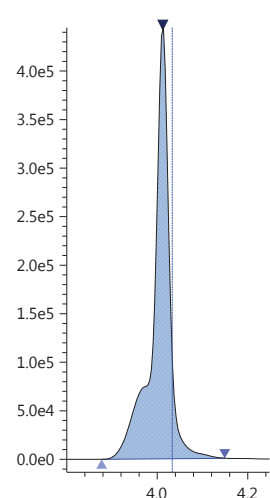
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.2703
RT 4.012 Area 1079769

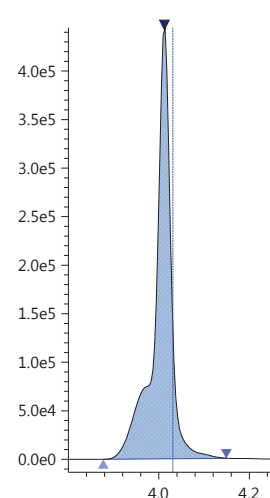
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.012 Area 1079769

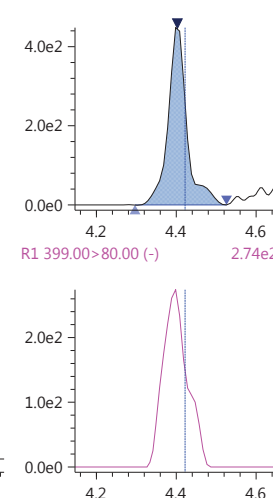
ISTD 301.80>80.00 (-)



PFHxS_1

Conc 0.0143
RT 4.403 Area 1474
R#1 61.95 (0.00)

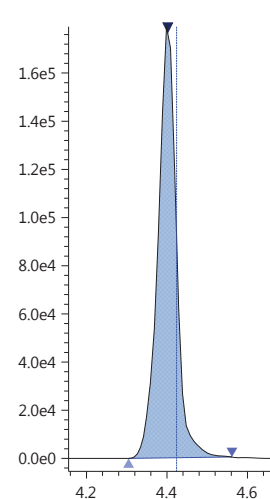
Q 399.00>99.00 (-)



PFHxS-180

Conc 4.2449
RT 4.402 Area 568682

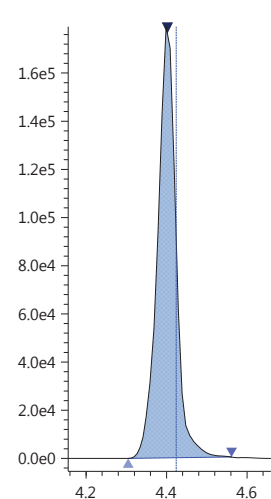
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.402 Area 568682

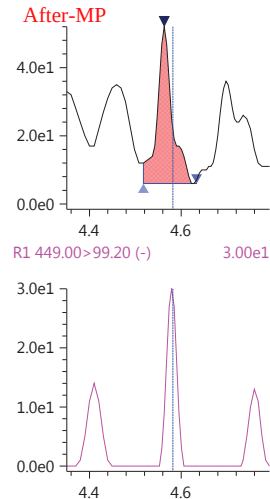
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0008
RT 4.563 Area 104
R#1 14.58 (0.00)

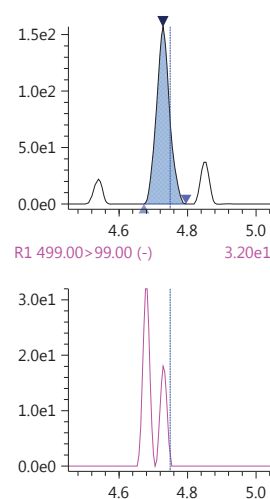
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0036
RT 4.728 Area 423
R#1 3.55 (0.00)

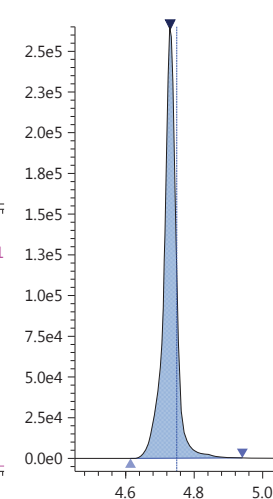
Q 499.00>80.00 (-)



PFOS-13C

Conc 4.9984
RT 4.730 Area 660847

Q 502.80>80.05 (-)

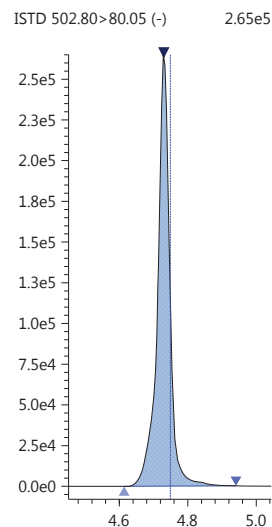


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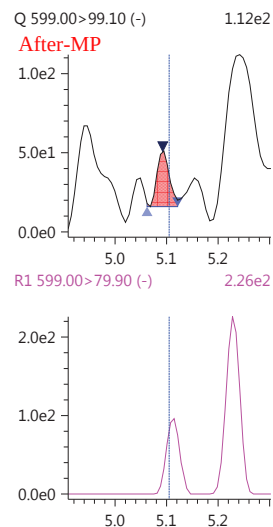
PFOS-13C_IS

Conc 5.0000
RT 4.730 Area 660847



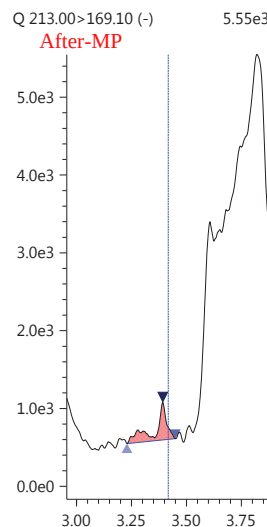
PFDS_1

Conc 0.0007
RT 5.093 Area 59
R#1 0.00 (0.00)



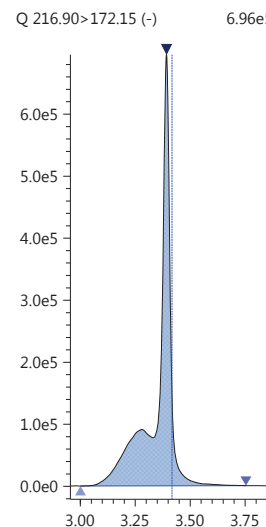
PFBA

Conc 0.0035
RT 3.392 Area 1749



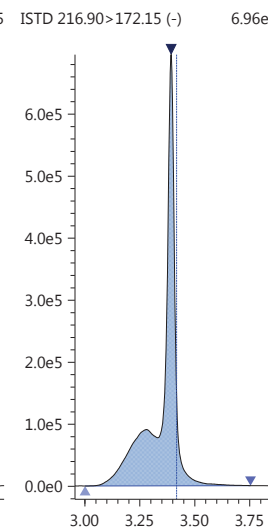
PFBA-13C

Conc 4.0481
RT 3.392 Area 2564567



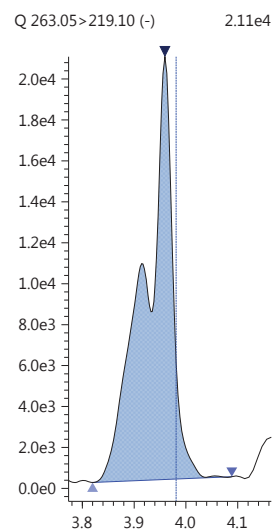
PFBA-13C_IS

Conc 5.0000
RT 3.392 Area 2564567



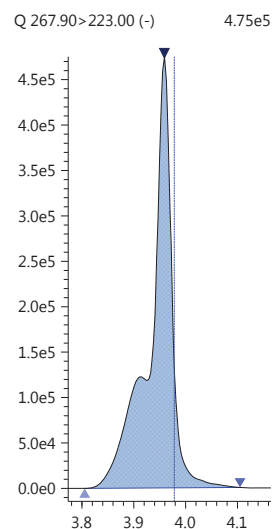
PFPeA

Conc 0.0121
RT 3.959 Area 77549



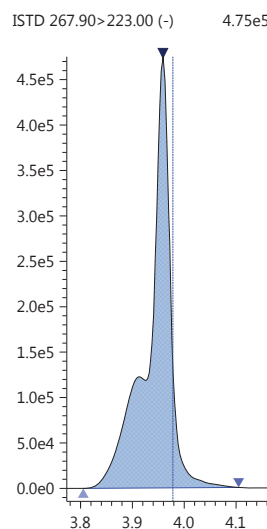
PFPeA-13C

Conc 4.0318
RT 3.959 Area 1373486



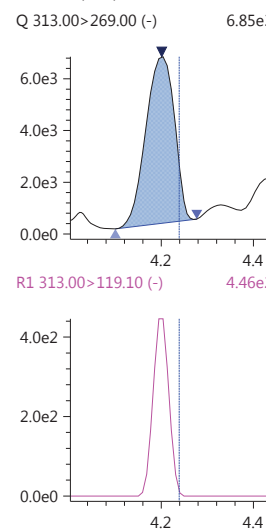
PFPeA-13C_IS

Conc 5.0000
RT 3.959 Area 1373486



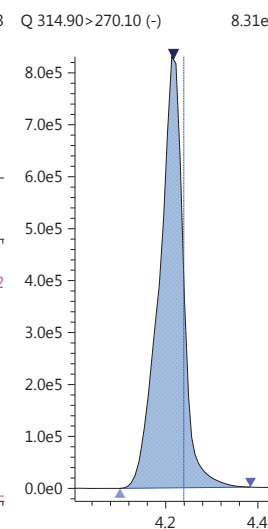
PFHxA

Conc 0.0064
RT 4.201 Area 27858
R#1 6.71 (0.00)



PFHxA-13C

Conc 3.9491
RT 4.217 Area 3016067



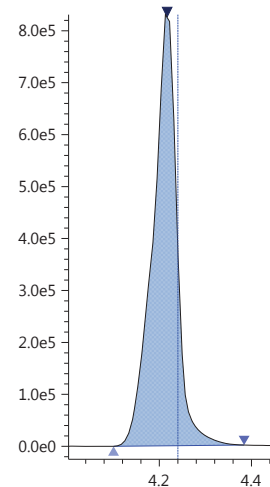
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PFHxA-13C_IS

Conc 5.0000
RT 4.217 Area 3016067

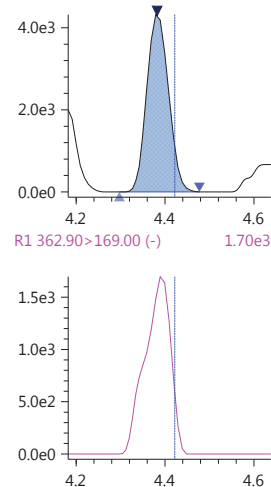
ISTD 314.90>270.10 (-) 8.31e5



PFHpa

Conc -0.0055
RT 4.382 Area 14790
R#1 34.91 (0.00)

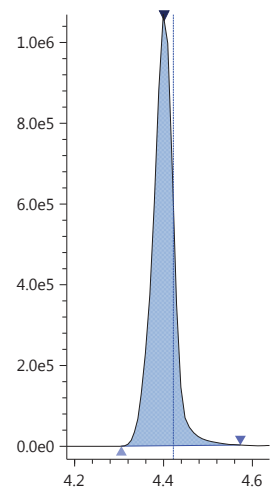
Q 362.90>319.00 (-) 4.32e3



PFHpa-13C

Conc 4.2244
RT 4.401 Area 3454232

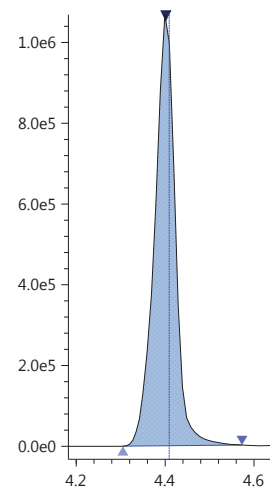
Q 366.90>322.10 (-) 1.07e6



PFHpa-13C_IS

Conc 5.0000
RT 4.401 Area 3454232

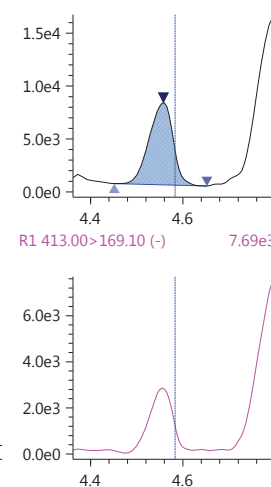
ISTD 366.90>322.10 (-) 1.07e6



PFOA

Conc 0.0011
RT 4.558 Area 27951
R#1 34.19 (0.00)

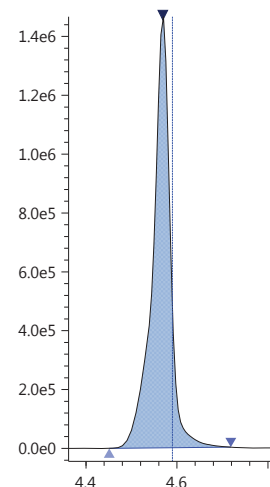
Q 413.00>369.00 (-) 1.68e4



PFOA-13C

Conc 4.4721
RT 4.569 Area 3906393

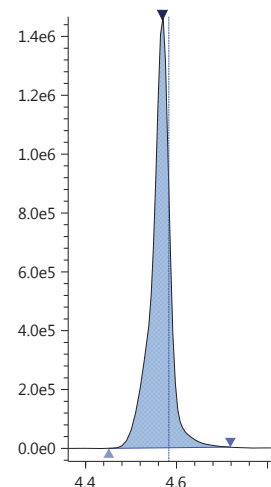
Q 416.80>372.05 (-) 1.47e6



PFOA-13C_IS

Conc 5.0000
RT 4.569 Area 3906393

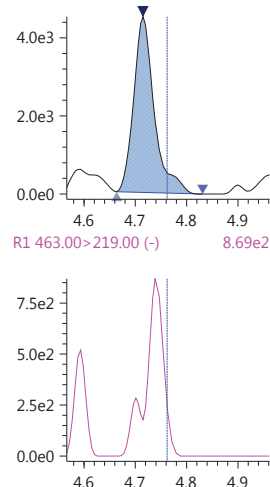
ISTD 416.80>372.05 (-) 1.47e6



PFNA

Conc -0.0077
RT 4.715 Area 12559
R#1 1.88 (0.00)

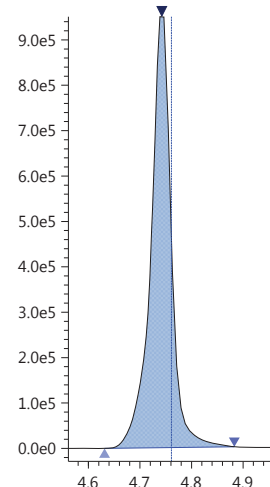
Q 463.00>418.90 (-) 4.54e3



PFNA-13C

Conc 4.4152
RT 4.742 Area 2638669

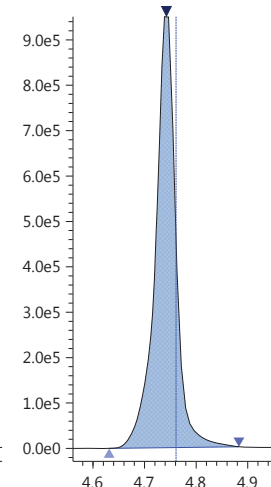
Q 467.80>423.00 (-) 9.51e5



PFNA-13C_IS

Conc 5.0000
RT 4.742 Area 2638669

ISTD 467.80>423.00 (-) 9.51e5



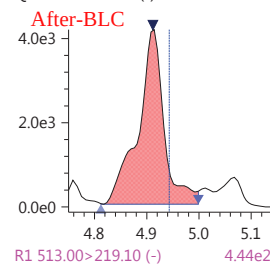
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PFDA

Conc 0.0081
RT 4.912 Area 14354
R#1 6.29 (0.00)

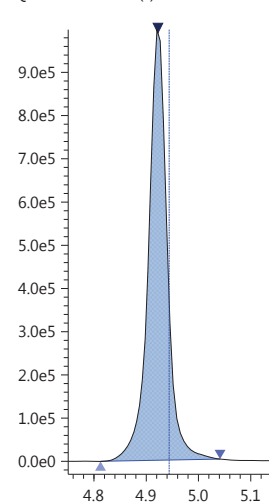
Q 513.00>468.80 (-) 4.21e3



PFDA-13C

Conc 4.5950
RT 4.923 Area 2501828

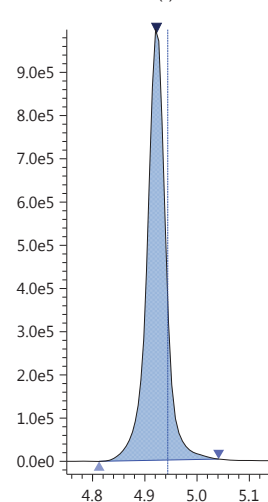
Q 514.80>469.95 (-) 9.99e5



PFDA-13C_IS

Conc 5.0000
RT 4.923 Area 2501828

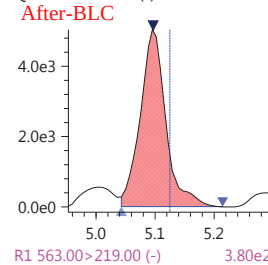
ISTD 514.80>469.95 (-) 9.99e5



PFUnA

Conc -0.0111
RT 5.097 Area 15179
R#1 5.94 (0.00)

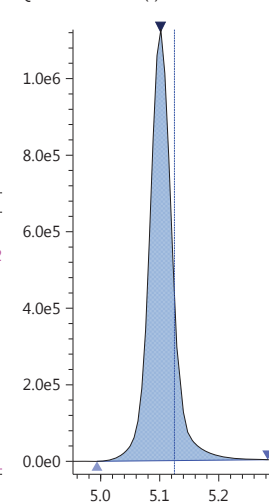
Q 563.00>518.90 (-) 5.04e3



PFUnA-13C

Conc 5.3942
RT 5.101 Area 3042614

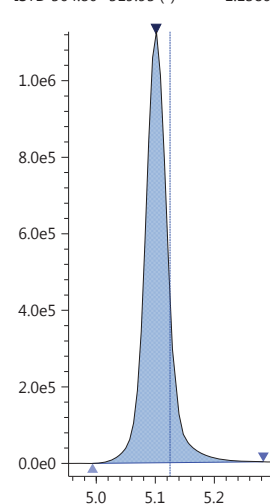
Q 564.80>519.95 (-) 1.13e6



PFUnA-13C_IS

Conc 5.0000
RT 5.101 Area 3042614

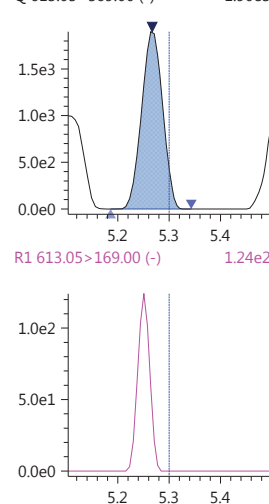
ISTD 564.80>519.95 (-) 1.13e6



PFD0A

Conc -0.0130
RT 5.267 Area 5430
R#1 2.88 (0.00)

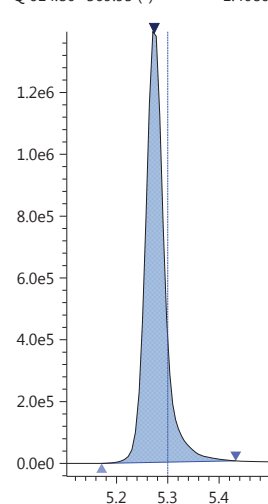
Q 613.05>569.00 (-) 1.90e3



PFD0A-13C

Conc 4.8108
RT 5.274 Area 3596467

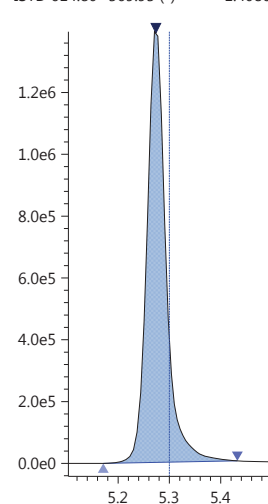
Q 614.80>569.95 (-) 1.40e6



PFD0A-13C_IS

Conc 5.0000
RT 5.274 Area 3596467

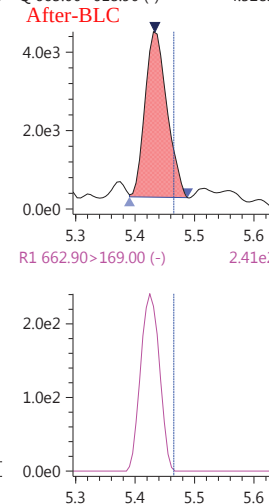
ISTD 614.80>569.95 (-) 1.40e6



PFTrDA

Conc -0.0137
RT 5.433 Area 10926
R#1 4.18 (0.00)

Q 663.00>618.90 (-) 4.52e3



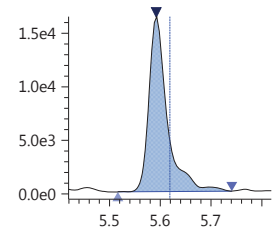
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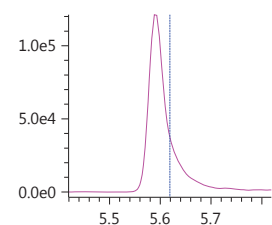
PFTeDA

Conc 0.0071
RT 5.592 Area 41108
R#1 765.97 (0.00)

Q 713.40>669.00 (-) 1.66e4



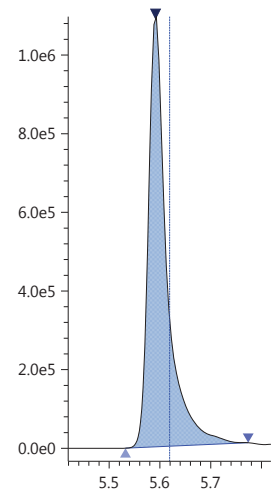
R1 713.40>169.10 (-) 1.21e5



PFTeDA-13C

Conc 4.2648
RT 5.591 Area 2771353

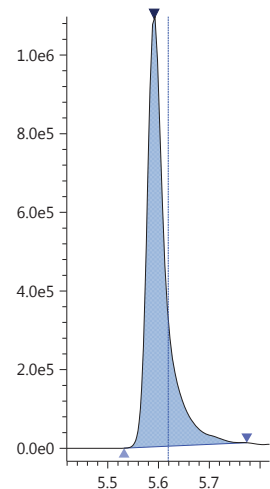
Q 714.70>669.90 (-)



PFTeDA-13C_IS

Conc 5.0000
RT 5.591 Area 2771353

ISTD 714.70>669.90 (-)

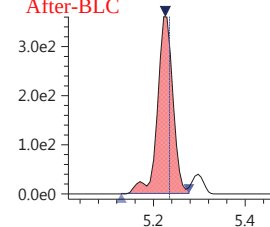


FOSA

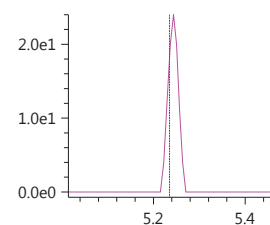
Conc 0.0027
RT 5.226 Area 845
R#1 1.10 (0.00)

Q 498.20>78.00 (-)

After-BLC



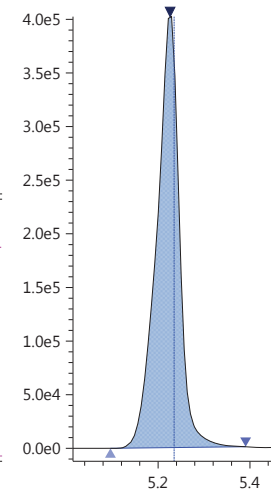
R1 498.20>64.10 (-) 2.40e1



FOSA-13C

Conc 4.3828
RT 5.226 Area 1384421

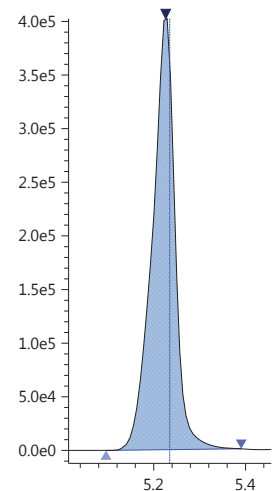
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
RT 5.226 Area 1384421

ISTD 506.00>78.05 (-)

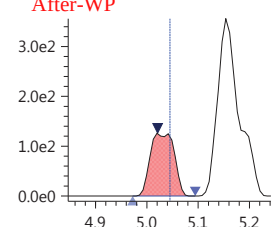


N-MeFOSAA

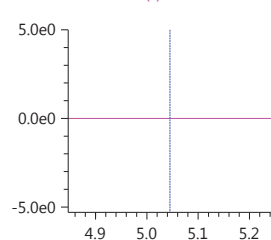
Conc 0.0294
RT 5.021 Area 413
R#1 0.00 (0.00)

Q 570.20>419.00 (-)

After-WP



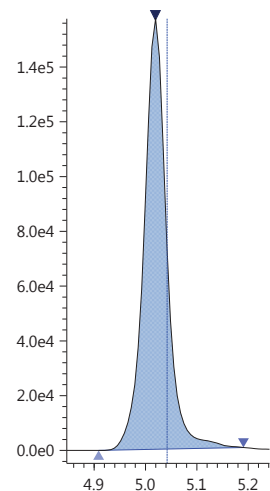
R1 570.20>512.00 (-) 0.00e0



N-MeFOSAA-d3

Conc 4.1403
RT 5.019 Area 482350

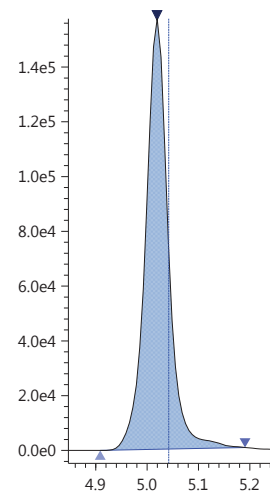
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.019 Area 482350

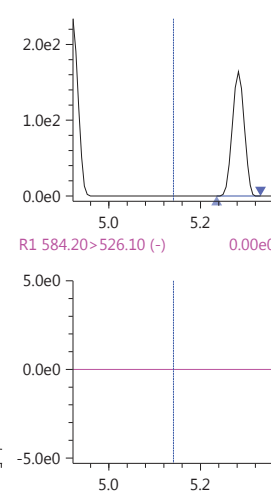
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc ----
RT ---- Area ----
R#1 0.00 (0.00)

Q 584.20>418.95 (-)



R1 584.20>526.10 (-) 0.00e0

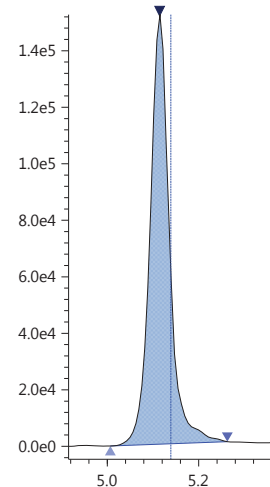
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N-EtFOSAA-d5

Conc 4.7377
RT 5.115 Area 449354

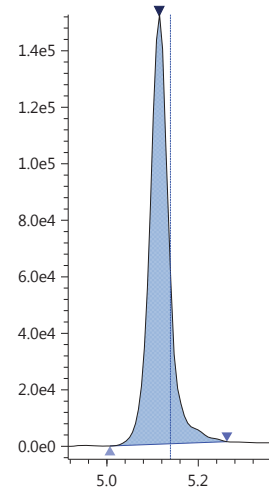
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.115 Area 449354

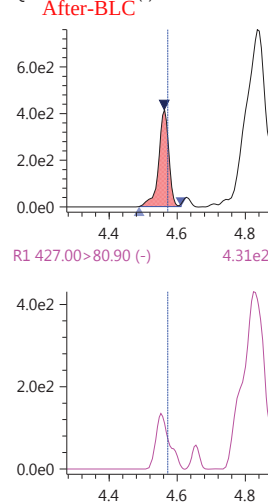
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 0.0142
RT 4.562 Area 864
R#1 24.45 (0.00)

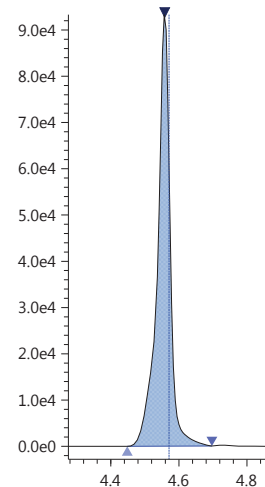
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 4.1865
RT 4.558 Area 242564

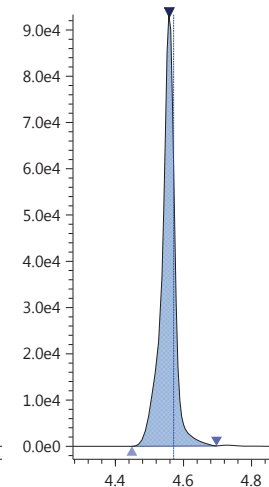
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.558 Area 242564

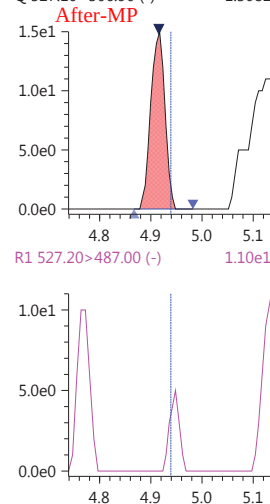
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.0009
RT 4.916 Area 29
R#1 0.00 (0.00)

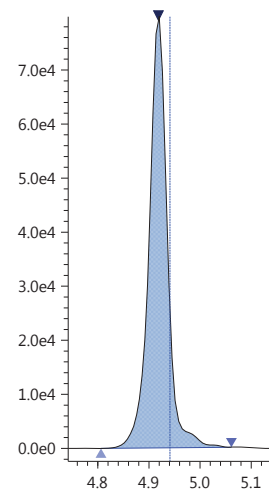
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.3893
RT 4.919 Area 197264

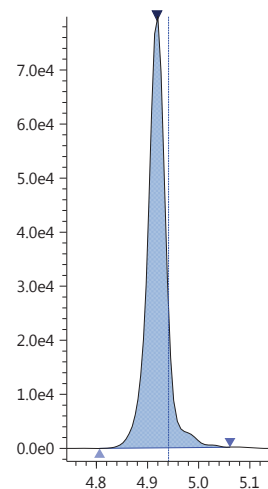
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.919 Area 197264

ISTD 528.80>509.00 (-)



Insight Report

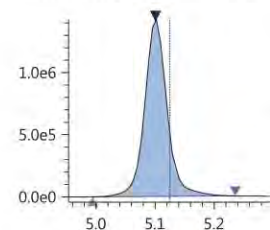
Printed at 12/6/2019 2:23:59 PM

191203_168

Sample ID: IB
Date acquired: 12/4/2019 8:09:29 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191203_b12\191203_168.lcd
Vial: 51 | Inj. Volume: 15.0000uL | Tray: 1

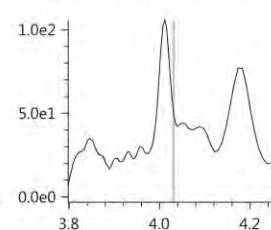
13C7-PFUnDA_IS

Conc 5.0000
RT 5.101 Area 3759147
ISTD 570.00>525.00 (-)



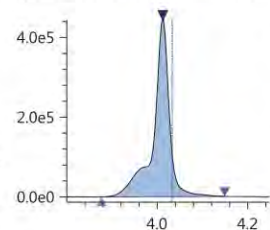
PFBS_1

Conc ---
RT --- Area ---
Q 298.80>99.00 (-)



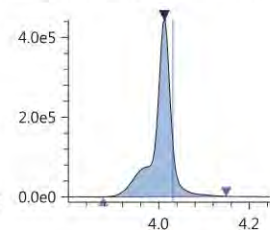
PFBS-13C

Conc 4.2703
RT 4.012 Area 1079769
Q 301.80>80.00 (-)



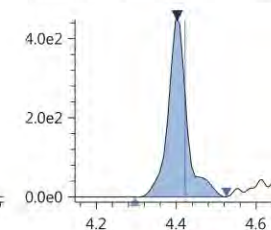
PFBS-13C_IS

Conc 5.0000
RT 4.012 Area 1079769
ISTD 301.80>80.00 (-)



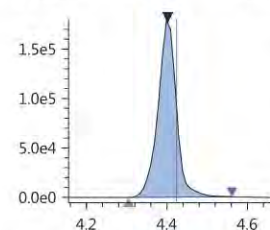
PFHxS_1

Conc 0.0143
RT 4.403 Area 1474
Q 399.00>99.00 (-)



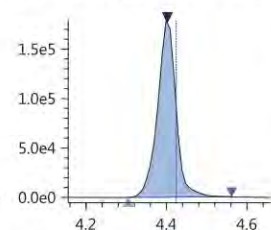
PFHxS-180

Conc 4.2449
RT 4.402 Area 568682
Q 402.70>84.05 (-)



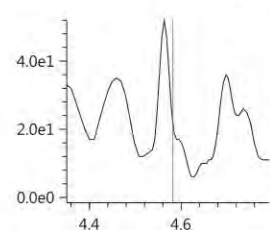
PFHxS-180_IS

Conc 5.0000
RT 4.402 Area 568682
ISTD 402.70>84.05 (-)



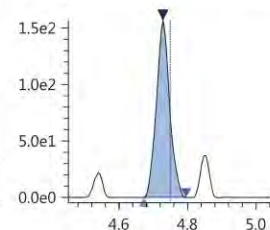
PFHpS_1

Conc ---
RT --- Area ---
Q 449.00>80.15 (-)



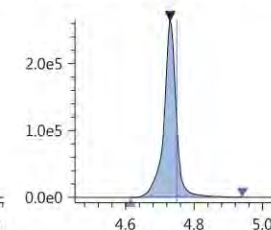
PFOS_1

Conc 0.0036
RT 4.728 Area 423
Q 499.00>80.00 (-)



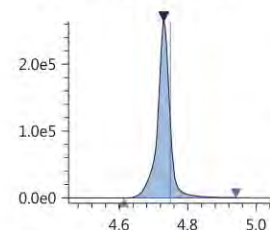
PFOS-13C

Conc 4.9984
RT 4.730 Area 660847
Q 502.80>80.05 (-)



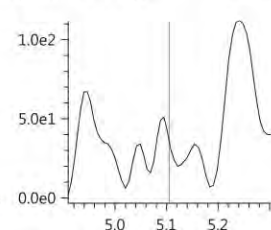
PFOS-13C_IS

Conc 5.0000
RT 4.730 Area 660847
ISTD 502.80>80.05 (-)



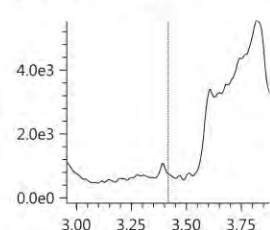
PFDS_1

Conc ---
RT --- Area ---
Q 599.00>99.10 (-)



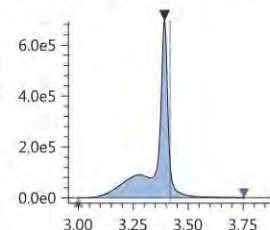
PFBA

Conc ---
RT --- Area ---
Q 213.00>169.10 (-)



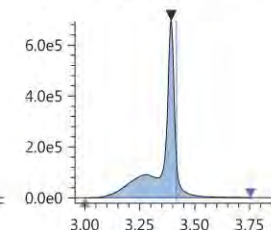
PFBA-13C

Conc 4.0481
RT 3.392 Area 2564567
Q 216.90>172.15 (-)



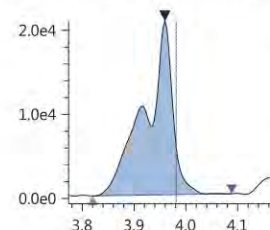
PFBA-13C_IS

Conc 5.0000
RT 3.392 Area 2564567
ISTD 216.90>172.15 (-)



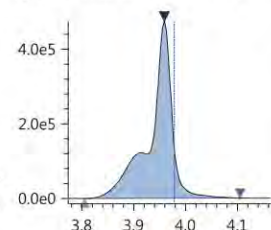
PFPeA

Conc 0.0121
RT 3.959 Area 77549
Q 263.05>219.10 (-)



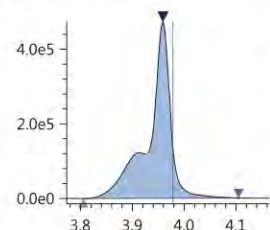
PFPeA-13C

Conc 4.0318
RT 3.959 Area 1373486
Q 267.90>223.00 (-)



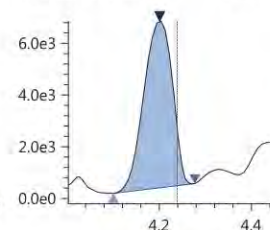
PFPeA-13C_IS

Conc 5.0000
RT 3.959 Area 1373486
ISTD 267.90>223.00 (-)



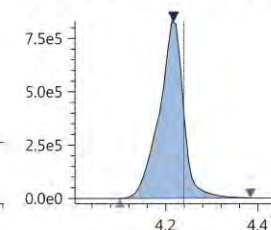
PFHxA

Conc 0.0064
RT 4.201 Area 27858
Q 313.00>269.00 (-)



PFHxA-13C

Conc 3.9491
RT 4.217 Area 3016067
Q 314.90>270.10 (-)

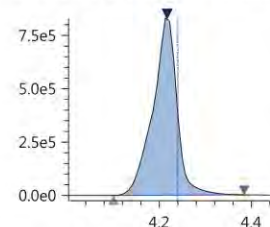


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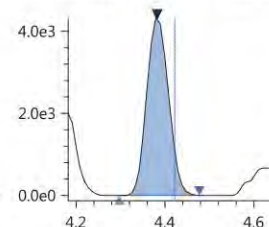
PFHxA-13C_IS

Conc 5.0000
RT 4.217 Area 3016067
ISTD 314.90>270.10 (-)



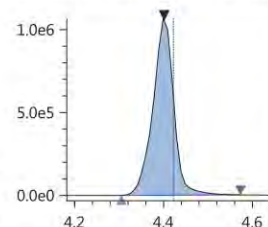
PFHpA

Conc -0.0055
RT 4.382 Area 14790
Q 362.90>319.00 (-)



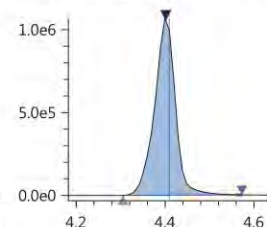
PFHpA-13C

Conc 4.2244
RT 4.401 Area 3454232
Q 366.90>322.10 (-)



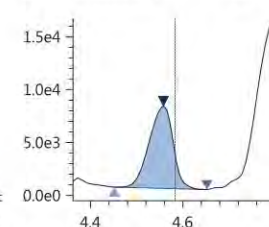
PFHpA-13C_IS

Conc 5.0000
RT 4.401 Area 3454232
ISTD 366.90>322.10 (-)



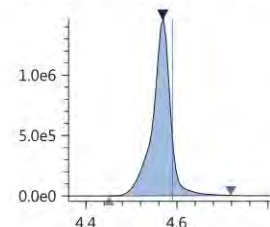
PFOA

Conc 0.0011
RT 4.558 Area 27951
Q 413.00>369.00 (-)



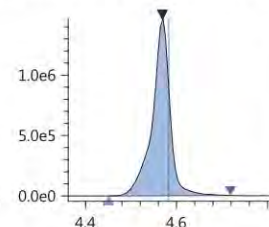
PFOA-13C

Conc 4.4721
RT 4.569 Area 3906393
Q 416.80>372.05 (-)



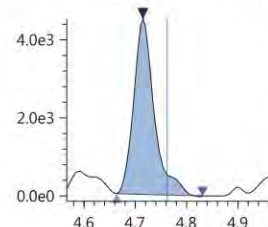
PFOA-13C_IS

Conc 5.0000
RT 4.569 Area 3906393
ISTD 416.80>372.05 (-)



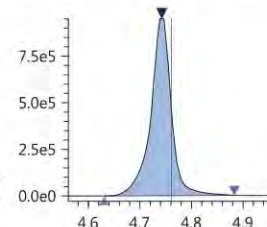
PFNA

Conc -0.0077
RT 4.715 Area 12559
Q 463.00>418.90 (-)



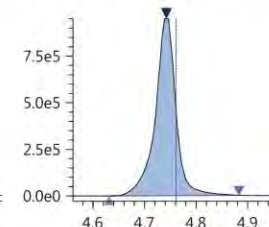
PFNA-13C

Conc 4.4152
RT 4.742 Area 2638669
Q 467.80>423.00 (-)



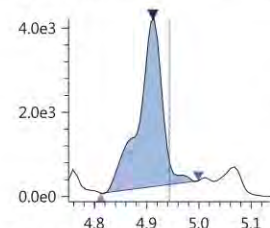
PFNA-13C_IS

Conc 5.0000
RT 4.742 Area 2638669
ISTD 467.80>423.00 (-)



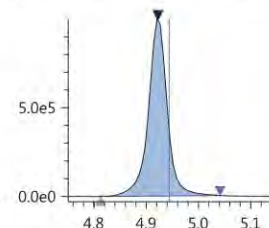
PFDA

Conc 0.0046
RT 4.912 Area 12569
Q 513.00>468.80 (-)



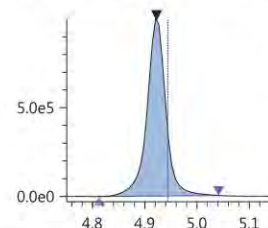
PFDA-13C

Conc 4.5950
RT 4.923 Area 2501828
Q 514.80>469.95 (-)



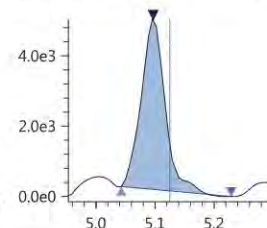
PFDA-13C_IS

Conc 5.0000
RT 4.923 Area 2501828
ISTD 514.80>469.95 (-)



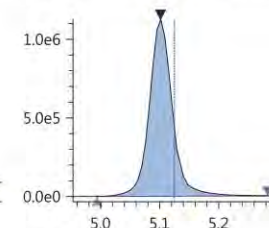
PFUnA

Conc -0.0140
RT 5.097 Area 13698
Q 563.00>518.90 (-)



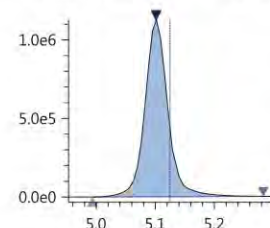
PFUnA-13C

Conc 5.3942
RT 5.101 Area 3042614
Q 564.80>519.95 (-)



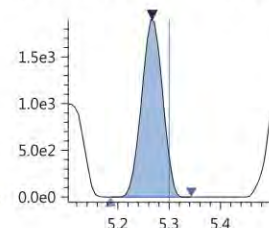
PFUnA-13C_IS

Conc 5.0000
RT 5.101 Area 3042614
ISTD 564.80>519.95 (-)



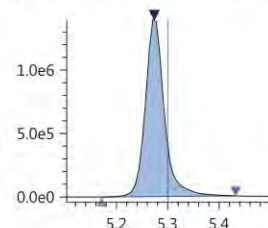
PFDaA

Conc -0.0130
RT 5.267 Area 5430
Q 613.05>569.00 (-)



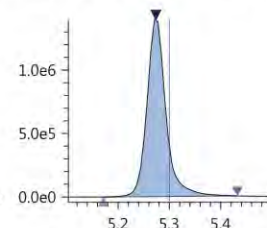
PFDaA-13C

Conc 4.8108
RT 5.274 Area 3596467
Q 614.80>569.95 (-)



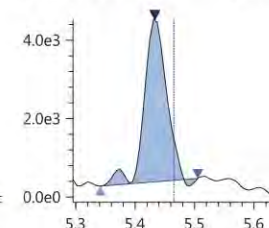
PFDaA-13C_IS

Conc 5.0000
RT 5.274 Area 3596467
ISTD 614.80>569.95 (-)



PFTrDA

Conc -0.0140
RT 5.433 Area 10786
Q 663.00>618.90 (-)

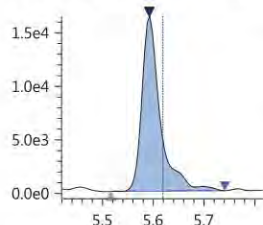


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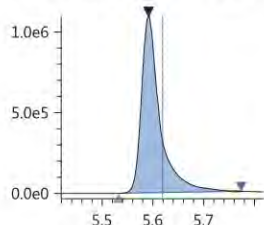
PFTeDA

Conc 0.0071
RT 5.592 Area 41108
Q 713.40>669.00 (-)



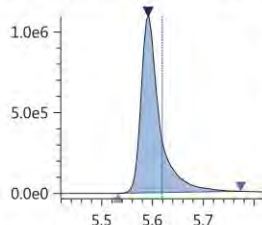
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Conc 4.2648
RT 5.591 Area 2771353
Q 714.70>669.90 (-)



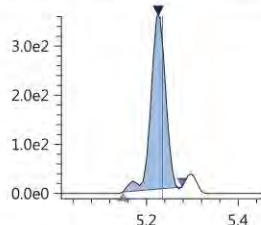
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Conc 5.0000
RT 5.591 Area 2771353
ISTD 714.70>669.90 (-)



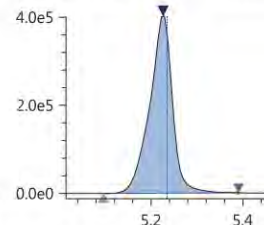
FOSA

Conc 0.0025
RT 5.226 Area 792
Q 498.20>78.00 (-)



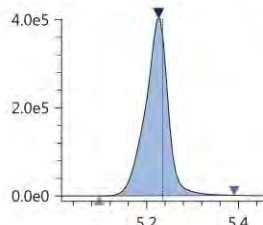
FOSA-13C

Conc 4.3828
RT 5.226 Area 1384421
Q 506.00>78.05 (-)



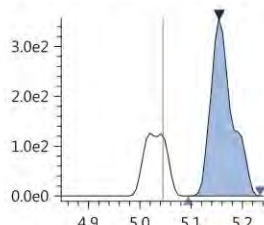
FOSA-13C_IS

Conc 5.0000
RT 5.226 Area 1384421
ISTD 506.00>78.05 (-)



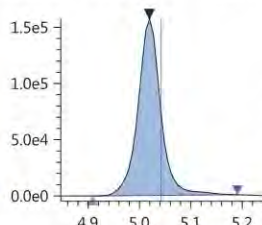
N-MeFOSAA

Conc 0.0401
RT 5.155 Area 1035
Q 570.20>419.00 (-)



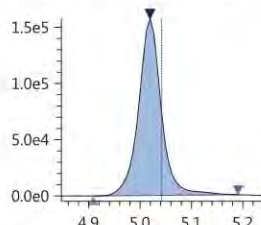
N-MeFOSAA-d3

Conc 4.1403
RT 5.019 Area 482350
Q 572.80>419.05 (-)



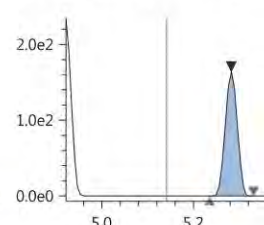
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.019 Area 482350
ISTD 572.80>419.05 (-)



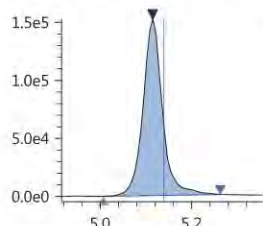
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Conc 0.0055
RT 5.283 Area 298
Q 584.20>418.95 (-)



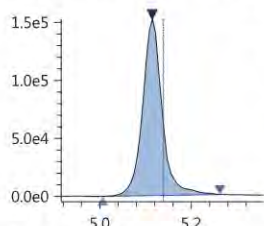
N-EtFOSAA-d5

Conc 4.7377
RT 5.115 Area 449354
Q 588.80>419.00 (-)



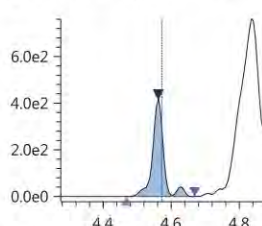
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.115 Area 449354
ISTD 588.80>419.00 (-)



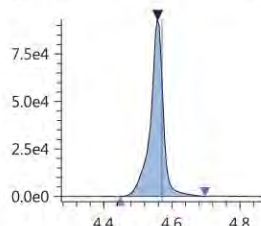
6_2-FTS_1

Conc 0.0153
RT 4.562 Area 932
Q 427.00>407.00 (-)



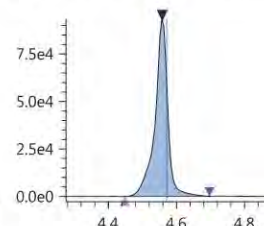
6_2-FTS-13C

Conc 4.1865
RT 4.558 Area 242564
Q 428.90>409.00 (-)



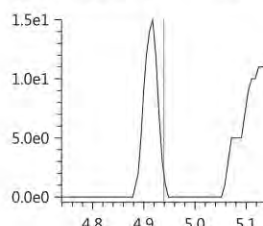
6_2-FTS-13C_IS

Conc 5.0000
RT 4.558 Area 242564
ISTD 428.90>409.00 (-)



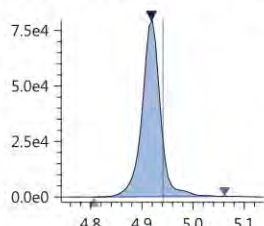
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)



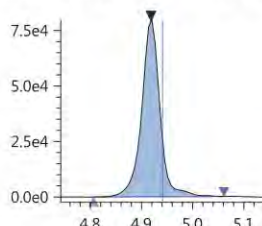
8_2-FTS-13C

Conc 4.3893
RT 4.919 Area 197264
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.919 Area 197264
ISTD 528.80>509.00 (-)



Validation Report

1st  12/06/19
2nd  12/10/19

Data File: J:\LCMS06\Data\191203_b12\191203_167
Lab ID: KQ1917900-01
RunType: CCV
Matrix: Water

Date Acquired: 12/4/19 19:59
Batch ID: 662103
Analysis Method: PFC/537M/PFAS

Validations

Validation Categories	Pass	Fail
ICAL Analyte Recovery	X	
Second Source ICAL Verification	X	
Internal Standards	X	
Above Highest ICAL Level	X	

Primary Review: _____

Secondary Review: _____

Quantitation Report

1st 12/06/19
2nd 12/10/19

Data File:	J:\LCMS06\Data\191203_b12\191203_167	Instrument:	K-LCMS-06
Acqu Date:	12/4/19 19:59	Vial:	1
Run Type:	CCV	Dilution:	1
Lab ID:	KQ1917900-01	Raw Units:	ng/mL

Bottle ID:		Tier:	IV	Matrix:	Water
Prod Code:	PFAS	Collect Date:	11/14/19	Receive Date:	11/15/19

Analysis Lot:	662103	Prep Lot:		Report Group:	KQ1917900
Analysis	PFC/537M	Prep Method:			
		Prep Date:			

Title:	Per- and Polyfluoroalkyl Substances (PFAS) by LC/MS/MS	Calibration ID:	KC1900518
		Report List ID:	19884

Internal Standard Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Area Criteria
13C7-PFUnDA	5.100		3798049	5.0000	OK

Surrogate Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
13C3-PFBS	4.013		1096812	4.2932	Y
18O2-PFHxS	4.401		535212	3.9542	Y
13C4-PFOS	4.730		647065	4.8441	Y
13C4-PFBA	3.393		2596505	4.0566	Y
13C5-PFPeA	3.960		1349722	3.9215	Y
13C2-PFHxA	4.217		3116695	4.0390	Y
13C4-PFHpA	4.400		3175983	3.8443	Y
13C4-PFOA	4.568		3946409	4.4716	Y
13C5-PFNA	4.741		2349468	3.8910	Y
13C2-PFDA	4.922		2353911	4.2791	Y
13C2-PFUnDA	5.100		3067138	5.3820	Y
13C2-PFDoDA	5.274		3407508	4.5113	Y
13C2-PFTeDA	5.590		2792862	4.2539	Y
13C8-FOSA	5.227		1370517	4.2943	Y
D3-MeFOSAA	5.018		475452	4.0393	Y
D5-EtFOSAA	5.114		435832	4.5480	Y
13C2-6:2 FTS	4.555		233466	3.9882	Y
13C2-8:2 FTS	4.918		185389	4.0828	Y

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluorobutane sulfonic acid (PFBS)	4.012		110353	0.8317	Y
Perfluorohexane sulfonic acid (PFHxS)	4.399		84674	0.8743	Y

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Printed: 12/6/19 15:49

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Data File: J:\LCMS06\Data\191203_b12\191203_167
Acqu Date: 12/4/19 19:59
Run Type: CCV
Lab ID: KQ1917900-01

Instrument: K-LCMS06
Vial: 1
Dilution: 1
Raw Units: ng/mL

Target Compounds

Parameter Name	RT	RT Dev	Response	Solution Conc	Rpt?
Perfluoroheptane sulfonic acid (PFHpS)	4.561		132728	1.0555	Y
Perfluorooctane sulfonic acid (PFOS)	4.730		101740	0.8911	Y
Perfluorodecane sulfonic acid (PFDS)	5.080		74325	0.8450	Y
Perfluorobutanoic acid (PFBA)	3.394		527194	1.0332	Y
Perfluoropentanoic acid (PFPeA)	3.960		704495	1.0680	Y
Perfluorohexanoic acid (PFHxA)	4.216		763487	0.9149	Y
Perfluoroheptanoic acid (PFHpA)	4.400		578486	0.9171	Y
Perfluorooctanoic acid (PFOA)	4.568		875683	0.9038	Y
Perfluorononanoic acid (PFNA)	4.742		478810	0.9546	Y
Perfluorodecanoic acid (PFDA)	4.923		501524	0.9999	Y
Perfluoroundecanoic acid (PFUnDA)	5.100		484213	0.8879	Y
Perfluorododecanoic acid (PFDoDA)	5.273		402331	0.9220	Y
Perfluorotridecanoic acid (PFTTrDA)	5.436		573085	0.9565	Y
Perfluorotetradecanoic acid (PFTeDA)	5.590		286942	0.9422	Y
Perfluorooctane sulfonamide (FOSA)	5.227		278998	0.8938	Y
N-Methyl perfluorooctane sulfonamidoacetic acid	5.022		62217	1.1087	Y
N-Ethyl perfluorooctane sulfonamidoacetic acid	5.118		46323	0.8740	Y
6:2 Fluorotelomer sulfonic acid (6:2 FTS)	4.556		57657	0.9833	Y
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	4.917		29326	1.0097	Y

U: Undetected at or above MDL

J: Analyte detected above MDL, but below MRL

B: Hit above MRL also found in Method Blank

E: Analyte concentration above high point of ICAL

N: Presumptive evidence of compound

D: Result from dilution

m: Manual integration performed

d: Compound manually deleted

NR: Analyte not reported from this analysis

*: Result fails acceptance criteria

#: Acceptance criteria not applicable

?: Insufficient information to determine acceptance

e: Result >= MRL, but MRL less than low point of ICAL

c: check for co-elution

Printed: 12/6/19 15:49

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Insight Report

Printed at 12/6/2019 3:10:36 PM

Method File: J:\LCMS06\Data\191203_b12\191203_b12.lcm
Project File: J:\LCMS06\Data\191203_b12\191203_b12.damlp
Flags File: J:\LCMS06\Data\191203_b12\191203_b12.damlp

191203_167

Sample ID: 1.0 PPB CCV
Date acquired: 12/4/2019 7:59:00 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191203_b12\191203_167.lcd
Vial: 50 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.100	3798049	3798049	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.012	110353	1096812	2	0.8317	ng/mL	0.8874
PFBS-13C	Auto	4.013	1096812	3798049	1	4.2932	ng/mL	5.0000
PFBS-13C_IS	Auto	4.013	1096812	1096812	2	5.0000	ng/mL	5.0000
PFHxS_1	Auto	4.399	84674	535212	3	0.8743	ng/mL	0.9131
PFHxS-18O	Auto	4.401	535212	3798049	1	3.9542	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.401	535212	535212	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.561	132728	535212	3	1.0555	ng/mL	0.9534
PFOS_1	Auto	4.730	101740	647065	4	0.8911	ng/mL	0.9292
PFOS-13C	Auto	4.730	647065	3798049	1	4.8441	ng/mL	5.0000
PFOS-13C_IS	Auto	4.730	647065	647065	4	5.0000	ng/mL	5.0000
PFDS_1	Auto	5.080	74325	647065	4	0.8450	ng/mL	0.9647
PFBA	Auto	3.394	527194	2596505	5	1.0332	ng/mL	1.0000
PFBA-13C	Auto	3.393	2596505	3798049	1	4.0566	ng/mL	5.0000
PFBA-13C_IS	Auto	3.393	2596505	2596505	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.960	704495	1349722	6	1.0680	ng/mL	1.0000
PFPeA-13C	Auto	3.960	1349722	3798049	1	3.9215	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.960	1349722	1349722	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.216	763487	3116695	7	0.9149	ng/mL	1.0000
PFHxA-13C	Auto	4.217	3116695	3798049	1	4.0390	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.217	3116695	3116695	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.400	578486	3175983	8	0.9171	ng/mL	1.0000
PFHpA-13C	Auto	4.400	3175983	3798049	1	3.8443	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.400	3175983	3175983	8	5.0000	ng/mL	5.0000
PFOA	M	4.568	875683	3946409	9	0.9038	ng/mL	1.0000
PFOA-13C	Auto	4.568	3946409	3798049	1	4.4716	ng/mL	5.0000
PFOA-13C_IS	Auto	4.568	3946409	3946409	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.742	478810	2349468	10	0.9546	ng/mL	1.0000
PFNA-13C	Auto	4.741	2349468	3798049	1	3.8910	ng/mL	5.0000
PFNA-13C_IS	Auto	4.741	2349468	2349468	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.923	501524	2353911	11	0.9999	ng/mL	1.0000
PFDA-13C	Auto	4.922	2353911	3798049	1	4.2791	ng/mL	5.0000
PFDA-13C_IS	Auto	4.922	2353911	2353911	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.100	484213	3067138	12	0.8879	ng/mL	1.0000
PFUnA-13C	Auto	5.100	3067138	3798049	1	5.3820	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.100	3067138	3067138	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.273	402331	3407508	13	0.9220	ng/mL	1.0000
PFDoA-13C	Auto	5.274	3407508	3798049	1	4.5113	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.274	3407508	3407508	13	5.0000	ng/mL	5.0000
PFTrDA	Auto	5.436	573085	2792862	14	0.9565	ng/mL	1.0000
PFTeDA	Auto	5.590	286942	2792862	14	0.9422	ng/mL	1.0000
PFTeDA-13C	Auto	5.590	2792862	3798049	1	4.2539	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.590	2792862	2792862	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.227	278998	1370517	16	0.8938	ng/mL	1.0000
FOSA-13C	Auto	5.227	1370517	3798049	1	4.2943	ng/mL	5.0000
FOSA-13C_IS	Auto	5.227	1370517	1370517	16	5.0000	ng/mL	5.0000
N-MeFOSAA	M	5.022	62217	475452	21	1.1087	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.018	475452	3798049	1	4.0393	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.018	475452	475452	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.118	46323	435832	22	0.8740	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.114	435832	3798049	1	4.5480	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.114	435832	435832	22	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.556	57657	233466	24	0.9833	ng/mL	0.9512
6_2-FTS-13C	Auto	4.555	233466	3798049	1	3.9882	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.555	233466	233466	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.917	29326	185389	25	1.0097	ng/mL	0.9600
8_2-FTS-13C	Auto	4.918	185389	3798049	1	4.0828	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.918	185389	185389	25	5.0000	ng/mL	5.0000

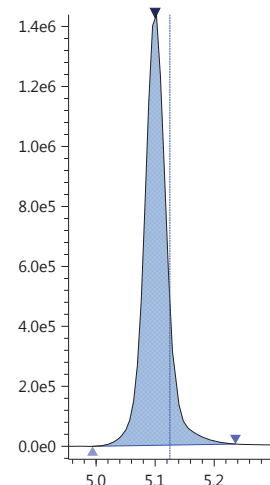
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13C7-PFUnDA_IS

Conc 5.0000
RT 5.100 Area 3798049

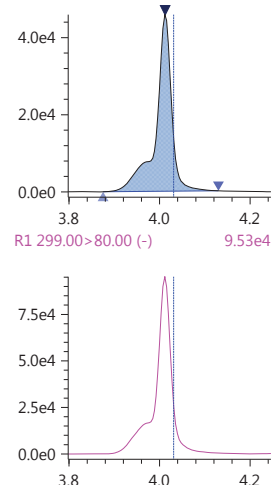
ISTD 570.00>525.00 (-) 1.44e6



PFBS_1

Conc 0.8317
RT 4.012 Area 110353
R#1 207.70 (0.00)

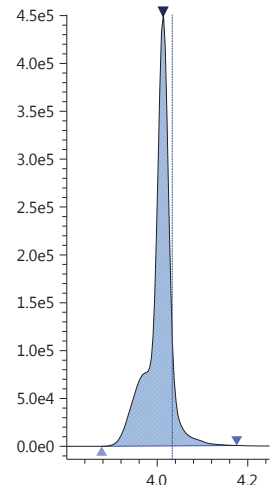
Q 298.80>99.00 (-) 4.60e4



PFBS-13C

Conc 4.2932
RT 4.013 Area 1096812

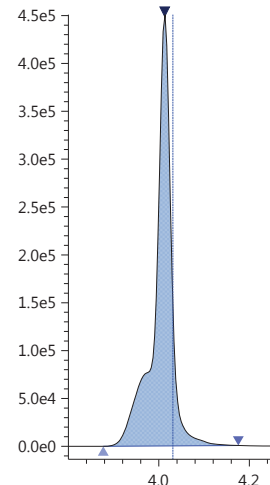
Q 301.80>80.00 (-) 4.51e5



PFBS-13C_IS

Conc 5.0000
RT 4.013 Area 1096812

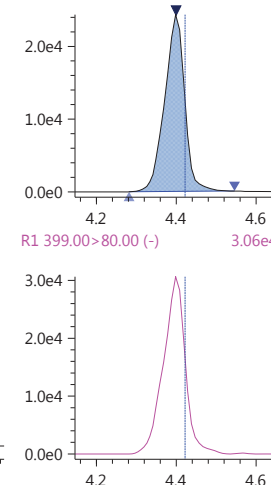
ISTD 301.80>80.00 (-) 4.51e5



PFHxS_1

Conc 0.8743
RT 4.399 Area 84674
R#1 126.04 (0.00)

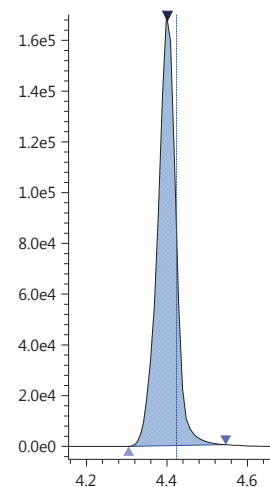
Q 399.00>99.00 (-) 2.44e4



PFHxS-180

Conc 3.9542
RT 4.401 Area 535212

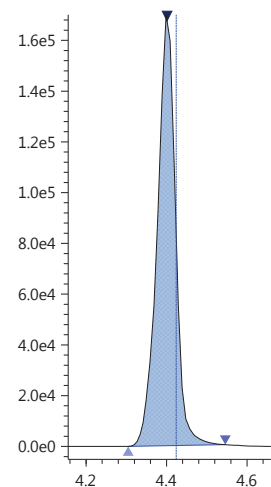
Q 402.70>84.05 (-) 1.70e5



PFHxS-180_IS

Conc 5.0000
RT 4.401 Area 535212

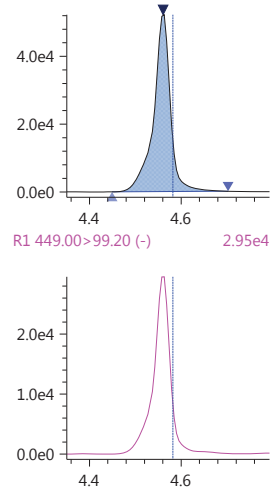
ISTD 402.70>84.05 (-) 1.70e5



PFHpS_1

Conc 1.0555
RT 4.561 Area 132728
R#1 56.97 (0.00)

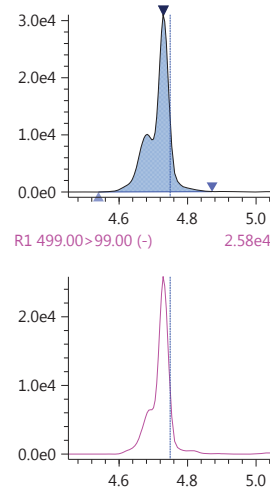
Q 449.00>80.15 (-) 5.23e4



PFOS_1

Conc 0.8911
RT 4.730 Area 101740
R#1 83.91 (0.00)

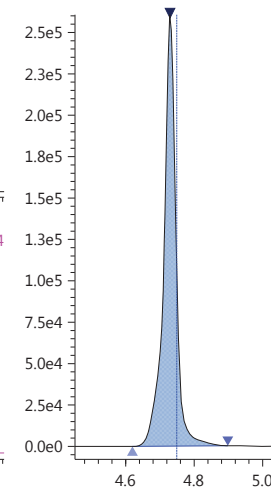
Q 499.00>80.00 (-) 3.10e4



PFOS-13C

Conc 4.8441
RT 4.730 Area 647065

Q 502.80>80.05 (-) 2.61e5



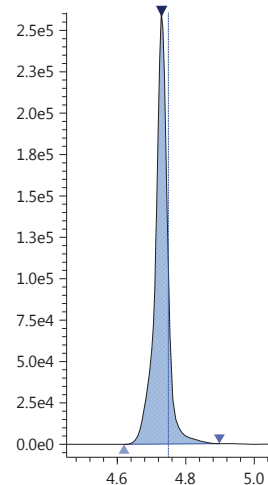
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PFOS-13C_IS

Conc 5.0000
RT 4.730 Area 647065

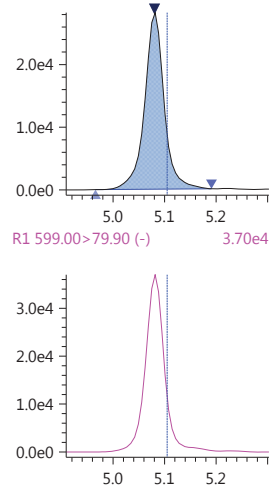
ISTD 502.80>80.05 (-)



PFDS_1

Conc 0.8450
RT 5.080 Area 74325
R#1 130.84 (0.00)

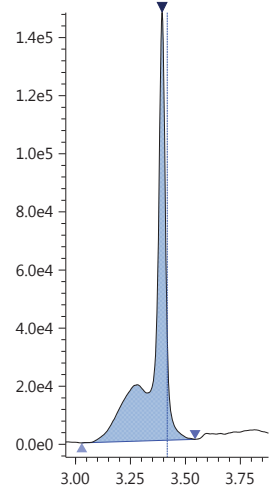
Q 599.00>99.10 (-)



PFBA

Conc 1.0332
RT 3.394 Area 527194

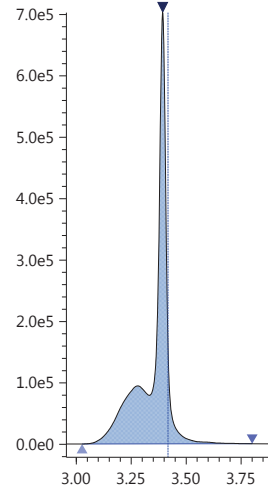
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.0566
RT 3.393 Area 2596505

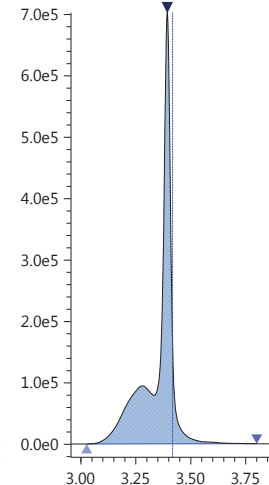
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
RT 3.393 Area 2596505

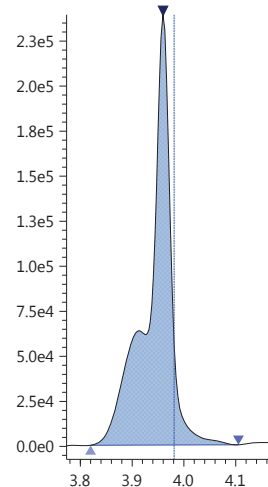
ISTD 216.90>172.15 (-)



PFPeA

Conc 1.0680
RT 3.960 Area 704495

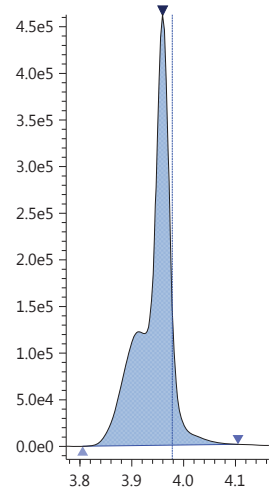
Q 263.05>219.10 (-)



PFPeA-13C

Conc 3.9215
RT 3.960 Area 1349722

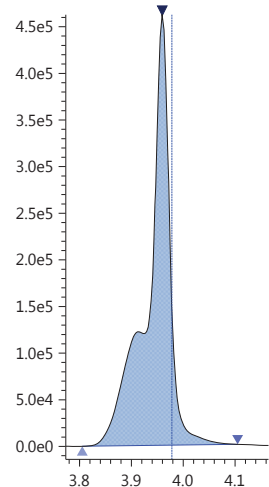
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.960 Area 1349722

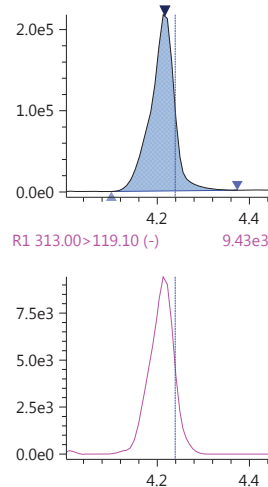
ISTD 267.90>223.00 (-)



PFHxA

Conc 0.9149
RT 4.216 Area 763487
R#1 4.36 (0.00)

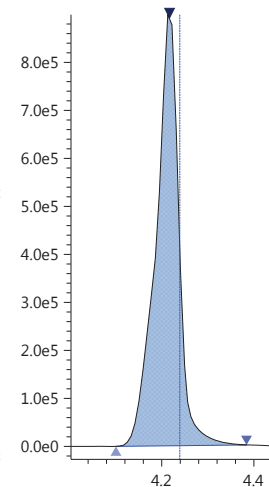
Q 313.00>269.00 (-)



PFHxA-13C

Conc 4.0390
RT 4.217 Area 3116695

Q 314.90>270.10 (-)



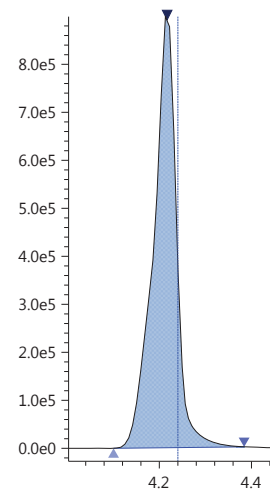
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PFHxA-13C_IS

Conc 5.0000
RT 4.217 Area 3116695

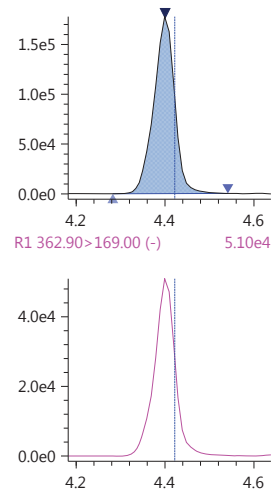
ISTD 314.90>270.10 (-) 8.99e5



PFHpA

Conc 0.9171
RT 4.400 Area 578486
R#1 28.61 (0.00)

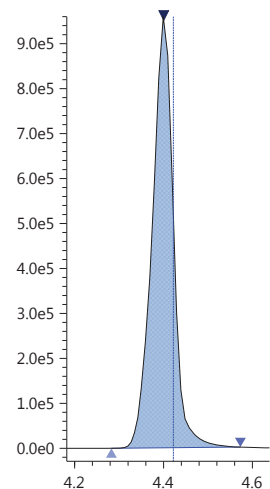
Q 362.90>319.00 (-) 1.78e5



PFHpA-13C

Conc 3.8443
RT 4.400 Area 3175983

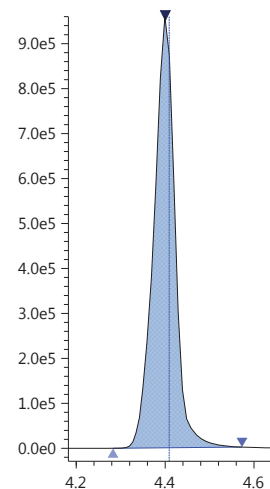
Q 366.90>322.10 (-) 9.60e5



PFHpA-13C_IS

Conc 5.0000
RT 4.400 Area 3175983

ISTD 366.90>322.10 (-) 9.60e5

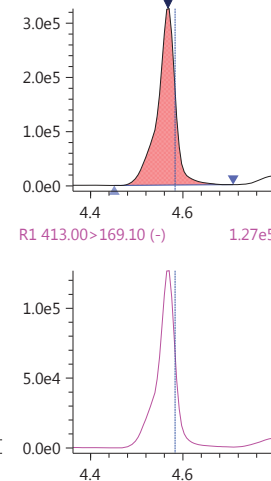


PFOA

Conc 0.9038
RT 4.568 Area 875683
R#1 38.89 (0.00)

Q 413.00>369.00 (-) 3.27e5

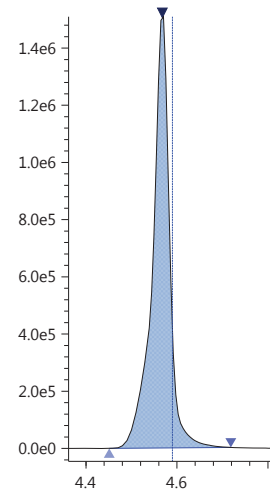
After-BLC



PFOA-13C

Conc 4.4716
RT 4.568 Area 3946409

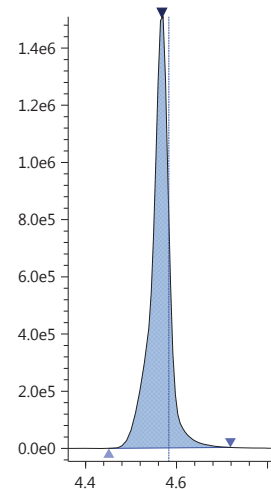
Q 416.80>372.05 (-) 1.51e6



PFOA-13C_IS

Conc 5.0000
RT 4.568 Area 3946409

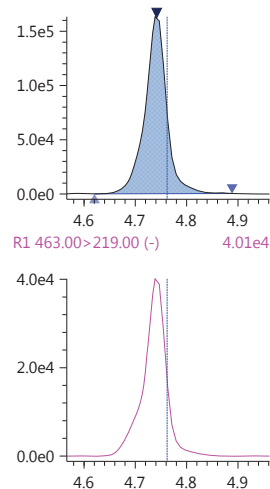
ISTD 416.80>372.05 (-) 1.51e6



PFNA

Conc 0.9546
RT 4.742 Area 478810
R#1 24.57 (0.00)

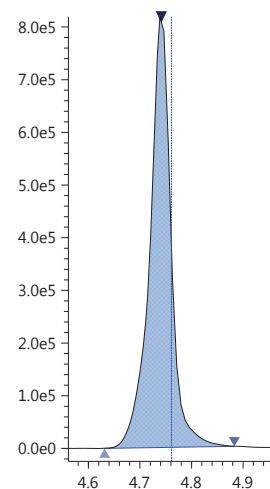
Q 463.00>418.90 (-) 1.63e5



PFNA-13C

Conc 3.8910
RT 4.741 Area 2349468

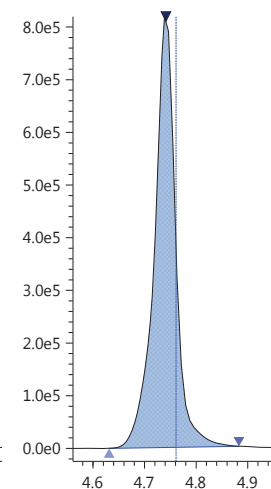
Q 467.80>423.00 (-) 8.20e5



PFNA-13C_IS

Conc 5.0000
RT 4.741 Area 2349468

ISTD 467.80>423.00 (-) 8.20e5



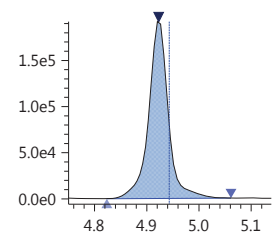
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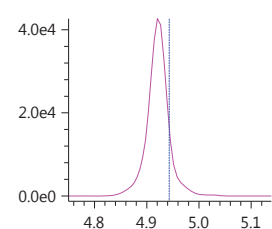
PFDA

Conc 0.9999
RT 4.923 Area 501524
R#1 21.76 (0.00)

Q 513.00>468.80 (-) 1.92e5



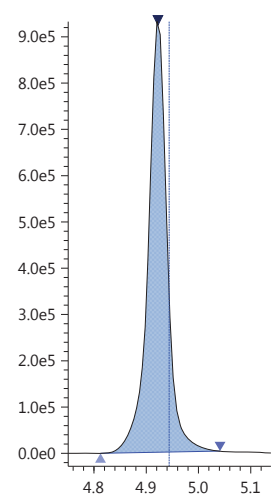
R1 513.00>219.10 (-) 4.27e4



PFDA-13C

Conc 4.2791
RT 4.922 Area 2353911

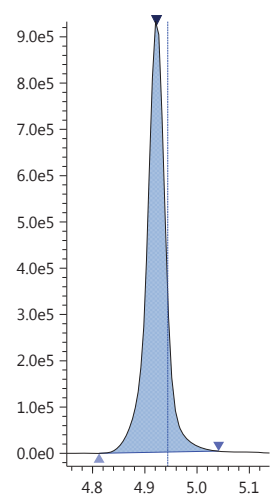
Q 514.80>469.95 (-) 9.33e5



PFDA-13C_IS

Conc 5.0000
RT 4.922 Area 2353911

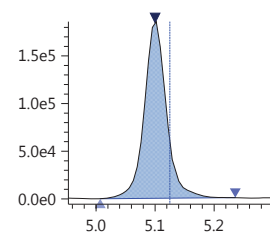
ISTD 514.80>469.95 (-) 9.33e5



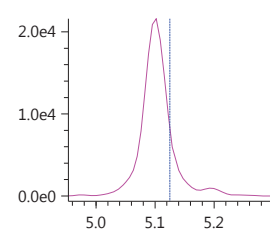
PFUnA

Conc 0.8879
RT 5.100 Area 484213
R#1 11.55 (0.00)

Q 563.00>518.90 (-) 1.86e5



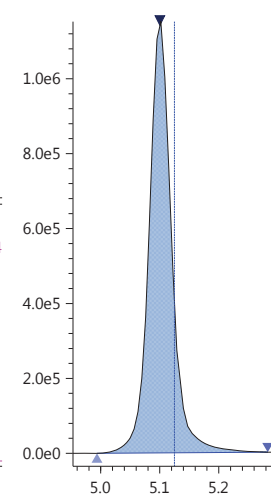
R1 563.00>219.00 (-) 2.16e4



PFUnA-13C

Conc 5.3820
RT 5.100 Area 3067138

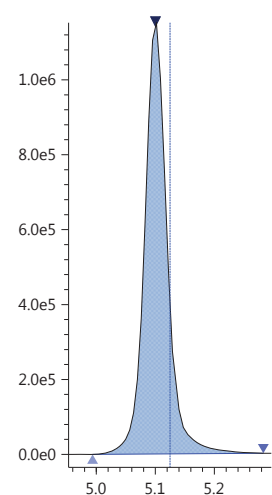
Q 564.80>519.95 (-) 1.15e6



PFUnA-13C_IS

Conc 5.0000
RT 5.100 Area 3067138

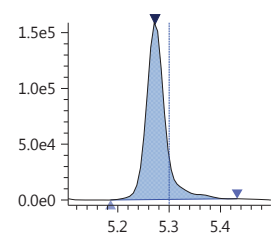
ISTD 564.80>519.95 (-) 1.15e6



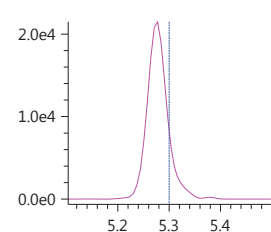
PFD0A

Conc 0.9220
RT 5.273 Area 402331
R#1 12.98 (0.00)

Q 613.05>569.00 (-) 1.59e5



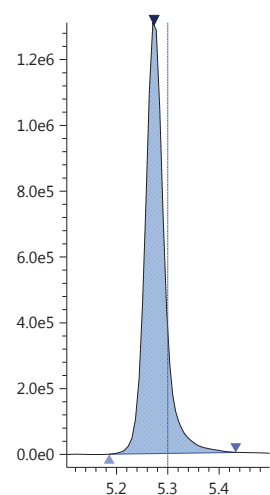
R1 613.05>169.00 (-) 2.15e4



PFD0A-13C

Conc 4.5113
RT 5.274 Area 3407508

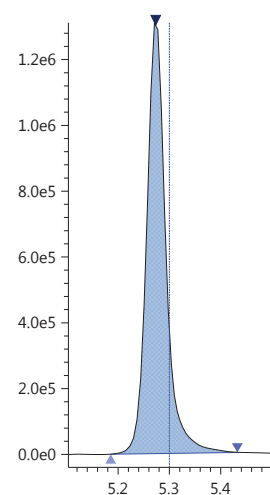
Q 614.80>569.95 (-) 1.31e6



PFD0A-13C_IS

Conc 5.0000
RT 5.274 Area 3407508

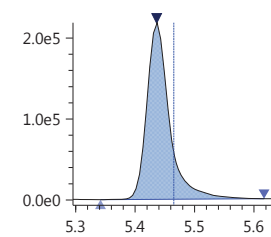
ISTD 614.80>569.95 (-) 1.31e6



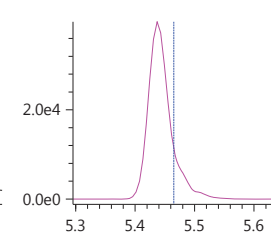
PFTrDA

Conc 0.9565
RT 5.436 Area 573085
R#1 18.31 (0.00)

Q 663.00>618.90 (-) 2.19e5



R1 662.90>169.00 (-) 3.97e4



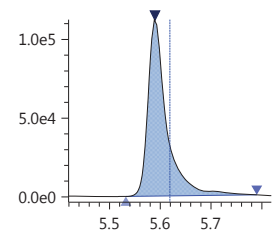
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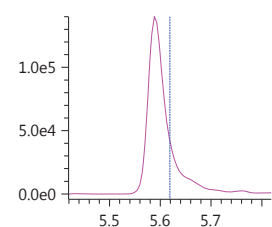
PFTeDA

Conc 0.9422
RT 5.590 Area 286942
R#1 123.30 (0.00)

Q 713.40>669.00 (-) 1.13e5



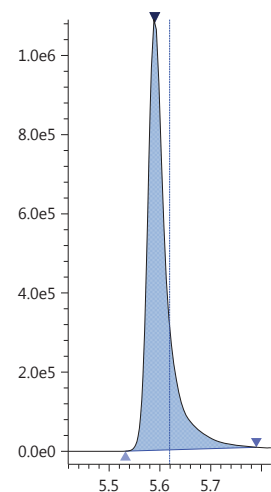
R1 713.40>169.10 (-) 1.40e5



PFTeDA-13C

Conc 4.2539
RT 5.590 Area 2792862

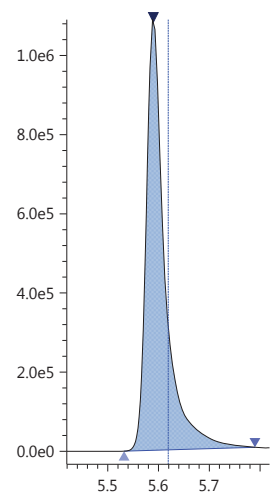
Q 714.70>669.90 (-) 1.09e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.590 Area 2792862

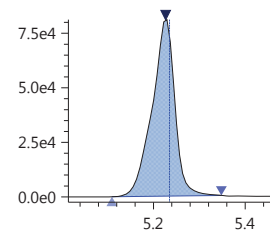
ISTD 714.70>669.90 (-) 1.09e6



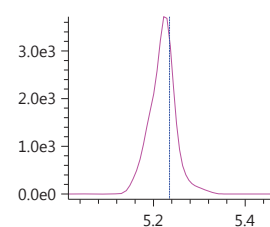
FOSA

Conc 0.8938
RT 5.227 Area 278998
R#1 4.67 (0.00)

Q 498.20>78.00 (-) 8.13e4



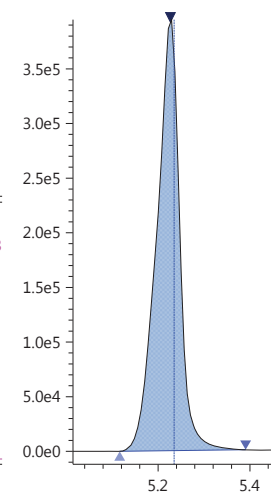
R1 498.20>64.10 (-) 3.72e3



FOSA-13C

Conc 4.2943
RT 5.227 Area 1370517

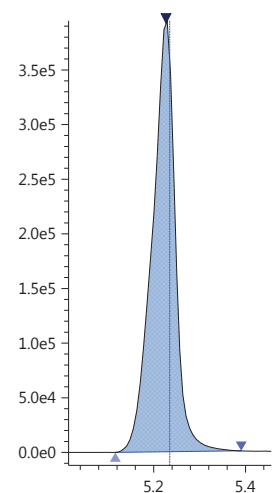
Q 506.00>78.05 (-) 3.95e5



FOSA-13C_IS

Conc 5.0000
RT 5.227 Area 1370517

ISTD 506.00>78.05 (-) 3.95e5

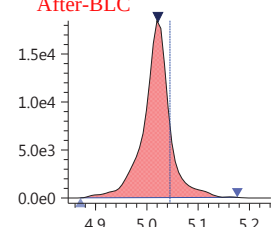


N-MeFOSAA

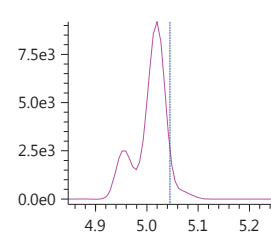
Conc 1.1087
RT 5.022 Area 62217
R#1 49.77 (0.00)

Q 570.20>419.00 (-) 1.85e4

After-BLC



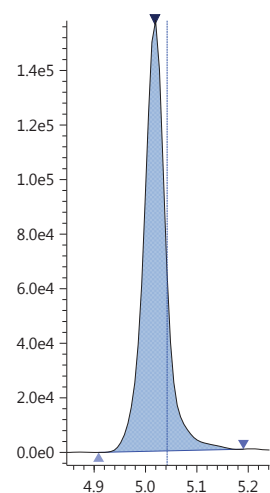
R1 570.20>512.00 (-) 9.19e3



N-MeFOSAA-d3

Conc 4.0393
RT 5.018 Area 475452

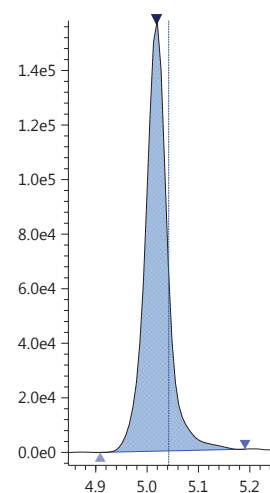
Q 572.80>419.05 (-) 1.58e5



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.018 Area 475452

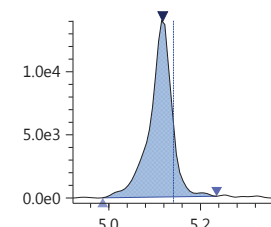
ISTD 572.80>419.05 (-) 1.58e5



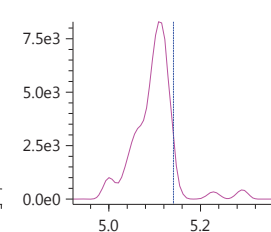
N-EtFOSAA

Conc 0.8740
RT 5.118 Area 46323
R#1 50.47 (0.00)

Q 584.20>418.95 (-) 1.40e4



R1 584.20>526.10 (-) 8.29e3



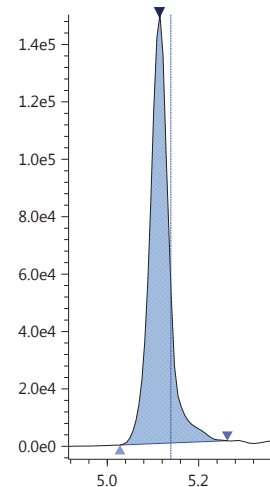
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N-EtFOSAA-d5

Conc 4.5480
RT 5.114 Area 435832

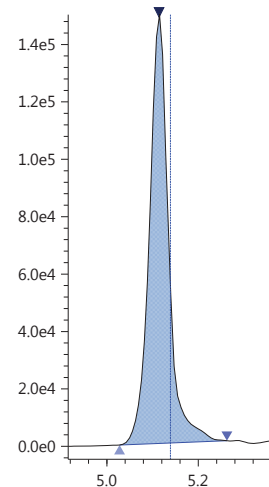
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.114 Area 435832

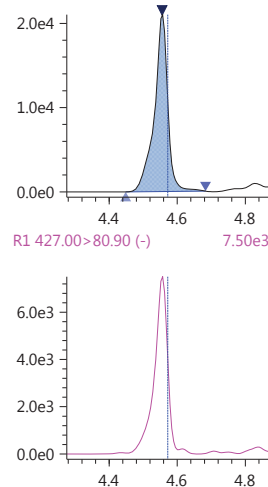
ISTD 588.80>419.00 (-)



6_2-FTS_1

Conc 0.9833
RT 4.556 Area 57657
R#1 35.33 (0.00)

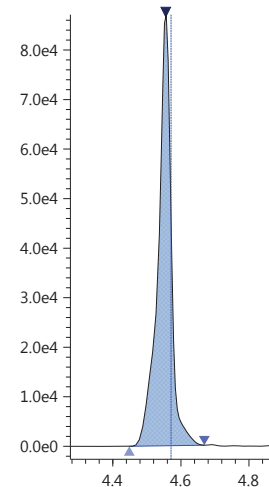
Q 427.00>407.00 (-)



6_2-FTS-13C

Conc 3.9882
RT 4.555 Area 233466

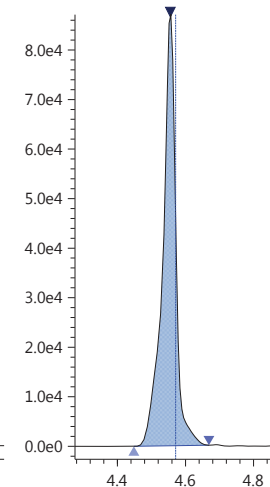
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.555 Area 233466

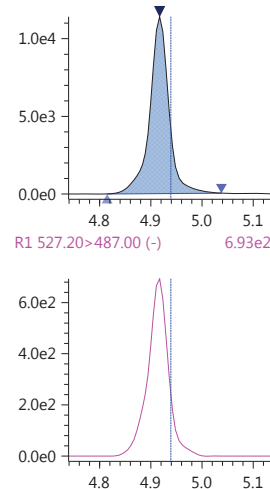
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 1.0097
RT 4.917 Area 29326
R#1 6.04 (0.00)

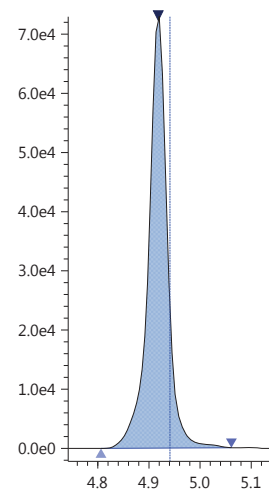
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.0828
RT 4.918 Area 185389

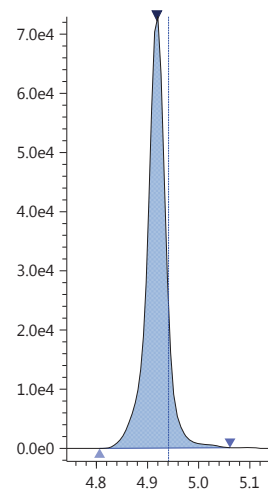
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.918 Area 185389

ISTD 528.80>509.00 (-)



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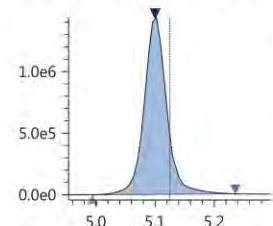
Method File: J:\LCMS06\Data\191203_b12\191203_b12.lcm
Project File: J:\LCMS06\Data\191203_b12\191203_b12.damlp
Flags File: J:\LCMS06\Data\191203_b12\191203_b12.damlp

191203_167

Sample ID: 1.0 PPB CCV
Date acquired: 12/4/2019 7:59:00 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191203_b12\191203_167.lcd
Vial: 50 | Inj. Volume: 15.0000uL | Tray: 1

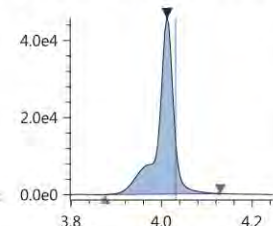
13C7-PFUnDA_IS

Conc 5.0000
RT 5.100 Area 3798049
ISTD 570.00>525.00 (-) 1.44e6



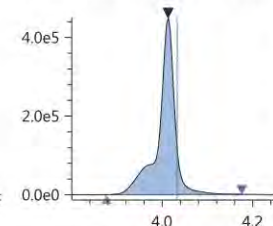
PFBS_1

Conc 0.8317
RT 4.012 Area 110353
Q 298.80>99.00 (-) 4.60e4



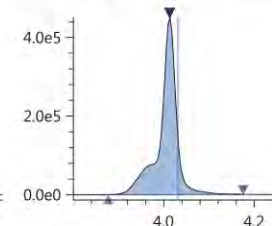
PFBS-13C

Conc 4.2932
RT 4.013 Area 1096812
Q 301.80>80.00 (-) 4.51e5



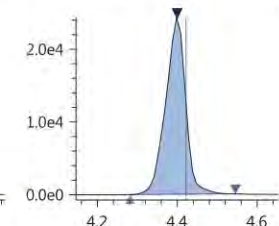
PFBS-13C_IS

Conc 5.0000
RT 4.013 Area 1096812
ISTD 301.80>80.00 (-) 4.51e5



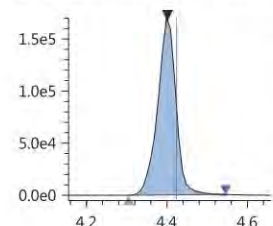
PFHxS_1

Conc 0.8743
RT 4.399 Area 84674
Q 399.00>99.00 (-) 2.44e4



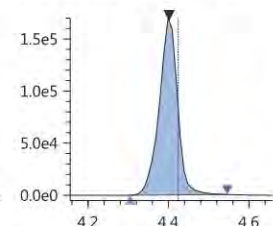
PFHxS-180

Conc 3.9542
RT 4.401 Area 535212
Q 402.70>84.05 (-) 1.70e5



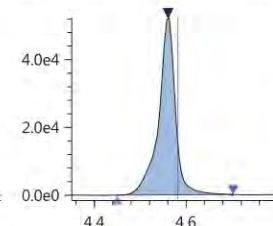
PFHxS-180_IS

Conc 5.0000
RT 4.401 Area 535212
ISTD 402.70>84.05 (-) 1.70e5



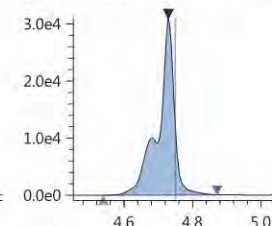
PFHpS_1

Conc 1.0555
RT 4.561 Area 132728
Q 449.00>80.15 (-) 5.23e4



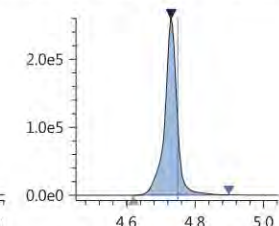
PFOS_1

Conc 0.8911
RT 4.730 Area 101740
Q 499.00>80.00 (-) 3.10e4



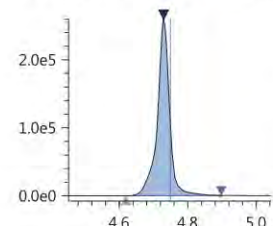
PFOS-13C

Conc 4.8441
RT 4.730 Area 647065
Q 502.80>80.05 (-) 2.61e5



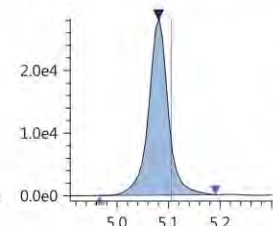
PFOS-13C_IS

Conc 5.0000
RT 4.730 Area 647065
ISTD 502.80>80.05 (-) 2.61e5



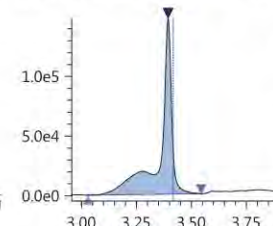
PFDS_1

Conc 0.8450
RT 5.080 Area 74325
Q 599.00>99.10 (-) 2.83e4



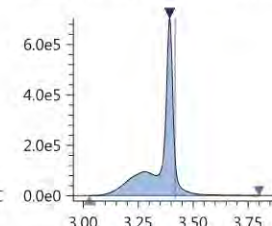
PFBA

Conc 1.0332
RT 3.394 Area 527194
Q 213.00>169.10 (-) 1.49e5



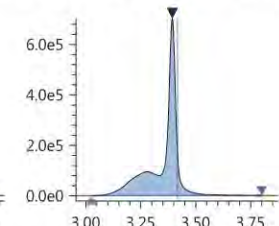
PFBA-13C

Conc 4.0566
RT 3.393 Area 2596505
Q 216.90>172.15 (-) 7.03e5



PFBA-13C_IS

Conc 5.0000
RT 3.393 Area 2596505
ISTD 216.90>172.15 (-) 7.03e5

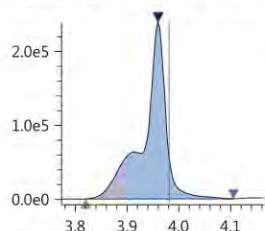


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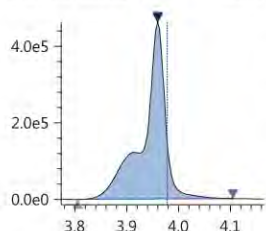
PFPeA

Conc 1.0680
RT 3.960 Area 704495
Q 263.05>219.10 (-)



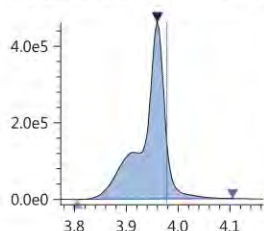
PFPeA-13C

Conc 3.9215
RT 3.960 Area 1349722
Q 267.90>223.00 (-)



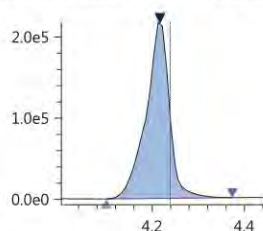
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Conc 5.0000
RT 3.960 Area 1349722
ISTD 267.90>223.00 (-)



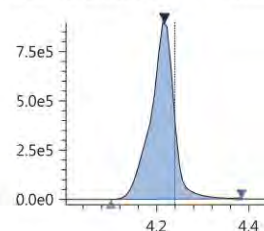
PFHxA

Conc 0.9149
RT 4.216 Area 763487
Q 313.00>269.00 (-)



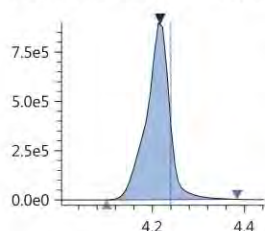
PFHxA-13C

Conc 4.0390
RT 4.217 Area 3116695
Q 314.90>270.10 (-)



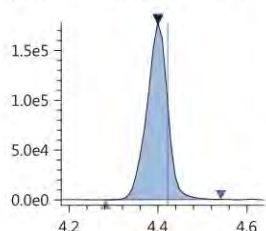
PFHxA-13C_IS

Conc 5.0000
RT 4.217 Area 3116695
ISTD 314.90>270.10 (-)



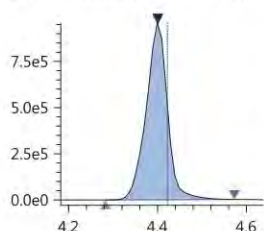
PFHpA

Conc 0.9171
RT 4.400 Area 578486
Q 362.90>319.00 (-)



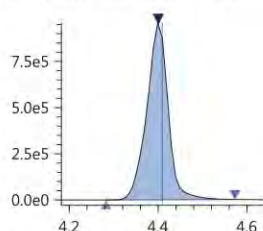
PFHpA-13C

Conc 3.8443
RT 4.400 Area 3175983
Q 366.90>322.10 (-)



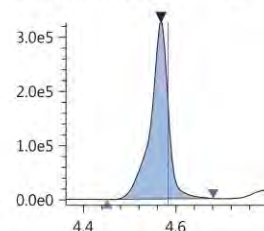
PFHpA-13C_IS

Conc 5.0000
RT 4.400 Area 3175983
ISTD 366.90>322.10 (-)



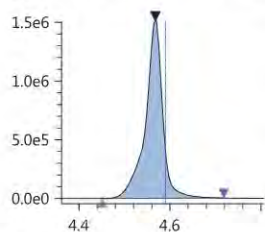
PFOA

Conc 0.8990
RT 4.568 Area 871212
Q 413.00>369.00 (-)



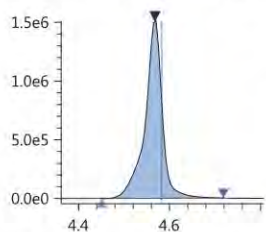
PFOA-13C

Conc 4.4716
RT 4.568 Area 3946409
Q 416.80>372.05 (-)



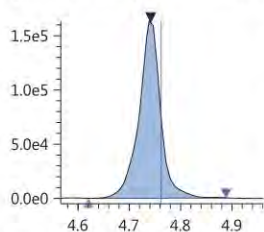
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Conc 5.0000
RT 4.568 Area 3946409
ISTD 416.80>372.05 (-)



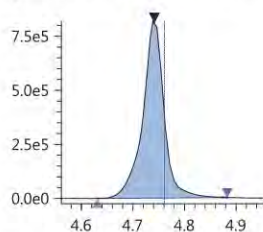
PFNA

Conc 0.9546
RT 4.742 Area 478810
Q 463.00>418.90 (-)



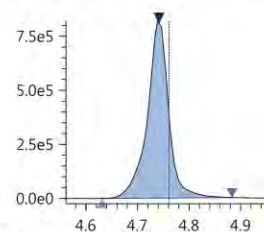
PFNA-13C

Conc 3.8910
RT 4.741 Area 2349468
Q 467.80>423.00 (-)



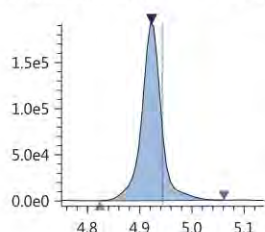
PFNA-13C_IS

Conc 5.0000
RT 4.741 Area 2349468
ISTD 467.80>423.00 (-)



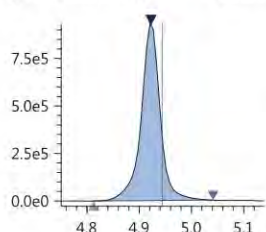
PFDA

Conc 0.9999
RT 4.923 Area 501524
Q 513.00>468.80 (-)



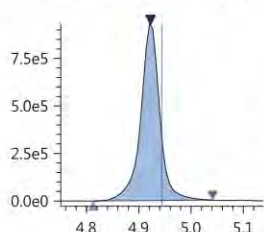
PFDA-13C

Conc 4.2791
RT 4.922 Area 2353911
Q 514.80>469.95 (-)



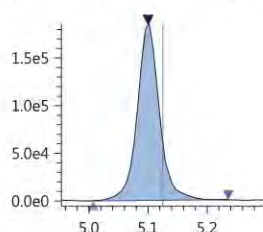
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Conc 5.0000
RT 4.922 Area 2353911
ISTD 514.80>469.95 (-)



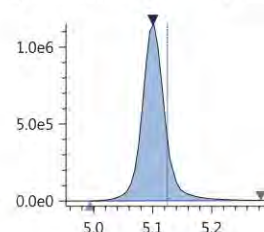
PFUnA

Conc 0.8879
RT 5.100 Area 484213
Q 563.00>518.90 (-)



PFUnA-13C

Conc 5.3820
RT 5.100 Area 3067138
Q 564.80>519.95 (-)

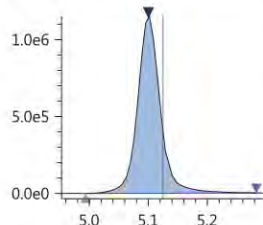


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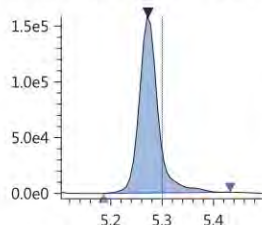
PFUnA-13C_IS

Conc 5.0000
RT 5.100 Area 3067138
ISTD 564.80>519.95 (-)



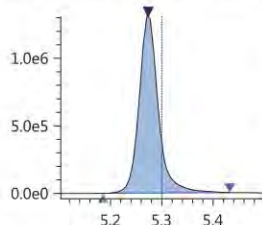
PFDaA

Conc 0.9220
RT 5.273 Area 402331
Q 613.05>569.00 (-)



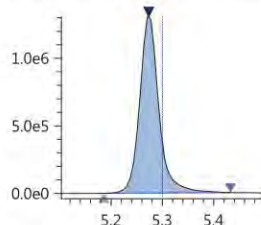
PFDaA-13C

Conc 4.5113
RT 5.274 Area 3407508
Q 614.80>569.95 (-)



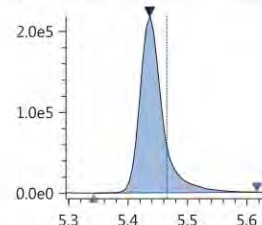
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Conc 5.0000
RT 5.274 Area 3407508
ISTD 614.80>569.95 (-)



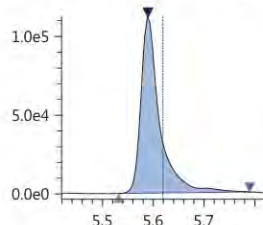
PFTrDA

Conc 0.9565
RT 5.436 Area 573085
Q 663.00>618.90 (-)



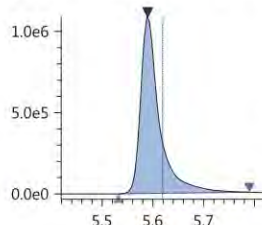
PFTeDA

Conc 0.9422
RT 5.590 Area 286942
Q 713.40>669.00 (-)



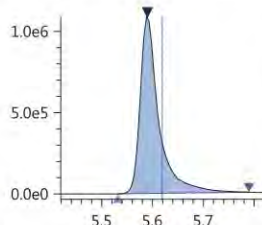
PFTeDA-13C

Conc 4.2539
RT 5.590 Area 2792862
Q 714.70>669.90 (-)



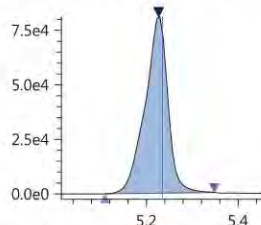
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Conc 5.0000
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ISTD 714.70>669.90 (-)



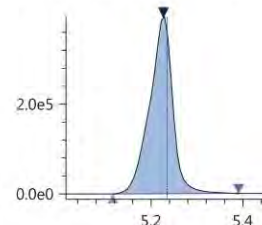
FOSA

Conc 0.8938
RT 5.227 Area 278998
Q 498.20>78.00 (-)



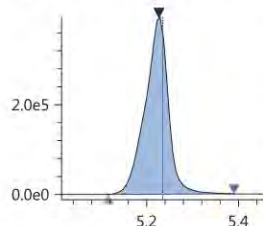
FOSA-13C

Conc 4.2943
RT 5.227 Area 1370517
Q 506.00>78.05 (-)



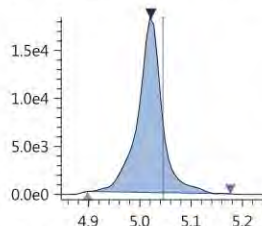
FOSA-13C_IS

Conc 5.0000
RT 5.227 Area 1370517
ISTD 506.00>78.05 (-)



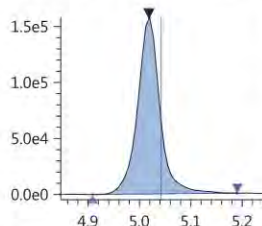
N-MeFOSAA

Conc 1.0611
RT 5.022 Area 59495
Q 570.20>419.00 (-)



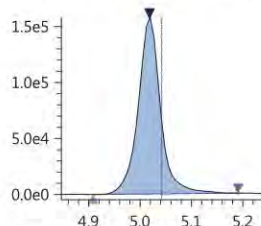
N-MeFOSAA-d3

Conc 4.0393
RT 5.018 Area 475452
Q 572.80>419.05 (-)



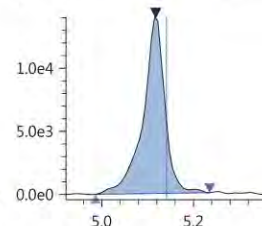
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.018 Area 475452
ISTD 572.80>419.05 (-)



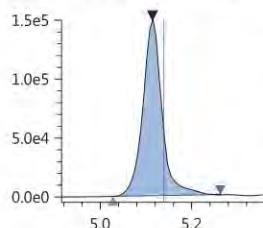
N-EtFOSAA

Conc 0.8740
RT 5.118 Area 46323
Q 584.20>418.95 (-)



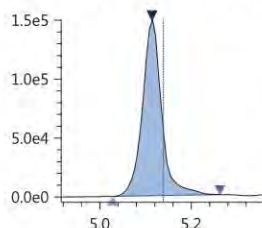
N-EtFOSAA-d5

Conc 4.5480
RT 5.114 Area 435832
Q 588.80>419.00 (-)



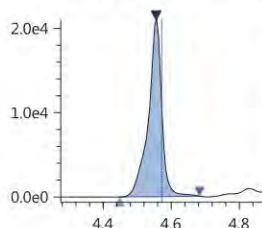
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.114 Area 435832
ISTD 588.80>419.00 (-)



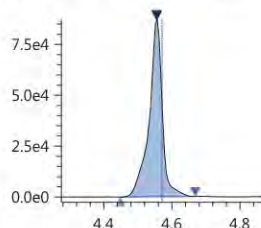
6_2-FTS_1

Conc 0.9833
RT 4.556 Area 57657
Q 427.00>407.00 (-)



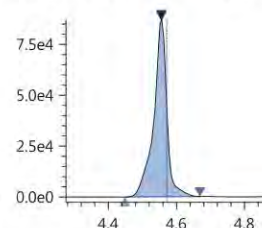
6_2-FTS-13C

Conc 3.9882
RT 4.555 Area 233466
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.555 Area 233466
ISTD 428.90>409.00 (-)



Insight Report

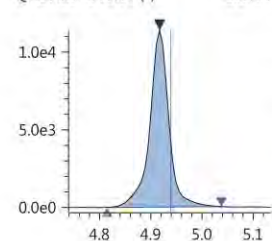
Printed at 12/6/2019 2:23:59 PM

8_2-FTS_1

Conc 1.0097

RT 4.917 Area 29326

Q 527.10>506.90 (-)

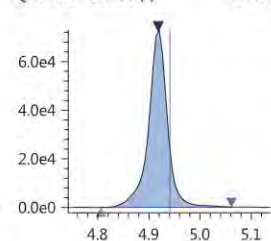


8_2-FTS-13C

Conc 4.0828

RT 4.918 Area 185389

Q 528.80>509.00 (-)

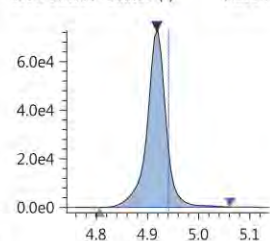


8_2-FTS-13C_IS

Conc 5.0000

RT 4.918 Area 185389

ISTD 528.80>509.00 (-)



191202_curve

st Review:

nd Review:

olumn:

obile Phases

Cmuller

DEC 03 2019

Phenomenex EVO-C18 100X4.6 mm S/N: H19-259961



ALS Environmental
LCMS06 - Shimadzu 8050

ICAL Date:

12/2/2019

Std. xp:

curve 2/28/20, ICV 4/7/20, 10:2 3/27/20

ICAL ID:

KC1900518

LIMS ID:

A: 5mM Ammonium Acetate in H2O 19-OLC-02-66C

B: 5mM Ammonium Acetate In MeOH 19-OLC-02-66D

	Sample Name	File Name	Acquisition Method	Dilution	R	
1	IB	19-OLC-02-65C	191202_017 • PFAS 191121 30 LCMS06.lcm	1x	☒	
2	0.05 PPB ICAL	19-OLC-01-56G	• 191202_018 PFAS 191121 30 LCMS06.lcm	1x	☒	
3	0.10 PPB ICAL	19-OLC-02-55D	191202_019 PFAS 191121 30 LCMS06.lcm	1x	☒	
4	0.50 PPB ICAL	19-OLC-02-55E	191202_020 PFAS 191121 30 LCMS06.lcm	1x	☒	
5	1.0 PPB ICAL	19-OLC-02-55F	191202_021 PFAS 191121 30 LCMS06.lcm	1x	☒	
6	5.0 PPB ICAL	19-OLC-02-55G	191202_022 PFAS 191121 30 LCMS06.lcm	1x	☒	
7	10.0 PPB ICAL	19-OLC-02-55H	191202_023 PFAS 191121 30 LCMS06.lcm	1x	☒	
8	IB	19-OLC-02-65C	191202_024 • PFAS 191121 30 LCMS06.lcm	1x	☒	
9	15.0 PPB ICAL	19-OLC-02-55I	• 191202_025 PFAS 191121 30 LCMS06.lcm	1x	☒	
10	IB	19-OLC-02-65C	191202_026 • PFAS 191121 30 LCMS06.lcm	1x	☒	
11	1.0 PPB ICV 10:2 FTS	19-OLC-02-55J	191202_027 PFAS 191121 30 LCMS06.lcm	1x	☒	
12	IB	19-OLC-02-65C	191202_028 • PFAS 191121 30 LCMS06.lcm	1x	☒	
13	1.0 PPB ICV NO10:2 FTS	19-OLC-02-55J	191202_029 PFAS 191121 30 LCMS06.lcm	1x	☒	
14	IB	19-OLC-02-67E	191202_030 • PFAS 191121 30 LCMS06.lcm	1x	☒	
15	T-PFOA	19-OLC-01-35A	191202_031 PFAS 191121 30 LCMS06.lcm	1x	☒	

on
12/7/19

Sample Information

Sample Type: PEG+PPG+Raffinose

Tuning Condition

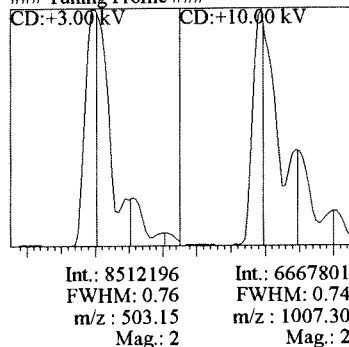
Detector Adjustment: On
 Resolution Adjustment: On
 FWHM of Spectrum: 0.70
 Sensitivity Adjustment: On
 Mass Calibration: On

Tuning Result

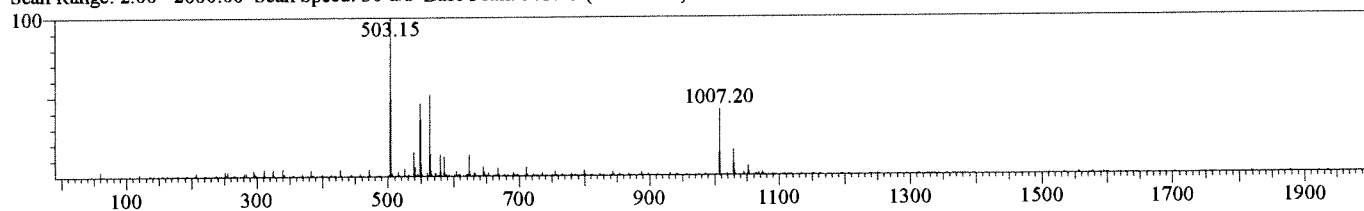
Model: LCMS-8050
 Interface: ESI
 Polarity: Neg
 Tuning Mode: Auto
 Tuning Date: 12/2/2019 4:01:17 PM
 Acquisition Mode: Q1 Scan(Use CID Gas)

Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
 Drying Gas Flow: 0.00(settings : 10.00) L/min
 CID Gas Flow: 270(settings : 270) kPa
 Interface Bias: -3.00 kV
 Interface Current: 0.55 uA
 DL Temp.: 249(settings : 250) C
 Heat Block Temp.: 400(settings : 400) C
 Q1 RF Gain: 5001
 Q1 RF Offset: 5000
 Q3 RF Gain: ---
 Q3 RF Offset: ---
 Q1 Post-rod Bias: 5.0 V
 CID CELL Exit Lens: 3.5 V
 Conversion Dynode: +10.00 kV
 Detector: -2.10(-2.10) kV
 PG Vacuum: 1.3e+002 Pa
 IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 2000.00 Scan Speed: 30 u/s Base Peak: 503.15 (20000000)



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15	503.15	0.00	0.76	8512196
1007.30	1007.20	-0.10	0.74	6667801

040.5
 cm
 12/3/19

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+140.0	+180.0	+300.0	+300.0	+300.0
Multipole1 Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Multipole1 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Bias	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Lens	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Q1 Bias	Const	+3.5	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0
CC Lens1	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
CC Lens2	Const	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0
CC Lens3	Const	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0
		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
CC RF	Scan	+200.0	+70.0	+110.0	+110.0	+300.0	+300.0	+300.0	+300.0
CE	Scan	+15.0	+15.0	+15.0	+16.0	+17.0	+21.0	+25.0	+25.0
Q3 Bias	Scan	+15.0	+15.0	+15.0	+15.1	+15.2	+15.6	+16.0	+17.0
		Const	107.15	1071.50	1893.40				
Q1 Pre Bias	Scan	+15.0	+5.0	+50.0	+50.0				
Q3 Pre Bias	Scan	+15.0	+5.0	+50.0	+50.0				

DEC 03 2019

Sample Information

Sample Type: PEG+PPG+Raffinose

Tuning Condition

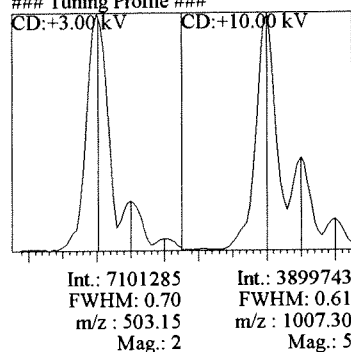
Detector Adjustment: On
 Resolution Adjustment: On
 FWHM of Spectrum: 0.70
 Sensitivity Adjustment: On
 Mass Calibration: On

Tuning Result

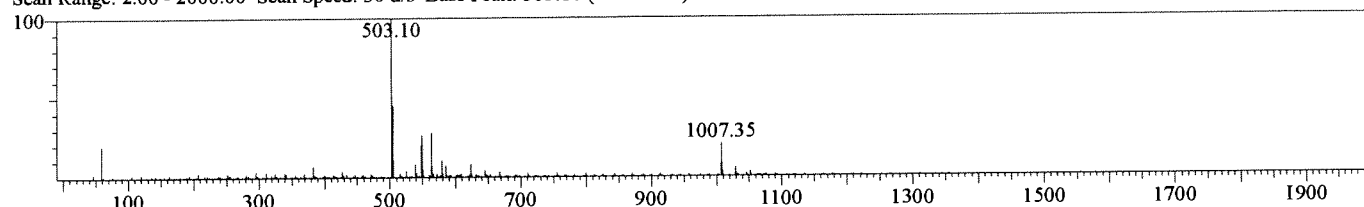
Model: LCMS-8050
 Interface: ESI
 Polarity: Neg
 Tuning Mode: Auto
 Tuning Date: 12/2/2019 4:09:23 PM
 Acquisition Mode: Q3 Scan(Use CID Gas)

Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
 Drying Gas Flow: 0.00(settings : 10.00) L/min
 CID Gas Flow: 270(settings : 270) kPa
 Interface Bias: -3.00 kV
 Interface Current: 0.56 uA
 DL Temp.: 249(settings : 250) C
 Heat Block Temp.: 399(settings : 400) C
 Q1 RF Gain: ---
 Q1 RF Offset: ---
 Q3 RF Gain: 4999
 Q3 RF Offset: 5000
 Q1 Post-rod Bias: 5.0 V
 CID CELL Exit Lens: 3.5 V
 Conversion Dynode: +10.00 kV
 Detector: -2.10(-2.10) kV
 PG Vacuum: 1.2e+002 Pa
 IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 2000.00 Scan Speed: 30 u/s Base Peak: 503.10 (20000000)



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15	503.10	-0.05	0.70	7101285
1007.30	1007.35	0.05	0.61	3899743

D < 0.5
cm
12/3/19

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+140.0	+180.0	+300.0	+300.0	+300.0
Multipole1 Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Multipole1 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Bias	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Lens	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Q1 Bias	Const	+3.5	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0
CC Lens1	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
CC Lens2	Const	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0
CC Lens3	Const	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0
		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
CC RF	Scan	+200.0	+70.0	+110.0	+110.0	+300.0	+300.0	+300.0	+300.0
CE	Scan	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0	+5.0
Q3 Bias	Scan	+7.0	+7.0	+7.0	+7.1	+7.2	+7.6	+8.0	+9.0
		Const	107.15	1071.50	1893.40				
Q1 Pre Bias	Scan	+15.0	+5.0	+50.0	+50.0				
Q3 Pre Bias	Scan	+15.0	+5.0	+50.0	+50.0				

DEC 03 2019

Sample Information

Sample Type: PEG+PPG+Raffinose

Tuning Condition

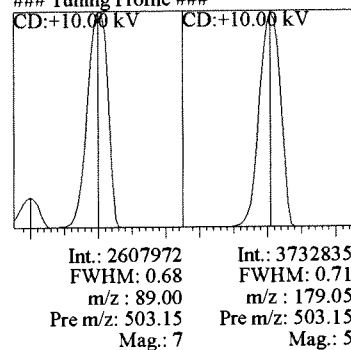
Detector Adjustment: On
 Resolution Adjustment: On
 FWHM of Spectrum: 0.70
 Sensitivity Adjustment: On
 Mass Calibration: On

Tuning Result

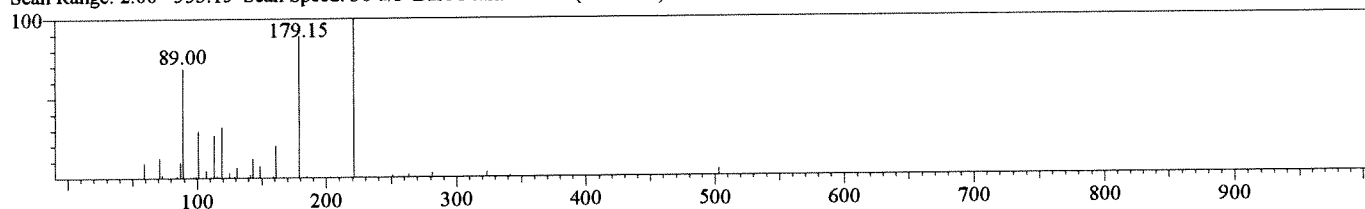
Model: LCMS-8050
 Interface: ESI
 Polarity: Neg
 Tuning Mode: Auto
 Tuning Date: 12/2/2019 4:13:50 PM
 Acquisition Mode: Product Scan

Nebulizing Gas Flow: 1.50(settings : 1.50) L/min
 Drying Gas Flow: 0.00(settings : 10.00) L/min
 CID Gas Flow: 270(settings : 270) kPa
 Interface Bias: -3.00 kV
 Interface Current: 0.50 uA
 DL Temp.: 249(settings : 250) C
 Heat Block Temp.: 400(settings : 400) C
 Q1 RF Gain: 5001
 Q1 RF Offset: 5000
 Q3 RF Gain: 4999
 Q3 RF Offset: 5009
 Q1 Post-rod Bias: 5.0 V
 CID CELL Exit Lens: -0.3 V
 Conversion Dynode: +10.00 kV
 Detector: -2.10(-2.10) kV
 PG Vacuum: 1.2e+002 Pa
 IG Vacuum: 2.1e-003 Pa

Tuning Profile



Scan Range: 2.00 - 553.15 Scan Speed: 30 u/s Base Peak: 221.10 (4448671) Pre m/z: 503.15



m/z(Target)	m/z(Actual)	Difference	Width	Intensity
503.15 > 89.00	89.00	0.00	0.68	2607972
503.15 > 179.05	179.15	0.10	0.71	3732835

DL0.5

cm 12/3/19

		Const	65.05	168.10	256.15	344.20	652.40	1004.60	1893.40
DL Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Qarray RF	Scan	+50.0	+34.8	+90.0	+110.0	+130.0	+130.0	+130.0	+130.0
Multipole RF	Scan	+100.0	+30.0	+50.0	+140.0	+180.0	+300.0	+300.0	+300.0
Multipole1 Bias	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
Multipole1 Lens	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Bias	Const	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8	+0.8
Multipole2 Lens	Const	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0	+1.0
Q1 Bias	Const	+3.5	+3.5	+3.5	+3.5	+3.5	+3.5	+3.5	+3.5
CC Lens1	Const	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0	+0.0
CC Lens2	Const	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0	+100.0
CC Lens3	Const	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0	+20.0
		Const	45.05	89.05	133.10	168.10	1893.40		
CC RF	Scan	+100.0	+100.0	+120.0	+300.0	+300.0	+300.0		
CE	Scan	+30.0	+30.0	+30.0	+30.0	+30.0	+30.0		
Q3 Bias	Scan	+7.0	+7.0	+7.0	+7.0	+7.0	+9.0		
		Const	107.15	1071.50	1893.40				
Q1 Pre Bias	Scan	+15.0	+5.0	+50.0	+50.0				
Q3 Pre Bias	Scan	+15.0	+5.0	+50.0	+50.0				

DEC 03 2019

Insight Report

Printed at 12/3/2019 10:19:07 AM

Method File: J:\LCMS06\Data\191202_curve\191202_curve.lcm
Project File: J:\LCMS06\Data\191202_curve\191202_curve.dampl
Flags File: J:\LCMS06\Data\191202_curve\191202_curve.dampl

191202_017

Sample ID: IB
Date acquired: 12/2/2019 5:29:14 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_017.lcd
Vial: 48 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.127	4195219	4195219	1	5.0000	ng/mL	0.0000
PFBS_1	M	4.032	110	1246436	2	0.0007	ng/mL	0.0000
PFBS-13C	Auto	4.039	1246436	4195219	1	4.4170	ng/mL	0.0000
PFBS-13C_IS	Auto	4.039	1246436	1246436	2	5.0000	ng/mL	0.0000
PFPeS	ND(W/B)	----	----	1246436	2	----	ng/mL	0.0000
PFHxS_1	M	4.423	1847	579629	3	0.0176	ng/mL	0.0000
PFHxS-18O	Auto	4.425	579629	4195219	1	3.8769	ng/mL	0.0000
PFHxS-18O_IS	Auto	4.425	579629	579629	3	5.0000	ng/mL	0.0000
PFHpS_1	ND(W/B)	----	----	579629	3	----	ng/mL	0.0000
PFOS_1	M	4.764	722	606161	4	0.0068	ng/mL	0.0000
PFOS-13C	Auto	4.756	606161	4195219	1	4.1082	ng/mL	0.0000
PFOS-13C_IS	Auto	4.756	606161	606161	4	5.0000	ng/mL	0.0000
PFNS	ND(W/B)	----	----	606161	4	----	ng/mL	0.0000
PFDS_1	ND(W/B)	----	----	606161	4	----	ng/mL	0.0000
PFBA	M	3.435	2141	3167946	5	0.0034	ng/mL	0.0000
PFBA-13C	Auto	3.430	3167946	4195219	1	4.4808	ng/mL	0.0000
PFBA-13C_IS	Auto	3.430	3167946	3167946	5	5.0000	ng/mL	0.0000
PFPeA	M	3.986	87083	1713972	6	-0.0008	ng/mL	0.0000
PFPeA-13C	Auto	3.986	1713972	4195219	1	4.5083	ng/mL	0.0000
PFPeA-13C_IS	Auto	3.986	1713972	1713972	6	5.0000	ng/mL	0.0000
PFHxA	M	4.217	43537	4214631	7	0.0106	ng/mL	0.0000
PFHxA-13C	Auto	4.244	4214631	4195219	1	4.9448	ng/mL	0.0000
PFHxA-13C_IS	Auto	4.244	4214631	4214631	7	5.0000	ng/mL	0.0000
PFHpA	Auto	4.407	25522	3696420	8	0.0082	ng/mL	0.0000
PFHpA-13C	Auto	4.425	3696420	4195219	1	4.0507	ng/mL	0.0000
PFHpA-13C_IS	Auto	4.425	3696420	3696420	8	5.0000	ng/mL	0.0000
PFOA	Auto	4.586	35871	4259273	9	0.0065	ng/mL	0.0000
PFOA-13C	Auto	4.595	4259273	4195219	1	4.3693	ng/mL	0.0000
PFOA-13C_IS	Auto	4.595	4259273	4259273	9	5.0000	ng/mL	0.0000
PFNA	M	4.753	14795	3074663	10	-0.0074	ng/mL	0.0000
PFNA-13C	Auto	4.768	3074663	4195219	1	4.6100	ng/mL	0.0000
PFNA-13C_IS	Auto	4.768	3074663	3074663	10	5.0000	ng/mL	0.0000
PFDA	M	4.944	11410	2665254	11	0.0011	ng/mL	0.0000
PFDA-13C	Auto	4.949	2665254	4195219	1	4.3864	ng/mL	0.0000
PFDA-13C_IS	Auto	4.949	2665254	2665254	11	5.0000	ng/mL	0.0000
PFUnA	M	5.123	16127	2772111	12	-0.0063	ng/mL	0.0000
PFUnA-13C	Auto	5.128	2772111	4195219	1	4.4038	ng/mL	0.0000
PFUnA-13C_IS	Auto	5.128	2772111	2772111	12	5.0000	ng/mL	0.0000
PFDoA	M	5.299	6873	3536157	13	-0.0095	ng/mL	0.0000
PFDoA-13C	Auto	5.304	3536157	4195219	1	4.2384	ng/mL	0.0000
PFDoA-13C_IS	Auto	5.304	3536157	3536157	13	5.0000	ng/mL	0.0000
PFTrDA	M	5.467	12195	3179945	14	-0.0143	ng/mL	0.0000
PFTeDA	Auto	5.621	41860	3179945	14	-0.0107	ng/mL	0.0000
PFTeDA-13C	Auto	5.622	3179945	4195219	1	4.3849	ng/mL	0.0000
PFTeDA-13C_IS	Auto	5.622	3179945	3179945	14	5.0000	ng/mL	0.0000
FOSA	Auto	5.255	945	1503289	16	0.0028	ng/mL	0.0000
FOSA-13C	Auto	5.238	1503289	4195219	1	4.2644	ng/mL	0.0000
FOSA-13C_IS	Auto	5.238	1503289	1503289	16	5.0000	ng/mL	0.0000
N-MeFOSA	M	5.623	1090	307404	17	0.0123	ng/mL	0.0000
N-MeFOSA-d3	Auto	5.617	307404	4195219	1	3.3572	ng/mL	0.0000
N-MeFOSA-d3_IS	Auto	5.617	307404	307404	17	5.0000	ng/mL	0.0000
N-EtFOSA	M	5.756	627	439088	18	0.0359	ng/mL	0.0000
N-EtFOSA-d9	Auto	5.750	439088	4195219	1	3.3377	ng/mL	0.0000
N-EtFOSA-d9_IS	Auto	5.750	439088	439088	18	5.0000	ng/mL	0.0000
N-MeFOSE	M	5.598	62	434161	19	0.0005	ng/mL	0.0000
N-MeFOSE-d7	Auto	5.586	434161	4195219	1	3.9273	ng/mL	0.0000
N-MeFOSE-d7_IS	Auto	5.586	434161	434161	19	5.0000	ng/mL	0.0000
N-EtFOSE	ND(W/B)	----	----	408903	20	----	ng/mL	0.0000
N-EtFOSE-d9	Auto	5.713	408903	4195219	1	3.8322	ng/mL	0.0000
N-EtFOSE-d9_IS	Auto	5.713	408903	408903	20	5.0000	ng/mL	0.0000
N-MeFOSAA	ND(W/B)	----	----	522876	21	----	ng/mL	0.0000
N-MeFOSAA-d3	Auto	5.046	522876	4195219	1	4.0216	ng/mL	0.0000
N-MeFOSAA-d3_IS	Auto	5.046	522876	522876	21	5.0000	ng/mL	0.0000
N-EtFOSAA	ND(W/B)	----	----	453431	22	----	ng/mL	0.0000

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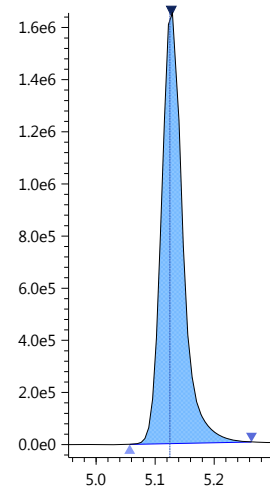
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
N-EtFOSAA-d5	Auto	5.140	453431	4195219	1	4.2837	ng/mL	0.0000
N-EtFOSAA-d5_IS	Auto	5.140	453431	453431	22	5.0000	ng/mL	0.0000
4_2-FTS_1	M	4.197	105	402048	23	0.0015	ng/mL	0.0000
4_2-FTS-13C	Auto	4.216	402048	4195219	1	4.7872	ng/mL	0.0000
4_2-FTS-13C_IS	Auto	4.216	402048	402048	23	5.0000	ng/mL	0.0000
6_2-FTS_1	M	4.572	841	280988	24	0.0119	ng/mL	0.0000
6_2-FTS-13C	Auto	4.583	280988	4195219	1	4.3456	ng/mL	0.0000
6_2-FTS-13C_IS	Auto	4.583	280988	280988	24	5.0000	ng/mL	0.0000
8_2-FTS_1	M	4.955	62	212645	25	0.0018	ng/mL	0.0000
8_2-FTS-13C	Auto	4.945	212645	4195219	1	4.2397	ng/mL	0.0000
8_2-FTS-13C_IS	Auto	4.945	212645	212645	25	5.0000	ng/mL	0.0000
10_2-Fts_1	ND(W/B)	----	----	212645	25	----	ng/mL	0.0000
HPFO_DA	M	4.310	1227	916595	26	0.0062	ng/mL	0.0000
HPFO_DA-13C	Auto	4.312	916595	4195219	1	4.5861	ng/mL	0.0000
HPFO_DA-13C_IS	Auto	4.312	916595	916595	26	5.0000	ng/mL	0.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.127 Area 4195219

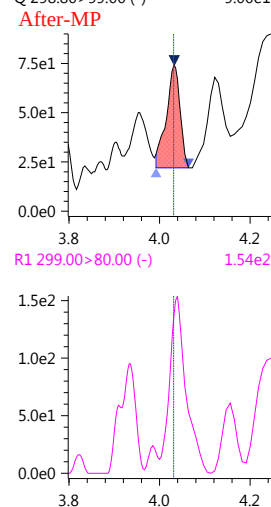
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0007
RT 4.032 Area 110
R#1 189.83 (0.00)

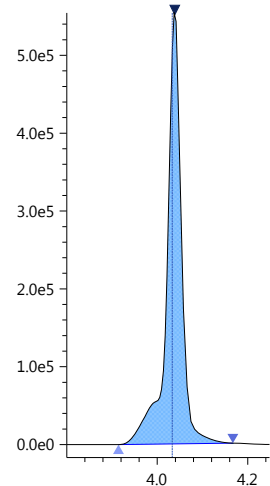
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.4170
RT 4.039 Area 1246436

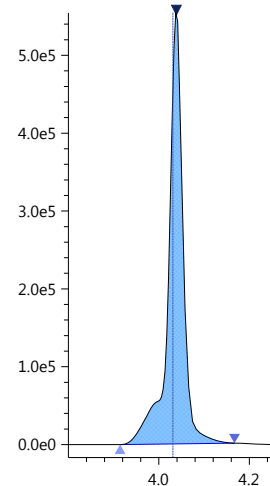
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.039 Area 1246436

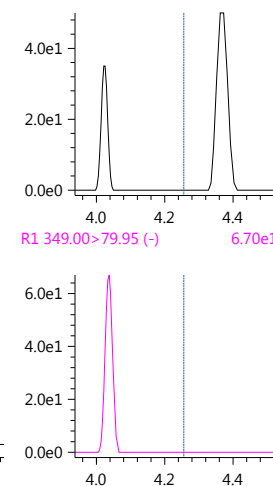
ISTD 301.80>80.00 (-)



PFPeS

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 349.00>99.00 (-)



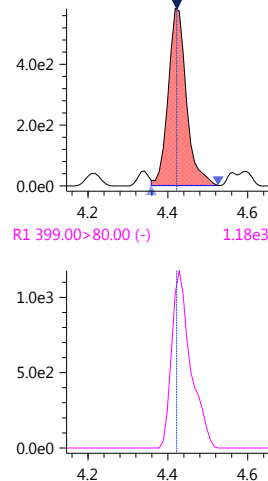
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PFHxS_1

Conc 0.0176
 RT 4.423 Area 1847
 R#1 206.87 (0.00)

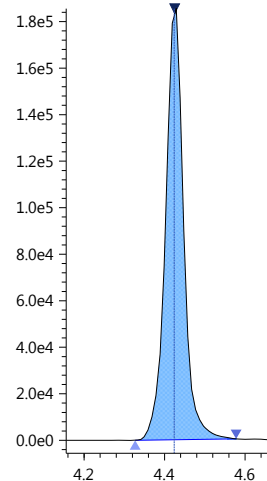
Q 399.00>80.00 (-)
 After-BLC



PFHxS-180

Conc 3.8769
 RT 4.425 Area 579629

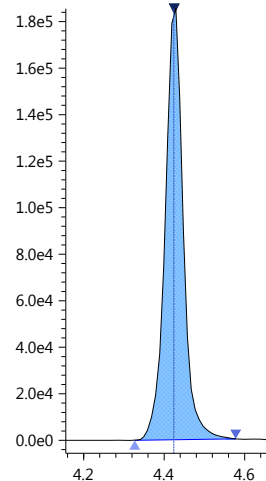
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
 RT 4.425 Area 579629

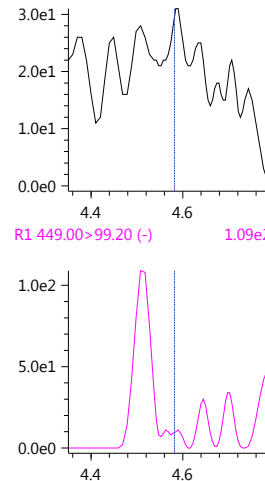
ISTD 402.70>84.05 (-)



PFHpS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

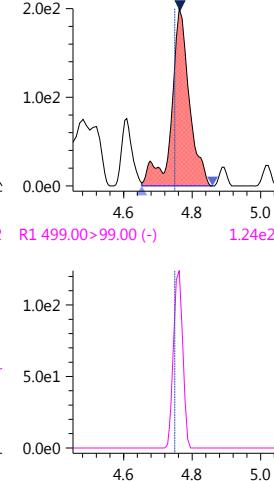
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0068
 RT 4.764 Area 722
 R#1 60.61 (0.00)

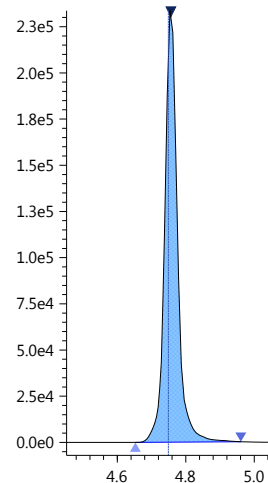
Q 499.00>80.00 (-)
 After-BLC



PFOS-13C

Conc 4.1082
 RT 4.756 Area 606161

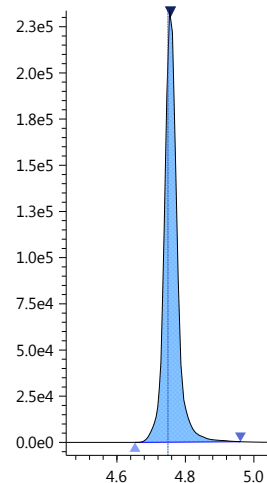
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.756 Area 606161

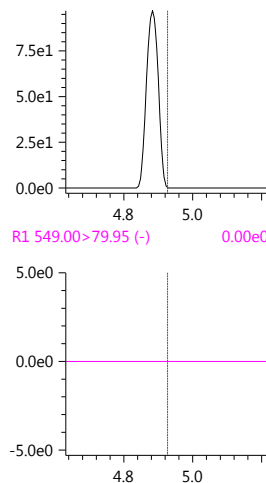
ISTD 502.80>80.05 (-)



PFNS

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

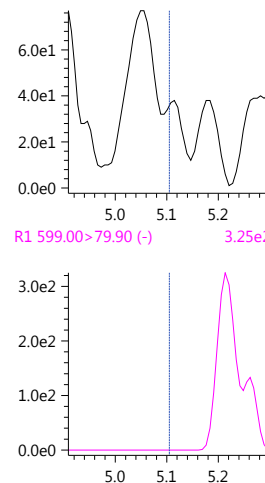
Q 549.00>99.00 (-)



PFDS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

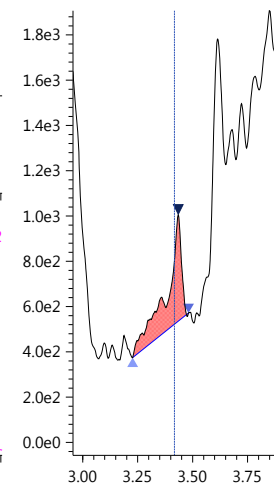
Q 599.00>99.10 (-)



PFBA

Conc 0.0034
 RT 3.435 Area 2141

After-MP

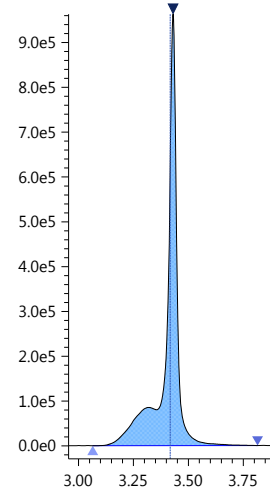


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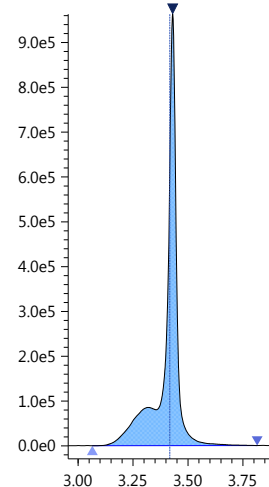
PFBA-13C

Conc 4.4808
 RT 3.430 Area 3167946
 Q 216.90>172.15 (-)



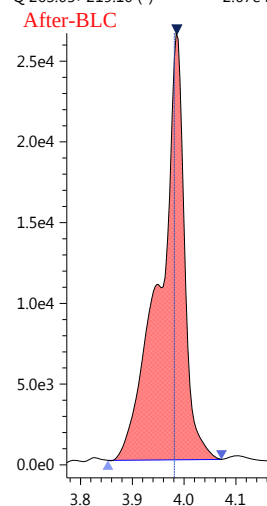
PFBA-13C_IS

Conc 5.0000
 RT 3.430 Area 3167946
 ISTD 216.90>172.15 (-)



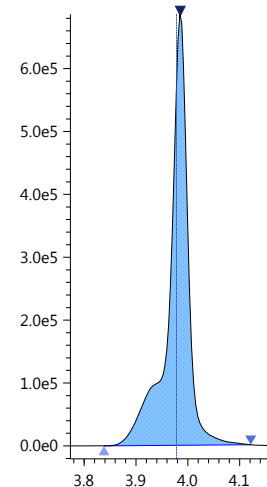
PFPeA

Conc -0.0008
 RT 3.986 Area 87083
 Q 263.05>219.10 (-)



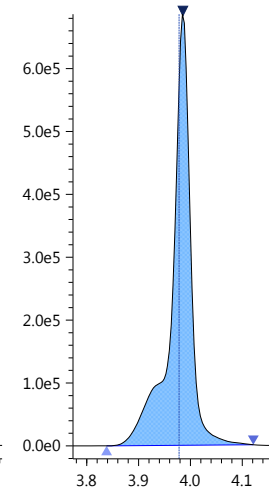
PFPeA-13C

Conc 4.5083
 RT 3.986 Area 1713972
 Q 267.90>223.00 (-)



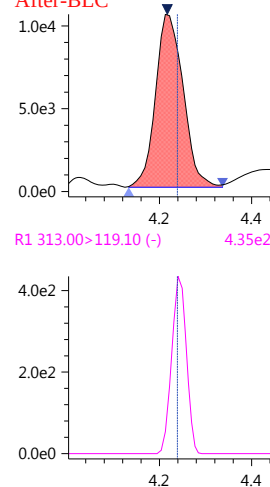
PFPeA-13C_IS

Conc 5.0000
 RT 3.986 Area 1713972
 ISTD 267.90>223.00 (-)



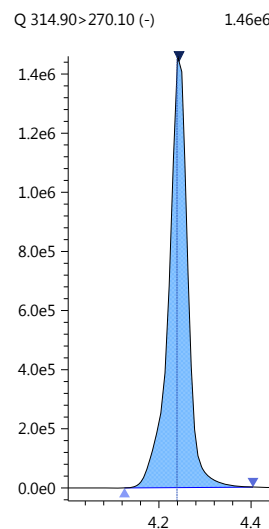
PFHxA

Conc 0.0106
 RT 4.217 Area 43537
 R#1 0.61 (0.00)
 Q 313.00>269.00 (-)



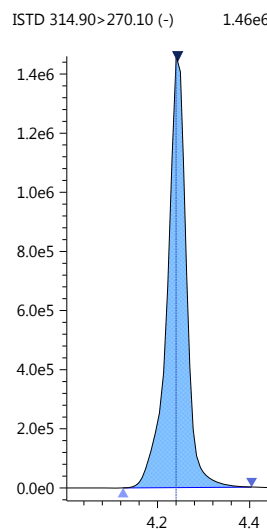
PFHxA-13C

Conc 4.9448
 RT 4.244 Area 4214631



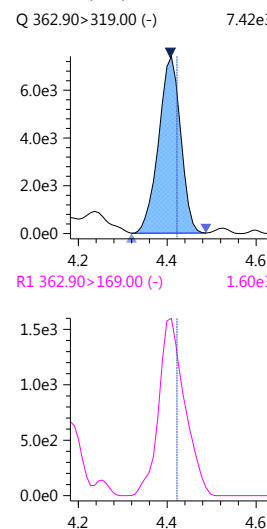
PFHxA-13C_IS

Conc 5.0000
 RT 4.244 Area 4214631
 ISTD 314.90>270.10 (-)



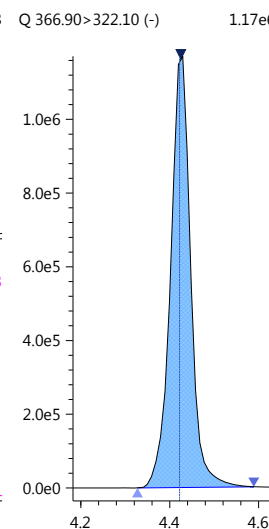
PFHpA

Conc 0.0082
 RT 4.407 Area 25522
 R#1 21.25 (0.00)
 Q 362.90>319.00 (-)



PFHpA-13C

Conc 4.0507
 RT 4.425 Area 3696420



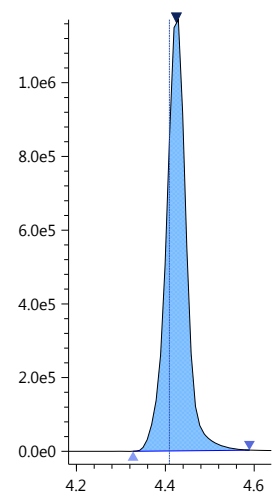
Insight Report

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PFHpA-13C_IS

Conc 5.0000
RT 4.425 Area 3696420

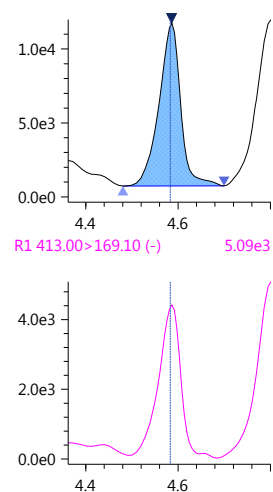
ISTD 366.90>322.10 (-)



PFOA

Conc 0.0065
RT 4.586 Area 35871
R#1 38.57 (0.00)

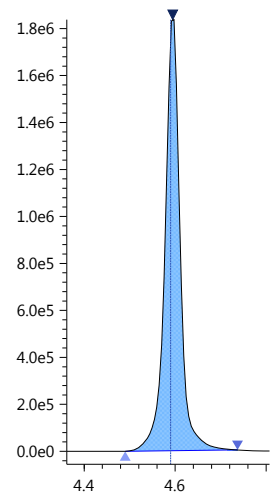
Q 413.00>369.00 (-)



PFOA-13C

Conc 4.3693
RT 4.595 Area 4259273

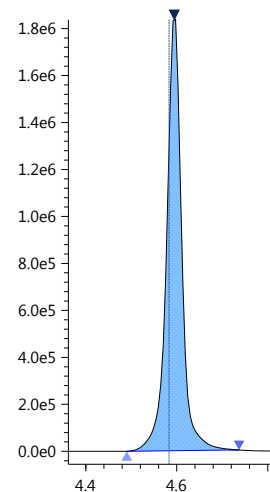
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
RT 4.595 Area 4259273

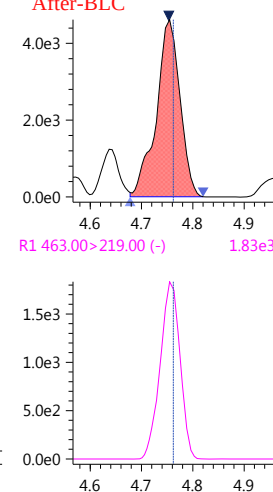
ISTD 416.80>372.05 (-)



PFNA

Conc -0.0074
RT 4.753 Area 14795
R#1 40.04 (0.00)

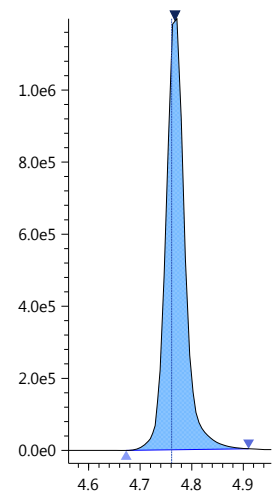
Q 463.00>418.90 (-)



PFNA-13C

Conc 4.6100
RT 4.768 Area 3074663

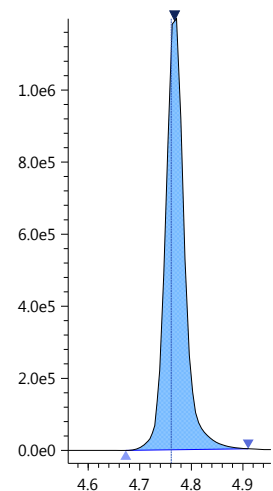
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
RT 4.768 Area 3074663

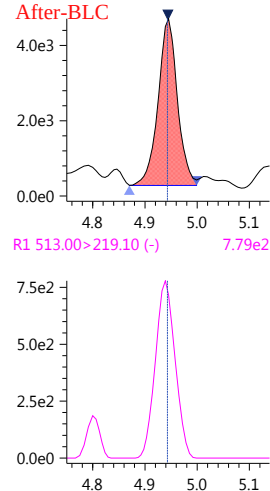
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0011
RT 4.944 Area 11410
R#1 15.85 (0.00)

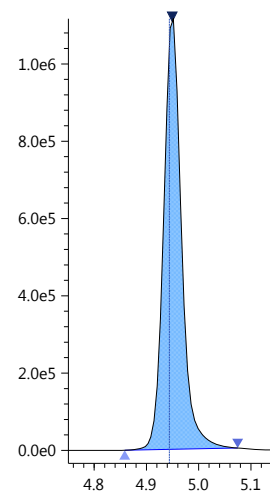
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.3864
RT 4.949 Area 2665254

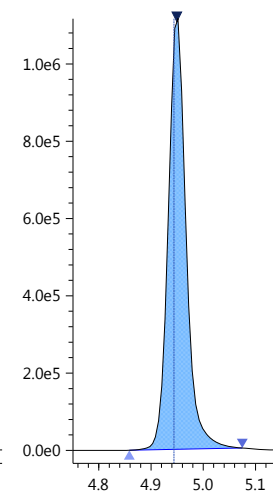
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
RT 4.949 Area 2665254

ISTD 514.80>469.95 (-)

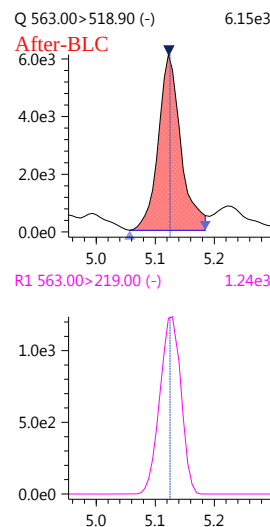


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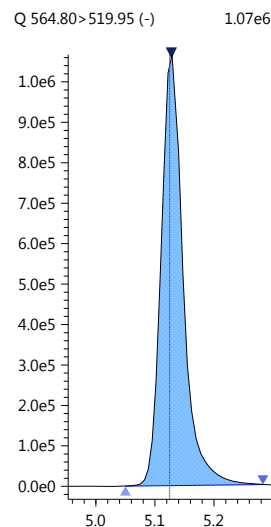
PFUnA

Conc -0.0063
 RT 5.123 Area 16127
 R#1 21.16 (0.00)



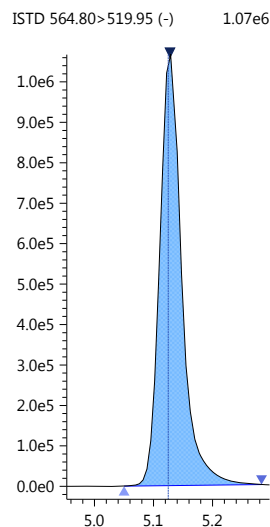
PFUnA-13C

Conc 4.4038
 RT 5.128 Area 2772111



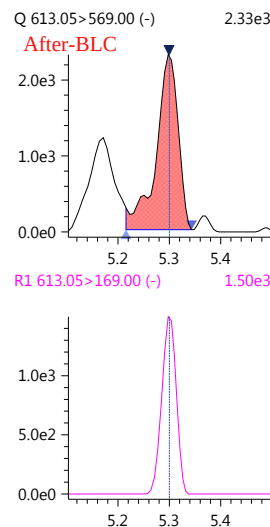
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Conc 5.0000
 RT 5.128 Area 2772111



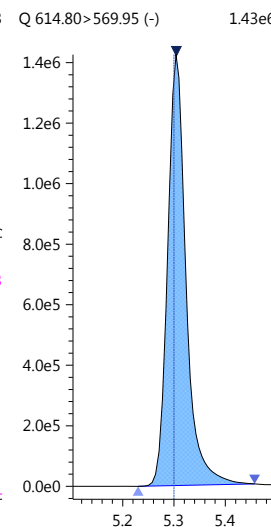
PFDaA

Conc -0.0095
 RT 5.299 Area 6873
 R#1 68.65 (0.00)



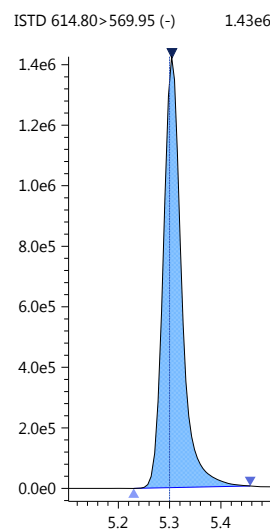
PFDaA-13C

Conc 4.2384
 RT 5.304 Area 3536157



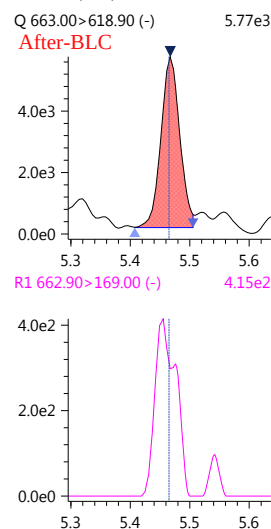
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Conc 5.0000
 RT 5.304 Area 3536157



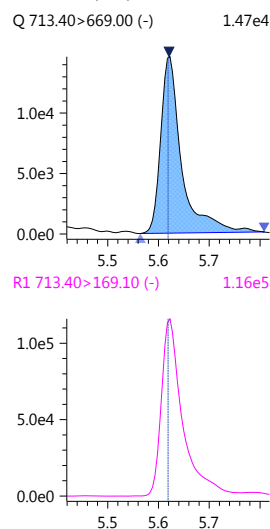
PFTeDA

Conc -0.0143
 RT 5.467 Area 12195
 R#1 3.91 (0.00)



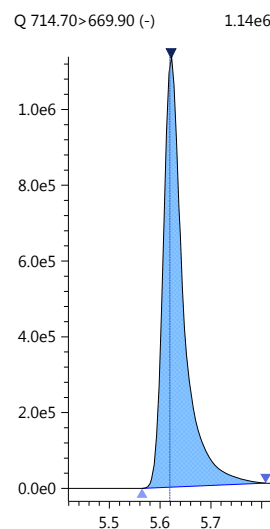
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 RT 5.621 Area 41860
 R#1 789.05 (0.00)



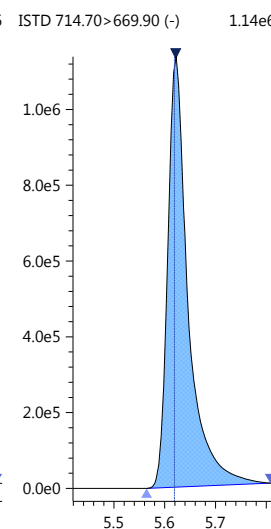
PFTeDA-13C

Conc 4.3849
 RT 5.622 Area 3179945



PFTeDA-13C_IS

Conc 5.0000
 RT 5.622 Area 3179945

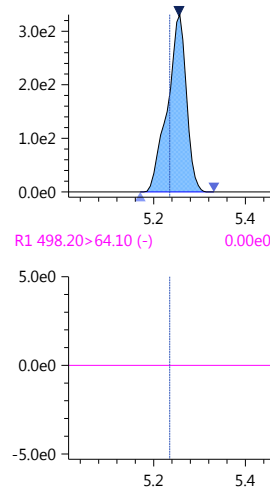


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FOSA

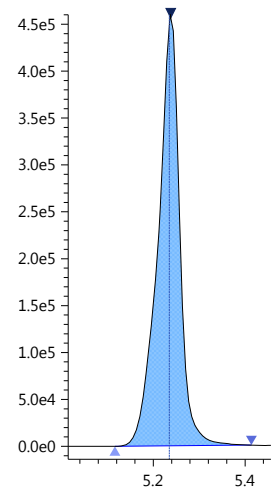
Conc 0.0028
RT 5.255 Area 945
R#1 0.00 (0.00)
Q 498.20>78.00 (-)



FOSA-13C

Conc 4.2644
RT 5.238 Area 1503289

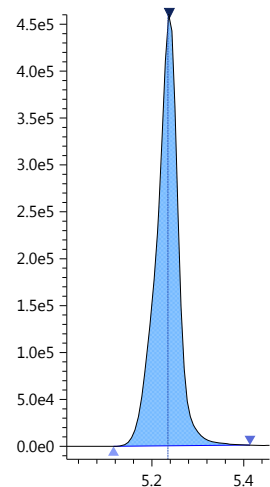
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
RT 5.238 Area 1503289

ISTD 506.00>78.05 (-)

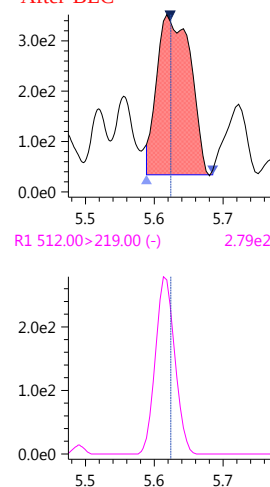


N-MeFOSA

Conc 0.0123
RT 5.623 Area 1090
R#1 87.55 (0.00)

Q 512.00>169.10 (-)

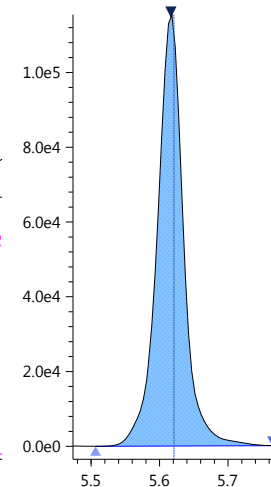
After-BLC



N-MeFOSA-d3

Conc 3.3572
RT 5.617 Area 307404

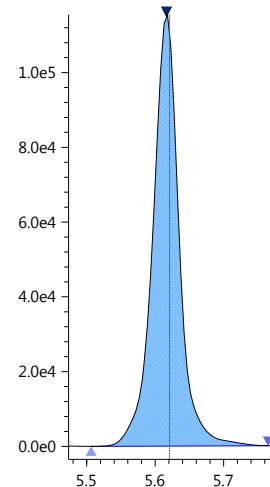
Q 514.90>168.90 (-)



N-MeFOSA-d3_IS

Conc 5.0000
RT 5.617 Area 307404

ISTD 514.90>168.90 (-)

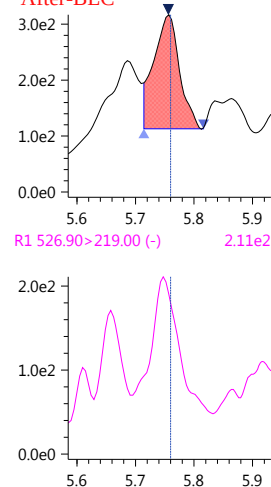


N-EtFOSA

Conc 0.0359
RT 5.756 Area 627
R#1 64.04 (0.00)

Q 526.90>169.10 (-)

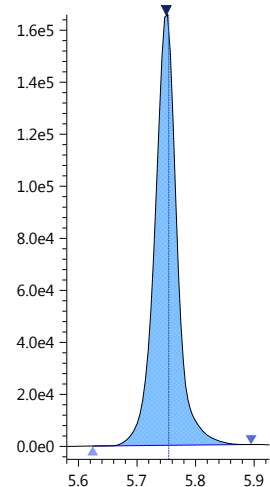
After-BLC



N-EtFOSA-d9

Conc 3.3377
RT 5.750 Area 439088

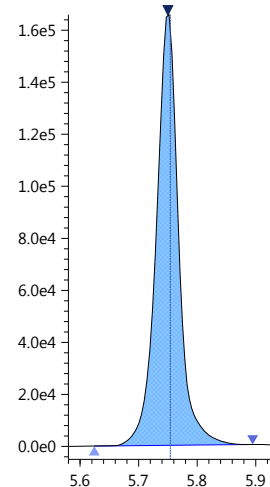
Q 530.90>169.15 (-)



N-EtFOSA-d9_IS

Conc 5.0000
RT 5.750 Area 439088

ISTD 530.90>169.15 (-)

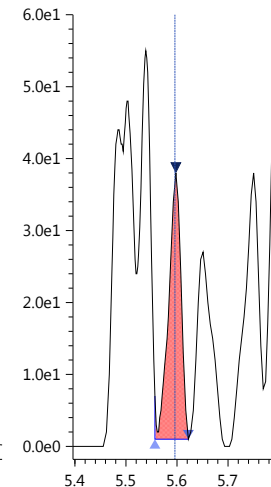


N-MeFOSE

Conc 0.0005
RT 5.598 Area 62

Q 616.00>59.00 (-)

After-MP

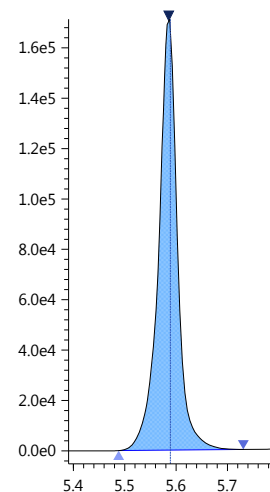


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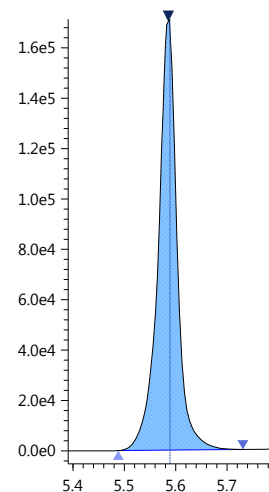
N-MeFOSE-d7

Conc 3.9273
 RT 5.586 Area 434161
 Q 622.70>59.10 (-)



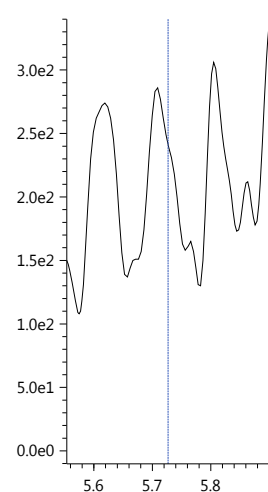
N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.586 Area 434161
 ISTD 622.70>59.10 (-)



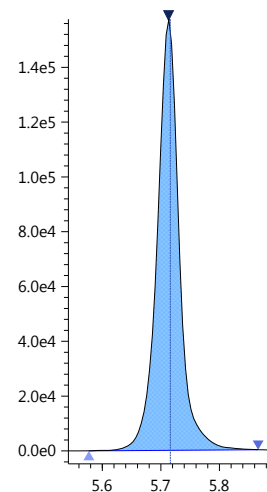
N-EtFOSE

Conc ----
 RT ---- Area ----
 Q 630.00>58.90 (-)



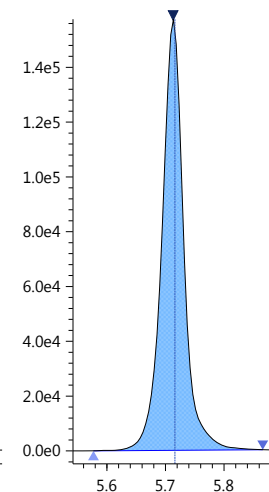
N-EtFOSE-d9

Conc 3.8322
 RT 5.713 Area 408903
 Q 638.70>59.10 (-)



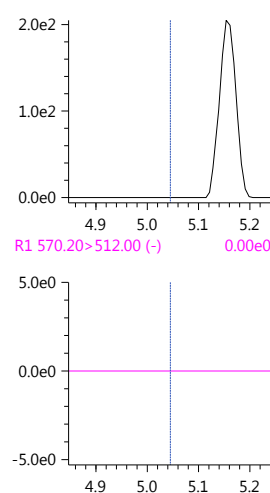
N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.713 Area 408903
 ISTD 638.70>59.10 (-)



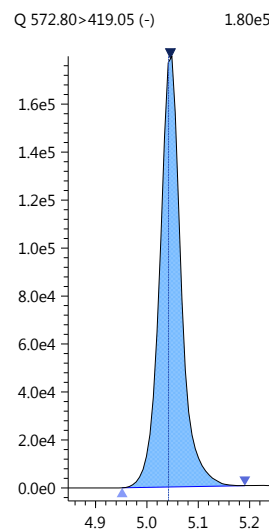
N-MeFOSAA

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)
 Q 570.20>419.00 (-)



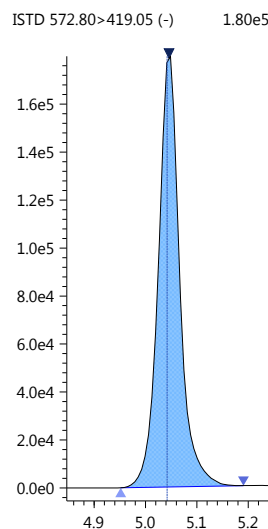
N-MeFOSAA-d3

Conc 4.0216
 RT 5.046 Area 522876



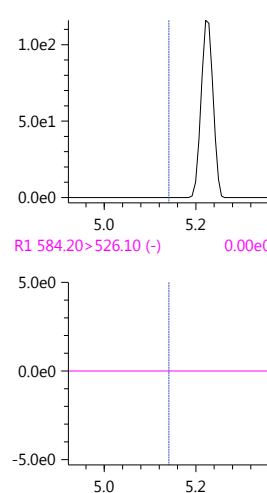
N-MeFOSAA-d3_IS

Conc 5.0000
 RT 5.046 Area 522876
 ISTD 572.80>419.05 (-)



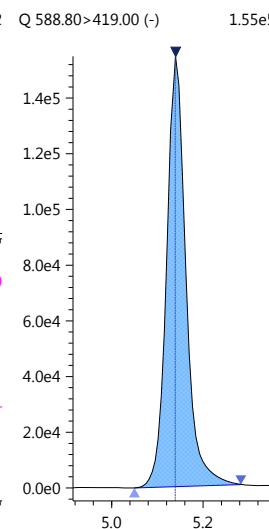
N-EtFOSAA

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)
 Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 4.2837
 RT 5.140 Area 453431



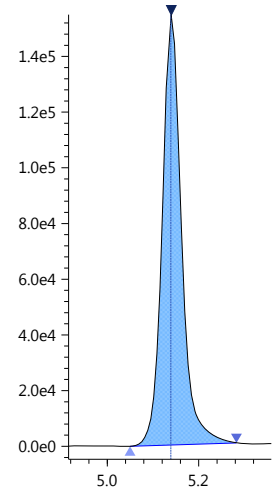
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N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.140 Area 453431

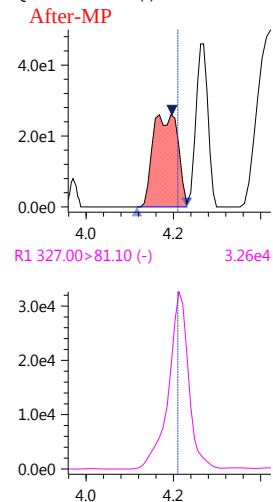
ISTD 588.80>419.00 (-) 1.55e5



4_2-FTS_1

Conc 0.0015
RT 4.197 Area 105
R#1 15638.46 (0.00)

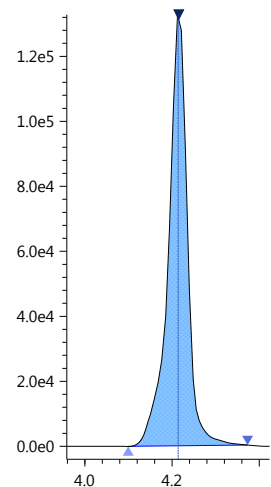
Q 327.00>307.05 (-) 5.00e1



4_2-FTS-13C

Conc 4.7872
RT 4.216 Area 402048

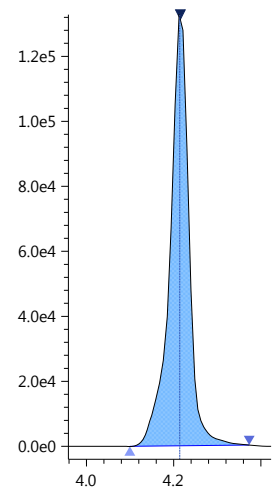
Q 328.80>309.05 (-) 1.33e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.216 Area 402048

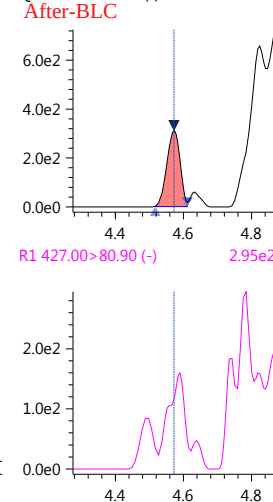
ISTD 328.80>309.05 (-) 1.33e5



6_2-FTS_1

Conc 0.0119
RT 4.572 Area 841
R#1 25.23 (0.00)

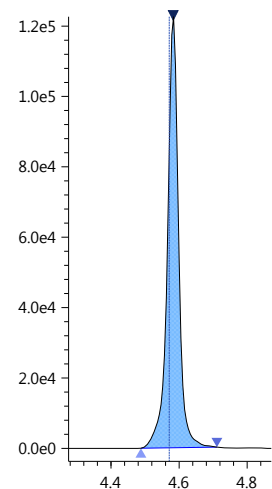
Q 427.00>407.00 (-) 7.25e2



6_2-FTS-13C

Conc 4.3456
RT 4.583 Area 280988

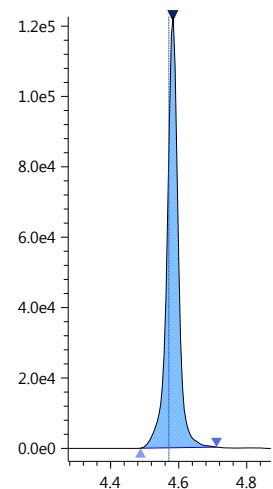
Q 428.90>409.00 (-) 1.23e5



6_2-FTS-13C_IS

Conc 5.0000
RT 4.583 Area 280988

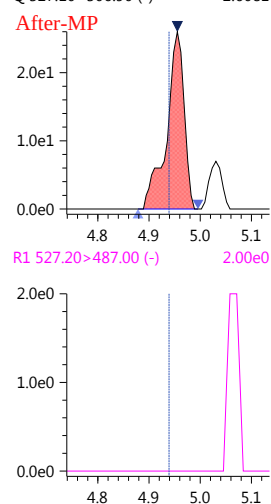
ISTD 428.90>409.00 (-) 1.23e5



8_2-FTS_1

Conc 0.0018
RT 4.955 Area 62
R#1 0.00 (0.00)

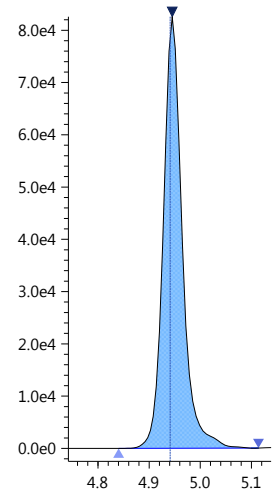
Q 527.10>506.90 (-) 2.60e1



8_2-FTS-13C

Conc 4.2397
RT 4.945 Area 212645

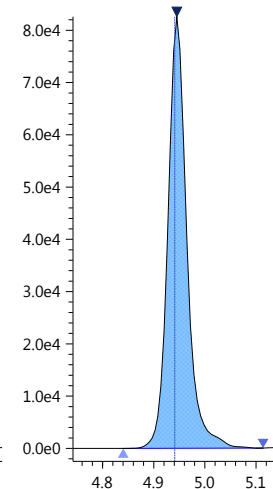
Q 528.80>509.00 (-) 8.26e4



8_2-FTS-13C_IS

Conc 5.0000
RT 4.945 Area 212645

ISTD 528.80>509.00 (-) 8.26e4

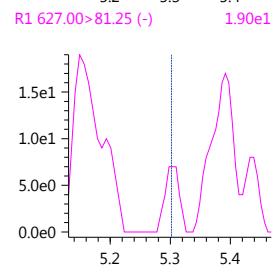
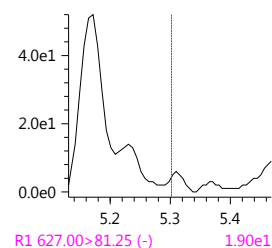


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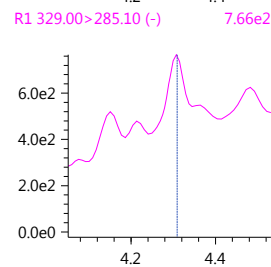
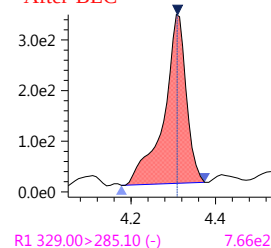
10_2-FtS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)
 Q 627.00>606.95 (-)



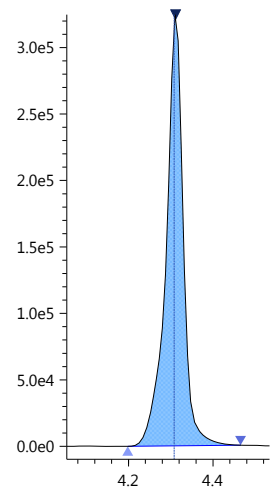
HPFO_DA

Conc 0.0062
 RT 4.310 Area 1227
 R#1 82.54 (0.00)
 Q 329.00>169.00 (-)
After-BLC



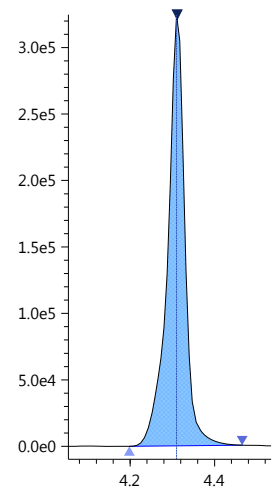
HFPO_DA-13C

Conc 4.5861
 RT 4.312 Area 916595
 Q 332.00>286.80 (-)



HFPO_DA-13C_IS

Conc 5.0000
 RT 4.312 Area 916595
 ISTD 332.00>286.80 (-)



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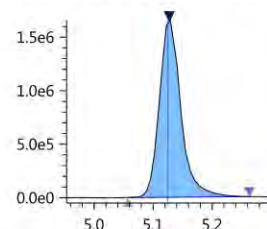
Method File: J:\LCMS06\Data\191202_curve\191002_curve.lcm
 Project File: J:\LCMS06\Data\191202_curve\191202_curve.damlp
 Flags File: J:\LCMS06\Data\191202_curve\191202_curve.damlp

191202_017

Sample ID: IB
 Date acquired: 12/2/2019 5:29:14 PM
 Acquired by: System Administrator
 Data File: J:\LCMS06\Data\191202_curve\191202_017.lcd
 Vial: 48 | Inj. Volume: 15.0000uL | Tray: 1

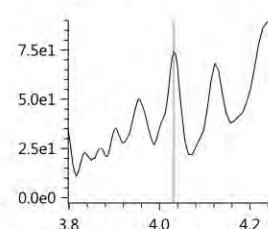
13C7-PFUnDA_IS

Conc 5.0000
 RT 5.127 Area 4195219
 ISTD 570.00>525.00 (-)



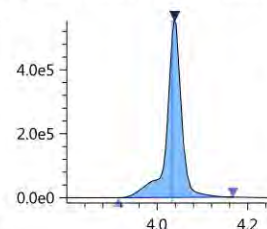
PFBS_1

Conc ---
 RT --- Area ---
 Q 298.80>99.00 (-)



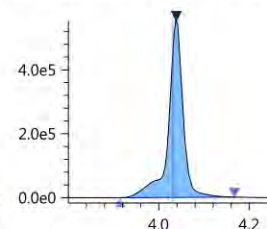
PFBS-13C

Conc 4.4170
 RT 4.039 Area 1246436
 Q 301.80>80.00 (-)



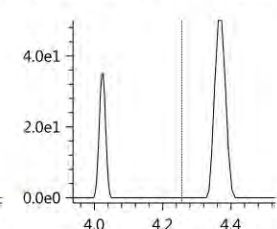
PFBS-13C_IS

Conc 5.0000
 RT 4.039 Area 1246436
 ISTD 301.80>80.00 (-)



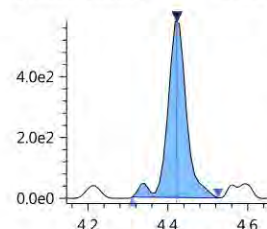
PFPeS

Conc ---
 RT --- Area ---
 Q 349.00>99.00 (-)



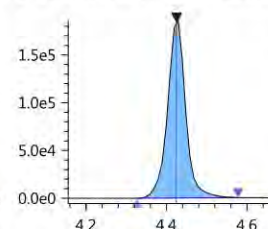
PFHxS_1

Conc 0.0183
 RT 4.423 Area 1913
 Q 399.00>99.00 (-)



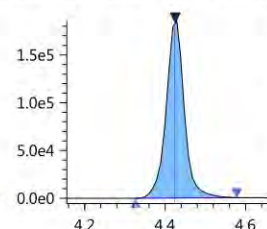
PFHxS-180

Conc 3.8769
 RT 4.425 Area 579629
 Q 402.70>84.05 (-)



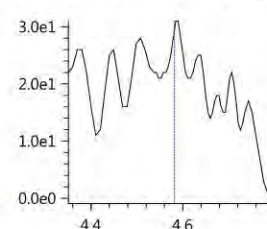
PFHxS-180_IS

Conc 5.0000
 RT 4.425 Area 579629
 ISTD 402.70>84.05 (-)



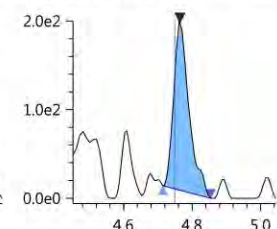
PFHpS_1

Conc ---
 RT --- Area ---
 Q 449.00>80.15 (-)



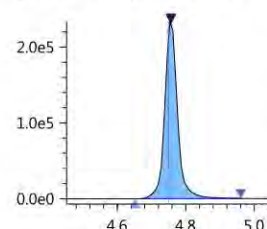
PFOS_1

Conc 0.0056
 RT 4.764 Area 596
 Q 499.00>80.00 (-)



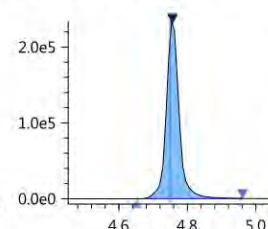
PFOS-13C

Conc 4.1082
 RT 4.756 Area 606161
 Q 502.80>80.05 (-)



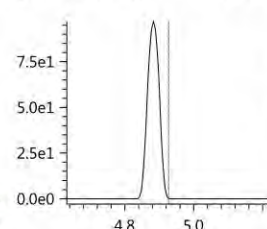
PFOS-13C_IS

Conc 5.0000
 RT 4.756 Area 606161
 ISTD 502.80>80.05 (-)



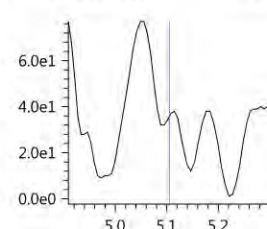
PFNS

Conc ---
 RT --- Area ---
 Q 549.00>99.00 (-)



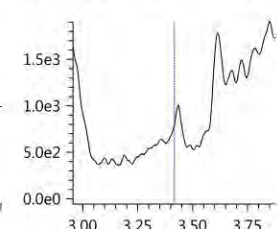
PFDS_1

Conc ---
 RT --- Area ---
 Q 599.00>99.10 (-)



PFBA

Conc ---
 RT --- Area ---
 Q 213.00>169.10 (-)

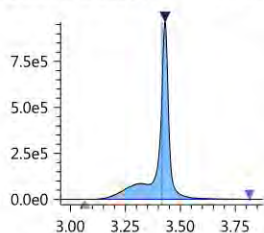


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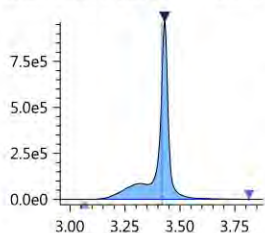
PFBA-13C

Conc 4.4808
 RT 3.430 Area 3167946
 Q 216.90>172.15 (-)



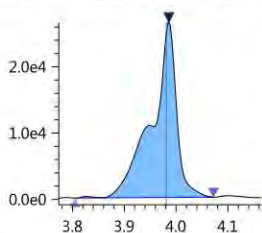
PFBA-13C_IS

Conc 5.0000
 RT 3.430 Area 3167946
 Q 216.90>172.15 (-)



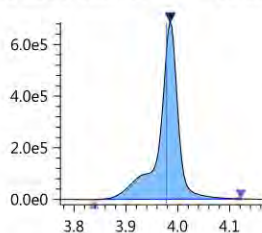
PFPeA

Conc 0.0002
 RT 3.986 Area 87798
 Q 263.05>219.10 (-)



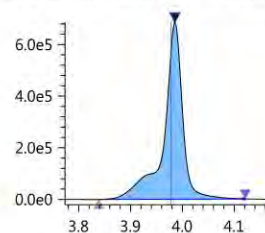
PFPeA-13C

Conc 4.5083
 RT 3.986 Area 1713972
 Q 267.90>223.00 (-)



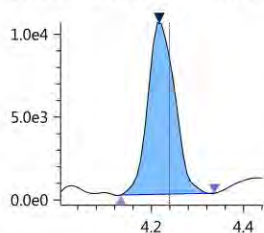
PFPeA-13C_IS

Conc 5.0000
 RT 3.986 Area 1713972
 Q 267.90>223.00 (-)



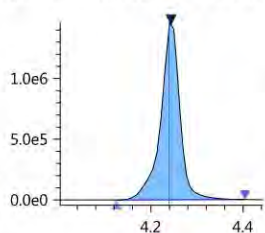
PFHxA

Conc 0.0098
 RT 4.217 Area 42445
 Q 313.00>269.00 (-)



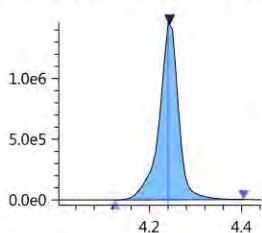
PFHxA-13C

Conc 4.9448
 RT 4.244 Area 4214631
 Q 314.90>270.10 (-)



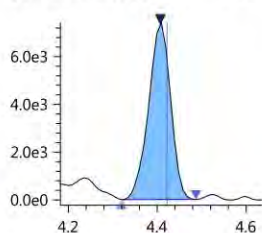
PFHxA-13C_IS

Conc 5.0000
 RT 4.244 Area 4214631
 Q 314.90>270.10 (-)



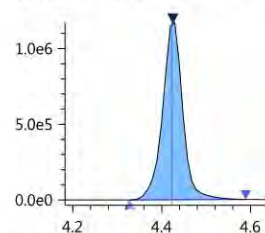
PFHpA

Conc 0.0082
 RT 4.407 Area 25522
 Q 362.90>319.00 (-)



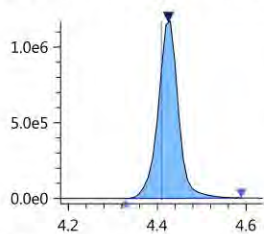
PFHpA-13C

Conc 4.0507
 RT 4.425 Area 3696420
 Q 366.90>322.10 (-)



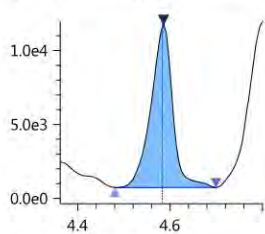
PFHpA-13C_IS

Conc 5.0000
 RT 4.425 Area 3696420
 Q 366.90>322.10 (-)



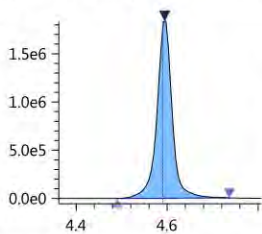
PFOA

Conc 0.0065
 RT 4.586 Area 35871
 Q 413.00>369.00 (-)



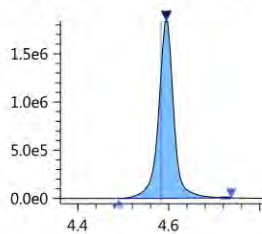
PFOA-13C

Conc 4.3693
 RT 4.595 Area 4259273
 Q 416.80>372.05 (-)



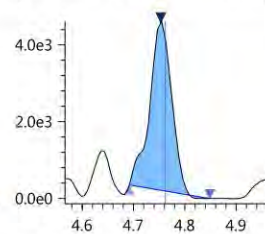
PFOA-13C_IS

Conc 5.0000
 RT 4.595 Area 4259273
 Q 416.80>372.05 (-)



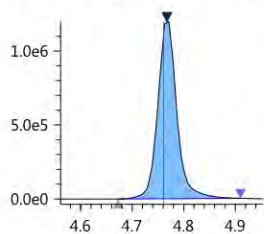
PFNA

Conc -0.0100
 RT 4.753 Area 13045
 Q 463.00>418.90 (-)



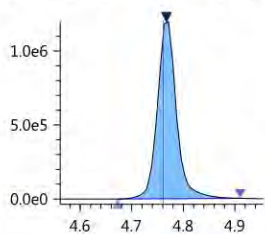
PFNA-13C

Conc 4.6100
 RT 4.768 Area 3074663
 Q 467.80>423.00 (-)



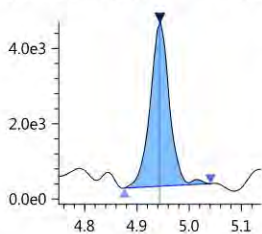
PFNA-13C_IS

Conc 5.0000
 RT 4.768 Area 3074663
 Q 467.80>423.00 (-)



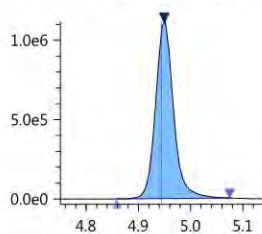
PFDA

Conc 0.0002
 RT 4.944 Area 11181
 Q 513.00>468.80 (-)



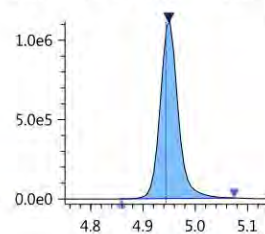
PFDA-13C

Conc 4.3864
 RT 4.949 Area 2665254
 Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 RT 4.949 Area 2665254
 Q 514.80>469.95 (-)

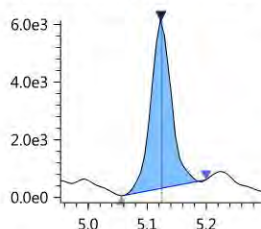


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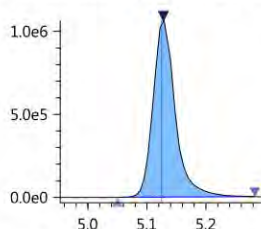
PFUnA

Conc -0.0101
RT 5.123 Area 14183
Q 563.00>518.90 (-)



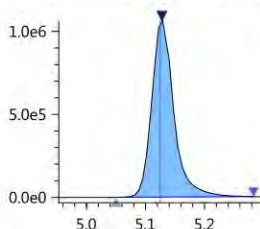
PFUnA-13C

Conc 4.4038
RT 5.128 Area 2772111
Q 564.80>519.95 (-)



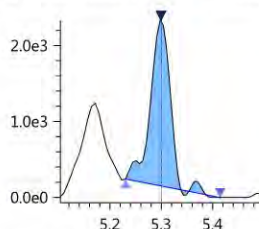
PFUnA-13C_IS

Conc 5.0000
RT 5.128 Area 2772111
ISTD 564.80>519.95 (-)



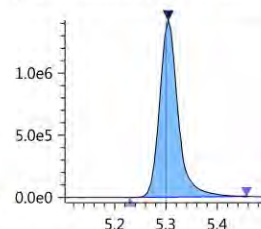
PFDaA

Conc 0.0127
RT 5.299 Area 5861
Q 613.05>569.00 (-)



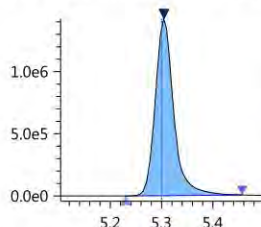
PFDaA-13C

Conc 4.2384
RT 5.304 Area 3536157
Q 614.80>569.95 (-)



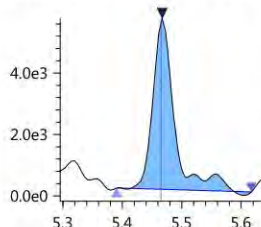
PFDaA-13C_IS

Conc 5.0000
RT 5.304 Area 3536157
ISTD 614.80>569.95 (-)



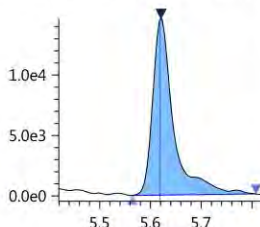
PFTeDA

Conc -0.0117
RT 5.467 Area 13876
Q 663.00>618.90 (-)



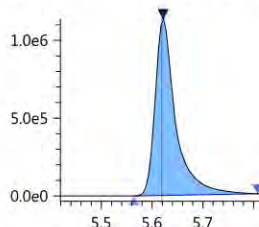
PFTeDA

Conc -0.0126
RT 5.621 Area 41860
Q 713.40>669.00 (-)



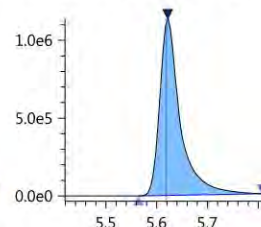
PFTeDA-13C

Conc 4.3849
RT 5.622 Area 3179945
Q 714.70>669.90 (-)



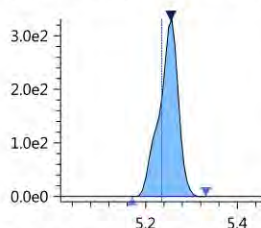
PFTeDA-13C_IS

Conc 5.0000
RT 5.622 Area 3179945
ISTD 714.70>669.90 (-)



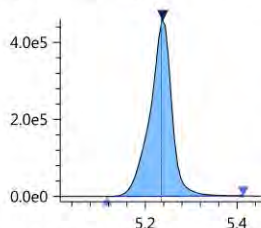
FOSA

Conc 0.0028
RT 5.255 Area 945
Q 498.20>78.00 (-)



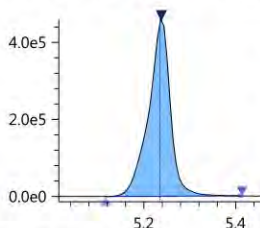
FOSA-13C

Conc 4.2644
RT 5.238 Area 1503289
Q 506.00>78.05 (-)



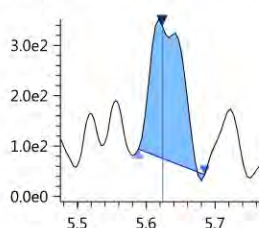
FOSA-13C_IS

Conc 5.0000
RT 5.238 Area 1503289
ISTD 506.00>78.05 (-)



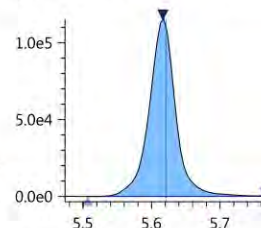
N-MeFOSA

Conc 0.0100
RT 5.623 Area 891
Q 512.00>169.10 (-)



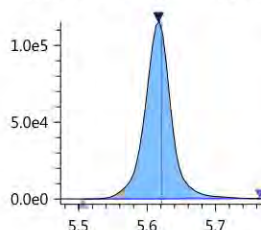
N-MeFOSA-d3

Conc 3.3572
RT 5.617 Area 307404
Q 514.90>168.90 (-)



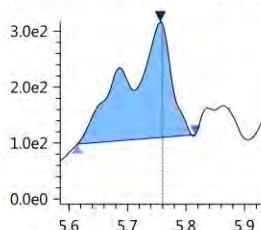
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.617 Area 307404
ISTD 514.90>168.90 (-)



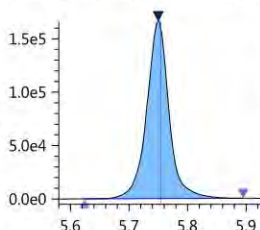
N-EtFOSA

Conc 0.0632
RT 5.756 Area 1091
Q 526.90>169.10 (-)



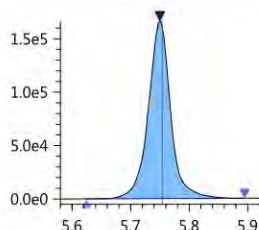
N-EtFOSA-d9

Conc 3.3377
RT 5.750 Area 439088
Q 530.90>169.15 (-)



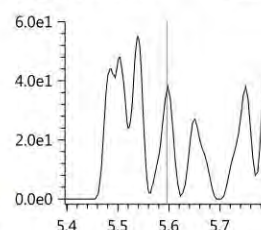
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.750 Area 439088
ISTD 530.90>169.15 (-)



N-MeFOSE

Conc ----
RT ---- Area ----
Q 616.00>59.00 (-)

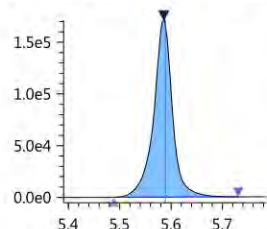


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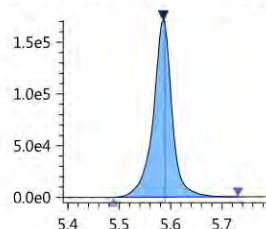
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N-MeFOSE-d7

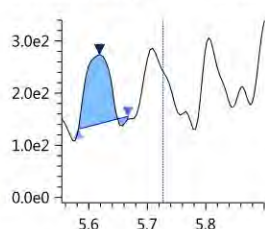
Conc 3.9273
RT 5.586 Area 434161
Q 622.70>59.10 (-)

**N-MeFOSE-d7_IS**

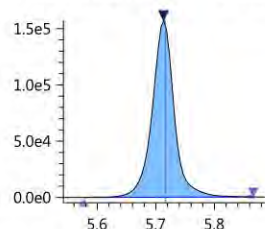
Conc 5.0000
RT 5.586 Area 434161
ISTD 622.70>59.10 (-)

**N-EtFOSE**

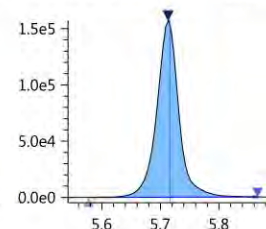
Conc 0.0033
RT 5.618 Area 358
Q 630.00>58.90 (-)

**N-EtFOSE-d9**

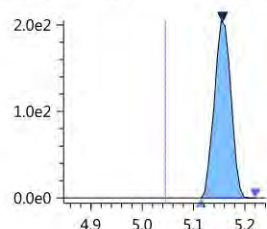
Conc 3.8322
RT 5.713 Area 408903
Q 638.70>59.10 (-)

**N-EtFOSE-d9_IS**

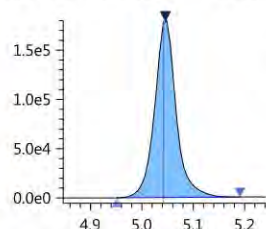
Conc 5.0000
RT 5.713 Area 408903
ISTD 638.70>59.10 (-)

**N-MeFOSAA**

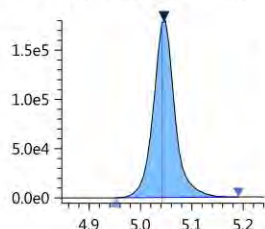
Conc 0.0313
RT 5.157 Area 462
Q 570.20>419.00 (-)

**N-MeFOSAA-d3**

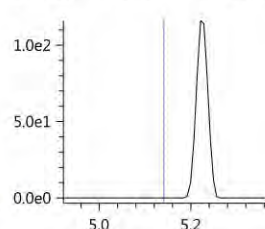
Conc 4.0216
RT 5.046 Area 522876
Q 572.80>419.05 (-)

**N-MeFOSAA-d3_IS**

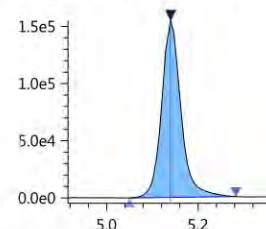
Conc 5.0000
RT 5.046 Area 522876
ISTD 572.80>419.05 (-)

**N-EtFOSAA**

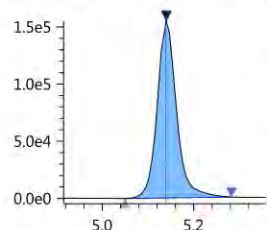
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-)

**N-EtFOSAA-d5**

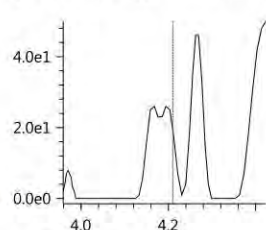
Conc 4.2837
RT 5.140 Area 453431
Q 588.80>419.00 (-)

**N-EtFOSAA-d5_IS**

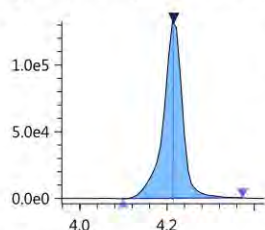
Conc 5.0000
RT 5.140 Area 453431
ISTD 588.80>419.00 (-)

**4_2-FTS_1**

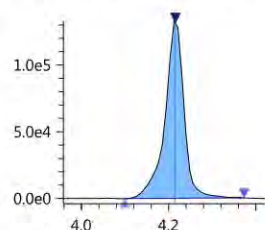
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-)

**4_2-FTS-13C**

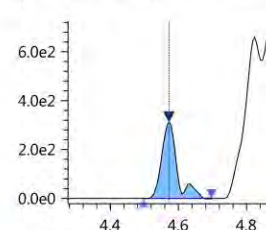
Conc 4.7872
RT 4.216 Area 402048
Q 328.80>309.05 (-)

**4_2-FTS-13C_IS**

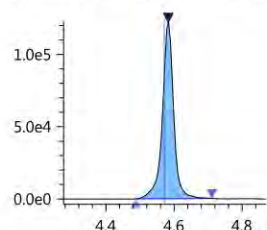
Conc 5.0000
RT 4.216 Area 402048
ISTD 328.80>309.05 (-)

**6_2-FTS_1**

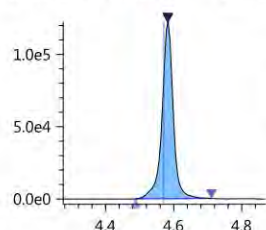
Conc 0.0139
RT 4.572 Area 975
Q 427.00>407.00 (-)

**6_2-FTS-13C**

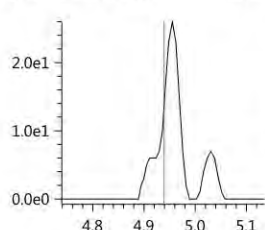
Conc 4.3456
RT 4.583 Area 280988
Q 428.90>409.00 (-)

**6_2-FTS-13C_IS**

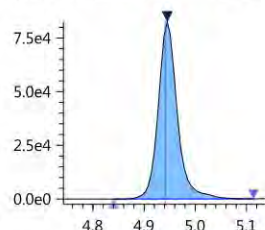
Conc 5.0000
RT 4.583 Area 280988
ISTD 428.90>409.00 (-)

**8_2-FTS_1**

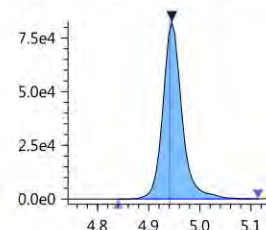
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)

**8_2-FTS-13C**

Conc 4.2397
RT 4.945 Area 212645
Q 528.80>509.00 (-)

**8_2-FTS-13C_IS**

Conc 5.0000
RT 4.945 Area 212645
ISTD 528.80>509.00 (-)

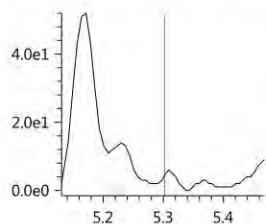


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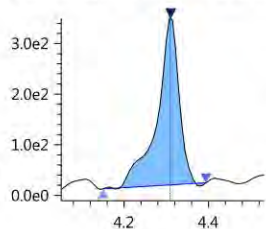
10_2-FtS_1

Conc ----
 RT ---- Area ----
 Q 627.00>606.95 (-)



HPFO_DA

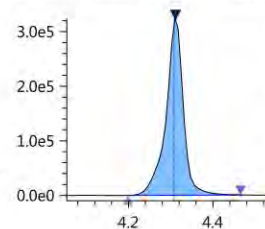
Conc 0.0060
 RT 4.310 Area 1187
 Q 329.00>169.00 (-)



HFPO_DA-13C

Conc 4.5861
 RT 4.312 Area 916595

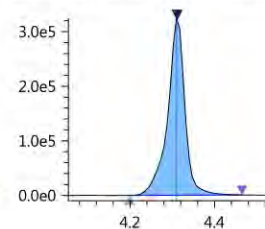
Q 332.00>286.80 (-)



HFPO_DA-13C_IS

Conc 5.0000
 RT 4.312 Area 916595

ISTD 332.00>286.80 (-)



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191202_018

Sample ID: 0.05 PPB ICAL

Date acquired: 12/2/2019 5:39:44 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_018.lcd

Vial: 10 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.128	3807280	3807280	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.036	7204	1268760	2	0.0469	ng/mL	0.0444
PFBS-13C	Auto	4.037	1268760	3807280	1	4.9543	ng/mL	5.0000
PFBS-13C_IS	Auto	4.037	1268760	1268760	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.258	5494	1268760	2	0.0417	ng/mL	0.0470
PFHxS_1	M	4.424	7323	625957	3	0.0647	ng/mL	0.0457
PFHxS-18O	Auto	4.425	625957	3807280	1	4.6134	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.425	625957	625957	3	5.0000	ng/mL	5.0000
PFHpS_1	M	4.586	7761	625957	3	0.0528	ng/mL	0.0477
PFOS_1	M	4.755	5792	627662	4	0.0523	ng/mL	0.0465
PFOS-13C	Auto	4.754	627662	3807280	1	4.6874	ng/mL	5.0000
PFOS-13C_IS	Auto	4.754	627662	627662	4	5.0000	ng/mL	5.0000
PFNS	M	4.934	4553	627662	4	0.0552	ng/mL	0.0481
PFDS_1	Auto	5.111	5598	627662	4	0.0656	ng/mL	0.0482
PFBA	Auto	3.427	32003	3119997	5	0.0522	ng/mL	0.0500
PFBA-13C	Auto	3.427	3119997	3807280	1	4.8626	ng/mL	5.0000
PFBA-13C_IS	Auto	3.427	3119997	3119997	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.985	125479	1689679	6	0.0524	ng/mL	0.0500
PFPeA-13C	Auto	3.984	1689679	3807280	1	4.8973	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.984	1689679	1689679	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.239	96087	4332246	7	0.0563	ng/mL	0.0500
PFHxA-13C	Auto	4.243	4332246	3807280	1	5.6007	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.243	4332246	4332246	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.420	65498	3843307	8	0.0607	ng/mL	0.0500
PFHpA-13C	Auto	4.424	3843307	3807280	1	4.6408	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.424	3843307	3843307	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.591	85592	4418856	9	0.0525	ng/mL	0.0500
PFOA-13C	Auto	4.593	4418856	3807280	1	4.9948	ng/mL	5.0000
PFOA-13C_IS	Auto	4.593	4418856	4418856	9	5.0000	ng/mL	5.0000
PFNA	M	4.763	48879	3269216	10	0.0416	ng/mL	0.0500
PFNA-13C	Auto	4.766	3269216	3807280	1	5.4011	ng/mL	5.0000
PFNA-13C_IS	Auto	4.766	3269216	3269216	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.945	44375	2810720	11	0.0561	ng/mL	0.0500
PFDA-13C	Auto	4.949	2810720	3807280	1	5.0971	ng/mL	5.0000
PFDA-13C_IS	Auto	4.949	2810720	2810720	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.126	46230	2787213	12	0.0571	ng/mL	0.0500
PFUnA-13C	Auto	5.129	2787213	3807280	1	4.8789	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.129	2787213	2787213	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.305	35606	3730654	13	0.0515	ng/mL	0.0500
PFDoA-13C	Auto	5.306	3730654	3807280	1	4.9272	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.306	3730654	3730654	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.471	55154	3242834	14	0.0492	ng/mL	0.0500
PFTeDA	Auto	5.622	63442	3242834	14	0.0574	ng/mL	0.0500
PFTeDA-13C	Auto	5.622	3242834	3807280	1	4.9273	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.622	3242834	3242834	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.240	24813	1512439	16	0.0720	ng/mL	0.0500
FOSA-13C	Auto	5.240	1512439	3807280	1	4.7275	ng/mL	5.0000
FOSA-13C_IS	Auto	5.240	1512439	1512439	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.623	10101	391956	17	0.0896	ng/mL	0.0500
N-MeFOSA-d3	Auto	5.619	391956	3807280	1	4.7168	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.619	391956	391956	17	5.0000	ng/mL	5.0000
N-EtFOSA	M	5.757	2250	556431	18	0.1017	ng/mL	0.0500
N-EtFOSA-d9	Auto	5.752	556431	3807280	1	4.6607	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.752	556431	556431	18	5.0000	ng/mL	5.0000
N-MeFOSE	M	5.595	10307	479098	19	0.0805	ng/mL	0.0500
N-MeFOSE-d7	Auto	5.588	479098	3807280	1	4.7754	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.588	479098	479098	19	5.0000	ng/mL	5.0000
N-EtFOSE	M	5.726	10300	455796	20	0.0857	ng/mL	0.0500
N-EtFOSE-d9	Auto	5.715	455796	3807280	1	4.7069	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.715	455796	455796	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.058	2663	558641	21	0.0618	ng/mL	0.0500
N-MeFOSAA-d3	Auto	5.047	558641	3807280	1	4.7345	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.047	558641	558641	21	5.0000	ng/mL	5.0000
N-EtFOSAA	M	5.151	3632	487642	22	0.0612	ng/mL	0.0500
N-EtFOSAA-d5	Auto	5.142	487642	3807280	1	5.0764	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.142	487642	487642	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.214	3263	402961	23	0.0481	ng/mL	0.0469
4_2-FTS-13C	Auto	4.215	402961	3807280	1	5.2870	ng/mL	5.0000

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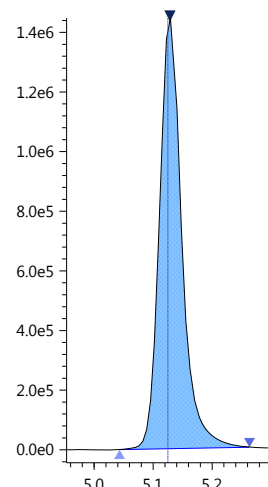
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.215	402961	402961	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.579	3592	292211	24	0.0489	ng/mL	0.0476
6_2-FTS-13C	Auto	4.582	292211	3807280	1	4.9796	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.582	292211	292211	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.945	1942	222465	25	0.0557	ng/mL	0.0480
8_2-FTS-13C	Auto	4.945	222465	3807280	1	4.8874	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.945	222465	222465	25	5.0000	ng/mL	5.0000
10_2-FTS_1	M	5.308	1768	222465	25	0.0536	ng/mL	0.0483
HFPO_DA	Auto	4.310	9533	908478	26	0.0489	ng/mL	0.0500
HFPO_DA-13C	Auto	4.312	908478	3807280	1	5.0086	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.312	908478	908478	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.128 Area 3807280

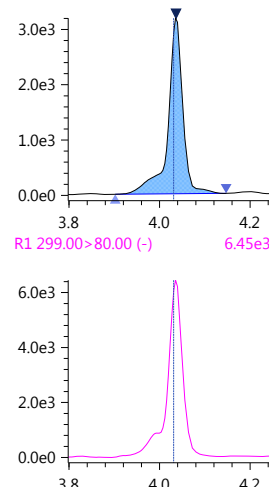
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0469
RT 4.036 Area 7204
R#1 198.01 (0.00)

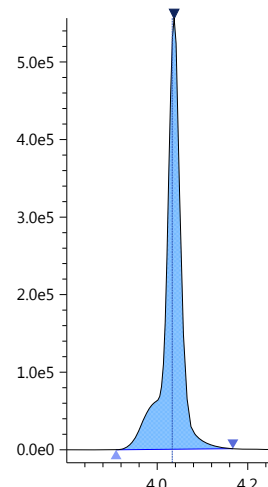
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.9543
RT 4.037 Area 1268760

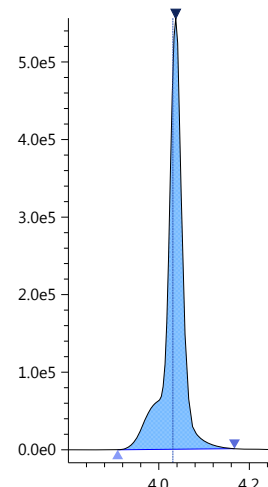
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.037 Area 1268760

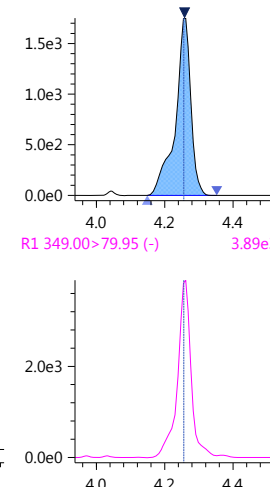
ISTD 301.80>80.00 (-)



PFPoS

Conc 0.0417
RT 4.258 Area 5494
R#1 216.62 (0.00)

Q 349.00>99.00 (-)

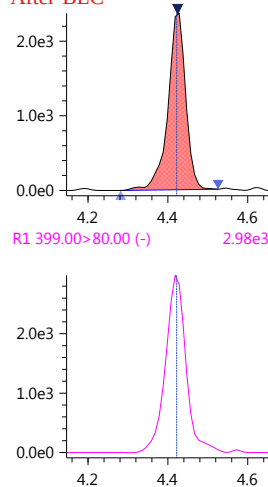


PFHxS_1

Conc 0.0647
RT 4.424 Area 7323
R#1 119.37 (0.00)

Q 399.00>99.00 (-)

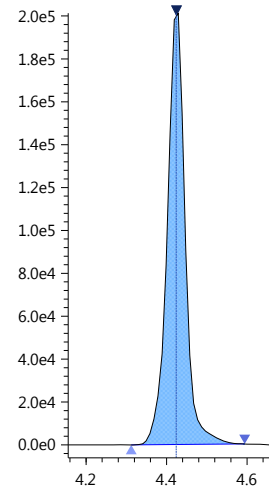
After-BLC



PFHxS-180

Conc 4.6134
RT 4.425 Area 625957

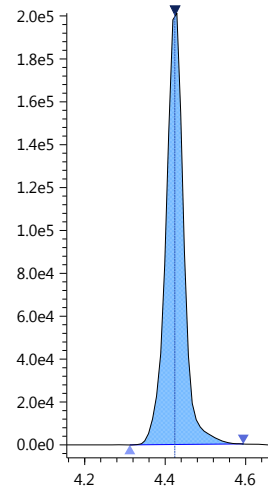
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.425 Area 625957

ISTD 402.70>84.05 (-)

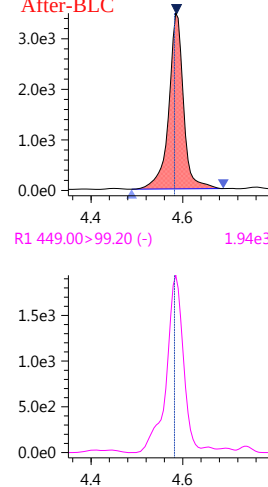


PFHpS_1

Conc 0.0528
RT 4.586 Area 7761
R#1 53.61 (0.00)

Q 449.00>80.15 (-)

After-BLC

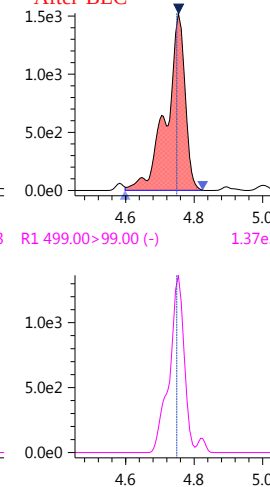


PFOS_1

Conc 0.0523
RT 4.755 Area 5792
R#1 83.23 (0.00)

Q 499.00>80.00 (-)

After-BLC



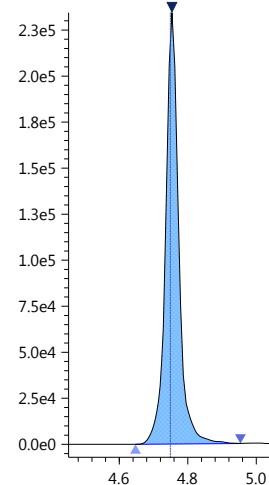
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PFOS-13C

Conc 4.6874
 RT 4.754 Area 627662

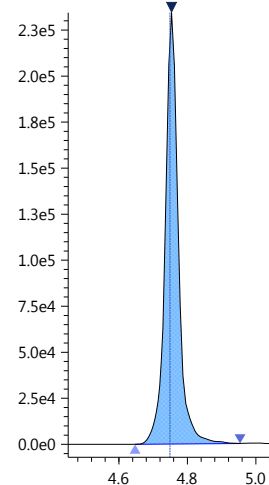
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.754 Area 627662

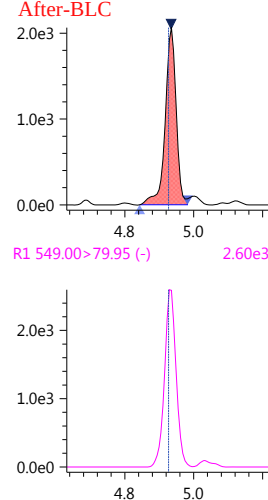
ISTD 502.80>80.05 (-)



PFNS

Conc 0.0552
 RT 4.934 Area 4553
 R#1 124.87 (0.00)

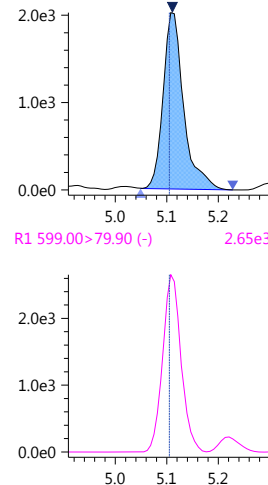
Q 549.00>99.00 (-)



PFDS_1

Conc 0.0656
 RT 5.111 Area 5598
 R#1 123.10 (0.00)

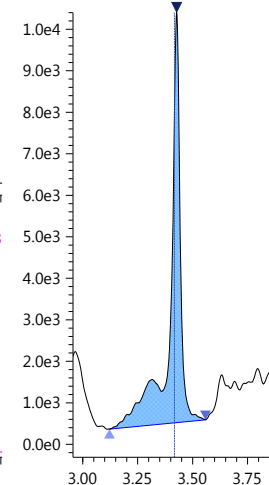
Q 599.00>99.10 (-)



PFBA

Conc 0.0522
 RT 3.427 Area 32003

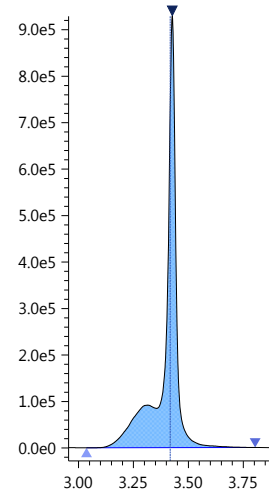
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.8626
 RT 3.427 Area 3119997

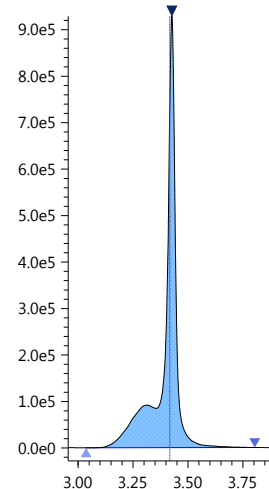
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.427 Area 3119997

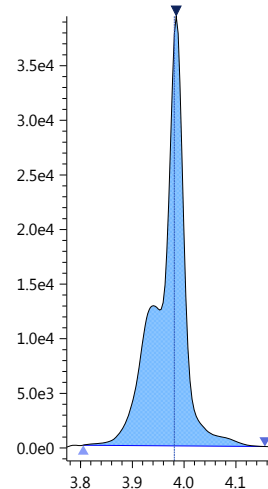
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0524
 RT 3.985 Area 125479

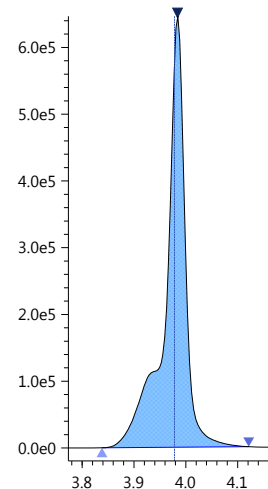
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.8973
 RT 3.984 Area 1689679

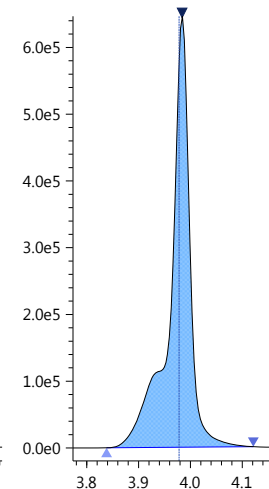
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.984 Area 1689679

ISTD 267.90>223.00 (-)

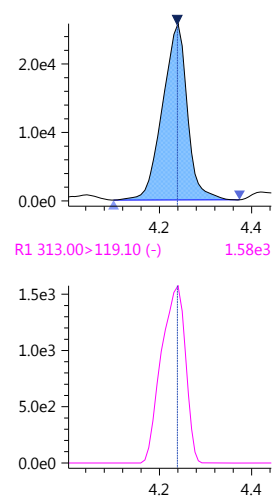


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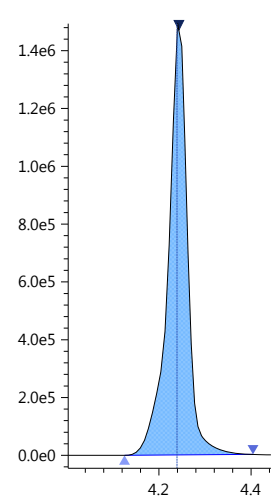
PFHxA

Conc 0.0563
RT 4.239 Area 96087
R#1 6.14 (0.00)
Q 313.00>269.00 (-) 2.59e4



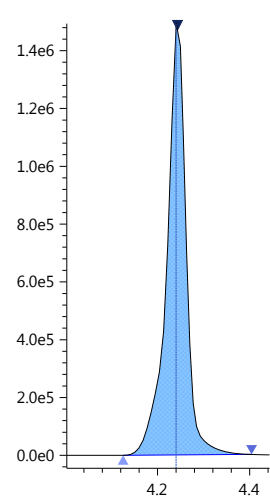
PFHxA-13C

Conc 5.6007
RT 4.243 Area 4332246
Q 314.90>270.10 (-) 1.49e6



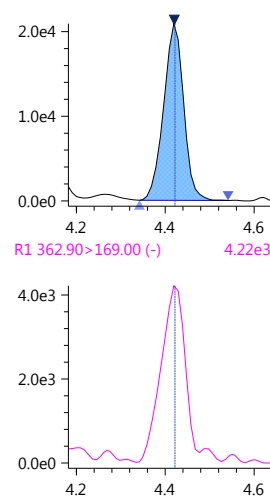
PFHxA-13C_IS

Conc 5.0000
RT 4.243 Area 4332246
ISTD 314.90>270.10 (-) 1.49e6



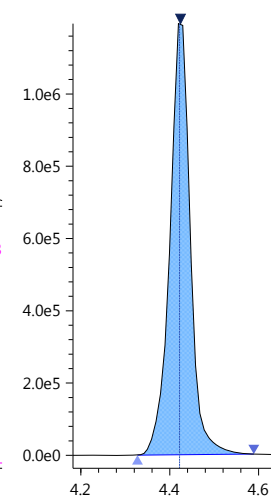
PFHpA

Conc 0.0607
RT 4.420 Area 65498
R#1 20.11 (0.00)
Q 362.90>319.00 (-) 2.09e4



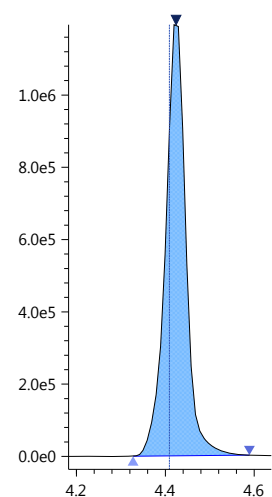
PFHpA-13C

Conc 4.6408
RT 4.424 Area 3843307
Q 366.90>322.10 (-) 1.19e6



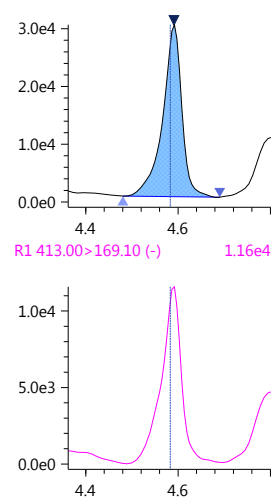
PFHpA-13C_IS

Conc 5.0000
RT 4.424 Area 3843307
ISTD 366.90>322.10 (-) 1.19e6



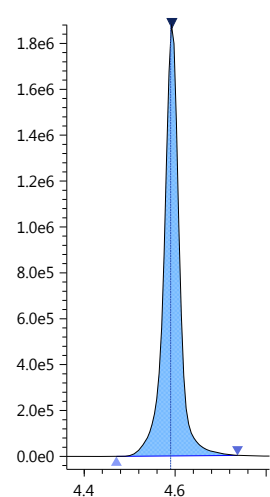
PFOA

Conc 0.0525
RT 4.591 Area 85592
R#1 38.73 (0.00)
Q 413.00>369.00 (-) 3.07e4



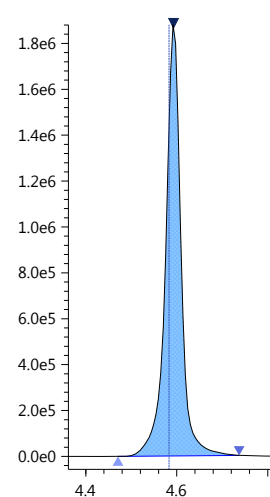
PFOA-13C

Conc 4.9948
RT 4.593 Area 4418856
Q 416.80>372.05 (-) 1.88e6



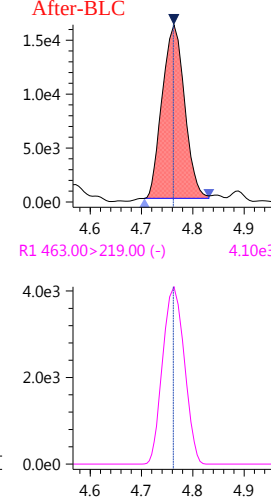
PFOA-13C_IS

Conc 5.0000
RT 4.593 Area 4418856
ISTD 416.80>372.05 (-) 1.88e6



PFNA

Conc 0.0416
RT 4.763 Area 48879
R#1 25.60 (0.00)
Q 463.00>418.90 (-) 1.64e4
After-BLC



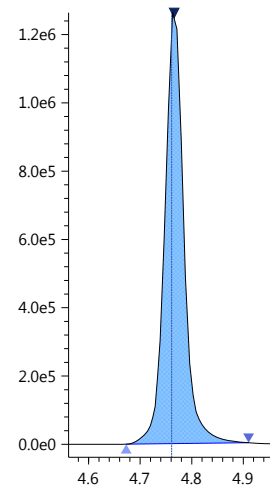
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PFNA-13C

Conc 5.4011
RT 4.766 Area 3269216

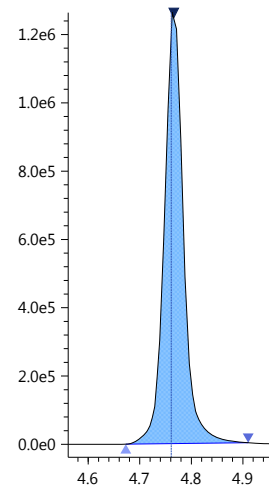
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
RT 4.766 Area 3269216

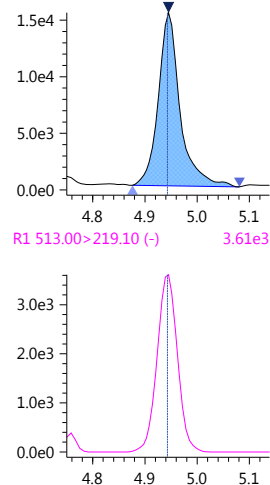
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0561
RT 4.945 Area 44375
R#1 23.02 (0.00)

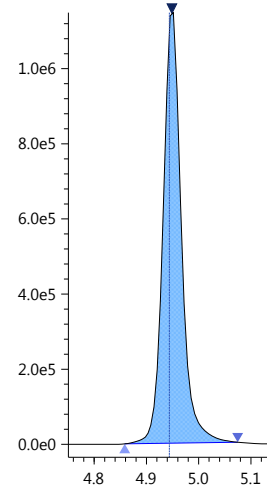
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.0971
RT 4.949 Area 2810720

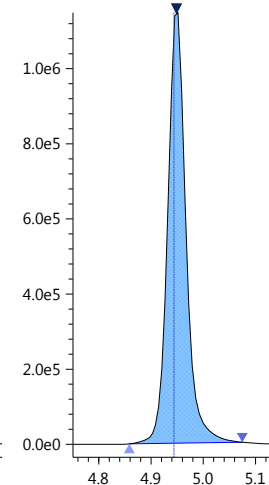
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
RT 4.949 Area 2810720

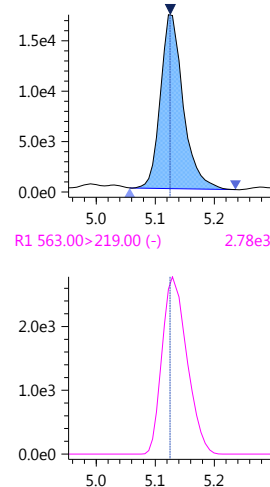
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.0571
RT 5.126 Area 46230
R#1 16.65 (0.00)

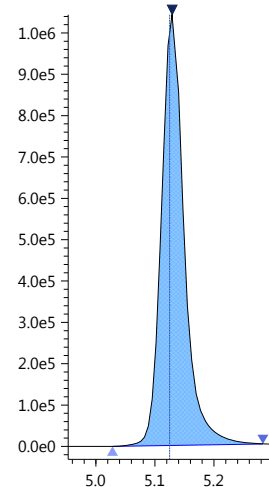
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.8789
RT 5.129 Area 2787213

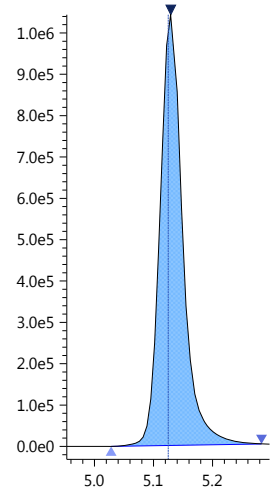
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
RT 5.129 Area 2787213

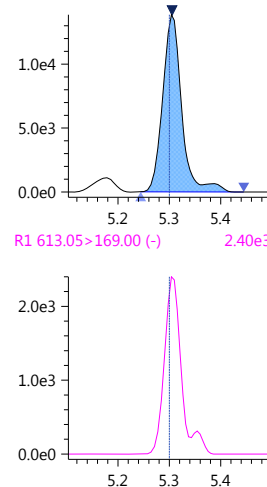
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.0515
RT 5.305 Area 35606
R#1 17.40 (0.00)

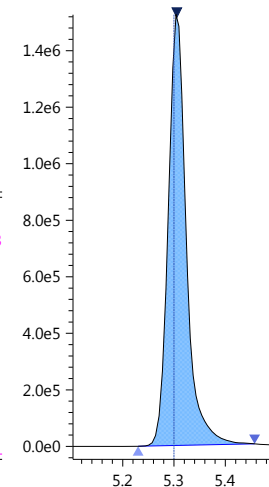
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.9272
RT 5.306 Area 3730654

Q 614.80>569.95 (-)



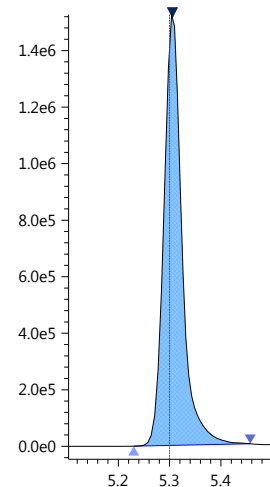
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PFD_oA-13C_IS

Conc 5.0000
 RT 5.306 Area 3730654

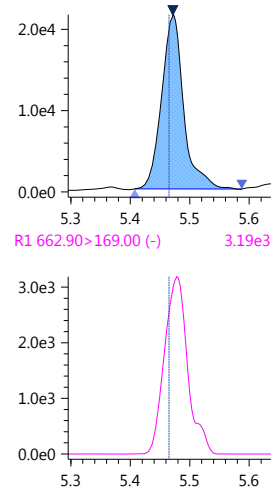
ISTD 614.80>569.95 (-) 1.53e6



PFT_rDA

Conc 0.0492
 RT 5.471 Area 55154
 R#1 12.81 (0.00)

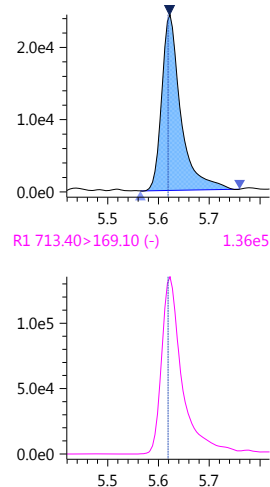
Q 663.00>618.90 (-) 2.18e4



PFT_eDA

Conc 0.0574
 RT 5.622 Area 63442
 R#1 552.86 (0.00)

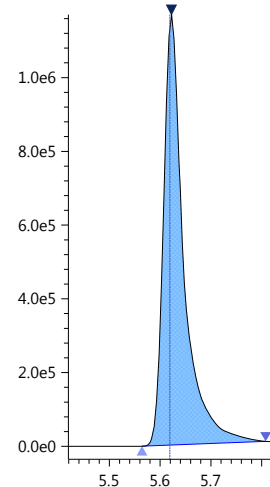
Q 713.40>669.00 (-) 2.45e4



PFT_eDA-13C

Conc 4.9273
 RT 5.622 Area 3242834

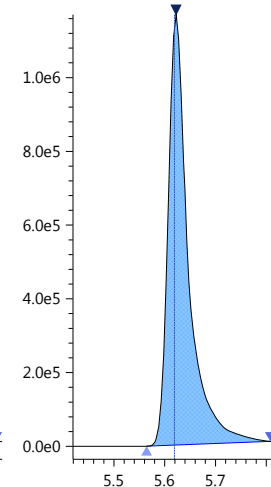
Q 714.70>669.90 (-) 1.17e6



PFT_eDA-13C_IS

Conc 5.0000
 RT 5.622 Area 3242834

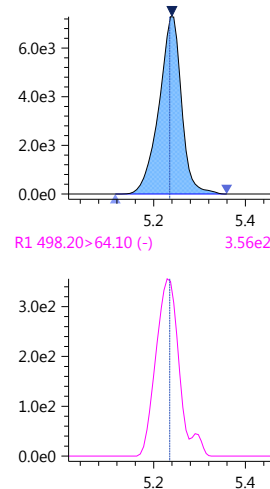
ISTD 714.70>669.90 (-) 1.17e6



FOSA

Conc 0.0720
 RT 5.240 Area 24813
 R#1 4.80 (0.00)

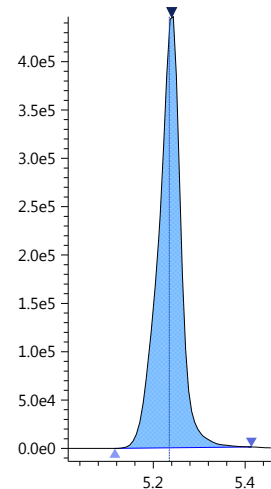
Q 498.20>78.00 (-) 7.29e3



FOSA-13C

Conc 4.7275
 RT 5.240 Area 1512439

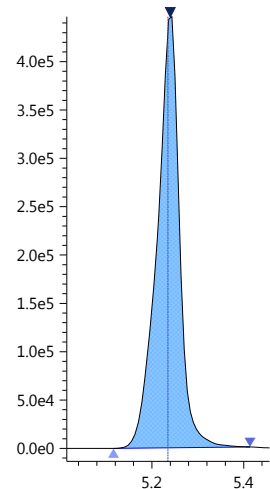
Q 506.00>78.05 (-) 4.46e5



FOSA-13C_IS

Conc 5.0000
 RT 5.240 Area 1512439

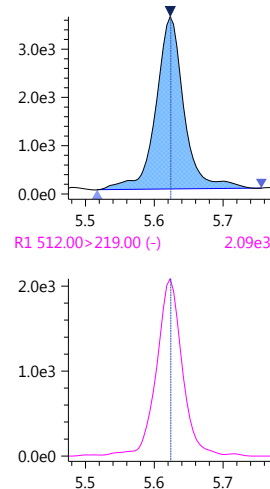
ISTD 506.00>78.05 (-) 4.46e5



N-MeFOSA

Conc 0.0896
 RT 5.623 Area 10101
 R#1 59.70 (0.00)

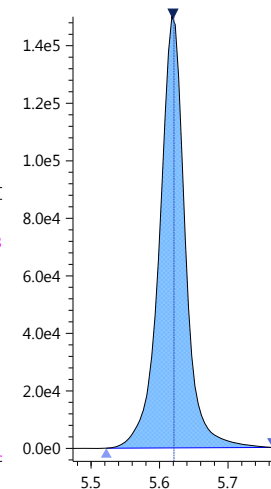
Q 512.00>169.10 (-) 3.67e3



N-MeFOSA-d3

Conc 4.7168
 RT 5.619 Area 391956

Q 514.90>168.90 (-) 1.50e5



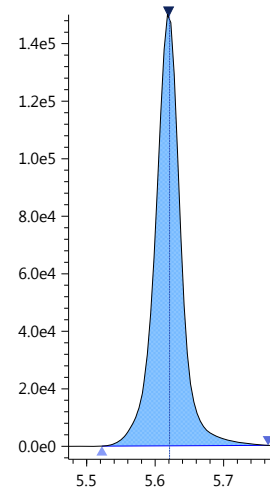
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N-MeFOSA-d3_IS

Conc 5.0000
RT 5.619 Area 391956

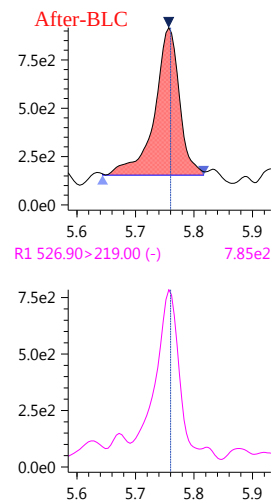
ISTD 514.90>168.90 (-) 1.50e5



N-EtFOSA

Conc 0.1017
RT 5.757 Area 2250
R#1 96.26 (0.00)

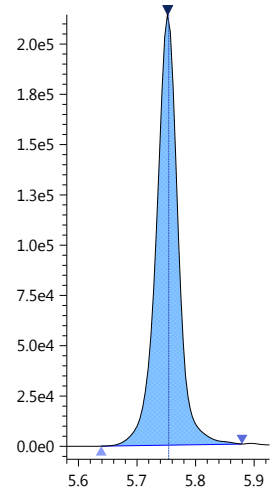
Q 526.90>169.10 (-) 9.17e2



N-EtFOSA-d9

Conc 4.6607
RT 5.752 Area 556431

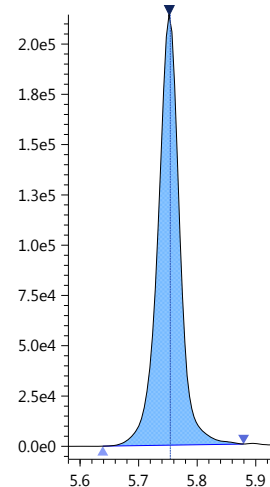
Q 530.90>169.15 (-) 2.15e5



N-EtFOSA-d9_IS

Conc 5.0000
RT 5.752 Area 556431

ISTD 530.90>169.15 (-) 2.15e5

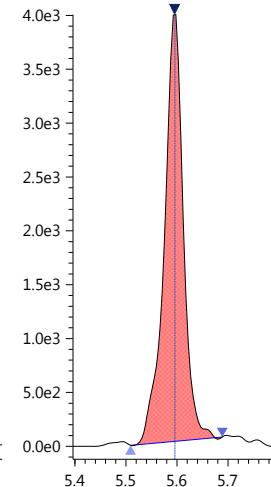


N-MeFOSE

Conc 0.0805
RT 5.595 Area 10307

After-BLC

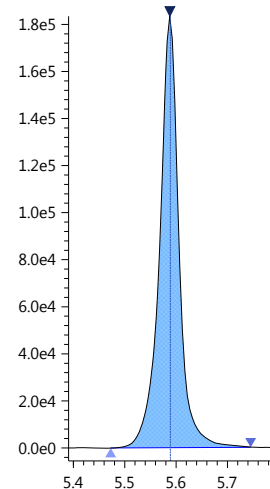
Q 616.00>59.00 (-) 4.01e3



N-MeFOSE-d7

Conc 4.7754
RT 5.588 Area 479098

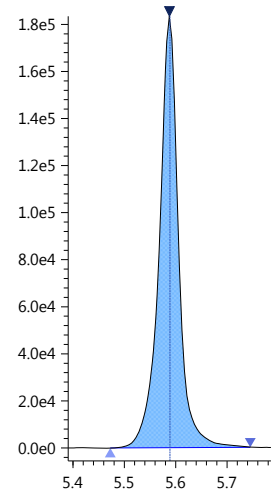
Q 622.70>59.10 (-) 1.83e5



N-MeFOSE-d7_IS

Conc 5.0000
RT 5.588 Area 479098

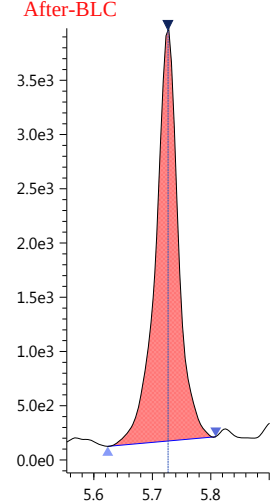
ISTD 622.70>59.10 (-) 1.83e5



N-EtFOSE

Conc 0.0857
RT 5.726 Area 10300

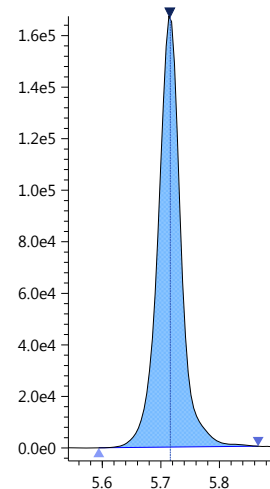
Q 630.00>58.90 (-) 3.98e3



N-EtFOSE-d9

Conc 4.7069
RT 5.715 Area 455796

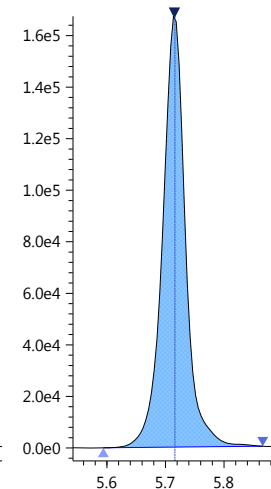
Q 638.70>59.10 (-) 1.68e5



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.715 Area 455796

ISTD 638.70>59.10 (-) 1.68e5



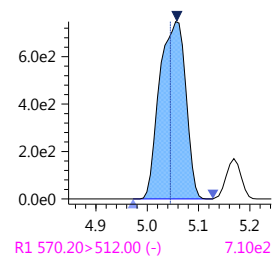
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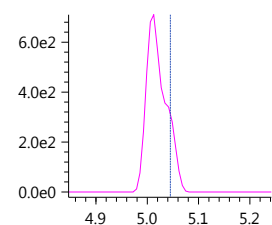
N-MeFOSAA

Conc 0.0618
 RT 5.058 Area 2663
 R#1 9.62 (0.00)

Q 570.20>419.00 (-)



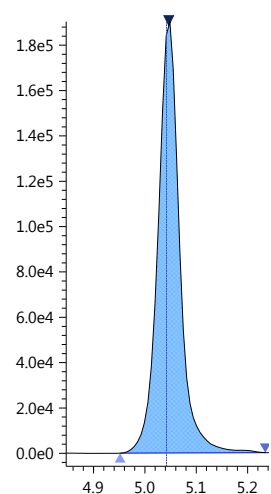
R1 570.20>512.00 (-) 7.10e2



N-MeFOSAA-d3

Conc 4.7345
 RT 5.047 Area 558641

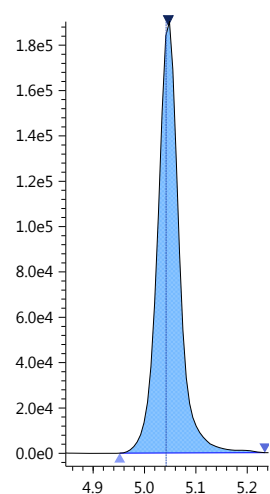
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
 RT 5.047 Area 558641

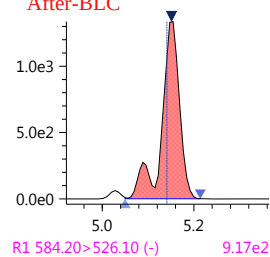
ISTD 572.80>419.05 (-)



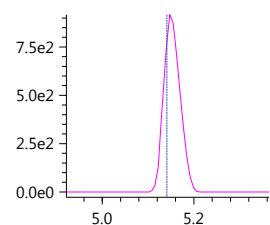
N-EtFOSAA

Conc 0.0612
 RT 5.151 Area 3632
 R#1 70.39 (0.00)

Q 584.20>418.95 (-)



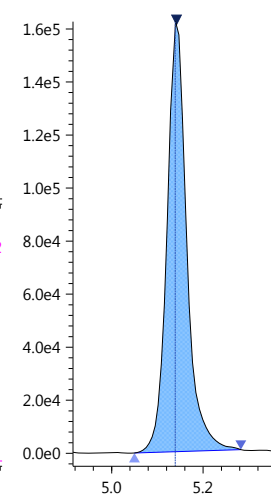
R1 584.20>526.10 (-) 9.17e2



N-EtFOSAA-d5

Conc 5.0764
 RT 5.142 Area 487642

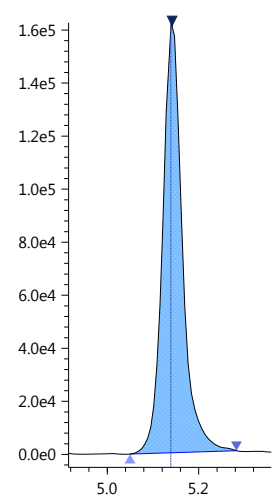
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
 RT 5.142 Area 487642

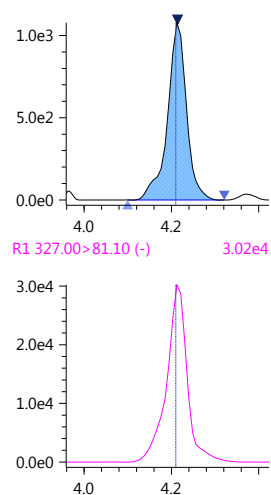
ISTD 588.80>419.00 (-)



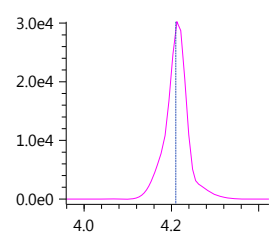
4_2-FTS_1

Conc 0.0481
 RT 4.214 Area 3263
 R#1 2792.84 (0.00)

Q 327.00>307.05 (-)



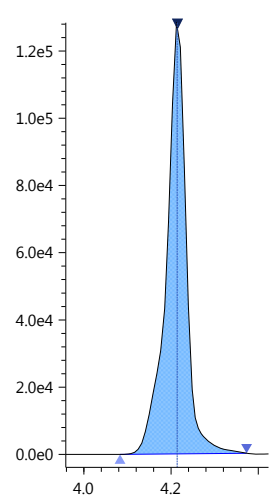
R1 327.00>81.10 (-) 3.02e4



4_2-FTS-13C

Conc 5.2870
 RT 4.215 Area 402961

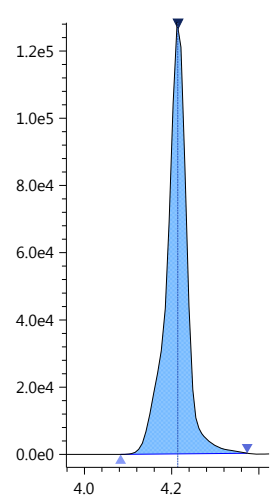
Q 328.80>309.05 (-)



4_2-FTS-13C_IS

Conc 5.0000
 RT 4.215 Area 402961

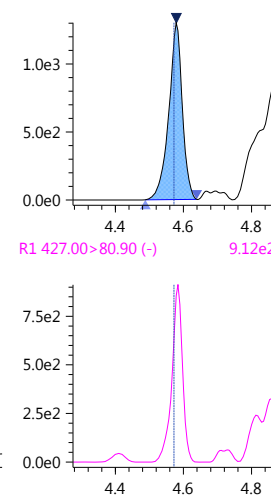
ISTD 328.80>309.05 (-)



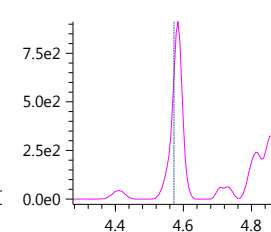
6_2-FTS_1

Conc 0.0489
 RT 4.579 Area 3592
 R#1 66.06 (0.00)

Q 427.00>407.00 (-)



R1 427.00>80.90 (-) 9.12e2

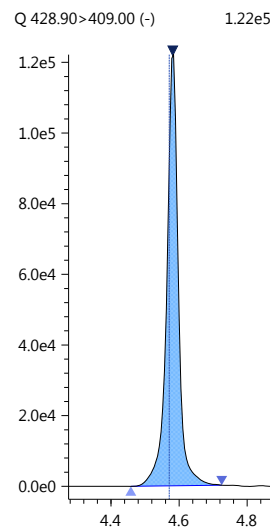


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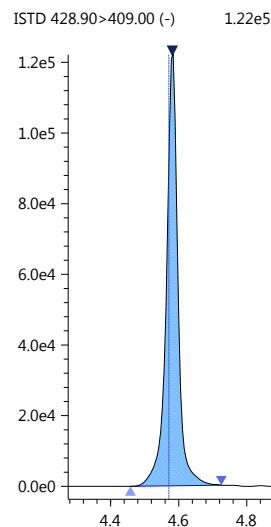
6_2-FTS-13C

Conc 4.9796
 RT 4.582 Area 292211



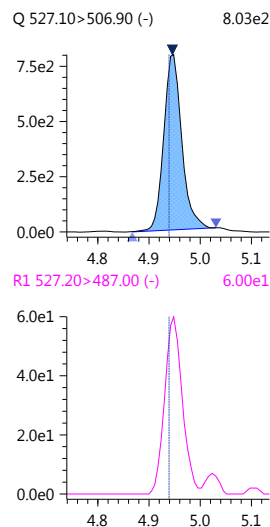
6_2-FTS-13C_IS

Conc 5.0000
 RT 4.582 Area 292211



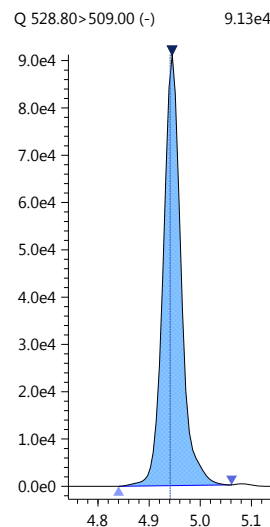
8_2-FTS_1

Conc 0.0557
 RT 4.945 Area 1942
 R#1 7.01 (0.00)



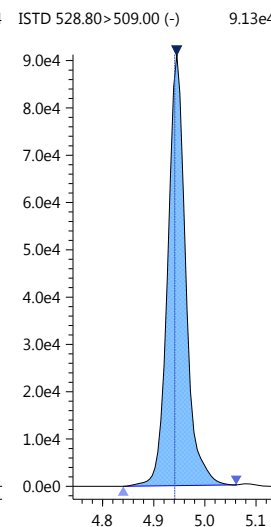
8_2-FTS-13C

Conc 4.8874
 RT 4.945 Area 222465



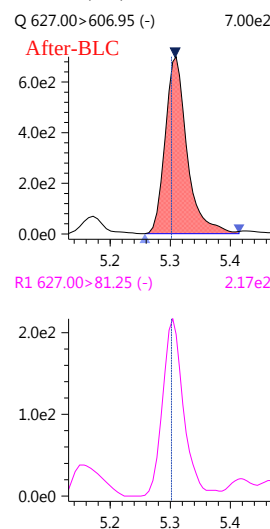
8_2-FTS-13C_IS

Conc 5.0000
 RT 4.945 Area 222465



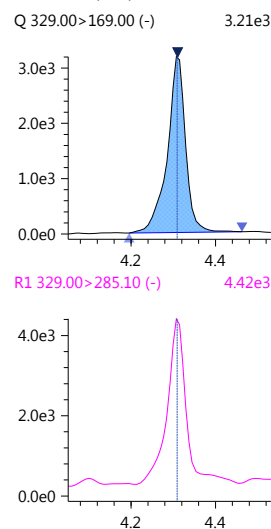
10_2-FtS_1

Conc 0.0536
 RT 5.308 Area 1768
 R#1 31.82 (0.00)



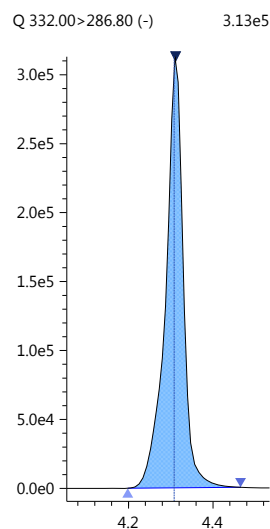
HPFO_DA

Conc 0.0489
 RT 4.310 Area 9533
 R#1 129.25 (0.00)



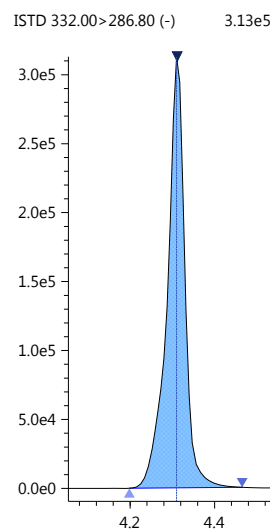
HPFO_DA-13C

Conc 5.0086
 RT 4.312 Area 908478



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.312 Area 908478



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191202_018

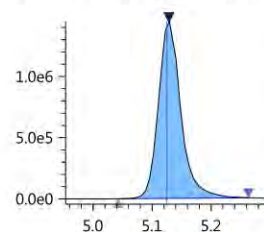
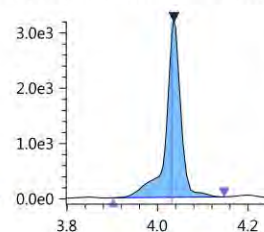
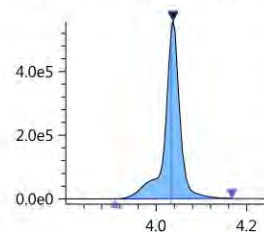
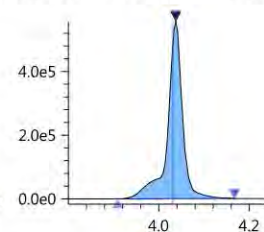
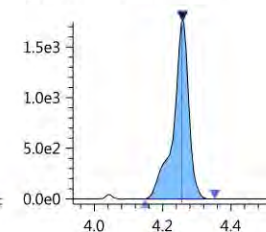
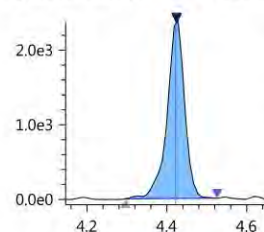
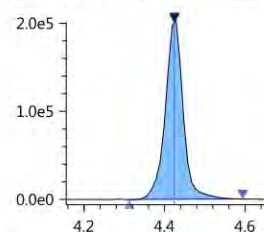
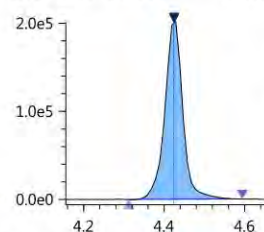
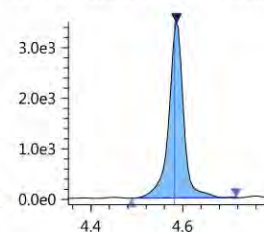
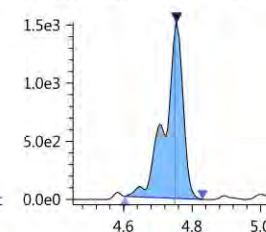
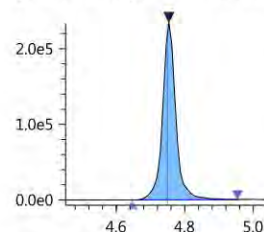
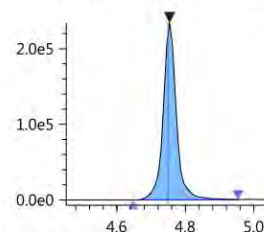
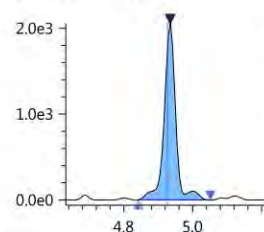
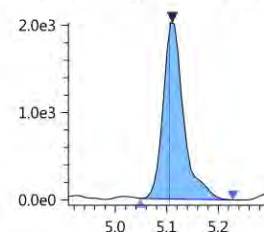
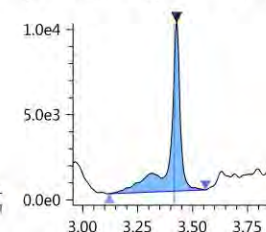
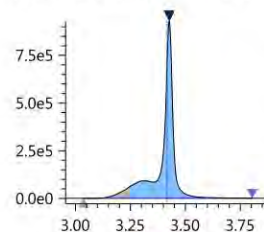
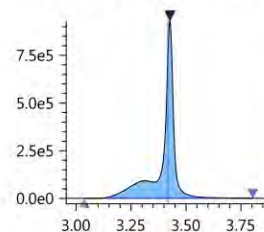
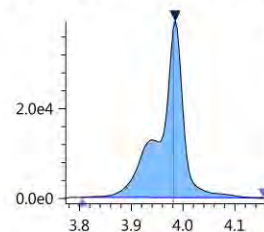
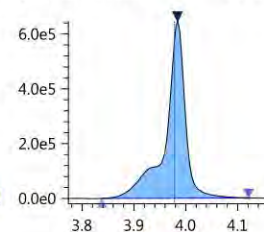
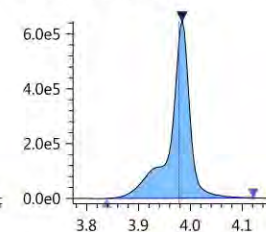
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Date acquired: 12/2/2019 5:39:44 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_018.lcd

Vial: 10 | Inj. Volume: 15.0000uL | Tray: 0

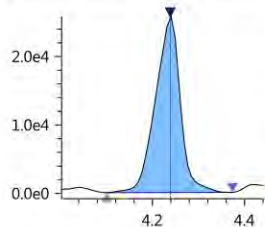
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RT 5.128 Area 3807280
ISTD 570.00>525.00 (-)**PFBS_1**Conc 0.0469
RT 4.036 Area 7204
Q 298.80>99.00 (-)**PFBS-13C**Conc 4.9543
RT 4.037 Area 1268760
Q 301.80>80.00 (-)**PFBS-13C_IS**Conc 5.0000
RT 4.037 Area 1268760
ISTD 301.80>80.00 (-)**PFPeS**Conc 0.0419
RT 4.258 Area 5494
Q 349.00>99.00 (-)**PFHxS_1**Conc 0.0643
RT 4.424 Area 7273
Q 399.00>99.00 (-)**PFHxS-180**Conc 4.6134
RT 4.425 Area 625957
Q 402.70>84.05 (-)**PFHxS-180_IS**Conc 5.0000
RT 4.425 Area 625957
ISTD 402.70>84.05 (-)**PFHpS_1**Conc 0.0529
RT 4.586 Area 7781
Q 449.00>80.15 (-)**PFOS_1**Conc 0.0511
RT 4.755 Area 5620
Q 499.00>80.00 (-)**PFOS-13C**Conc 4.6874
RT 4.754 Area 627662
Q 502.80>80.05 (-)**PFOS-13C_IS**Conc 5.0000
RT 4.754 Area 627662
ISTD 502.80>80.05 (-)**PFNS**Conc 0.0576
RT 4.934 Area 4778
Q 549.00>99.00 (-)**PFDS_1**Conc 0.0657
RT 5.111 Area 5598
Q 599.00>99.10 (-)**PFBA**Conc 0.0522
RT 3.427 Area 32003
Q 213.00>169.10 (-)**PFBA-13C**Conc 4.8626
RT 3.427 Area 3119997
Q 216.90>172.15 (-)**PFBA-13C_IS**Conc 5.0000
RT 3.427 Area 3119997
ISTD 216.90>172.15 (-)**PFPeA**Conc 0.0524
RT 3.985 Area 125479
Q 263.05>219.10 (-)**PFPeA-13C**Conc 4.8973
RT 3.984 Area 1689679
Q 267.90>223.00 (-)**PFPeA-13C_IS**Conc 5.0000
RT 3.984 Area 1689679
ISTD 267.90>223.00 (-)

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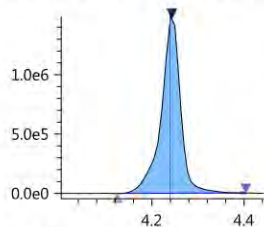
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Conc 0.0564
RT 4.239 Area 96087
Q 313.00>269.00 (-)



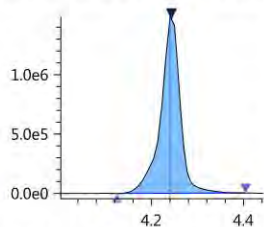
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Conc 5.6007
RT 4.243 Area 4332246
Q 314.90>270.10 (-)



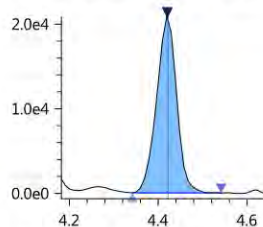
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Conc 5.0000
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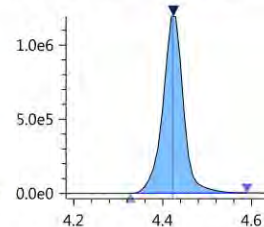
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Conc 0.0607
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Q 362.90>319.00 (-)



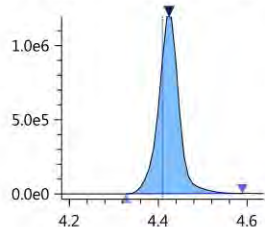
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Conc 4.6408
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Q 366.90>322.10 (-)



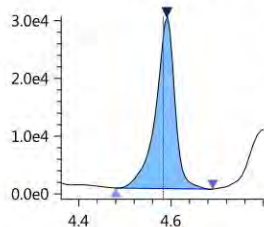
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Conc 5.0000
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ISTD 366.90>322.10 (-)



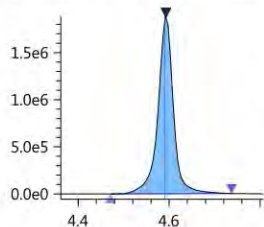
PFOA

Conc 0.0526
RT 4.591 Area 85592
Q 413.00>369.00 (-)



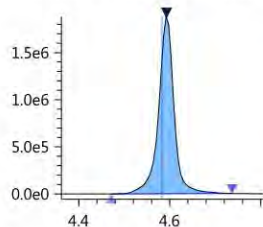
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Conc 4.9948
RT 4.593 Area 4418856
Q 416.80>372.05 (-)



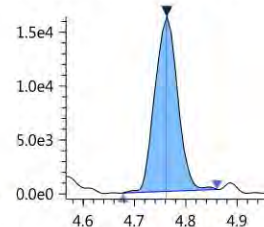
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Conc 5.0000
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ISTD 416.80>372.05 (-)



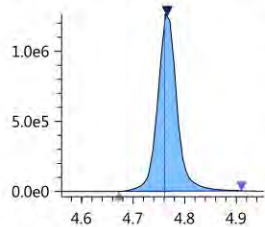
PFNA

Conc 0.0435
RT 4.763 Area 50035
Q 463.00>418.90 (-)



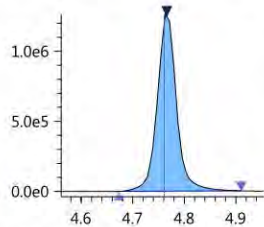
PFNA-13C

Conc 5.4011
RT 4.766 Area 3269216
Q 467.80>423.00 (-)



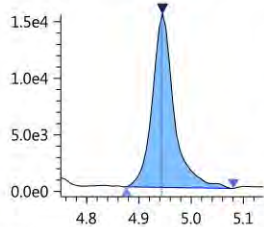
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Conc 5.0000
RT 4.766 Area 3269216
ISTD 467.80>423.00 (-)



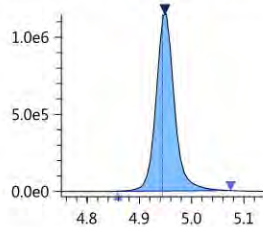
PFDA

Conc 0.0556
RT 4.945 Area 44375
Q 513.00>468.80 (-)



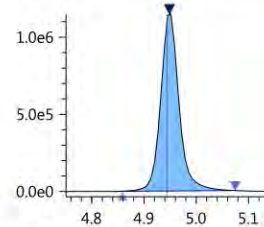
PFDA-13C

Conc 5.0971
RT 4.949 Area 2810720
Q 514.80>469.95 (-)



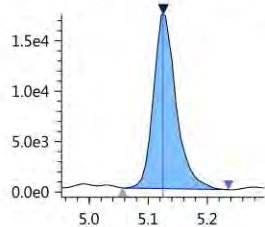
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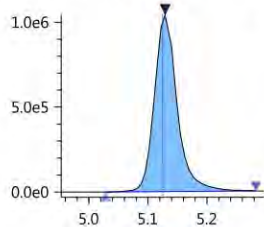
PFUnA

Conc 0.0573
RT 5.126 Area 46230
Q 563.00>518.90 (-)



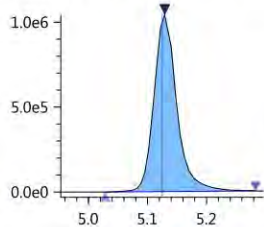
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Conc 4.8789
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Q 564.80>519.95 (-)



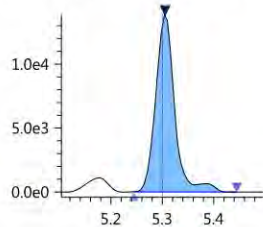
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ISTD 564.80>519.95 (-)



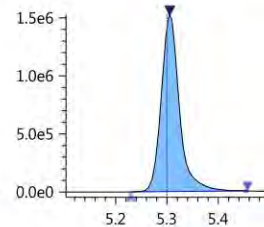
PFDaA

Conc 0.0729
RT 5.305 Area 35606
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.9272
RT 5.306 Area 3730654
Q 614.80>569.95 (-)

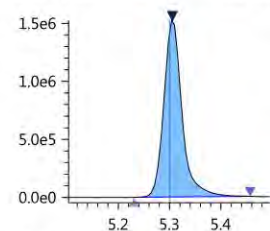


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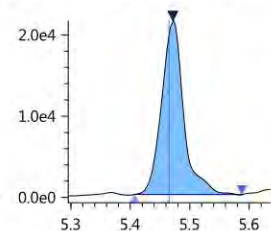
PFDaA-13C_IS

Conc 5.0000
RT 5.306 Area 3730654
ISTD 614.80>569.95 (-)



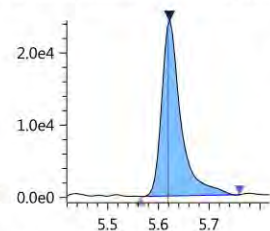
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Conc 0.0492
RT 5.471 Area 55154
Q 663.00>618.90 (-)



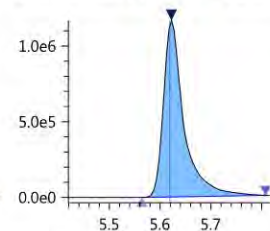
PFTeDA

Conc 0.0555
RT 5.622 Area 63442
Q 713.40>669.00 (-)



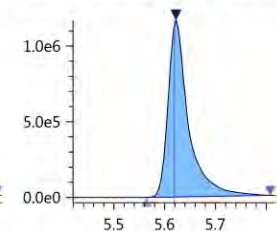
PFTeDA-13C

Conc 4.9273
RT 5.622 Area 3242834
Q 714.70>669.90 (-)



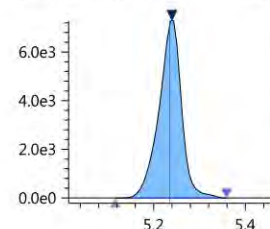
PFTeDA-13C_IS

Conc 5.0000
RT 5.622 Area 3242834
ISTD 714.70>669.90 (-)



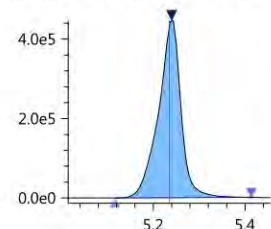
FOSA

Conc 0.0720
RT 5.240 Area 24813
Q 498.20>78.00 (-)



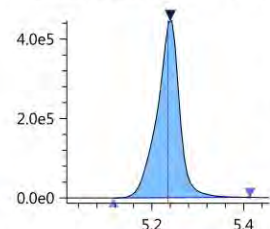
FOSA-13C

Conc 4.7275
RT 5.240 Area 1512439
Q 506.00>78.05 (-)



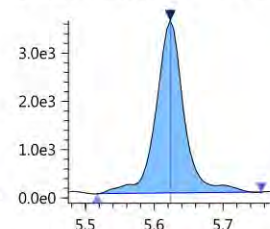
FOSA-13C_IS

Conc 5.0000
RT 5.240 Area 1512439
ISTD 506.00>78.05 (-)



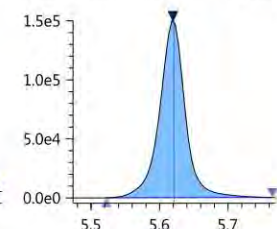
N-MeFOSA

Conc 0.0892
RT 5.623 Area 10101
Q 512.00>169.10 (-)



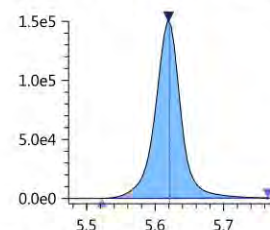
N-MeFOSA-d3

Conc 4.7168
RT 5.619 Area 391956
Q 514.90>168.90 (-)



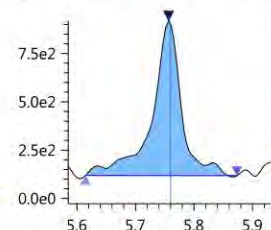
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.619 Area 391956
ISTD 514.90>168.90 (-)



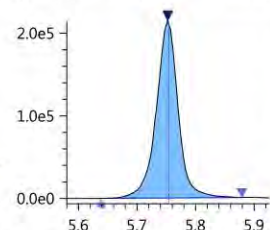
N-EtFOSA

Conc 0.1271
RT 5.757 Area 2782
Q 526.90>169.10 (-)



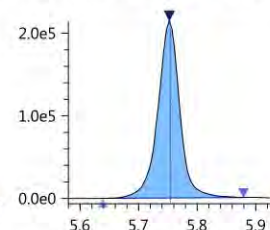
N-EtFOSA-d9

Conc 4.6607
RT 5.752 Area 556431
Q 530.90>169.15 (-)



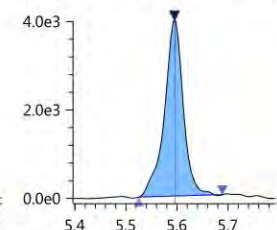
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.752 Area 556431
ISTD 530.90>169.15 (-)



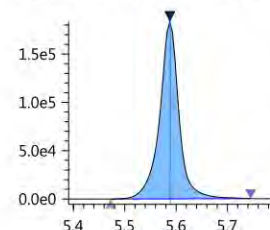
N-MeFOSE

Conc 0.0799
RT 5.595 Area 10236
Q 616.00>59.00 (-)



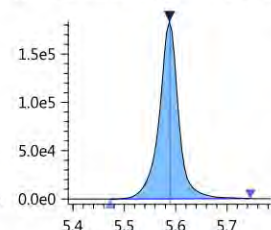
N-MeFOSE-d7

Conc 4.7754
RT 5.588 Area 479098
Q 622.70>59.10 (-)



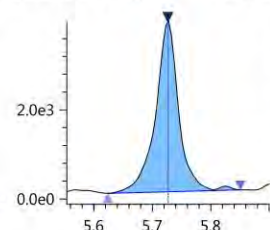
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.588 Area 479098
ISTD 622.70>59.10 (-)



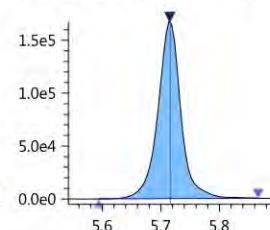
N-EtFOSE

Conc 0.0877
RT 5.726 Area 10554
Q 630.00>58.90 (-)



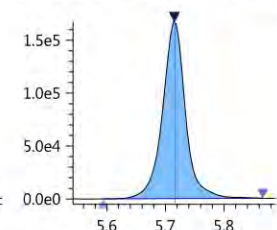
N-EtFOSE-d9

Conc 4.7069
RT 5.715 Area 455796
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.715 Area 455796
ISTD 638.70>59.10 (-)

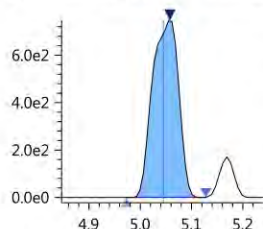


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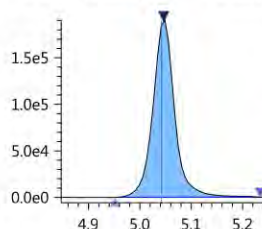
N-MeFOSAA

Conc 0.0636
RT 5.058 Area 2663
Q 570.20>419.00 (-)



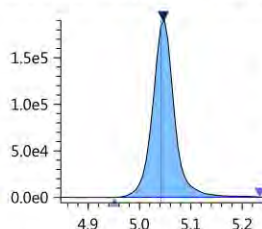
N-MeFOSAA-d3

Conc 4.7345
RT 5.047 Area 558641
Q 572.80>419.05 (-)



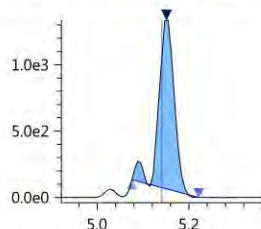
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.047 Area 558641
ISTD 572.80>419.05 (-)



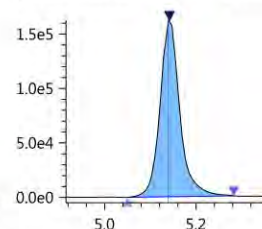
N-EtFOSAA

Conc 0.0535
RT 5.151 Area 3004
Q 584.20>418.95 (-)



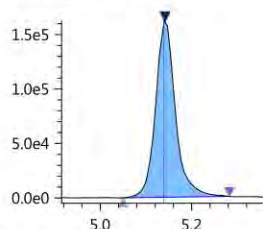
N-EtFOSAA-d5

Conc 5.0764
RT 5.142 Area 487642
Q 588.80>419.00 (-)



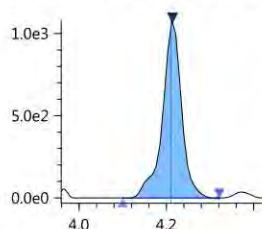
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.142 Area 487642
ISTD 588.80>419.00 (-)



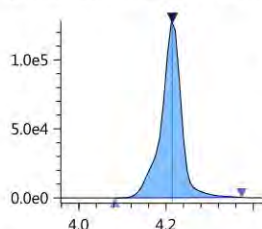
4_2-FTS_1

Conc 0.0481
RT 4.214 Area 3263
Q 327.00>307.05 (-)



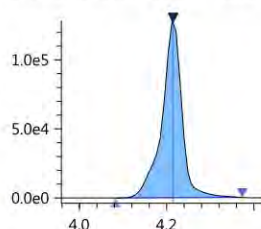
4_2-FTS-13C

Conc 5.2870
RT 4.215 Area 402961
Q 328.80>309.05 (-)



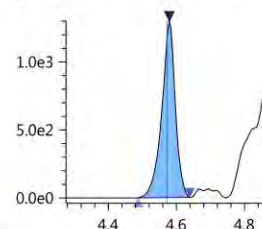
4_2-FTS-13C_IS

Conc 5.0000
RT 4.215 Area 402961
ISTD 328.80>309.05 (-)



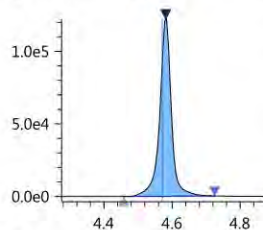
6_2-FTS_1

Conc 0.0491
RT 4.579 Area 3592
Q 427.00>407.00 (-)



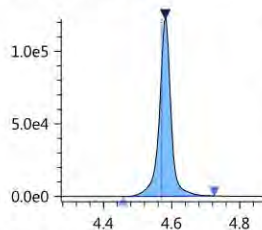
6_2-FTS-13C

Conc 4.9796
RT 4.582 Area 292211
Q 428.90>409.00 (-)



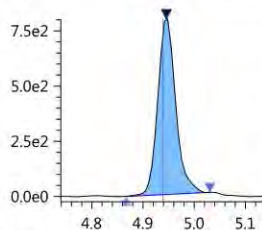
6_2-FTS-13C_IS

Conc 5.0000
RT 4.582 Area 292211
ISTD 428.90>409.00 (-)



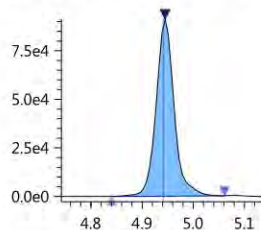
8_2-FTS_1

Conc 0.0558
RT 4.945 Area 1942
Q 527.10>506.90 (-)



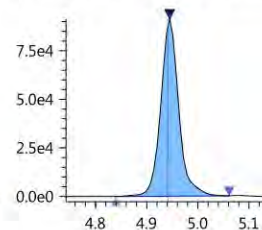
8_2-FTS-13C

Conc 4.8874
RT 4.945 Area 222465
Q 528.80>509.00 (-)



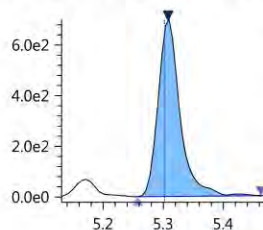
8_2-FTS-13C_IS

Conc 5.0000
RT 4.945 Area 222465
ISTD 528.80>509.00 (-)



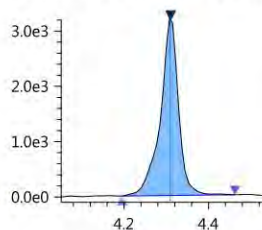
10_2-FTS_1

Conc 0.0536
RT 5.308 Area 1767
Q 627.00>606.95 (-)



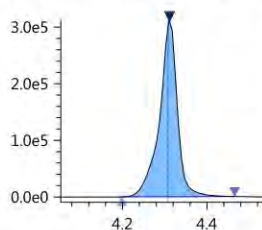
HPFO_DA

Conc 0.0489
RT 4.310 Area 9533
Q 329.00>169.00 (-)



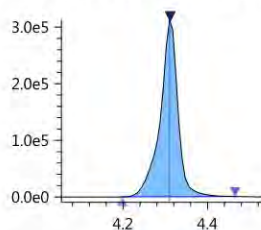
HPFO_DA-13C

Conc 5.0086
RT 4.312 Area 908478
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.312 Area 908478
ISTD 332.00>286.80 (-)



Insight Report

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191202_019

Sample ID: 0.10 PPB ICAL

Date acquired: 12/2/2019 5:50:12 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_019.lcd

Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.124	3889768	3889768	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.035	13673	1336930	2	0.0845	ng/mL	0.0887
PFBS-13C	Auto	4.036	1336930	3889768	1	5.1097	ng/mL	5.0000
PFBS-13C_IS	Auto	4.036	1336930	1336930	2	5.0000	ng/mL	5.0000
PFPeS	M	4.258	14487	1336930	2	0.1043	ng/mL	0.0941
PFHxS_1	M	4.422	14420	747148	3	0.1067	ng/mL	0.0913
PFHxS-18O	Auto	4.423	747148	3889768	1	5.3898	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.423	747148	747148	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.584	15541	747148	3	0.0885	ng/mL	0.0953
PFOS_1	M	4.754	11097	702387	4	0.0895	ng/mL	0.0929
PFOS-13C	Auto	4.752	702387	3889768	1	5.1342	ng/mL	5.0000
PFOS-13C_IS	Auto	4.752	702387	702387	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.929	8692	702387	4	0.0942	ng/mL	0.0962
PFDS_1	M	5.107	9068	702387	4	0.0950	ng/mL	0.0965
PFBA	Auto	3.423	62512	3264420	5	0.0974	ng/mL	0.1000
PFBA-13C	Auto	3.422	3264420	3889768	1	4.9798	ng/mL	5.0000
PFBA-13C_IS	Auto	3.422	3264420	3264420	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.982	169164	1776618	6	0.1000	ng/mL	0.1000
PFPeA-13C	Auto	3.982	1776618	3889768	1	5.0400	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.982	1776618	1776618	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.240	143150	4260978	7	0.1003	ng/mL	0.1000
PFHxA-13C	Auto	4.242	4260978	3889768	1	5.3917	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.242	4260978	4260978	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.422	101923	4563929	8	0.0882	ng/mL	0.1000
PFHpA-13C	Auto	4.423	4563929	3889768	1	5.3941	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.423	4563929	4563929	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.590	138073	4570891	9	0.0980	ng/mL	0.1000
PFOA-13C	Auto	4.591	4570891	3889768	1	5.0571	ng/mL	5.0000
PFOA-13C_IS	Auto	4.591	4570891	4570891	9	5.0000	ng/mL	5.0000
PFNA	M	4.763	95717	3064286	10	0.1203	ng/mL	0.1000
PFNA-13C	Auto	4.764	3064286	3889768	1	4.9552	ng/mL	5.0000
PFNA-13C_IS	Auto	4.764	3064286	3064286	10	5.0000	ng/mL	5.0000
PFDA	M	4.946	70093	2887561	11	0.0967	ng/mL	0.1000
PFDA-13C	Auto	4.947	2887561	3889768	1	5.1254	ng/mL	5.0000
PFDA-13C_IS	Auto	4.947	2887561	2887561	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.123	65871	2868446	12	0.0946	ng/mL	0.1000
PFUnA-13C	Auto	5.124	2868446	3889768	1	4.9147	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.124	2868446	2868446	12	5.0000	ng/mL	5.0000
PFDoA	M	5.302	60579	3927232	13	0.0986	ng/mL	0.1000
PFDoA-13C	Auto	5.301	3927232	3889768	1	5.0768	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.301	3927232	3927232	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.467	91142	3390128	14	0.0969	ng/mL	0.1000
PFTeDA	M	5.617	76934	3390128	14	0.0907	ng/mL	0.1000
PFTeDA-13C	Auto	5.617	3390128	3889768	1	5.0418	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.617	3390128	3390128	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.237	38361	1621637	16	0.1039	ng/mL	0.1000
FOSA-13C	Auto	5.238	1621637	3889768	1	4.9614	ng/mL	5.0000
FOSA-13C_IS	Auto	5.238	1621637	1621637	16	5.0000	ng/mL	5.0000
N-MeFOSA	M	5.620	12703	409366	17	0.1078	ng/mL	0.1000
N-MeFOSA-d3	Auto	5.617	409366	3889768	1	4.8218	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.617	409366	409366	17	5.0000	ng/mL	5.0000
N-EtFOSA	M	5.754	2618	588657	18	0.1119	ng/mL	0.1000
N-EtFOSA-d9	Auto	5.750	588657	3889768	1	4.8261	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.750	588657	588657	18	5.0000	ng/mL	5.0000
N-MeFOSE	M	5.592	13603	494836	19	0.1029	ng/mL	0.1000
N-MeFOSE-d7	Auto	5.585	494836	3889768	1	4.8277	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.585	494836	494836	19	5.0000	ng/mL	5.0000
N-EtFOSE	M	5.723	12682	472854	20	0.1017	ng/mL	0.1000
N-EtFOSE-d9	Auto	5.713	472854	3889768	1	4.7795	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.713	472854	472854	20	5.0000	ng/mL	5.0000
N-MeFOSAA	M	5.049	5533	599478	21	0.0989	ng/mL	0.1000
N-MeFOSAA-d3	Auto	5.044	599478	3889768	1	4.9728	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.044	599478	599478	21	5.0000	ng/mL	5.0000
N-EtFOSAA	M	5.135	6236	485602	22	0.1056	ng/mL	0.1000
N-EtFOSAA-d5	Auto	5.139	485602	3889768	1	4.9479	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.139	485602	485602	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.215	6328	380209	23	0.0989	ng/mL	0.0937
4_2-FTS-13C	Auto	4.213	380209	3889768	1	4.8827	ng/mL	5.0000

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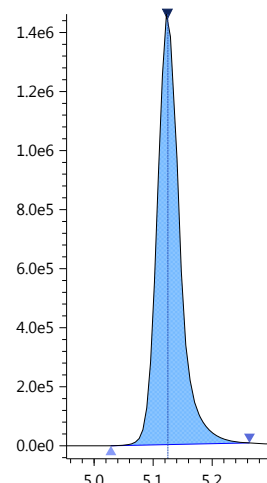
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.213	380209	380209	23	5.0000	ng/mL	5.0000
6_2-FTS_1	M	4.578	7402	298679	24	0.0987	ng/mL	0.0951
6_2-FTS-13C	Auto	4.580	298679	3889768	1	4.9819	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.580	298679	298679	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.941	3493	234347	25	0.0951	ng/mL	0.0960
8_2-FTS-13C	Auto	4.942	234347	3889768	1	5.0393	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.942	234347	234347	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.303	3606	234347	25	0.1038	ng/mL	0.0966
HFPO_DA	Auto	4.309	20676	914340	26	0.1054	ng/mL	0.1000
HFPO_DA-13C	Auto	4.309	914340	3889768	1	4.9340	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.309	914340	914340	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.124 Area 3889768

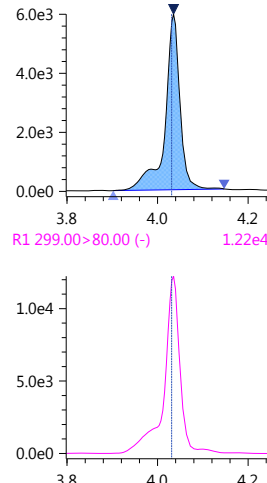
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0845
RT 4.035 Area 13673
R#1 202.31 (0.00)

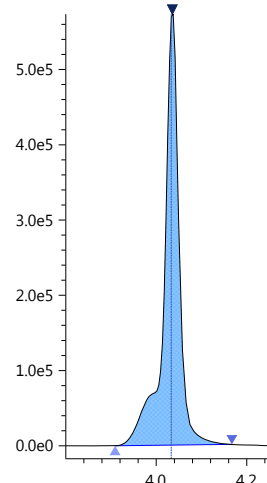
Q 298.80>99.00 (-)



PFBS-13C

Conc 5.1097
RT 4.036 Area 1336930

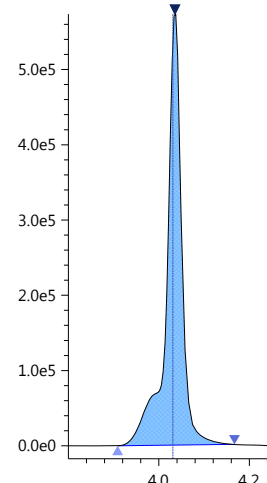
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.036 Area 1336930

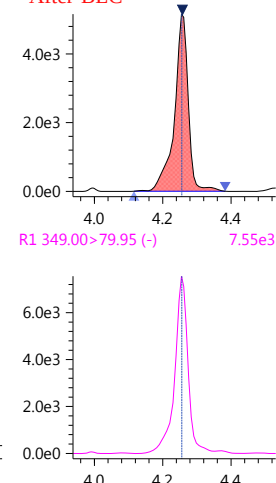
ISTD 301.80>80.00 (-)



PFPsS

Conc 0.1043
RT 4.258 Area 14487
R#1 147.19 (0.00)

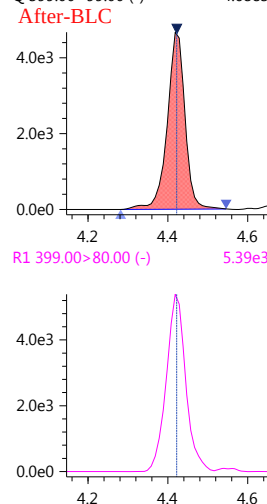
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.1067
RT 4.422 Area 14420
R#1 115.03 (0.00)

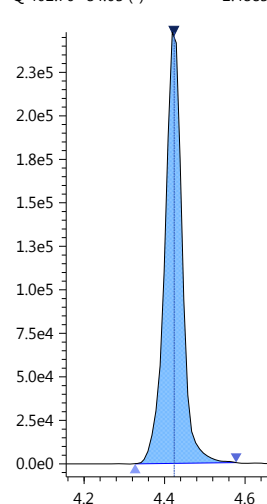
Q 399.00>99.00 (-)



PFHxS-180

Conc 5.3898
RT 4.423 Area 747148

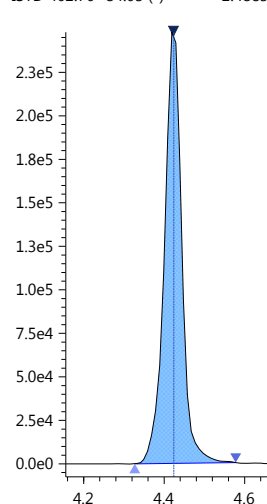
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.423 Area 747148

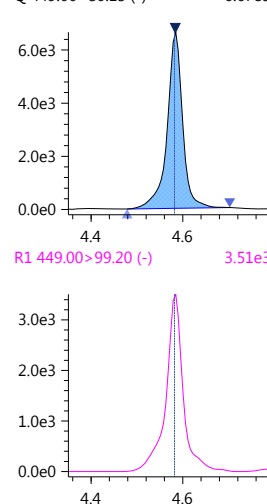
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0885
RT 4.584 Area 15541
R#1 53.06 (0.00)

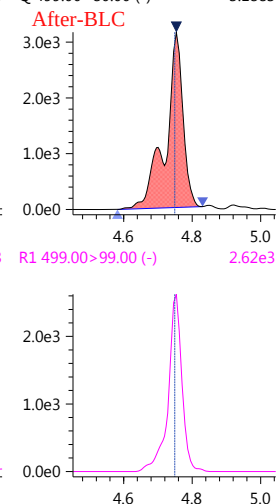
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0895
RT 4.754 Area 11097
R#1 82.09 (0.00)

Q 499.00>80.00 (-)



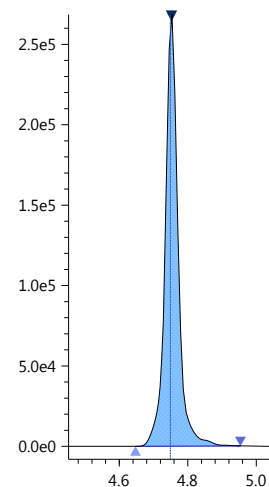
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PFOS-13C

Conc 5.1342
 RT 4.752 Area 702387

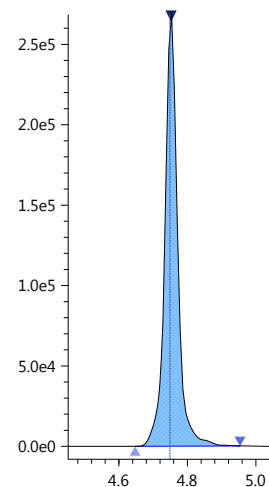
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.752 Area 702387

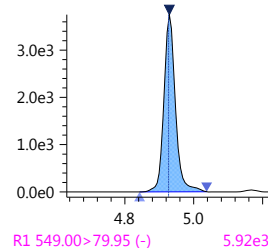
ISTD 502.80>80.05 (-)



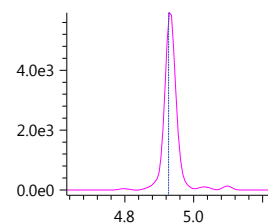
PFNS

Conc 0.0942
 RT 4.929 Area 8692
 R#1 155.86 (0.00)

Q 549.00>99.00 (-)



R1 549.00>79.95 (-)

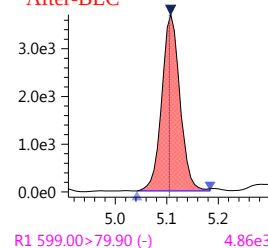


PFDS_1

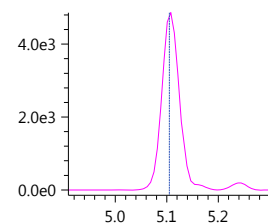
Conc 0.0950
 RT 5.107 Area 9068
 R#1 131.69 (0.00)

Q 599.00>99.10 (-)

After-BLC



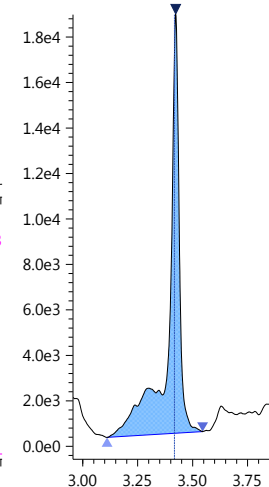
R1 599.00>79.90 (-)



PFBA

Conc 0.0974
 RT 3.423 Area 62512

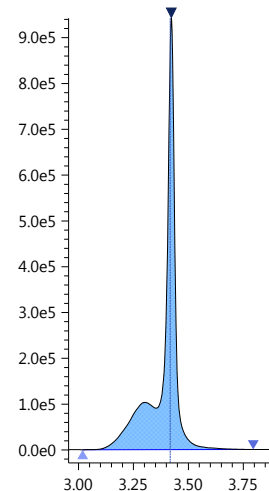
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.9798
 RT 3.422 Area 3264420

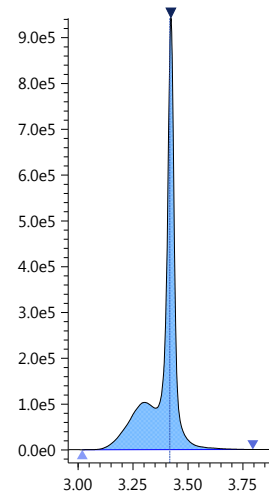
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.422 Area 3264420

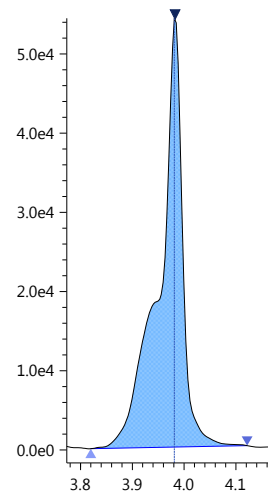
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.1000
 RT 3.982 Area 169164

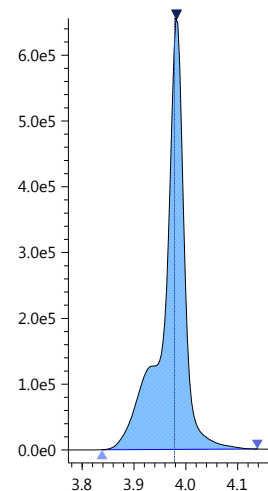
Q 263.05>219.10 (-)



PFPeA-13C

Conc 5.0400
 RT 3.982 Area 1776618

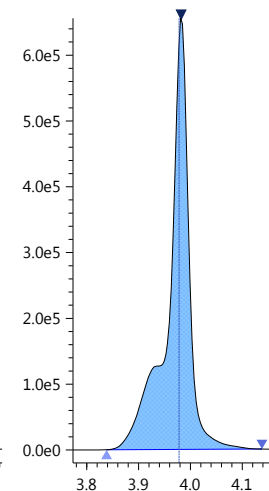
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.982 Area 1776618

ISTD 267.90>223.00 (-)

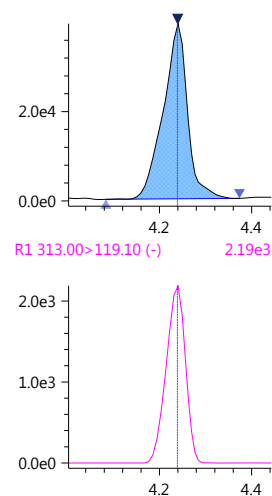


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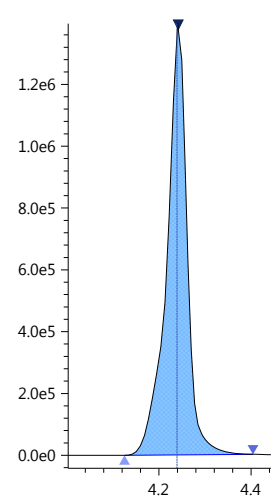
PFHxA

Conc 0.1003
 RT 4.240 Area 143150
 R#1 5.59 (0.00)
 Q 313.00>269.00 (-) 3.97e4



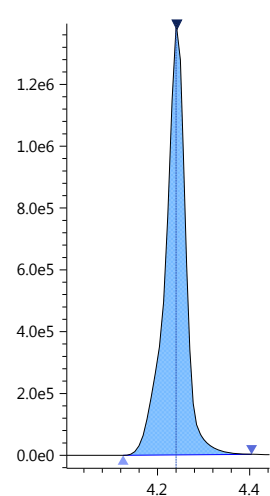
PFHxA-13C

Conc 5.3917
 RT 4.242 Area 4260978
 Q 314.90>270.10 (-) 1.40e6



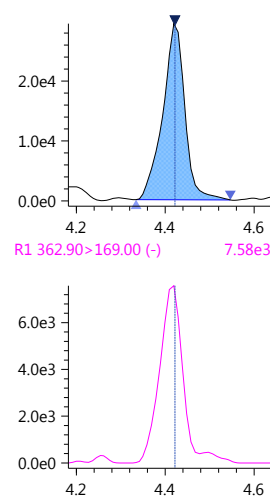
PFHxA-13C_IS

Conc 5.0000
 RT 4.242 Area 4260978
 ISTD 314.90>270.10 (-) 1.40e6



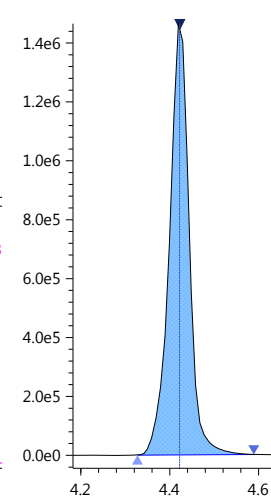
PFHpA

Conc 0.0882
 RT 4.422 Area 101923
 R#1 25.83 (0.00)
 Q 362.90>319.00 (-) 2.96e4



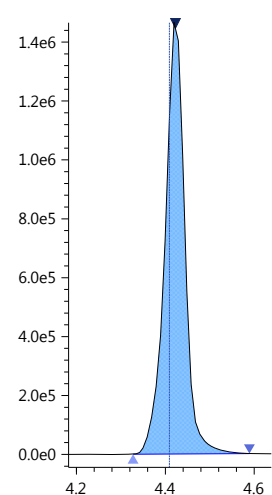
PFHpA-13C

Conc 5.3941
 RT 4.423 Area 4563929
 Q 366.90>322.10 (-) 1.47e6



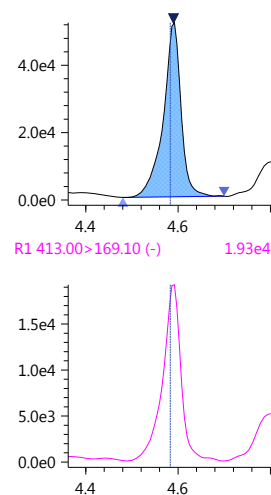
PFHpA-13C_IS

Conc 5.0000
 RT 4.423 Area 4563929
 ISTD 366.90>322.10 (-) 1.47e6



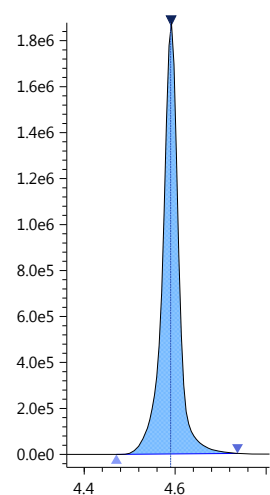
PFOA

Conc 0.0980
 RT 4.590 Area 138073
 R#1 36.89 (0.00)
 Q 413.00>369.00 (-) 5.26e4



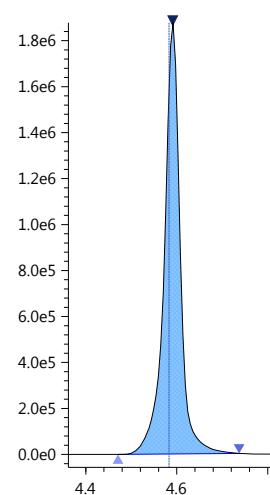
PFOA-13C

Conc 5.0571
 RT 4.591 Area 4570891
 Q 416.80>372.05 (-) 1.88e6



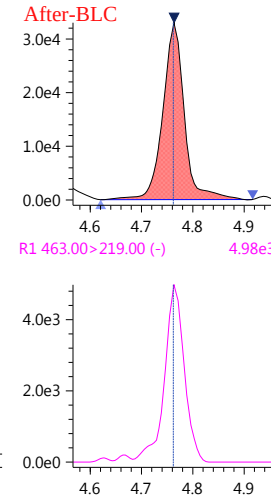
PFOA-13C_IS

Conc 5.0000
 RT 4.591 Area 4570891
 ISTD 416.80>372.05 (-) 1.88e6



PFNA

Conc 0.1203
 RT 4.763 Area 95717
 R#1 14.88 (0.00)
 Q 463.00>418.90 (-) 3.30e4



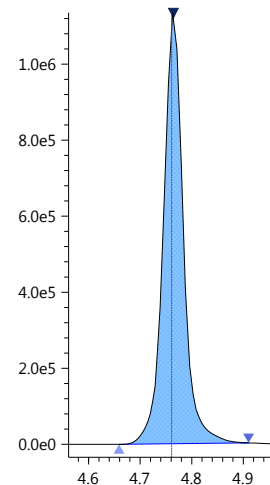
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PFNA-13C

Conc 4.9552
 RT 4.764 Area 3064286

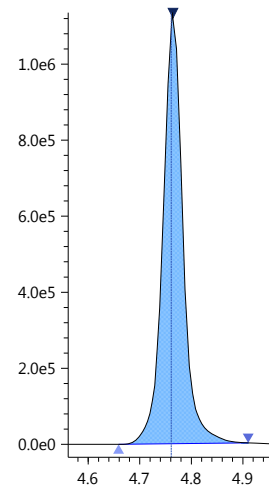
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
 RT 4.764 Area 3064286

ISTD 467.80>423.00 (-)

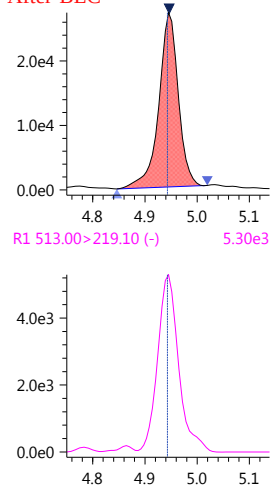


PFDA

Conc 0.0967
 RT 4.946 Area 70093
 R#1 19.13 (0.00)

Q 513.00>468.80 (-)

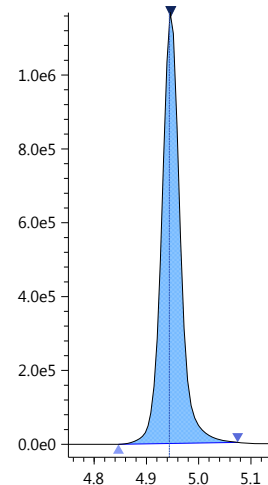
After-BLC



PFDA-13C

Conc 5.1254
 RT 4.947 Area 2887561

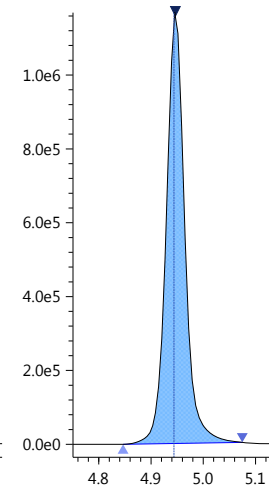
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 RT 4.947 Area 2887561

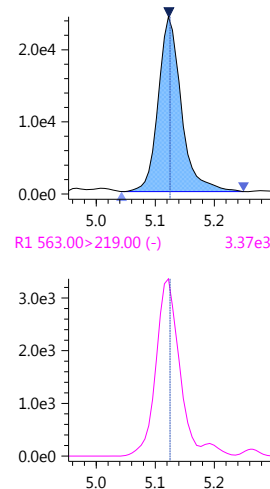
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.0946
 RT 5.123 Area 65871
 R#1 13.25 (0.00)

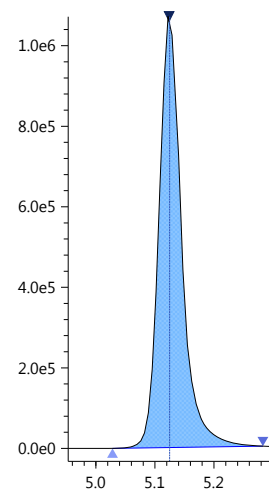
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.9147
 RT 5.124 Area 2868446

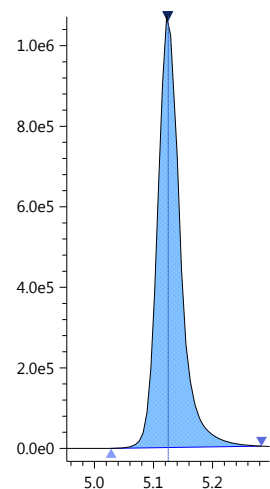
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 RT 5.124 Area 2868446

ISTD 564.80>519.95 (-)

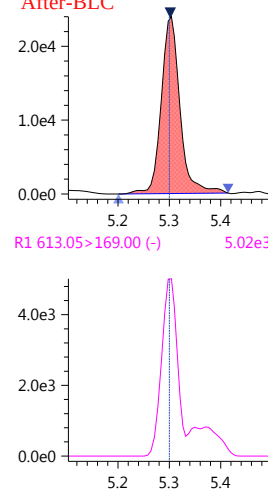


PFDaA

Conc 0.0986
 RT 5.302 Area 60579
 R#1 21.07 (0.00)

Q 613.05>569.00 (-)

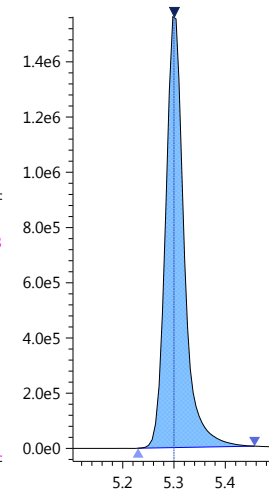
After-BLC



PFDaA-13C

Conc 5.0768
 RT 5.301 Area 3927232

Q 614.80>569.95 (-)



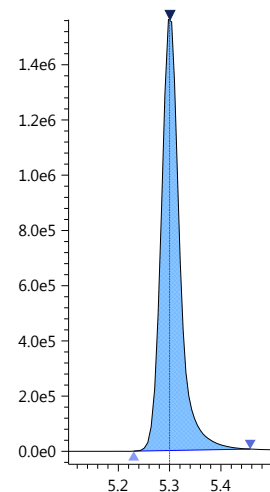
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PFDaA-13C_IS

Conc 5.0000
 RT 5.301 Area 3927232

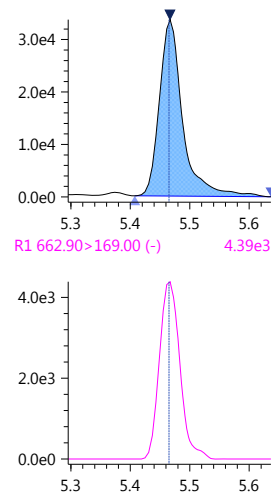
ISTD 614.80>569.95 (-)



PFTrDA

Conc 0.0969
 RT 5.467 Area 91142
 R#1 12.83 (0.00)

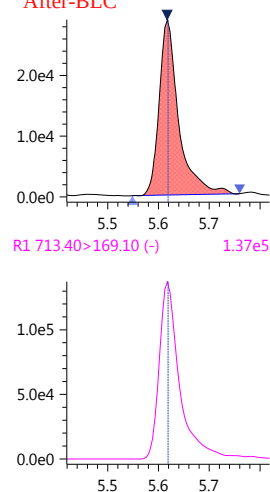
Q 663.00>618.90 (-)



PFTeDA

Conc 0.0907
 RT 5.617 Area 76934
 R#1 468.86 (0.00)

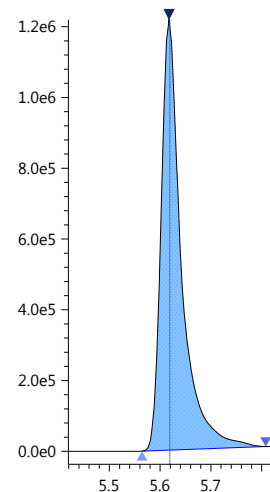
Q 713.40>669.00 (-)



PFTeDA-13C

Conc 5.0418
 RT 5.617 Area 3390128

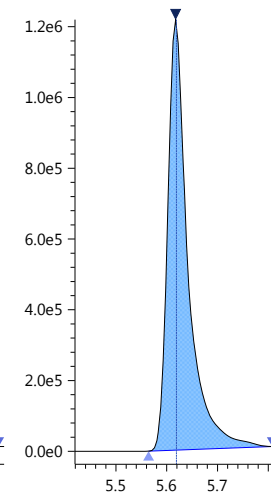
Q 714.70>669.90 (-)



PFTeDA-13C_IS

Conc 5.0000
 RT 5.617 Area 3390128

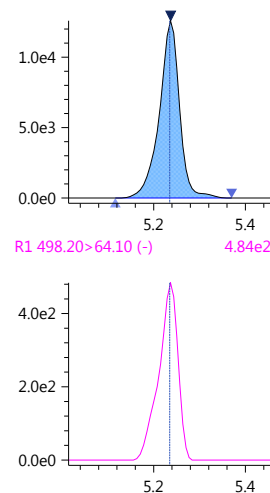
ISTD 714.70>669.90 (-)



FOSA

Conc 0.1039
 RT 5.237 Area 38361
 R#1 3.87 (0.00)

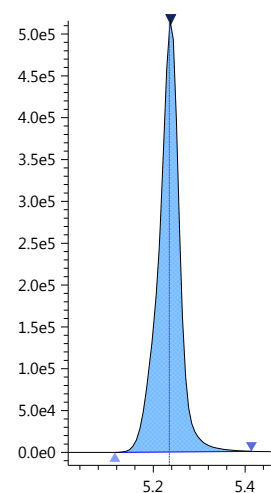
Q 498.20>78.00 (-)



FOSA-13C

Conc 4.9614
 RT 5.238 Area 1621637

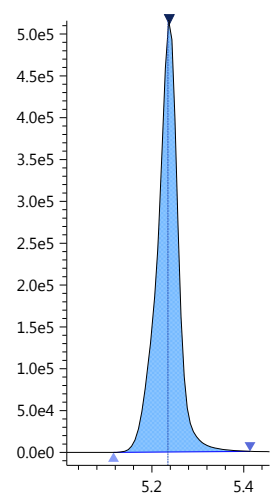
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
 RT 5.238 Area 1621637

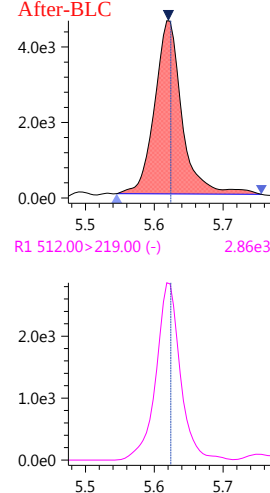
ISTD 506.00>78.05 (-)



N-MeFOSA

Conc 0.1078
 RT 5.620 Area 12703
 R#1 63.05 (0.00)

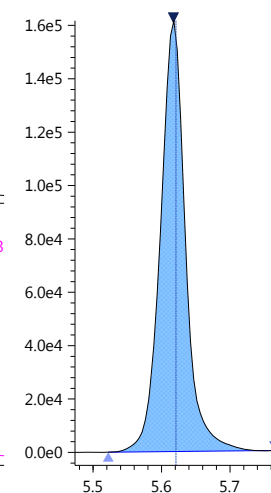
Q 512.00>169.10 (-)



N-MeFOSA-d3

Conc 4.8218
 RT 5.617 Area 409366

Q 514.90>168.90 (-)



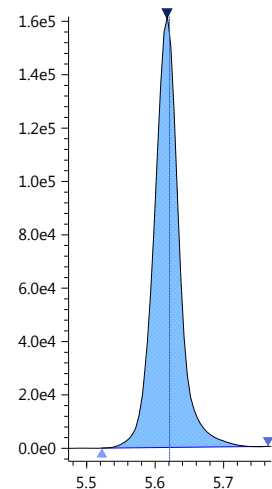
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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.617 Area 409366

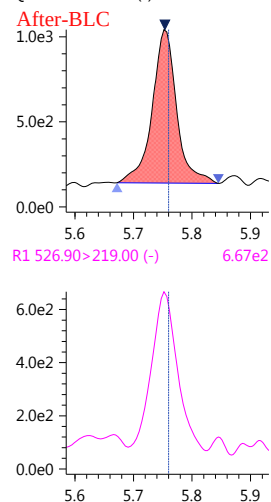
ISTD 514.90>168.90 (-) 1.62e5



N-EtFOSA

Conc 0.1119
 RT 5.754 Area 2618
 R#1 58.37 (0.00)

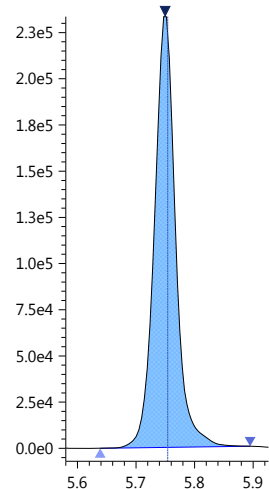
Q 526.90>169.10 (-)



N-EtFOSA-d9

Conc 4.8261
 RT 5.750 Area 588657

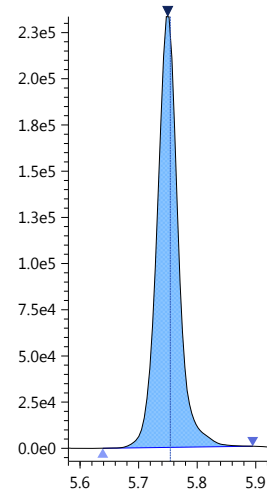
Q 530.90>169.15 (-)



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.750 Area 588657

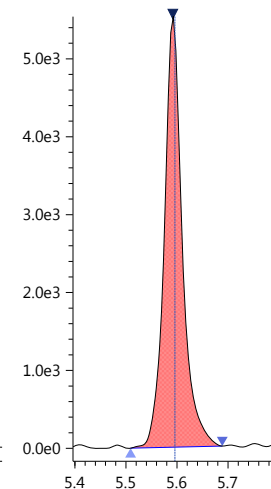
ISTD 530.90>169.15 (-) 2.34e5



N-MeFOSE

Conc 0.1029
 RT 5.592 Area 13603
 After-BLC

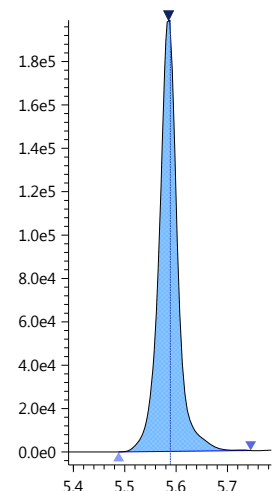
Q 616.00>59.00 (-)



N-MeFOSE-d7

Conc 4.8277
 RT 5.585 Area 494836

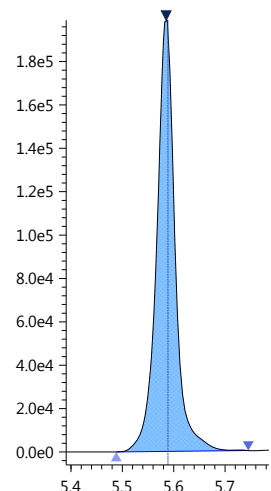
Q 622.70>59.10 (-)



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.585 Area 494836

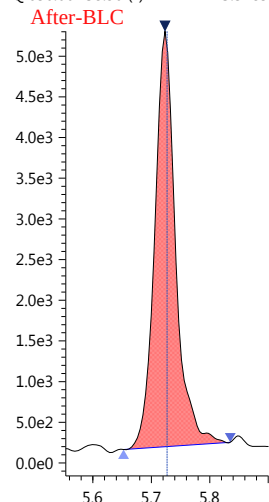
ISTD 622.70>59.10 (-)



N-EtFOSE

Conc 0.1017
 RT 5.723 Area 12682

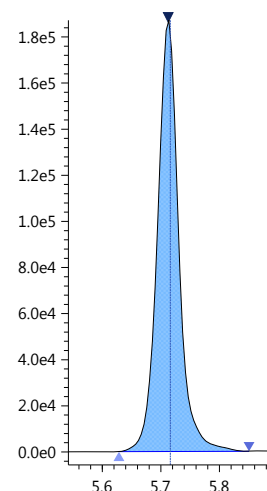
Q 630.00>58.90 (-)



N-EtFOSE-d9

Conc 4.7795
 RT 5.713 Area 472854

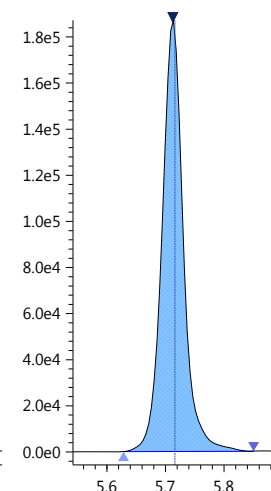
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.713 Area 472854

ISTD 638.70>59.10 (-)

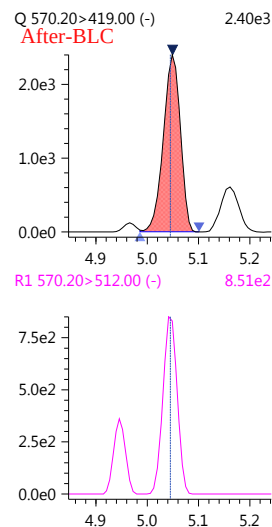


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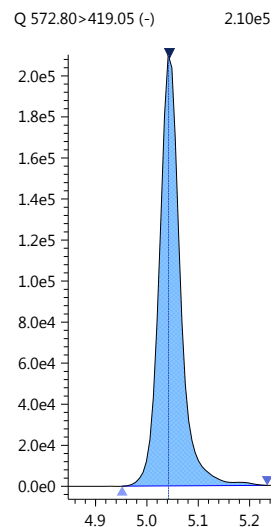
N-MeFOSAA

Conc 0.0989
RT 5.049 Area 5533
R#1 35.68 (0.00)



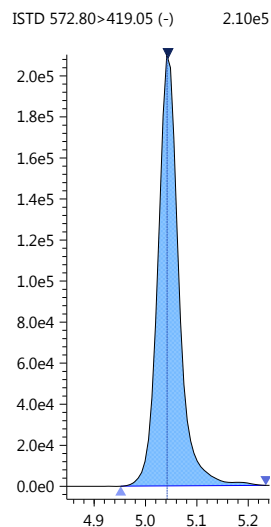
N-MeFOSAA-d3

Conc 4.9728
RT 5.044 Area 599478



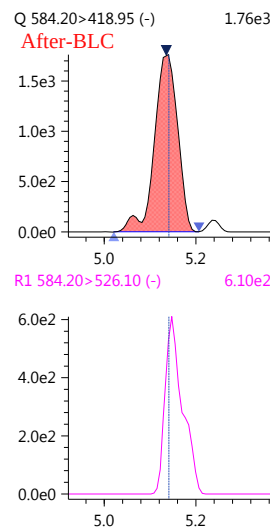
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.044 Area 599478



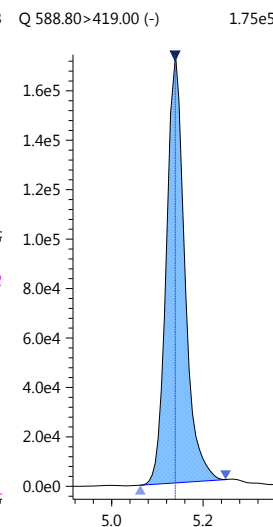
N-EtFOSAA

Conc 0.1056
RT 5.135 Area 6236
R#1 27.25 (0.00)



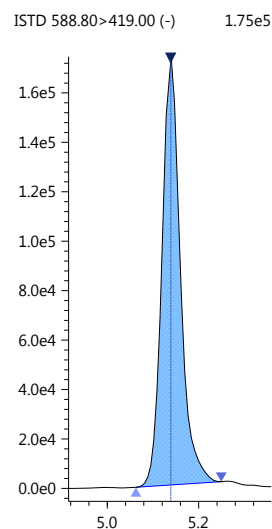
N-EtFOSAA-d5

Conc 4.9479
RT 5.139 Area 485602



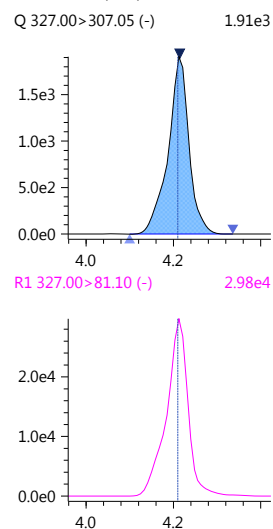
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.139 Area 485602



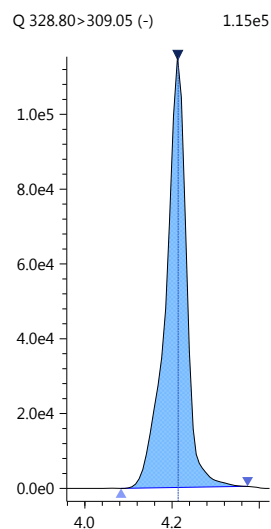
4_2-FTS_1

Conc 0.0989
RT 4.215 Area 6328
R#1 1557.01 (0.00)



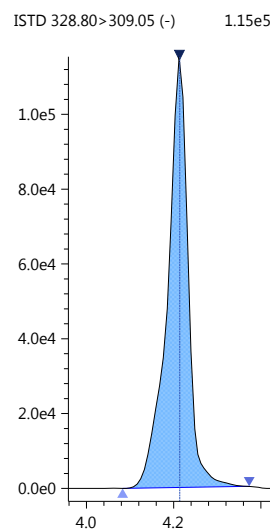
4_2-FTS-13C

Conc 4.8827
RT 4.213 Area 380209



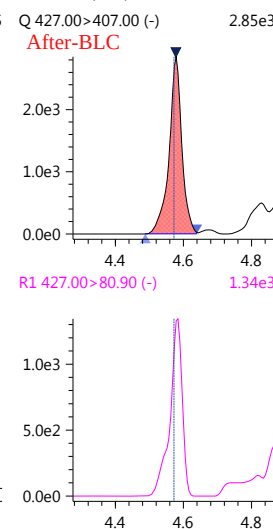
4_2-FTS-13C_IS

Conc 5.0000
RT 4.213 Area 380209



6_2-FTS_1

Conc 0.0987
RT 4.578 Area 7402
R#1 46.37 (0.00)



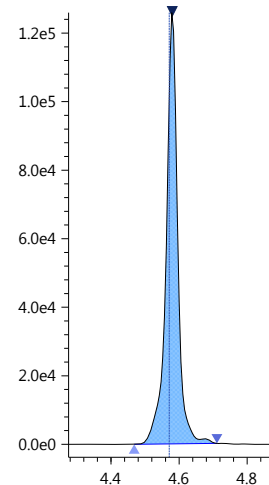
Insight Report

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6_2-FTS-13C

Conc 4.9819
 RT 4.580 Area 298679

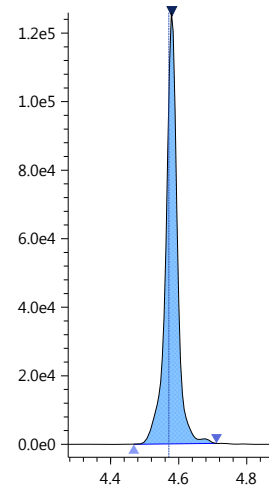
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
 RT 4.580 Area 298679

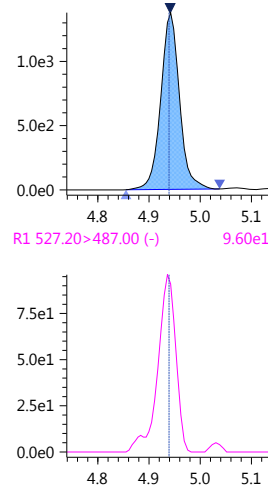
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.0951
 RT 4.941 Area 3493
 R#1 6.46 (0.00)

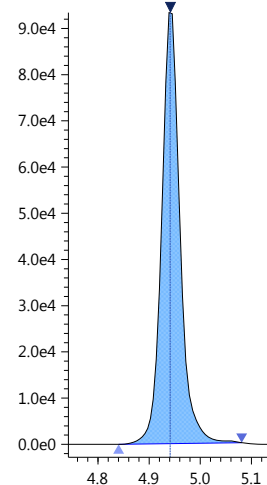
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 5.0393
 RT 4.942 Area 234347

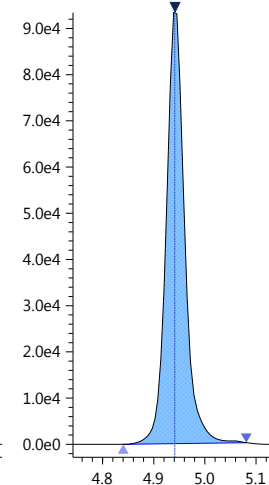
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
 RT 4.942 Area 234347

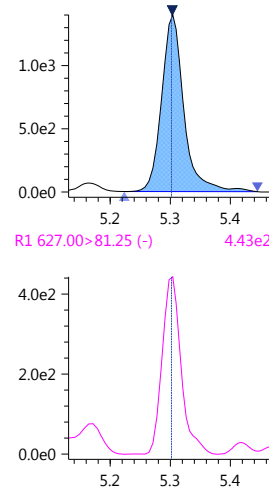
ISTD 528.80>509.00 (-)



10_2-FtS_1

Conc 0.1038
 RT 5.303 Area 3606
 R#1 32.02 (0.00)

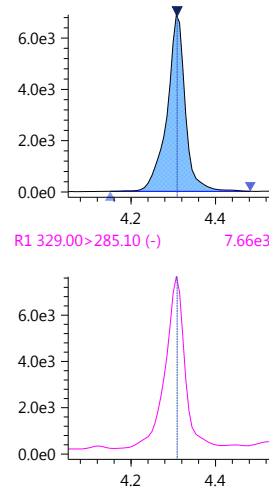
Q 627.00>606.95 (-)



HPFO_DA

Conc 0.1054
 RT 4.309 Area 20676
 R#1 106.98 (0.00)

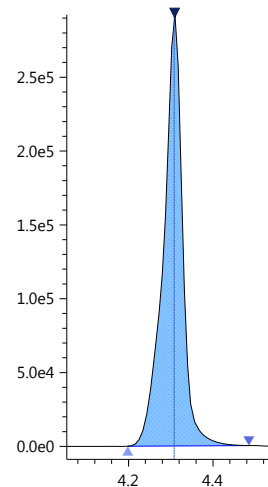
Q 329.00>169.00 (-)



HPFO_DA-13C

Conc 4.9340
 RT 4.309 Area 914340

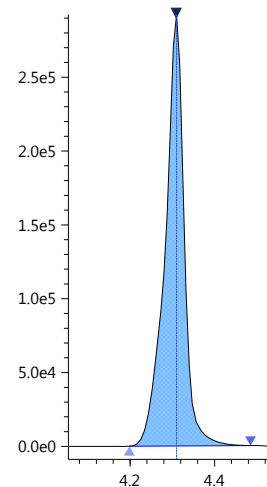
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.309 Area 914340

ISTD 332.00>286.80 (-)



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191202_019

Sample ID: 0.10 PPB ICAL

Date acquired: 12/2/2019 5:50:12 PM

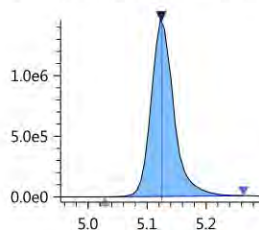
Acquired by: System Administrator

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Vial: 2 | Inj. Volume: 15.0000uL | Tray: 0

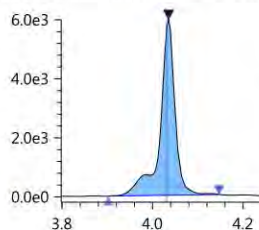
13C7-PFUnDA_IS

Conc 5.0000
RT 5.124 Area 3889768
ISTD 570.00>525.00 (-)



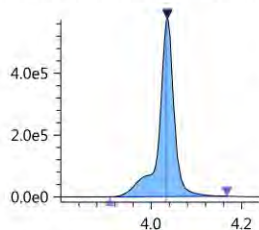
PFBS_1

Conc 0.0845
RT 4.035 Area 13673
Q 298.80>99.00 (-)



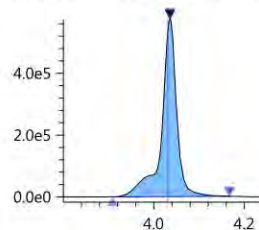
PFBS-13C

Conc 5.1097
RT 4.036 Area 1336930
Q 301.80>80.00 (-)



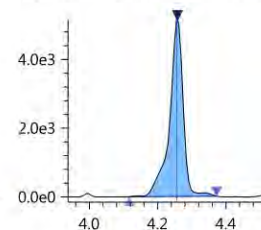
PFBS-13C_IS

Conc 5.0000
RT 4.036 Area 1336930
ISTD 301.80>80.00 (-)



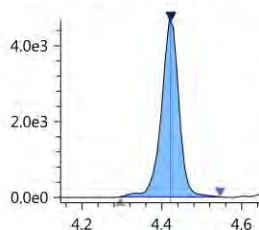
PFPeS

Conc 0.1040
RT 4.258 Area 14375
Q 349.00>99.00 (-)



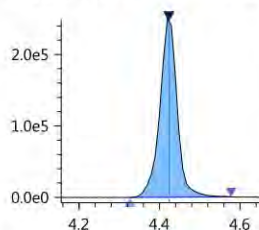
PFHxS_1

Conc 0.1060
RT 4.422 Area 14309
Q 399.00>99.00 (-)



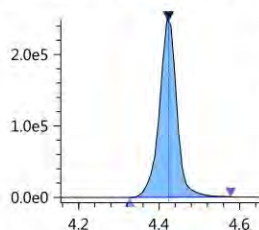
PFHxS-180

Conc 5.3898
RT 4.423 Area 747148
Q 402.70>84.05 (-)



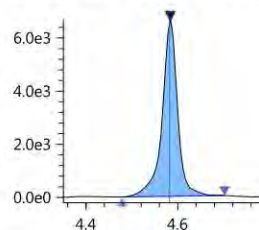
PFHxS-180_IS

Conc 5.0000
RT 4.423 Area 747148
ISTD 402.70>84.05 (-)



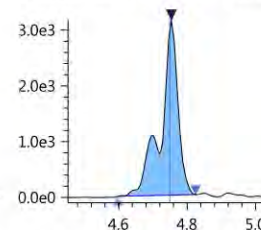
PFHpS_1

Conc 0.0885
RT 4.584 Area 15541
Q 449.00>80.15 (-)



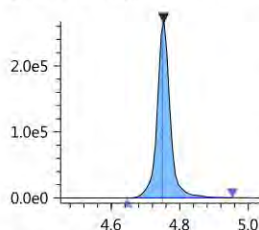
PFOS_1

Conc 0.0892
RT 4.754 Area 10984
Q 499.00>80.00 (-)



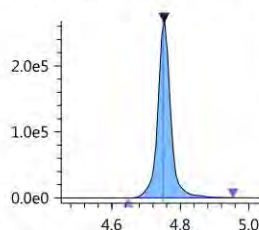
PFOS-13C

Conc 5.1342
RT 4.752 Area 702387
Q 502.80>80.05 (-)



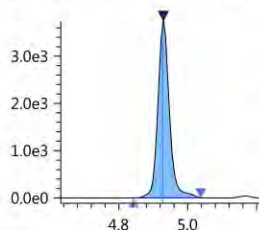
PFOS-13C_IS

Conc 5.0000
RT 4.752 Area 702387
ISTD 502.80>80.05 (-)



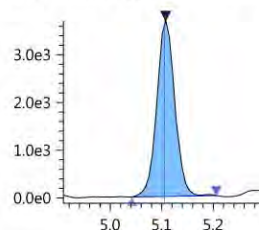
PFNS

Conc 0.0936
RT 4.929 Area 8692
Q 549.00>99.00 (-)



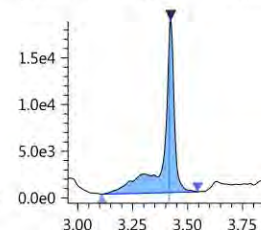
PFDS_1

Conc 0.0940
RT 5.107 Area 8961
Q 599.00>99.10 (-)



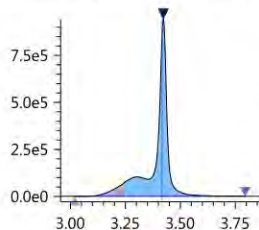
PFBA

Conc 0.0974
RT 3.423 Area 62512
Q 213.00>169.10 (-)



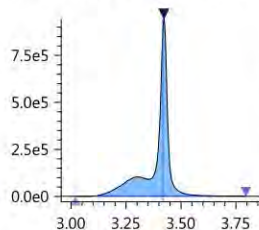
PFBA-13C

Conc 4.9798
RT 3.422 Area 3264420
Q 216.90>172.15 (-)



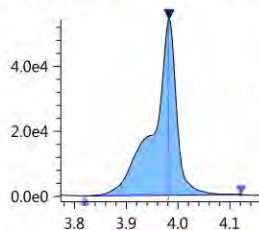
PFBA-13C_IS

Conc 5.0000
RT 3.422 Area 3264420
ISTD 216.90>172.15 (-)



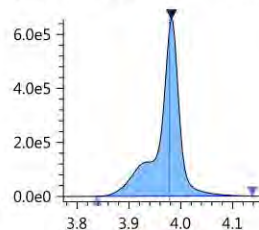
PFPeA

Conc 0.1000
RT 3.982 Area 169164
Q 263.05>219.10 (-)



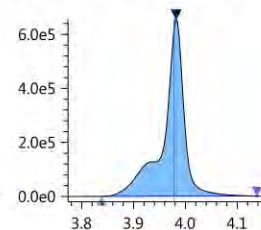
PFPeA-13C

Conc 5.0400
RT 3.982 Area 1776618
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.982 Area 1776618
ISTD 267.90>223.00 (-)

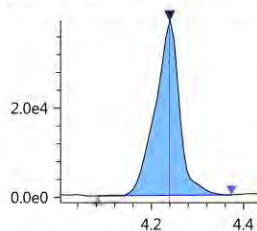


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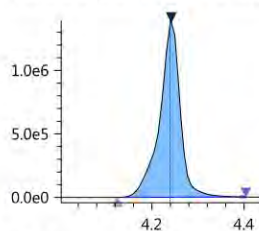
PFHxA

Conc 0.1004
 RT 4.240 Area 143150
 Q 313.00>269.00 (-)



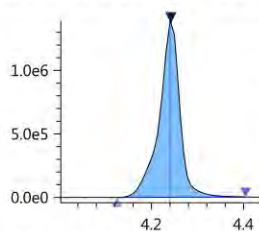
PFHxA-13C

Conc 5.3917
 RT 4.242 Area 4260978
 Q 314.90>270.10 (-)



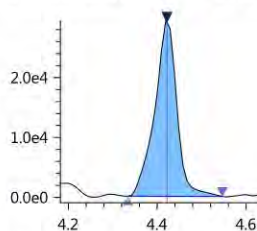
PFHxA-13C_IS

Conc 5.0000
 RT 4.242 Area 4260978
 ISTD 314.90>270.10 (-)



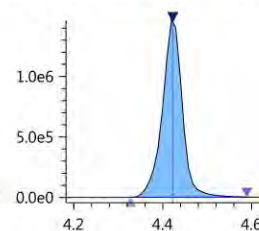
PFHpA

Conc 0.0882
 RT 4.422 Area 101923
 Q 362.90>319.00 (-)



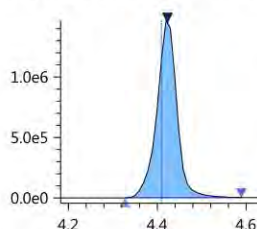
PFHpA-13C

Conc 5.3941
 RT 4.423 Area 4563929
 Q 366.90>322.10 (-)



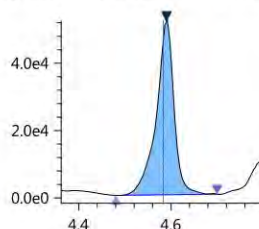
PFHpA-13C_IS

Conc 5.0000
 RT 4.423 Area 4563929
 ISTD 366.90>322.10 (-)



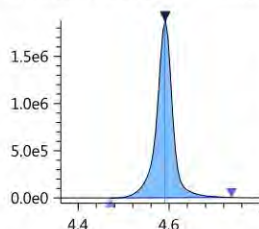
PFOA

Conc 0.0981
 RT 4.590 Area 138073
 Q 413.00>369.00 (-)



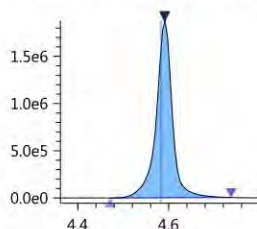
PFOA-13C

Conc 5.0571
 RT 4.591 Area 4570891
 Q 416.80>372.05 (-)



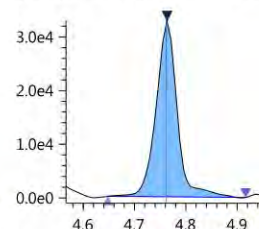
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Conc 5.0000
 RT 4.591 Area 4570891
 ISTD 416.80>372.05 (-)



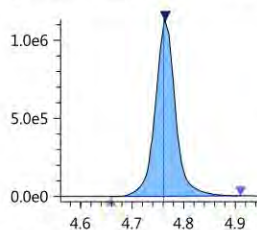
PFNA

Conc 0.1166
 RT 4.763 Area 93255
 Q 463.00>418.90 (-)



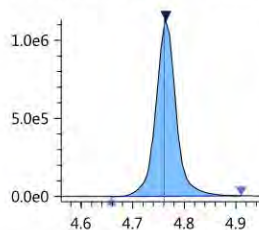
PFNA-13C

Conc 4.9552
 RT 4.764 Area 3064286
 Q 467.80>423.00 (-)



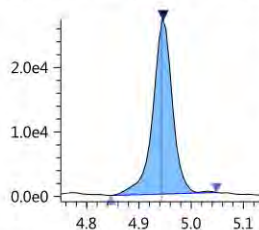
PFNA-13C_IS

Conc 5.0000
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 ISTD 467.80>423.00 (-)



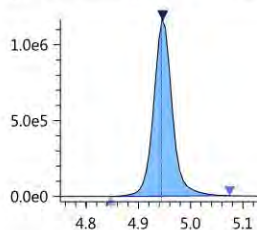
PFDA

Conc 0.0979
 RT 4.946 Area 71113
 Q 513.00>468.80 (-)



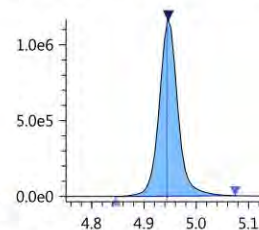
PFDA-13C

Conc 5.1254
 RT 4.947 Area 2887561
 Q 514.80>469.95 (-)



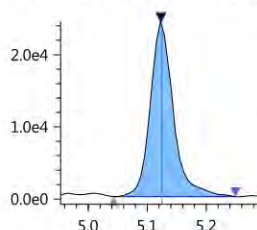
PFDA-13C_IS

Conc 5.0000
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 ISTD 514.80>469.95 (-)



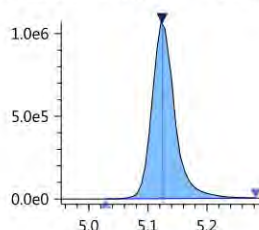
PFUnA

Conc 0.0948
 RT 5.123 Area 65871
 Q 563.00>518.90 (-)



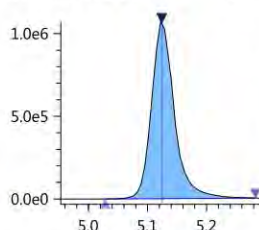
PFUnA-13C

Conc 4.9147
 RT 5.124 Area 2868446
 Q 564.80>519.95 (-)



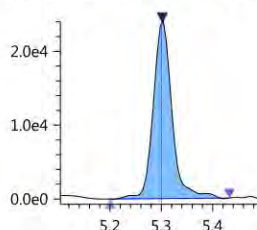
PFUnA-13C_IS

Conc 5.0000
 RT 5.124 Area 2868446
 ISTD 564.80>519.95 (-)



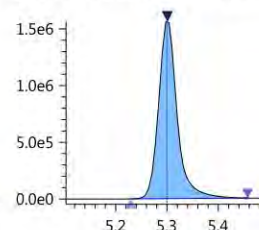
PFDaA

Conc 0.1179
 RT 5.302 Area 60619
 Q 613.05>569.00 (-)



PFDaA-13C

Conc 5.0768
 RT 5.301 Area 3927232
 Q 614.80>569.95 (-)

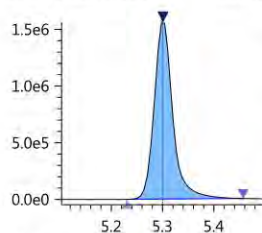


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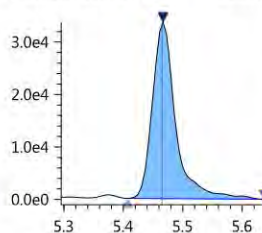
PFDaA-13C_IS

Conc 5.0000
RT 5.301 Area 3927232
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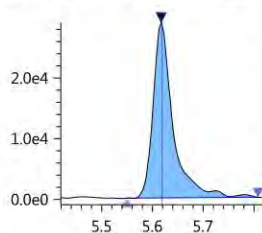
PFTrDA

Conc 0.0969
RT 5.467 Area 91142
Q 663.00>618.90 (-)



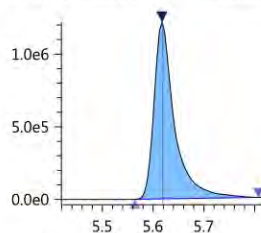
PFTeDA

Conc 0.0950
RT 5.617 Area 78903
Q 713.40>669.00 (-)



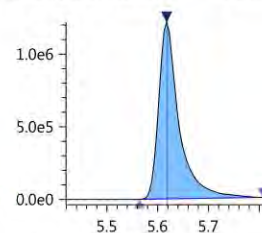
PFTeDA-13C

Conc 5.0418
RT 5.617 Area 3390128
Q 714.70>669.90 (-)



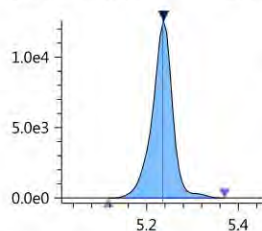
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Conc 5.0000
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ISTD 714.70>669.90 (-)



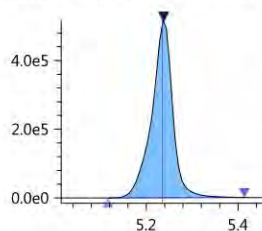
FOSA

Conc 0.1039
RT 5.237 Area 38361
Q 498.20>78.00 (-)



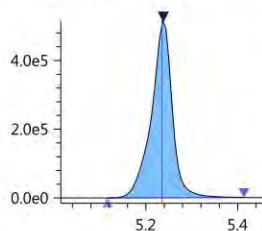
FOSA-13C

Conc 4.9614
RT 5.238 Area 1621637
Q 506.00>78.05 (-)



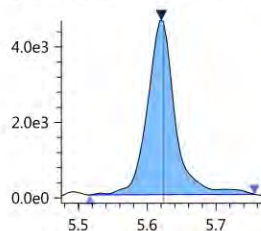
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Conc 5.0000
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ISTD 506.00>78.05 (-)



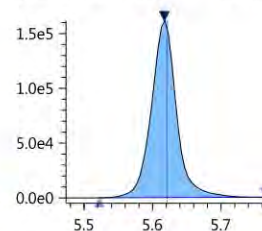
N-MeFOSA

Conc 0.1096
RT 5.620 Area 12955
Q 512.00>169.10 (-)



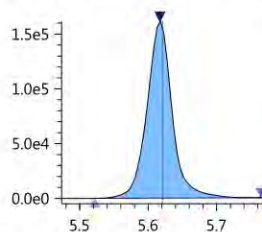
N-MeFOSA-d3

Conc 4.8218
RT 5.617 Area 409366
Q 514.90>168.90 (-)



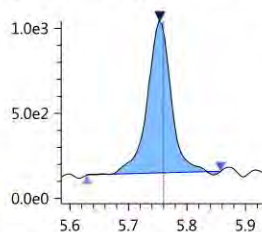
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.617 Area 409366
ISTD 514.90>168.90 (-)



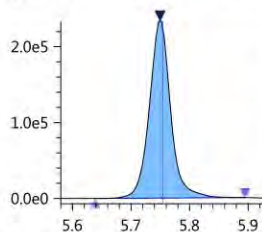
N-EtFOSA

Conc 0.1079
RT 5.754 Area 2499
Q 526.90>169.10 (-)



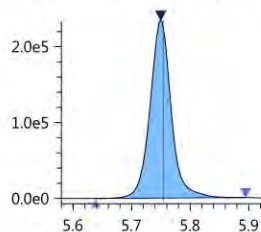
N-EtFOSA-d9

Conc 4.8261
RT 5.750 Area 588657
Q 530.90>169.15 (-)



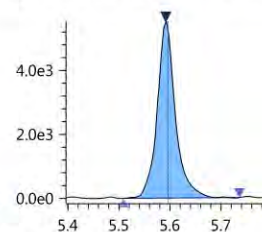
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.750 Area 588657
ISTD 530.90>169.15 (-)



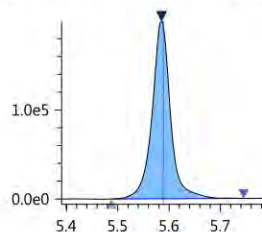
N-MeFOSE

Conc 0.1032
RT 5.592 Area 13650
Q 616.00>59.00 (-)



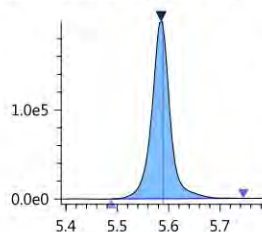
N-MeFOSE-d7

Conc 4.8277
RT 5.585 Area 494836
Q 622.70>59.10 (-)



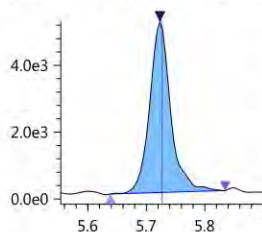
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.585 Area 494836
ISTD 622.70>59.10 (-)



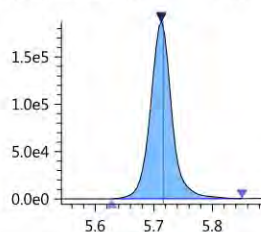
N-EtFOSE

Conc 0.1021
RT 5.723 Area 12754
Q 630.00>58.90 (-)



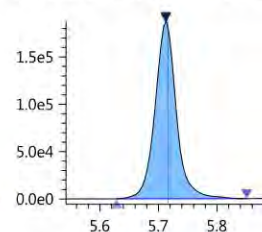
N-EtFOSE-d9

Conc 4.7795
RT 5.713 Area 472854
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.713 Area 472854
ISTD 638.70>59.10 (-)

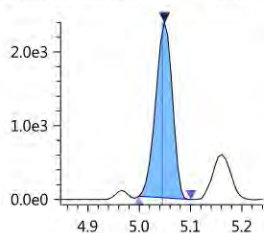


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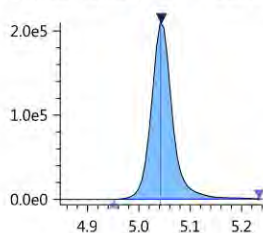
N-MeFOSAA

Conc 0.0988
RT 5.049 Area 5400
Q 570.20>419.00 (-)



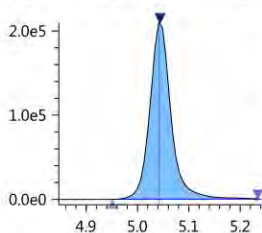
N-MeFOSAA-d3

Conc 4.9728
RT 5.044 Area 599478
Q 572.80>419.05 (-)



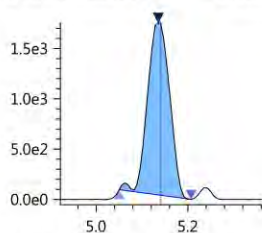
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.044 Area 599478
ISTD 572.80>419.05 (-)



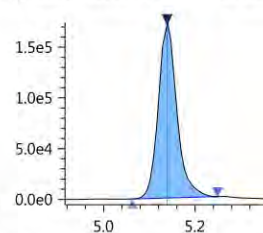
N-EtFOSAA

Conc 0.1030
RT 5.135 Area 5757
Q 584.20>418.95 (-)



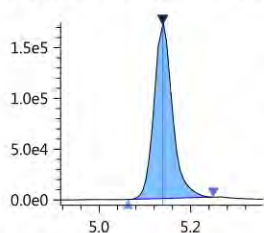
N-EtFOSAA-d5

Conc 4.9479
RT 5.139 Area 485602
Q 588.80>419.00 (-)



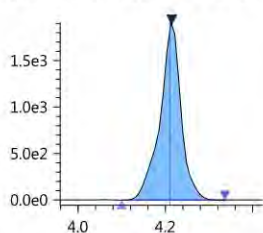
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.139 Area 485602
ISTD 588.80>419.00 (-)



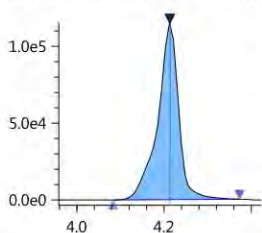
4_2-FTS_1

Conc 0.0989
RT 4.215 Area 6328
Q 327.00>307.05 (-)



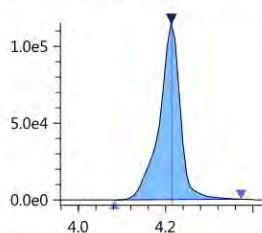
4_2-FTS-13C

Conc 4.8827
RT 4.213 Area 380209
Q 328.80>309.05 (-)



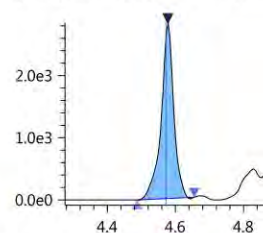
4_2-FTS-13C_IS

Conc 5.0000
RT 4.213 Area 380209
ISTD 328.80>309.05 (-)



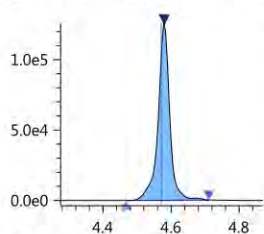
6_2-FTS_1

Conc 0.0969
RT 4.578 Area 7244
Q 427.00>407.00 (-)



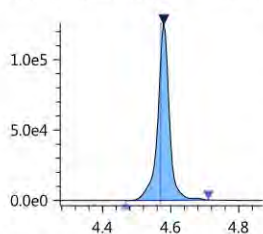
6_2-FTS-13C

Conc 4.9819
RT 4.580 Area 298679
Q 428.90>409.00 (-)



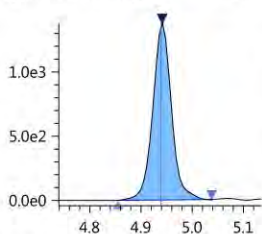
6_2-FTS-13C_IS

Conc 5.0000
RT 4.580 Area 298679
ISTD 428.90>409.00 (-)



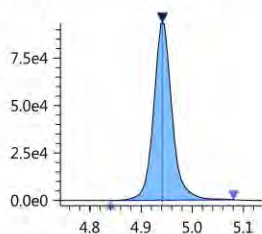
8_2-FTS_1

Conc 0.0952
RT 4.941 Area 3493
Q 527.10>506.90 (-)



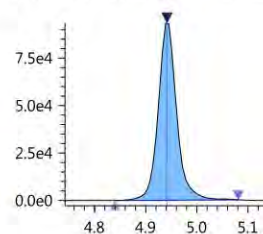
8_2-FTS-13C

Conc 5.0393
RT 4.942 Area 234347
Q 528.80>509.00 (-)



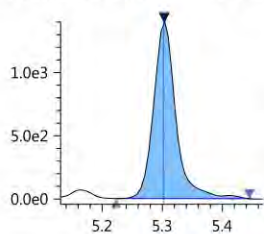
8_2-FTS-13C_IS

Conc 5.0000
RT 4.942 Area 234347
ISTD 528.80>509.00 (-)



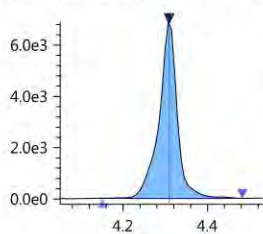
10_2-FTS_1

Conc 0.1038
RT 5.303 Area 3606
Q 627.00>606.95 (-)



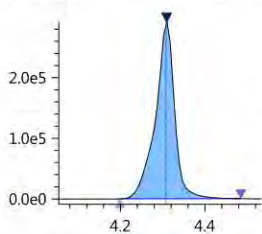
HPFO_DA

Conc 0.1054
RT 4.309 Area 20676
Q 329.00>169.00 (-)



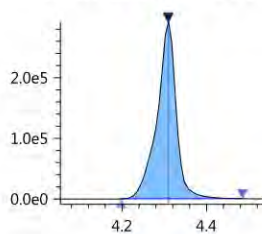
HPFO_DA-13C

Conc 4.9340
RT 4.309 Area 914340
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.309 Area 914340
ISTD 332.00>286.80 (-)



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191202_020

Sample ID: 0.50 PPB ICAL

Date acquired: 12/2/2019 6:00:38 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_020.lcd

Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.123	3308668	3308668	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.034	62003	1133470	2	0.4522	ng/mL	0.4437
PFBS-13C	Auto	4.035	1133470	3308668	1	5.0930	ng/mL	5.0000
PFBS-13C_IS	Auto	4.035	1133470	1133470	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.256	57630	1133470	2	0.4895	ng/mL	0.4705
PFHxS_1	Auto	4.421	51313	604484	3	0.4691	ng/mL	0.4565
PFHxS-18O	Auto	4.424	604484	3308668	1	5.1265	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.424	604484	604484	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.584	67122	604484	3	0.4726	ng/mL	0.4767
PFOS_1	Auto	4.753	47160	575035	4	0.4648	ng/mL	0.4646
PFOS-13C	Auto	4.753	575035	3308668	1	4.9416	ng/mL	5.0000
PFOS-13C_IS	Auto	4.753	575035	575035	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.930	38602	575035	4	0.5111	ng/mL	0.4808
PFDS_1	Auto	5.106	39590	575035	4	0.5065	ng/mL	0.4823
PFBA	Auto	3.422	273128	2857021	5	0.4865	ng/mL	0.5000
PFBA-13C	Auto	3.421	2857021	3308668	1	5.1238	ng/mL	5.0000
PFBA-13C_IS	Auto	3.421	2857021	2857021	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.981	412645	1527945	6	0.4966	ng/mL	0.5000
PFPeA-13C	Auto	3.981	1527945	3308668	1	5.0959	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.981	1527945	1527945	6	5.0000	ng/mL	5.0000
PFHxA	M	4.240	463248	3431316	7	0.4911	ng/mL	0.5000
PFHxA-13C	Auto	4.240	3431316	3308668	1	5.1044	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.240	3431316	3431316	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.422	381980	3927571	8	0.4768	ng/mL	0.5000
PFHpA-13C	Auto	4.423	3927571	3308668	1	5.4573	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.423	3927571	3927571	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.591	502368	3960880	9	0.5042	ng/mL	0.5000
PFOA-13C	Auto	4.591	3960880	3308668	1	5.1519	ng/mL	5.0000
PFOA-13C_IS	Auto	4.591	3960880	3960880	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.765	300456	2803142	10	0.4875	ng/mL	0.5000
PFNA-13C	Auto	4.765	2803142	3308668	1	5.3290	ng/mL	5.0000
PFNA-13C_IS	Auto	4.765	2803142	2803142	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.946	266699	2487081	11	0.4936	ng/mL	0.5000
PFDA-13C	Auto	4.946	2487081	3308668	1	5.1899	ng/mL	5.0000
PFDA-13C_IS	Auto	4.946	2487081	2487081	11	5.0000	ng/mL	5.0000
PFUnA	M	5.123	218627	2434953	12	0.4875	ng/mL	0.5000
PFUnA-13C	Auto	5.124	2434953	3308668	1	4.9046	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.124	2434953	2434953	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.300	234745	3429450	13	0.5239	ng/mL	0.5000
PFDoA-13C	Auto	5.301	3429450	3308668	1	5.2120	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.301	3429450	3429450	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.466	331075	2865259	14	0.5243	ng/mL	0.5000
PFTeDA	Auto	5.618	175900	2865259	14	0.5023	ng/mL	0.5000
PFTeDA-13C	Auto	5.618	2865259	3308668	1	5.0096	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.618	2865259	2865259	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.237	165355	1439123	16	0.5045	ng/mL	0.5000
FOSA-13C	Auto	5.238	1439123	3308668	1	5.1762	ng/mL	5.0000
FOSA-13C_IS	Auto	5.238	1439123	1439123	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.621	52435	373562	17	0.4878	ng/mL	0.5000
N-MeFOSA-d3	Auto	5.617	373562	3308668	1	5.1729	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.617	373562	373562	17	5.0000	ng/mL	5.0000
N-EtFOSA	M	5.755	10083	539572	18	0.4700	ng/mL	0.5000
N-EtFOSA-d9	Auto	5.750	539572	3308668	1	5.2006	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.750	539572	539572	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.594	58810	421066	19	0.5229	ng/mL	0.5000
N-MeFOSE-d7	Auto	5.586	421066	3308668	1	4.8295	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.586	421066	421066	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.724	55884	415104	20	0.5103	ng/mL	0.5000
N-EtFOSE-d9	Auto	5.714	415104	3308668	1	4.9327	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.714	415104	415104	20	5.0000	ng/mL	5.0000
N-MeFOSAA	M	5.043	25910	532089	21	0.4265	ng/mL	0.5000
N-MeFOSAA-d3	Auto	5.042	532089	3308668	1	5.1890	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.042	532089	532089	21	5.0000	ng/mL	5.0000
N-EtFOSAA	M	5.142	25297	424238	22	0.4903	ng/mL	0.5000
N-EtFOSAA-d5	Auto	5.137	424238	3308668	1	5.0819	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.137	424238	424238	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.211	26185	295807	23	0.5260	ng/mL	0.4686
4_2-FTS-13C	Auto	4.211	295807	3308668	1	4.4660	ng/mL	5.0000

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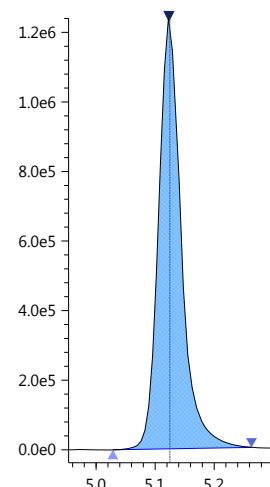
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.211	295807	295807	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.578	30573	255138	24	0.4771	ng/mL	0.4756
6_2-FTS-13C	Auto	4.579	255138	3308668	1	5.0030	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.579	255138	255138	24	5.0000	ng/mL	5.0000
8_2-FTS_1	M	4.941	14830	210384	25	0.4499	ng/mL	0.4800
8_2-FTS-13C	Auto	4.941	210384	3308668	1	5.3185	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.941	210384	210384	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.303	14426	210384	25	0.4626	ng/mL	0.4831
HPFO_DA	Auto	4.308	88023	792924	26	0.5172	ng/mL	0.5000
HPFO_DA-13C	Auto	4.308	792924	3308668	1	5.0303	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.308	792924	792924	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.123 Area 3308668

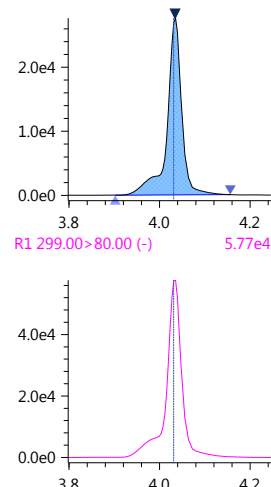
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.4522
RT 4.034 Area 62003
R#1 212.93 (0.00)

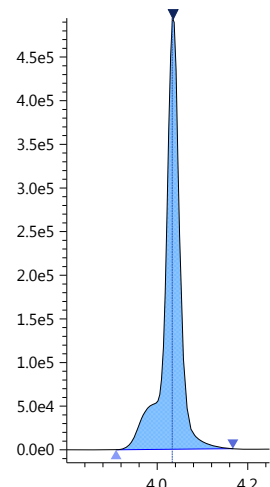
Q 298.80>99.00 (-)



PFBS-13C

Conc 5.0930
RT 4.035 Area 1133470

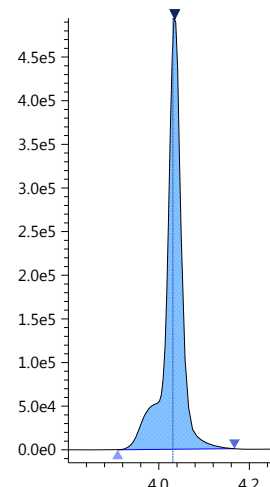
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.035 Area 1133470

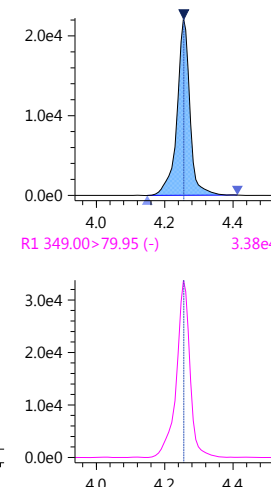
ISTD 301.80>80.00 (-)



PFPoS

Conc 0.4895
RT 4.256 Area 57630
R#1 151.77 (0.00)

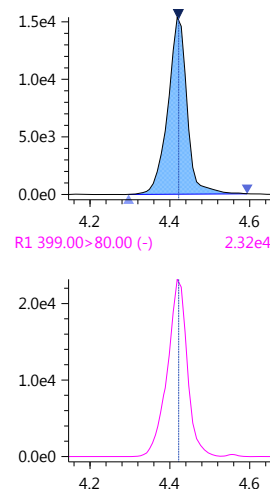
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.4691
RT 4.421 Area 51313
R#1 150.72 (0.00)

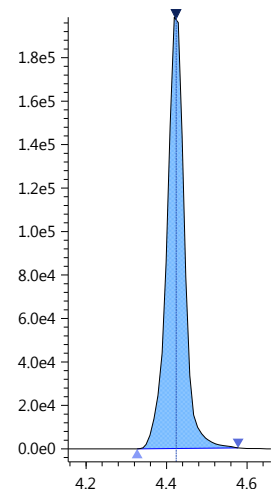
Q 399.00>99.00 (-)



PFHxS-180

Conc 5.1265
RT 4.424 Area 604484

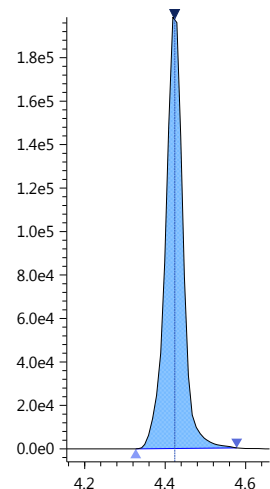
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.424 Area 604484

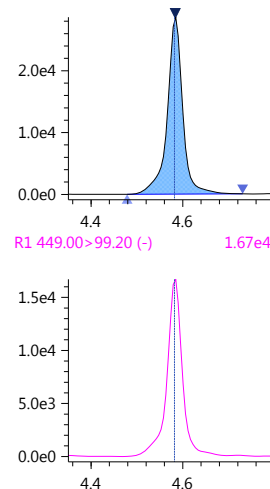
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.4726
RT 4.584 Area 67122
R#1 58.25 (0.00)

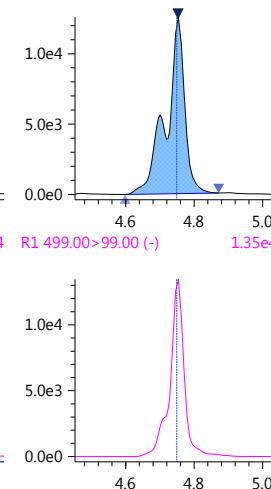
Q 449.00>80.15 (-)



PFOS_1

Conc 0.4648
RT 4.753 Area 47160
R#1 106.27 (0.00)

Q 499.00>80.00 (-)



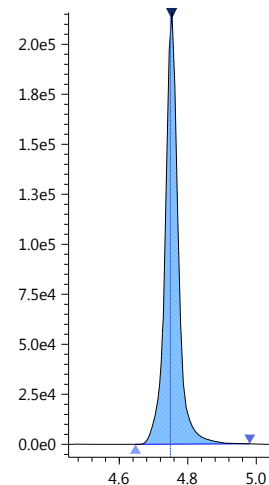
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PFOS-13C

Conc 4.9416
 RT 4.753 Area 575035

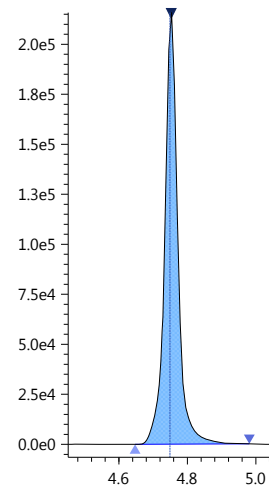
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.753 Area 575035

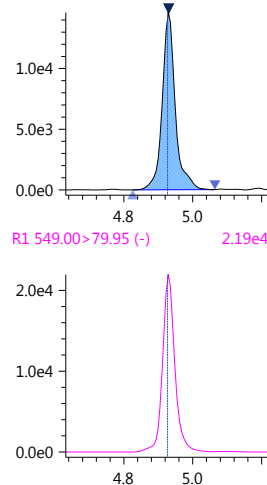
ISTD 502.80>80.05 (-)



PFNS

Conc 0.5111
 RT 4.930 Area 38602
 R#1 150.76 (0.00)

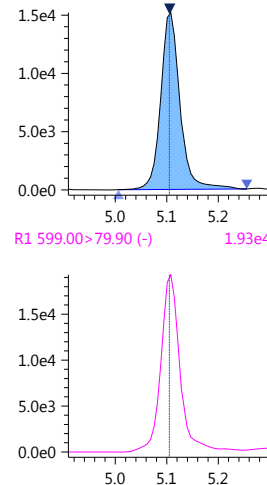
Q 549.00>99.00 (-)



PFDS_1

Conc 0.5065
 RT 5.106 Area 39590
 R#1 127.40 (0.00)

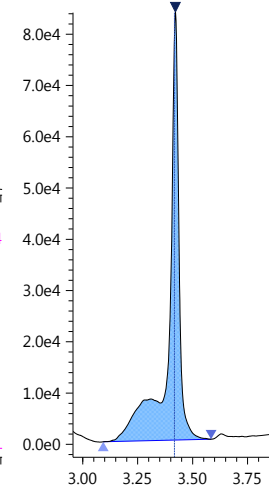
Q 599.00>99.10 (-)



PFBA

Conc 0.4865
 RT 3.422 Area 273128

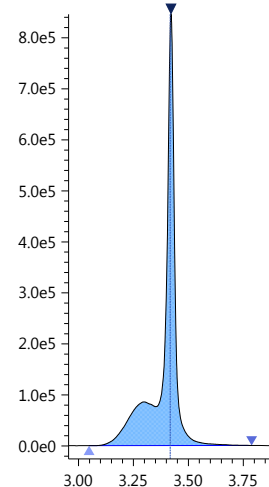
Q 213.00>169.10 (-)



PFBA-13C

Conc 5.1238
 RT 3.421 Area 2857021

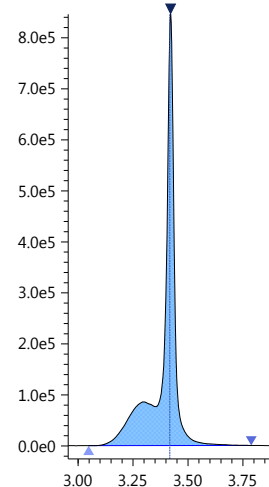
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PFBA-13C_IS

Conc 5.0000
 RT 3.421 Area 2857021

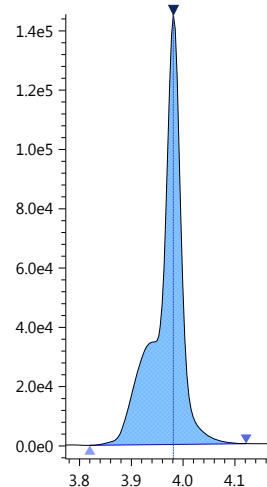
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.4966
 RT 3.981 Area 412645

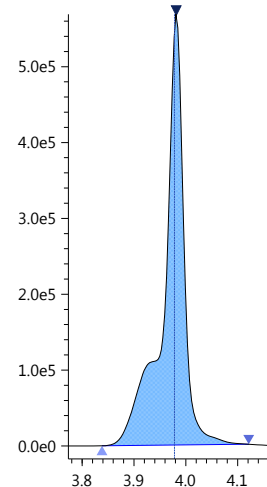
Q 263.05>219.10 (-)



PFPeA-13C

Conc 5.0959
 RT 3.981 Area 1527945

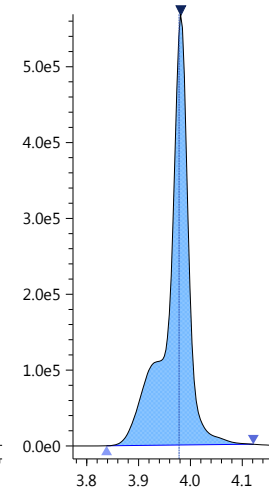
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.981 Area 1527945

ISTD 267.90>223.00 (-)



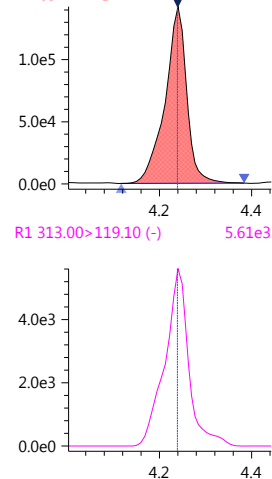
Insight Report

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PFHxA

Conc 0.4911
RT 4.240 Area 463248
R#1 3.94 (0.00)

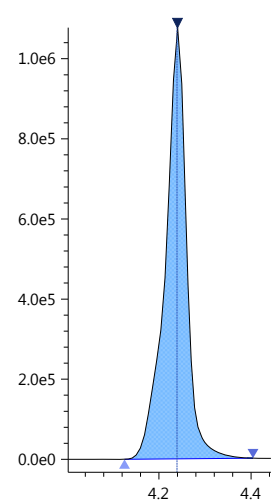
Q 313.00>269.00 (-) 1.43e5
After-BLC



PFHxA-13C

Conc 5.1044
RT 4.240 Area 3431316

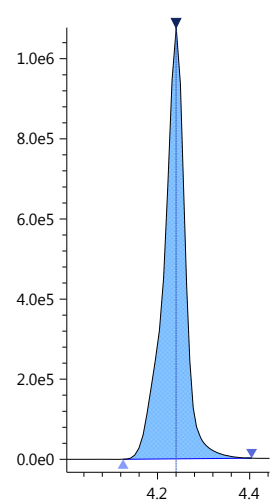
Q 314.90>270.10 (-) 1.08e6



PFHxA-13C_IS

Conc 5.0000
RT 4.240 Area 3431316

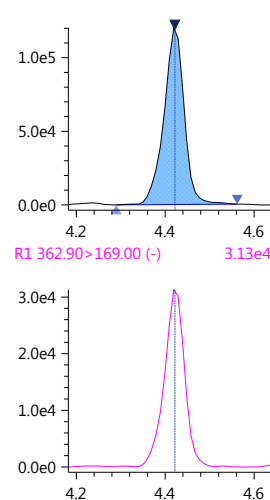
ISTD 314.90>270.10 (-) 1.08e6



PFHpA

Conc 0.4768
RT 4.422 Area 381980
R#1 26.00 (0.00)

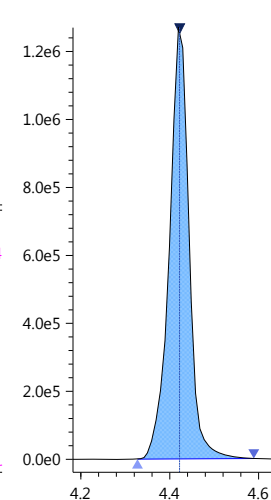
Q 362.90>319.00 (-) 1.20e5



PFHpA-13C

Conc 5.4573
RT 4.423 Area 3927571

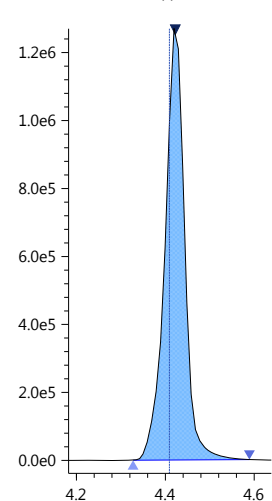
Q 366.90>322.10 (-) 1.27e6



PFHpA-13C_IS

Conc 5.0000
RT 4.423 Area 3927571

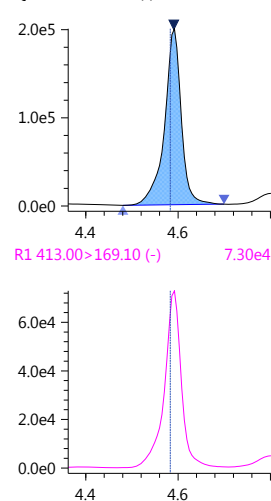
ISTD 366.90>322.10 (-) 1.27e6



PFOA

Conc 0.5042
RT 4.591 Area 502368
R#1 36.41 (0.00)

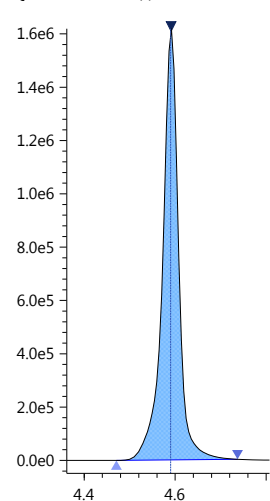
Q 413.00>369.00 (-) 2.01e5



PFOA-13C

Conc 5.1519
RT 4.591 Area 3960880

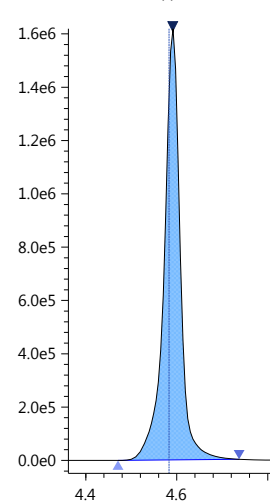
Q 416.80>372.05 (-) 1.62e6



PFOA-13C_IS

Conc 5.0000
RT 4.591 Area 3960880

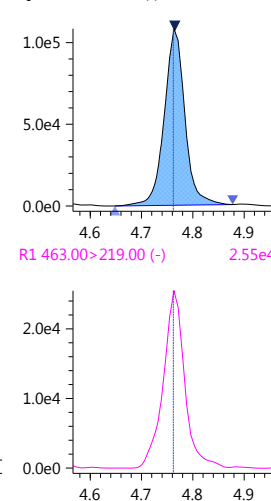
ISTD 416.80>372.05 (-) 1.62e6



PFNA

Conc 0.4875
RT 4.765 Area 300456
R#1 23.48 (0.00)

Q 463.00>418.90 (-) 1.09e5



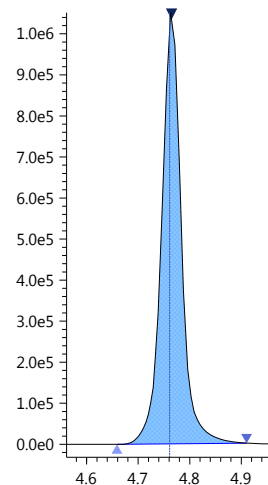
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PFNA-13C

Conc 5.3290
 RT 4.765 Area 2803142

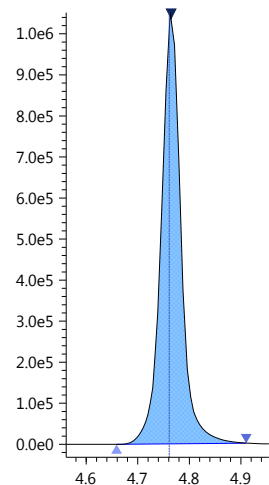
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
 RT 4.765 Area 2803142

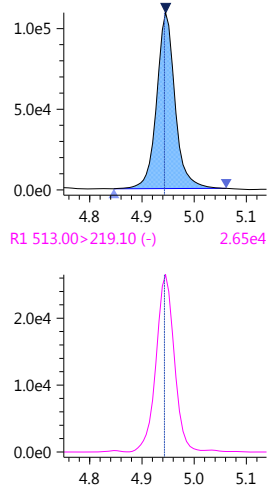
ISTD 467.80>423.00 (-)



PFDA

Conc 0.4936
 RT 4.946 Area 266699
 R#1 24.06 (0.00)

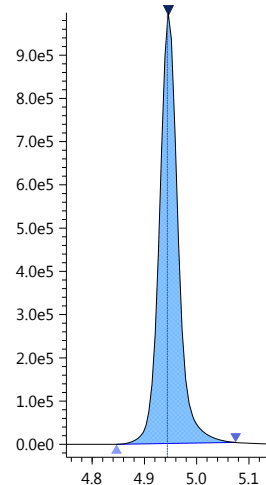
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.1899
 RT 4.946 Area 2487081

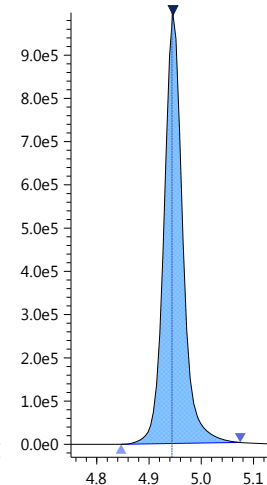
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 RT 4.946 Area 2487081

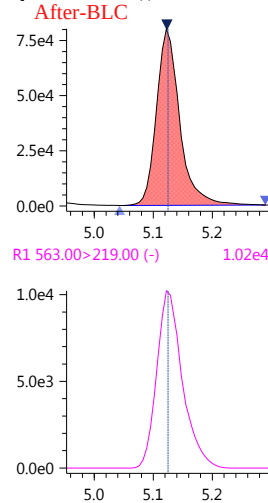
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.4875
 RT 5.123 Area 218627
 R#1 12.88 (0.00)

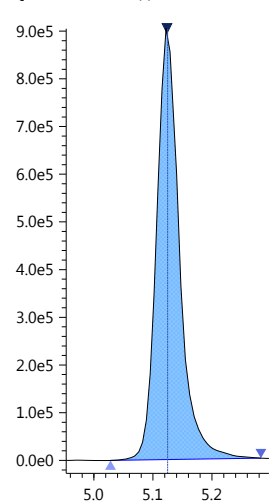
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.9046
 RT 5.124 Area 2434953

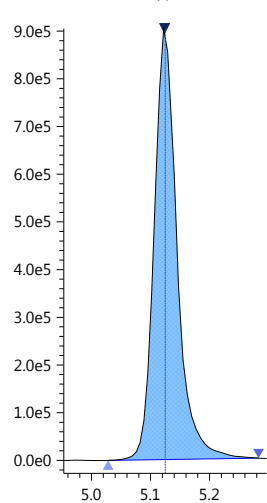
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 RT 5.124 Area 2434953

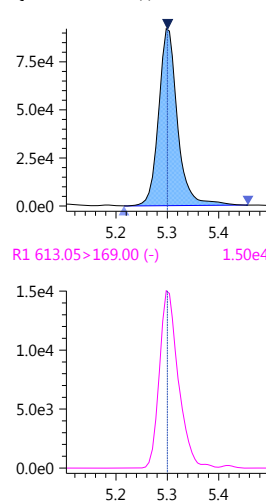
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.5239
 RT 5.300 Area 234745
 R#1 16.46 (0.00)

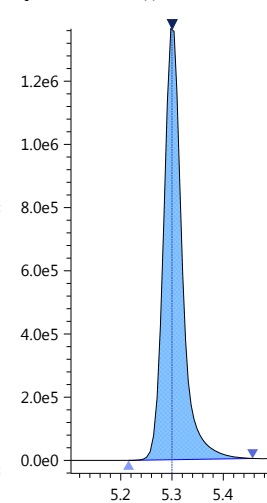
Q 613.05>569.00 (-)



PFDaA-13C

Conc 5.2120
 RT 5.301 Area 3429450

Q 614.80>569.95 (-)



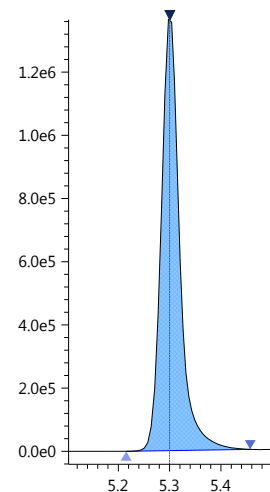
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PFD_oA-13C_{IS}

Conc 5.0000
 RT 5.301 Area 3429450

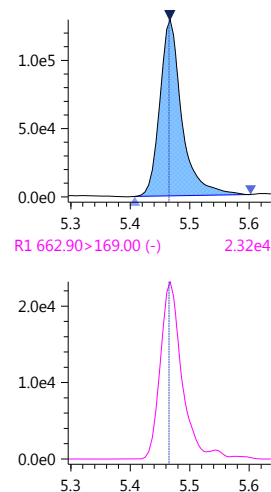
ISTD 614.80>569.95 (-) 1.37e6



PFT_rDA

Conc 0.5243
 RT 5.466 Area 331075
 R#1 17.93 (0.00)

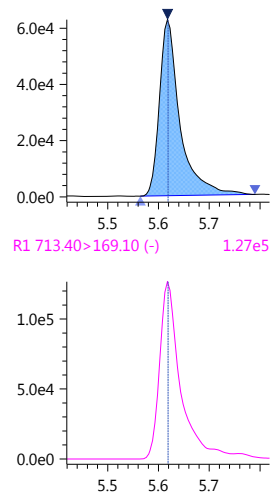
Q 663.00>618.90 (-) 1.30e5



PFT_eDA

Conc 0.5023
 RT 5.618 Area 175900
 R#1 202.98 (0.00)

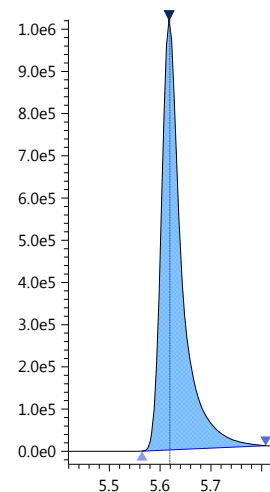
Q 713.40>669.00 (-) 6.30e4



PFT_eDA-13C

Conc 5.0096
 RT 5.618 Area 2865259

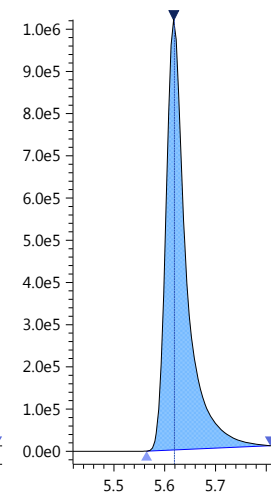
Q 714.70>669.90 (-) 1.02e6



PFT_eDA-13C_{IS}

Conc 5.0000
 RT 5.618 Area 2865259

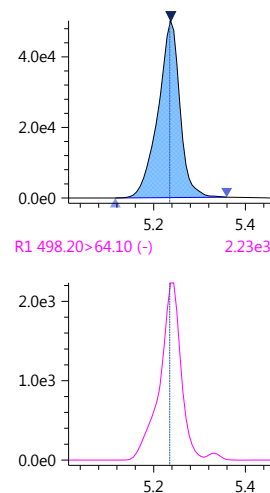
ISTD 714.70>669.90 (-) 1.02e6



FOSA

Conc 0.5045
 RT 5.237 Area 165355
 R#1 4.46 (0.00)

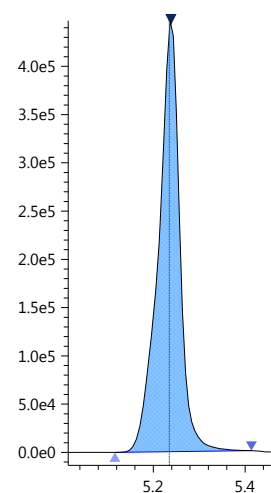
Q 498.20>78.00 (-) 5.03e4



FOSA-13C

Conc 5.1762
 RT 5.238 Area 1439123

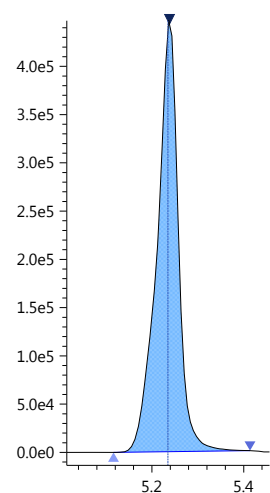
Q 506.00>78.05 (-) 4.47e5



FOSA-13C_{IS}

Conc 5.0000
 RT 5.238 Area 1439123

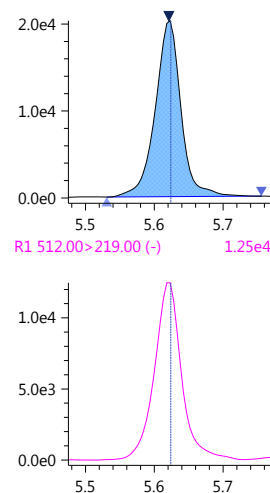
ISTD 506.00>78.05 (-) 4.47e5



N-MeFOSA

Conc 0.4878
 RT 5.621 Area 52435
 R#1 62.14 (0.00)

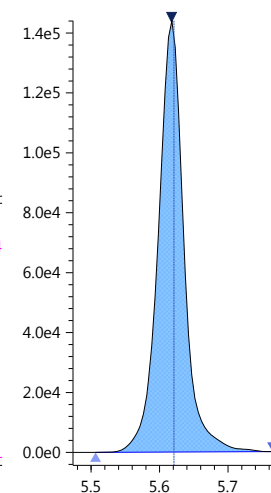
Q 512.00>169.10 (-) 2.04e4



N-MeFOSA-d3

Conc 5.1729
 RT 5.617 Area 373562

Q 514.90>168.90 (-) 1.44e5



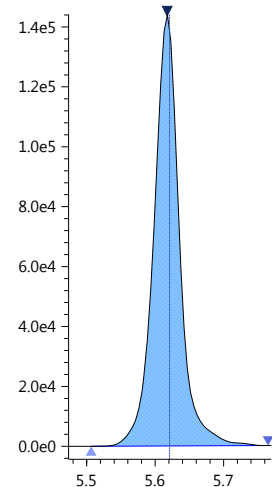
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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.617 Area 373562

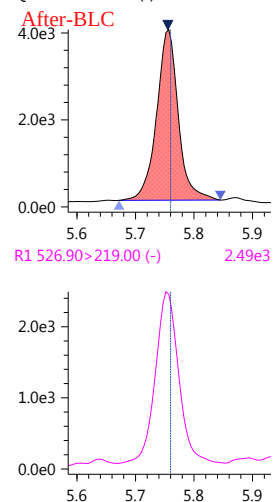
ISTD 514.90>168.90 (-) 1.44e5



N-EtFOSA

Conc 0.4700
 RT 5.755 Area 10083
 R#1 58.76 (0.00)

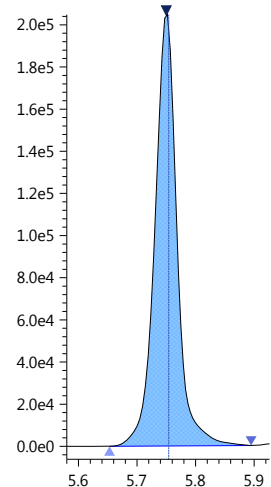
Q 526.90>169.10 (-) 4.08e3



N-EtFOSA-d9

Conc 5.2006
 RT 5.750 Area 539572

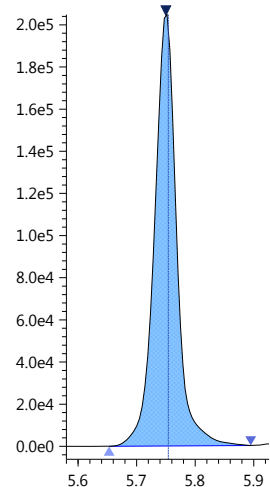
Q 530.90>169.15 (-) 2.05e5



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.750 Area 539572

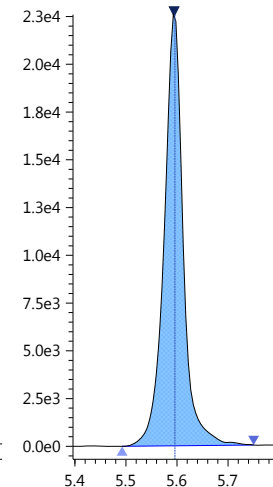
ISTD 530.90>169.15 (-) 2.05e5



N-MeFOSE

Conc 0.5229
 RT 5.594 Area 58810

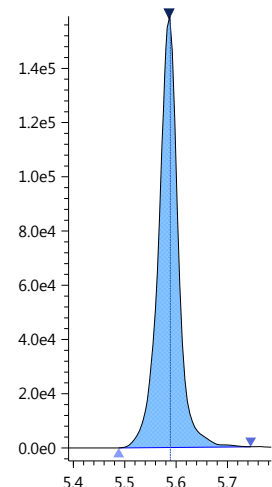
Q 616.00>59.00 (-) 2.26e4



N-MeFOSE-d7

Conc 4.8295
 RT 5.586 Area 421066

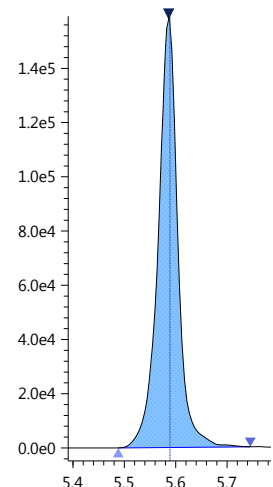
Q 622.70>59.10 (-) 1.59e5



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.586 Area 421066

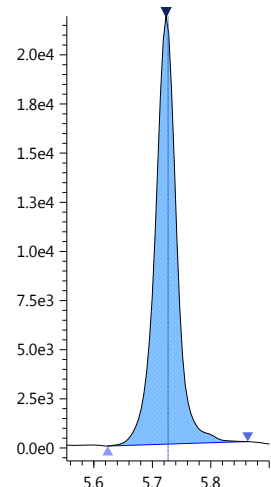
ISTD 622.70>59.10 (-) 1.59e5



N-EtFOSE

Conc 0.5103
 RT 5.724 Area 55884

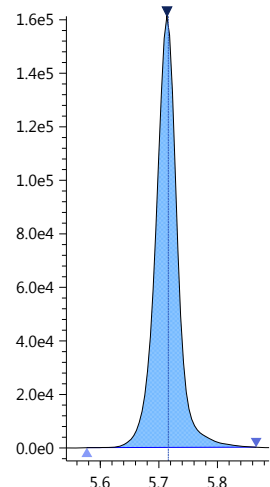
Q 630.00>58.90 (-) 2.20e4



N-EtFOSE-d9

Conc 4.9327
 RT 5.714 Area 415104

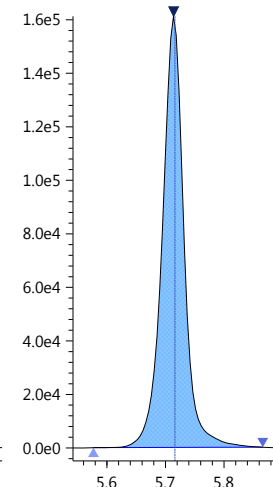
Q 638.70>59.10 (-) 1.61e5



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.714 Area 415104

ISTD 638.70>59.10 (-) 1.61e5

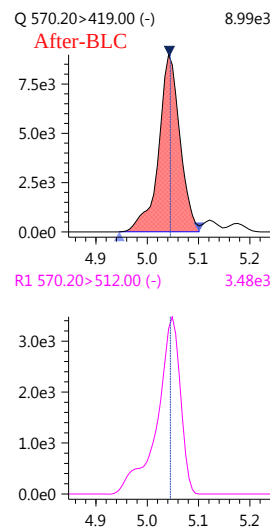


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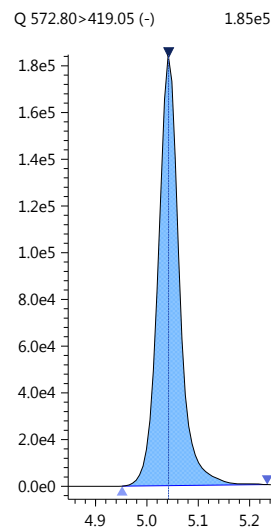
N-MeFOSAA

Conc 0.4265
 RT 5.043 Area 25910
 R#1 35.86 (0.00)



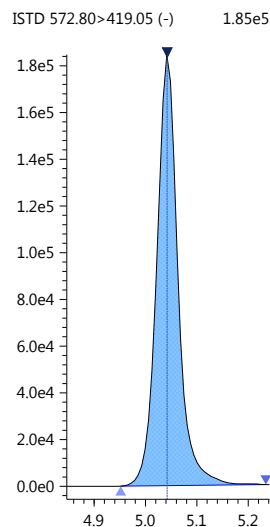
N-MeFOSAA-d3

Conc 5.1890
 RT 5.042 Area 532089



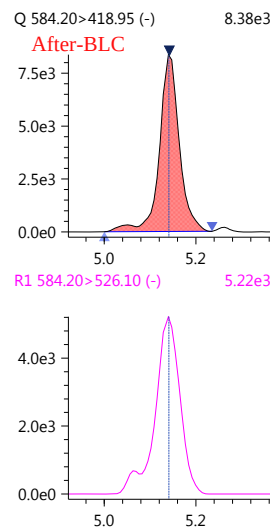
N-MeFOSAA-d3_IS

Conc 5.0000
 RT 5.042 Area 532089



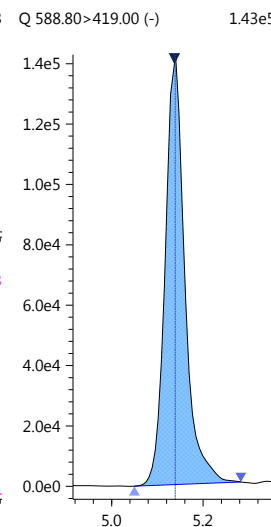
N-EtFOSAA

Conc 0.4903
 RT 5.142 Area 25297
 R#1 63.78 (0.00)



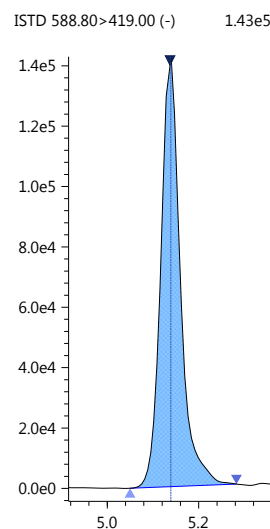
N-EtFOSAA-d5

Conc 5.0819
 RT 5.137 Area 424238



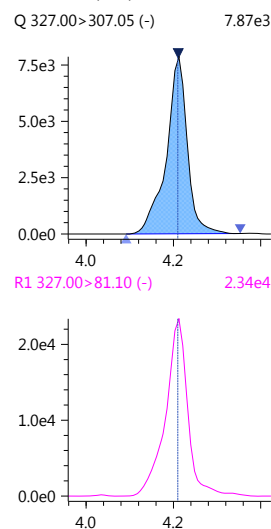
N-EtFOSAA-d5_IS

Conc 5.0000
 RT 5.137 Area 424238



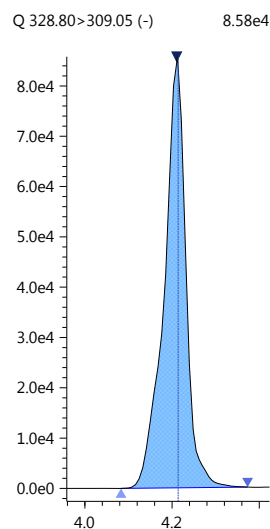
4_2-FTS_1

Conc 0.5260
 RT 4.211 Area 26185
 R#1 296.78 (0.00)



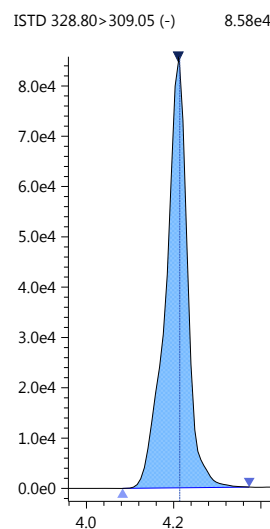
4_2-FTS-13C

Conc 4.4660
 RT 4.211 Area 295807



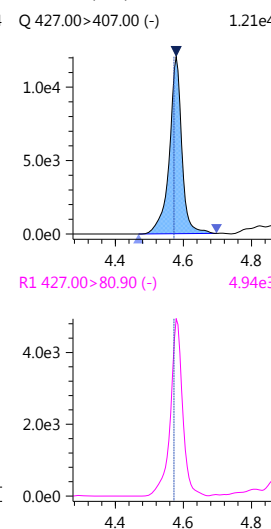
4_2-FTS-13C_IS

Conc 5.0000
 RT 4.211 Area 295807



6_2-FTS_1

Conc 0.4771
 RT 4.578 Area 30573
 R#1 40.85 (0.00)

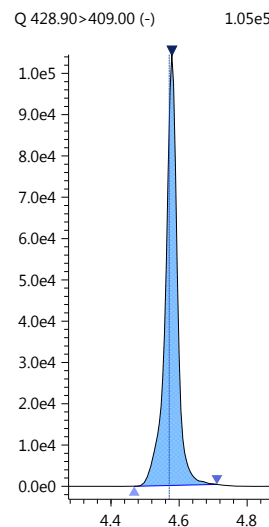


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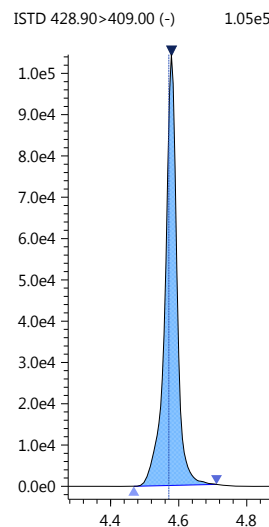
6_2-FTS-13C

Conc 5.0030
 RT 4.579 Area 255138



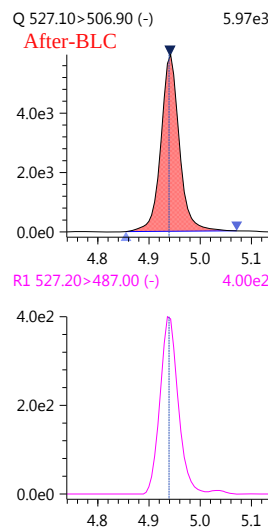
6_2-FTS-13C_IS

Conc 5.0000
 RT 4.579 Area 255138



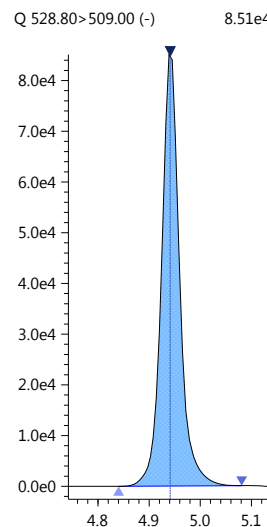
8_2-FTS_1

Conc 0.4499
 RT 4.941 Area 14830
 R#1 6.60 (0.00)



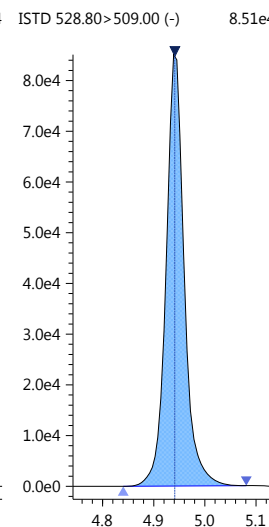
8_2-FTS-13C

Conc 5.3185
 RT 4.941 Area 210384



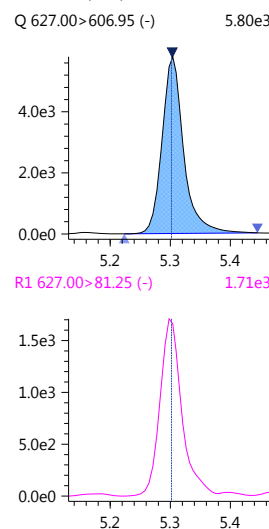
8_2-FTS-13C_IS

Conc 5.0000
 RT 4.941 Area 210384



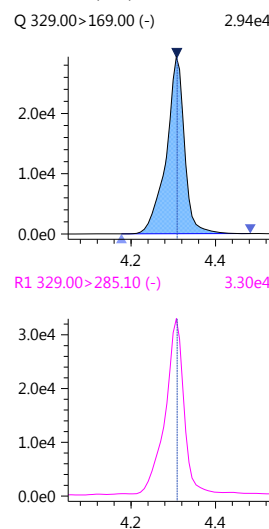
10_2-FtS_1

Conc 0.4626
 RT 5.303 Area 14426
 R#1 28.63 (0.00)



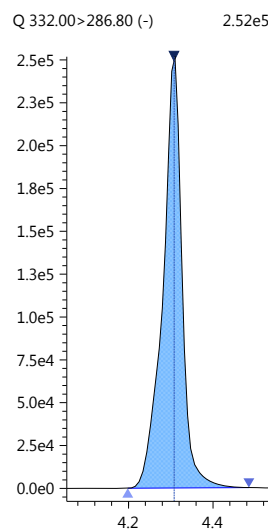
HPFO_DA

Conc 0.5172
 RT 4.308 Area 88023
 R#1 110.93 (0.00)



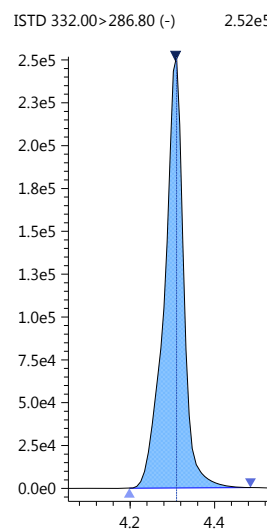
HPFO_DA-13C

Conc 5.0303
 RT 4.308 Area 792924



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.308 Area 792924



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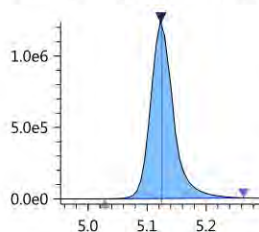
Printed at 12/3/2019 9:26:07 AM

191202_020

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Date acquired: 12/2/2019 6:00:38 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_020.lcd
Vial: 3 | Inj. Volume: 15.0000uL | Tray: 0

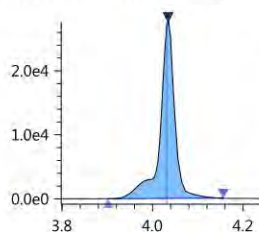
13C7-PFUnDA_IS

Conc 5.0000
RT 5.123 Area 3308668
ISTD 570.00>525.00 (-)



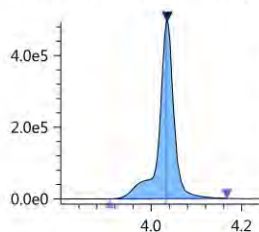
PFBS_1

Conc 0.4522
RT 4.034 Area 62003
Q 298.80>99.00 (-)



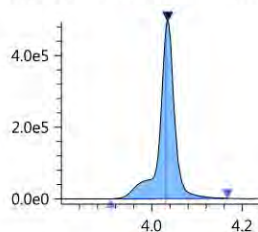
PFBS-13C

Conc 5.0930
RT 4.035 Area 1133470
Q 301.80>80.00 (-)



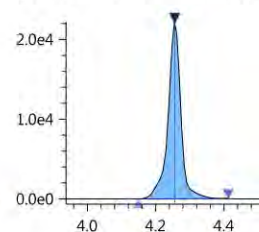
PFBS-13C_IS

Conc 5.0000
RT 4.035 Area 1133470
ISTD 301.80>80.00 (-)



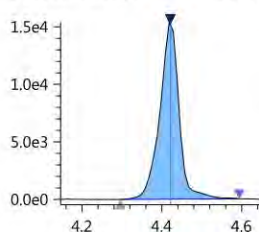
PFPeS

Conc 0.4920
RT 4.256 Area 57630
Q 349.00>99.00 (-)



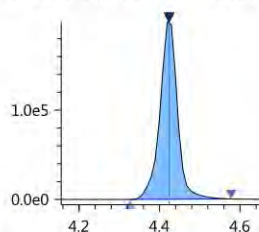
PFHxS_1

Conc 0.4698
RT 4.421 Area 51313
Q 399.00>99.00 (-)



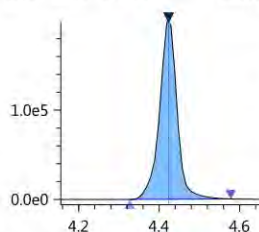
PFHxS-180

Conc 5.1265
RT 4.424 Area 604484
Q 402.70>84.05 (-)



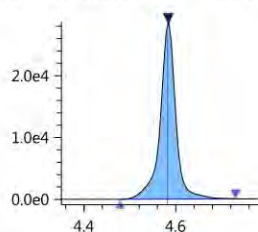
PFHxS-180_IS

Conc 5.0000
RT 4.424 Area 604484
ISTD 402.70>84.05 (-)



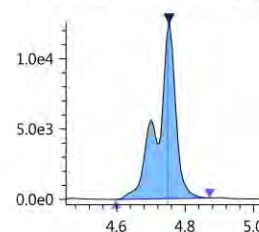
PFHpS_1

Conc 0.4727
RT 4.584 Area 67122
Q 449.00>80.15 (-)



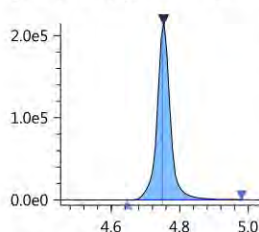
PFOS_1

Conc 0.4677
RT 4.753 Area 47160
Q 499.00>80.00 (-)



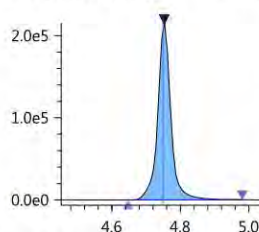
PFOS-13C

Conc 4.9416
RT 4.753 Area 575035
Q 502.80>80.05 (-)



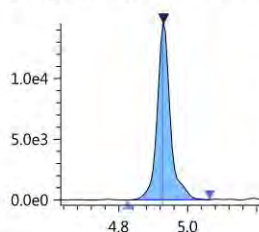
PFOS-13C_IS

Conc 5.0000
RT 4.753 Area 575035
ISTD 502.80>80.05 (-)



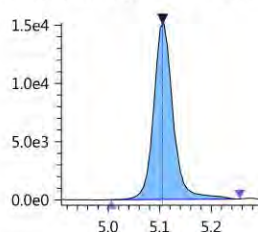
PFNS

Conc 0.5075
RT 4.930 Area 38602
Q 549.00>99.00 (-)



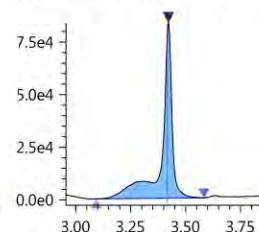
PFDS_1

Conc 0.5074
RT 5.106 Area 39590
Q 599.00>99.10 (-)



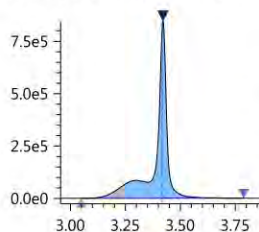
PFBA

Conc 0.4865
RT 3.422 Area 273128
Q 213.00>169.10 (-)



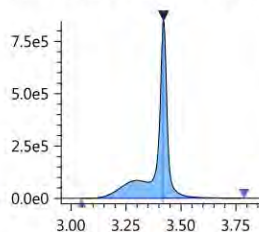
PFBA-13C

Conc 5.1238
RT 3.421 Area 2857021
Q 216.90>172.15 (-)



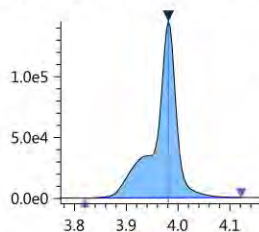
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Conc 5.0000
RT 3.421 Area 2857021
ISTD 216.90>172.15 (-)



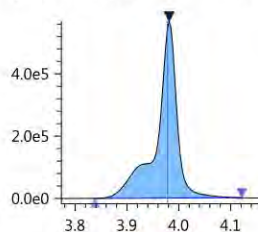
PFPeA

Conc 0.4966
RT 3.981 Area 412645
Q 263.05>219.10 (-)



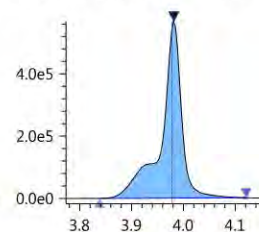
PFPeA-13C

Conc 5.0959
RT 3.981 Area 1527945
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.981 Area 1527945
ISTD 267.90>223.00 (-)

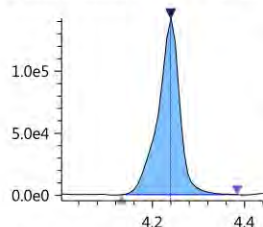


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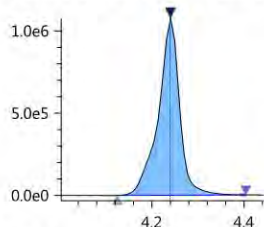
PFHxA

Conc 0.4888
RT 4.240 Area 461083
Q 313.00>269.00 (-)



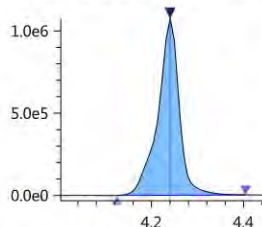
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Conc 5.1044
RT 4.240 Area 3431316
Q 314.90>270.10 (-)



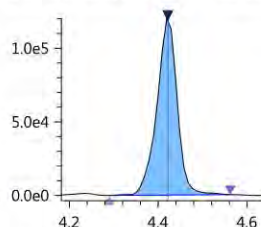
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Conc 5.0000
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ISTD 314.90>270.10 (-)



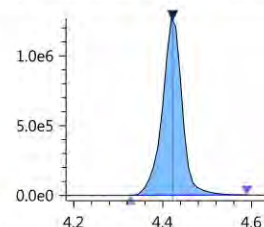
PFHpA

Conc 0.4768
RT 4.422 Area 381980
Q 362.90>319.00 (-)



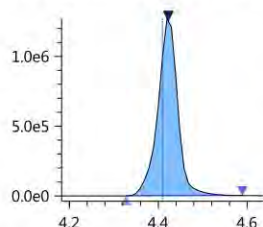
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Conc 5.4573
RT 4.423 Area 3927571
Q 366.90>322.10 (-)



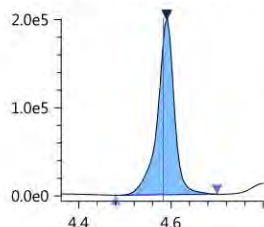
PFHpA-13C_IS

Conc 5.0000
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ISTD 366.90>322.10 (-)



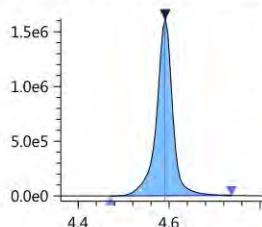
PFOA

Conc 0.5043
RT 4.591 Area 502368
Q 413.00>369.00 (-)



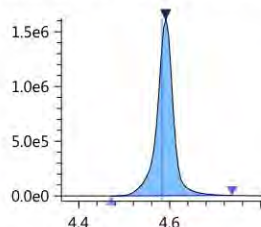
PFOA-13C

Conc 5.1519
RT 4.591 Area 3960880
Q 416.80>372.05 (-)



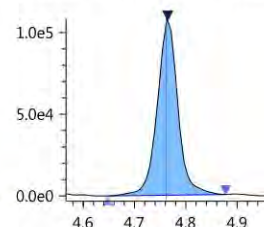
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Conc 5.0000
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ISTD 416.80>372.05 (-)



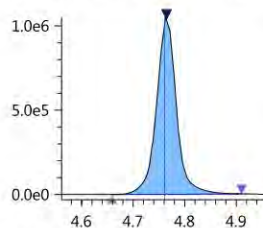
PFNA

Conc 0.4877
RT 4.765 Area 300456
Q 463.00>418.90 (-)



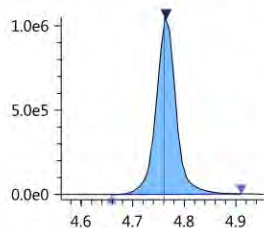
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Conc 5.3290
RT 4.765 Area 2803142
Q 467.80>423.00 (-)



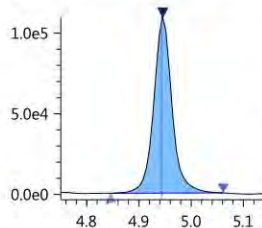
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Conc 5.0000
RT 4.765 Area 2803142
ISTD 467.80>423.00 (-)



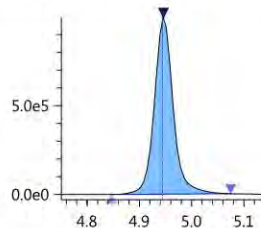
PFDA

Conc 0.4931
RT 4.946 Area 266699
Q 513.00>468.80 (-)



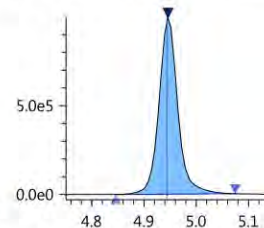
PFDA-13C

Conc 5.1899
RT 4.946 Area 2487081
Q 514.80>469.95 (-)



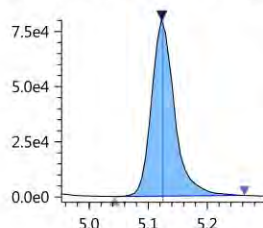
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Conc 5.0000
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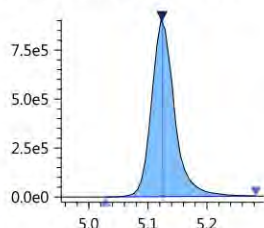
PFUnA

Conc 0.4830
RT 5.123 Area 216623
Q 563.00>518.90 (-)



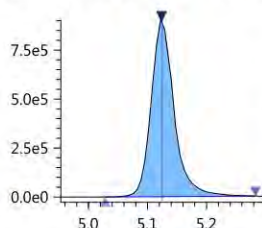
PFUnA-13C

Conc 4.9046
RT 5.124 Area 2434953
Q 564.80>519.95 (-)



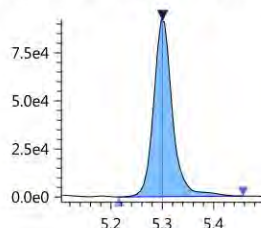
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Conc 5.0000
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ISTD 564.80>519.95 (-)



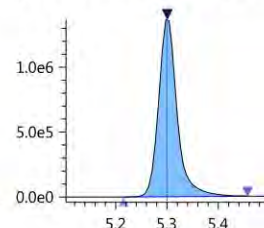
PFDaA

Conc 0.5228
RT 5.300 Area 234745
Q 613.05>569.00 (-)



PFDaA-13C

Conc 5.2120
RT 5.301 Area 3429450
Q 614.80>569.95 (-)

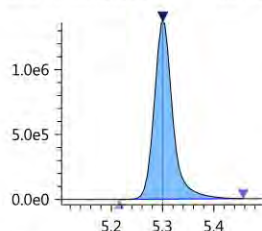


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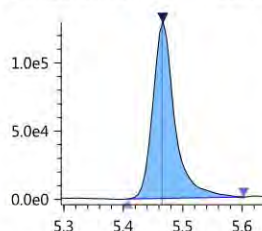
PFDaA-13C_IS

Conc 5.0000
RT 5.301 Area 3429450
ISTD 614.80>569.95 (-)



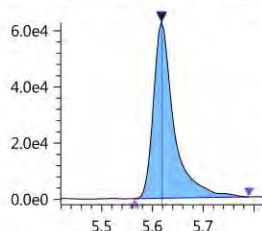
PFTrDA

Conc 0.5243
RT 5.466 Area 331075
Q 663.00>618.90 (-)



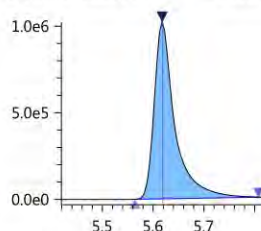
PFTeDA

Conc 0.5006
RT 5.618 Area 175900
Q 713.40>669.00 (-)



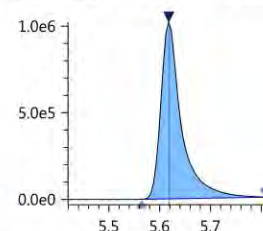
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Conc 5.0096
RT 5.618 Area 2865259
Q 714.70>669.90 (-)



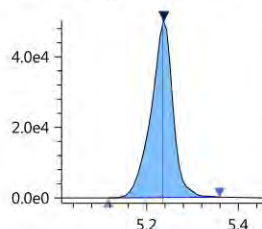
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Conc 5.0000
RT 5.618 Area 2865259
ISTD 714.70>669.90 (-)



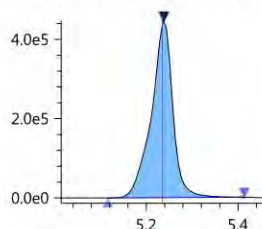
FOSA

Conc 0.5045
RT 5.237 Area 165355
Q 498.20>78.00 (-)



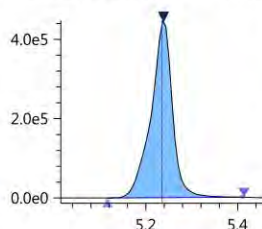
FOSA-13C

Conc 5.1762
RT 5.238 Area 1439123
Q 506.00>78.05 (-)



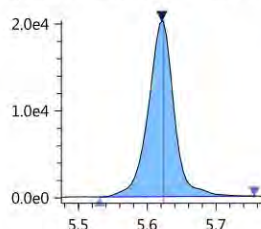
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ISTD 506.00>78.05 (-)



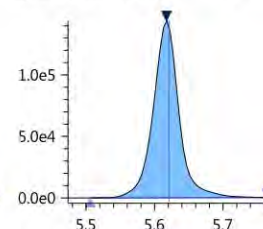
N-MeFOSA

Conc 0.4861
RT 5.621 Area 52435
Q 512.00>169.10 (-)



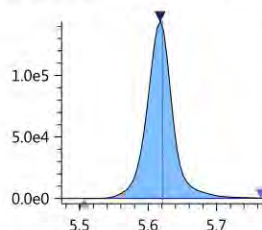
N-MeFOSA-d3

Conc 5.1729
RT 5.617 Area 373562
Q 514.90>168.90 (-)



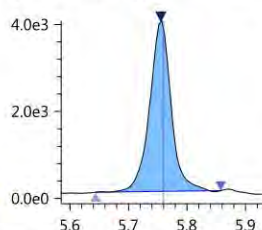
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.617 Area 373562
ISTD 514.90>168.90 (-)



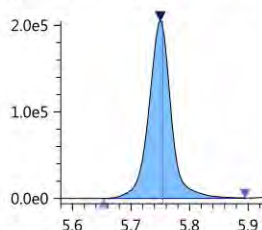
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Conc 0.4695
RT 5.755 Area 9969
Q 526.90>169.10 (-)



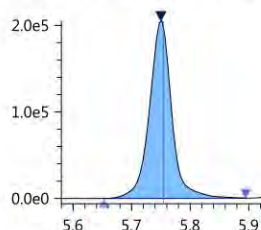
N-EtFOSA-d9

Conc 5.2006
RT 5.750 Area 539572
Q 530.90>169.15 (-)



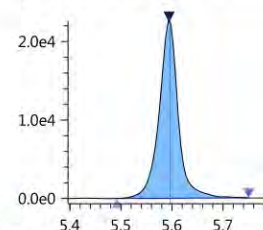
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ISTD 530.90>169.15 (-)



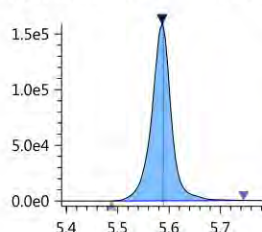
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Conc 0.5226
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Q 616.00>59.00 (-)



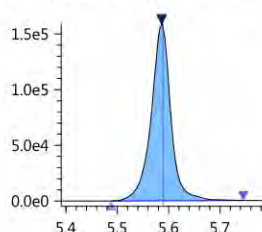
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Conc 4.8295
RT 5.586 Area 421066
Q 622.70>59.10 (-)



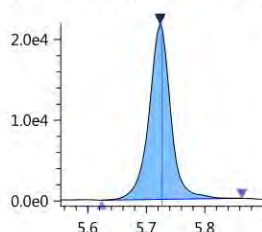
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Conc 5.0000
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ISTD 622.70>59.10 (-)



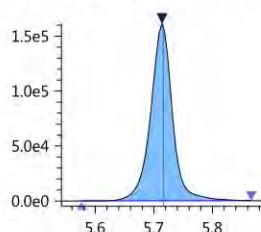
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Conc 0.5098
RT 5.724 Area 55884
Q 630.00>58.90 (-)



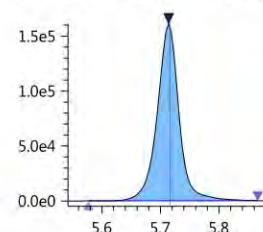
N-EtFOSE-d9

Conc 4.9327
RT 5.714 Area 415104
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.714 Area 415104
ISTD 638.70>59.10 (-)

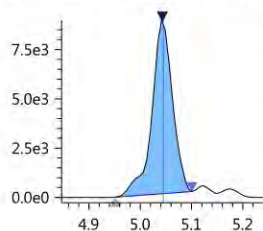


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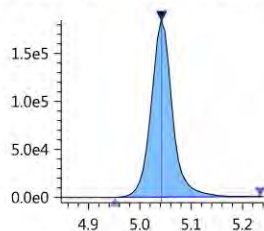
N-MeFOSAA

Conc 0.4081
RT 5.043 Area 24610
Q 570.20>419.00 (-)



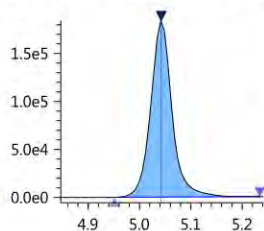
N-MeFOSAA-d3

Conc 5.1890
RT 5.042 Area 532089
Q 572.80>419.05 (-)



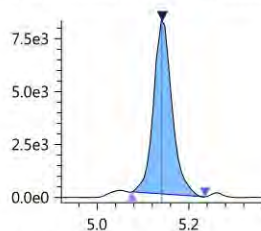
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.042 Area 532089
ISTD 572.80>419.05 (-)



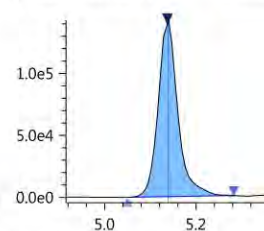
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Conc 0.4741
RT 5.142 Area 23145
Q 584.20>418.95 (-)



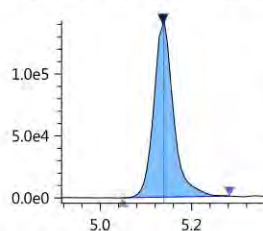
N-EtFOSAA-d5

Conc 5.0819
RT 5.137 Area 424238
Q 588.80>419.00 (-)



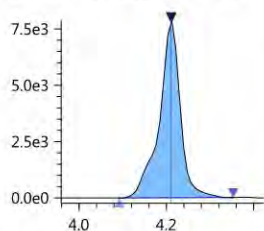
N-EtFOSAA-d5_IS

Conc 5.0000
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ISTD 588.80>419.00 (-)



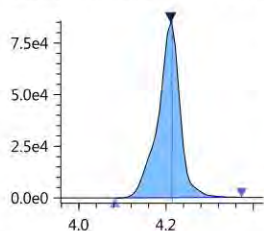
4_2-FTS_1

Conc 0.5262
RT 4.211 Area 26185
Q 327.00>307.05 (-)



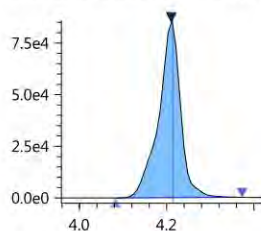
4_2-FTS-13C

Conc 4.4660
RT 4.211 Area 295807
Q 328.80>309.05 (-)



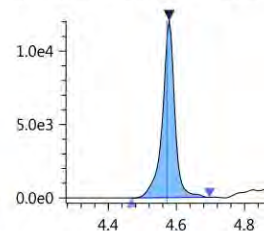
4_2-FTS-13C_IS

Conc 5.0000
RT 4.211 Area 295807
ISTD 328.80>309.05 (-)



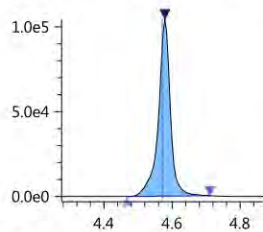
6_2-FTS_1

Conc 0.4786
RT 4.578 Area 30573
Q 427.00>407.00 (-)



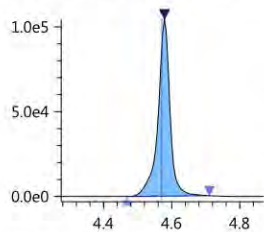
6_2-FTS-13C

Conc 5.0030
RT 4.579 Area 255138
Q 428.90>409.00 (-)



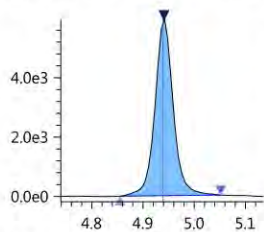
6_2-FTS-13C_IS

Conc 5.0000
RT 4.579 Area 255138
ISTD 428.90>409.00 (-)



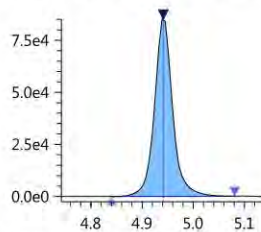
8_2-FTS_1

Conc 0.4471
RT 4.941 Area 14722
Q 527.10>506.90 (-)



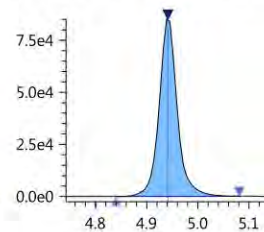
8_2-FTS-13C

Conc 5.3185
RT 4.941 Area 210384
Q 528.80>509.00 (-)



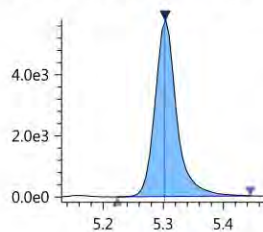
8_2-FTS-13C_IS

Conc 5.0000
RT 4.941 Area 210384
ISTD 528.80>509.00 (-)



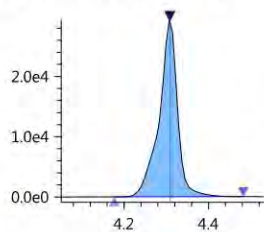
10_2-FtS_1

Conc 0.4626
RT 5.303 Area 14426
Q 627.00>606.95 (-)



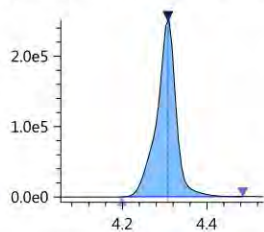
HPFO_DA

Conc 0.5172
RT 4.308 Area 88023
Q 329.00>169.00 (-)



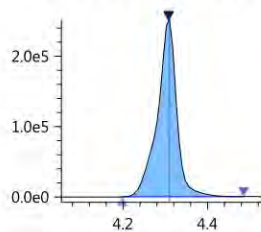
HPFO_DA-13C

Conc 5.0303
RT 4.308 Area 792924
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.308 Area 792924
ISTD 332.00>286.80 (-)



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191202_021

Sample ID: 1.0 PPB ICAL

Date acquired: 12/2/2019 6:11:06 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_021.lcd

Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.124	3574220	3574220	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.032	129175	1246070	2	0.8570	ng/mL	0.8874
PFBS-13C	Auto	4.033	1246070	3574220	1	5.1829	ng/mL	5.0000
PFBS-13C_IS	Auto	4.033	1246070	1246070	2	5.0000	ng/mL	5.0000
PFPeS	M	4.256	125427	1246070	2	0.9690	ng/mL	0.9409
PFHxS_1	Auto	4.421	106797	662460	3	0.8909	ng/mL	0.9131
PFHxS-18O	Auto	4.423	662460	3574220	1	5.2008	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.423	662460	662460	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.582	151760	662460	3	0.9750	ng/mL	0.9534
PFOS_1	Auto	4.750	102413	675865	4	0.8587	ng/mL	0.9292
PFOS-13C	Auto	4.751	675865	3574220	1	5.3765	ng/mL	5.0000
PFOS-13C_IS	Auto	4.751	675865	675865	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.929	78039	675865	4	0.8792	ng/mL	0.9616
PFDS_1	Auto	5.106	87320	675865	4	0.9504	ng/mL	0.9647
PFBA	Auto	3.418	586993	3076140	5	0.9711	ng/mL	1.0000
PFBA-13C	Auto	3.417	3076140	3574220	1	5.1069	ng/mL	5.0000
PFBA-13C_IS	Auto	3.417	3076140	3076140	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.980	808956	1675267	6	0.9794	ng/mL	1.0000
PFPeA-13C	Auto	3.979	1675267	3574220	1	5.1721	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.979	1675267	1675267	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.240	915798	3728268	7	0.9175	ng/mL	1.0000
PFHxA-13C	Auto	4.240	3728268	3574220	1	5.1341	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.240	3728268	3728268	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.422	818035	4194405	8	0.9839	ng/mL	1.0000
PFHpA-13C	Auto	4.422	4194405	3574220	1	5.3950	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.422	4194405	4194405	8	5.0000	ng/mL	5.0000
PFOA	M	4.589	1065055	4412903	9	0.9856	ng/mL	1.0000
PFOA-13C	Auto	4.589	4412903	3574220	1	5.3134	ng/mL	5.0000
PFOA-13C_IS	Auto	4.589	4412903	4412903	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.762	627343	2890350	10	1.0187	ng/mL	1.0000
PFNA-13C	Auto	4.762	2890350	3574220	1	5.0865	ng/mL	5.0000
PFNA-13C_IS	Auto	4.762	2890350	2890350	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.945	537015	2677792	11	0.9400	ng/mL	1.0000
PFDA-13C	Auto	4.945	2677792	3574220	1	5.1727	ng/mL	5.0000
PFDA-13C_IS	Auto	4.945	2677792	2677792	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.124	485976	2841784	12	0.9652	ng/mL	1.0000
PFUnA-13C	Auto	5.124	2841784	3574220	1	5.2988	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.124	2841784	2841784	12	5.0000	ng/mL	5.0000
PFDoA	M	5.299	449357	3715472	13	0.9450	ng/mL	1.0000
PFDoA-13C	Auto	5.300	3715472	3574220	1	5.2271	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.300	3715472	3715472	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.466	688467	3196242	14	1.0057	ng/mL	1.0000
PFTeDA	Auto	5.617	336467	3196242	14	0.9691	ng/mL	1.0000
PFTeDA-13C	Auto	5.617	3196242	3574220	1	5.1731	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.617	3196242	3196242	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.239	342673	1570401	16	0.9581	ng/mL	1.0000
FOSA-13C	Auto	5.238	1570401	3574220	1	5.2288	ng/mL	5.0000
FOSA-13C_IS	Auto	5.238	1570401	1570401	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.621	120635	423247	17	0.9906	ng/mL	1.0000
N-MeFOSA-d3	Auto	5.619	423247	3574220	1	5.4255	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.619	423247	423247	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.756	23050	608610	18	0.9525	ng/mL	1.0000
N-EtFOSA-d9	Auto	5.751	608610	3574220	1	5.4302	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.751	608610	608610	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.595	134062	498472	19	1.0069	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.587	498472	3574220	1	5.2925	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.587	498472	498472	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.725	124729	478481	20	0.9881	ng/mL	1.0000
N-EtFOSE-d9	Auto	5.714	478481	3574220	1	5.2634	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.714	478481	478481	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.048	63057	552106	21	0.9705	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.043	552106	3574220	1	4.9842	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.043	552106	552106	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.141	56248	472471	22	0.9789	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.138	472471	3574220	1	5.2391	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.138	472471	472471	22	5.0000	ng/mL	5.0000
4_2-FTS_1	M	4.209	56121	343173	23	0.9718	ng/mL	0.9372
4_2-FTS-13C	Auto	4.211	343173	3574220	1	4.7961	ng/mL	5.0000

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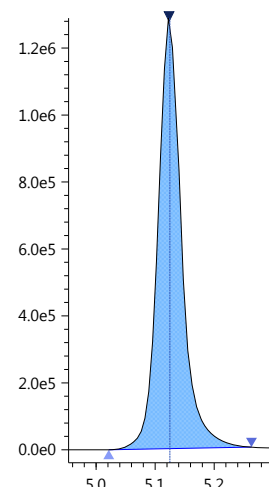
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.211	343173	343173	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.577	68650	273063	24	1.0010	ng/mL	0.9512
6_2-FTS-13C	Auto	4.578	273063	3574220	1	4.9567	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.578	273063	273063	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.940	33397	221691	25	0.9616	ng/mL	0.9600
8_2-FTS-13C	Auto	4.941	221691	3574220	1	5.1880	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.941	221691	221691	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.302	31233	221691	25	0.9505	ng/mL	0.9662
HPFO_DA	Auto	4.308	186410	860093	26	1.0098	ng/mL	1.0000
HPFO_DA-13C	Auto	4.307	860093	3574220	1	5.0511	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.307	860093	860093	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.124 Area 3574220

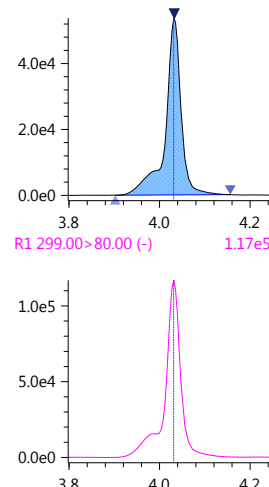
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.8570
RT 4.032 Area 129175
R#1 218.57 (0.00)

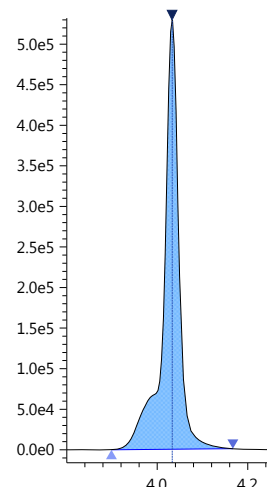
Q 298.80>99.00 (-)



PFBS-13C

Conc 5.1829
RT 4.033 Area 1246070

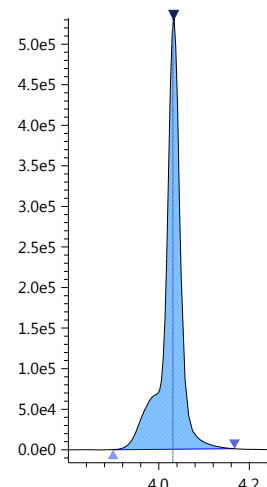
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.033 Area 1246070

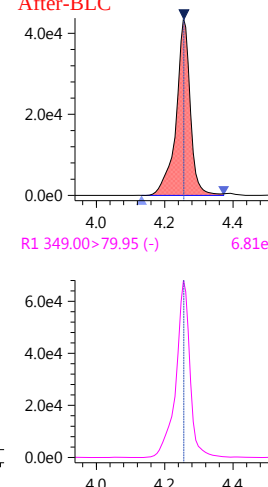
ISTD 301.80>80.00 (-)



PFPeS

Conc 0.9690
RT 4.256 Area 125427
R#1 156.28 (0.00)

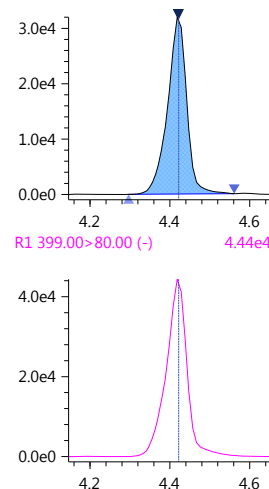
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.8909
RT 4.421 Area 106797
R#1 138.87 (0.00)

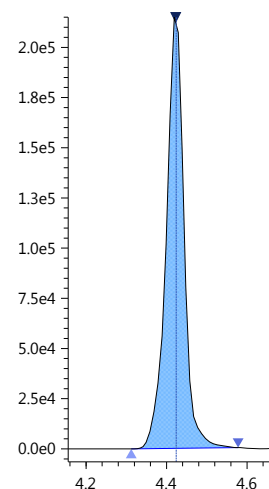
Q 399.00>99.00 (-)



PFHxS-180

Conc 5.2008
RT 4.423 Area 662460

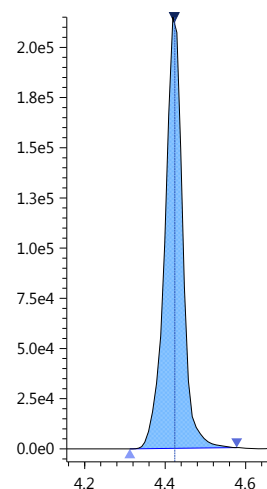
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.423 Area 662460

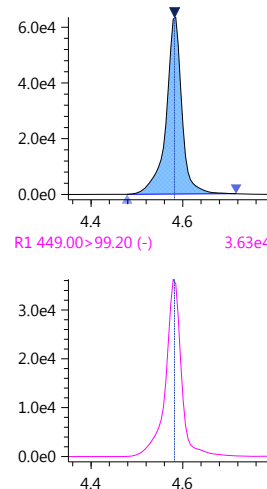
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.9750
RT 4.582 Area 151760
R#1 58.05 (0.00)

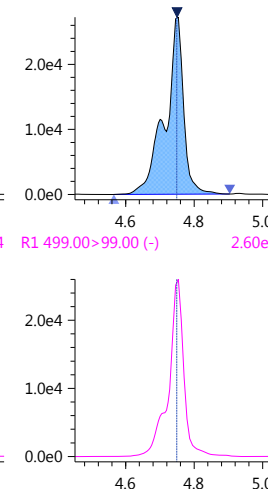
Q 449.00>80.15 (-)



PFOS_1

Conc 0.8587
RT 4.750 Area 102413
R#1 93.02 (0.00)

Q 499.00>80.00 (-)



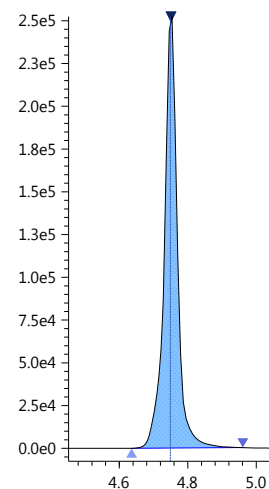
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PFOS-13C

Conc 5.3765
 RT 4.751 Area 675865

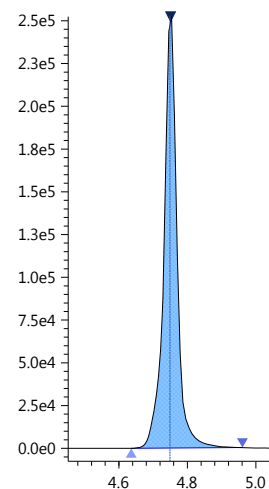
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.751 Area 675865

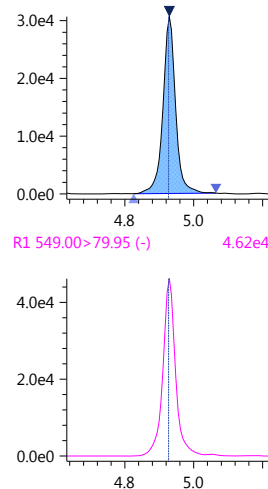
ISTD 502.80>80.05 (-)



PFNS

Conc 0.8792
 RT 4.929 Area 78039
 R#1 150.71 (0.00)

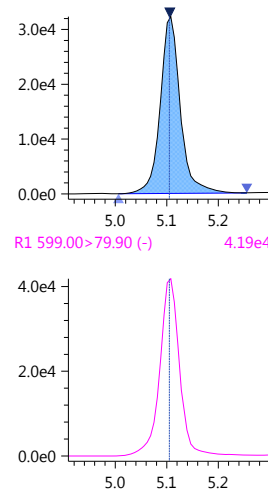
Q 549.00>99.00 (-)



PFDS_1

Conc 0.9504
 RT 5.106 Area 87320
 R#1 129.46 (0.00)

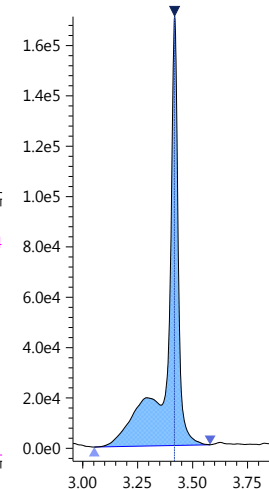
Q 599.00>99.10 (-)



PFBA

Conc 0.9711
 RT 3.418 Area 586993

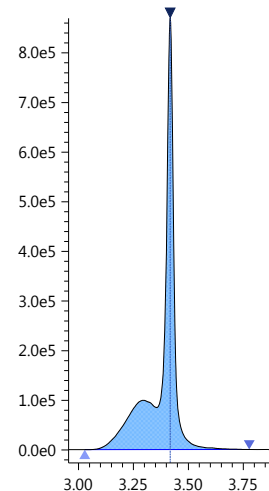
Q 213.00>169.10 (-)



PFBA-13C

Conc 5.1069
 RT 3.417 Area 3076140

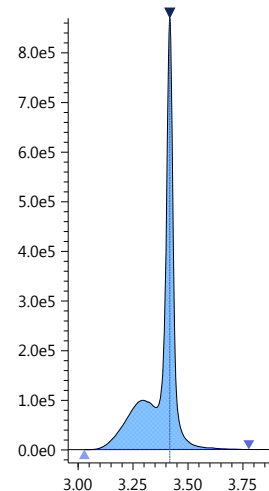
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.417 Area 3076140

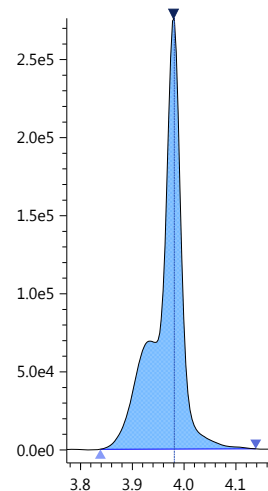
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.9794
 RT 3.980 Area 808956

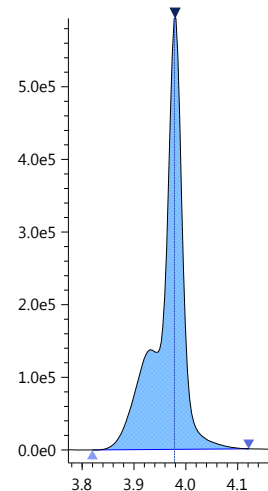
Q 263.05>219.10 (-)



PFPeA-13C

Conc 5.1721
 RT 3.979 Area 1675267

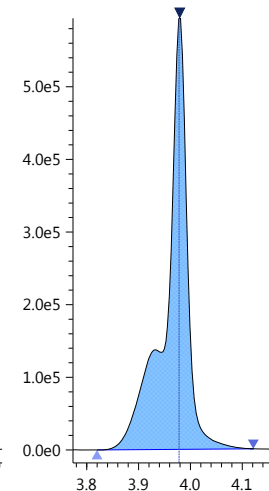
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.979 Area 1675267

ISTD 267.90>223.00 (-)

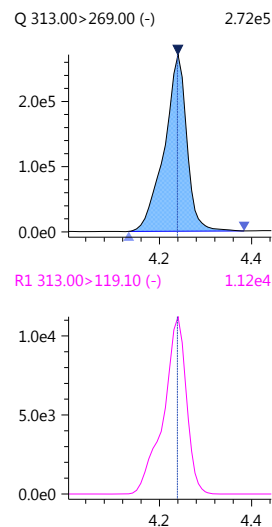


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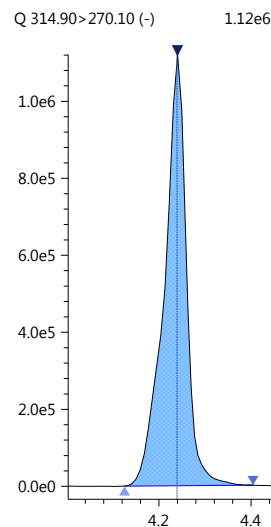
PFHxA

Conc 0.9175
 RT 4.240 Area 915798
 R#1 4.15 (0.00)



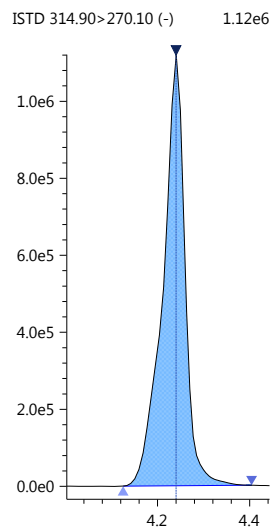
PFHxA-13C

Conc 5.1341
 RT 4.240 Area 3728268



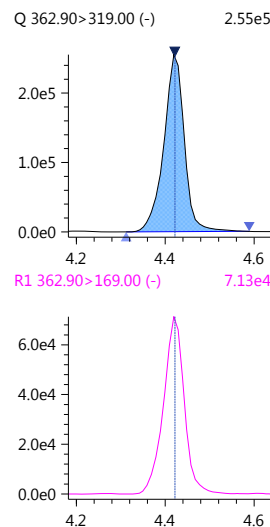
PFHxA-13C_IS

Conc 5.0000
 RT 4.240 Area 3728268



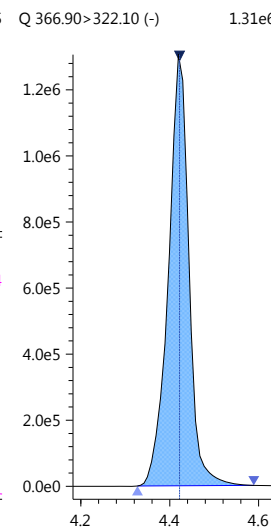
PFHpA

Conc 0.9839
 RT 4.422 Area 818035
 R#1 28.00 (0.00)



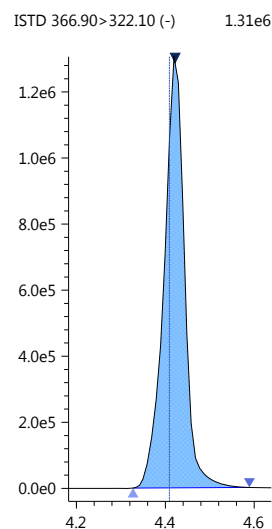
PFHpA-13C

Conc 5.3950
 RT 4.422 Area 4194405



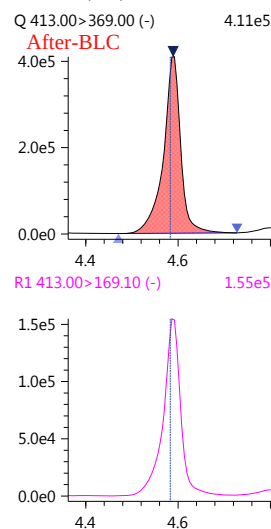
PFHpA-13C_IS

Conc 5.0000
 RT 4.422 Area 4194405



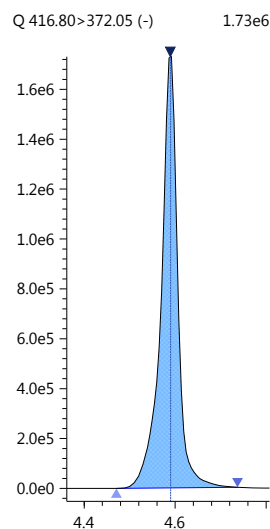
PFOA

Conc 0.9856
 RT 4.589 Area 1065055
 R#1 37.36 (0.00)



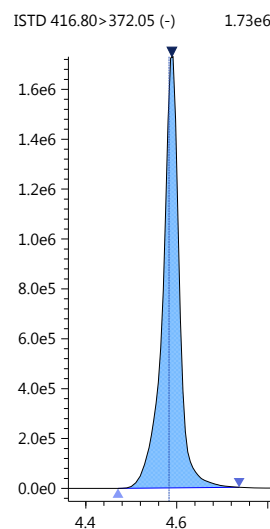
PFOA-13C

Conc 5.3134
 RT 4.589 Area 4412903



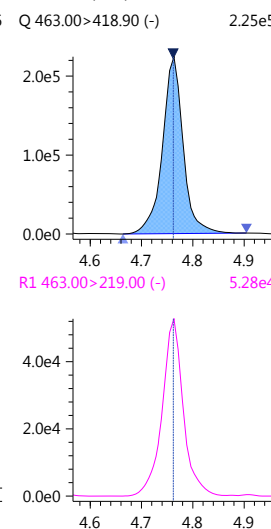
PFOA-13C_IS

Conc 5.0000
 RT 4.589 Area 4412903



PFNA

Conc 1.0187
 RT 4.762 Area 627343
 R#1 23.43 (0.00)

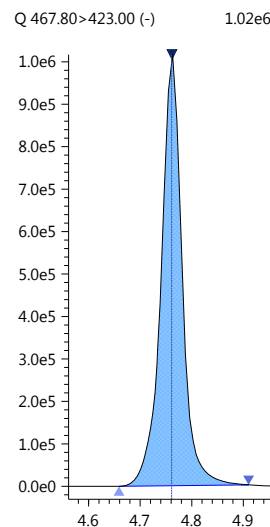


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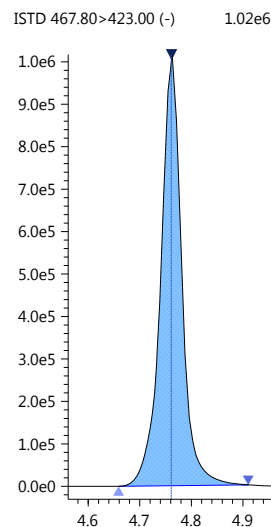
PFNA-13C

Conc 5.0865
RT 4.762 Area 2890350



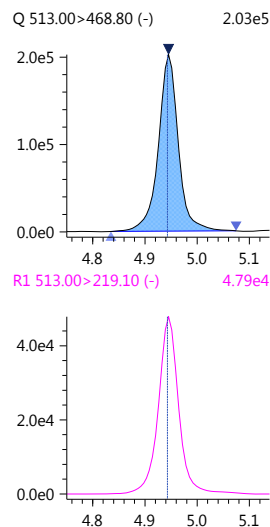
PFNA-13C_IS

Conc 5.0000
RT 4.762 Area 2890350



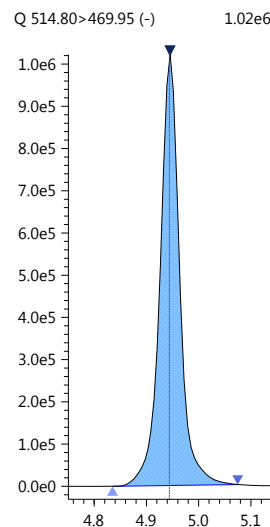
PFDA

Conc 0.9400
RT 4.945 Area 537015
R#1 23.56 (0.00)



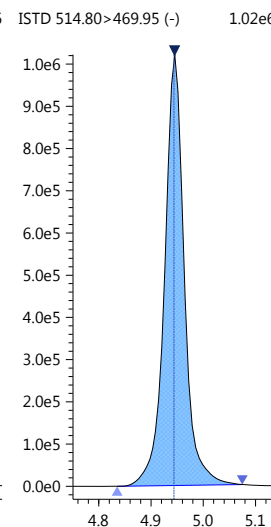
PFDA-13C

Conc 5.1727
RT 4.945 Area 2677792



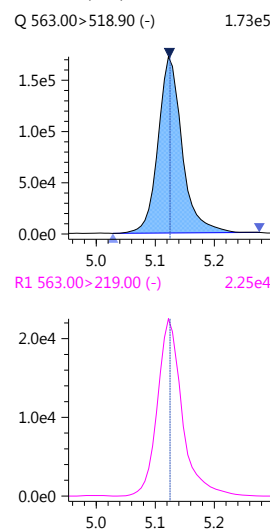
PFDA-13C_IS

Conc 5.0000
RT 4.945 Area 2677792



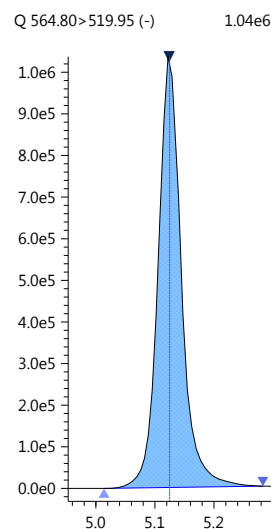
PFUnA

Conc 0.9652
RT 5.124 Area 485976
R#1 13.00 (0.00)



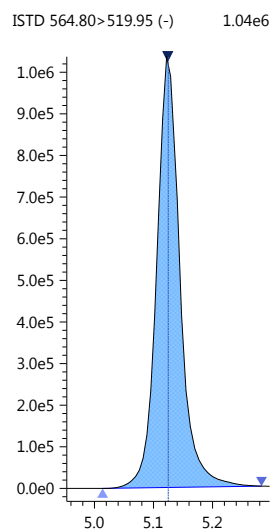
PFUnA-13C

Conc 5.2988
RT 5.124 Area 2841784



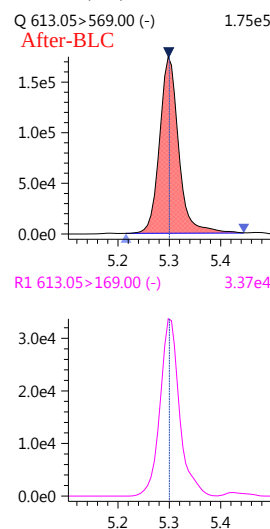
PFUnA-13C_IS

Conc 5.0000
RT 5.124 Area 2841784



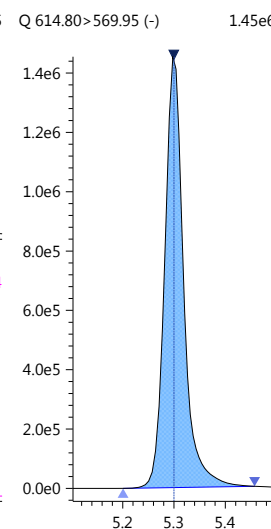
PFDaA

Conc 0.9450
RT 5.299 Area 449357
R#1 19.06 (0.00)



PFDaA-13C

Conc 5.2271
RT 5.300 Area 3715472



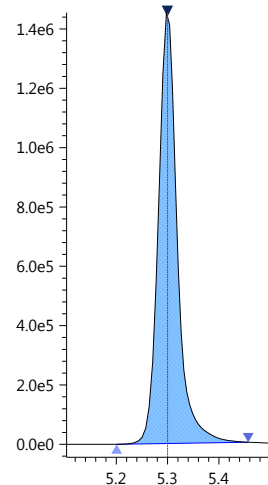
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PFDaA-13C_IS

Conc 5.0000
 RT 5.300 Area 3715472

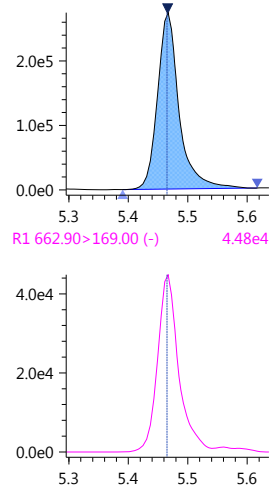
ISTD 614.80>569.95 (-) 1.45e6



PFTrDA

Conc 1.0057
 RT 5.466 Area 688467
 R#1 16.52 (0.00)

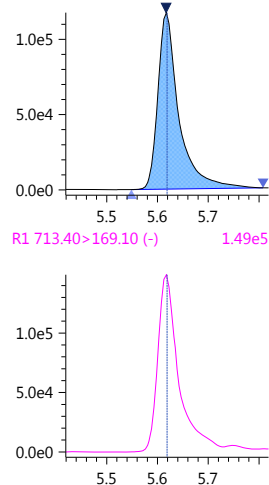
Q 663.00>618.90 (-) 2.75e5



PFTeDA

Conc 0.9691
 RT 5.617 Area 336467
 R#1 125.36 (0.00)

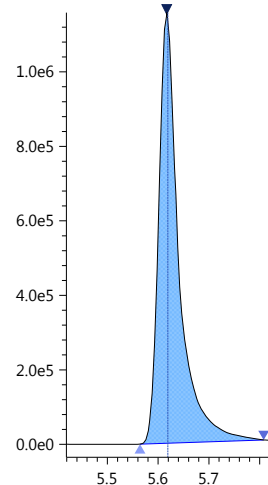
Q 713.40>669.00 (-) 1.18e5



PFTeDA-13C

Conc 5.1731
 RT 5.617 Area 3196242

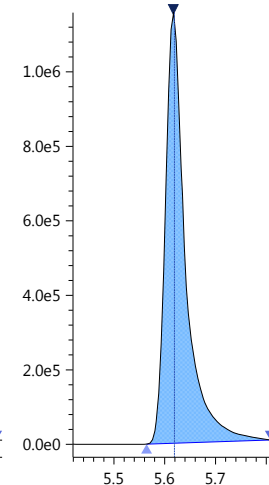
Q 714.70>669.90 (-) 1.16e6



PFTeDA-13C_IS

Conc 5.0000
 RT 5.617 Area 3196242

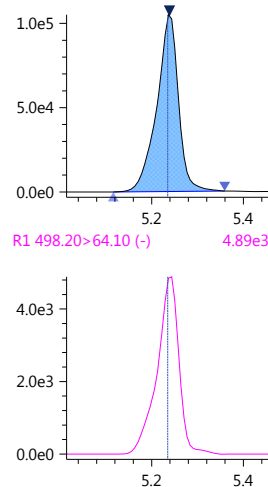
ISTD 714.70>669.90 (-) 1.16e6



FOSA

Conc 0.9581
 RT 5.239 Area 342673
 R#1 4.62 (0.00)

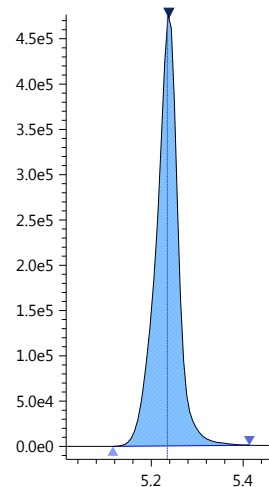
Q 498.20>78.00 (-) 1.05e5



FOSA-13C

Conc 5.2288
 RT 5.238 Area 1570401

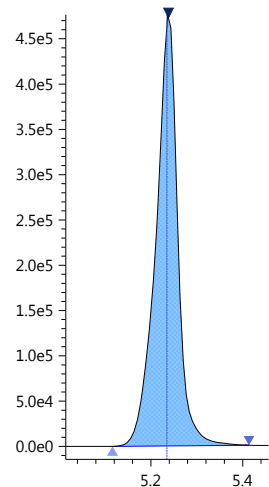
Q 506.00>78.05 (-) 4.77e5



FOSA-13C_IS

Conc 5.0000
 RT 5.238 Area 1570401

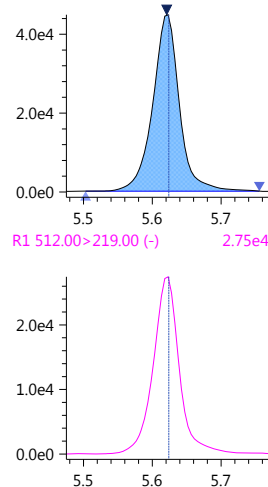
ISTD 506.00>78.05 (-) 4.77e5



N-MeFOSA

Conc 0.9906
 RT 5.621 Area 120635
 R#1 60.91 (0.00)

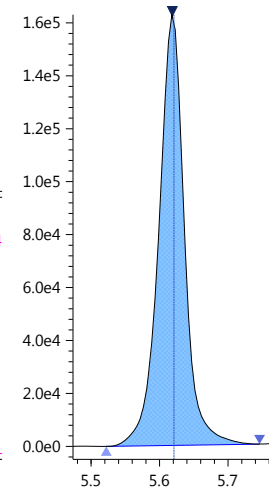
Q 512.00>169.10 (-) 4.50e4



N-MeFOSA-d3

Conc 5.4255
 RT 5.619 Area 423247

Q 514.90>168.90 (-) 1.63e5



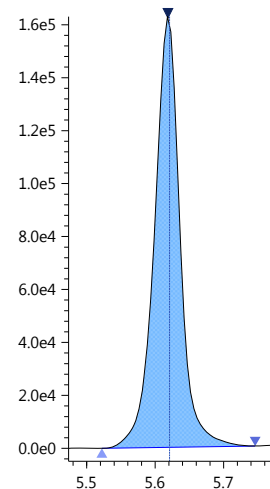
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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.619 Area 423247

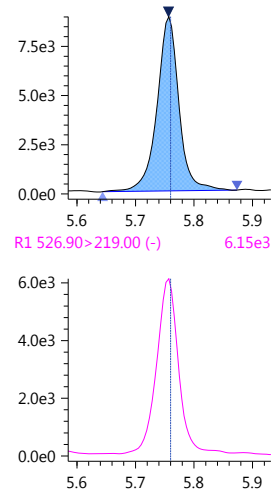
ISTD 514.90>168.90 (-) 1.63e5



N-EtFOSA

Conc 0.9525
 RT 5.756 Area 23050
 R#1 68.18 (0.00)

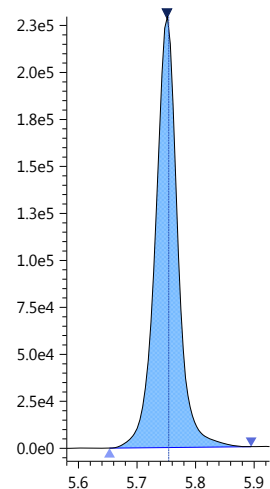
Q 526.90>169.10 (-) 9.02e3



N-EtFOSA-d9

Conc 5.4302
 RT 5.751 Area 608610

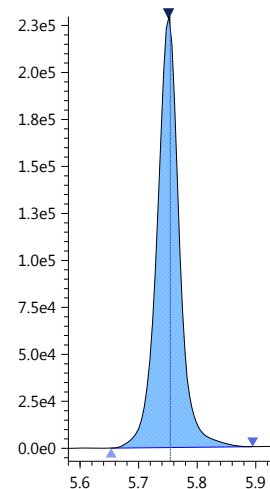
Q 530.90>169.15 (-) 2.30e5



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.751 Area 608610

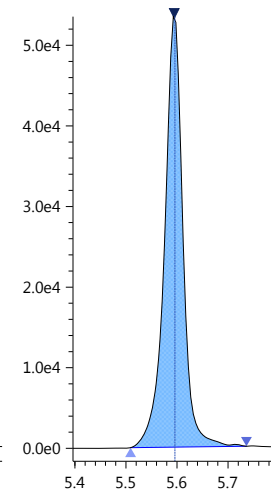
ISTD 530.90>169.15 (-) 2.30e5



N-MeFOSE

Conc 1.0069
 RT 5.595 Area 134062

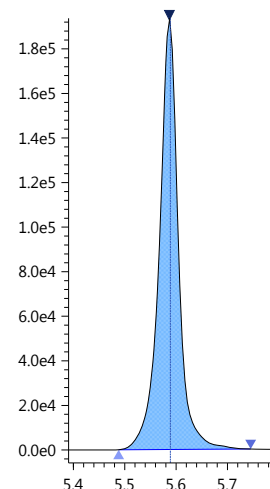
Q 616.00>59.00 (-) 5.36e4



N-MeFOSE-d7

Conc 5.2925
 RT 5.587 Area 498472

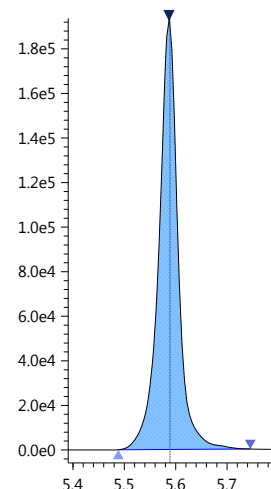
Q 622.70>59.10 (-) 1.94e5



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.587 Area 498472

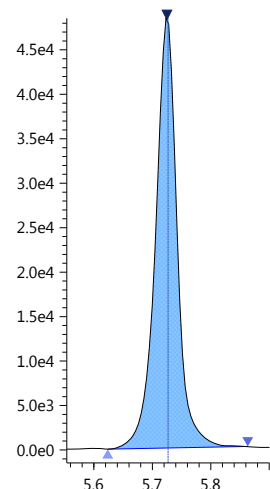
ISTD 622.70>59.10 (-) 1.94e5



N-EtFOSE

Conc 0.9881
 RT 5.725 Area 124729

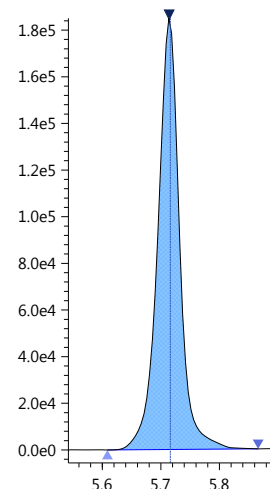
Q 630.00>58.90 (-) 4.86e4



N-EtFOSE-d9

Conc 5.2634
 RT 5.714 Area 478481

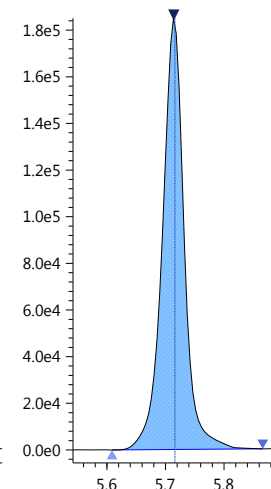
Q 638.70>59.10 (-) 1.85e5



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.714 Area 478481

ISTD 638.70>59.10 (-) 1.85e5



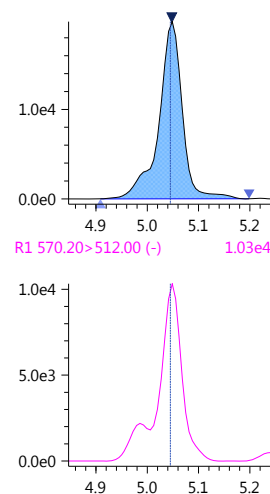
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N-MeFOSAA

Conc 0.9705
RT 5.048 Area 63057
R#1 52.42 (0.00)

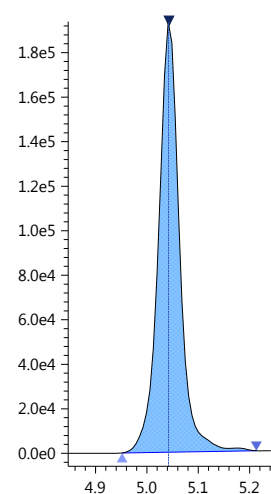
Q 570.20>419.00 (-)



N-MeFOSAA-d3

Conc 4.9842
RT 5.043 Area 552106

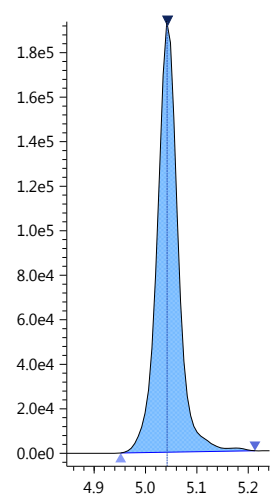
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.043 Area 552106

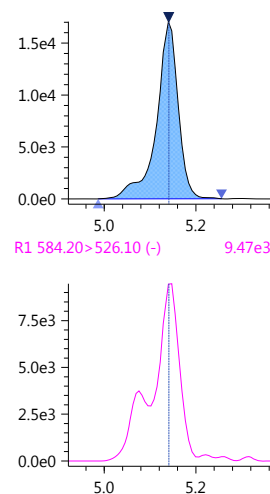
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc 0.9789
RT 5.141 Area 56248
R#1 53.66 (0.00)

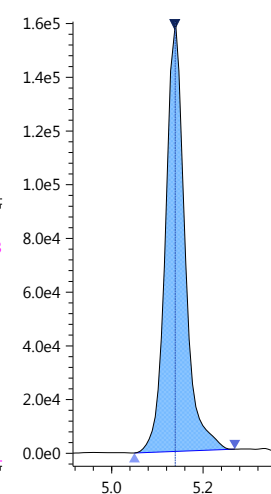
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 5.2391
RT 5.138 Area 472471

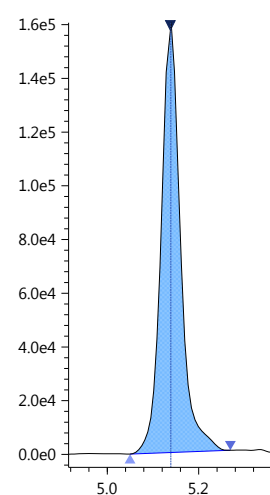
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.138 Area 472471

ISTD 588.80>419.00 (-)

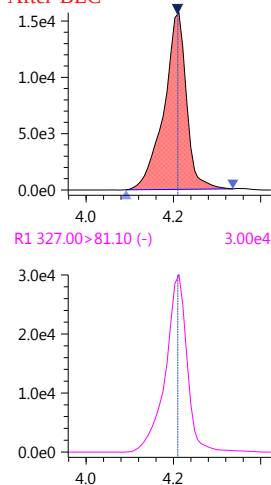


4_2-FTS_1

Conc 0.9718
RT 4.209 Area 56121
R#1 186.51 (0.00)

Q 327.00>307.05 (-)

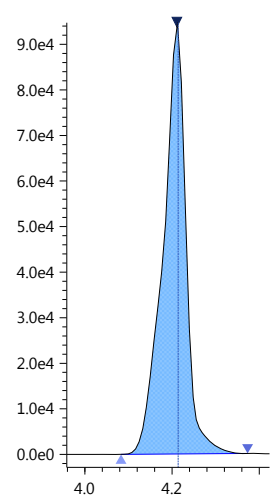
After-BLC



4_2-FTS-13C

Conc 4.7961
RT 4.211 Area 343173

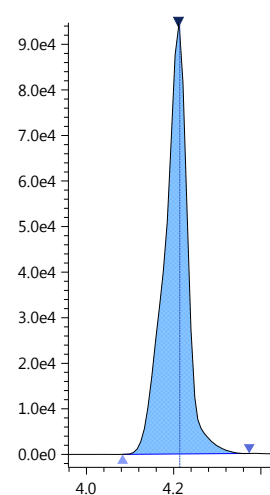
Q 328.80>309.05 (-)



4_2-FTS-13C_IS

Conc 5.0000
RT 4.211 Area 343173

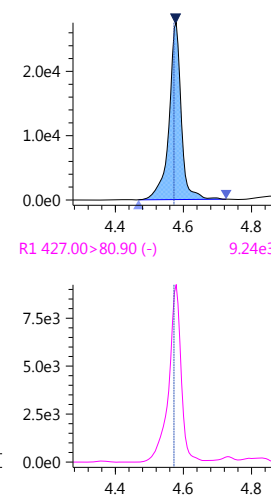
ISTD 328.80>309.05 (-)



6_2-FTS_1

Conc 1.0010
RT 4.577 Area 68650
R#1 32.33 (0.00)

Q 427.00>407.00 (-)



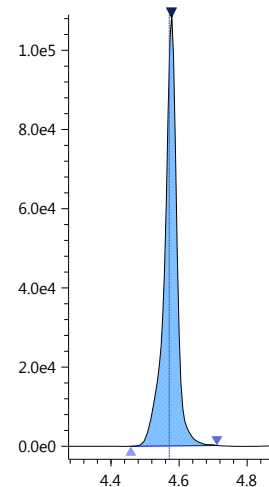
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6_2-FTS-13C

Conc 4.9567
 RT 4.578 Area 273063

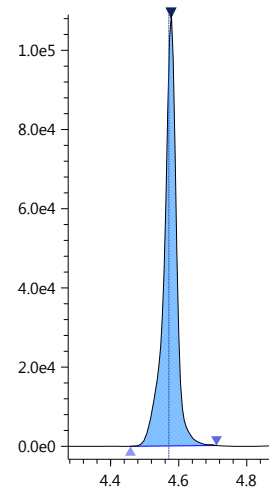
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
 RT 4.578 Area 273063

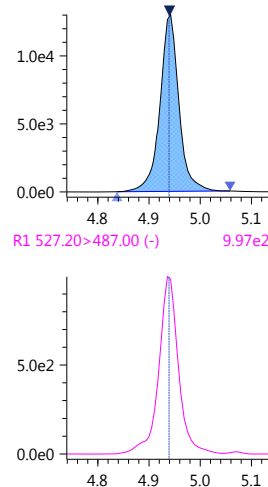
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 0.9616
 RT 4.940 Area 33397
 R#1 7.89 (0.00)

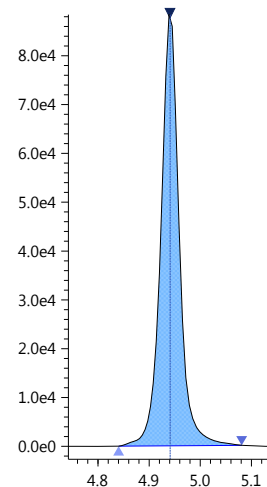
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 5.1880
 RT 4.941 Area 221691

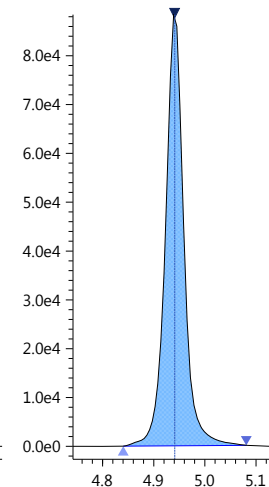
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
 RT 4.941 Area 221691

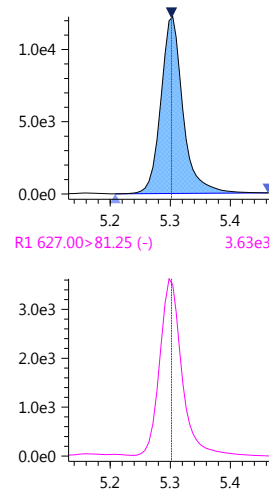
ISTD 528.80>509.00 (-)



10_2-FtS_1

Conc 0.9505
 RT 5.302 Area 31233
 R#1 30.31 (0.00)

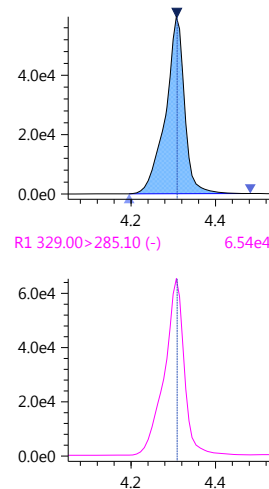
Q 627.00>606.95 (-)



HPFO_DA

Conc 1.0098
 RT 4.308 Area 186410
 R#1 109.07 (0.00)

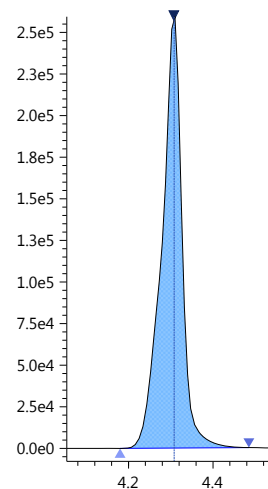
Q 329.00>169.00 (-)



HPFO_DA-13C

Conc 5.0511
 RT 4.307 Area 860093

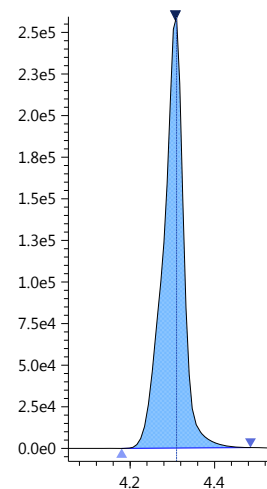
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.307 Area 860093

ISTD 332.00>286.80 (-)



Insight Report

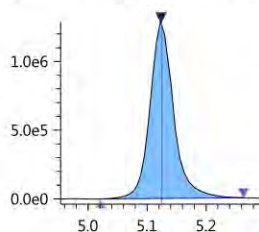
Printed at 12/3/2019 9:26:07 AM

191202_021

Sample ID: 1.0 PPB ICAL
Date acquired: 12/2/2019 6:11:06 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_021.lcd
Vial: 4 | Inj. Volume: 15.0000uL | Tray: 0

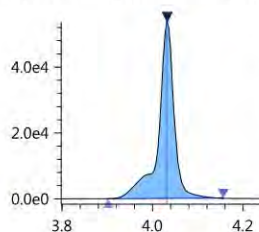
13C7-PFUnDa_IS

Conc 5.0000
RT 5.124 Area 3574220
ISTD 570.00>525.00 (-)



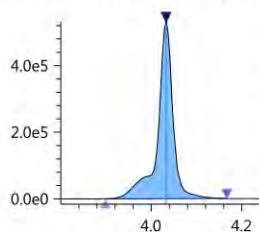
PFBS_1

Conc 0.8570
RT 4.032 Area 129175
Q 298.80>99.00 (-)



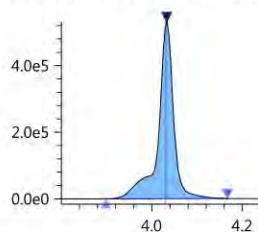
PFBS-13C

Conc 5.1829
RT 4.033 Area 1246070
Q 301.80>80.00 (-)



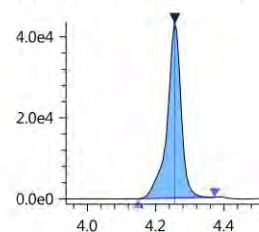
PFBS-13C_IS

Conc 5.0000
RT 4.033 Area 1246070
ISTD 301.80>80.00 (-)



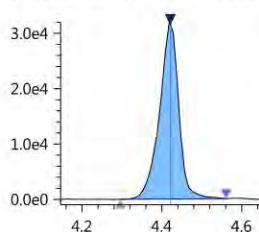
PFPeS

Conc 0.9506
RT 4.256 Area 122417
Q 349.00>99.00 (-)



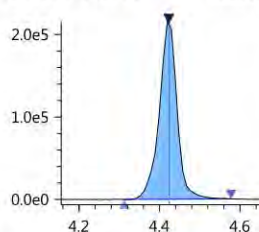
PFHxS_1

Conc 0.8923
RT 4.421 Area 106797
Q 399.00>99.00 (-)



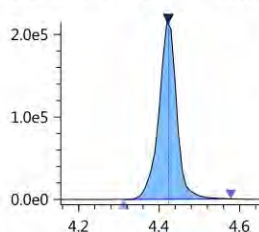
PFHxS-180

Conc 5.2008
RT 4.423 Area 662460
Q 402.70>84.05 (-)



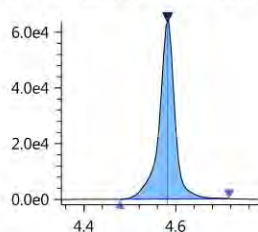
PFHxS-180_IS

Conc 5.0000
RT 4.423 Area 662460
ISTD 402.70>84.05 (-)



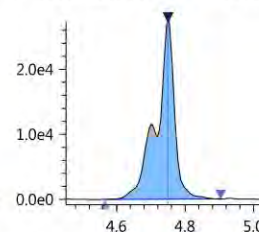
PFHpS_1

Conc 0.9751
RT 4.582 Area 151760
Q 449.00>80.15 (-)



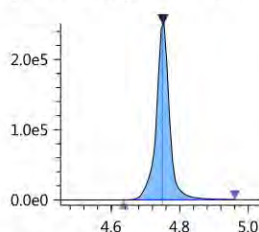
PFOS_1

Conc 0.8641
RT 4.750 Area 102413
Q 499.00>80.00 (-)



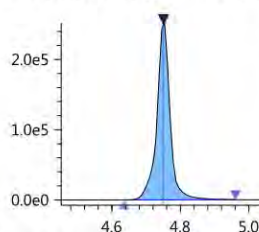
PFOS-13C

Conc 5.3765
RT 4.751 Area 675865
Q 502.80>80.05 (-)



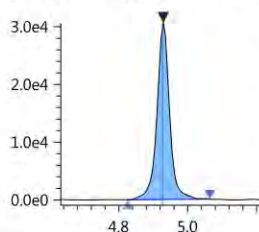
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Conc 5.0000
RT 4.751 Area 675865
ISTD 502.80>80.05 (-)



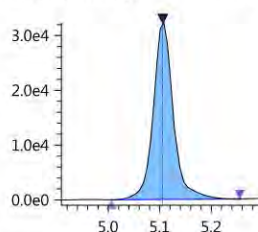
PFNS

Conc 0.8730
RT 4.929 Area 78039
Q 549.00>99.00 (-)



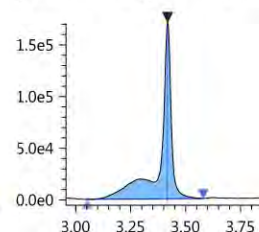
PFDS_1

Conc 0.9522
RT 5.106 Area 87320
Q 599.00>99.10 (-)



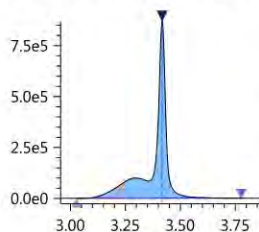
PFBA

Conc 0.9711
RT 3.418 Area 586993
Q 213.00>169.10 (-)



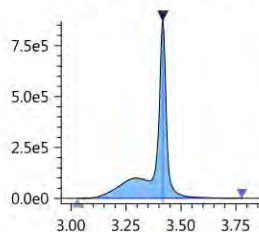
PFBA-13C

Conc 5.1069
RT 3.417 Area 3076140
Q 216.90>172.15 (-)



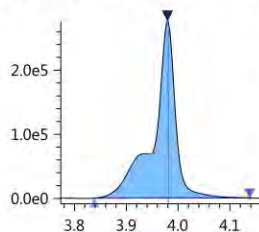
PFBA-13C_IS

Conc 5.0000
RT 3.417 Area 3076140
ISTD 216.90>172.15 (-)



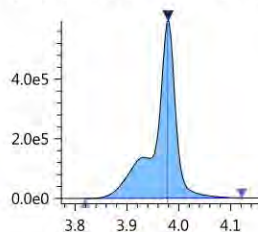
PFPeA

Conc 0.9794
RT 3.980 Area 808956
Q 263.05>219.10 (-)



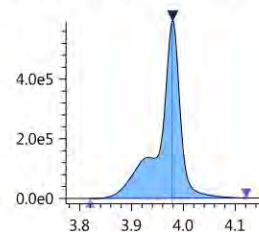
PFPeA-13C

Conc 5.1721
RT 3.979 Area 1675267
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.979 Area 1675267
ISTD 267.90>223.00 (-)

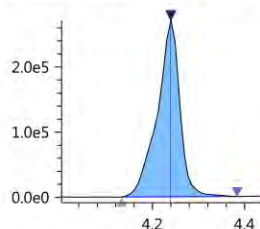


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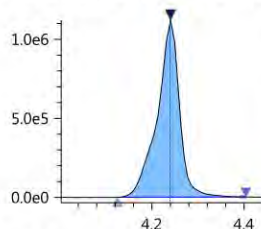
PFHxA

Conc 0.9176
RT 4.240 Area 915798
Q 313.00>269.00 (-)



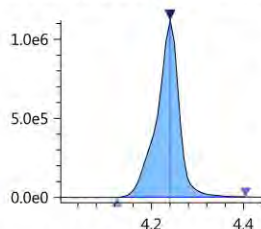
PFHxA-13C

Conc 5.1341
RT 4.240 Area 3728268
Q 314.90>270.10 (-)



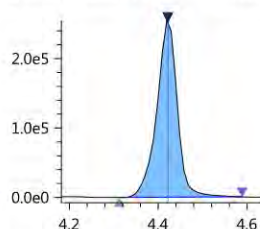
PFHxA-13C_IS

Conc 5.0000
RT 4.240 Area 3728268
ISTD 314.90>270.10 (-)



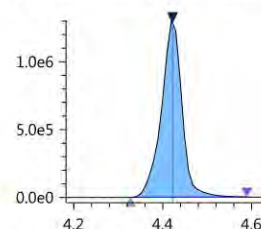
PFHpA

Conc 0.9839
RT 4.422 Area 818035
Q 362.90>319.00 (-)



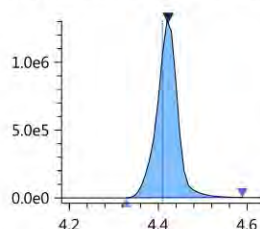
PFHpA-13C

Conc 5.3950
RT 4.422 Area 4194405
Q 366.90>322.10 (-)



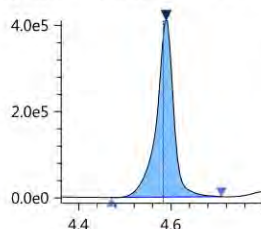
PFHpA-13C_IS

Conc 5.0000
RT 4.422 Area 4194405
ISTD 366.90>322.10 (-)



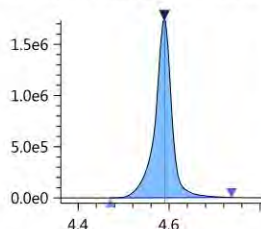
PFOA

Conc 0.9823
RT 4.589 Area 1061480
Q 413.00>369.00 (-)



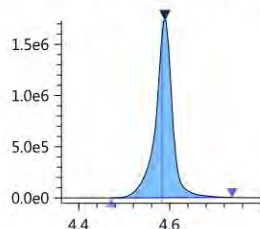
PFOA-13C

Conc 5.3134
RT 4.589 Area 4412903
Q 416.80>372.05 (-)



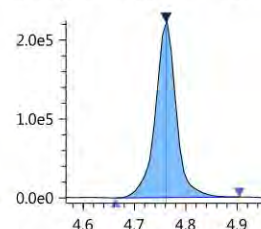
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Conc 5.0000
RT 4.589 Area 4412903
ISTD 416.80>372.05 (-)



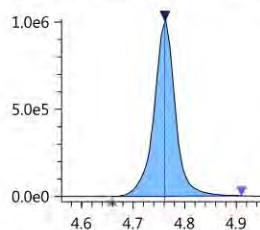
PFNA

Conc 1.0188
RT 4.762 Area 627343
Q 463.00>418.90 (-)



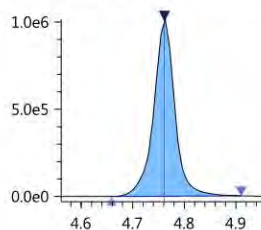
PFNA-13C

Conc 5.0865
RT 4.762 Area 2890350
Q 467.80>423.00 (-)



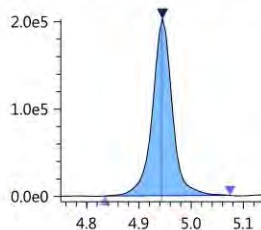
PFNA-13C_IS

Conc 5.0000
RT 4.762 Area 2890350
ISTD 467.80>423.00 (-)



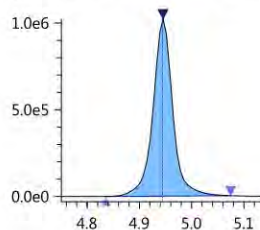
PFDA

Conc 0.9395
RT 4.945 Area 537015
Q 513.00>468.80 (-)



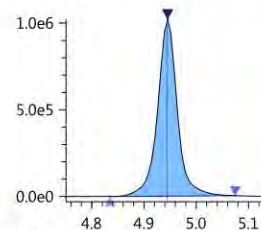
PFDA-13C

Conc 5.1727
RT 4.945 Area 2677792
Q 514.80>469.95 (-)



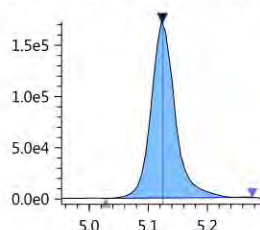
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Conc 5.0000
RT 4.945 Area 2677792
ISTD 514.80>469.95 (-)



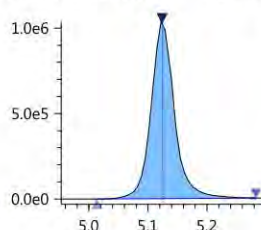
PFUnA

Conc 0.9656
RT 5.124 Area 485976
Q 563.00>518.90 (-)



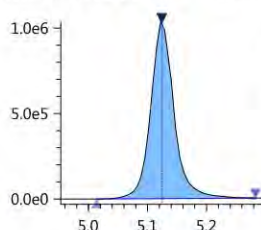
PFUnA-13C

Conc 5.2988
RT 5.124 Area 2841784
Q 564.80>519.95 (-)



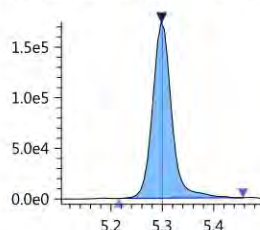
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Conc 5.0000
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ISTD 564.80>519.95 (-)



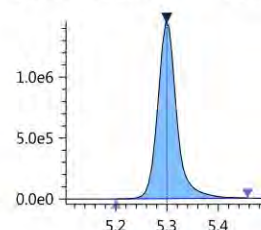
PFDaA

Conc 0.9184
RT 5.299 Area 446793
Q 613.05>569.00 (-)



PFDaA-13C

Conc 5.2271
RT 5.300 Area 3715472
Q 614.80>569.95 (-)

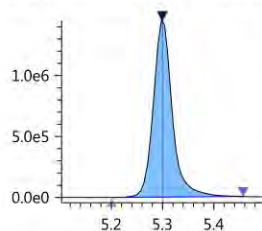


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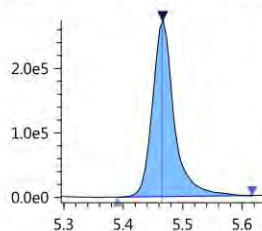
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Conc 5.0000
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ISTD 614.80>569.95 (-)



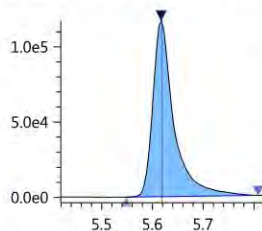
PFTrDA

Conc 1.0057
RT 5.466 Area 688467
Q 663.00>618.90 (-)



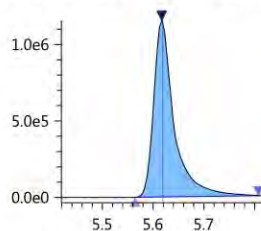
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Conc 0.9674
RT 5.617 Area 336467
Q 713.40>669.00 (-)



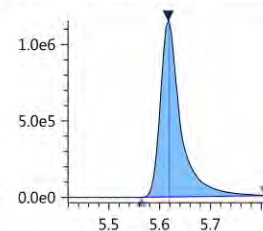
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Conc 5.1731
RT 5.617 Area 3196242
Q 714.70>669.90 (-)



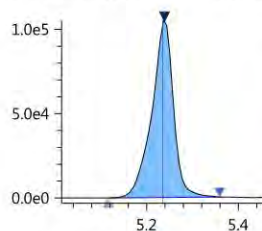
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Conc 5.0000
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ISTD 714.70>669.90 (-)



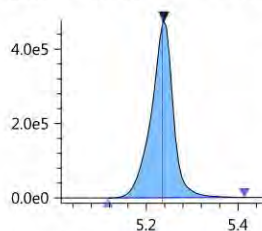
FOSA

Conc 0.9581
RT 5.239 Area 342673
Q 498.20>78.00 (-)



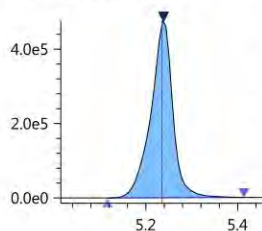
FOSA-13C

Conc 5.2288
RT 5.238 Area 1570401
Q 506.00>78.05 (-)



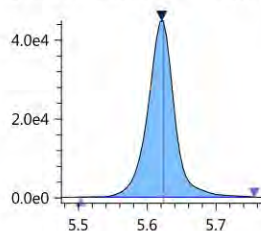
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Conc 5.0000
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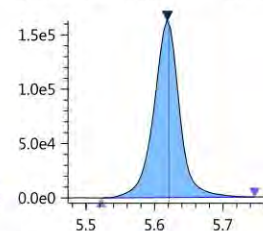
N-MeFOSA

Conc 0.9871
RT 5.621 Area 120635
Q 512.00>169.10 (-)



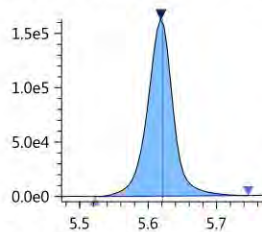
N-MeFOSA-d3

Conc 5.4255
RT 5.619 Area 423247
Q 514.90>168.90 (-)



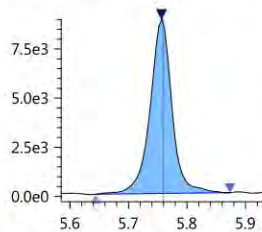
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.619 Area 423247
ISTD 514.90>168.90 (-)



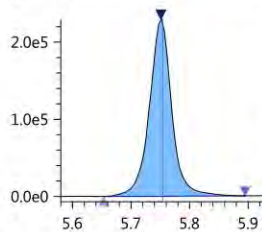
N-EtFOSA

Conc 0.9624
RT 5.756 Area 23050
Q 526.90>169.10 (-)



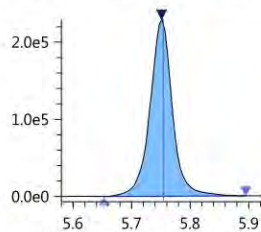
N-EtFOSA-d9

Conc 5.4302
RT 5.751 Area 608610
Q 530.90>169.15 (-)



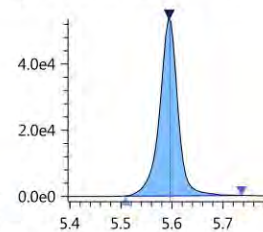
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.751 Area 608610
ISTD 530.90>169.15 (-)



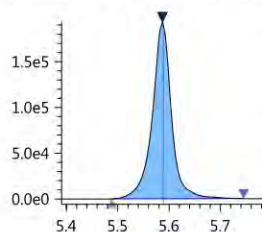
N-MeFOSE

Conc 1.0063
RT 5.595 Area 134062
Q 616.00>59.00 (-)



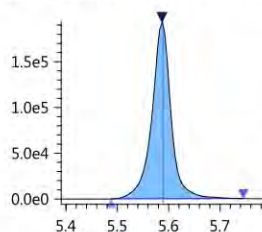
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Conc 5.2925
RT 5.587 Area 498472
Q 622.70>59.10 (-)



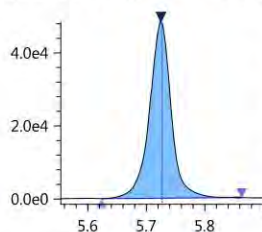
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.587 Area 498472
ISTD 622.70>59.10 (-)



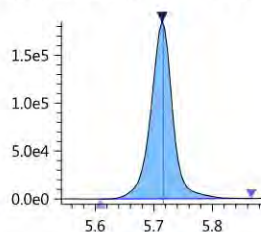
N-EtFOSE

Conc 0.9872
RT 5.725 Area 124729
Q 630.00>58.90 (-)



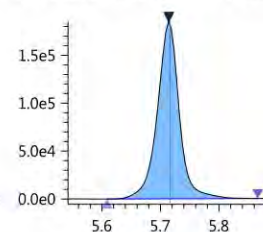
N-EtFOSE-d9

Conc 5.2634
RT 5.714 Area 478481
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.714 Area 478481
ISTD 638.70>59.10 (-)

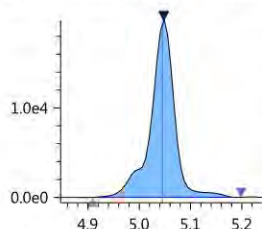


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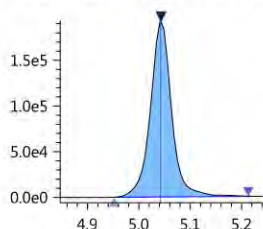
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Conc 0.9725
RT 5.048 Area 63057
Q 570.20>419.00 (-)



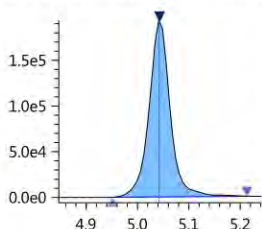
N-MeFOSAA-d3

Conc 4.9842
RT 5.043 Area 552106
Q 572.80>419.05 (-)



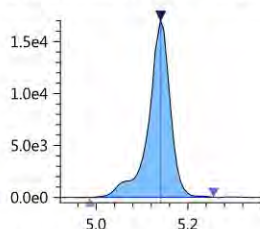
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Conc 5.0000
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ISTD 572.80>419.05 (-)



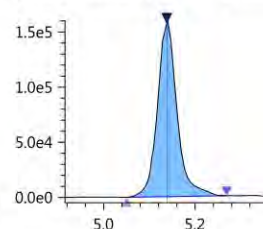
N-EtFOSAA

Conc 1.0346
RT 5.141 Area 56248
Q 584.20>418.95 (-)



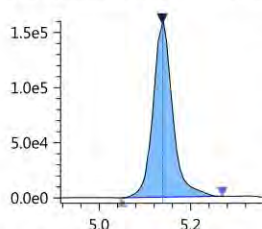
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Conc 5.2391
RT 5.138 Area 472471
Q 588.80>419.00 (-)



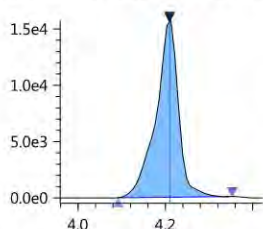
N-EtFOSAA-d5_IS

Conc 5.0000
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ISTD 588.80>419.00 (-)



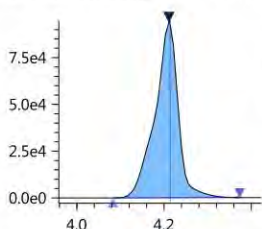
4_2-FTS_1

Conc 0.9693
RT 4.209 Area 55955
Q 327.00>307.05 (-)



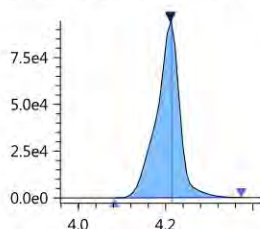
4_2-FTS-13C

Conc 4.7961
RT 4.211 Area 343173
Q 328.80>309.05 (-)



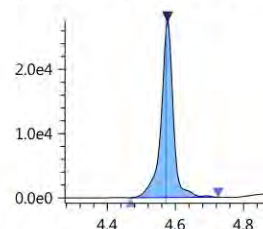
4_2-FTS-13C_IS

Conc 5.0000
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ISTD 328.80>309.05 (-)



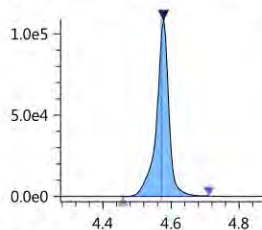
6_2-FTS_1

Conc 1.0042
RT 4.577 Area 68650
Q 427.00>407.00 (-)



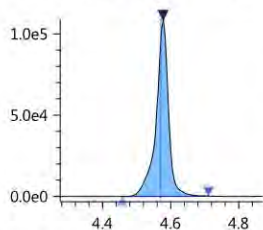
6_2-FTS-13C

Conc 4.9567
RT 4.578 Area 273063
Q 428.90>409.00 (-)



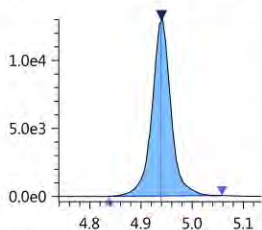
6_2-FTS-13C_IS

Conc 5.0000
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ISTD 428.90>409.00 (-)



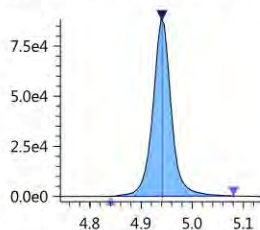
8_2-FTS_1

Conc 0.9625
RT 4.940 Area 33397
Q 527.10>506.90 (-)



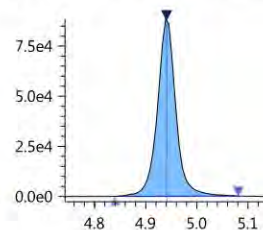
8_2-FTS-13C

Conc 5.1880
RT 4.941 Area 221691
Q 528.80>509.00 (-)



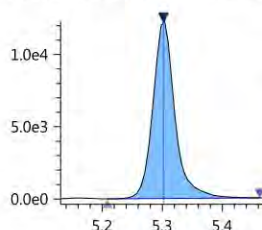
8_2-FTS-13C_IS

Conc 5.0000
RT 4.941 Area 221691
ISTD 528.80>509.00 (-)



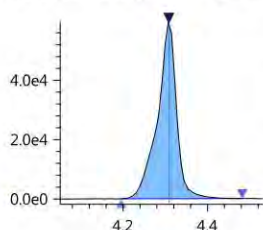
10_2-Fts_1

Conc 0.9505
RT 5.302 Area 31233
Q 627.00>606.95 (-)



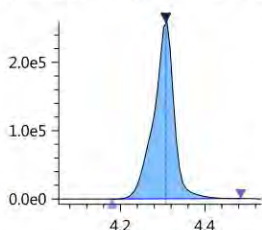
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Conc 1.0098
RT 4.308 Area 186410
Q 329.00>169.00 (-)



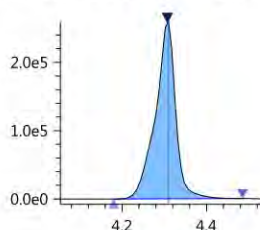
HFPO_DA-13C

Conc 5.0511
RT 4.307 Area 860093
Q 332.00>286.80 (-)



HFPO_DA-13C_IS

Conc 5.0000
RT 4.307 Area 860093
Q 332.00>286.80 (-)



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191202_022

Sample ID: 5.0 PPB ICAL

Date acquired: 12/2/2019 6:21:31 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_022.lcd

Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.122	3592994	3592994	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.034	639918	1192066	2	4.4376	ng/mL	4.4368
PFBS-13C	Auto	4.035	1192066	3592994	1	4.9324	ng/mL	5.0000
PFBS-13C_IS	Auto	4.035	1192066	1192066	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.257	593311	1192066	2	4.7914	ng/mL	4.7046
PFHxS_1	Auto	4.422	501746	663277	3	4.1805	ng/mL	4.5654
PFHxS-18O	Auto	4.423	663277	3592994	1	5.1800	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.423	663277	663277	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.582	698067	663277	3	4.4793	ng/mL	4.7672
PFOS_1	Auto	4.750	503877	652846	4	4.3741	ng/mL	4.6461
PFOS-13C	Auto	4.750	652846	3592994	1	5.1663	ng/mL	5.0000
PFOS-13C_IS	Auto	4.750	652846	652846	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.928	382338	652846	4	4.4592	ng/mL	4.8079
PFDS_1	Auto	5.104	414609	652846	4	4.6718	ng/mL	4.8233
PFBA	Auto	3.421	2857080	3003227	5	4.8412	ng/mL	5.0000
PFBA-13C	Auto	3.420	3003227	3592994	1	4.9598	ng/mL	5.0000
PFBA-13C_IS	Auto	3.420	3003227	3003227	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.982	3531539	1612733	6	4.8515	ng/mL	5.0000
PFPeA-13C	Auto	3.981	1612733	3592994	1	4.9530	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.981	1612733	1612733	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.241	4515510	3629869	7	4.7650	ng/mL	5.0000
PFHxA-13C	Auto	4.241	3629869	3592994	1	4.9725	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.241	3629869	3629869	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.422	3606325	3949603	8	4.7082	ng/mL	5.0000
PFHpA-13C	Auto	4.422	3949603	3592994	1	5.0536	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.422	3949603	3949603	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.590	4785489	4154625	9	4.8128	ng/mL	5.0000
PFOA-13C	Auto	4.590	4154625	3592994	1	4.9762	ng/mL	5.0000
PFOA-13C_IS	Auto	4.590	4154625	4154625	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.761	2691729	2777289	10	4.6550	ng/mL	5.0000
PFNA-13C	Auto	4.761	2777289	3592994	1	4.8620	ng/mL	5.0000
PFNA-13C_IS	Auto	4.761	2777289	2777289	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.944	2531726	2485506	11	4.8535	ng/mL	5.0000
PFDA-13C	Auto	4.944	2485506	3592994	1	4.7761	ng/mL	5.0000
PFDA-13C_IS	Auto	4.944	2485506	2485506	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.123	2179904	2643385	12	4.8093	ng/mL	5.0000
PFUnA-13C	Auto	5.123	2643385	3592994	1	4.9031	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.123	2643385	2643385	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.300	2175580	3555605	13	4.8828	ng/mL	5.0000
PFDoA-13C	Auto	5.300	3555605	3592994	1	4.9761	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.300	3555605	3555605	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.466	3173645	3127244	14	4.8600	ng/mL	5.0000
PFTeDA	Auto	5.616	1440472	3127244	14	4.7492	ng/mL	5.0000
PFTeDA-13C	Auto	5.616	3127244	3592994	1	5.0350	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.616	3127244	3127244	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.238	1674122	1515951	16	4.8487	ng/mL	5.0000
FOSA-13C	Auto	5.238	1515951	3592994	1	5.0211	ng/mL	5.0000
FOSA-13C_IS	Auto	5.238	1515951	1515951	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.621	548124	393003	17	4.8472	ng/mL	5.0000
N-MeFOSA-d3	Auto	5.618	393003	3592994	1	5.0115	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.618	393003	393003	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.756	109515	568603	18	4.8442	ng/mL	5.0000
N-EtFOSA-d9	Auto	5.751	568603	3592994	1	5.0467	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.751	568603	568603	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.594	621474	477002	19	4.8779	ng/mL	5.0000
N-MeFOSE-d7	Auto	5.587	477002	3592994	1	5.0381	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.587	477002	477002	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.724	594157	467738	20	4.8152	ng/mL	5.0000
N-EtFOSE-d9	Auto	5.713	467738	3592994	1	5.1183	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.713	467738	467738	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.043	321754	567381	21	4.7302	ng/mL	5.0000
N-MeFOSAA-d3	Auto	5.041	567381	3592994	1	5.0954	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.041	567381	567381	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.139	242701	457690	22	4.3604	ng/mL	5.0000
N-EtFOSAA-d5	Auto	5.136	457690	3592994	1	5.0487	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.136	457690	457690	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.211	262047	353262	23	4.4079	ng/mL	4.6861
4_2-FTS-13C	Auto	4.212	353262	3592994	1	4.9113	ng/mL	5.0000

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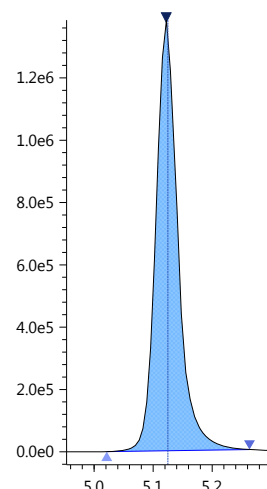
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.212	353262	353262	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.578	323620	269089	24	4.7884	ng/mL	4.7558
6_2-FTS-13C	Auto	4.577	269089	3592994	1	4.8591	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.577	269089	269089	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.939	156081	208446	25	4.7796	ng/mL	4.8002
8_2-FTS-13C	Auto	4.940	208446	3592994	1	4.8526	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.940	208446	208446	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.303	139457	208446	25	4.5135	ng/mL	4.8310
HPFO_DA	Auto	4.309	886241	822531	26	5.0203	ng/mL	5.0000
HPFO_DA-13C	Auto	4.308	822531	3592994	1	4.8052	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.308	822531	822531	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.122 Area 3592994

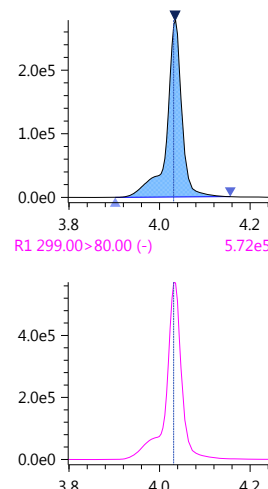
ISTD 570.00>525.00 (-)



PFBS_1

Conc 4.4376
RT 4.034 Area 639918
R#1 210.95 (0.00)

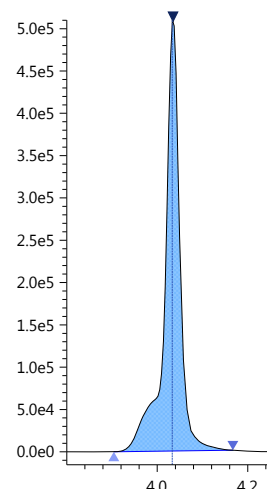
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.9324
RT 4.035 Area 1192066

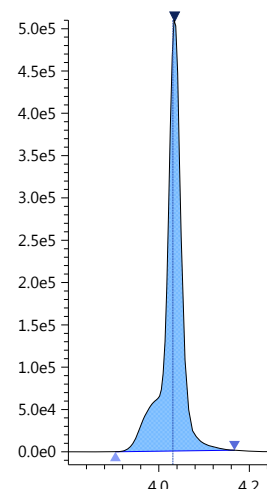
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.035 Area 1192066

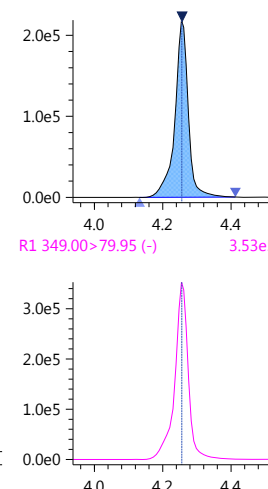
ISTD 301.80>80.00 (-)



PFPeS

Conc 4.7914
RT 4.257 Area 593311
R#1 161.37 (0.00)

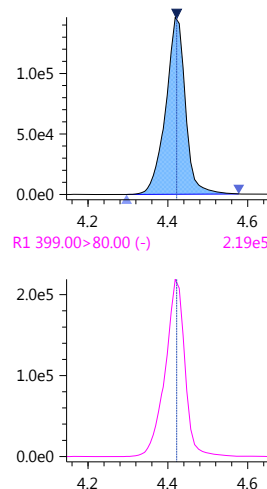
Q 349.00>99.00 (-)



PFHxS_1

Conc 4.1805
RT 4.422 Area 501746
R#1 149.39 (0.00)

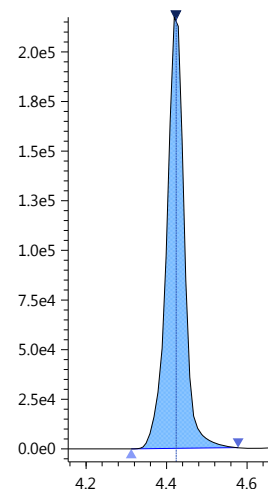
Q 399.00>99.00 (-)



PFHxS-180

Conc 5.1800
RT 4.423 Area 663277

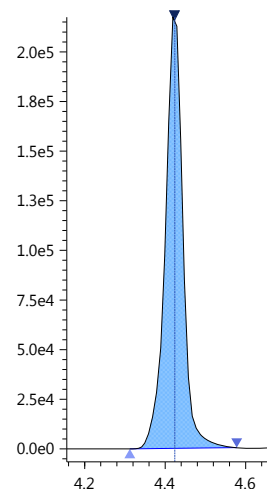
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.423 Area 663277

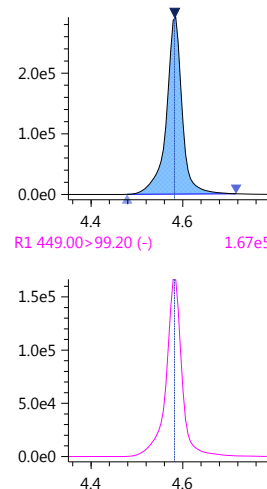
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 4.4793
RT 4.582 Area 698067
R#1 58.32 (0.00)

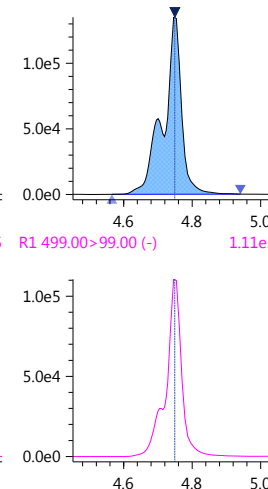
Q 449.00>80.15 (-)



PFOS_1

Conc 4.3741
RT 4.750 Area 503877
R#1 81.86 (0.00)

Q 499.00>80.00 (-)



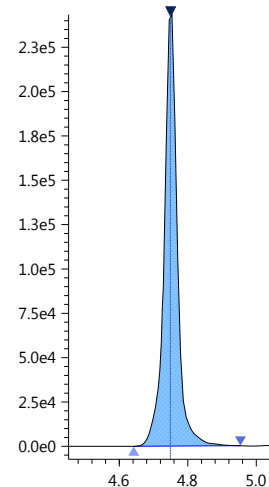
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PFOS-13C

Conc 5.1663
 RT 4.750 Area 652846

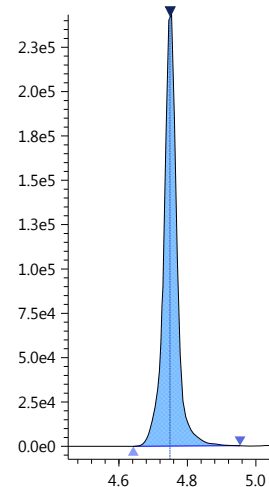
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.750 Area 652846

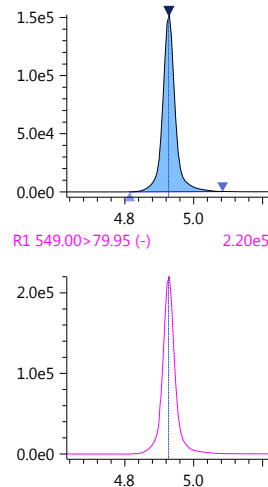
ISTD 502.80>80.05 (-)



PFNS

Conc 4.4592
 RT 4.928 Area 382338
 R#1 146.26 (0.00)

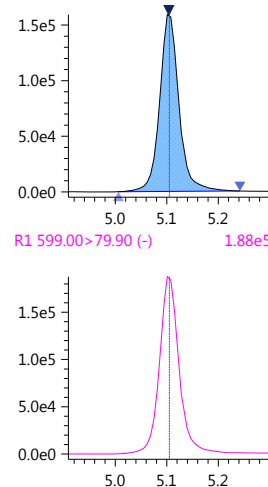
Q 549.00>99.00 (-)



PFDS_1

Conc 4.6718
 RT 5.104 Area 414609
 R#1 116.93 (0.00)

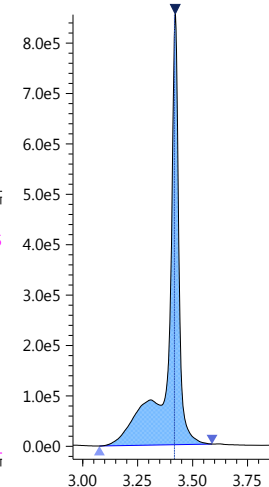
Q 599.00>99.10 (-)



PFBA

Conc 4.8412
 RT 3.421 Area 2857080

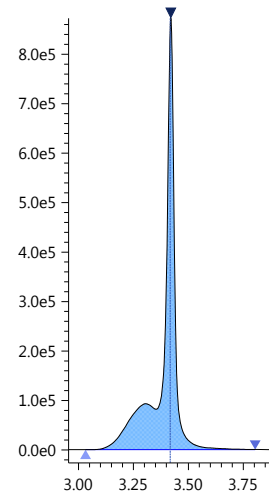
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.9598
 RT 3.420 Area 3003227

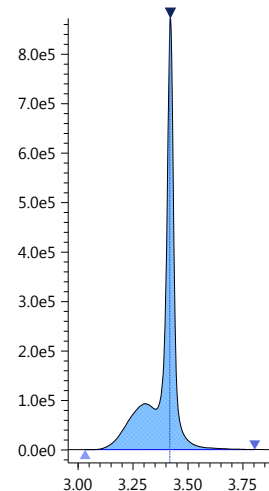
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.420 Area 3003227

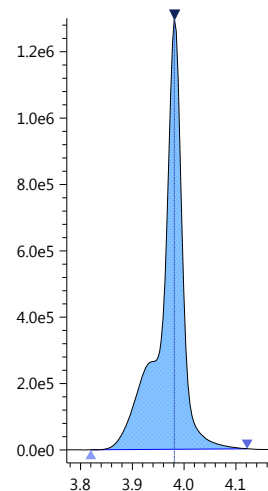
ISTD 216.90>172.15 (-)



PFPeA

Conc 4.8515
 RT 3.982 Area 3531539

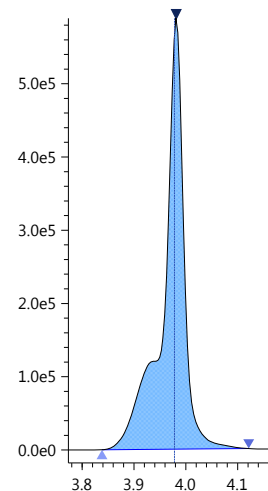
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.9530
 RT 3.981 Area 1612733

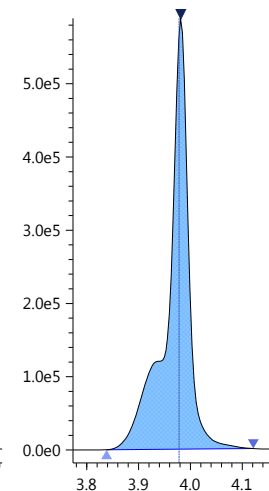
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.981 Area 1612733

ISTD 267.90>223.00 (-)

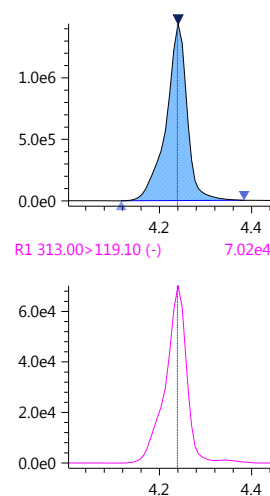


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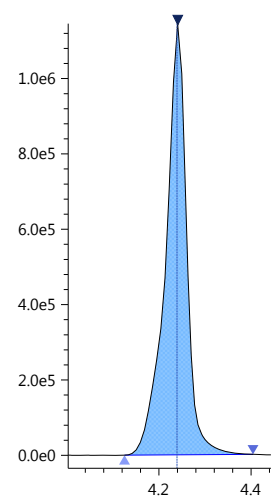
PFHxA

Conc 4.7650
RT 4.241 Area 4515510
R#1 4.87 (0.00)
Q 313.00>269.00 (-) 1.44e6



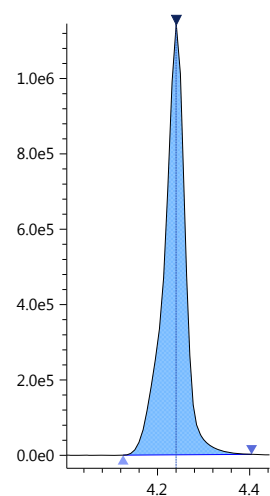
PFHxA-13C

Conc 4.9725
RT 4.241 Area 3629869
Q 314.90>270.10 (-) 1.15e6



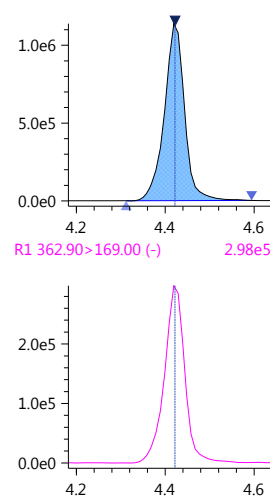
PFHxA-13C_IS

Conc 5.0000
RT 4.241 Area 3629869
ISTD 314.90>270.10 (-) 1.15e6



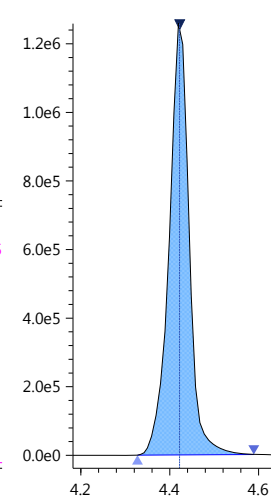
PFHpA

Conc 4.7082
RT 4.422 Area 3606325
R#1 26.17 (0.00)
Q 362.90>319.00 (-) 1.14e6



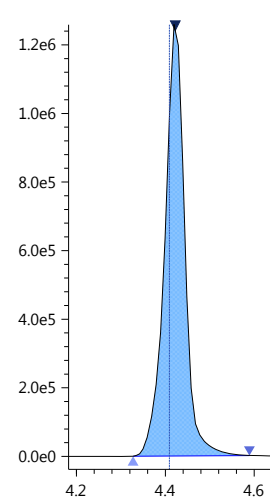
PFHpA-13C

Conc 5.0536
RT 4.422 Area 3949603
Q 366.90>322.10 (-) 1.26e6



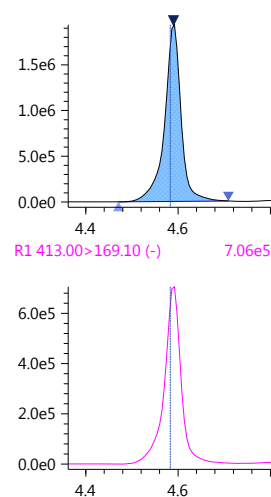
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Conc 5.0000
RT 4.422 Area 3949603
ISTD 366.90>322.10 (-) 1.26e6



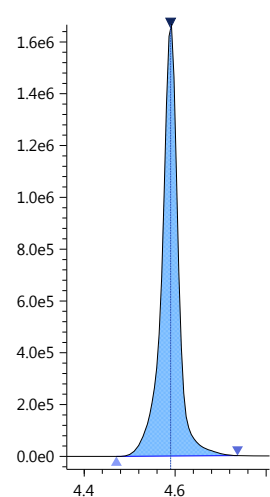
PFOA

Conc 4.8128
RT 4.590 Area 4785489
R#1 36.38 (0.00)
Q 413.00>369.00 (-) 1.94e6



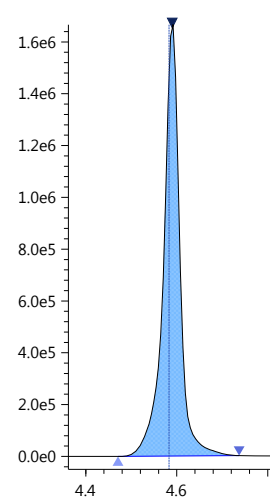
PFOA-13C

Conc 4.9762
RT 4.590 Area 4154625
Q 416.80>372.05 (-) 1.67e6



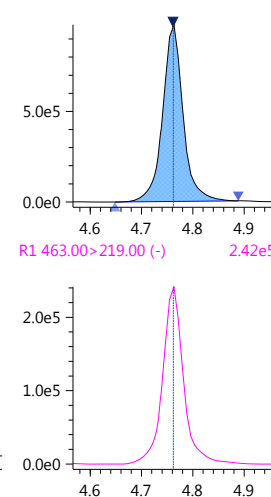
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Conc 5.0000
RT 4.590 Area 4154625
ISTD 416.80>372.05 (-) 1.67e6



PFNA

Conc 4.6550
RT 4.761 Area 2691729
R#1 24.68 (0.00)
Q 463.00>418.90 (-) 9.79e5



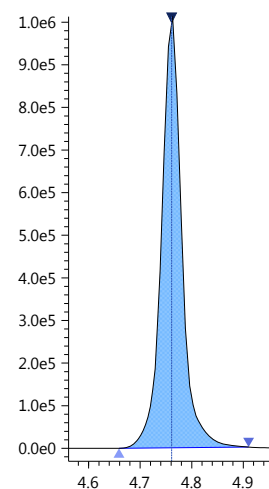
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PFNA-13C

Conc 4.8620
 RT 4.761 Area 2777289

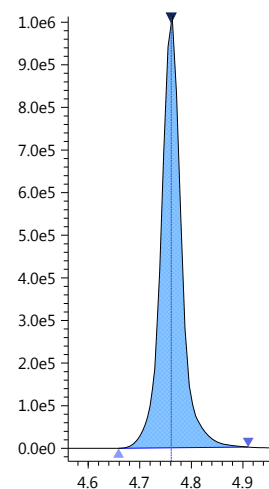
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
 RT 4.761 Area 2777289

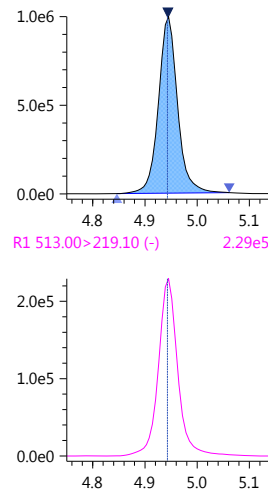
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PFDA

Conc 4.8535
 RT 4.944 Area 2531726
 R#1 22.96 (0.00)

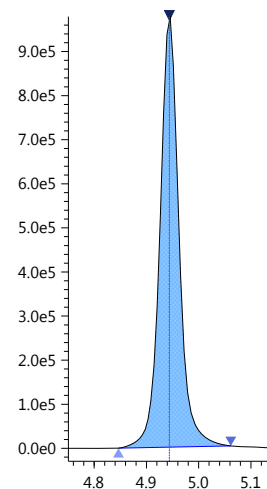
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.7761
 RT 4.944 Area 2485506

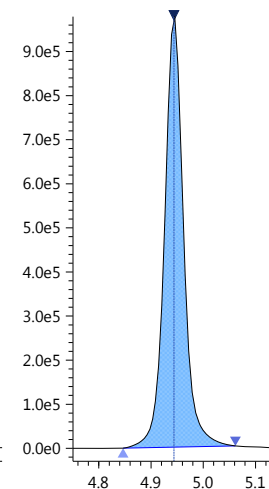
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 RT 4.944 Area 2485506

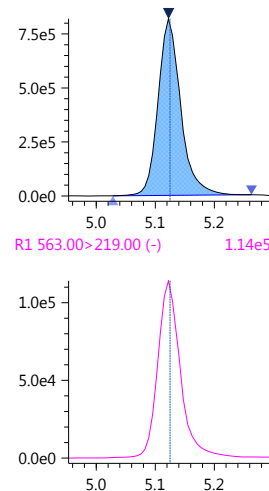
ISTD 514.80>469.95 (-)



PFUnA

Conc 4.8093
 RT 5.123 Area 2179904
 R#1 13.79 (0.00)

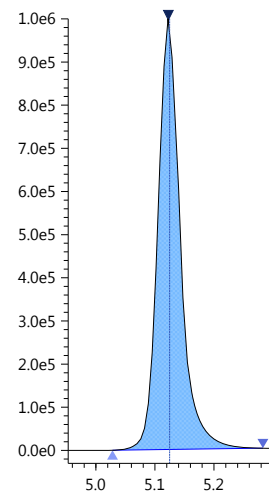
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.9031
 RT 5.123 Area 2643385

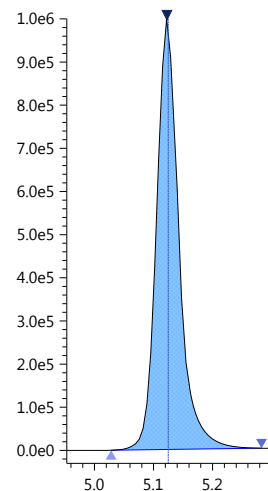
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 RT 5.123 Area 2643385

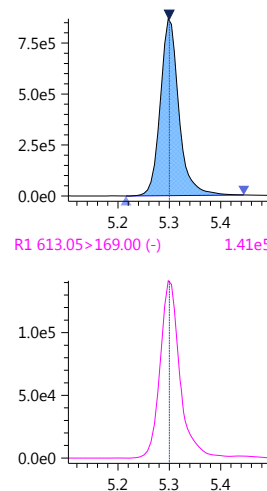
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PFDaA

Conc 4.8828
 RT 5.300 Area 2175580
 R#1 16.15 (0.00)

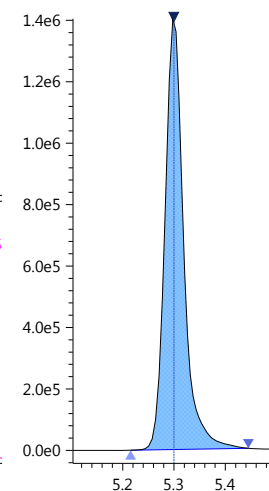
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.9761
 RT 5.300 Area 3555605

Q 614.80>569.95 (-)



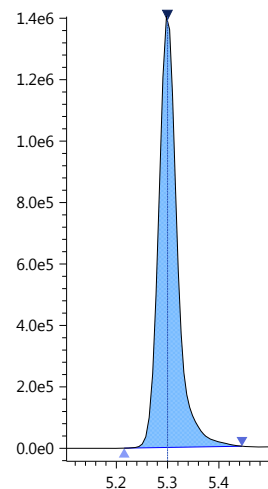
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PFD_oA-13C_IS

Conc 5.0000
 RT 5.300 Area 3555605

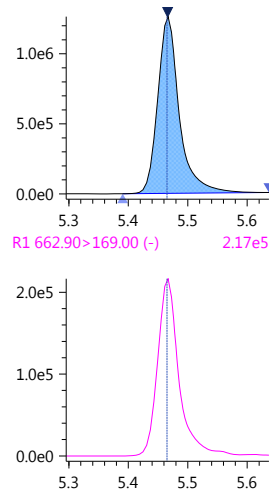
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PFT_rDA

Conc 4.8600
 RT 5.466 Area 3173645
 R#1 17.25 (0.00)

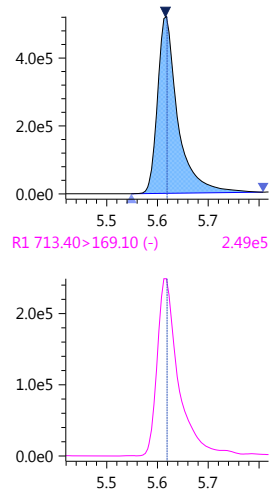
Q 663.00>618.90 (-)



PFT_eDA

Conc 4.7492
 RT 5.616 Area 1440472
 R#1 48.14 (0.00)

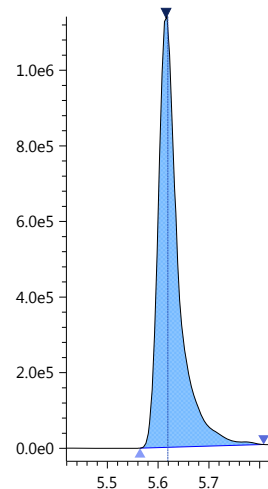
Q 713.40>669.00 (-)



PFT_eDA-13C

Conc 5.0350
 RT 5.616 Area 3127244

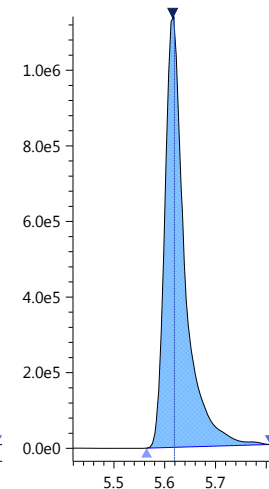
Q 714.70>669.90 (-)



PFT_eDA-13C_IS

Conc 5.0000
 RT 5.616 Area 3127244

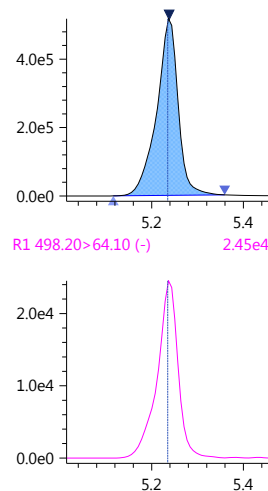
ISTD 714.70>669.90 (-)



FOSA

Conc 4.8487
 RT 5.238 Area 1674122
 R#1 4.75 (0.00)

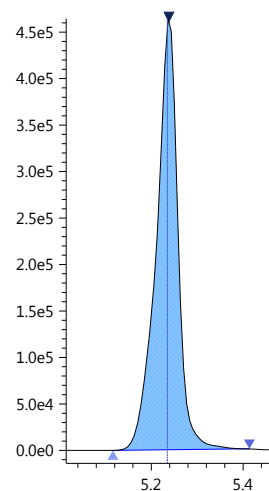
Q 498.20>78.00 (-)



FOSA-13C

Conc 5.0211
 RT 5.238 Area 1515951

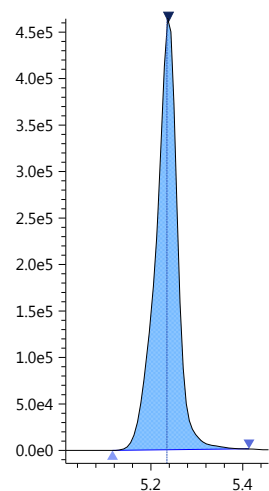
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc 5.0000
 RT 5.238 Area 1515951

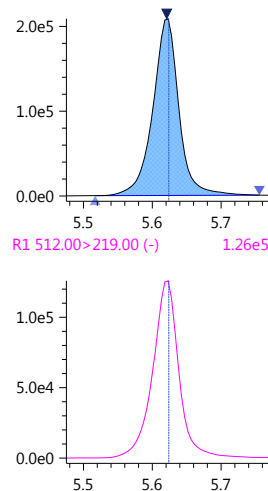
ISTD 506.00>78.05 (-)



N-MeFOSA

Conc 4.8472
 RT 5.621 Area 548124
 R#1 60.54 (0.00)

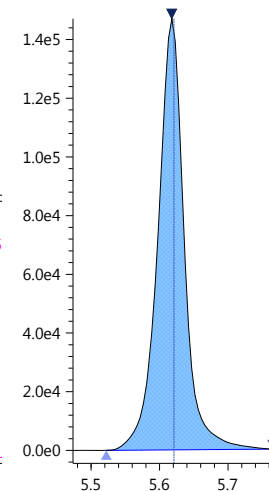
Q 512.00>169.10 (-)



N-MeFOSA-d3

Conc 5.0115
 RT 5.618 Area 393003

Q 514.90>168.90 (-)



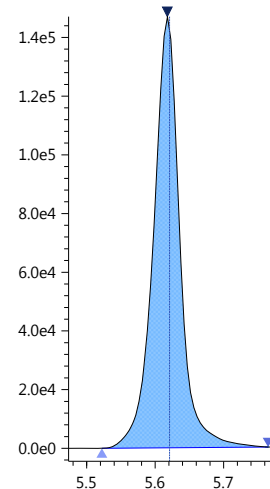
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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.618 Area 393003

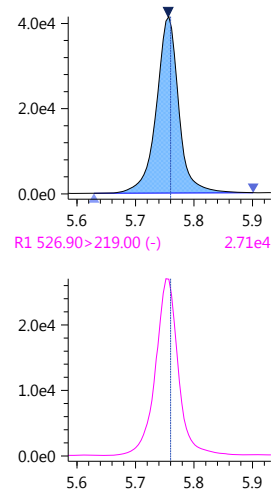
ISTD 514.90>168.90 (-) 1.47e5



N-EtFOSA

Conc 4.8442
 RT 5.756 Area 109515
 R#1 64.54 (0.00)

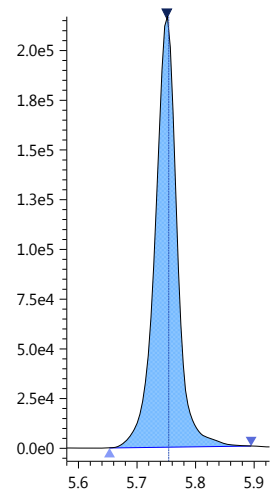
Q 526.90>169.10 (-) 4.16e4



N-EtFOSA-d9

Conc 5.0467
 RT 5.751 Area 568603

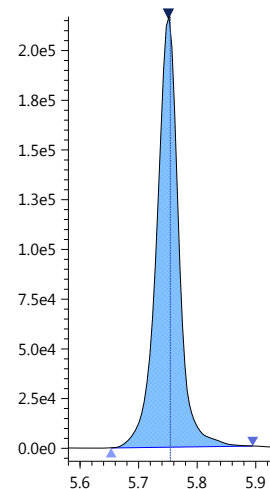
Q 530.90>169.15 (-) 2.17e5



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.751 Area 568603

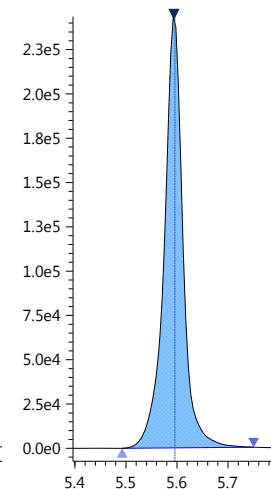
ISTD 530.90>169.15 (-) 2.17e5



N-MeFOSE

Conc 4.8779
 RT 5.594 Area 621474

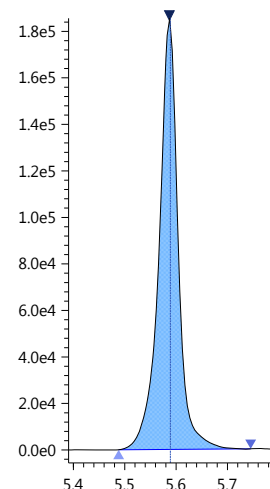
Q 616.00>59.00 (-) 2.44e5



N-MeFOSE-d7

Conc 5.0381
 RT 5.587 Area 477002

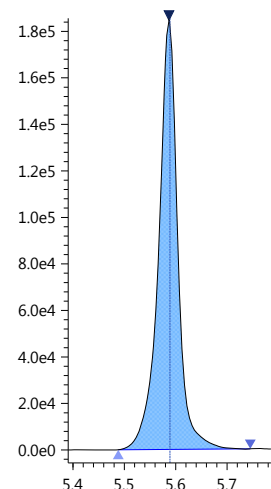
Q 622.70>59.10 (-) 1.86e5



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.587 Area 477002

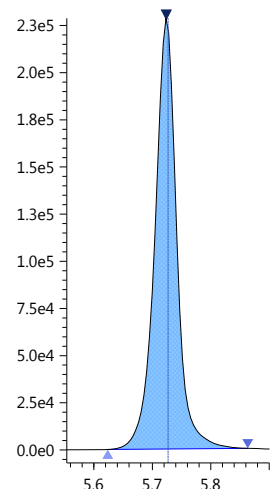
ISTD 622.70>59.10 (-) 1.86e5



N-EtFOSE

Conc 4.8152
 RT 5.724 Area 594157

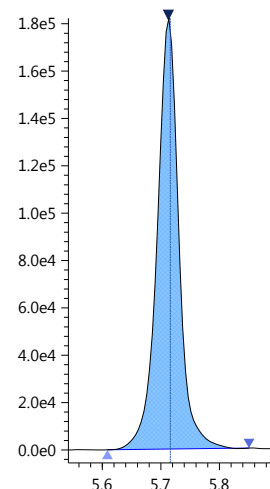
Q 630.00>58.90 (-) 2.29e5



N-EtFOSE-d9

Conc 5.1183
 RT 5.713 Area 467738

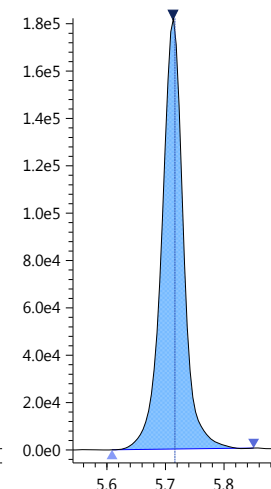
Q 638.70>59.10 (-) 1.82e5



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.713 Area 467738

ISTD 638.70>59.10 (-) 1.82e5



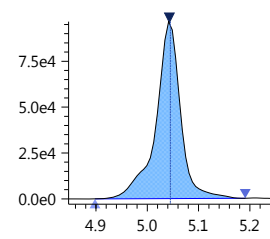
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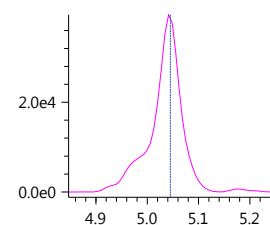
N-MeFOSAA

Conc 4.7302
RT 5.043 Area 321754
R#1 40.88 (0.00)

Q 570.20>419.00 (-)



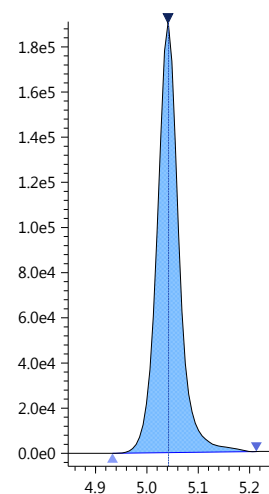
R1 570.20>512.00 (-) 3.95e4



N-MeFOSAA-d3

Conc 5.0954
RT 5.041 Area 567381

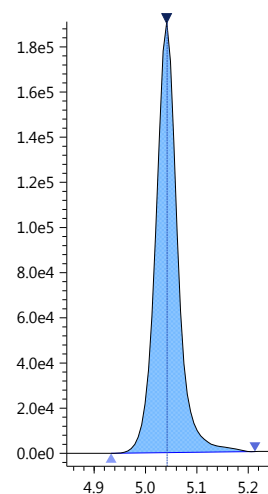
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.041 Area 567381

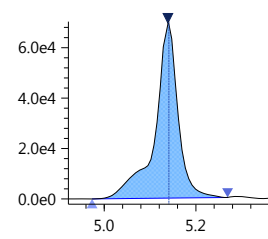
ISTD 572.80>419.05 (-)



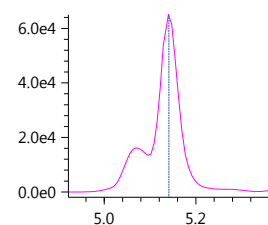
N-EtFOSAA

Conc 4.3604
RT 5.139 Area 242701
R#1 91.00 (0.00)

Q 584.20>418.95 (-)



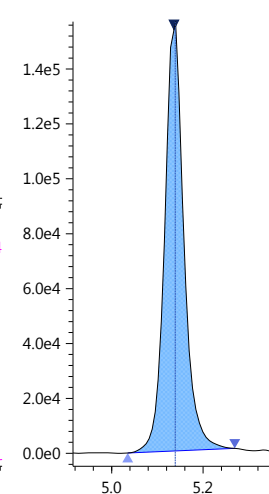
R1 584.20>526.10 (-) 6.50e4



N-EtFOSAA-d5

Conc 5.0487
RT 5.136 Area 457690

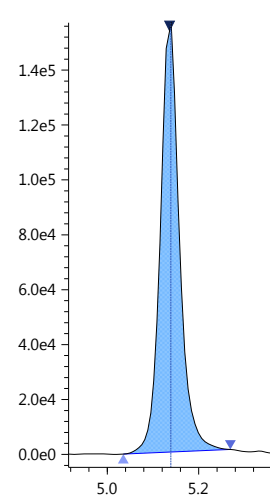
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.136 Area 457690

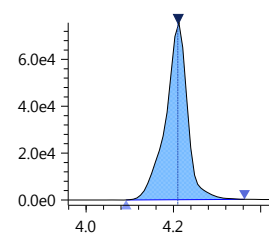
ISTD 588.80>419.00 (-)



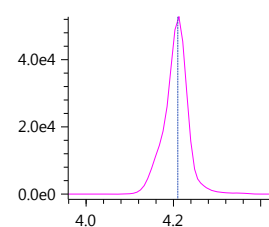
4_2-FTS_1

Conc 4.4079
RT 4.211 Area 262047
R#1 69.74 (0.00)

Q 327.00>307.05 (-)



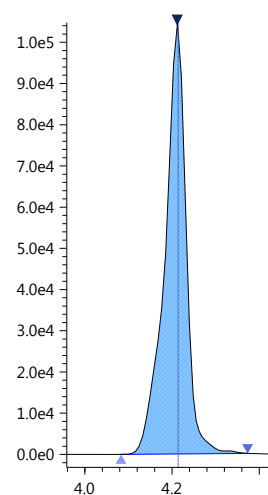
R1 327.00>81.10 (-) 5.28e4



4_2-FTS-13C

Conc 4.9113
RT 4.212 Area 353262

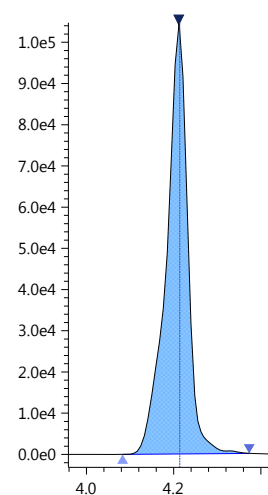
Q 328.80>309.05 (-)



4_2-FTS-13C_IS

Conc 5.0000
RT 4.212 Area 353262

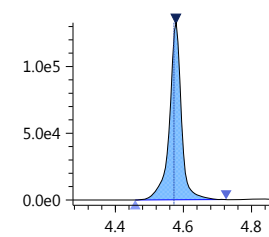
ISTD 328.80>309.05 (-)



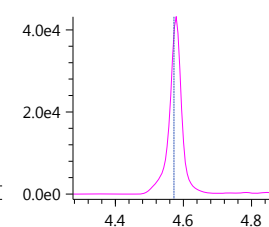
6_2-FTS_1

Conc 4.7884
RT 4.578 Area 323620
R#1 32.44 (0.00)

Q 427.00>407.00 (-)



R1 427.00>80.90 (-) 4.32e4



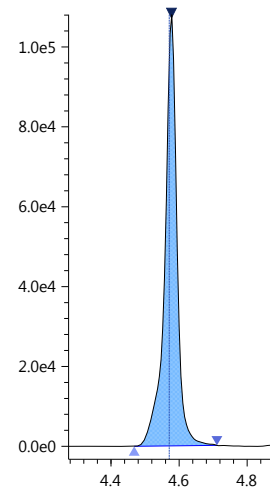
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6_2-FTS-13C

Conc 4.8591
RT 4.577 Area 269089

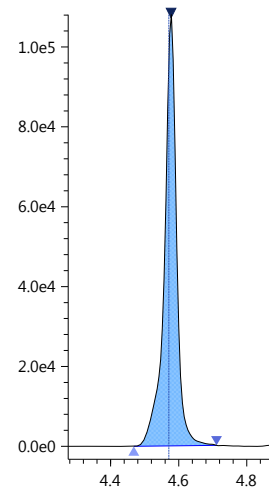
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
RT 4.577 Area 269089

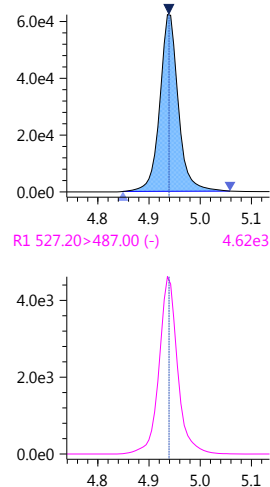
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 4.7796
RT 4.939 Area 156081
R#1 7.42 (0.00)

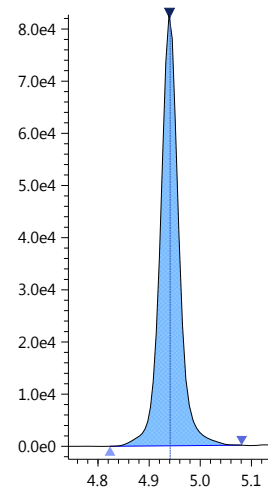
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.8526
RT 4.940 Area 208446

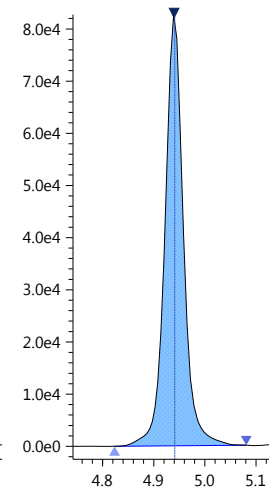
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.940 Area 208446

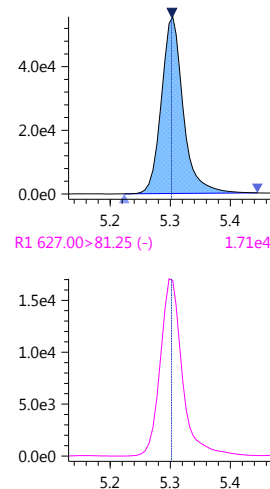
ISTD 528.80>509.00 (-)



10_2-FtS_1

Conc 4.5135
RT 5.303 Area 139457
R#1 30.52 (0.00)

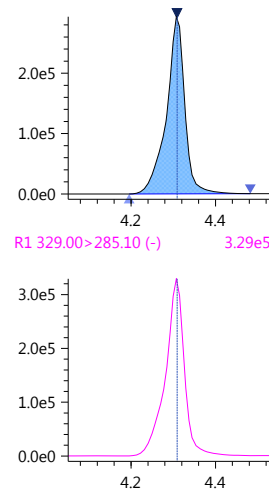
Q 627.00>606.95 (-)



HPFO_DA

Conc 5.0203
RT 4.309 Area 886241
R#1 112.23 (0.00)

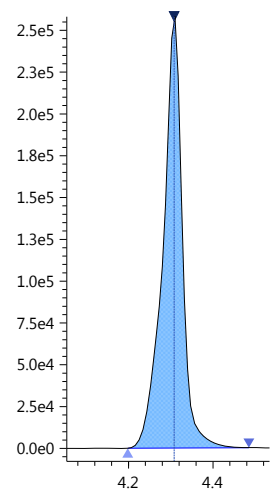
Q 329.00>169.00 (-)



HPFO_DA-13C

Conc 4.8052
RT 4.308 Area 822531

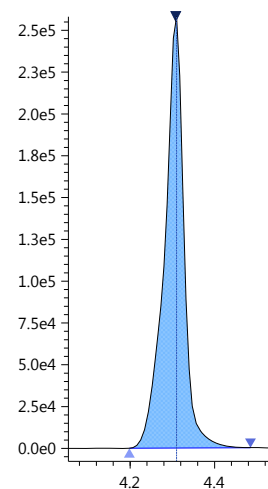
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.308 Area 822531

ISTD 332.00>286.80 (-)



Insight Report

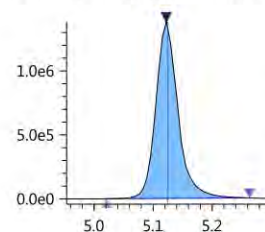
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191202_022

Sample ID: 5.0 PPB ICAL
Date acquired: 12/2/2019 6:21:31 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_022.lcd
Vial: 5 | Inj. Volume: 15.0000uL | Tray: 0

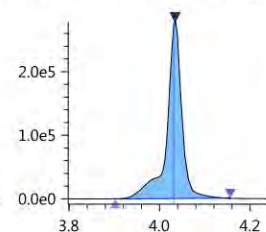
13C7-PFUnDA_IS

Conc 5.0000
RT 5.122 Area 3592994
ISTD 570.00>525.00 (-)



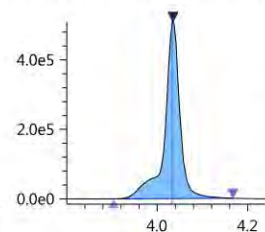
PFBS_1

Conc 4.4376
RT 4.034 Area 639918
Q 298.80>99.00 (-)



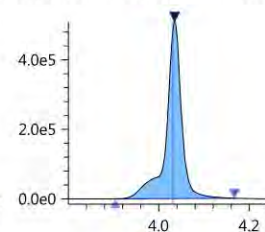
PFBS-13C

Conc 4.9324
RT 4.035 Area 1192066
Q 301.80>80.00 (-)



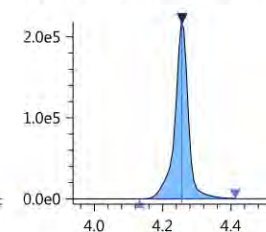
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Conc 5.0000
RT 4.035 Area 1192066
ISTD 301.80>80.00 (-)



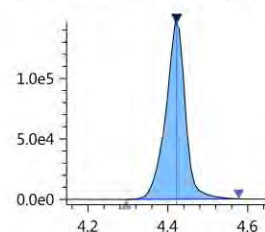
PFPeS

Conc 4.8162
RT 4.257 Area 593311
Q 349.00>99.00 (-)



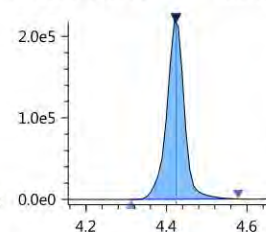
PFHxS_1

Conc 4.1868
RT 4.422 Area 501746
Q 399.00>99.00 (-)



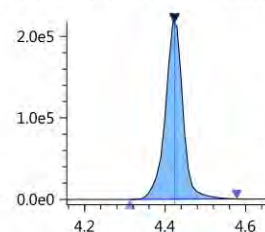
PFHxS-180

Conc 5.1800
RT 4.423 Area 663277
Q 402.70>84.05 (-)



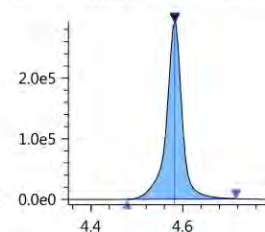
PFHxS-180_IS

Conc 5.0000
RT 4.423 Area 663277
ISTD 402.70>84.05 (-)



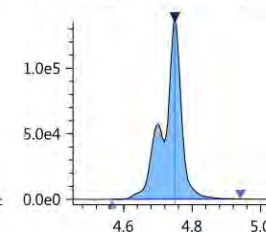
PFHpS_1

Conc 4.4799
RT 4.582 Area 698067
Q 449.00>80.15 (-)



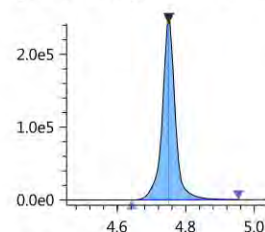
PFOS_1

Conc 4.4012
RT 4.750 Area 503877
Q 499.00>80.00 (-)



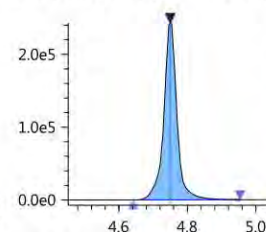
PFOS-13C

Conc 5.1663
RT 4.750 Area 652846
Q 502.80>80.05 (-)



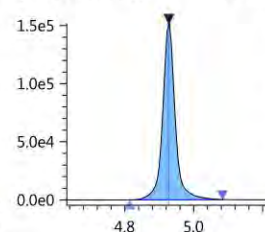
PFOS-13C_IS

Conc 5.0000
RT 4.750 Area 652846
ISTD 502.80>80.05 (-)



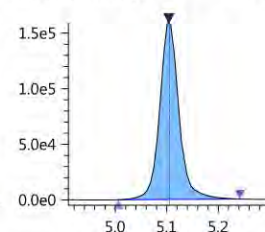
PFNS

Conc 4.4278
RT 4.928 Area 382338
Q 549.00>99.00 (-)



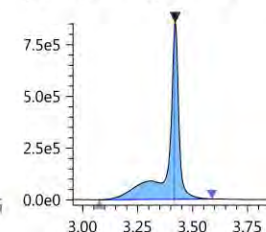
PFDS_1

Conc 4.6808
RT 5.104 Area 414609
Q 599.00>99.10 (-)



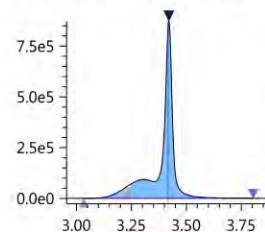
PFBA

Conc 4.8412
RT 3.421 Area 2857080
Q 213.00>169.10 (-)



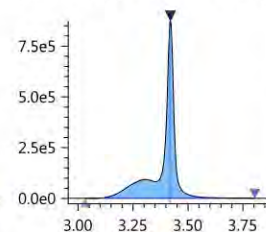
PFBA-13C

Conc 4.9598
RT 3.420 Area 3003227
Q 216.90>172.15 (-)



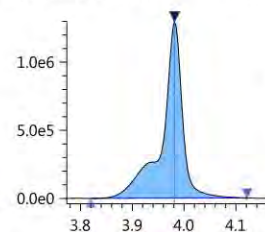
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Conc 5.0000
RT 3.420 Area 3003227
ISTD 216.90>172.15 (-)



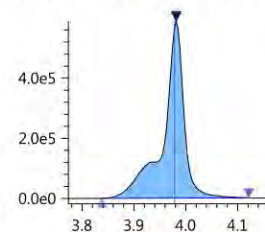
PFPeA

Conc 4.8515
RT 3.982 Area 3531539
Q 263.05>219.10 (-)



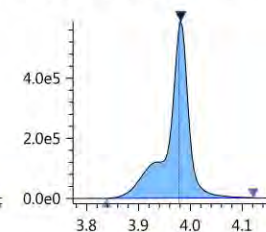
PFPeA-13C

Conc 4.9530
RT 3.981 Area 1612733
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.981 Area 1612733
ISTD 267.90>223.00 (-)

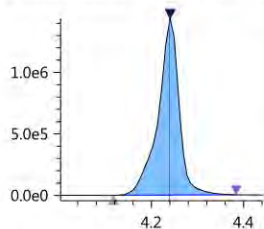


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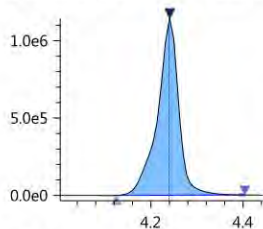
PFHxA

Conc 4.7653
 RT 4.241 Area 4515510
 Q 313.00>269.00 (-)



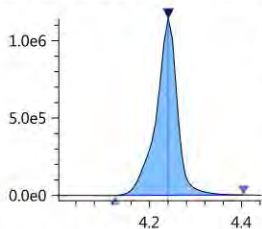
PFHxA-13C

Conc 4.9725
 RT 4.241 Area 3629869
 Q 314.90>270.10 (-)



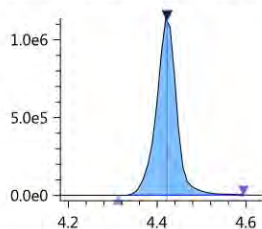
PFHxA-13C_IS

Conc 5.0000
 RT 4.241 Area 3629869
 ISTD 314.90>270.10 (-)



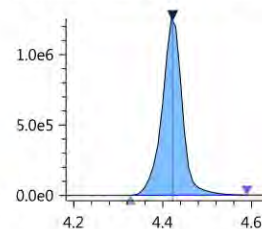
PFHpA

Conc 4.7082
 RT 4.422 Area 3606325
 Q 362.90>319.00 (-)



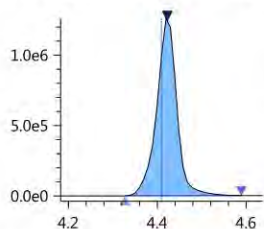
PFHpA-13C

Conc 5.0536
 RT 4.422 Area 3949603
 Q 366.90>322.10 (-)



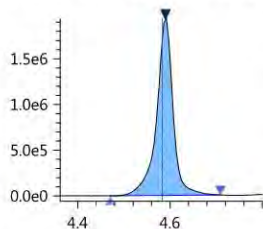
PFHpA-13C_IS

Conc 5.0000
 RT 4.422 Area 3949603
 ISTD 366.90>322.10 (-)



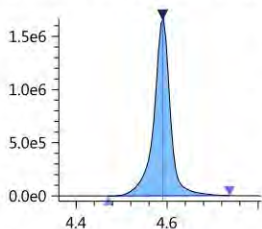
PFOA

Conc 4.8133
 RT 4.590 Area 4785489
 Q 413.00>369.00 (-)



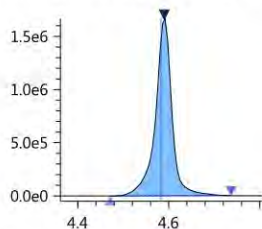
PFOA-13C

Conc 4.9762
 RT 4.590 Area 4154625
 Q 416.80>372.05 (-)



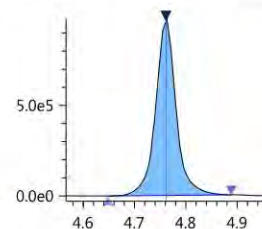
PFOA-13C_IS

Conc 5.0000
 RT 4.590 Area 4154625
 ISTD 416.80>372.05 (-)



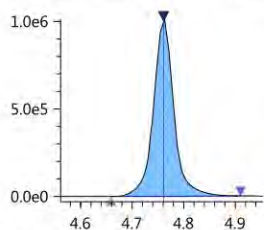
PFNA

Conc 4.6553
 RT 4.761 Area 2691729
 Q 463.00>418.90 (-)



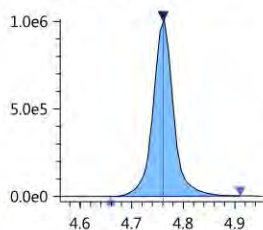
PFNA-13C

Conc 4.8620
 RT 4.761 Area 2777289
 Q 467.80>423.00 (-)



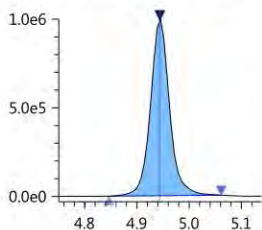
PFNA-13C_IS

Conc 5.0000
 RT 4.761 Area 2777289
 ISTD 467.80>423.00 (-)



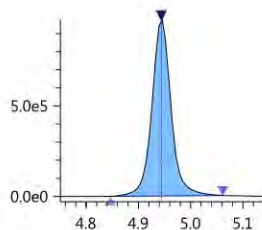
PFDA

Conc 4.8533
 RT 4.944 Area 2531726
 Q 513.00>468.80 (-)



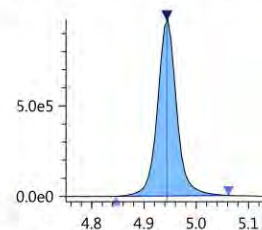
PFDA-13C

Conc 4.7761
 RT 4.944 Area 2485506
 Q 514.80>469.95 (-)



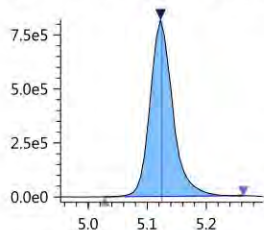
PFDA-13C_IS

Conc 5.0000
 RT 4.944 Area 2485506
 ISTD 514.80>469.95 (-)



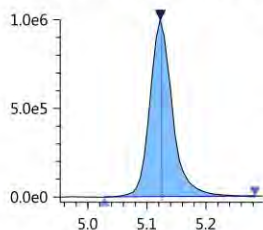
PFUnA

Conc 4.8100
 RT 5.123 Area 2179904
 Q 563.00>518.90 (-)



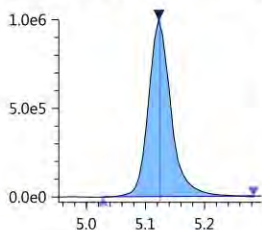
PFUnA-13C

Conc 4.9031
 RT 5.123 Area 2643385
 Q 564.80>519.95 (-)



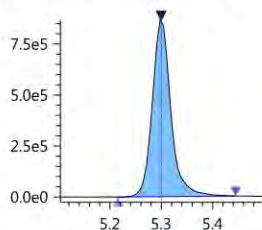
PFUnA-13C_IS

Conc 5.0000
 RT 5.123 Area 2643385
 ISTD 564.80>519.95 (-)



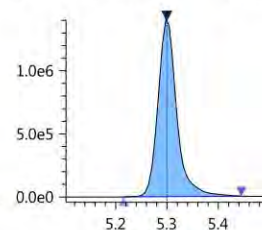
PFDaA

Conc 4.6730
 RT 5.300 Area 2175580
 Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.9761
 RT 5.300 Area 3555605
 Q 614.80>569.95 (-)

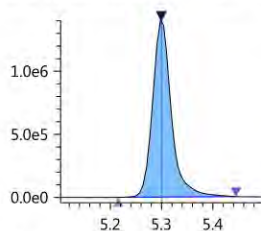


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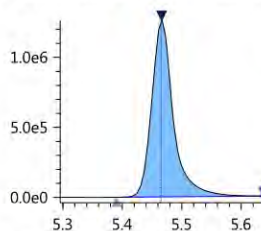
PFDaA-13C_IS

Conc 5.0000
RT 5.300 Area 3555605
ISTD 614.80>569.95 (-)



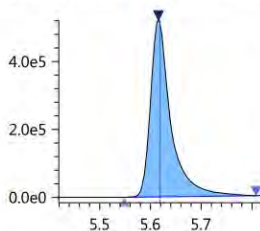
PFTrDA

Conc 4.8600
RT 5.466 Area 3173645
Q 663.00>618.90 (-)



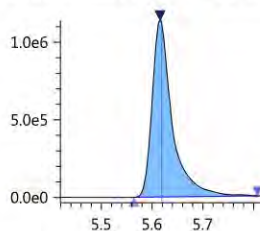
PFTeDA

Conc 4.7484
RT 5.616 Area 1440472
Q 713.40>669.00 (-)



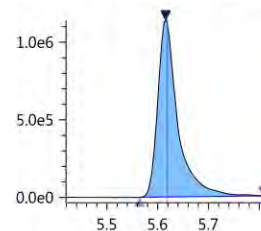
PFTeDA-13C

Conc 5.0350
RT 5.616 Area 3127244
Q 714.70>669.90 (-)



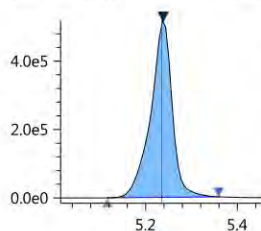
PFTeDA-13C_IS

Conc 5.0000
RT 5.616 Area 3127244
ISTD 714.70>669.90 (-)



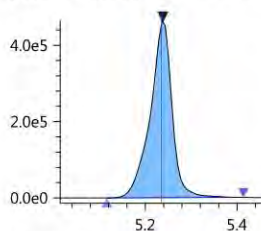
FOSA

Conc 4.8487
RT 5.238 Area 1674122
Q 498.20>78.00 (-)



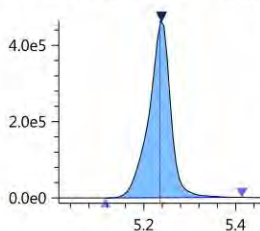
FOSA-13C

Conc 5.0211
RT 5.238 Area 1515951
Q 506.00>78.05 (-)



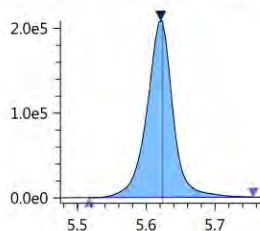
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Conc 5.0000
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ISTD 506.00>78.05 (-)



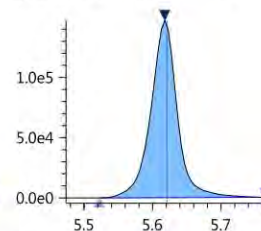
N-MeFOSA

Conc 4.8300
RT 5.621 Area 548124
Q 512.00>169.10 (-)



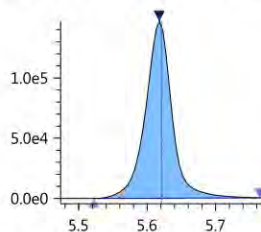
N-MeFOSA-d3

Conc 5.0115
RT 5.618 Area 393003
Q 514.90>168.90 (-)



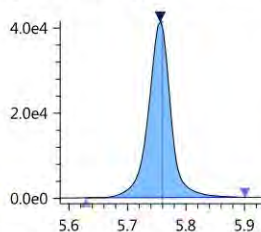
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.618 Area 393003
ISTD 514.90>168.90 (-)



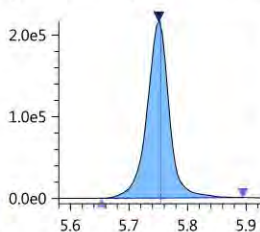
N-EtFOSA

Conc 4.8946
RT 5.756 Area 109515
Q 526.90>169.10 (-)



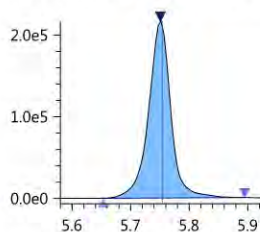
N-EtFOSA-d9

Conc 5.0467
RT 5.751 Area 568603
Q 530.90>169.15 (-)



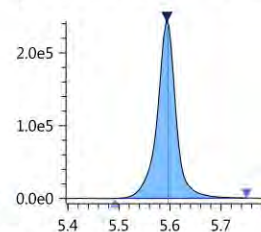
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.751 Area 568603
ISTD 530.90>169.15 (-)



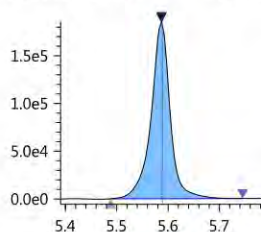
N-MeFOSE

Conc 4.8751
RT 5.594 Area 621474
Q 616.00>59.00 (-)



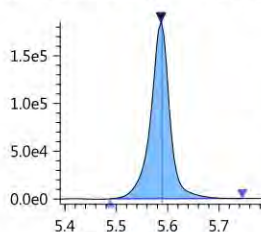
N-MeFOSE-d7

Conc 5.0381
RT 5.587 Area 477002
Q 622.70>59.10 (-)



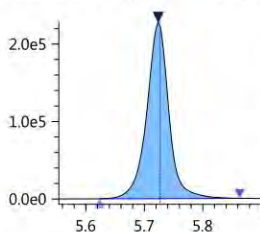
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.587 Area 477002
ISTD 622.70>59.10 (-)



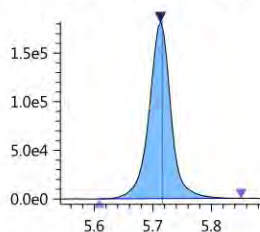
N-EtFOSE

Conc 4.8106
RT 5.724 Area 594157
Q 630.00>58.90 (-)



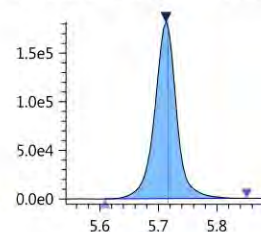
N-EtFOSE-d9

Conc 5.1183
RT 5.713 Area 467738
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.713 Area 467738
ISTD 638.70>59.10 (-)

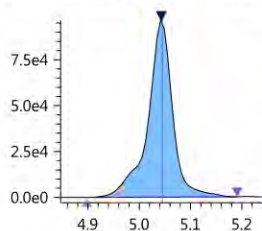


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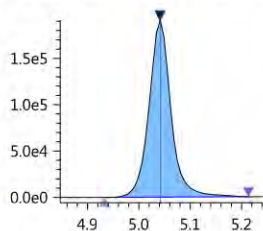
N-MeFOSAA

Conc 4.7334
RT 5.043 Area 321754
Q 570.20>419.00 (-)



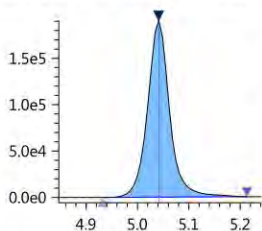
N-MeFOSAA-d3

Conc 5.0954
RT 5.041 Area 567381
Q 572.80>419.05 (-)



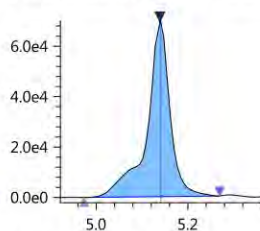
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.041 Area 567381
ISTD 572.80>419.05 (-)



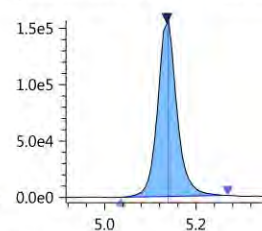
N-EtFOSAA

Conc 4.6083
RT 5.139 Area 242701
Q 584.20>418.95 (-)



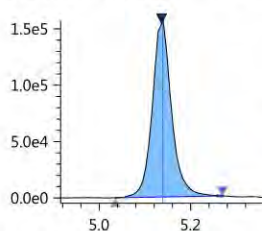
N-EtFOSAA-d5

Conc 5.0487
RT 5.136 Area 457690
Q 588.80>419.00 (-)



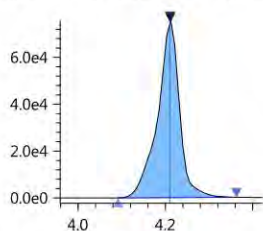
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.136 Area 457690
ISTD 588.80>419.00 (-)



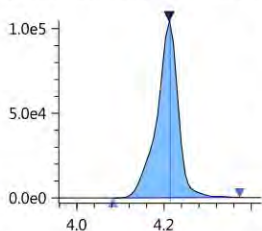
4_2-FTS_1

Conc 4.4098
RT 4.211 Area 262047
Q 327.00>307.05 (-)



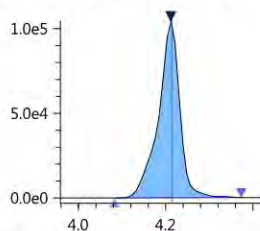
4_2-FTS-13C

Conc 4.9113
RT 4.212 Area 353262
Q 328.80>309.05 (-)



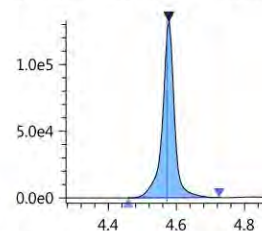
4_2-FTS-13C_IS

Conc 5.0000
RT 4.212 Area 353262
ISTD 328.80>309.05 (-)



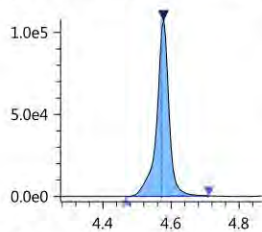
6_2-FTS_1

Conc 4.8036
RT 4.578 Area 323620
Q 427.00>407.00 (-)



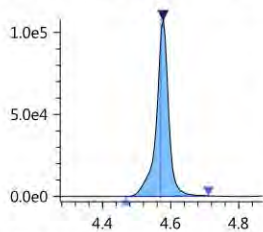
6_2-FTS-13C

Conc 4.8591
RT 4.577 Area 269089
Q 428.90>409.00 (-)



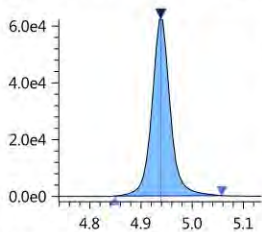
6_2-FTS-13C_IS

Conc 5.0000
RT 4.577 Area 269089
ISTD 428.90>409.00 (-)



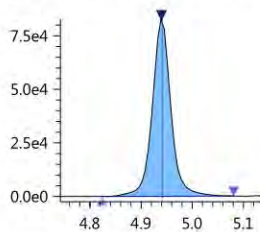
8_2-FTS_1

Conc 4.7843
RT 4.939 Area 156081
Q 527.10>506.90 (-)



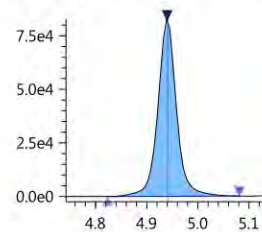
8_2-FTS-13C

Conc 4.8526
RT 4.940 Area 208446
Q 528.80>509.00 (-)



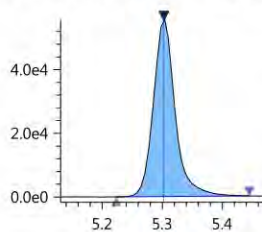
8_2-FTS-13C_IS

Conc 5.0000
RT 4.940 Area 208446
ISTD 528.80>509.00 (-)



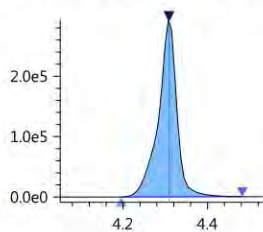
10_2-FtS_1

Conc 4.5138
RT 5.303 Area 139457
Q 627.00>606.95 (-)



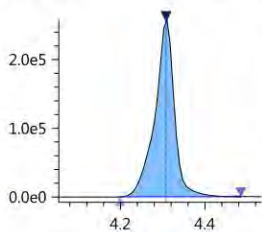
HFPO_DA

Conc 5.0203
RT 4.309 Area 886241
Q 329.00>169.00 (-)



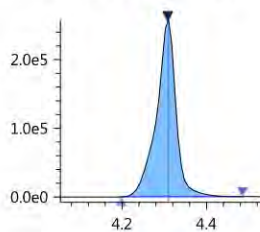
HFPO_DA-13C

Conc 4.8052
RT 4.308 Area 822531
Q 332.00>286.80 (-)



HFPO_DA-13C_IS

Conc 5.0000
RT 4.308 Area 822531
ISTD 332.00>286.80 (-)



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191202_023

Sample ID: 10.0 PPB ICAL

Date acquired: 12/2/2019 6:31:59 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_023.lcd

Vial: 6 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.122	3488769	3488769	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.033	1272461	1180644	2	8.9094	ng/mL	8.8737
PFBS-13C	Auto	4.033	1180644	3488769	1	5.0311	ng/mL	5.0000
PFBS-13C_IS	Auto	4.033	1180644	1180644	2	5.0000	ng/mL	5.0000
PFPeS	M	4.255	1082029	1180644	2	8.8227	ng/mL	9.4092
PFHxS_1	Auto	4.421	989795	609814	3	8.9699	ng/mL	9.1308
PFHxS-18O	Auto	4.422	609814	3488769	1	4.9047	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.422	609814	609814	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.581	1378890	609814	3	9.6237	ng/mL	9.5344
PFOS_1	Auto	4.749	1011527	595216	4	9.6311	ng/mL	9.2923
PFOS-13C	Auto	4.749	595216	3488769	1	4.8509	ng/mL	5.0000
PFOS-13C_IS	Auto	4.749	595216	595216	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.926	762631	595216	4	9.7558	ng/mL	9.6158
PFDS_1	Auto	5.103	815805	595216	4	10.0825	ng/mL	9.6467
PFBA	Auto	3.419	6037871	2986172	5	10.2893	ng/mL	10.0000
PFBA-13C	Auto	3.418	2986172	3488769	1	5.0789	ng/mL	5.0000
PFBA-13C_IS	Auto	3.418	2986172	2986172	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.980	7057268	1596138	6	9.9141	ng/mL	10.0000
PFPeA-13C	Auto	3.980	1596138	3488769	1	5.0485	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.980	1596138	1596138	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.238	8408007	3259165	7	9.9130	ng/mL	10.0000
PFHxA-13C	Auto	4.238	3259165	3488769	1	4.5981	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.238	3259165	3259165	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.421	6943021	3565593	8	10.0720	ng/mL	10.0000
PFHpA-13C	Auto	4.421	3565593	3488769	1	4.6985	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.421	3565593	3565593	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.589	9638359	4035544	9	10.0105	ng/mL	10.0000
PFOA-13C	Auto	4.589	4035544	3488769	1	4.9780	ng/mL	5.0000
PFOA-13C_IS	Auto	4.589	4035544	4035544	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.761	6079863	2782234	10	10.5341	ng/mL	10.0000
PFNA-13C	Auto	4.761	2782234	3488769	1	5.0162	ng/mL	5.0000
PFNA-13C_IS	Auto	4.761	2782234	2782234	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.943	5269445	2529872	11	9.9450	ng/mL	10.0000
PFDA-13C	Auto	4.943	2529872	3488769	1	5.0066	ng/mL	5.0000
PFDA-13C_IS	Auto	4.943	2529872	2529872	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.122	4372051	2597691	12	9.8574	ng/mL	10.0000
PFUnA-13C	Auto	5.122	2597691	3488769	1	4.9623	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.122	2597691	2597691	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.298	4424563	3485065	13	10.1583	ng/mL	10.0000
PFDoA-13C	Auto	5.298	3485065	3488769	1	5.0231	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.298	3485065	3485065	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.463	6521406	3021712	14	10.3722	ng/mL	10.0000
PFTeDA	Auto	5.614	2904634	3021712	14	10.0748	ng/mL	10.0000
PFTeDA-13C	Auto	5.614	3021712	3488769	1	5.0105	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.614	3021712	3021712	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.238	3405115	1482292	16	10.0862	ng/mL	10.0000
FOSA-13C	Auto	5.238	1482292	3488769	1	5.0563	ng/mL	5.0000
FOSA-13C_IS	Auto	5.238	1482292	1482292	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.620	1083042	381294	17	9.8717	ng/mL	10.0000
N-MeFOSA-d3	Auto	5.617	381294	3488769	1	5.0074	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.617	381294	381294	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.754	221275	550643	18	10.1069	ng/mL	10.0000
N-EtFOSA-d9	Auto	5.750	550643	3488769	1	5.0333	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.750	550643	550643	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.592	1246787	473453	19	9.8594	ng/mL	10.0000
N-MeFOSE-d7	Auto	5.585	473453	3488769	1	5.1500	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.585	473453	473453	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.723	1226422	445202	20	10.4424	ng/mL	10.0000
N-EtFOSE-d9	Auto	5.713	445202	3488769	1	5.0172	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.713	445202	445202	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.042	642761	568166	21	9.4142	ng/mL	10.0000
N-MeFOSAA-d3	Auto	5.040	568166	3488769	1	5.2548	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.040	568166	568166	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.141	489509	459148	22	8.7667	ng/mL	10.0000
N-EtFOSAA-d5	Auto	5.136	459148	3488769	1	5.2161	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.136	459148	459148	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.209	550072	367626	23	8.8912	ng/mL	9.3722
4_2-FTS-13C	Auto	4.208	367626	3488769	1	5.2637	ng/mL	5.0000

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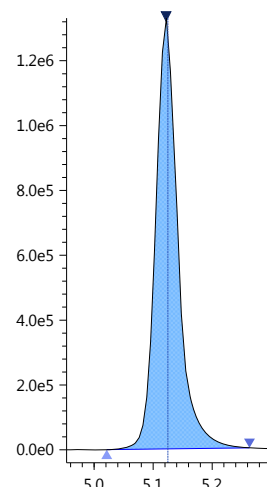
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.208	367626	367626	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.576	636752	278470	24	9.1042	ng/mL	9.5117
6_2-FTS-13C	Auto	4.576	278470	3488769	1	5.1787	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.576	278470	278470	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.938	302717	205953	25	9.3823	ng/mL	9.6004
8_2-FTS-13C	Auto	4.939	205953	3488769	1	4.9378	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.939	205953	205953	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.301	295768	205953	25	9.6882	ng/mL	9.6619
HPFO_DA	Auto	4.307	1731639	863501	26	9.3438	ng/mL	10.0000
HPFO_DA-13C	Auto	4.306	863501	3488769	1	5.1953	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.306	863501	863501	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.122 Area 3488769

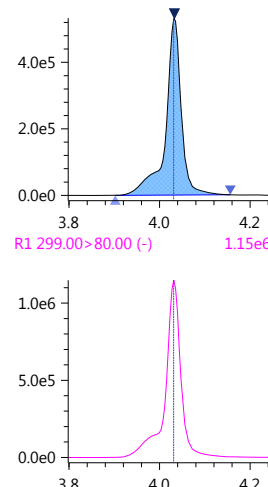
ISTD 570.00>525.00 (-)



PFBS_1

Conc 8.9094
RT 4.033 Area 1272461
R#1 216.27 (0.00)

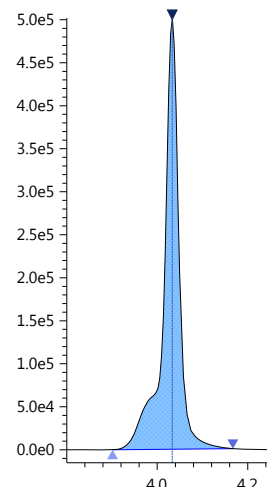
Q 298.80>99.00 (-)



PFBS-13C

Conc 5.0311
RT 4.033 Area 1180644

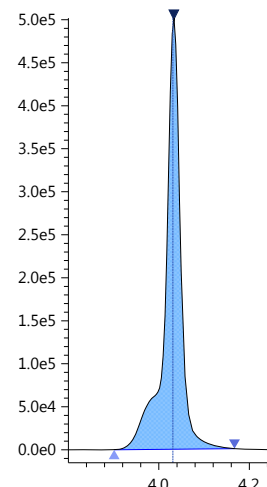
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.033 Area 1180644

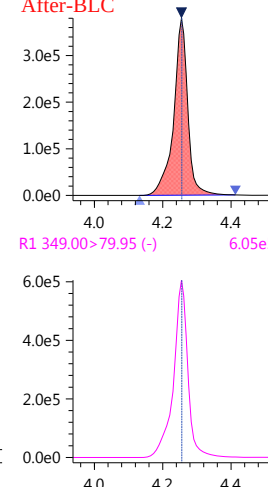
ISTD 301.80>80.00 (-)



PFPeS

Conc 8.8227
RT 4.255 Area 1082029
R#1 159.21 (0.00)

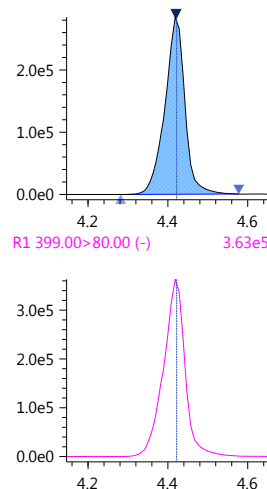
Q 349.00>99.00 (-)



PFHxS_1

Conc 8.9699
RT 4.421 Area 989795
R#1 127.80 (0.00)

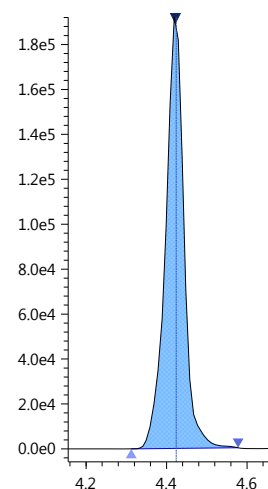
Q 399.00>99.00 (-)



PFHxS-180

Conc 4.9047
RT 4.422 Area 609814

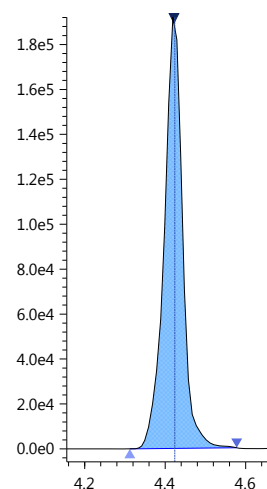
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.422 Area 609814

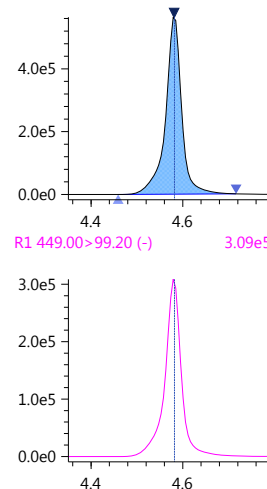
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 9.6237
RT 4.581 Area 1378890
R#1 54.78 (0.00)

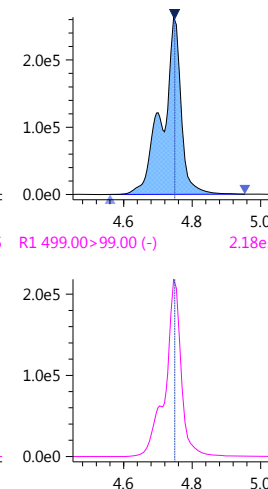
Q 449.00>80.15 (-)



PFOS_1

Conc 9.6311
RT 4.749 Area 1011527
R#1 82.72 (0.00)

Q 499.00>80.00 (-)



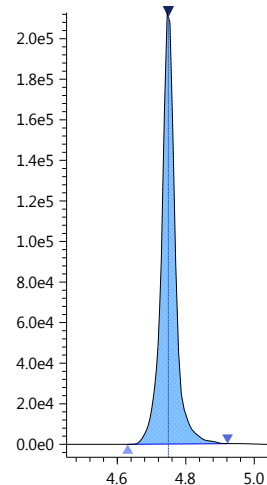
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PFOS-13C

Conc 4.8509
 RT 4.749 Area 595216

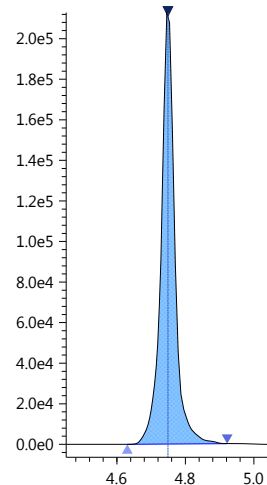
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.749 Area 595216

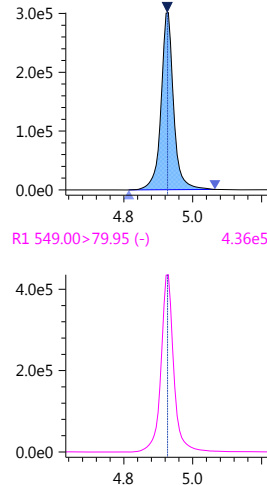
ISTD 502.80>80.05 (-)



PFNS

Conc 9.7558
 RT 4.926 Area 762631
 R#1 144.29 (0.00)

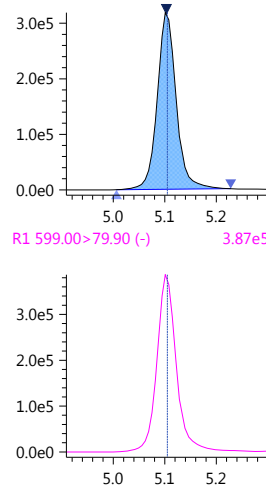
Q 549.00>99.00 (-)



PFDS_1

Conc 10.0825
 RT 5.103 Area 815805
 R#1 121.09 (0.00)

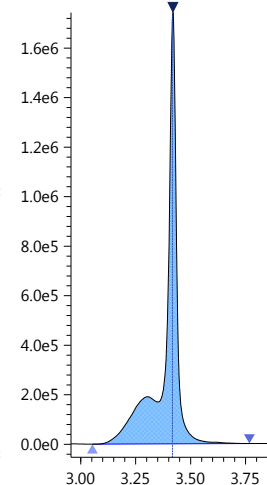
Q 599.00>99.10 (-)



PFBA

Conc 10.2893
 RT 3.419 Area 6037871

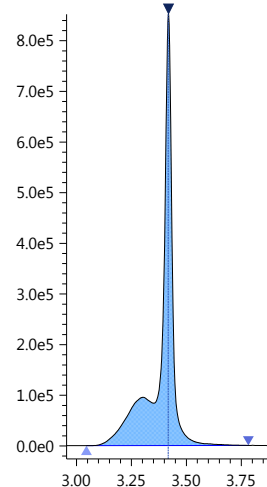
Q 213.00>169.10 (-)



PFBA-13C

Conc 5.0789
 RT 3.418 Area 2986172

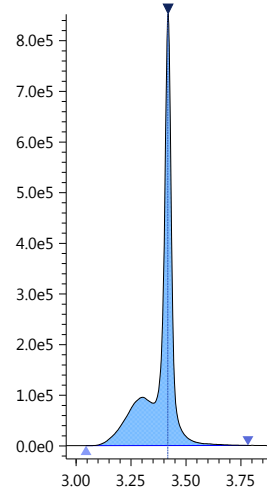
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.418 Area 2986172

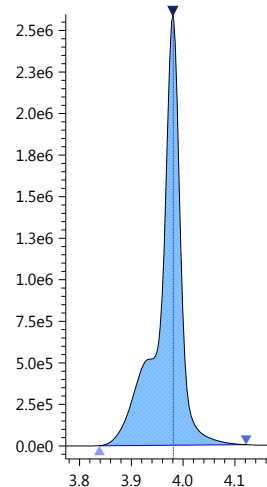
ISTD 216.90>172.15 (-)



PFPeA

Conc 9.9141
 RT 3.980 Area 7057268

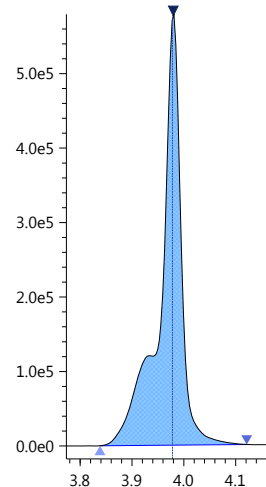
Q 263.05>219.10 (-)



PFPeA-13C

Conc 5.0485
 RT 3.980 Area 1596138

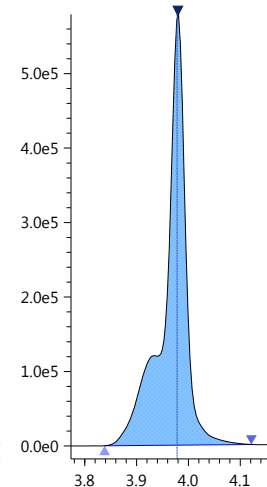
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.980 Area 1596138

ISTD 267.90>223.00 (-)



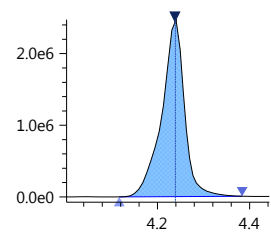
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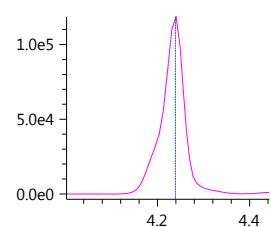
PFHxA

Conc 9.9130
 RT 4.238 Area 8408007
 R#1 4.80 (0.00)

Q 313.00>269.00 (-) 2.47e6



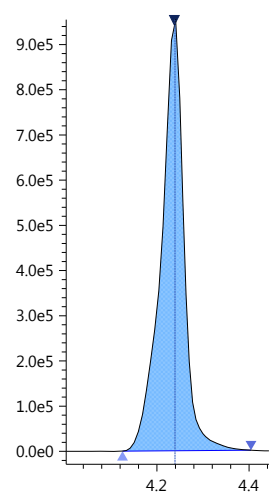
R1 313.00>119.10 (-) 1.19e5



PFHxA-13C

Conc 4.5981
 RT 4.238 Area 3259165

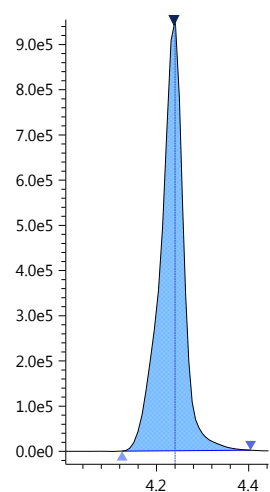
Q 314.90>270.10 (-) 9.55e5



PFHxA-13C_IS

Conc 5.0000
 RT 4.238 Area 3259165

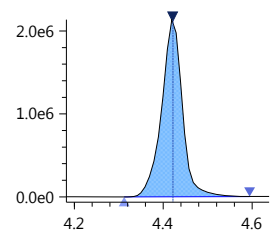
ISTD 314.90>270.10 (-) 9.55e5



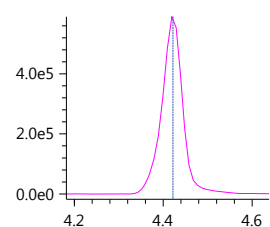
PFHpA

Conc 10.0720
 RT 4.421 Area 6943021
 R#1 27.58 (0.00)

Q 362.90>319.00 (-) 2.14e6



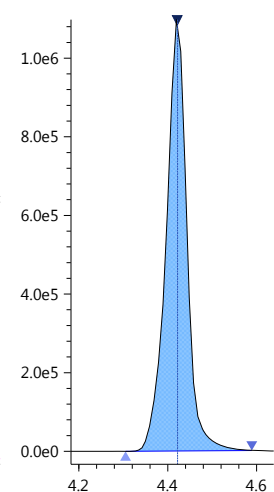
R1 362.90>169.00 (-) 5.90e5



PFHpA-13C

Conc 4.6985
 RT 4.421 Area 3565593

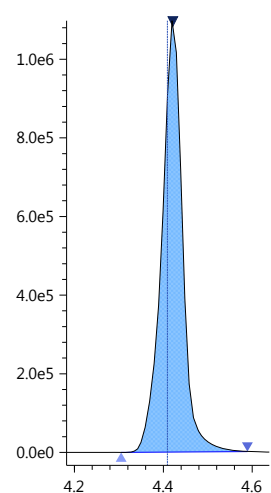
Q 366.90>322.10 (-) 1.10e6



PFHpA-13C_IS

Conc 5.0000
 RT 4.421 Area 3565593

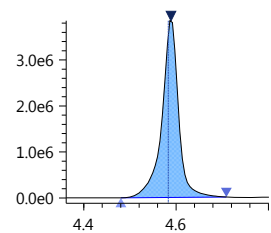
ISTD 366.90>322.10 (-) 1.10e6



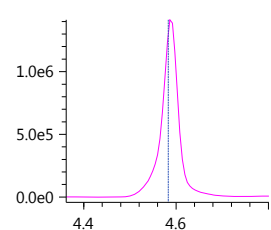
PFOA

Conc 10.0105
 RT 4.589 Area 9638359
 R#1 36.31 (0.00)

Q 413.00>369.00 (-) 3.85e6



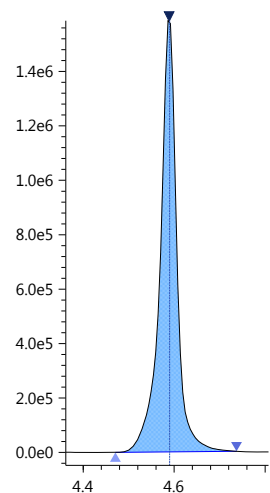
R1 413.00>169.10 (-) 1.41e6



PFOA-13C

Conc 4.9780
 RT 4.589 Area 4035544

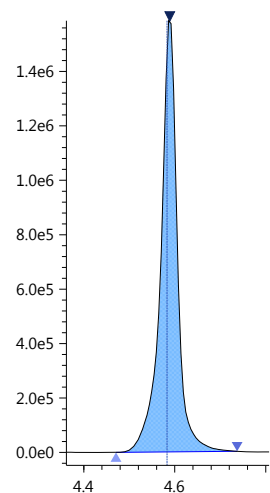
Q 416.80>372.05 (-) 1.59e6



PFOA-13C_IS

Conc 5.0000
 RT 4.589 Area 4035544

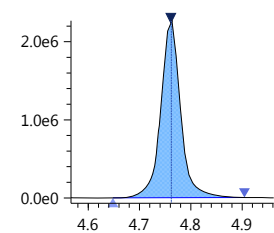
ISTD 416.80>372.05 (-) 1.59e6



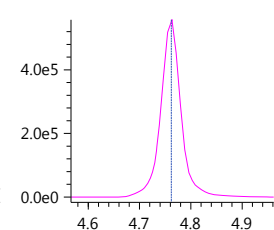
PFNA

Conc 10.5341
 RT 4.761 Area 6079863
 R#1 24.56 (0.00)

Q 463.00>418.90 (-) 2.27e6



R1 463.00>219.00 (-) 5.57e5



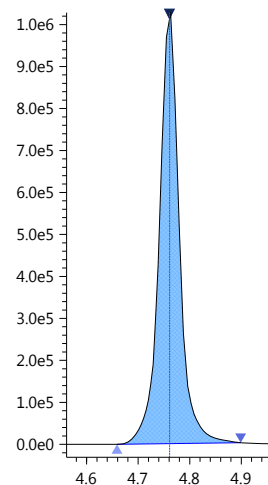
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PFNA-13C

Conc 5.0162
 RT 4.761 Area 2782234

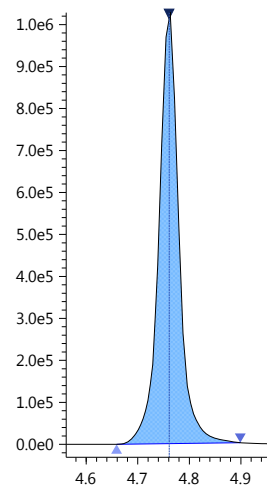
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
 RT 4.761 Area 2782234

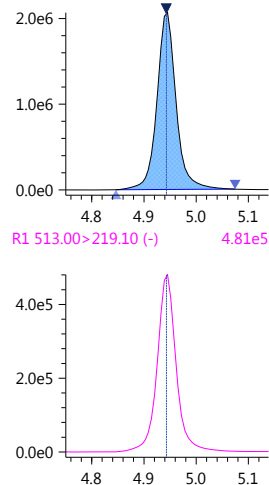
ISTD 467.80>423.00 (-)



PFDA

Conc 9.9450
 RT 4.943 Area 5269445
 R#1 23.31 (0.00)

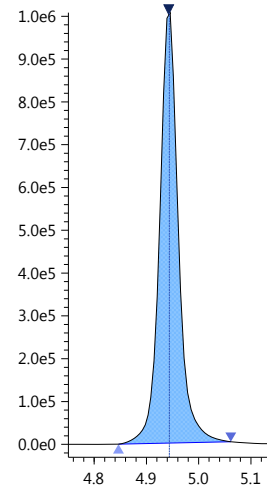
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.0066
 RT 4.943 Area 2529872

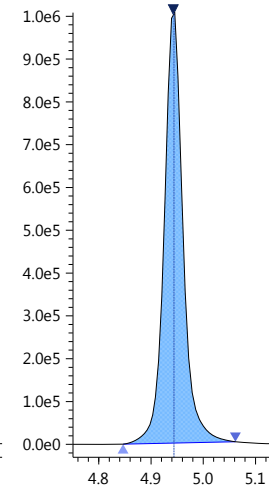
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PFDA-13C_IS

Conc 5.0000
 RT 4.943 Area 2529872

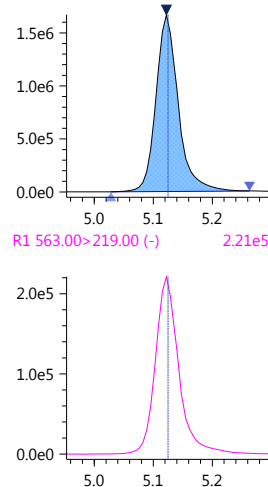
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PFUnA

Conc 9.8574
 RT 5.122 Area 4372051
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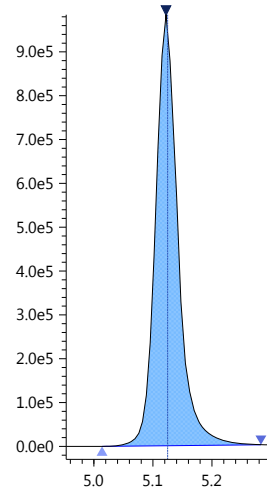
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.9623
 RT 5.122 Area 2597691

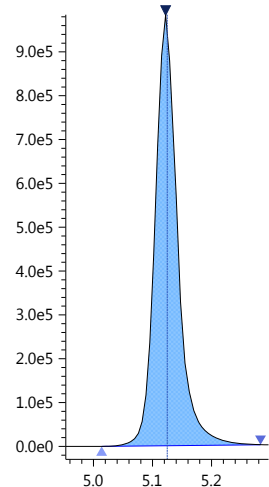
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 RT 5.122 Area 2597691

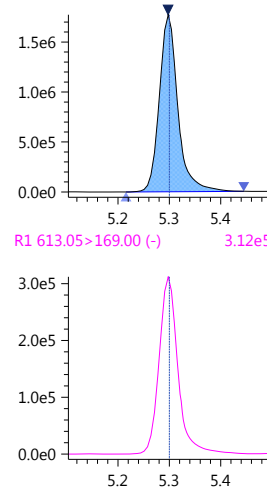
ISTD 564.80>519.95 (-)



PFDaA

Conc 10.1583
 RT 5.298 Area 4424563
 R#1 17.57 (0.00)

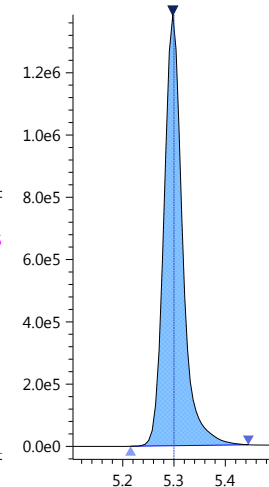
Q 613.05>569.00 (-)



PFDaA-13C

Conc 5.0231
 RT 5.298 Area 3485065

Q 614.80>569.95 (-)



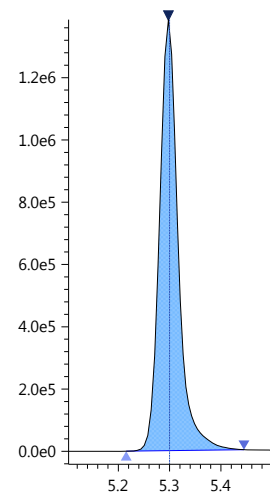
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PFDaA-13C_IS

Conc 5.0000
 RT 5.298 Area 3485065

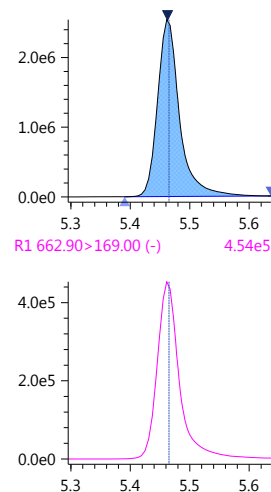
ISTD 614.80>569.95 (-) 1.39e6



PFTrDA

Conc 10.3722
 RT 5.463 Area 6521406
 R#1 17.70 (0.00)

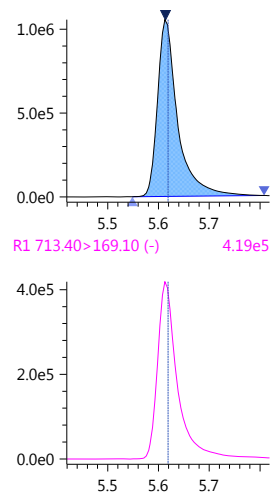
Q 663.00>618.90 (-) 2.54e6



PFTeDA

Conc 10.0748
 RT 5.614 Area 2904634
 R#1 39.88 (0.00)

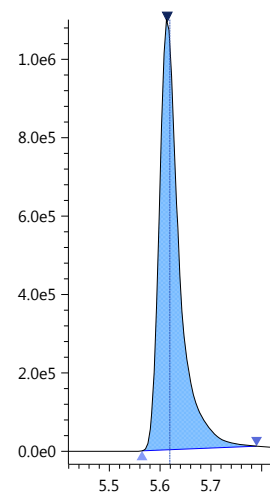
Q 713.40>669.00 (-) 1.06e6



PFTeDA-13C

Conc 5.0105
 RT 5.614 Area 3021712

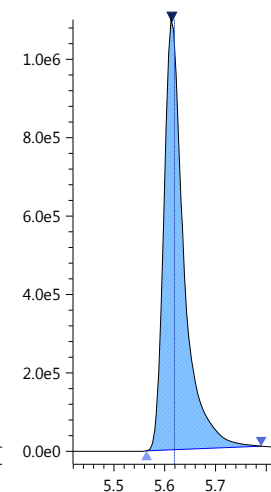
Q 714.70>669.90 (-) 1.10e6



PFTeDA-13C_IS

Conc 5.0000
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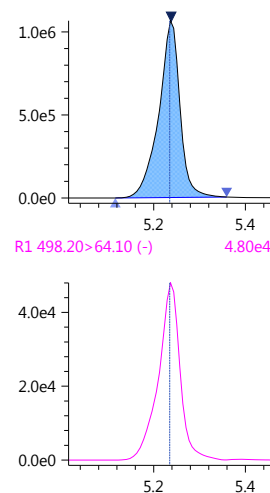
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FOSA

Conc 10.0862
 RT 5.238 Area 3405115
 R#1 4.51 (0.00)

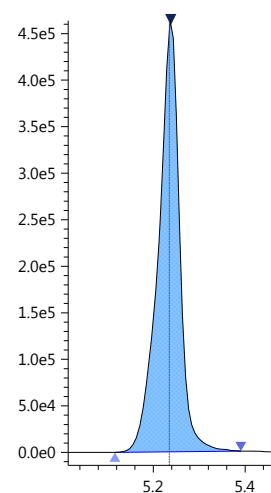
Q 498.20>78.00 (-) 1.07e6



FOSA-13C

Conc 5.0563
 RT 5.238 Area 1482292

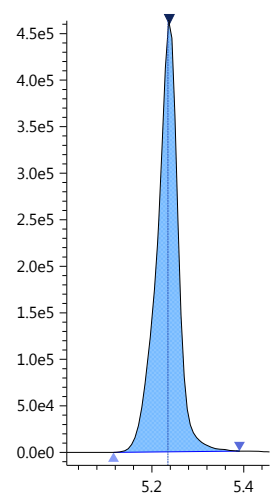
Q 506.00>78.05 (-) 4.64e5



FOSA-13C_IS

Conc 5.0000
 RT 5.238 Area 1482292

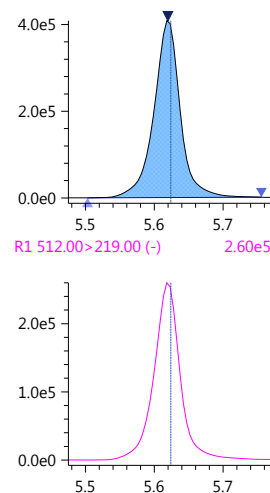
ISTD 506.00>78.05 (-) 4.64e5



N-MeFOSA

Conc 9.8717
 RT 5.620 Area 1083042
 R#1 63.91 (0.00)

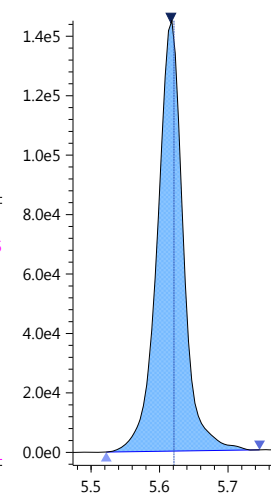
Q 512.00>169.10 (-) 4.09e5



N-MeFOSA-d3

Conc 5.0074
 RT 5.617 Area 381294

Q 514.90>168.90 (-) 1.45e5



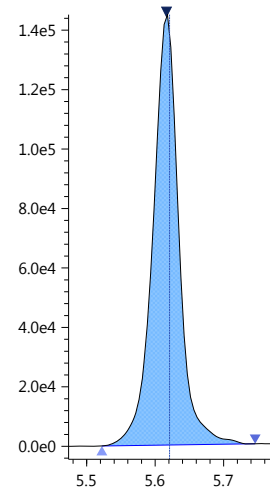
Insight Report

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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.617 Area 381294

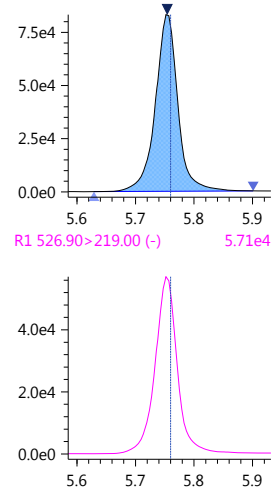
ISTD 514.90>168.90 (-) 1.45e5



N-EtFOSA

Conc 10.1069
 RT 5.754 Area 221275
 R#1 68.87 (0.00)

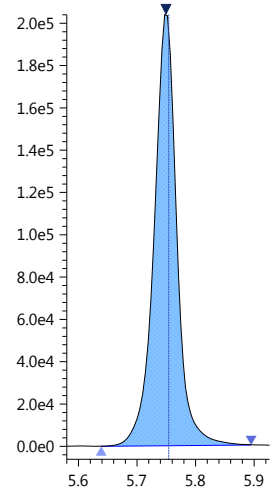
Q 526.90>169.10 (-) 8.33e4



N-EtFOSA-d9

Conc 5.0333
 RT 5.750 Area 550643

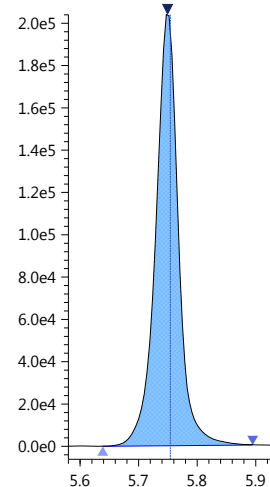
Q 530.90>169.15 (-) 2.04e5



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.750 Area 550643

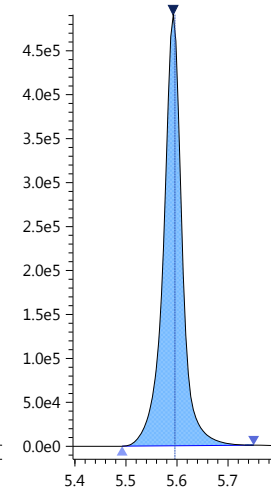
ISTD 530.90>169.15 (-) 2.04e5



N-MeFOSE

Conc 9.8594
 RT 5.592 Area 1246787

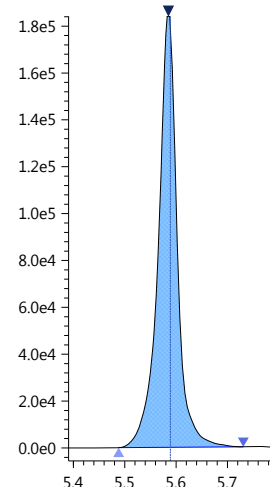
Q 616.00>59.00 (-) 4.91e5



N-MeFOSE-d7

Conc 5.1500
 RT 5.585 Area 473453

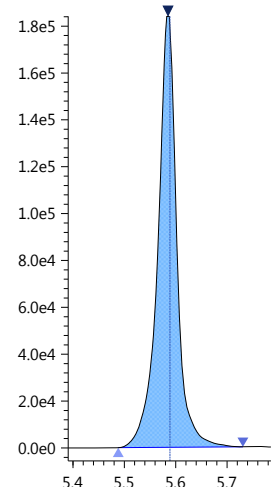
Q 622.70>59.10 (-) 1.84e5



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.585 Area 473453

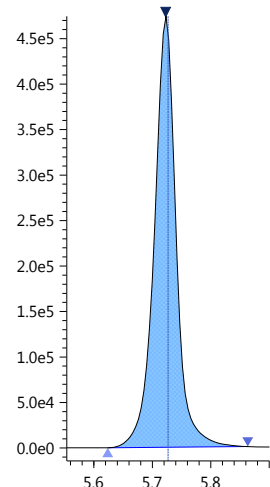
ISTD 622.70>59.10 (-) 1.84e5



N-EtFOSE

Conc 10.4424
 RT 5.723 Area 1226422

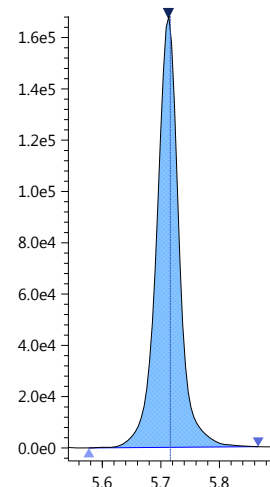
Q 630.00>58.90 (-) 4.75e5



N-EtFOSE-d9

Conc 5.0172
 RT 5.713 Area 445202

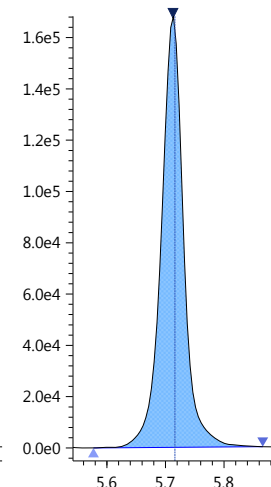
Q 638.70>59.10 (-) 1.68e5



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.713 Area 445202

ISTD 638.70>59.10 (-) 1.68e5

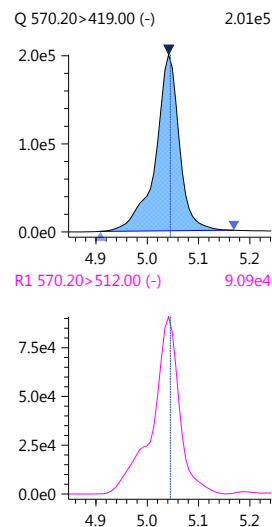


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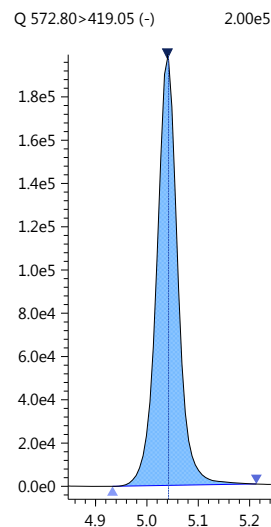
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Conc 9.4142
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 R#1 45.19 (0.00)



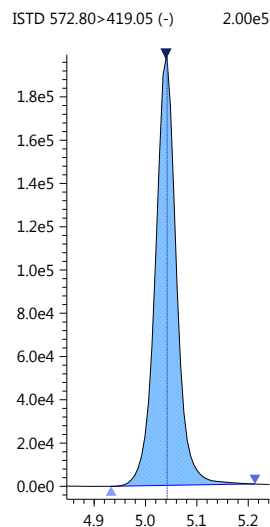
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Conc 5.2548
 RT 5.040 Area 568166



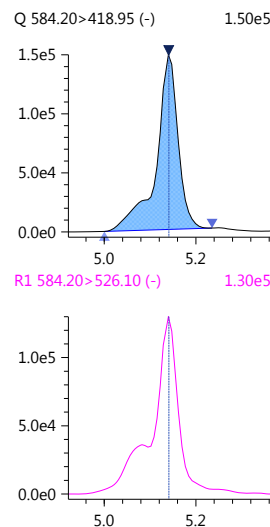
N-MeFOSAA-d3_IS

Conc 5.0000
 RT 5.040 Area 568166



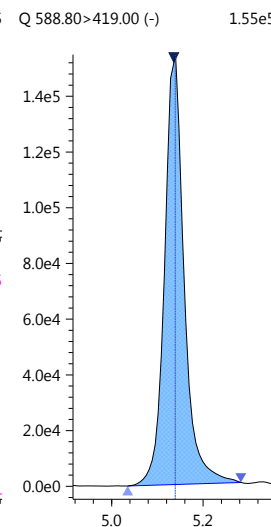
N-EtFOSAA

Conc 8.7667
 RT 5.141 Area 489509
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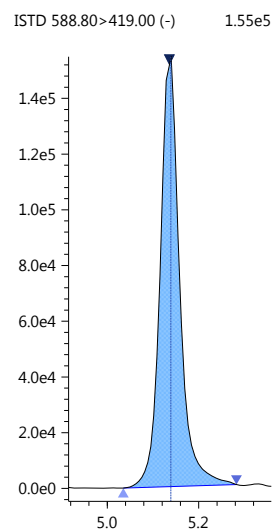
N-EtFOSAA-d5

Conc 5.2161
 RT 5.136 Area 459148



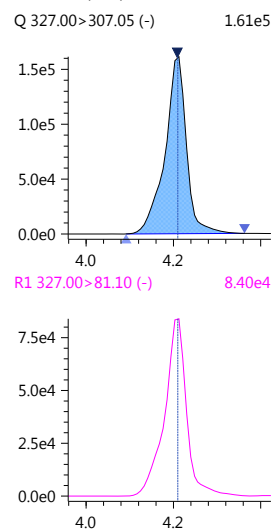
N-EtFOSAA-d5_IS

Conc 5.0000
 RT 5.136 Area 459148



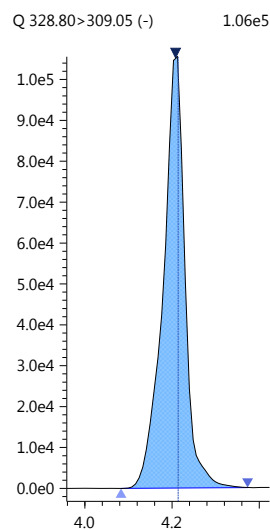
4_2-FTS_1

Conc 8.8912
 RT 4.209 Area 550072
 R#1 52.94 (0.00)



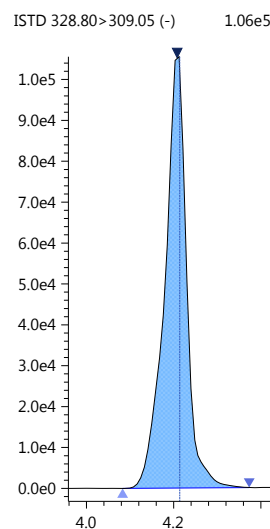
4_2-FTS-13C

Conc 5.2637
 RT 4.208 Area 367626



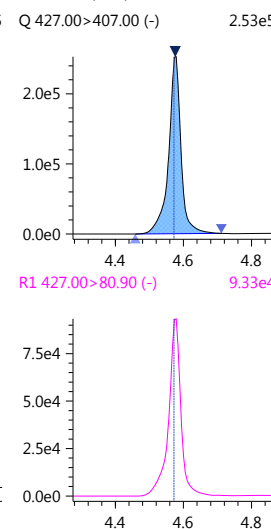
4_2-FTS-13C_IS

Conc 5.0000
 RT 4.208 Area 367626



6_2-FTS_1

Conc 9.1042
 RT 4.576 Area 636752
 R#1 36.85 (0.00)

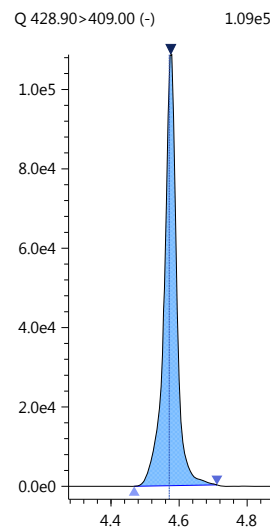


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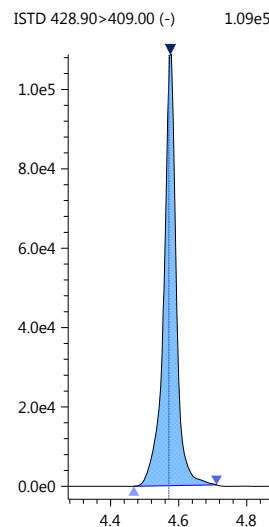
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Conc 5.1787
 RT 4.576 Area 278470



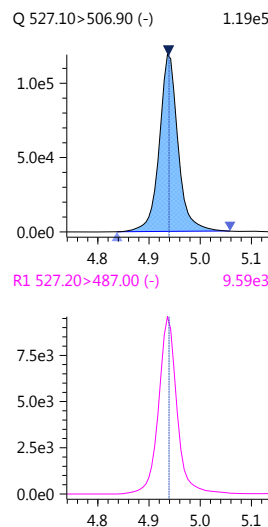
6_2-FTS-13C_IS

Conc 5.0000
 RT 4.576 Area 278470



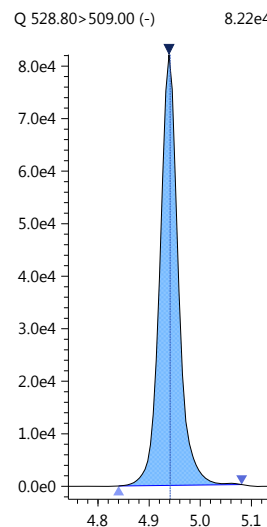
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Conc 9.3823
 RT 4.938 Area 302717
 R#1 8.07 (0.00)



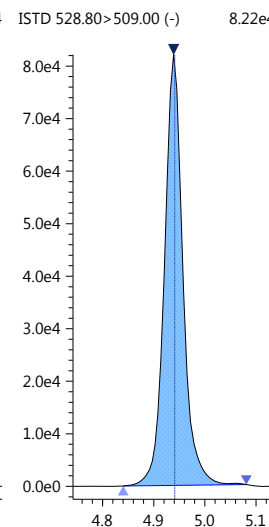
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Conc 4.9378
 RT 4.939 Area 205953



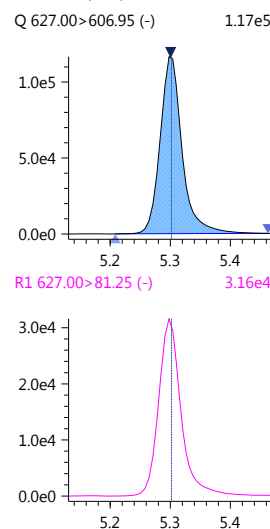
8_2-FTS-13C_IS

Conc 5.0000
 RT 4.939 Area 205953



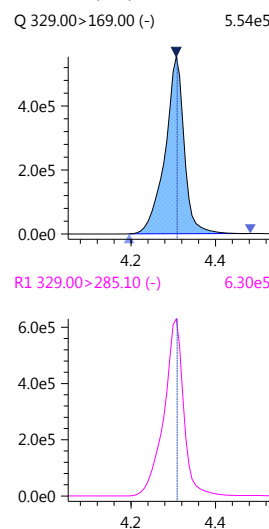
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Conc 9.6882
 RT 5.301 Area 295768
 R#1 27.23 (0.00)



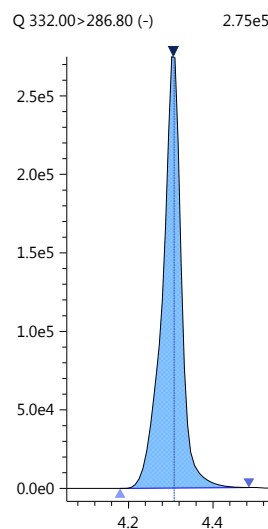
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Conc 9.3438
 RT 4.307 Area 1731639
 R#1 113.76 (0.00)



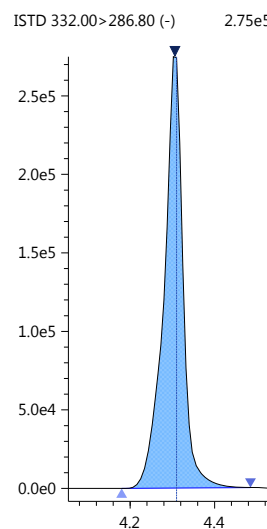
HPFO_DA-13C

Conc 5.1953
 RT 4.306 Area 863501



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.306 Area 863501



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191202_023

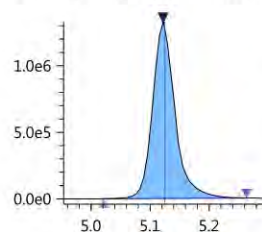
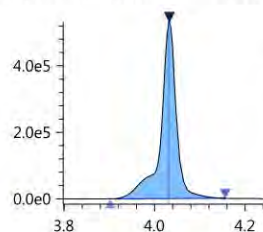
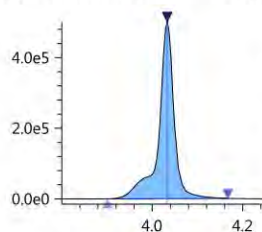
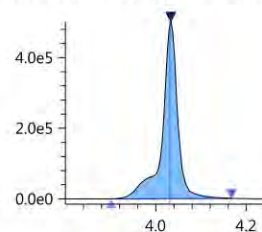
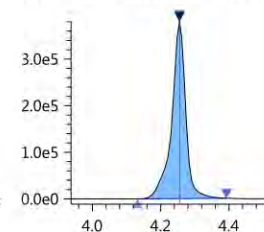
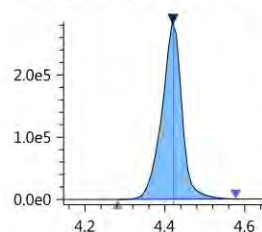
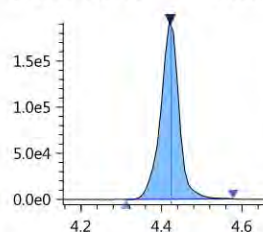
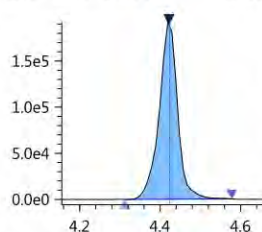
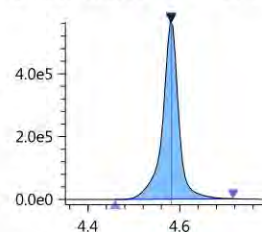
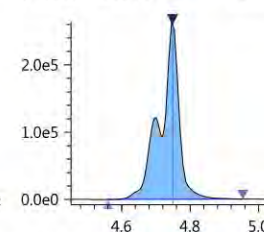
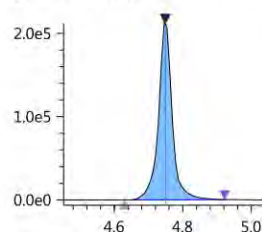
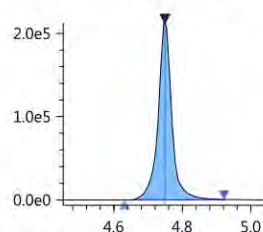
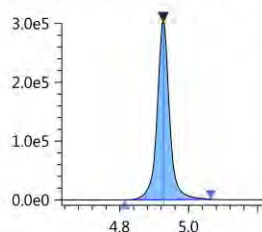
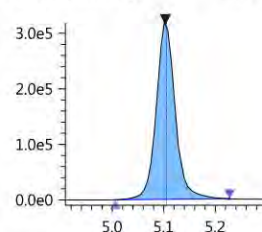
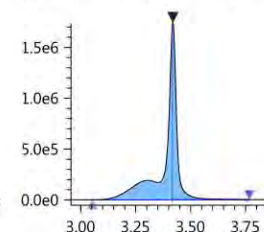
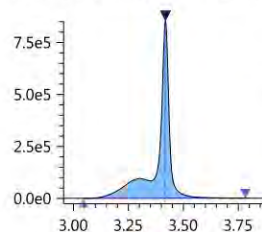
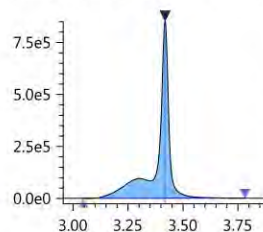
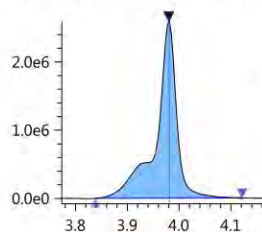
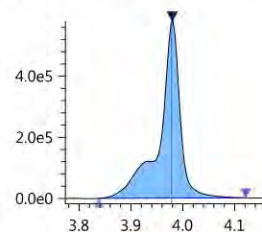
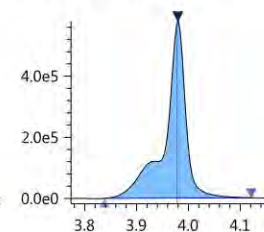
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Date acquired: 12/2/2019 6:31:59 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_023.lcd

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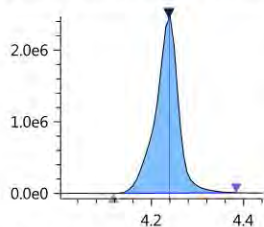
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RT 4.033 Area 1272461
Q 298.80>99.00 (-)**PFBS-13C**Conc 5.0311
RT 4.033 Area 1180644
Q 301.80>80.00 (-)**PFBS-13C_IS**Conc 5.0000
RT 4.033 Area 1180644
ISTD 301.80>80.00 (-)**PFPeS**Conc 8.8431
RT 4.255 Area 1078958
Q 349.00>99.00 (-)**PFHxS_1**Conc 8.9835
RT 4.421 Area 989795
Q 399.00>99.00 (-)**PFHxS-180**Conc 4.9047
RT 4.422 Area 609814
Q 402.70>84.05 (-)**PFHxS-180_IS**Conc 5.0000
RT 4.422 Area 609814
ISTD 402.70>84.05 (-)**PFHpS_1**Conc 9.6250
RT 4.581 Area 1378890
Q 449.00>80.15 (-)**PFOS_1**Conc 9.6909
RT 4.749 Area 1011527
Q 499.00>80.00 (-)**PFOS-13C**Conc 4.8509
RT 4.749 Area 595216
Q 502.80>80.05 (-)**PFOS-13C_IS**Conc 5.0000
RT 4.749 Area 595216
ISTD 502.80>80.05 (-)**PFNS**Conc 9.6870
RT 4.926 Area 762631
Q 549.00>99.00 (-)**PFDS_1**Conc 10.1020
RT 5.103 Area 815805
Q 599.00>99.10 (-)**PFBA**Conc 10.2893
RT 3.419 Area 6037871
Q 213.00>169.10 (-)**PFBA-13C**Conc 5.0789
RT 3.418 Area 2986172
Q 216.90>172.15 (-)**PFBA-13C_IS**Conc 5.0000
RT 3.418 Area 2986172
ISTD 216.90>172.15 (-)**PFPeA**Conc 9.9141
RT 3.980 Area 7057268
Q 263.05>219.10 (-)**PFPeA-13C**Conc 5.0485
RT 3.980 Area 1596138
Q 267.90>223.00 (-)**PFPeA-13C_IS**Conc 5.0000
RT 3.980 Area 1596138
ISTD 267.90>223.00 (-)

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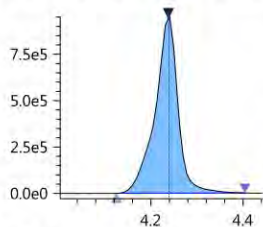
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Conc 9.9136
RT 4.238 Area 8408007
Q 313.00>269.00 (-)



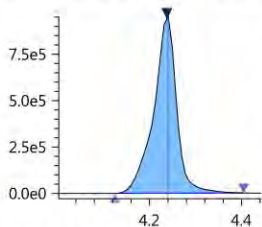
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Conc 4.5981
RT 4.238 Area 3259165
Q 314.90>270.10 (-)



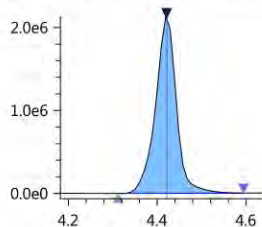
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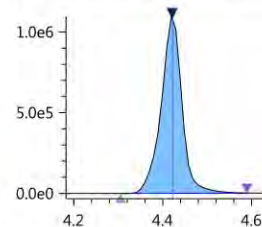
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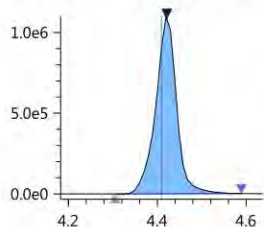
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Conc 4.6985
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Q 366.90>322.10 (-)



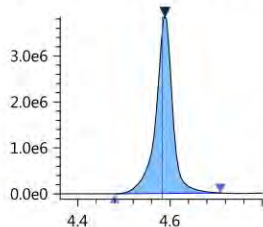
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Conc 5.0000
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ISTD 366.90>322.10 (-)



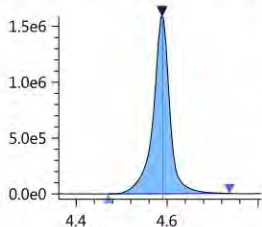
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Conc 10.0115
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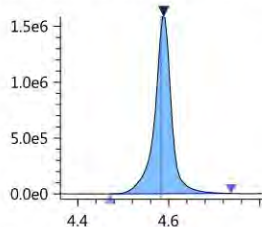
PFOA-13C

Conc 4.9780
RT 4.589 Area 4035544
Q 416.80>372.05 (-)



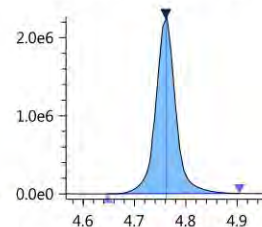
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ISTD 416.80>372.05 (-)



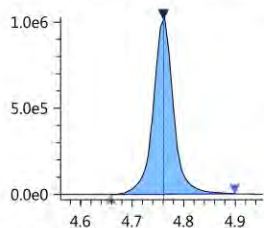
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Q 463.00>418.90 (-)



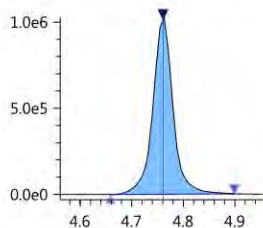
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Conc 5.0162
RT 4.761 Area 2782234
Q 467.80>423.00 (-)



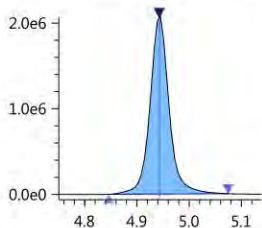
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Conc 5.0000
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ISTD 467.80>423.00 (-)



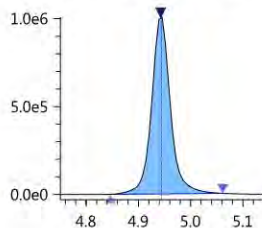
PFDA

Conc 9.9451
RT 4.943 Area 5269445
Q 513.00>468.80 (-)



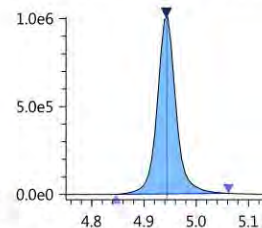
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RT 4.943 Area 2529872
Q 514.80>469.95 (-)



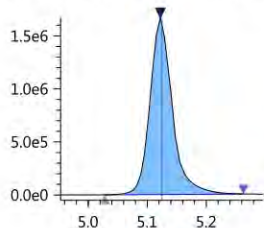
PFDA-13C_IS

Conc 5.0000
RT 4.943 Area 2529872
ISTD 514.80>469.95 (-)



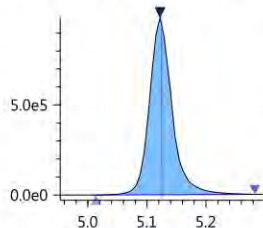
PFUnA

Conc 9.8586
RT 5.122 Area 4372051
Q 563.00>518.90 (-)



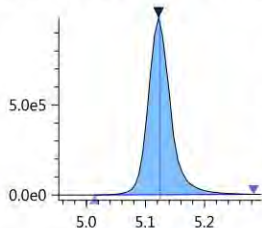
PFUnA-13C

Conc 4.9623
RT 5.122 Area 2597691
Q 564.80>519.95 (-)



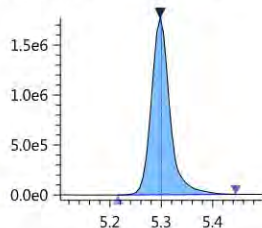
PFUnA-13C_IS

Conc 5.0000
RT 5.122 Area 2597691
ISTD 564.80>519.95 (-)



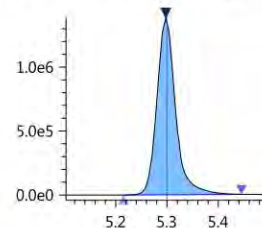
PFDaA

Conc 9.6959
RT 5.298 Area 4424563
Q 613.05>569.00 (-)



PFDaA-13C

Conc 5.0231
RT 5.298 Area 3485065
Q 614.80>569.95 (-)

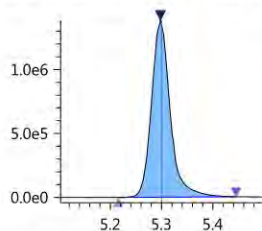


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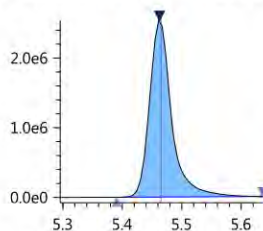
PFDaA-13C_IS

Conc 5.0000
RT 5.298 Area 3485065
ISTD 614.80>569.95 (-)



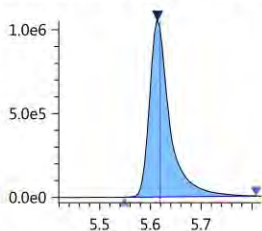
PFTrDA

Conc 10.3722
RT 5.463 Area 6521406
Q 663.00>618.90 (-)



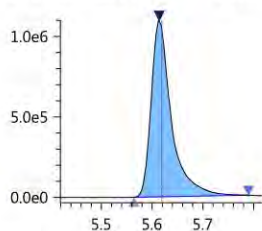
PFTeDA

Conc 10.0752
RT 5.614 Area 2904634
Q 713.40>669.00 (-)



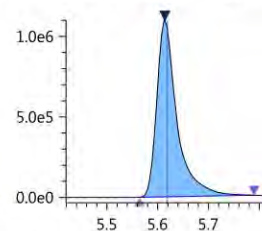
PFTeDA-13C

Conc 5.0105
RT 5.614 Area 3021712
Q 714.70>669.90 (-)



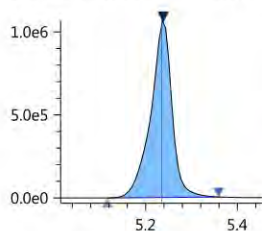
PFTeDA-13C_IS

Conc 5.0000
RT 5.614 Area 3021712
ISTD 714.70>669.90 (-)



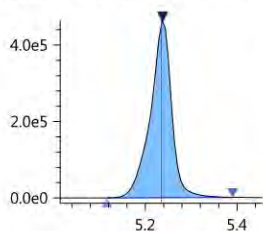
FOSA

Conc 10.0862
RT 5.238 Area 3405115
Q 498.20>78.00 (-)



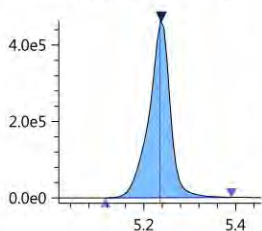
FOSA-13C

Conc 5.0563
RT 5.238 Area 1482292
Q 506.00>78.05 (-)



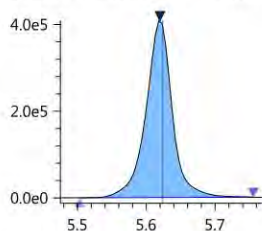
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Conc 5.0000
RT 5.238 Area 1482292
ISTD 506.00>78.05 (-)



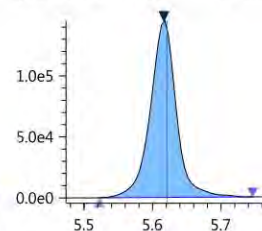
N-MeFOSA

Conc 9.8367
RT 5.620 Area 1083042
Q 512.00>169.10 (-)



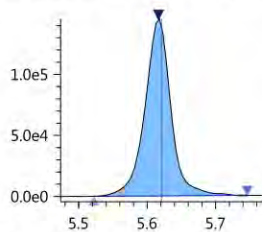
N-MeFOSA-d3

Conc 5.0074
RT 5.617 Area 381294
Q 514.90>168.90 (-)



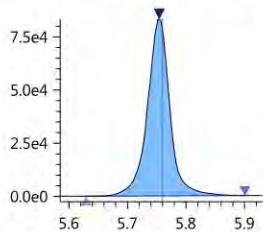
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.617 Area 381294
ISTD 514.90>168.90 (-)



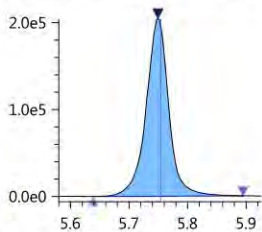
N-EtFOSA

Conc 10.2120
RT 5.754 Area 221275
Q 526.90>169.10 (-)



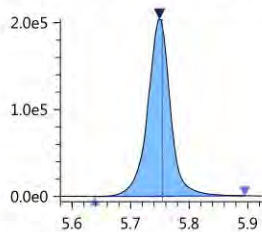
N-EtFOSA-d9

Conc 5.0333
RT 5.750 Area 550643
Q 530.90>169.15 (-)



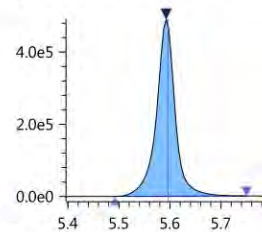
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.750 Area 550643
ISTD 530.90>169.15 (-)



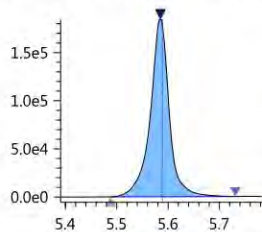
N-MeFOSE

Conc 9.8535
RT 5.592 Area 1246787
Q 616.00>59.00 (-)



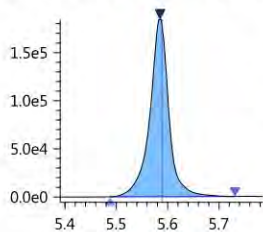
N-MeFOSE-d7

Conc 5.1500
RT 5.585 Area 473453
Q 622.70>59.10 (-)



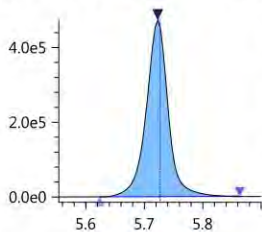
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.585 Area 473453
ISTD 622.70>59.10 (-)



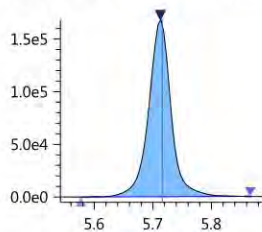
N-EtFOSE

Conc 10.4323
RT 5.723 Area 1226422
Q 630.00>58.90 (-)



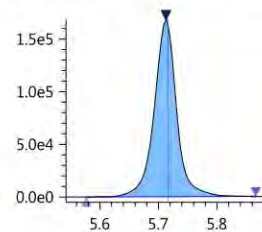
N-EtFOSE-d9

Conc 5.0172
RT 5.713 Area 445202
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.713 Area 445202
ISTD 638.70>59.10 (-)

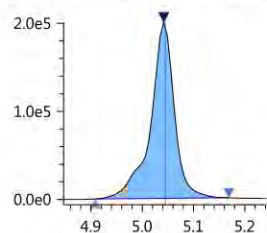


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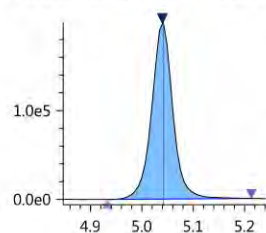
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N-MeFOSAA

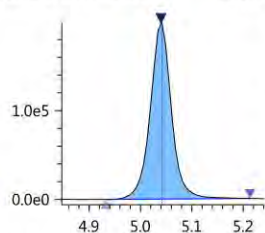
Conc 9.4189
RT 5.042 Area 642761
Q 570.20>419.00 (-)

**N-MeFOSAA-d3**

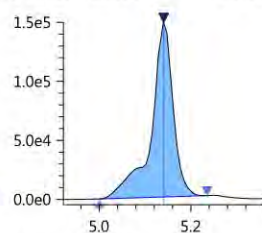
Conc 5.2548
RT 5.040 Area 568166
Q 572.80>419.05 (-)

**N-MeFOSAA-d3_IS**

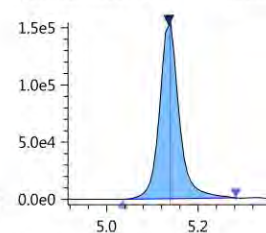
Conc 5.0000
RT 5.040 Area 568166
ISTD 572.80>419.05 (-)

**N-EtFOSAA**

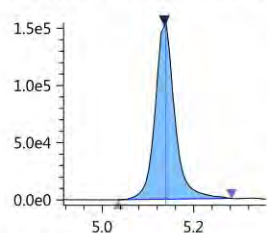
Conc 9.2652
RT 5.141 Area 489509
Q 584.20>418.95 (-)

**N-EtFOSAA-d5**

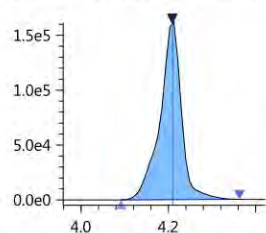
Conc 5.2161
RT 5.136 Area 459148
Q 588.80>419.00 (-)

**N-EtFOSAA-d5_IS**

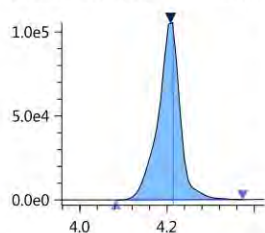
Conc 5.0000
RT 5.136 Area 459148
ISTD 588.80>419.00 (-)

**4_2-FTS_1**

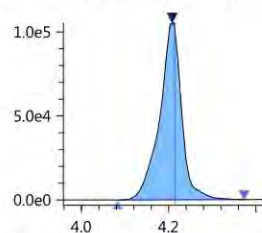
Conc 8.8951
RT 4.209 Area 550072
Q 327.00>307.05 (-)

**4_2-FTS-13C**

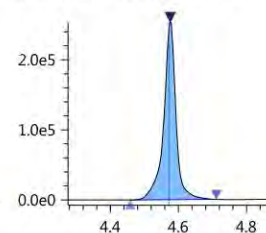
Conc 5.2637
RT 4.208 Area 367626
Q 328.80>309.05 (-)

**4_2-FTS-13C_IS**

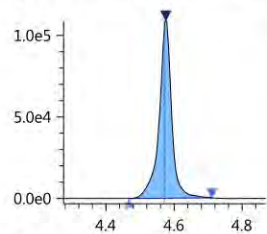
Conc 5.0000
RT 4.208 Area 367626
ISTD 328.80>309.05 (-)

**6_2-FTS_1**

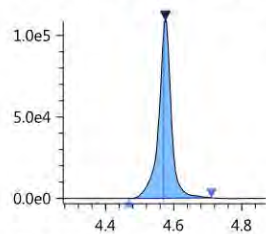
Conc 9.1331
RT 4.576 Area 636752
Q 427.00>407.00 (-)

**6_2-FTS-13C**

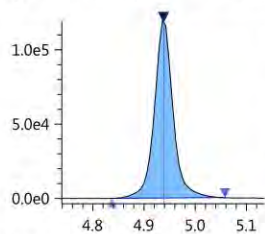
Conc 5.1787
RT 4.576 Area 278470
Q 428.90>409.00 (-)

**6_2-FTS-13C_IS**

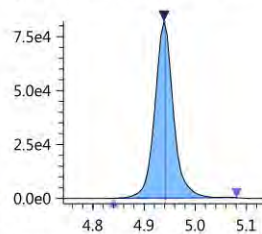
Conc 5.0000
RT 4.576 Area 278470
ISTD 428.90>409.00 (-)

**8_2-FTS_1**

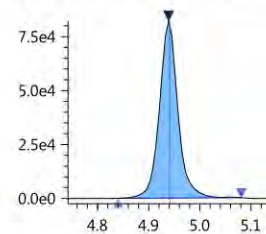
Conc 9.3914
RT 4.938 Area 302717
Q 527.10>506.90 (-)

**8_2-FTS-13C**

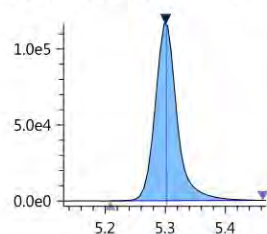
Conc 4.9378
RT 4.939 Area 205953
Q 528.80>509.00 (-)

**8_2-FTS-13C_IS**

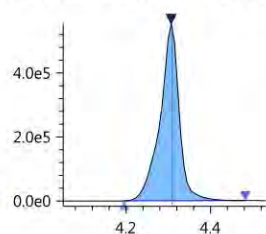
Conc 5.0000
RT 4.939 Area 205953
ISTD 528.80>509.00 (-)

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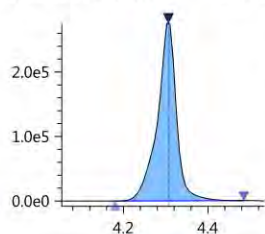
Conc 9.6889
RT 5.301 Area 295768
Q 627.00>606.95 (-)

**HPFO_DA**

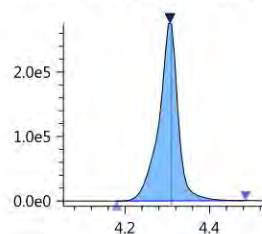
Conc 9.3438
RT 4.307 Area 1731639
Q 329.00>169.00 (-)

**HPFO_DA-13C**

Conc 5.1953
RT 4.306 Area 863501
Q 332.00>286.80 (-)

**HPFO_DA-13C_IS**

Conc 5.0000
RT 4.306 Area 863501
ISTD 332.00>286.80 (-)



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191202_024

Sample ID: IB
Date acquired: 12/2/2019 6:42:29 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_024.lcd
Vial: 48 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.121	4308021	4308021	1	5.0000	ng/mL	0.0000
PFBS_1	M	4.032	340	1240030	2	0.0023	ng/mL	0.0000
PFBS-13C	Auto	4.029	1240030	4308021	1	4.2793	ng/mL	0.0000
PFBS-13C_IS	Auto	4.029	1240030	1240030	2	5.0000	ng/mL	0.0000
PFPeS	ND(W/B)	----	----	1240030	2	----	ng/mL	0.0000
PFHxS_1	Auto	4.421	1588	520291	3	0.0169	ng/mL	0.0000
PFHxS-18O	Auto	4.419	520291	4308021	1	3.3889	ng/mL	0.0000
PFHxS-18O_IS	Auto	4.419	520291	520291	3	5.0000	ng/mL	0.0000
PFHpS_1	M	4.577	203	520291	3	0.0017	ng/mL	0.0000
PFOS_1	Auto	4.746	555	630414	4	0.0050	ng/mL	0.0000
PFOS-13C	Auto	4.748	630414	4308021	1	4.1607	ng/mL	0.0000
PFOS-13C_IS	Auto	4.748	630414	630414	4	5.0000	ng/mL	0.0000
PFNS	ND(W/B)	----	----	630414	4	----	ng/mL	0.0000
PFDS_1	ND(W/B)	----	----	630414	4	----	ng/mL	0.0000
PFBA	M	3.419	1863	3101797	5	0.0031	ng/mL	0.0000
PFBA-13C	Auto	3.417	3101797	4308021	1	4.2723	ng/mL	0.0000
PFBA-13C_IS	Auto	3.417	3101797	3101797	5	5.0000	ng/mL	0.0000
PFPeA	M	3.977	88849	1682703	6	0.0038	ng/mL	0.0000
PFPeA-13C	Auto	3.977	1682703	4308021	1	4.3102	ng/mL	0.0000
PFPeA-13C_IS	Auto	3.977	1682703	1682703	6	5.0000	ng/mL	0.0000
PFHxA	M	4.211	45885	4136683	7	0.0136	ng/mL	0.0000
PFHxA-13C	Auto	4.235	4136683	4308021	1	4.7262	ng/mL	0.0000
PFHxA-13C_IS	Auto	4.235	4136683	4136683	7	5.0000	ng/mL	0.0000
PFHpA	M	4.397	25443	3404556	8	0.0111	ng/mL	0.0000
PFHpA-13C	Auto	4.418	3404556	4308021	1	3.6332	ng/mL	0.0000
PFHpA-13C_IS	Auto	4.418	3404556	3404556	8	5.0000	ng/mL	0.0000
PFOA	Auto	4.576	39298	4564683	9	0.0072	ng/mL	0.0000
PFOA-13C	Auto	4.586	4564683	4308021	1	4.5599	ng/mL	0.0000
PFOA-13C_IS	Auto	4.586	4564683	4564683	9	5.0000	ng/mL	0.0000
PFNA	M	4.745	15666	3343847	10	-0.0080	ng/mL	0.0000
PFNA-13C	Auto	4.760	3343847	4308021	1	4.8823	ng/mL	0.0000
PFNA-13C_IS	Auto	4.760	3343847	3343847	10	5.0000	ng/mL	0.0000
PFDA	M	4.935	15558	2857137	11	0.0067	ng/mL	0.0000
PFDA-13C	Auto	4.942	2857137	4308021	1	4.5790	ng/mL	0.0000
PFDA-13C_IS	Auto	4.942	2857137	2857137	11	5.0000	ng/mL	0.0000
PFUnA	M	5.119	21091	3002021	12	0.0008	ng/mL	0.0000
PFUnA-13C	Auto	5.121	3002021	4308021	1	4.6441	ng/mL	0.0000
PFUnA-13C_IS	Auto	5.121	3002021	3002021	12	5.0000	ng/mL	0.0000
PFDoA	M	5.297	8123	3823071	13	-0.0081	ng/mL	0.0000
PFDoA-13C	Auto	5.296	3823071	4308021	1	4.4623	ng/mL	0.0000
PFDoA-13C_IS	Auto	5.296	3823071	3823071	13	5.0000	ng/mL	0.0000
PFTeDA	M	5.458	18283	3262352	14	-0.0057	ng/mL	0.0000
PFTeDA	Auto	5.613	47877	3262352	14	0.0054	ng/mL	0.0000
PFTeDA-13C	Auto	5.613	3262352	4308021	1	4.3808	ng/mL	0.0000
PFTeDA-13C_IS	Auto	5.613	3262352	3262352	14	5.0000	ng/mL	0.0000
FOSA	M	5.236	4311	1559197	16	0.0121	ng/mL	0.0000
FOSA-13C	Auto	5.235	1559197	4308021	1	4.3072	ng/mL	0.0000
FOSA-13C_IS	Auto	5.235	1559197	1559197	16	5.0000	ng/mL	0.0000
N-MeFOSA	M	5.618	1702	325053	17	0.0182	ng/mL	0.0000
N-MeFOSA-d3	Auto	5.615	325053	4308021	1	3.4570	ng/mL	0.0000
N-MeFOSA-d3_IS	Auto	5.615	325053	325053	17	5.0000	ng/mL	0.0000
N-EtFOSA	M	5.750	722	467026	18	0.0389	ng/mL	0.0000
N-EtFOSA-d9	Auto	5.748	467026	4308021	1	3.4572	ng/mL	0.0000
N-EtFOSA-d9_IS	Auto	5.748	467026	467026	18	5.0000	ng/mL	0.0000
N-MeFOSE	M	5.600	383	461983	19	0.0031	ng/mL	0.0000
N-MeFOSE-d7	Auto	5.584	461983	4308021	1	4.0696	ng/mL	0.0000
N-MeFOSE-d7_IS	Auto	5.584	461983	461983	19	5.0000	ng/mL	0.0000
N-EtFOSE	M	5.720	298	475021	20	0.0024	ng/mL	0.0000
N-EtFOSE-d9	Auto	5.710	475021	4308021	1	4.3352	ng/mL	0.0000
N-EtFOSE-d9_IS	Auto	5.710	475021	475021	20	5.0000	ng/mL	0.0000
N-MeFOSAA	M	5.043	3076	563911	21	0.0676	ng/mL	0.0000
N-MeFOSAA-d3	Auto	5.038	563911	4308021	1	4.2237	ng/mL	0.0000
N-MeFOSAA-d3_IS	Auto	5.038	563911	563911	21	5.0000	ng/mL	0.0000
N-EtFOSAA	M	5.149	1663	482305	22	0.0283	ng/mL	0.0000
N-EtFOSAA-d5	Auto	5.134	482305	4308021	1	4.4372	ng/mL	0.0000
N-EtFOSAA-d5_IS	Auto	5.134	482305	482305	22	5.0000	ng/mL	0.0000
4_2-FTS_1	Auto	4.189	210	441083	23	0.0028	ng/mL	0.0000
4_2-FTS-13C	Auto	4.207	441083	4308021	1	5.1145	ng/mL	0.0000

Insight Report

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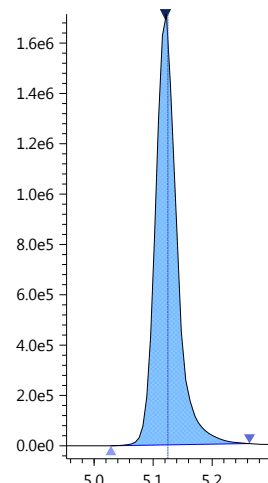
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.207	441083	441083	23	5.0000	ng/mL	0.0000
6_2-FTS_1	M	4.576	1257	289159	24	0.0173	ng/mL	0.0000
6_2-FTS-13C	Auto	4.575	289159	4308021	1	4.3548	ng/mL	0.0000
6_2-FTS-13C_IS	Auto	4.575	289159	289159	24	5.0000	ng/mL	0.0000
8_2-FTS_1	ND(W/B)	----	----	231866	25	----	ng/mL	0.0000
8_2-FTS-13C	Auto	4.938	231866	4308021	1	4.5019	ng/mL	0.0000
8_2-FTS-13C_IS	Auto	4.938	231866	231866	25	5.0000	ng/mL	0.0000
10_2-FTS_1	ND(W/B)	----	----	231866	25	----	ng/mL	0.0000
HPFO_DA	M	4.302	1208	932174	26	0.0060	ng/mL	0.0000
HPFO_DA-13C	Auto	4.304	932174	4308021	1	4.5419	ng/mL	0.0000
HPFO_DA-13C_IS	Auto	4.304	932174	932174	26	5.0000	ng/mL	0.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.121 Area 4308021

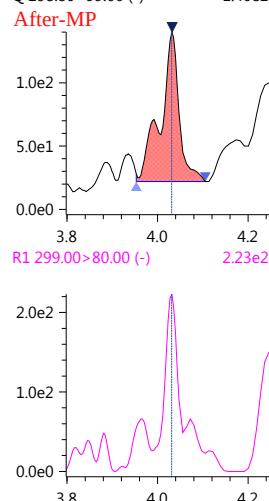
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0023
RT 4.032 Area 340
R#1 158.39 (0.00)

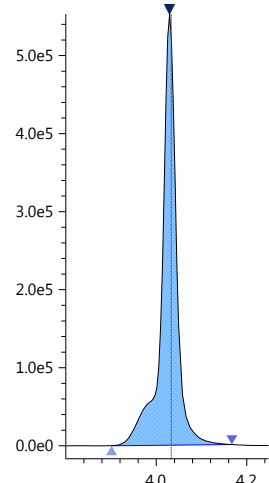
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.2793
RT 4.029 Area 1240030

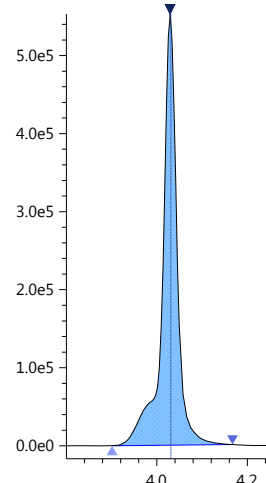
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.029 Area 1240030

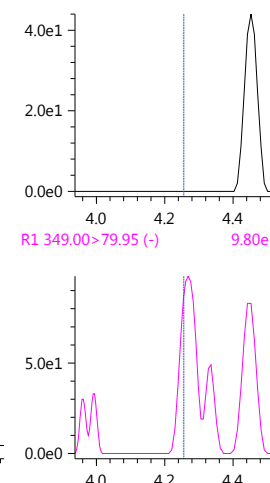
ISTD 301.80>80.00 (-)



PFPeS

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

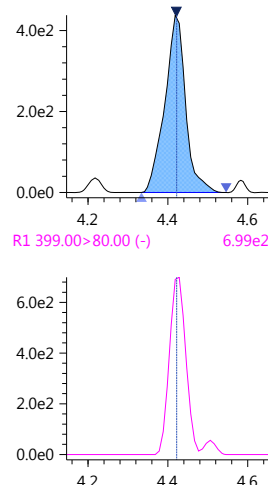
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.0169
RT 4.421 Area 1588
R#1 157.88 (0.00)

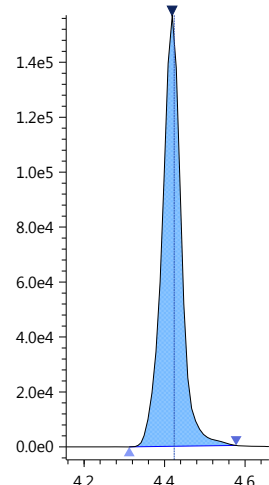
Q 399.00>99.00 (-)



PFHxS-180

Conc 3.3889
RT 4.419 Area 520291

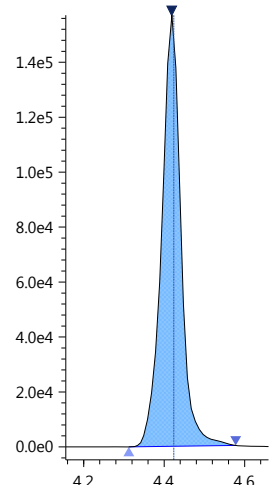
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.419 Area 520291

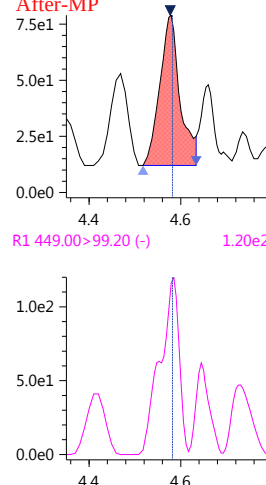
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0017
RT 4.577 Area 203
R#1 129.23 (0.00)

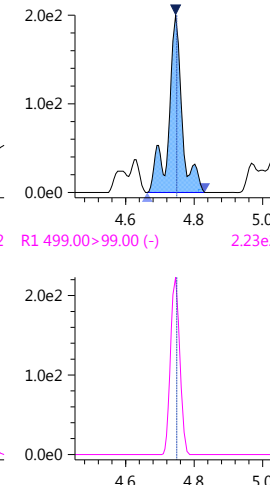
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0050
RT 4.746 Area 555
R#1 110.05 (0.00)

Q 499.00>80.00 (-)



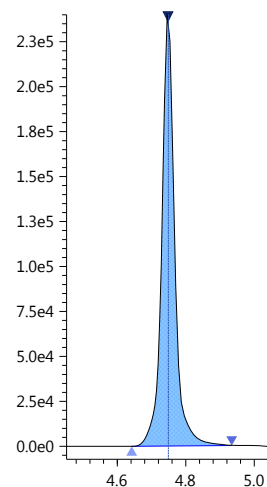
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PFOS-13C

Conc 4.1607
 RT 4.748 Area 630414

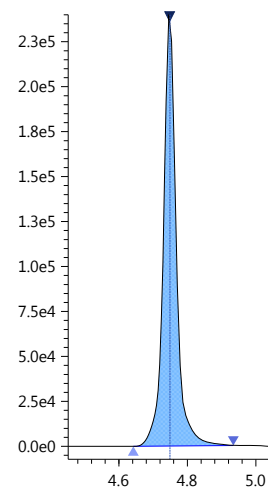
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.748 Area 630414

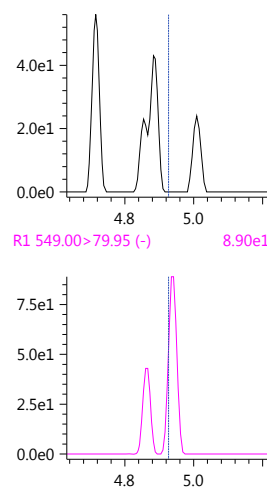
ISTD 502.80>80.05 (-)



PFNS

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

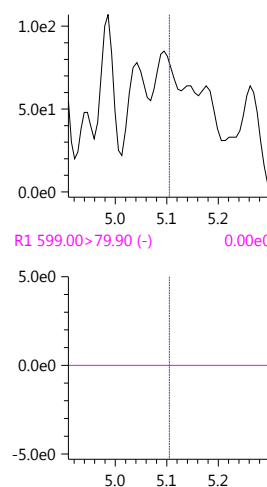
Q 549.00>99.00 (-)



PFDS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

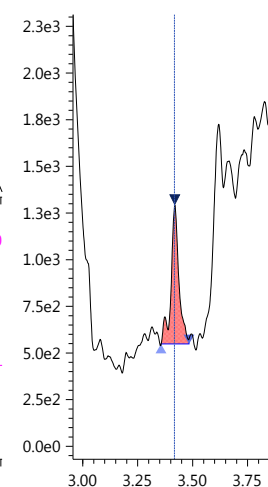
Q 599.00>99.10 (-)



PFBA

Conc 0.0031
 RT 3.419 Area 1863
 After-MP

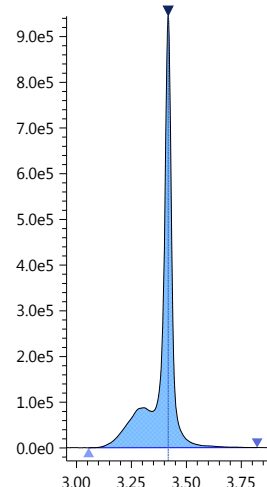
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.2723
 RT 3.417 Area 3101797

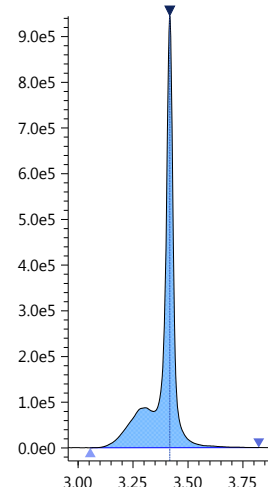
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.417 Area 3101797

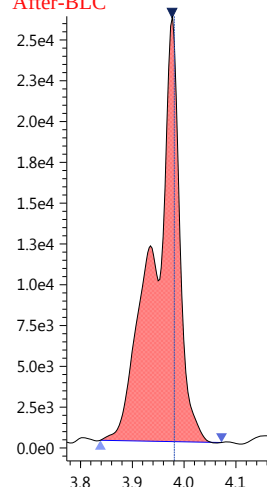
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0038
 RT 3.977 Area 88849
 After-BLC

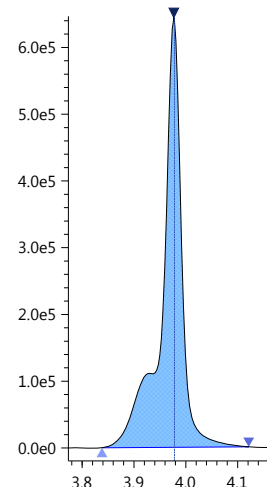
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.3102
 RT 3.977 Area 1682703

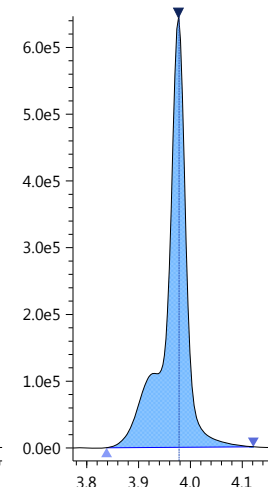
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.977 Area 1682703

ISTD 267.90>223.00 (-)

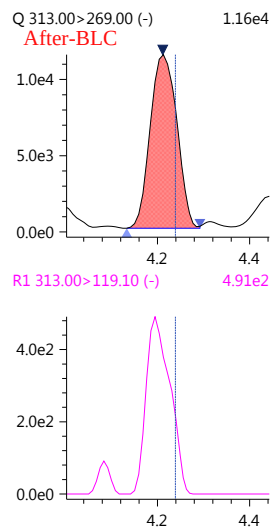


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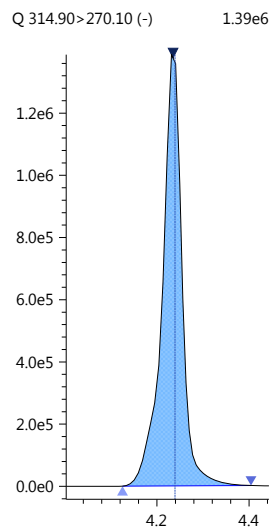
PFHxA

Conc 0.0136
RT 4.211 Area 45885
R#1 3.40 (0.00)



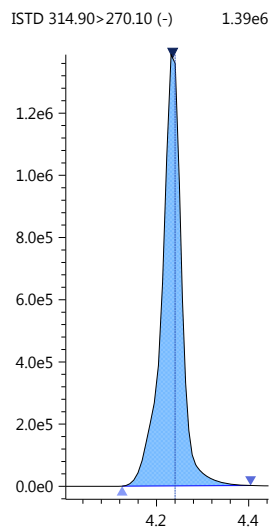
PFHxA-13C

Conc 4.7262
RT 4.235 Area 4136683



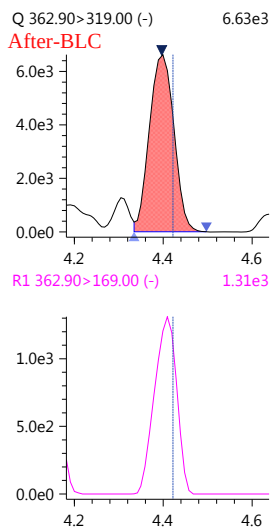
PFHxA-13C_IS

Conc 5.0000
RT 4.235 Area 4136683



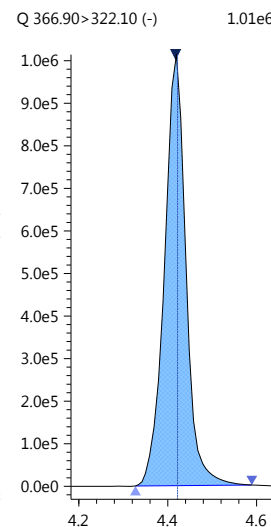
PFHpA

Conc 0.0111
RT 4.397 Area 25443
R#1 18.73 (0.00)



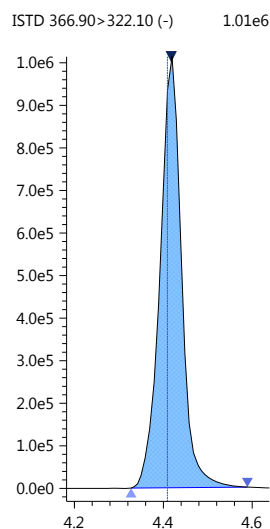
PFHpA-13C

Conc 3.6332
RT 4.418 Area 3404556



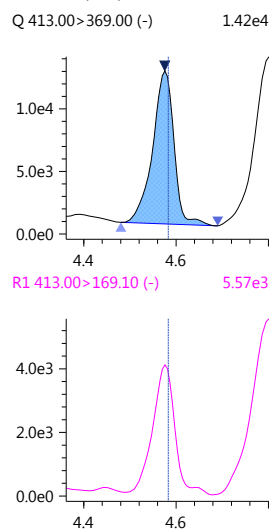
PFHpA-13C_IS

Conc 5.0000
RT 4.418 Area 3404556



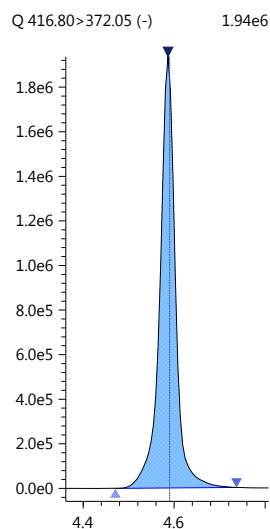
PFOA

Conc 0.0072
RT 4.576 Area 39298
R#1 32.99 (0.00)



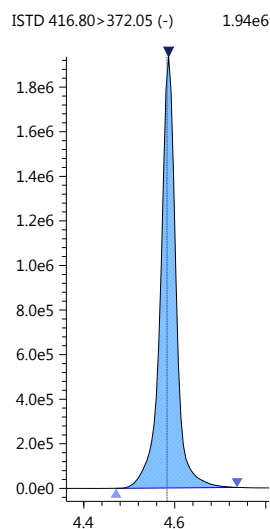
PFOA-13C

Conc 4.5599
RT 4.586 Area 4564683



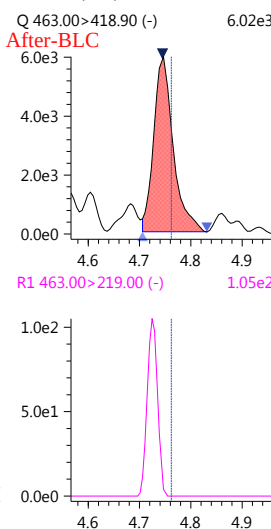
PFOA-13C_IS

Conc 5.0000
RT 4.586 Area 4564683



PFNA

Conc -0.0080
RT 4.745 Area 15666
R#1 0.00 (0.00)



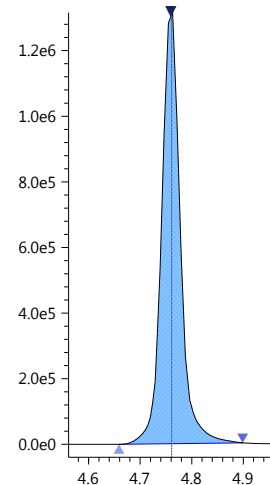
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PFNA-13C

Conc 4.8823
RT 4.760 Area 3343847

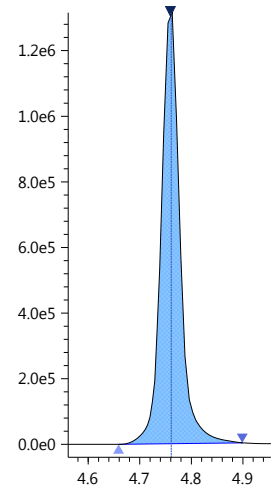
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
RT 4.760 Area 3343847

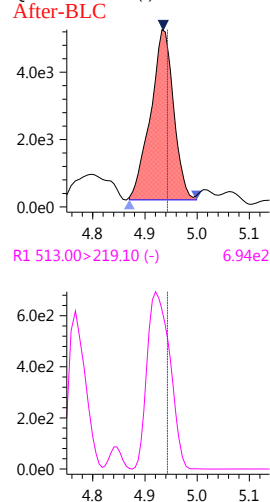
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0067
RT 4.935 Area 15558
R#1 11.25 (0.00)

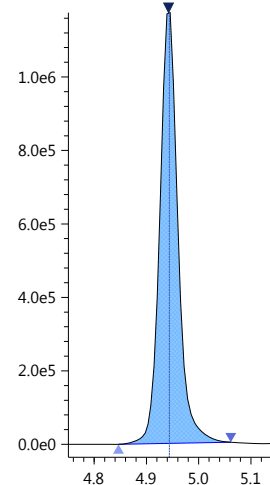
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.5790
RT 4.942 Area 2857137

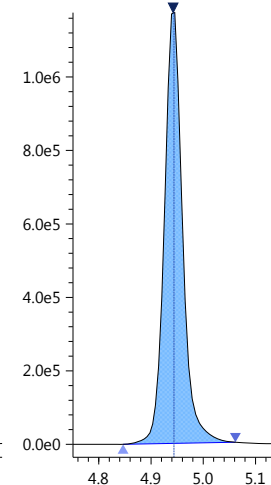
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
RT 4.942 Area 2857137

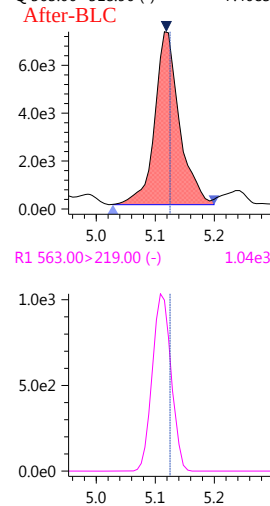
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.0008
RT 5.119 Area 21091
R#1 10.20 (0.00)

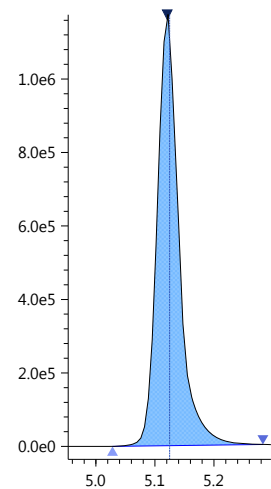
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.6441
RT 5.121 Area 3002021

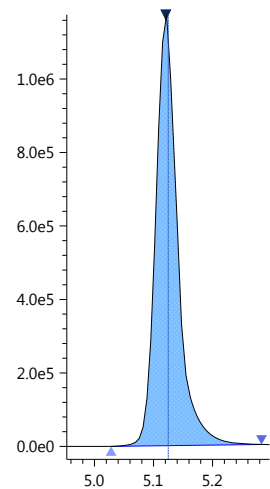
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
RT 5.121 Area 3002021

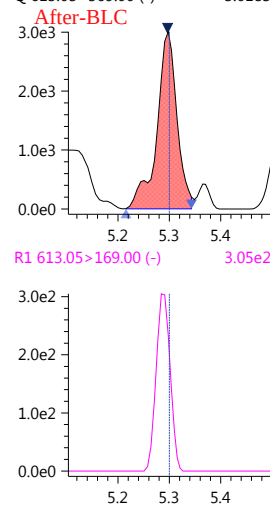
ISTD 564.80>519.95 (-)



PFDaA

Conc -0.0081
RT 5.297 Area 8123
R#1 7.88 (0.00)

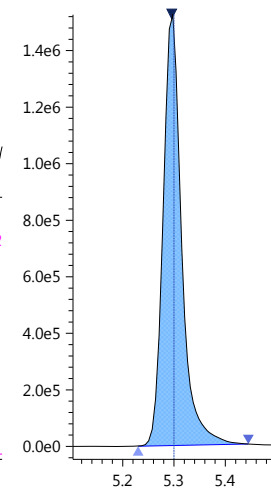
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.4623
RT 5.296 Area 3823071

Q 614.80>569.95 (-)



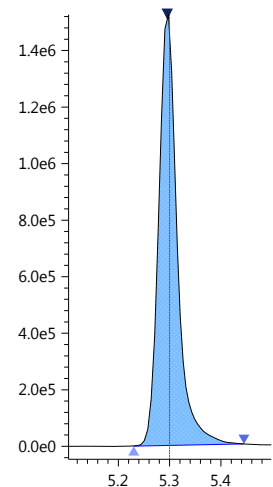
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PFDaA-13C_IS

Conc 5.0000
 RT 5.296 Area 3823071

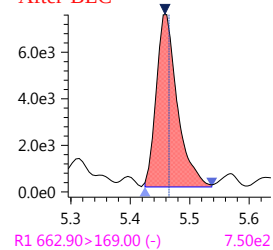
ISTD 614.80>569.95 (-) 1.53e6



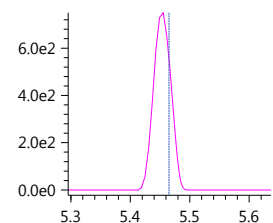
PFTrDA

Conc -0.0057
 RT 5.458 Area 18283
 R#1 8.52 (0.00)

Q 663.00>618.90 (-) 7.62e3



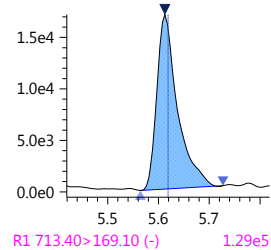
R1 662.90>169.00 (-) 7.50e2



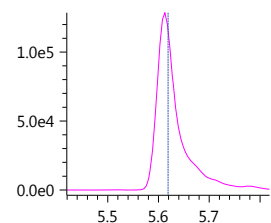
PFTeDA

Conc 0.0054
 RT 5.613 Area 47877
 R#1 756.14 (0.00)

Q 713.40>669.00 (-) 1.72e4



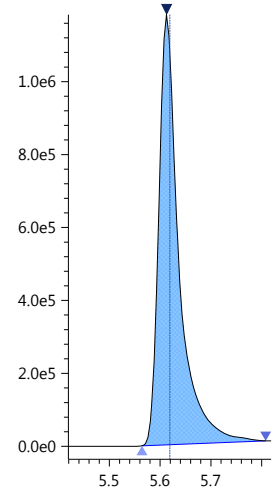
R1 713.40>169.10 (-) 1.29e5



PFTeDA-13C

Conc 4.3808
 RT 5.613 Area 3262352

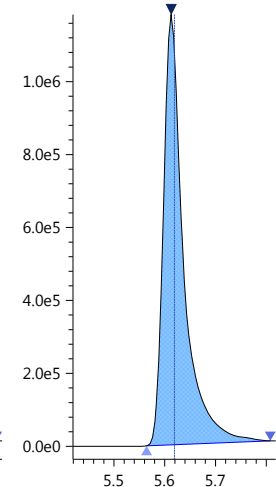
Q 714.70>669.90 (-) 1.18e6



PFTeDA-13C_IS

Conc 5.0000
 RT 5.613 Area 3262352

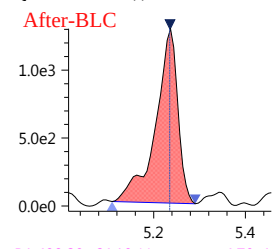
ISTD 714.70>669.90 (-) 1.18e6



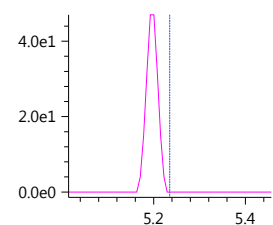
FOSA

Conc 0.0121
 RT 5.236 Area 4311
 R#1 0.00 (0.00)

Q 498.20>78.00 (-) 1.31e3



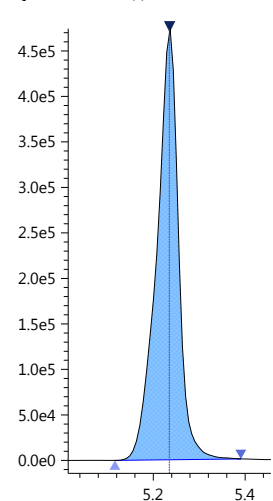
R1 498.20>64.10 (-) 4.70e1



FOSA-13C

Conc 4.3072
 RT 5.235 Area 1559197

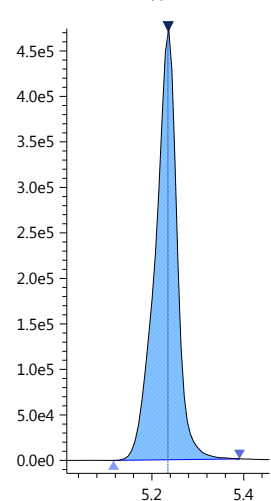
Q 506.00>78.05 (-) 4.74e5



FOSA-13C_IS

Conc 5.0000
 RT 5.235 Area 1559197

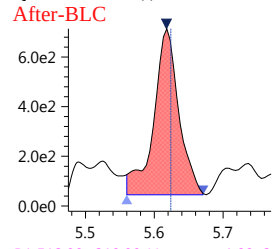
ISTD 506.00>78.05 (-) 4.74e5



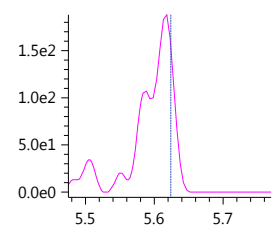
N-MeFOSA

Conc 0.0182
 RT 5.618 Area 1702
 R#1 31.27 (0.00)

Q 512.00>169.10 (-) 7.14e2



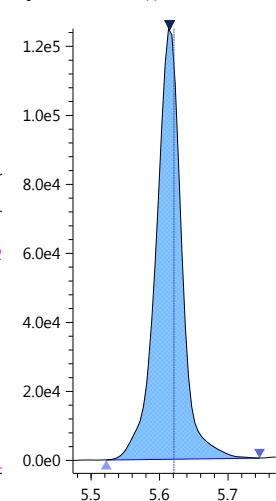
R1 512.00>219.00 (-) 1.88e2



N-MeFOSA-d3

Conc 3.4570
 RT 5.615 Area 325053

Q 514.90>168.90 (-) 1.25e5



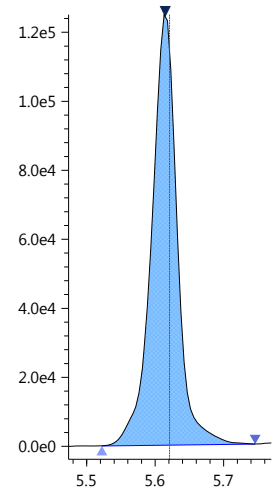
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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.615 Area 325053

ISTD 514.90>168.90 (-) 1.25e5

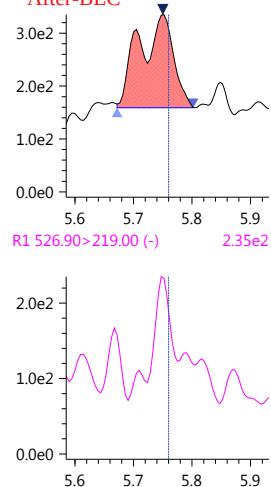


N-EtFOSA

Conc 0.0389
 RT 5.750 Area 722
 R#1 61.29 (0.00)

Q 526.90>169.10 (-) 3.35e2

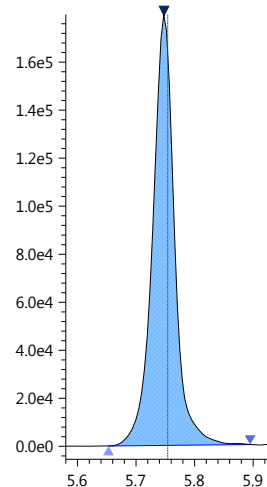
After-BLC



N-EtFOSA-d9

Conc 3.4572
 RT 5.748 Area 467026

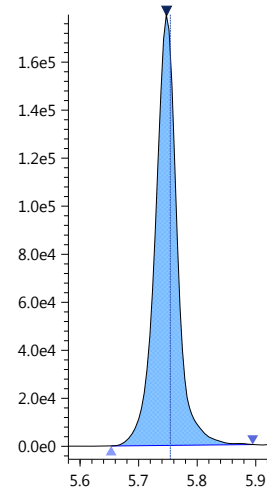
Q 530.90>169.15 (-)



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.748 Area 467026

ISTD 530.90>169.15 (-) 1.80e5

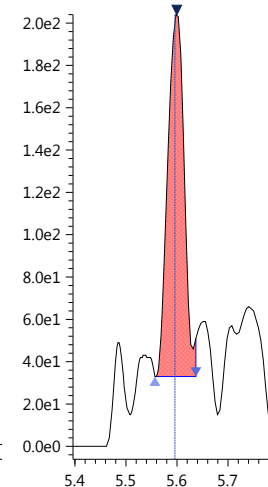


N-MeFOSE

Conc 0.0031
 RT 5.600 Area 383

After-BLC

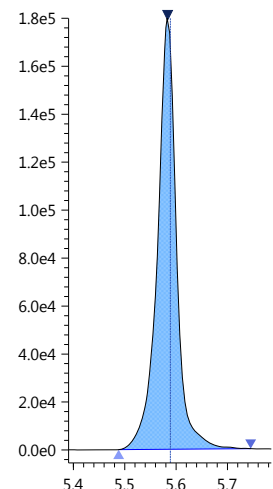
Q 616.00>59.00 (-) 2.04e2



N-MeFOSE-d7

Conc 4.0696
 RT 5.584 Area 461983

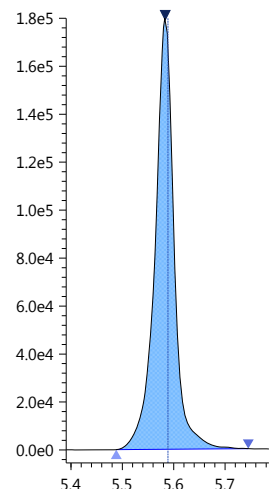
Q 622.70>59.10 (-)



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.584 Area 461983

ISTD 622.70>59.10 (-)

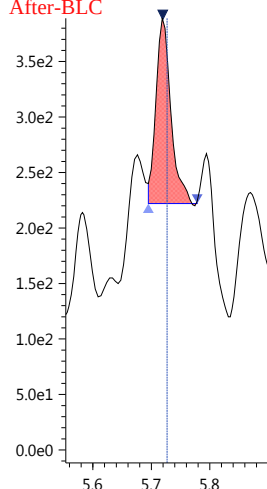


N-EtFOSE

Conc 0.0024
 RT 5.720 Area 298

Q 630.00>58.90 (-)

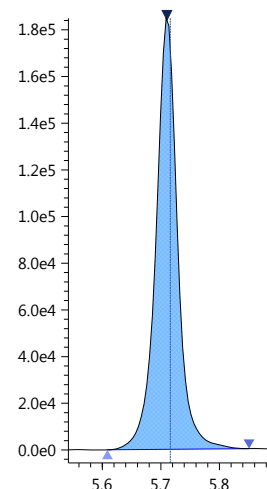
After-BLC



N-EtFOSE-d9

Conc 4.3352
 RT 5.710 Area 475021

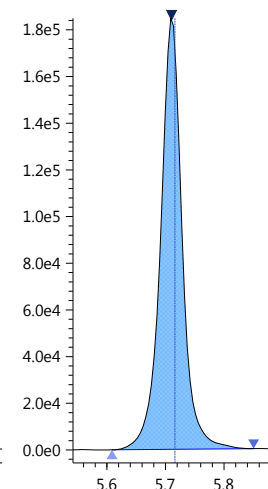
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.710 Area 475021

ISTD 638.70>59.10 (-)



Insight Report

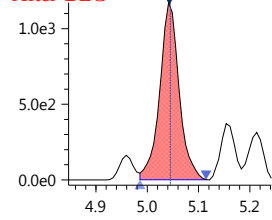
Printed at 12/3/2019 10:19:07 AM

N-MeFOSAA

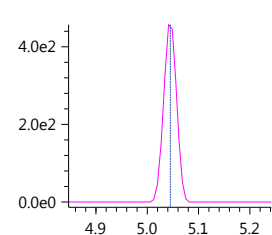
Conc 0.0676
RT 5.043 Area 3076
R#1 39.88 (0.00)

Q 570.20>419.00 (-) 1.17e3

After-BLC



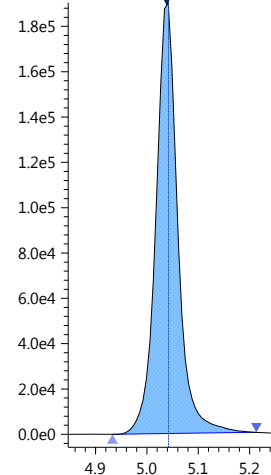
R1 570.20>512.00 (-) 4.57e2



N-MeFOSAA-d3

Conc 4.2237
RT 5.038 Area 563911

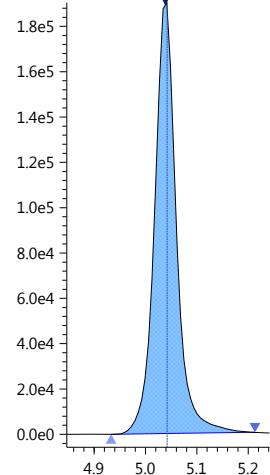
Q 572.80>419.05 (-) 1.90e5



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.038 Area 563911

ISTD 572.80>419.05 (-) 1.90e5

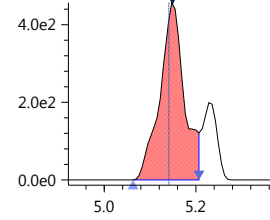


N-EtFOSAA

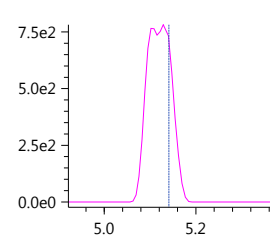
Conc 0.0283
RT 5.149 Area 1663
R#1 161.60 (0.00)

Q 584.20>418.95 (-) 4.57e2

After-BLC



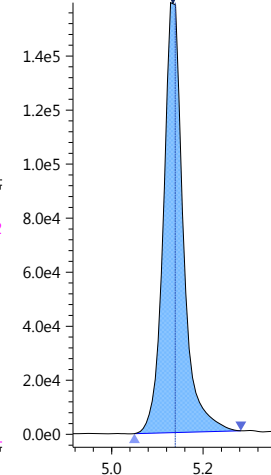
R1 584.20>526.10 (-) 7.82e2



N-EtFOSAA-d5

Conc 4.4372
RT 5.134 Area 482305

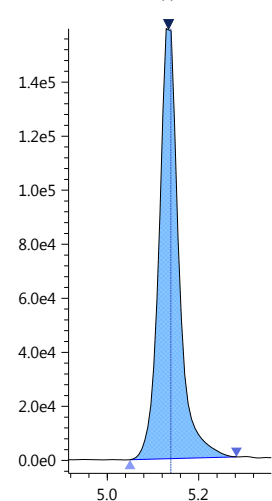
Q 588.80>419.00 (-) 1.60e5



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.134 Area 482305

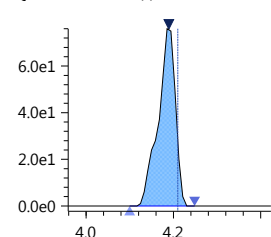
ISTD 588.80>419.00 (-) 1.60e5



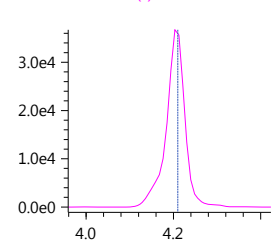
4_2-FTS_1

Conc 0.0028
RT 4.189 Area 210
R#1 22275.68 (0.00)

Q 327.00>307.05 (-) 7.60e1



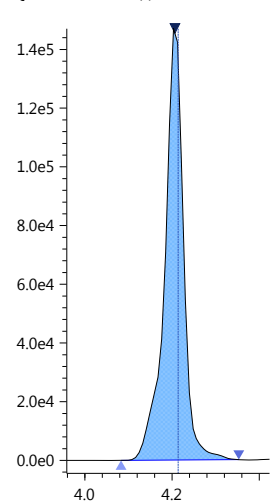
R1 327.00>81.10 (-) 3.67e4



4_2-FTS-13C

Conc 5.1145
RT 4.207 Area 441083

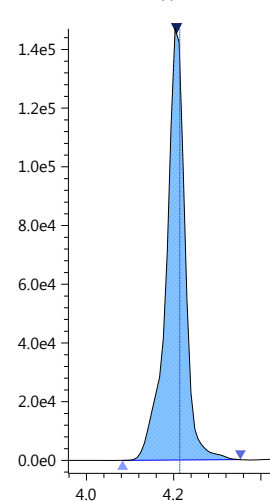
Q 328.80>309.05 (-) 1.47e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.207 Area 441083

ISTD 328.80>309.05 (-) 1.47e5

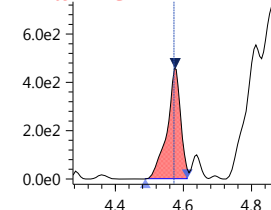


6_2-FTS_1

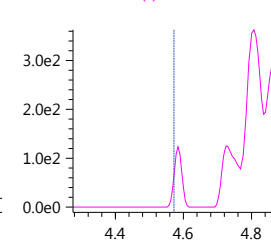
Conc 0.0173
RT 4.576 Area 1257
R#1 15.45 (0.00)

Q 427.00>407.00 (-) 7.34e2

After-BLC



R1 427.00>80.90 (-) 3.63e2



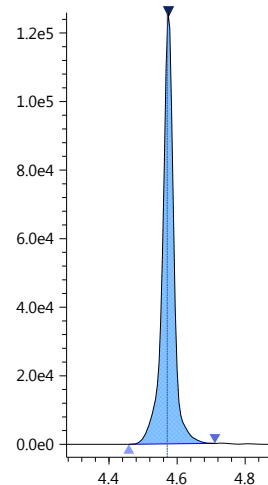
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6_2-FTS-13C

Conc 4.3548
 RT 4.575 Area 289159

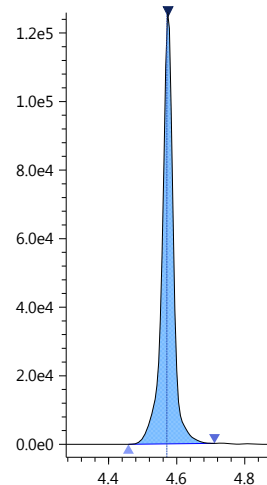
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
 RT 4.575 Area 289159

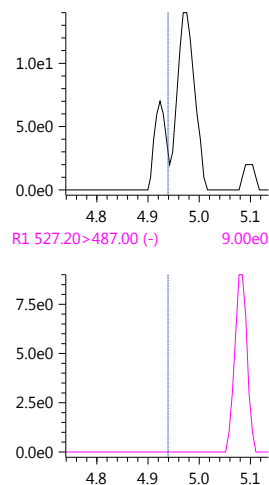
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

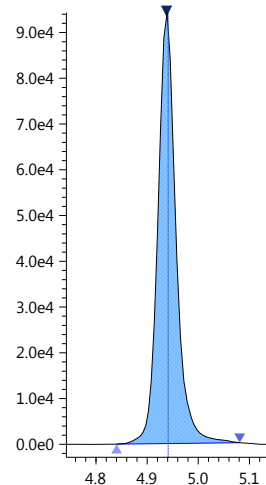
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.5019
 RT 4.938 Area 231866

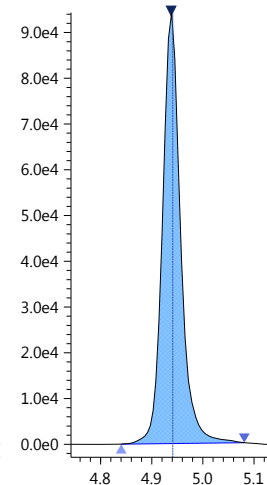
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
 RT 4.938 Area 231866

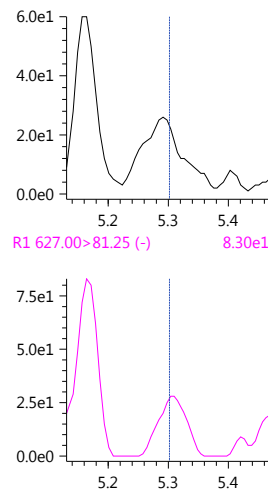
ISTD 528.80>509.00 (-)



10_2-Fts_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

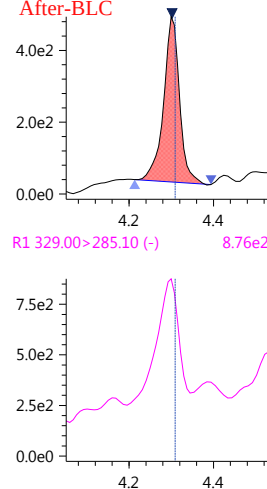
Q 627.00>606.95 (-)



HPFO_DA

Conc 0.0060
 RT 4.302 Area 1208
 R#1 120.13 (0.00)

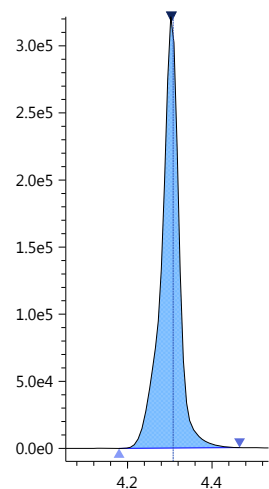
Q 329.00>169.00 (-)



HPFO_DA-13C

Conc 4.5419
 RT 4.304 Area 932174

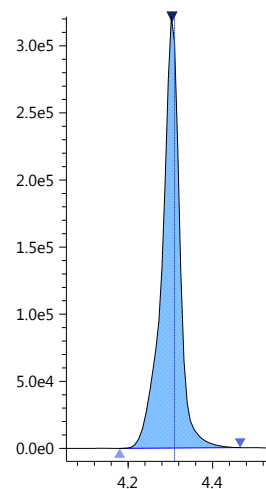
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.304 Area 932174

ISTD 332.00>286.80 (-)



Insight Report

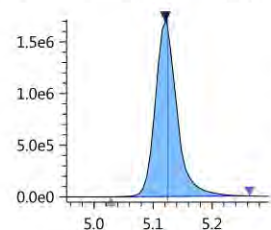
Printed at 12/3/2019 9:26:07 AM

191202_024

Sample ID: IB
Date acquired: 12/2/2019 6:42:29 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_024.lcd
Vial: 48 | Inj. Volume: 15.0000uL | Tray: 1

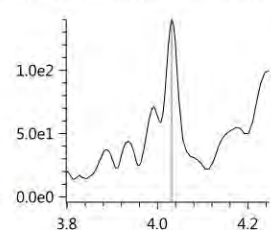
13C7-PFUnDA_IS

Conc 5.0000
RT 5.121 Area 4308021
ISTD 570.00>525.00 (-)



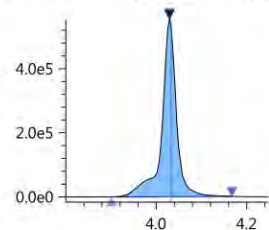
PFBS_1

Conc ---
RT --- Area ---
Q 298.80>99.00 (-)



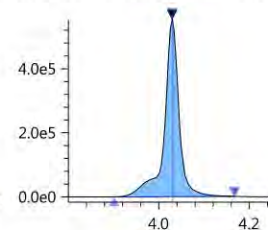
PFBS-13C

Conc 4.2793
RT 4.029 Area 1240030
Q 301.80>80.00 (-)



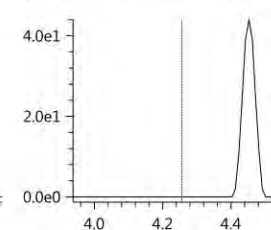
PFBS-13C_IS

Conc 5.0000
RT 4.029 Area 1240030
ISTD 301.80>80.00 (-)



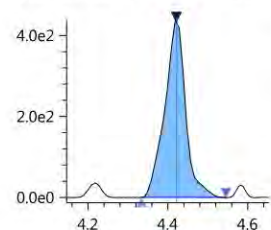
PFPeS

Conc ---
RT --- Area ---
Q 349.00>99.00 (-)



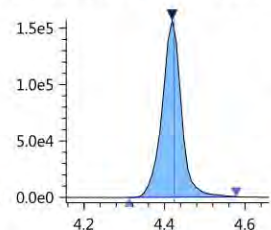
PFHxS_1

Conc 0.0169
RT 4.421 Area 1588
Q 399.00>99.00 (-)



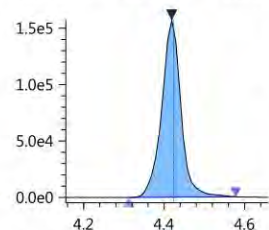
PFHxS-180

Conc 3.3889
RT 4.419 Area 520291
Q 402.70>84.05 (-)



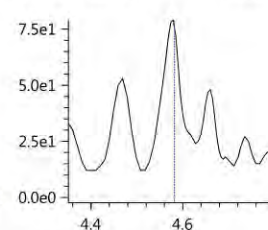
PFHxS-180_IS

Conc 5.0000
RT 4.419 Area 520291
ISTD 402.70>84.05 (-)



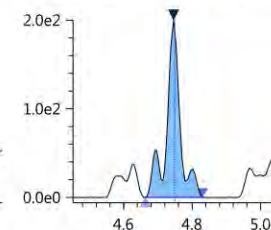
PFHpS_1

Conc ---
RT --- Area ---
Q 449.00>80.15 (-)



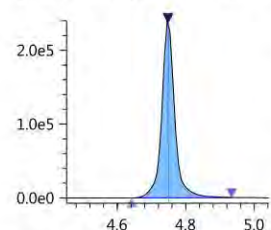
PFOS_1

Conc 0.0050
RT 4.746 Area 555
Q 499.00>80.00 (-)



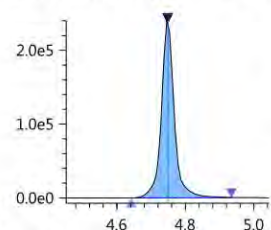
PFOS-13C

Conc 4.1607
RT 4.748 Area 630414
Q 502.80>80.05 (-)



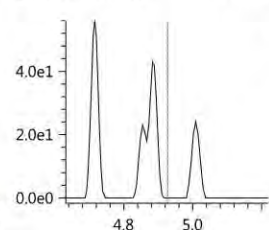
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Conc 5.0000
RT 4.748 Area 630414
ISTD 502.80>80.05 (-)



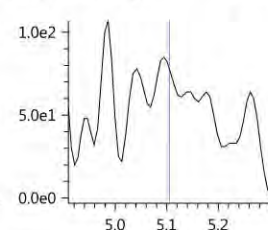
PFNS

Conc ---
RT --- Area ---
Q 549.00>99.00 (-)



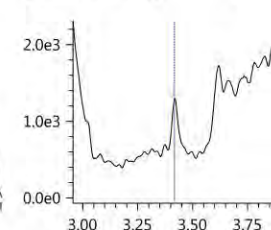
PFDS_1

Conc ---
RT --- Area ---
Q 599.00>99.10 (-)



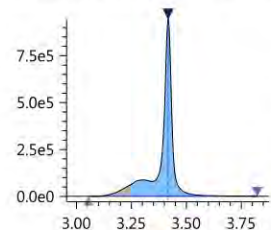
PFBA

Conc ---
RT --- Area ---
Q 213.00>169.10 (-)



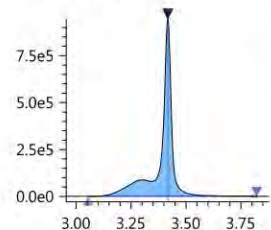
PFBA-13C

Conc 4.2723
RT 3.417 Area 3101797
Q 216.90>172.15 (-)



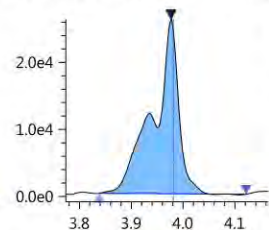
PFBA-13C_IS

Conc 5.0000
RT 3.417 Area 3101797
ISTD 216.90>172.15 (-)



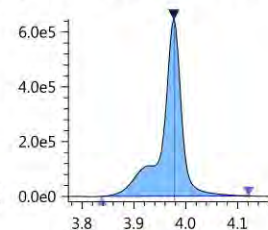
PFPeA

Conc 0.0034
RT 3.977 Area 88598
Q 263.05>219.10 (-)



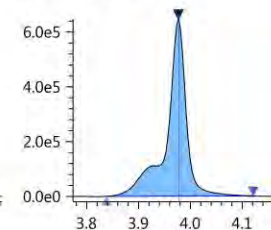
PFPeA-13C

Conc 4.3102
RT 3.977 Area 1682703
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.977 Area 1682703
ISTD 267.90>223.00 (-)

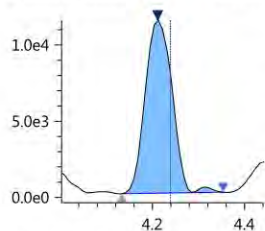


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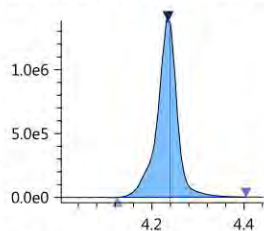
PFHxA

Conc 0.0140
 RT 4.211 Area 46187
 Q 313.00>269.00 (-)



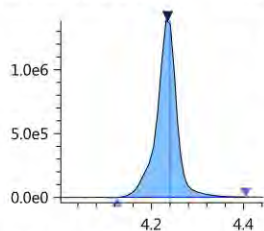
PFHxA-13C

Conc 4.7262
 RT 4.235 Area 4136683
 Q 314.90>270.10 (-)



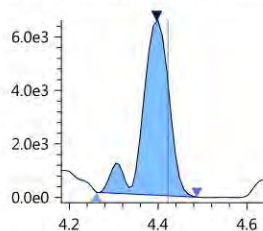
PFHxA-13C_IS

Conc 5.0000
 RT 4.235 Area 4136683
 ISTD 314.90>270.10 (-)



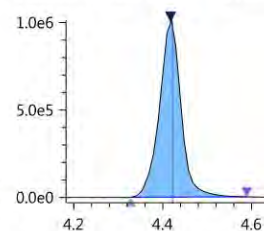
PFHpA

Conc 0.0139
 RT 4.397 Area 27269
 Q 362.90>319.00 (-)



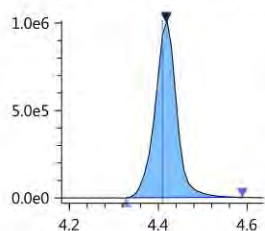
PFHpA-13C

Conc 3.6332
 RT 4.418 Area 3404556
 Q 366.90>322.10 (-)



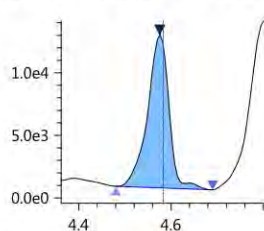
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Conc 5.0000
 RT 4.418 Area 3404556
 ISTD 366.90>322.10 (-)



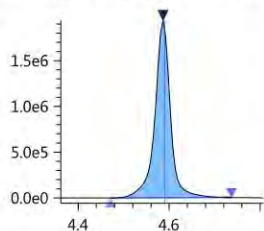
PFOA

Conc 0.0073
 RT 4.576 Area 39298
 Q 413.00>369.00 (-)



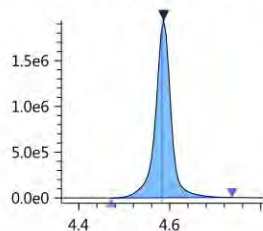
PFOA-13C

Conc 4.5599
 RT 4.586 Area 4564683
 Q 416.80>372.05 (-)



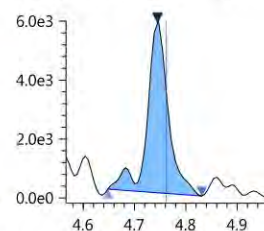
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Conc 5.0000
 RT 4.586 Area 4564683
 ISTD 416.80>372.05 (-)



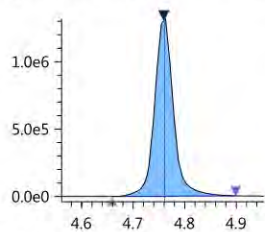
PFNA

Conc -0.0066
 RT 4.745 Area 16551
 Q 463.00>418.90 (-)



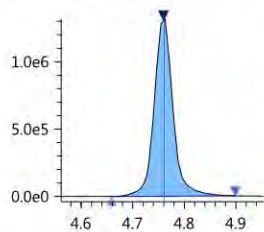
PFNA-13C

Conc 4.8823
 RT 4.760 Area 3343847
 Q 467.80>423.00 (-)



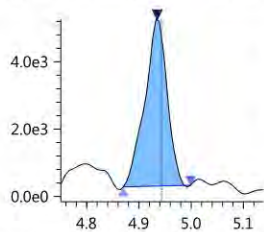
PFNA-13C_IS

Conc 5.0000
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 ISTD 467.80>423.00 (-)



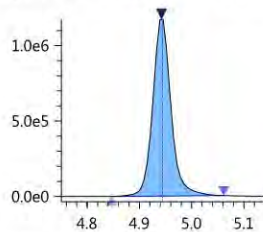
PFDA

Conc 0.0049
 RT 4.935 Area 14798
 Q 513.00>468.80 (-)



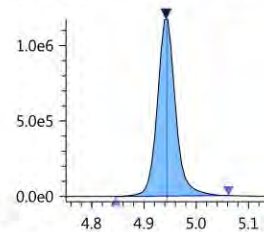
PFDA-13C

Conc 4.5790
 RT 4.942 Area 2857137
 Q 514.80>469.95 (-)



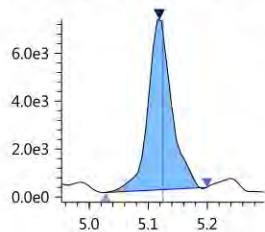
PFDA-13C_IS

Conc 5.0000
 RT 4.942 Area 2857137
 ISTD 514.80>469.95 (-)



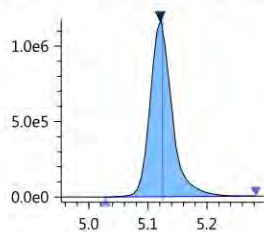
PFUnA

Conc -0.0012
 RT 5.119 Area 19910
 Q 563.00>518.90 (-)



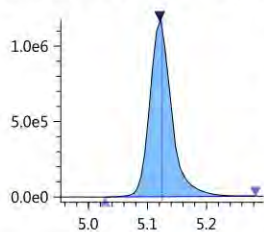
PFUnA-13C

Conc 4.6441
 RT 5.121 Area 3002021
 Q 564.80>519.95 (-)



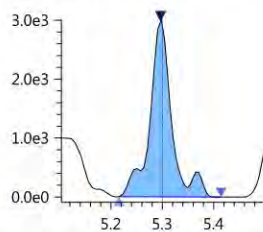
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Conc 5.0000
 RT 5.121 Area 3002021
 ISTD 564.80>519.95 (-)



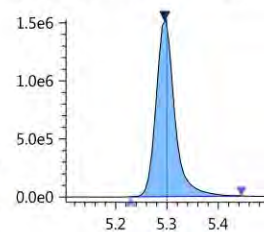
PFDaA

Conc 0.0176
 RT 5.297 Area 8825
 Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.4623
 RT 5.296 Area 3823071
 Q 614.80>569.95 (-)

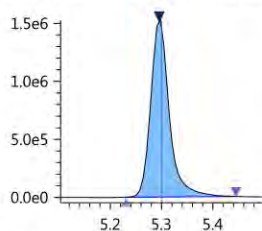


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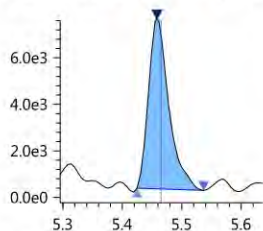
PFDaA-13C_IS

Conc 5.0000
RT 5.296 Area 3823071
ISTD 614.80>569.95 (-)



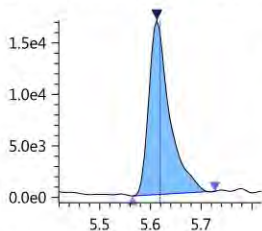
PFTrDA

Conc -0.0071
RT 5.458 Area 17362
Q 663.00>618.90 (-)



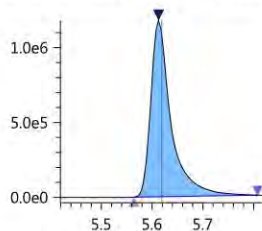
PFTeDA

Conc 0.0035
RT 5.613 Area 47877
Q 713.40>669.00 (-)



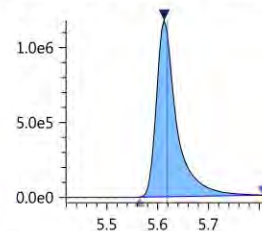
PFTeDA-13C

Conc 4.3808
RT 5.613 Area 3262352
Q 714.70>669.90 (-)



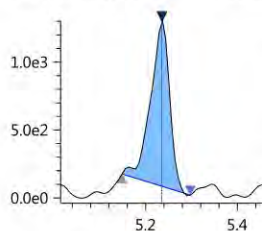
PFTeDA-13C_IS

Conc 5.0000
RT 5.613 Area 3262352
ISTD 714.70>669.90 (-)



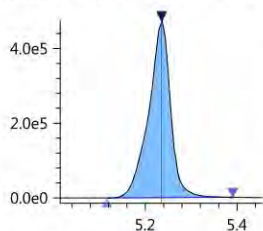
FOSA

Conc 0.0098
RT 5.236 Area 3495
Q 498.20>78.00 (-)



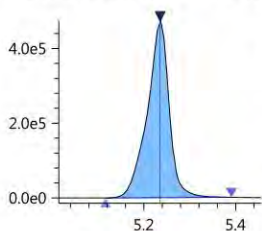
FOSA-13C

Conc 4.3072
RT 5.235 Area 1559197
Q 506.00>78.05 (-)



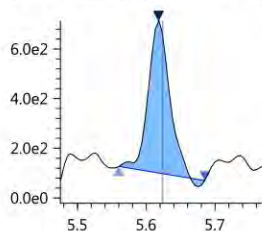
FOSA-13C_IS

Conc 5.0000
RT 5.235 Area 1559197
ISTD 506.00>78.05 (-)



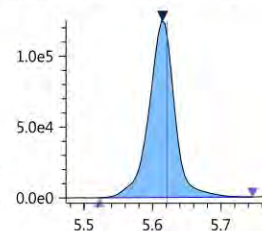
N-MeFOSA

Conc 0.0139
RT 5.618 Area 1307
Q 512.00>169.10 (-)



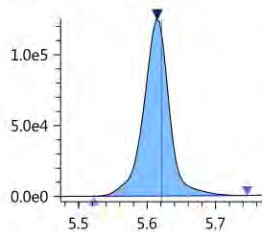
N-MeFOSA-d3

Conc 3.4570
RT 5.615 Area 325053
Q 514.90>168.90 (-)



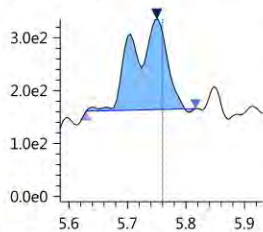
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.615 Area 325053
ISTD 514.90>168.90 (-)



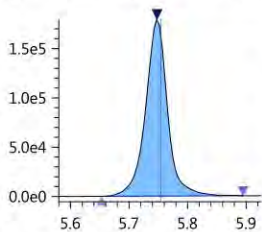
N-EtFOSA

Conc 0.0378
RT 5.750 Area 695
Q 526.90>169.10 (-)



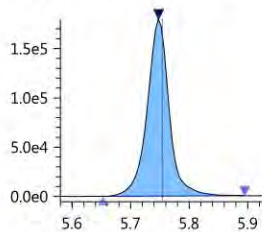
N-EtFOSA-d9

Conc 3.4572
RT 5.748 Area 467026
Q 530.90>169.15 (-)



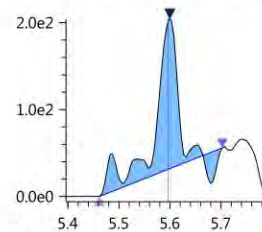
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.748 Area 467026
ISTD 530.90>169.15 (-)



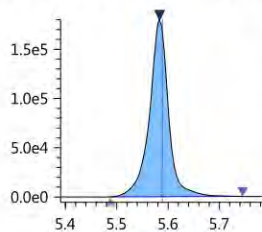
N-MeFOSE

Conc 0.0039
RT 5.600 Area 478
Q 616.00>59.00 (-)



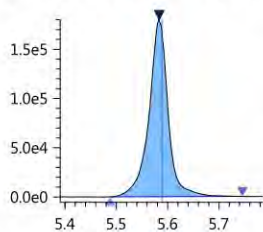
N-MeFOSE-d7

Conc 4.0696
RT 5.584 Area 461983
Q 622.70>59.10 (-)



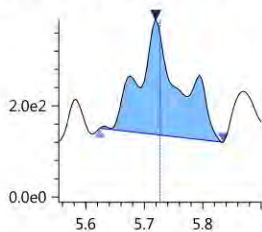
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.584 Area 461983
ISTD 622.70>59.10 (-)



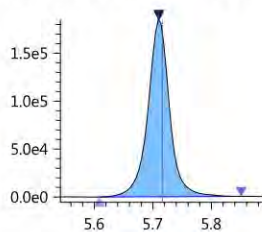
N-EtFOSE

Conc 0.0098
RT 5.720 Area 1225
Q 630.00>58.90 (-)



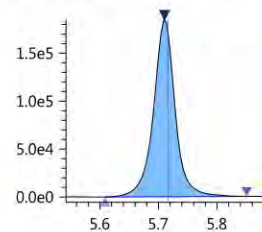
N-EtFOSE-d9

Conc 4.3352
RT 5.710 Area 475021
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.710 Area 475021
ISTD 638.70>59.10 (-)

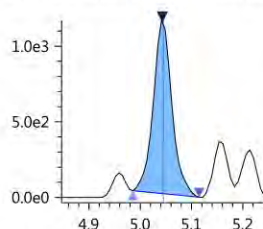


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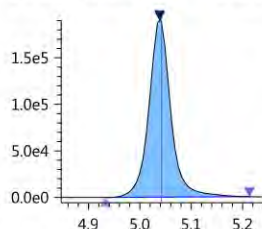
N-MeFOSAA

Conc 0.0668
RT 5.043 Area 2907
Q 570.20>419.00 (-)



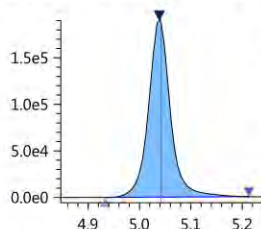
N-MeFOSAA-d3

Conc 4.2237
RT 5.038 Area 563911
Q 572.80>419.05 (-)



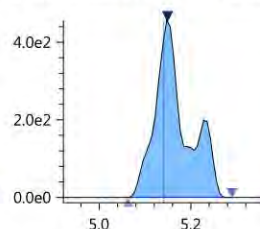
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.038 Area 563911
ISTD 572.80>419.05 (-)



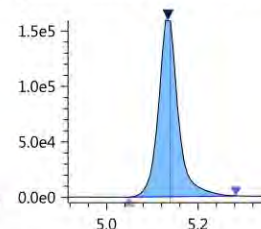
N-EtFOSAA

Conc 0.0380
RT 5.149 Area 2109
Q 584.20>418.95 (-)



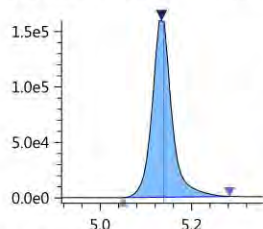
N-EtFOSAA-d5

Conc 4.4372
RT 5.134 Area 482305
Q 588.80>419.00 (-)



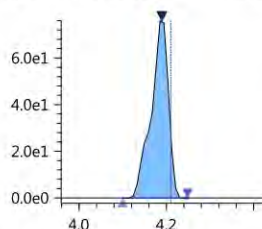
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.134 Area 482305
ISTD 588.80>419.00 (-)



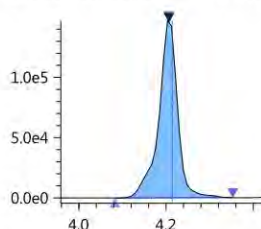
4_2-FTS_1

Conc 0.0028
RT 4.189 Area 210
Q 327.00>307.05 (-)



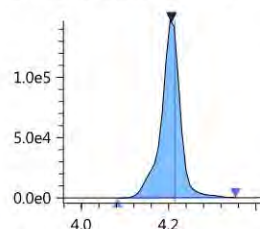
4_2-FTS-13C

Conc 5.1145
RT 4.207 Area 441083
Q 328.80>309.05 (-)



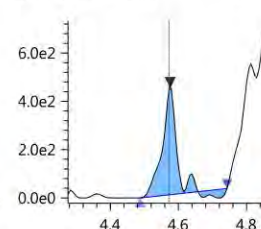
4_2-FTS-13C_IS

Conc 5.0000
RT 4.207 Area 441083
ISTD 328.80>309.05 (-)



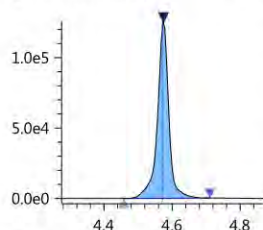
6_2-FTS_1

Conc 0.0163
RT 4.576 Area 1181
Q 427.00>407.00 (-)



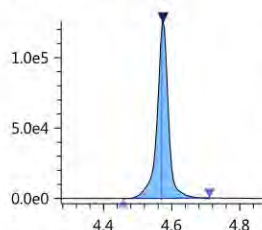
6_2-FTS-13C

Conc 4.3548
RT 4.575 Area 289159
Q 428.90>409.00 (-)



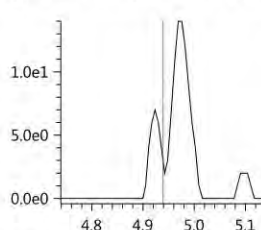
6_2-FTS-13C_IS

Conc 5.0000
RT 4.575 Area 289159
ISTD 428.90>409.00 (-)



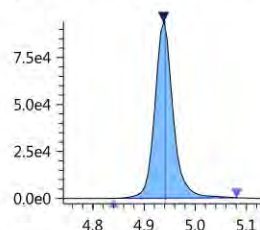
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)



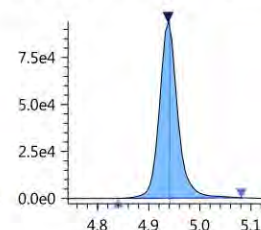
8_2-FTS-13C

Conc 4.5019
RT 4.938 Area 231866
Q 528.80>509.00 (-)



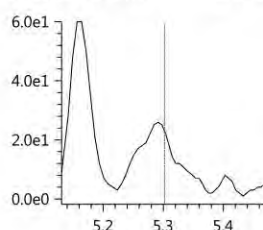
8_2-FTS-13C_IS

Conc 5.0000
RT 4.938 Area 231866
ISTD 528.80>509.00 (-)



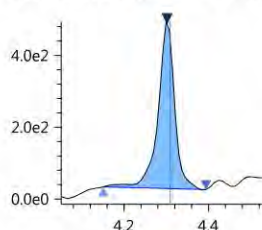
10_2-FtS_1

Conc ----
RT ---- Area ----
Q 627.00>606.95 (-)



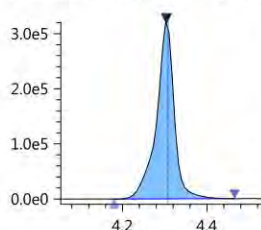
HPFO_DA

Conc 0.0064
RT 4.302 Area 1276
Q 329.00>169.00 (-)



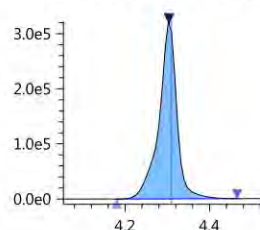
HPFO_DA-13C

Conc 4.5419
RT 4.304 Area 932174
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.304 Area 932174
ISTD 332.00>286.80 (-)



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191202_025

Sample ID: 15.0 PPB ICAL

Date acquired: 12/2/2019 6:52:58 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_025.lcd

Vial: 7 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.116	3662277	3662277	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.024	1863611	1156968	2	13.3154	ng/mL	13.3106
PFBS-13C	Auto	4.025	1156968	3662277	1	4.6966	ng/mL	5.0000
PFBS-13C_IS	Auto	4.025	1156968	1156968	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.248	1660486	1156968	2	13.8164	ng/mL	14.1138
PFHxS_1	Auto	4.411	1379923	598399	3	12.7439	ng/mL	13.6961
PFHxS-18O	Auto	4.413	598399	3662277	1	4.5849	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.413	598399	598399	3	5.0000	ng/mL	5.0000
PFHpS_1	M	4.573	2014121	598399	3	14.3253	ng/mL	14.3016
PFOS_1	Auto	4.744	1547162	623804	4	14.0559	ng/mL	13.9384
PFOS-13C	Auto	4.744	623804	3662277	1	4.8431	ng/mL	5.0000
PFOS-13C_IS	Auto	4.744	623804	623804	4	5.0000	ng/mL	5.0000
PFNS	M	4.920	1124672	623804	4	13.7277	ng/mL	14.4237
PFDS_1	Auto	5.095	1185920	623804	4	13.9850	ng/mL	14.4700
PFBA	Auto	3.413	9252014	3016963	5	15.6057	ng/mL	15.0000
PFBA-13C	Auto	3.412	3016963	3662277	1	4.8882	ng/mL	5.0000
PFBA-13C_IS	Auto	3.412	3016963	3016963	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.972	10779544	1590795	6	15.2559	ng/mL	15.0000
PFPeA-13C	Auto	3.972	1590795	3662277	1	4.7932	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.972	1590795	1590795	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.231	12512503	3123934	7	15.4069	ng/mL	15.0000
PFHxA-13C	Auto	4.231	3123934	3662277	1	4.1985	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.231	3123934	3123934	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.412	10238994	3473755	8	15.2602	ng/mL	15.0000
PFHpA-13C	Auto	4.412	3473755	3662277	1	4.3607	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.412	3473755	3473755	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.582	13949410	3853764	9	15.1864	ng/mL	15.0000
PFOA-13C	Auto	4.581	3853764	3662277	1	4.5286	ng/mL	5.0000
PFOA-13C_IS	Auto	4.581	3853764	3853764	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.755	7765439	2532662	10	14.7928	ng/mL	15.0000
PFNA-13C	Auto	4.755	2532662	3662277	1	4.3499	ng/mL	5.0000
PFNA-13C_IS	Auto	4.755	2532662	2532662	10	5.0000	ng/mL	5.0000
PFDA	Auto	4.937	7850266	2457080	11	15.2650	ng/mL	15.0000
PFDA-13C	Auto	4.937	2457080	3662277	1	4.6322	ng/mL	5.0000
PFDA-13C_IS	Auto	4.937	2457080	2457080	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.117	7402062	2823132	12	15.3789	ng/mL	15.0000
PFUnA-13C	Auto	5.116	2823132	3662277	1	5.1375	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.116	2823132	2823132	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.291	6213938	3319549	13	14.9898	ng/mL	15.0000
PFDoA-13C	Auto	5.291	3319549	3662277	1	4.5578	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.291	3319549	3319549	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.456	9317370	3040430	14	14.7417	ng/mL	15.0000
PFTeDA-13C	Auto	5.607	4389304	3040430	14	15.2064	ng/mL	15.0000
PFTeDA-13C_IS	Auto	5.607	3040430	3662277	1	4.8026	ng/mL	5.0000
FOSA	Auto	5.231	5157743	1485983	16	15.2396	ng/mL	15.0000
FOSA-13C	Auto	5.231	1485983	3662277	1	4.8287	ng/mL	5.0000
FOSA-13C_IS	Auto	5.231	1485983	1485983	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.614	1669038	387210	17	14.9805	ng/mL	15.0000
N-MeFOSA-d3	Auto	5.611	387210	3662277	1	4.8442	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.611	387210	387210	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.749	331938	551515	18	15.1376	ng/mL	15.0000
N-EtFOSA-d9	Auto	5.744	551515	3662277	1	4.8024	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.744	551515	551515	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.587	1881281	490913	19	14.3477	ng/mL	15.0000
N-MeFOSE-d7	Auto	5.580	490913	3662277	1	5.0869	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.580	490913	490913	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.717	1847523	482695	20	14.5089	ng/mL	15.0000
N-EtFOSE-d9	Auto	5.707	482695	3662277	1	5.1820	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.707	482695	482695	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.036	1038393	541305	21	15.9479	ng/mL	15.0000
N-MeFOSAA-d3	Auto	5.033	541305	3662277	1	4.7692	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.033	541305	541305	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.134	747831	405636	22	15.1599	ng/mL	15.0000
N-EtFOSAA-d5	Auto	5.129	405636	3662277	1	4.3899	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.129	405636	405636	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.203	813387	395401	23	12.2238	ng/mL	14.0583
4_2-FTS-13C	Auto	4.203	395401	3662277	1	5.3932	ng/mL	5.0000

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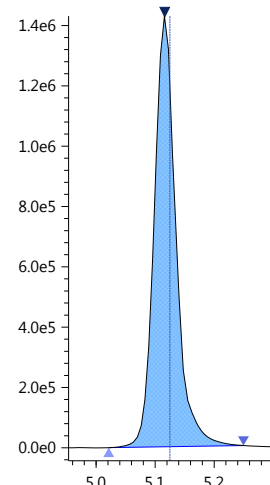
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.203	395401	395401	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.568	931779	284550	24	13.0378	ng/mL	14.2676
6_2-FTS-13C	Auto	4.568	284550	3662277	1	5.0410	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.568	284550	284550	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.932	441636	209130	25	13.4799	ng/mL	14.4007
8_2-FTS-13C	Auto	4.933	209130	3662277	1	4.7764	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.933	209130	209130	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.294	421280	209130	25	13.5899	ng/mL	14.4929
HPFO_DA	Auto	4.300	2754648	868095	26	14.7853	ng/mL	15.0000
HPFO_DA-13C	Auto	4.300	868095	3662277	1	4.9755	ng/mL	5.0000
HPFO_DA-13C_IS	Auto	4.300	868095	868095	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.116 Area 3662277

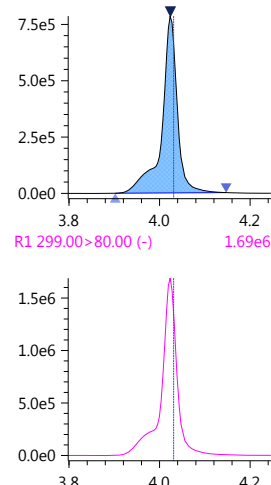
ISTD 570.00>525.00 (-)



PFBS_1

Conc 13.3154
RT 4.024 Area 1863611
R#1 215.36 (0.00)

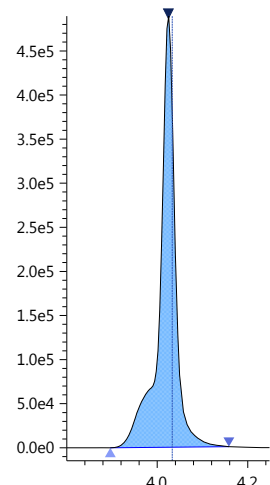
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.6966
RT 4.025 Area 1156968

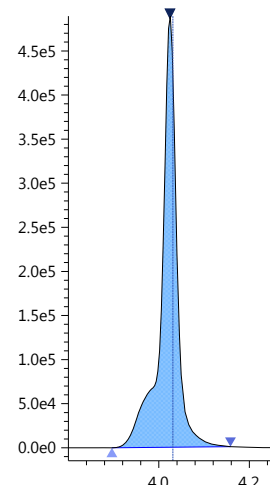
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.025 Area 1156968

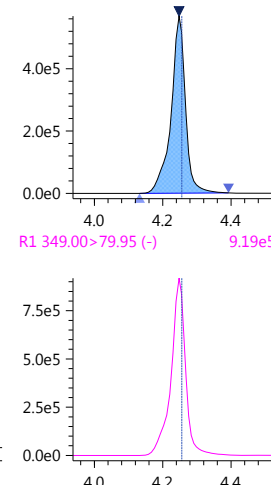
ISTD 301.80>80.00 (-)



PFPoS

Conc 13.8164
RT 4.248 Area 1660486
R#1 161.46 (0.00)

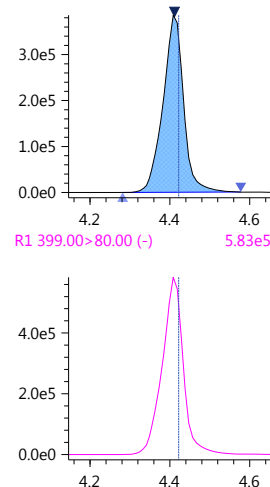
Q 349.00>99.00 (-)



PFHxS_1

Conc 12.7439
RT 4.411 Area 1379923
R#1 151.25 (0.00)

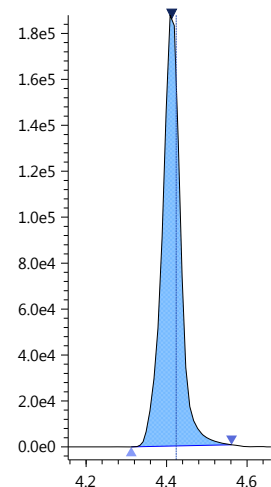
Q 399.00>99.00 (-)



PFHxS-180

Conc 4.5849
RT 4.413 Area 598399

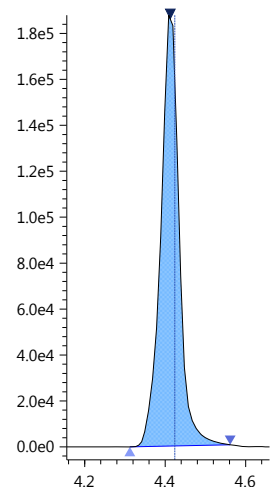
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.413 Area 598399

ISTD 402.70>84.05 (-)

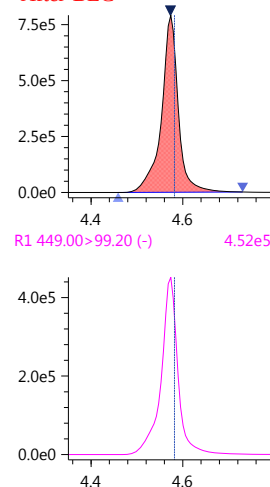


PFHpS_1

Conc 14.3253
RT 4.573 Area 2014121
R#1 57.10 (0.00)

Q 449.00>80.15 (-)

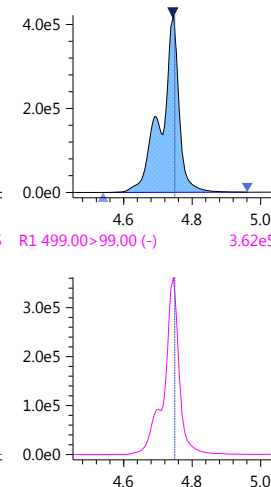
After-BLC



PFOS_1

Conc 14.0559
RT 4.744 Area 1547162
R#1 85.77 (0.00)

Q 499.00>80.00 (-)



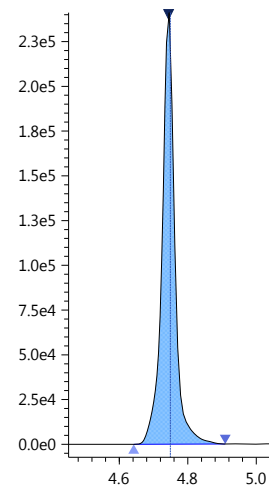
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PFOS-13C

Conc 4.8431
 RT 4.744 Area 623804

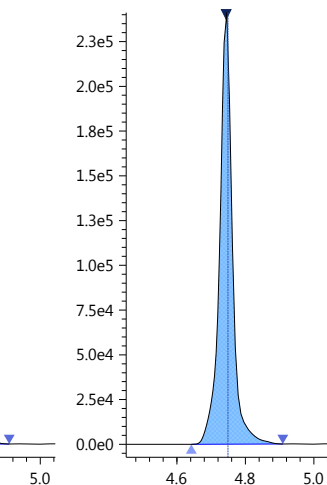
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.744 Area 623804

ISTD 502.80>80.05 (-)

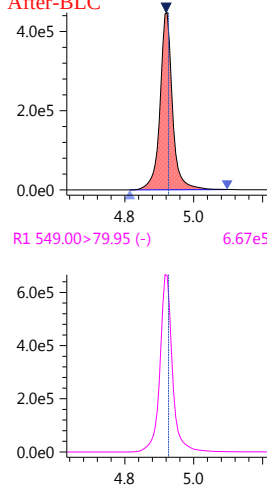


PFNS

Conc 13.7277
 RT 4.920 Area 1124672
 R#1 150.26 (0.00)

Q 549.00>99.00 (-)

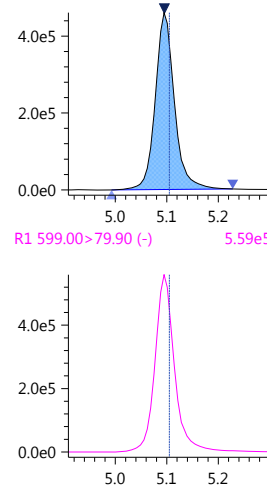
After-BLC



PFDS_1

Conc 13.9850
 RT 5.095 Area 1185920
 R#1 121.28 (0.00)

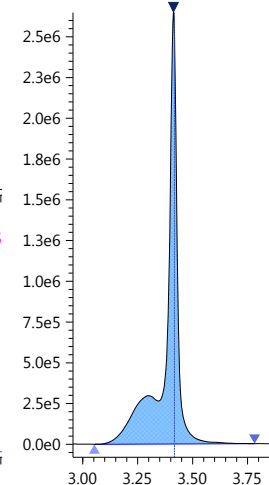
Q 599.00>99.10 (-)



PFBA

Conc 15.6057
 RT 3.413 Area 9252014

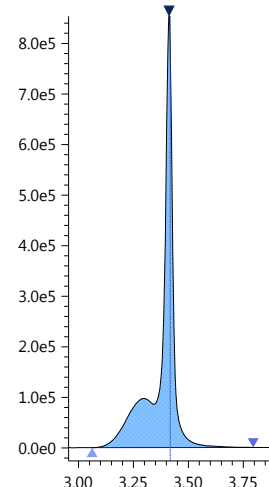
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.8882
 RT 3.412 Area 3016963

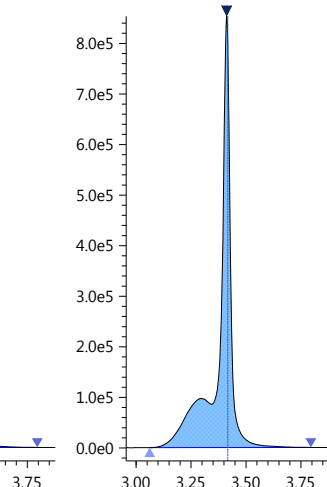
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.412 Area 3016963

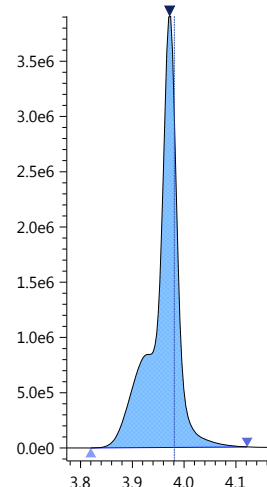
ISTD 216.90>172.15 (-)



PFPeA

Conc 15.2559
 RT 3.972 Area 10779544

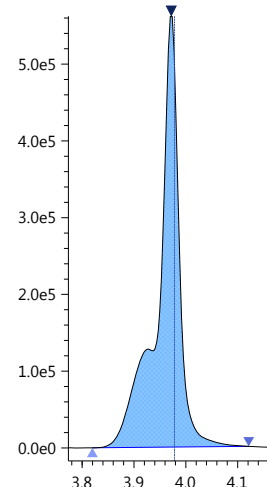
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.7932
 RT 3.972 Area 1590795

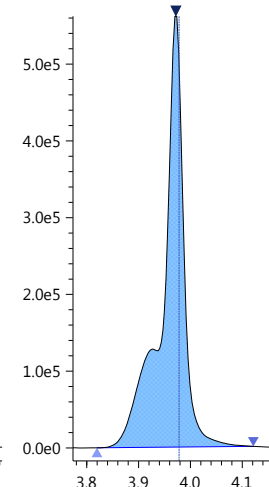
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.972 Area 1590795

ISTD 267.90>223.00 (-)

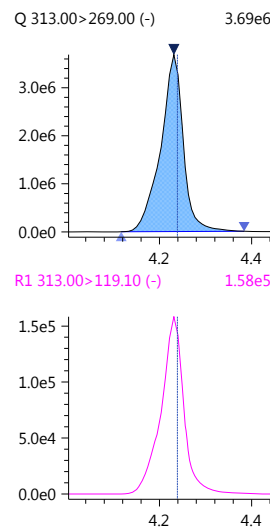


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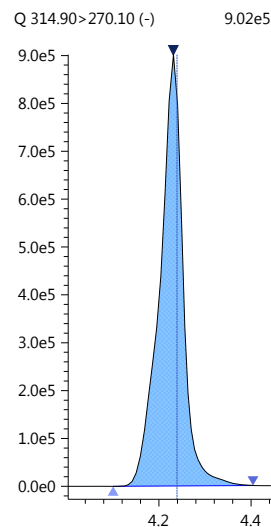
PFHxA

Conc 15.4069
RT 4.231 Area 12512503
R#1 4.29 (0.00)



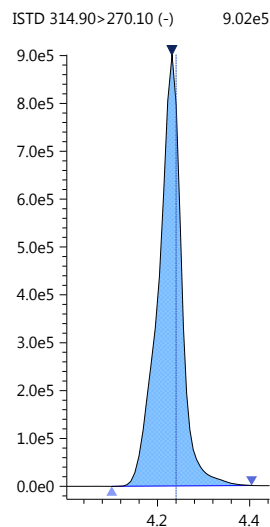
PFHxA-13C

Conc 4.1985
RT 4.231 Area 3123934



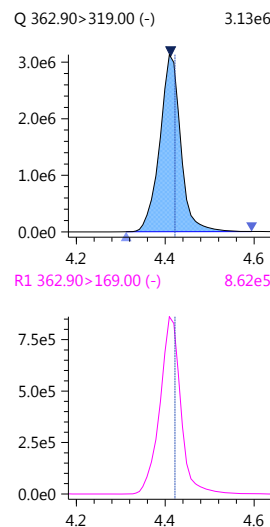
PFHxA-13C_IS

Conc 5.0000
RT 4.231 Area 3123934



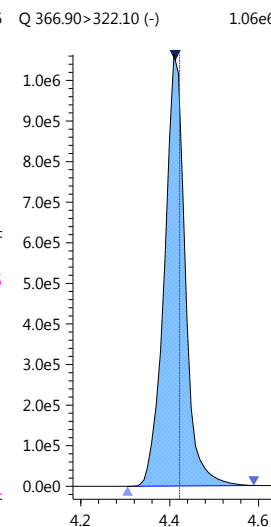
PFHpA

Conc 15.2602
RT 4.412 Area 10238994
R#1 27.48 (0.00)



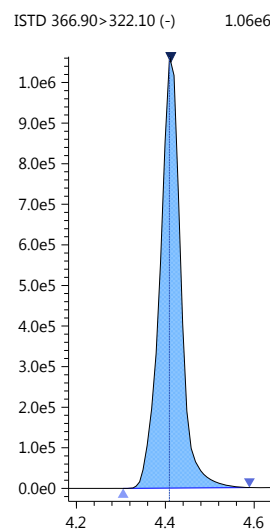
PFHpA-13C

Conc 4.3607
RT 4.412 Area 3473755



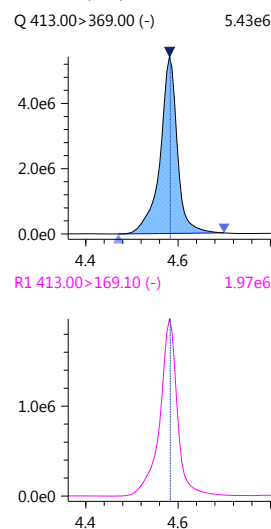
PFHpA-13C_IS

Conc 5.0000
RT 4.412 Area 3473755



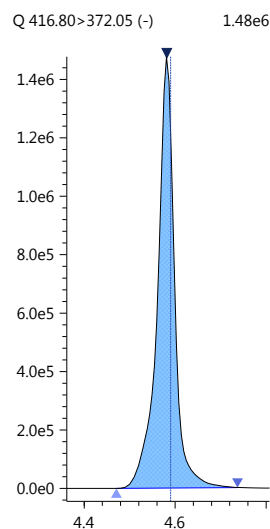
PFOA

Conc 15.1864
RT 4.582 Area 13949410
R#1 36.30 (0.00)



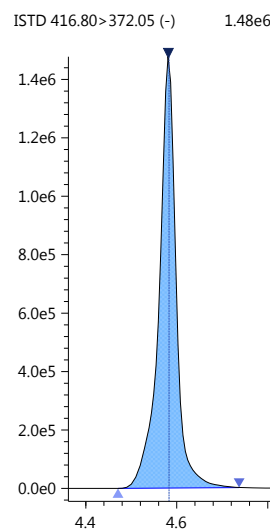
PFOA-13C

Conc 4.5286
RT 4.581 Area 3853764



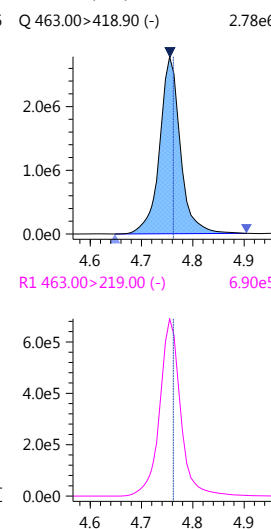
PFOA-13C_IS

Conc 5.0000
RT 4.581 Area 3853764



PFNA

Conc 14.7928
RT 4.755 Area 7765439
R#1 24.80 (0.00)



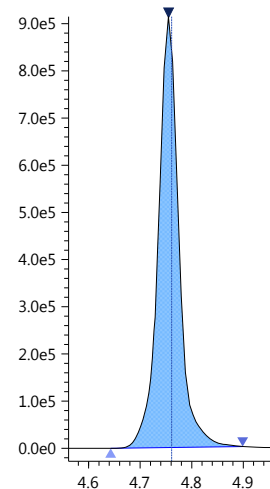
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PFNA-13C

Conc 4.3499
 RT 4.755 Area 2532662

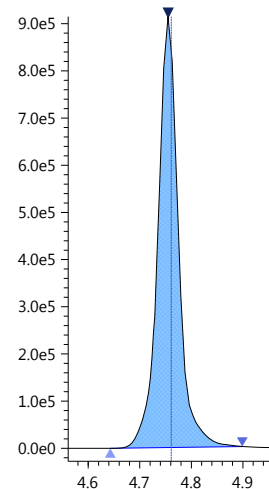
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
 RT 4.755 Area 2532662

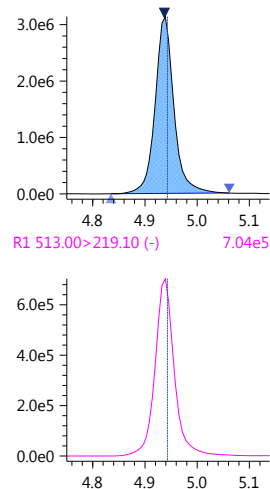
9.15e5 ISTD 467.80>423.00 (-)



PFDA

Conc 15.2650
 RT 4.937 Area 7850266
 R#1 22.36 (0.00)

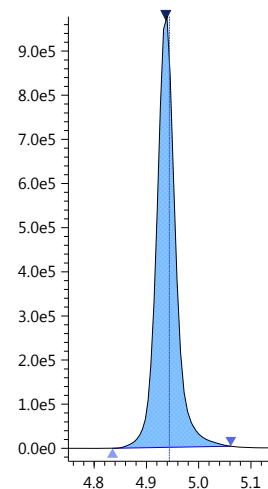
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.6322
 RT 4.937 Area 2457080

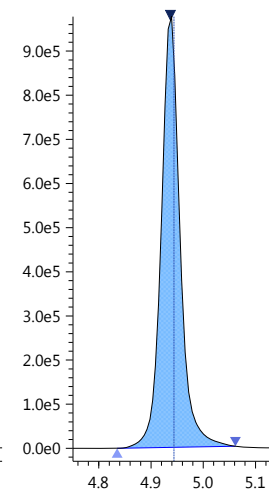
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 RT 4.937 Area 2457080

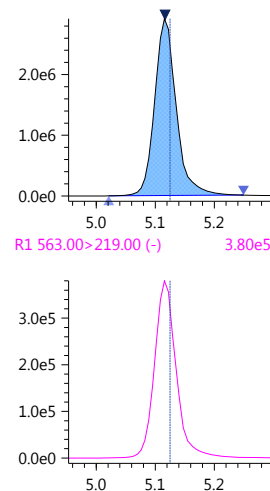
9.78e5 ISTD 514.80>469.95 (-)



PFUnA

Conc 15.3789
 RT 5.117 Area 7402062
 R#1 13.02 (0.00)

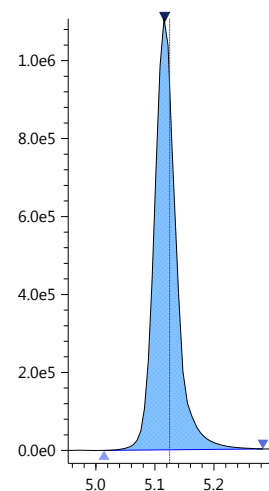
Q 563.00>518.90 (-)



PFUnA-13C

Conc 5.1375
 RT 5.116 Area 2823132

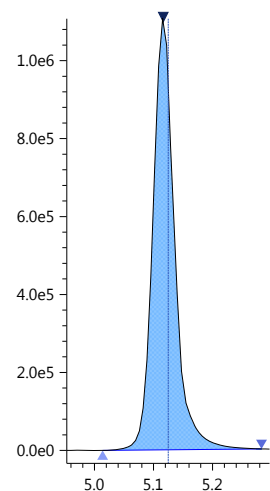
2.92e6 Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 RT 5.116 Area 2823132

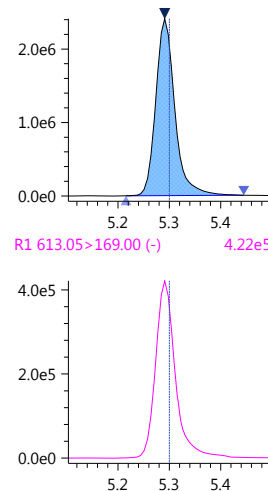
1.11e6 ISTD 564.80>519.95 (-)



PFDaA

Conc 14.9898
 RT 5.291 Area 6213938
 R#1 17.47 (0.00)

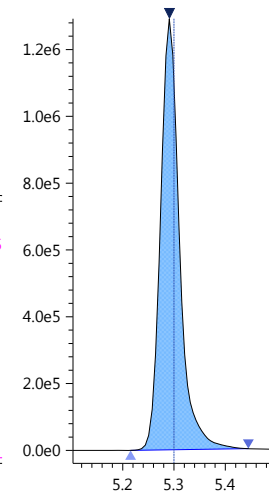
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.5578
 RT 5.291 Area 3319549

2.41e6 Q 614.80>569.95 (-)



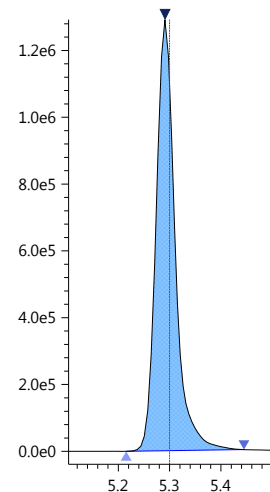
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PFD_oA-13C_IS

Conc 5.0000
RT 5.291 Area 3319549
R#1 16.14 (0.00)

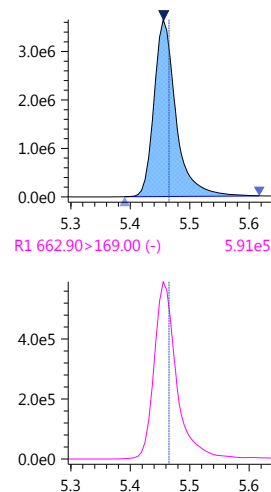
ISTD 614.80>569.95 (-) 1.29e6



PFT_rDA

Conc 14.7417
RT 5.456 Area 9317370
R#1 16.14 (0.00)

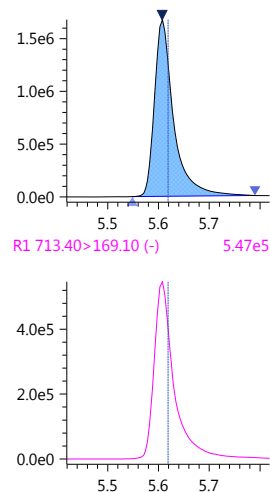
Q 663.00>618.90 (-) 3.66e6



PFT_eDA

Conc 15.2064
RT 5.607 Area 4389304
R#1 32.47 (0.00)

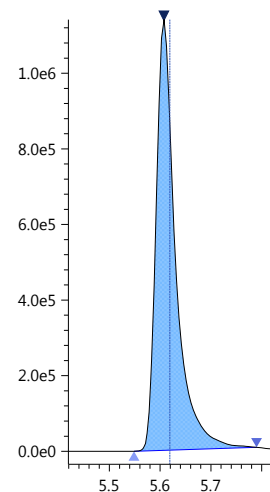
Q 713.40>669.00 (-) 1.68e6



PFT_eDA-13C

Conc 4.8026
RT 5.607 Area 3040430

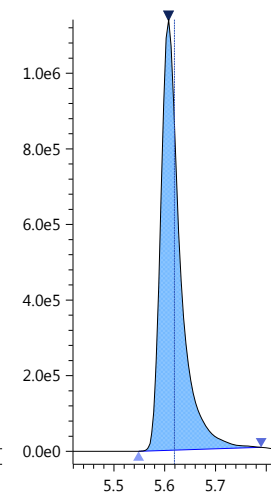
Q 714.70>669.90 (-) 1.14e6



PFT_eDA-13C_IS

Conc 5.0000
RT 5.607 Area 3040430

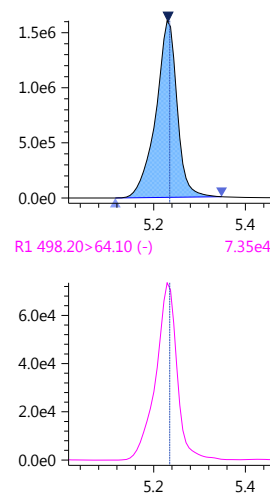
ISTD 714.70>669.90 (-) 1.14e6



FOSA

Conc 15.2396
RT 5.231 Area 5157743
R#1 4.58 (0.00)

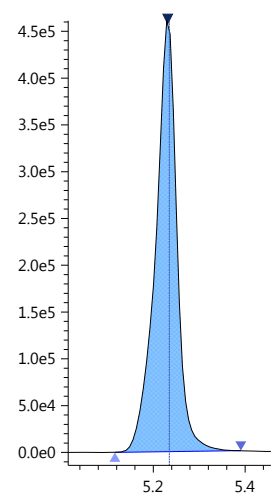
Q 498.20>78.00 (-) 1.61e6



FOSA-13C

Conc 4.8287
RT 5.231 Area 1485983

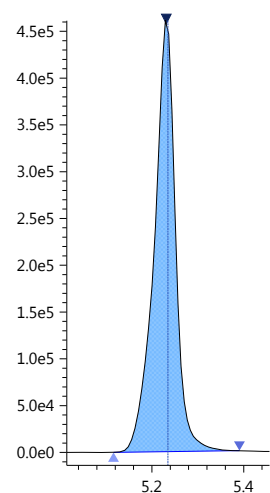
Q 506.00>78.05 (-) 4.61e5



FOSA-13C_IS

Conc 5.0000
RT 5.231 Area 1485983

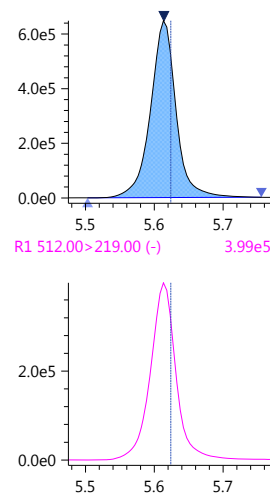
ISTD 506.00>78.05 (-) 4.61e5



N-MeFOSA

Conc 14.9805
RT 5.614 Area 1669038
R#1 61.52 (0.00)

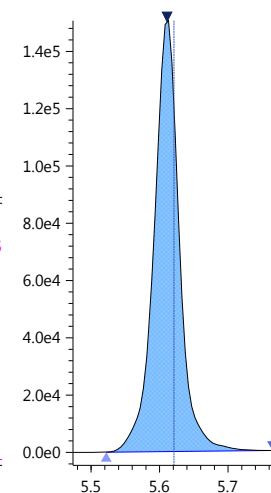
Q 512.00>169.10 (-) 6.49e5



N-MeFOSA-d3

Conc 4.8442
RT 5.611 Area 387210

Q 514.90>168.90 (-) 1.51e5



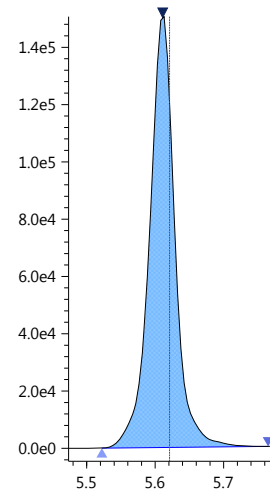
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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.611 Area 387210

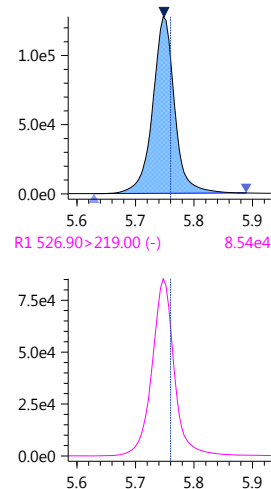
ISTD 514.90>168.90 (-) 1.51e5



N-EtFOSA

Conc 15.1376
 RT 5.749 Area 331938
 R#1 66.78 (0.00)

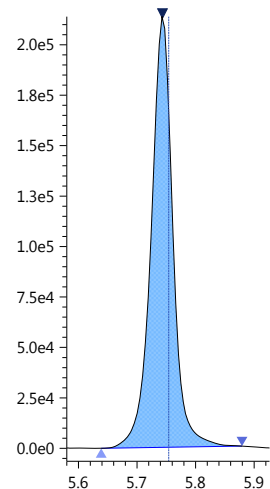
Q 526.90>169.10 (-) 1.28e5



N-EtFOSA-d9

Conc 4.8024
 RT 5.744 Area 551515

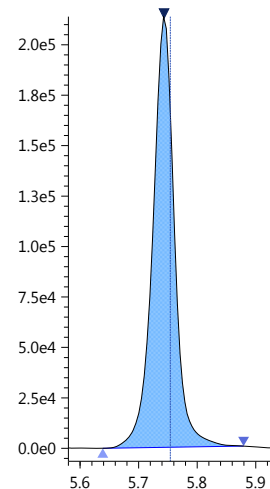
Q 530.90>169.15 (-) 2.14e5



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.744 Area 551515

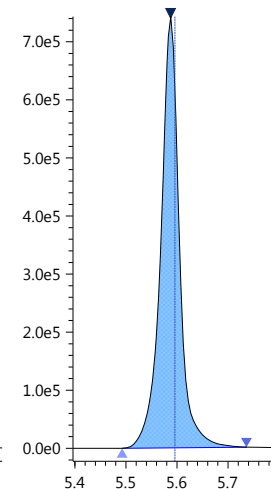
ISTD 530.90>169.15 (-) 2.14e5



N-MeFOSE

Conc 14.3477
 RT 5.587 Area 1881281

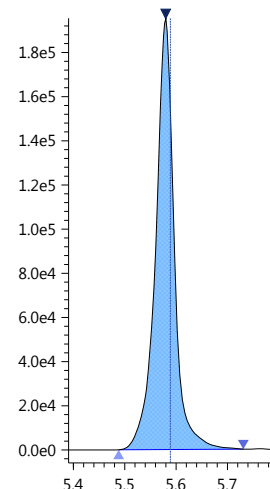
Q 616.00>59.00 (-) 7.43e5



N-MeFOSE-d7

Conc 5.0869
 RT 5.580 Area 490913

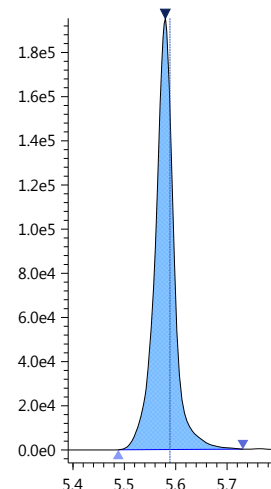
Q 622.70>59.10 (-) 1.95e5



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.580 Area 490913

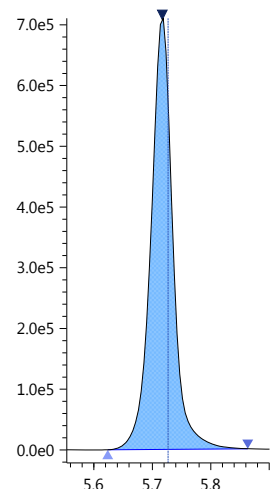
ISTD 622.70>59.10 (-) 1.95e5



N-EtFOSE

Conc 14.5089
 RT 5.717 Area 1847523

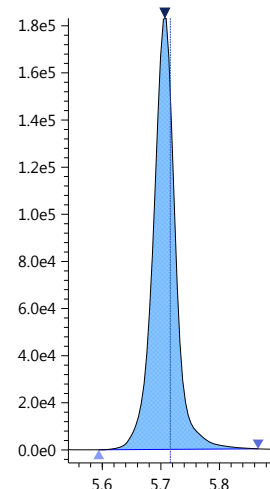
Q 630.00>58.90 (-) 7.11e5



N-EtFOSE-d9

Conc 5.1820
 RT 5.707 Area 482695

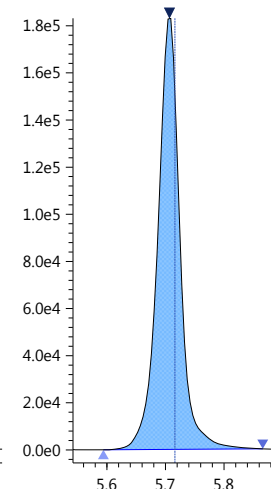
Q 638.70>59.10 (-) 1.83e5



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.707 Area 482695

ISTD 638.70>59.10 (-) 1.83e5



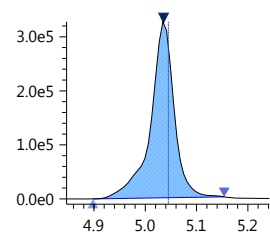
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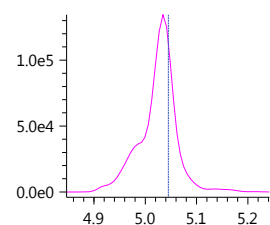
N-MeFOSAA

Conc 15.9479
RT 5.036 Area 1038393
R#1 40.91 (0.00)

Q 570.20>419.00 (-) 3.28e5



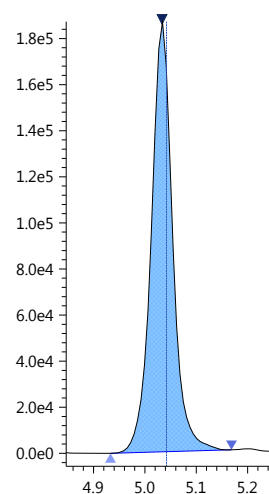
R1 570.20>512.00 (-) 1.34e5



N-MeFOSAA-d3

Conc 4.7692
RT 5.033 Area 541305

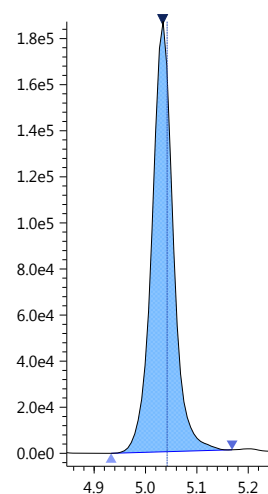
Q 572.80>419.05 (-) 1.87e5



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.033 Area 541305

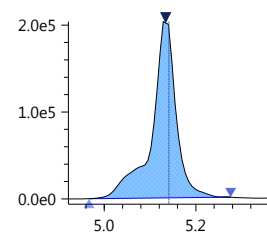
ISTD 572.80>419.05 (-) 1.87e5



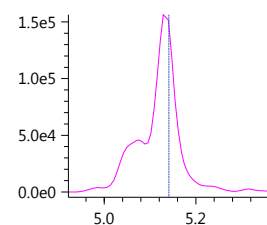
N-EtFOSAA

Conc 15.1599
RT 5.134 Area 747831
R#1 76.07 (0.00)

Q 584.20>418.95 (-) 2.04e5



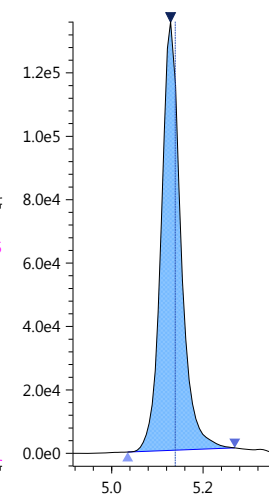
R1 584.20>526.10 (-) 1.56e5



N-EtFOSAA-d5

Conc 4.3899
RT 5.129 Area 405636

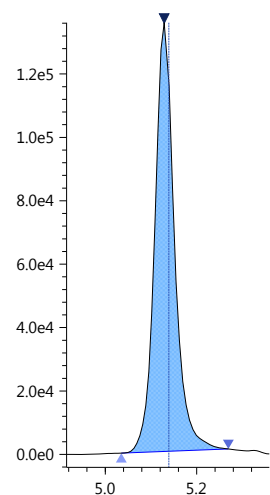
Q 588.80>419.00 (-) 1.36e5



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.129 Area 405636

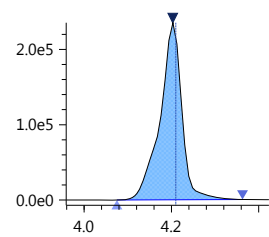
ISTD 588.80>419.00 (-) 1.36e5



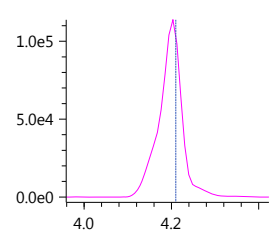
4_2-FTS_1

Conc 12.2238
RT 4.203 Area 813387
R#1 48.31 (0.00)

Q 327.00>307.05 (-) 2.36e5



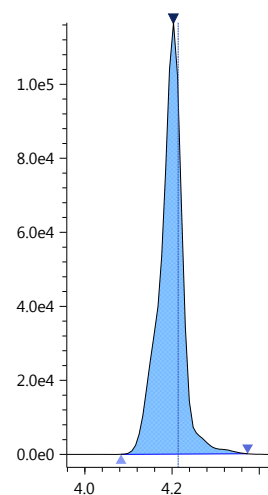
R1 327.00>81.10 (-) 1.14e5



4_2-FTS-13C

Conc 5.3932
RT 4.203 Area 395401

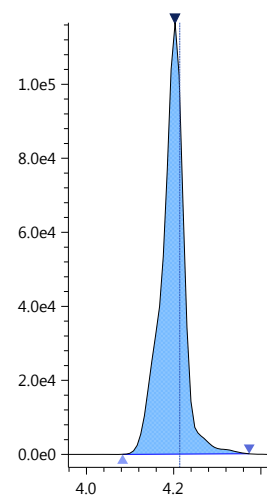
Q 328.80>309.05 (-) 1.17e5



4_2-FTS-13C_IS

Conc 5.0000
RT 4.203 Area 395401

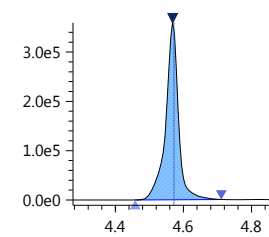
ISTD 328.80>309.05 (-) 1.17e5



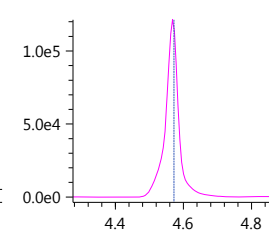
6_2-FTS_1

Conc 13.0378
RT 4.568 Area 931779
R#1 33.73 (0.00)

Q 427.00>407.00 (-) 3.60e5



R1 427.00>80.90 (-) 1.21e5

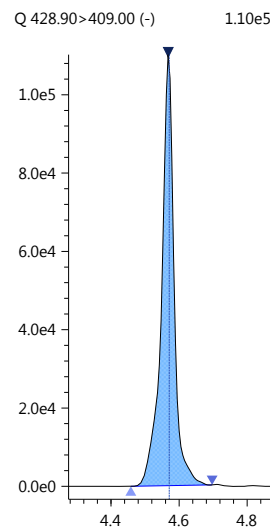


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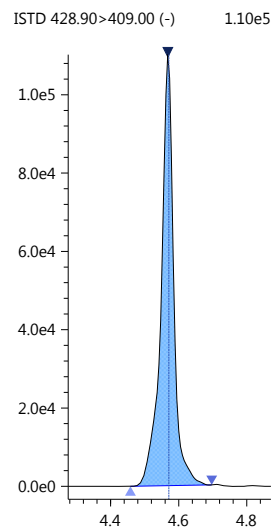
6_2-FTS-13C

Conc 5.0410
 RT 4.568 Area 284550



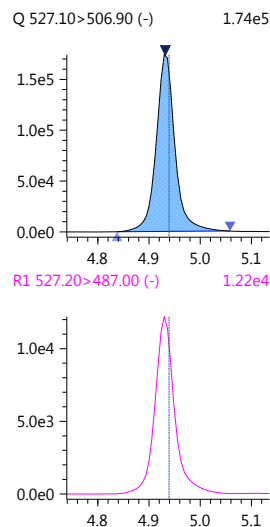
6_2-FTS-13C_IS

Conc 5.0000
 RT 4.568 Area 284550



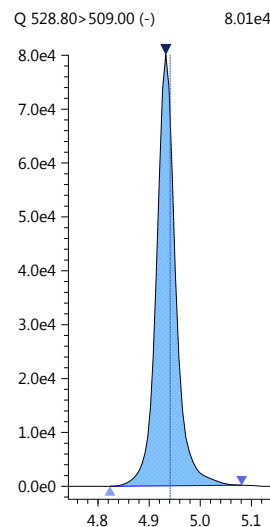
8_2-FTS_1

Conc 13.4799
 RT 4.932 Area 441636
 R#1 7.00 (0.00)



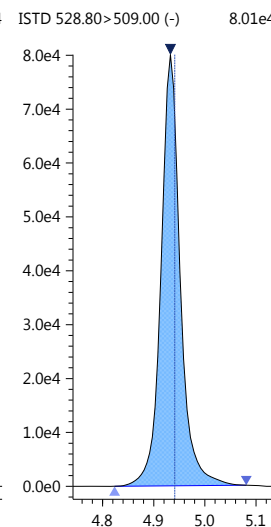
8_2-FTS-13C

Conc 4.7764
 RT 4.933 Area 209130



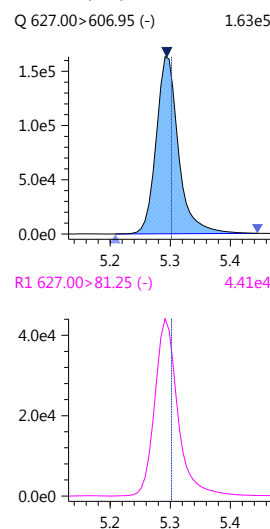
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Conc 5.0000
 RT 4.933 Area 209130



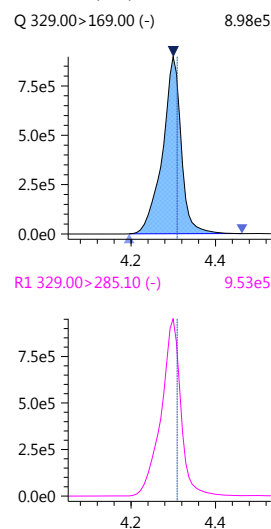
10_2-FtS_1

Conc 13.5899
 RT 5.294 Area 421280
 R#1 26.96 (0.00)



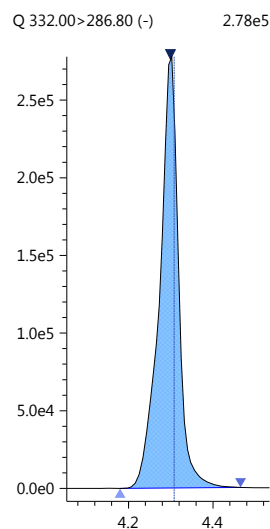
HPFO_DA

Conc 14.7853
 RT 4.300 Area 2754648
 R#1 106.12 (0.00)



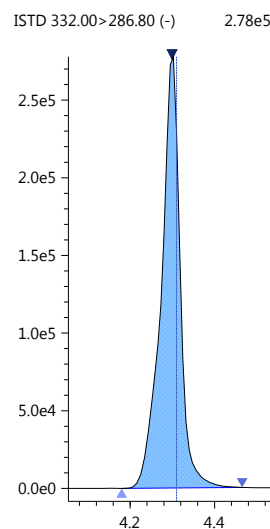
HPFO_DA-13C

Conc 4.9755
 RT 4.300 Area 868095



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.300 Area 868095



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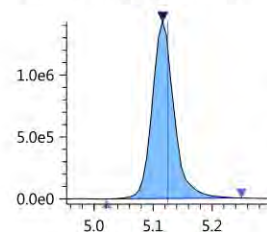
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191202_025

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Date acquired: 12/2/2019 6:52:58 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_025.lcd
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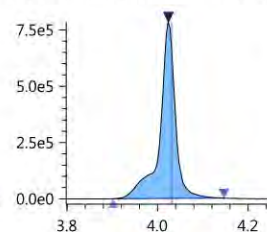
13C7-PFUnDA_IS

Conc 5.0000
RT 5.116 Area 3662277
ISTD 570.00>525.00 (-)



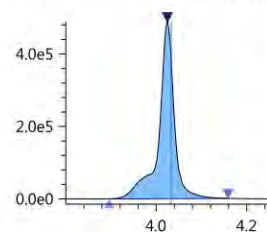
PFBS_1

Conc 13.3154
RT 4.024 Area 1863611
Q 298.80>99.00 (-)



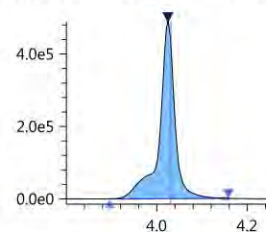
PFBS-13C

Conc 4.6966
RT 4.025 Area 1156968
Q 301.80>80.00 (-)



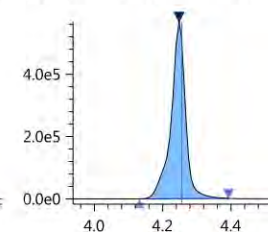
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ISTD 301.80>80.00 (-)



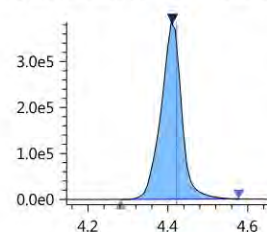
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Conc 13.8878
RT 4.248 Area 1660486
Q 349.00>99.00 (-)



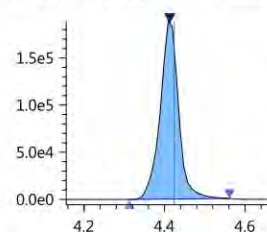
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Conc 12.7632
RT 4.411 Area 1379923
Q 399.00>99.00 (-)



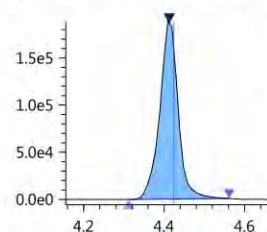
PFHxS-180

Conc 4.5849
RT 4.413 Area 598399
Q 402.70>84.05 (-)



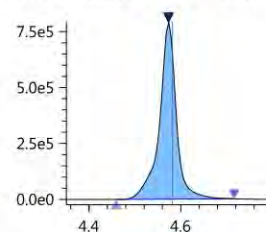
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RT 4.413 Area 598399
ISTD 402.70>84.05 (-)



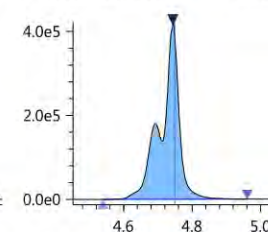
PFHpS_1

Conc 14.2724
RT 4.573 Area 2006413
Q 449.00>80.15 (-)



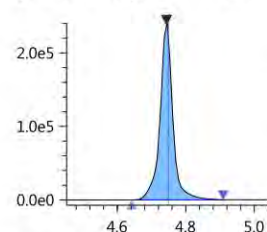
PFOS_1

Conc 14.1433
RT 4.744 Area 1547162
Q 499.00>80.00 (-)



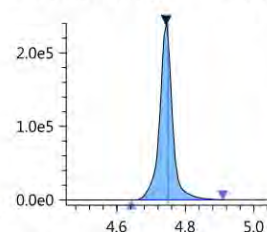
PFOS-13C

Conc 4.8431
RT 4.744 Area 623804
Q 502.80>80.05 (-)



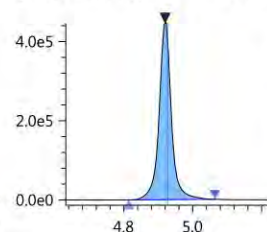
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RT 4.744 Area 623804
ISTD 502.80>80.05 (-)



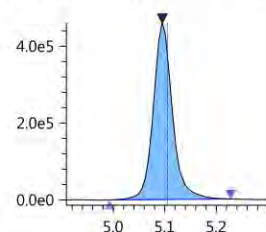
PFNS

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RT 4.920 Area 1116445
Q 549.00>99.00 (-)



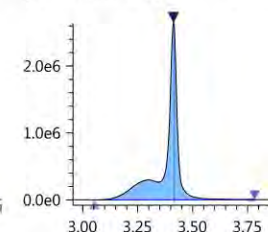
PFDS_1

Conc 14.0121
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Q 599.00>99.10 (-)



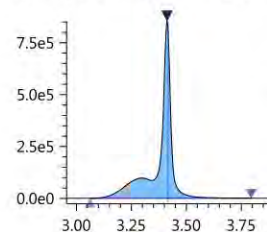
PFBA

Conc 15.6057
RT 3.413 Area 9252014
Q 213.00>169.10 (-)



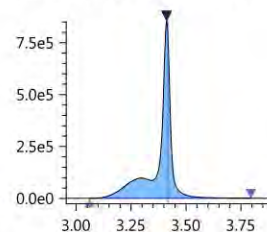
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Conc 4.8882
RT 3.412 Area 3016963
Q 216.90>172.15 (-)



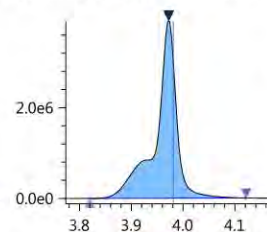
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ISTD 216.90>172.15 (-)



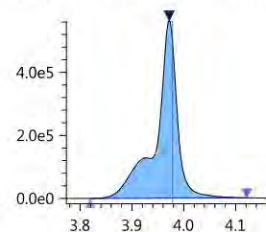
PFPeA

Conc 15.2559
RT 3.972 Area 10779544
Q 263.05>219.10 (-)



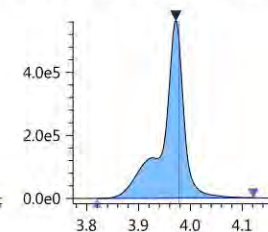
PFPeA-13C

Conc 4.7932
RT 3.972 Area 1590795
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.972 Area 1590795
ISTD 267.90>223.00 (-)

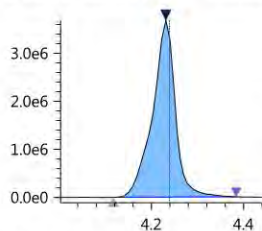


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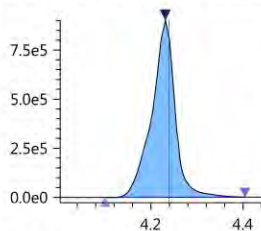
PFHxA

Conc 15.4077
 RT 4.231 Area 12512503
 Q 313.00>269.00 (-)



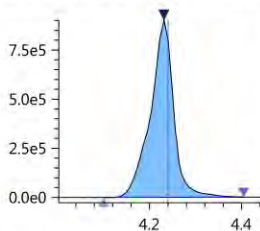
PFHxA-13C

Conc 4.1985
 RT 4.231 Area 3123934
 Q 314.90>270.10 (-)



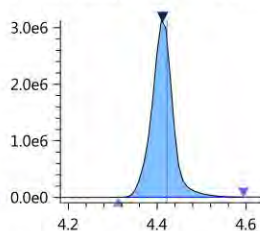
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Conc 5.0000
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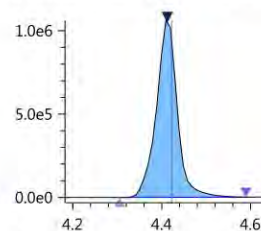
PFHpA

Conc 15.2602
 RT 4.412 Area 10238994
 Q 362.90>319.00 (-)



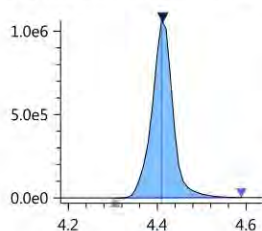
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Conc 4.3607
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 Q 366.90>322.10 (-)



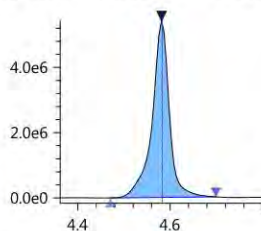
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Conc 5.0000
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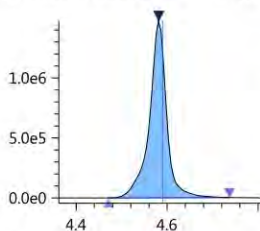
PFOA

Conc 15.1878
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 Q 413.00>369.00 (-)



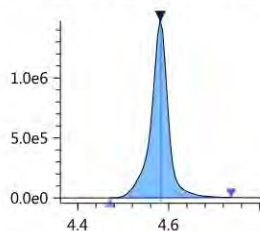
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Conc 4.5286
 RT 4.581 Area 3853764
 Q 416.80>372.05 (-)



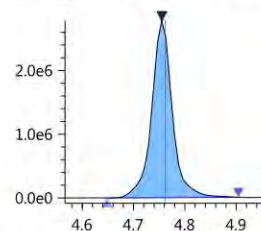
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 ISTD 416.80>372.05 (-)



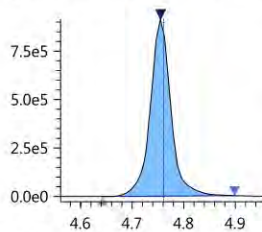
PFNA

Conc 14.7935
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 Q 463.00>418.90 (-)



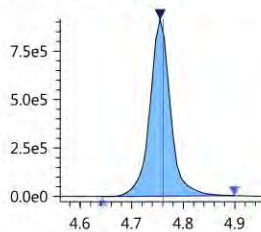
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Conc 4.3499
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 Q 467.80>423.00 (-)



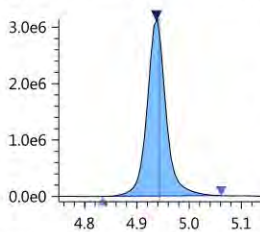
PFNA-13C_IS

Conc 5.0000
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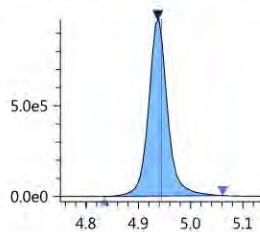
PFDA

Conc 15.2655
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 Q 513.00>468.80 (-)



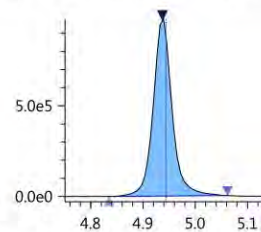
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Conc 4.6322
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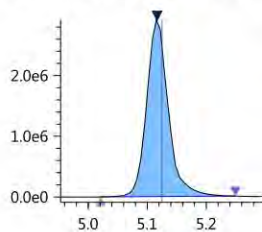
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Conc 5.0000
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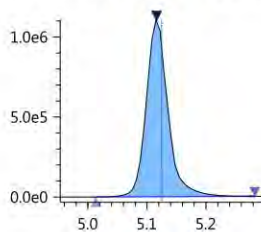
PFUnA

Conc 15.3806
 RT 5.117 Area 7402062
 Q 563.00>518.90 (-)



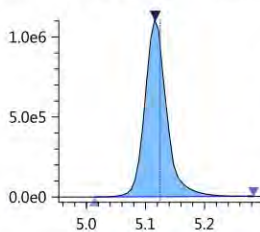
PFUnA-13C

Conc 5.1375
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 Q 564.80>519.95 (-)



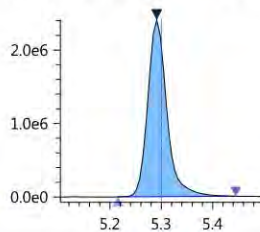
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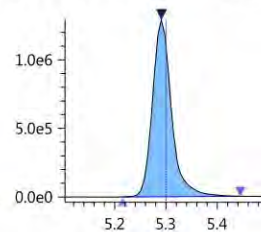
PFDaA

Conc 14.2961
 RT 5.291 Area 6213938
 Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.5578
 RT 5.291 Area 3319549
 Q 614.80>569.95 (-)

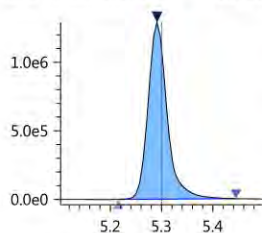


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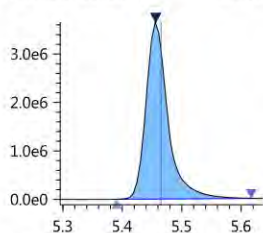
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Conc 5.0000
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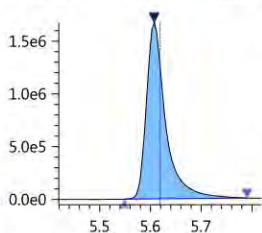
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Conc 14.7417
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Q 663.00>618.90 (-)



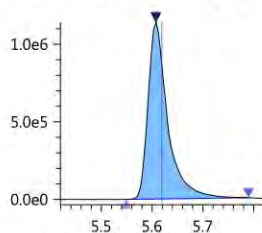
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Conc 15.2079
RT 5.607 Area 4389304
Q 713.40>669.00 (-)



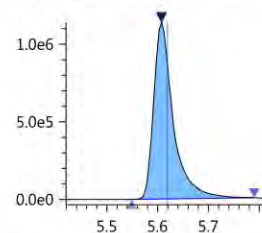
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Conc 4.8026
RT 5.607 Area 3040430
Q 714.70>669.90 (-)



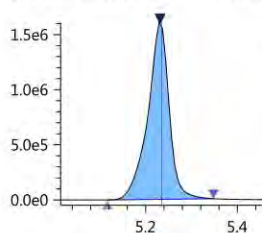
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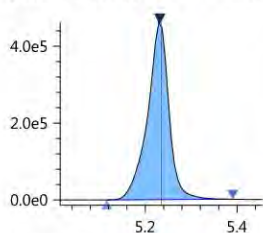
FOSA

Conc 15.2396
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Q 498.20>78.00 (-)



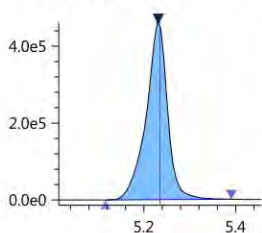
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Conc 4.8287
RT 5.231 Area 1485983
Q 506.00>78.05 (-)



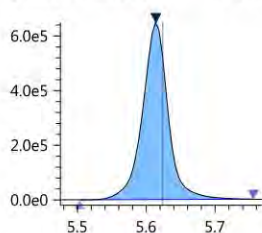
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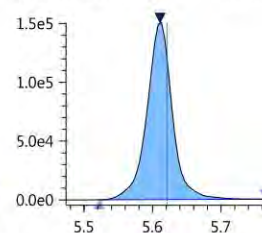
N-MeFOSA

Conc 14.9274
RT 5.614 Area 1669038
Q 512.00>169.10 (-)



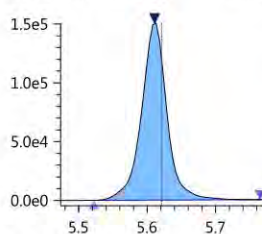
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Conc 4.8442
RT 5.611 Area 387210
Q 514.90>168.90 (-)



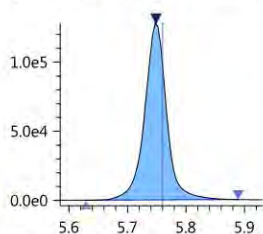
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.611 Area 387210
ISTD 514.90>168.90 (-)



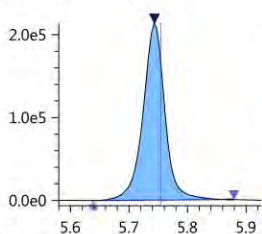
N-EtFOSA

Conc 15.2950
RT 5.749 Area 331938
Q 526.90>169.10 (-)



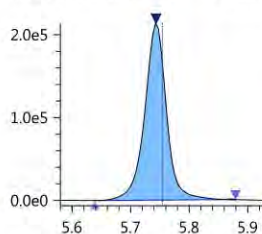
N-EtFOSA-d9

Conc 4.8024
RT 5.744 Area 551515
Q 530.90>169.15 (-)



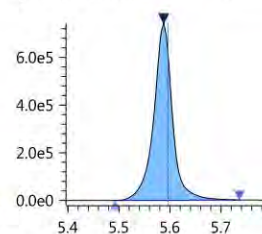
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.744 Area 551515
ISTD 530.90>169.15 (-)



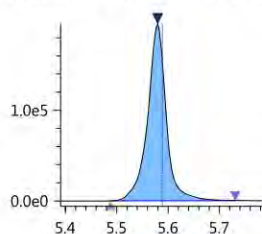
N-MeFOSE

Conc 14.3392
RT 5.587 Area 1881281
Q 616.00>59.00 (-)



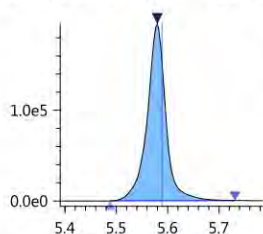
N-MeFOSE-d7

Conc 5.0869
RT 5.580 Area 490913
Q 622.70>59.10 (-)



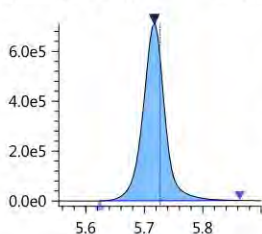
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.580 Area 490913
ISTD 622.70>59.10 (-)



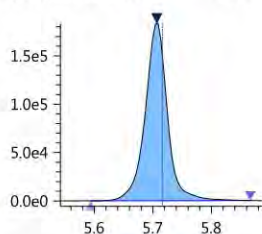
N-EtFOSE

Conc 14.4949
RT 5.717 Area 1847523
Q 630.00>58.90 (-)



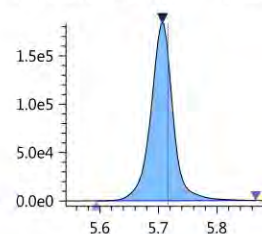
N-EtFOSE-d9

Conc 5.1820
RT 5.707 Area 482695
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.707 Area 482695
ISTD 638.70>59.10 (-)

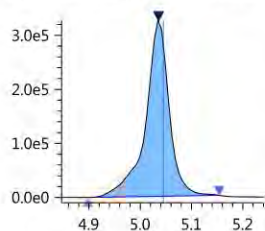


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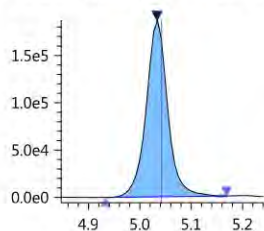
N-MeFOSAA

Conc 15.9548
RT 5.036 Area 1038393
Q 570.20>419.00 (-)



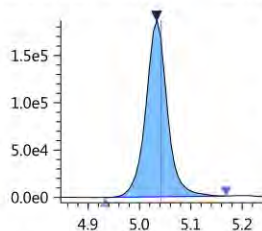
N-MeFOSAA-d3

Conc 4.7692
RT 5.033 Area 541305
Q 572.80>419.05 (-)



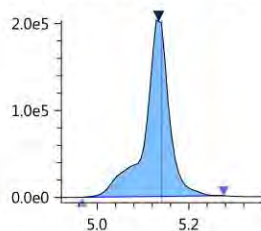
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.033 Area 541305
ISTD 572.80>419.05 (-)



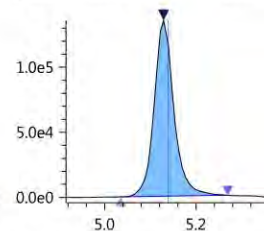
N-EtFOSAA

Conc 16.0219
RT 5.134 Area 747831
Q 584.20>418.95 (-)



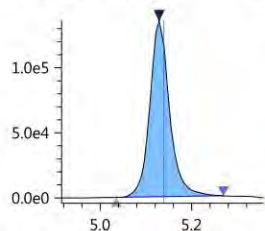
N-EtFOSAA-d5

Conc 4.3899
RT 5.129 Area 405636
Q 588.80>419.00 (-)



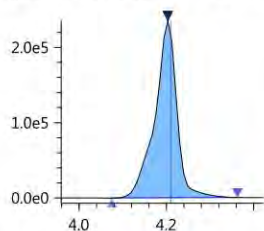
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.129 Area 405636
ISTD 588.80>419.00 (-)



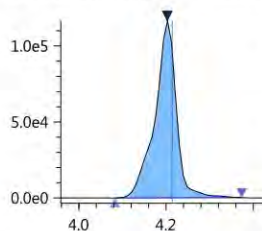
4_2-FTS_1

Conc 12.2292
RT 4.203 Area 813387
Q 327.00>307.05 (-)



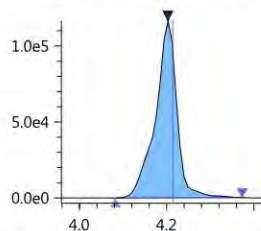
4_2-FTS-13C

Conc 5.3932
RT 4.203 Area 395401
Q 328.80>309.05 (-)



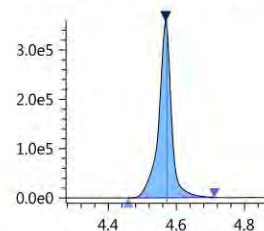
4_2-FTS-13C_IS

Conc 5.0000
RT 4.203 Area 395401
ISTD 328.80>309.05 (-)



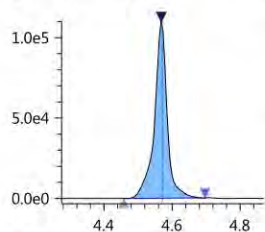
6_2-FTS_1

Conc 13.0792
RT 4.568 Area 931779
Q 427.00>407.00 (-)



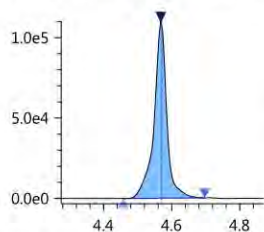
6_2-FTS-13C

Conc 5.0410
RT 4.568 Area 284550
Q 428.90>409.00 (-)



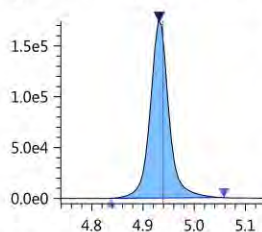
6_2-FTS-13C_IS

Conc 5.0000
RT 4.568 Area 284550
ISTD 428.90>409.00 (-)



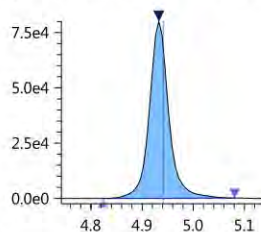
8_2-FTS_1

Conc 13.4930
RT 4.932 Area 441636
Q 527.10>506.90 (-)



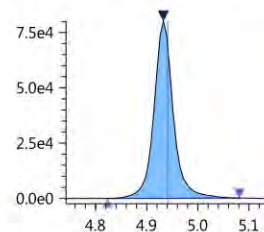
8_2-FTS-13C

Conc 4.7764
RT 4.933 Area 209130
Q 528.80>509.00 (-)



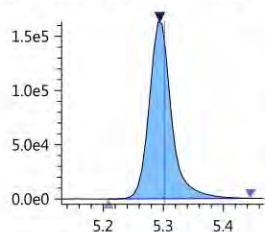
8_2-FTS-13C_IS

Conc 5.0000
RT 4.933 Area 209130
ISTD 528.80>509.00 (-)



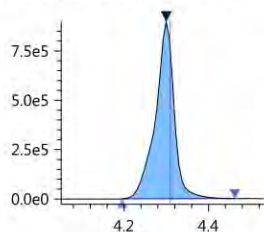
10_2-FTS_1

Conc 13.5909
RT 5.294 Area 421280
Q 627.00>606.95 (-)



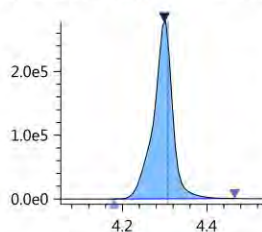
HPFO_DA

Conc 14.7853
RT 4.300 Area 2754648
Q 329.00>169.00 (-)



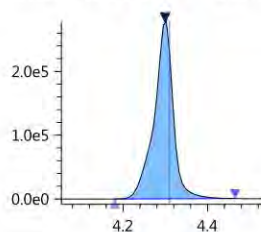
HPFO_DA-13C

Conc 4.9755
RT 4.300 Area 868095
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.300 Area 868095
ISTD 332.00>286.80 (-)



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191202_026

Sample ID: IB
Date acquired: 12/2/2019 7:03:27 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_026.lcd
Vial: 48 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.122	4073223	4073223	1	5.0000	ng/mL	0.0000
PFBS_1	M	4.023	346	1270564	2	0.0022	ng/mL	0.0000
PFBS-13C	Auto	4.032	1270564	4073223	1	4.6374	ng/mL	0.0000
PFBS-13C_IS	Auto	4.032	1270564	1270564	2	5.0000	ng/mL	0.0000
PFPeS	M	4.295	132	1270564	2	0.0010	ng/mL	0.0000
PFHxS_1	M	4.425	1993	631619	3	0.0174	ng/mL	0.0000
PFHxS-18O	Auto	4.423	631619	4073223	1	4.3512	ng/mL	0.0000
PFHxS-18O_IS	Auto	4.423	631619	631619	3	5.0000	ng/mL	0.0000
PFHpS_1	M	4.582	326	631619	3	0.0022	ng/mL	0.0000
PFOS_1	M	4.752	286	672286	4	0.0024	ng/mL	0.0000
PFOS-13C	Auto	4.750	672286	4073223	1	4.6929	ng/mL	0.0000
PFOS-13C_IS	Auto	4.750	672286	672286	4	5.0000	ng/mL	0.0000
PFNS	M	4.926	147	672286	4	0.0017	ng/mL	0.0000
PFDS_1	M	5.109	375	672286	4	0.0041	ng/mL	0.0000
PFBA	M	3.419	2300	3077541	5	0.0038	ng/mL	0.0000
PFBA-13C	Auto	3.419	3077541	4073223	1	4.4833	ng/mL	0.0000
PFBA-13C_IS	Auto	3.419	3077541	3077541	5	5.0000	ng/mL	0.0000
PFPeA	Auto	3.978	89263	1683040	6	0.0043	ng/mL	0.0000
PFPeA-13C	Auto	3.979	1683040	4073223	1	4.5595	ng/mL	0.0000
PFPeA-13C_IS	Auto	3.979	1683040	1683040	6	5.0000	ng/mL	0.0000
PFHxA	M	4.221	42528	3727061	7	0.0148	ng/mL	0.0000
PFHxA-13C	Auto	4.238	3727061	4073223	1	4.5037	ng/mL	0.0000
PFHxA-13C_IS	Auto	4.238	3727061	3727061	7	5.0000	ng/mL	0.0000
PFHpA	M	4.408	24095	3832959	8	0.0049	ng/mL	0.0000
PFHpA-13C	Auto	4.421	3832959	4073223	1	4.3261	ng/mL	0.0000
PFHpA-13C_IS	Auto	4.421	3832959	3832959	8	5.0000	ng/mL	0.0000
PFOA	Auto	4.580	42904	4699455	9	0.0094	ng/mL	0.0000
PFOA-13C	Auto	4.588	4699455	4073223	1	4.9652	ng/mL	0.0000
PFOA-13C_IS	Auto	4.588	4699455	4699455	9	5.0000	ng/mL	0.0000
PFNA	M	4.756	14598	3170745	10	-0.0084	ng/mL	0.0000
PFNA-13C	Auto	4.761	3170745	4073223	1	4.8964	ng/mL	0.0000
PFNA-13C_IS	Auto	4.761	3170745	3170745	10	5.0000	ng/mL	0.0000
PFDA	M	4.937	18980	2902778	11	0.0119	ng/mL	0.0000
PFDA-13C	Auto	4.943	2902778	4073223	1	4.9203	ng/mL	0.0000
PFDA-13C_IS	Auto	4.943	2902778	2902778	11	5.0000	ng/mL	0.0000
PFUnA	M	5.121	20349	2830856	12	0.0018	ng/mL	0.0000
PFUnA-13C	Auto	5.122	2830856	4073223	1	4.6318	ng/mL	0.0000
PFUnA-13C_IS	Auto	5.122	2830856	2830856	12	5.0000	ng/mL	0.0000
PFDoA	M	5.299	14041	3815614	13	0.0044	ng/mL	0.0000
PFDoA-13C	Auto	5.299	3815614	4073223	1	4.7104	ng/mL	0.0000
PFDoA-13C_IS	Auto	5.299	3815614	3815614	13	5.0000	ng/mL	0.0000
PFTeDA	M	5.461	21735	3206021	14	-0.0001	ng/mL	0.0000
PFTeDA	Auto	5.615	47939	3206021	14	0.0084	ng/mL	0.0000
PFTeDA-13C	Auto	5.616	3206021	4073223	1	4.5533	ng/mL	0.0000
PFTeDA-13C_IS	Auto	5.616	3206021	3206021	14	5.0000	ng/mL	0.0000
FOSA	M	5.239	5302	1590214	16	0.0146	ng/mL	0.0000
FOSA-13C	Auto	5.238	1590214	4073223	1	4.6461	ng/mL	0.0000
FOSA-13C_IS	Auto	5.238	1590214	1590214	16	5.0000	ng/mL	0.0000
N-MeFOSA	M	5.626	1252	331583	17	0.0131	ng/mL	0.0000
N-MeFOSA-d3	Auto	5.618	331583	4073223	1	3.7297	ng/mL	0.0000
N-MeFOSA-d3_IS	Auto	5.618	331583	331583	17	5.0000	ng/mL	0.0000
N-EtFOSA	M	5.766	811	460808	18	0.0443	ng/mL	0.0000
N-EtFOSA-d9	Auto	5.751	460808	4073223	1	3.6078	ng/mL	0.0000
N-EtFOSA-d9_IS	Auto	5.751	460808	460808	18	5.0000	ng/mL	0.0000
N-MeFOSE	M	5.593	702	453412	19	0.0058	ng/mL	0.0000
N-MeFOSE-d7	Auto	5.586	453412	4073223	1	4.2243	ng/mL	0.0000
N-MeFOSE-d7_IS	Auto	5.586	453412	453412	19	5.0000	ng/mL	0.0000
N-EtFOSE	M	5.722	1914	465650	20	0.0156	ng/mL	0.0000
N-EtFOSE-d9	Auto	5.714	465650	4073223	1	4.4947	ng/mL	0.0000
N-EtFOSE-d9_IS	Auto	5.714	465650	465650	20	5.0000	ng/mL	0.0000
N-MeFOSAA	M	5.047	2761	561410	21	0.0631	ng/mL	0.0000
N-MeFOSAA-d3	Auto	5.040	561410	4073223	1	4.4473	ng/mL	0.0000
N-MeFOSAA-d3_IS	Auto	5.040	561410	561410	21	5.0000	ng/mL	0.0000
N-EtFOSAA	Auto	5.146	2054	479312	22	0.0352	ng/mL	0.0000
N-EtFOSAA-d5	Auto	5.135	479312	4073223	1	4.6639	ng/mL	0.0000
N-EtFOSAA-d5_IS	Auto	5.135	479312	479312	22	5.0000	ng/mL	0.0000
4_2-FTS_1	M	4.217	53	388027	23	0.0008	ng/mL	0.0000
4_2-FTS-13C	Auto	4.209	388027	4073223	1	4.7586	ng/mL	0.0000

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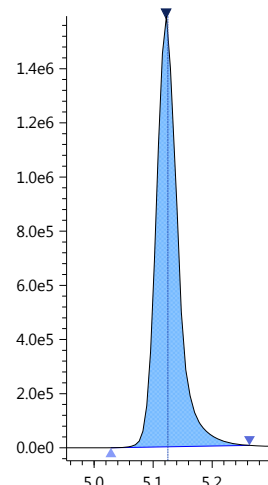
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.209	388027	388027	23	5.0000	ng/mL	0.0000
6_2-FTS_1	M	4.570	860	287847	24	0.0119	ng/mL	0.0000
6_2-FTS-13C	Auto	4.576	287847	4073223	1	4.5850	ng/mL	0.0000
6_2-FTS-13C_IS	Auto	4.576	287847	287847	24	5.0000	ng/mL	0.0000
8_2-FTS_1	M	4.939	49	223145	25	0.0014	ng/mL	0.0000
8_2-FTS-13C	Auto	4.939	223145	4073223	1	4.5823	ng/mL	0.0000
8_2-FTS-13C_IS	Auto	4.939	223145	223145	25	5.0000	ng/mL	0.0000
10_2-FTS_1	M	5.300	79	223145	25	0.0024	ng/mL	0.0000
HPFO_DA	M	4.304	1278	953682	26	0.0062	ng/mL	0.0000
HPFO_DA-13C	Auto	4.306	953682	4073223	1	4.9145	ng/mL	0.0000
HPFO_DA-13C_IS	Auto	4.306	953682	953682	26	5.0000	ng/mL	0.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.122 Area 4073223

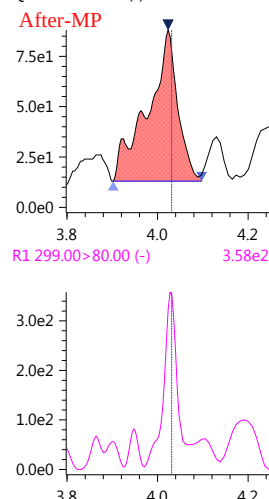
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0022
RT 4.023 Area 346
R#1 351.16 (0.00)

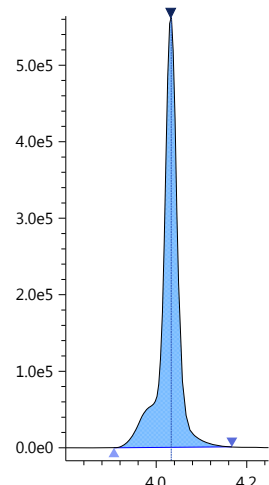
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.6374
RT 4.032 Area 1270564

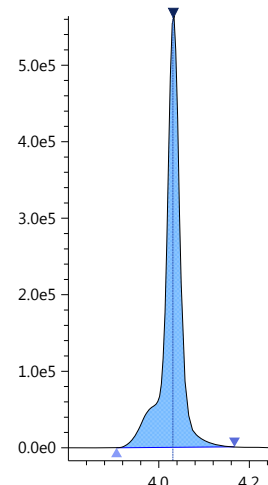
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.032 Area 1270564

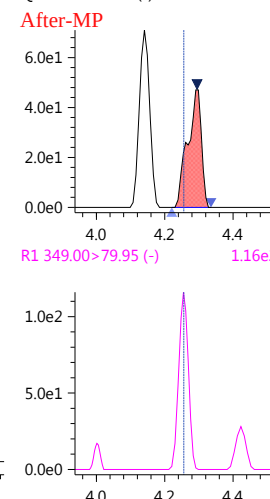
ISTD 301.80>80.00 (-)



PFPeS

Conc 0.0010
RT 4.295 Area 132
R#1 0.00 (0.00)

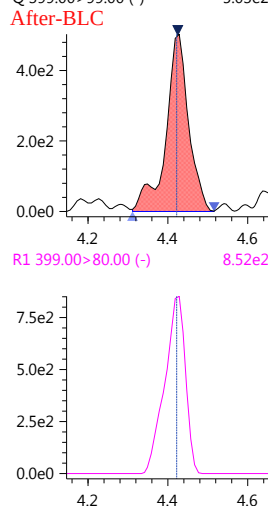
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.0174
RT 4.425 Area 1993
R#1 168.69 (0.00)

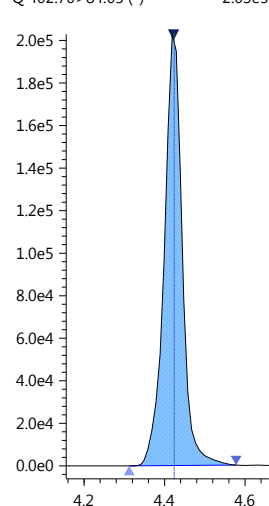
Q 399.00>99.00 (-)



PFHxS-180

Conc 4.3512
RT 4.423 Area 631619

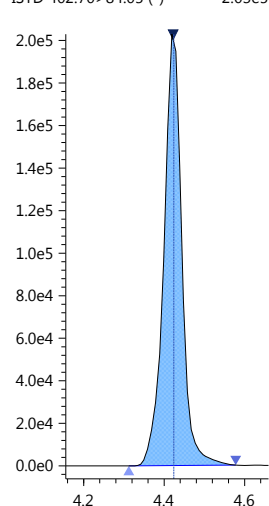
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.423 Area 631619

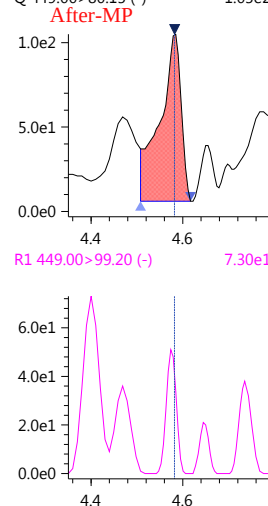
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 0.0022
RT 4.582 Area 326
R#1 56.25 (0.00)

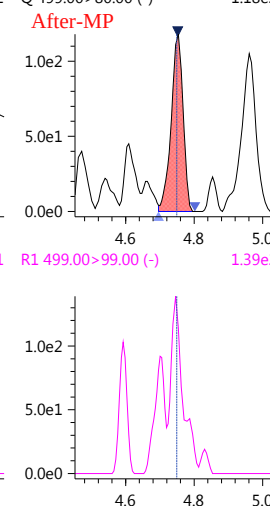
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0024
RT 4.752 Area 286
R#1 52.99 (0.00)

Q 499.00>80.00 (-)



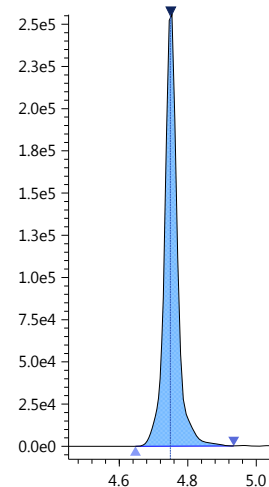
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PFOS-13C

Conc 4.6929
 RT 4.750 Area 672286

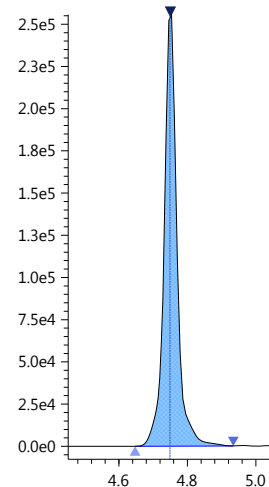
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.750 Area 672286

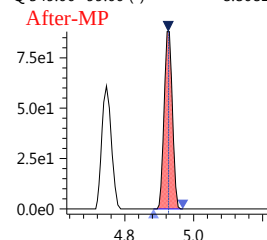
ISTD 502.80>80.05 (-)



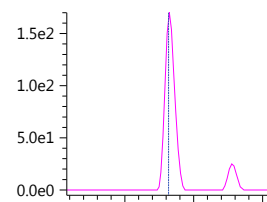
PFNS

Conc 0.0017
 RT 4.926 Area 147
 R#1 165.62 (0.00)

Q 549.00>99.00 (-)



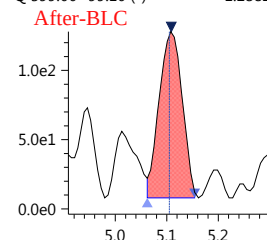
R1 549.00>79.95 (-)



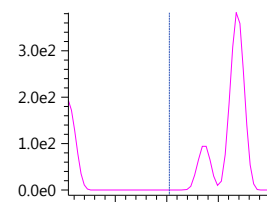
PFDS_1

Conc 0.0041
 RT 5.109 Area 375
 R#1 0.00 (0.00)

Q 599.00>99.10 (-)



R1 599.00>79.90 (-)

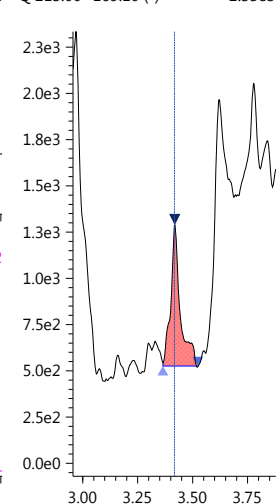


PFBA

Conc 0.0038
 RT 3.419 Area 2300

After-MP

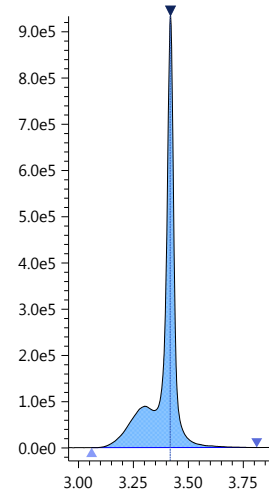
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.4833
 RT 3.419 Area 3077541

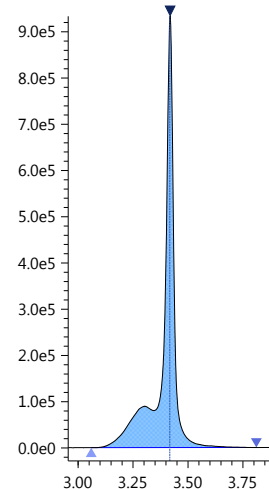
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.419 Area 3077541

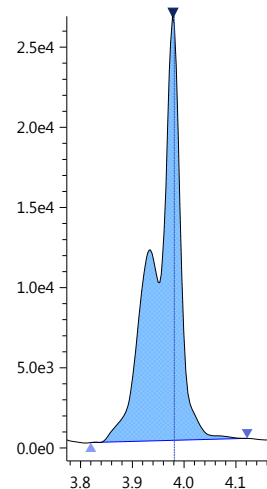
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0043
 RT 3.978 Area 89263

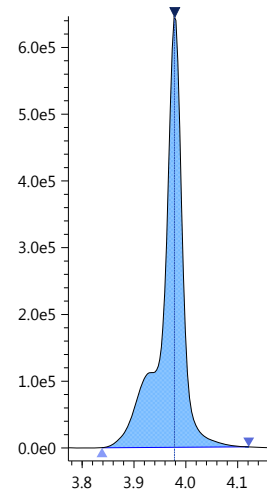
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.5595
 RT 3.979 Area 1683040

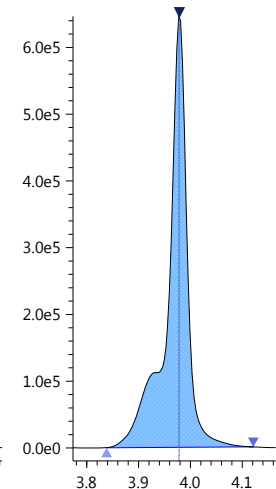
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.979 Area 1683040

ISTD 267.90>223.00 (-)

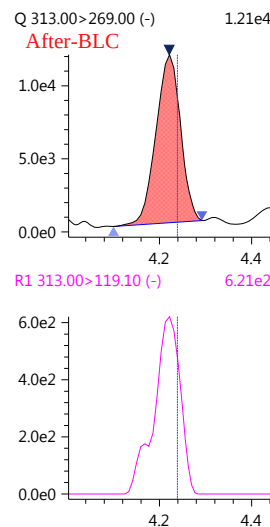


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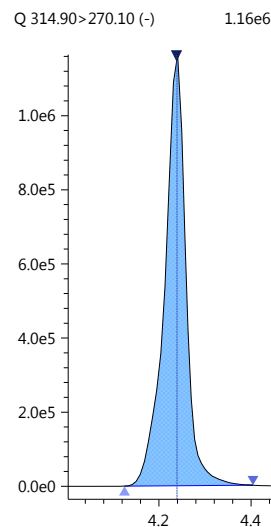
PFHxA

Conc 0.0148
RT 4.221 Area 42528
R#1 5.40 (0.00)



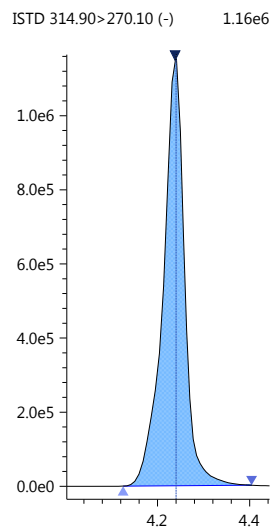
PFHxA-13C

Conc 4.5037
RT 4.238 Area 3727061



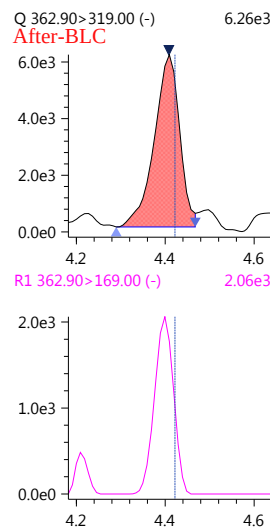
PFHxA-13C_IS

Conc 5.0000
RT 4.238 Area 3727061



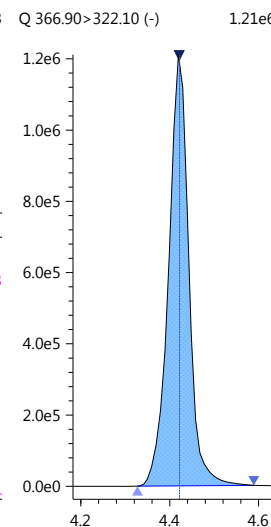
PFHpA

Conc 0.0049
RT 4.408 Area 24095
R#1 30.74 (0.00)



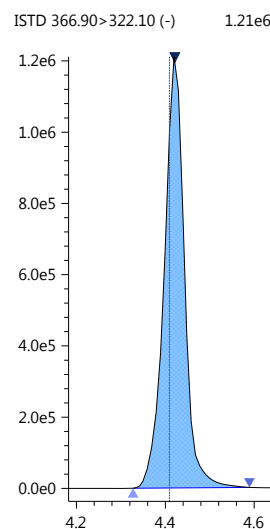
PFHpA-13C

Conc 4.3261
RT 4.421 Area 3832959



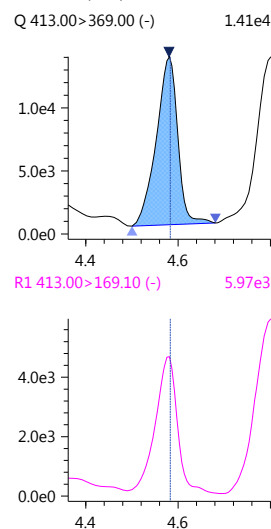
PFHpA-13C_IS

Conc 5.0000
RT 4.421 Area 3832959



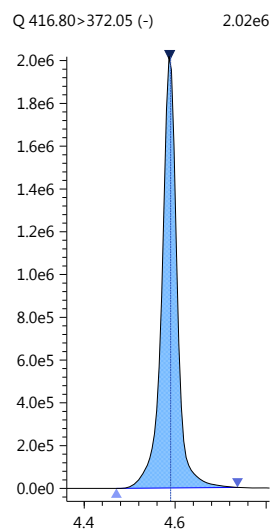
PFOA

Conc 0.0094
RT 4.580 Area 42904
R#1 33.98 (0.00)



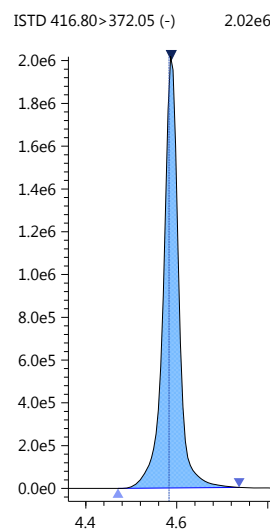
PFOA-13C

Conc 4.9652
RT 4.588 Area 4699455



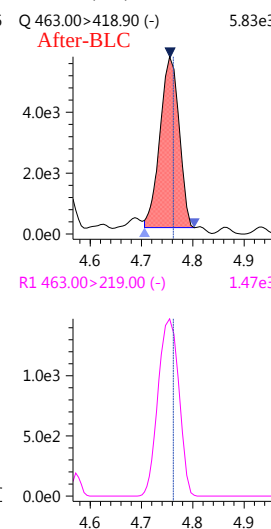
PFOA-13C_IS

Conc 5.0000
RT 4.588 Area 4699455



PFNA

Conc -0.0084
RT 4.756 Area 14598
R#1 26.38 (0.00)



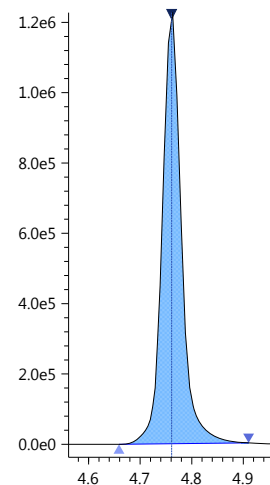
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PFNA-13C

Conc 4.8964
RT 4.761 Area 3170745

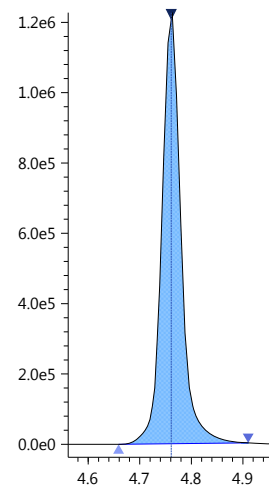
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
RT 4.761 Area 3170745

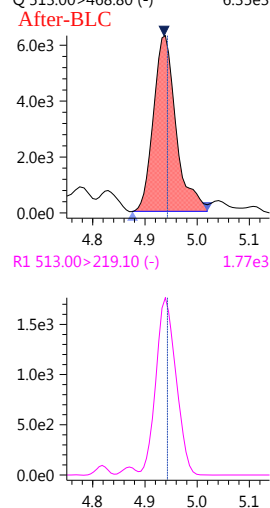
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0119
RT 4.937 Area 18980
R#1 27.89 (0.00)

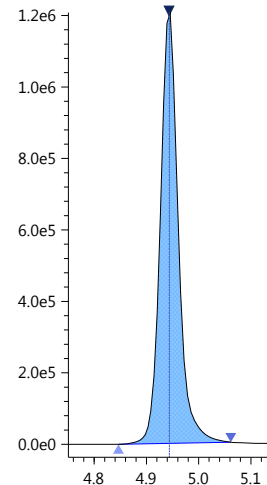
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.9203
RT 4.943 Area 2902778

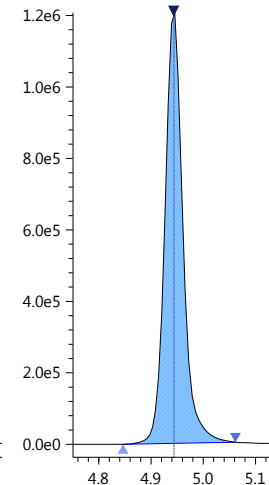
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
RT 4.943 Area 2902778

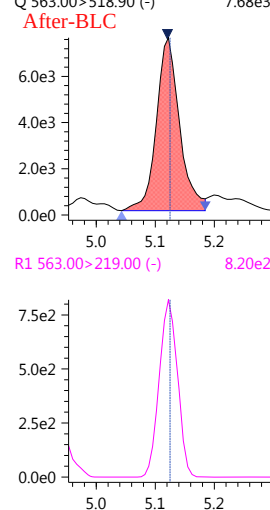
ISTD 514.80>469.95 (-)



PFUnA

Conc 0.0018
RT 5.121 Area 20349
R#1 11.53 (0.00)

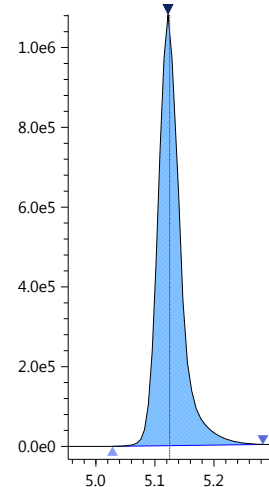
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.6318
RT 5.122 Area 2830856

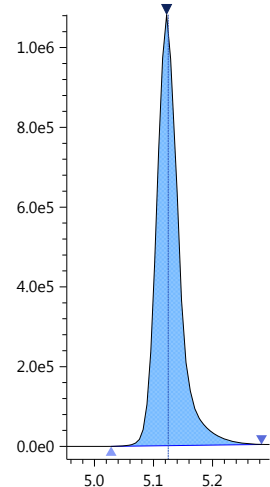
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
RT 5.122 Area 2830856

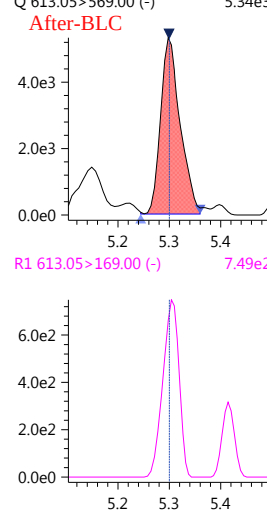
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.0044
RT 5.299 Area 14041
R#1 12.26 (0.00)

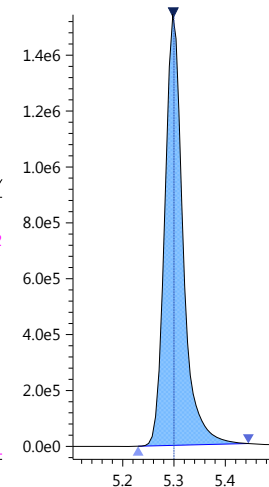
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.7104
RT 5.299 Area 3815614

Q 614.80>569.95 (-)



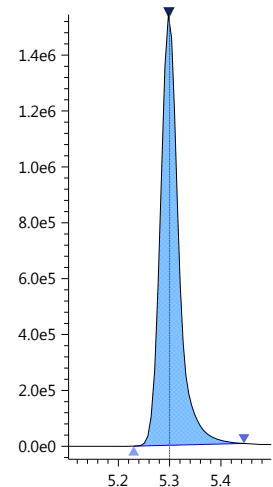
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PFD_oA-13C_IS

Conc 5.0000
RT 5.299 Area 3815614

ISTD 614.80>569.95 (-) 1.54e6

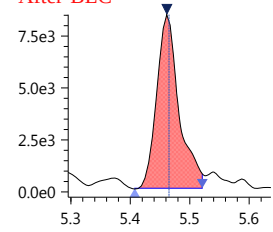


PFT_rDA

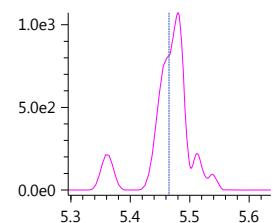
Conc -0.0001
RT 5.461 Area 21735
R#1 9.98 (0.00)

Q 663.00>618.90 (-) 8.53e3

After-BLC



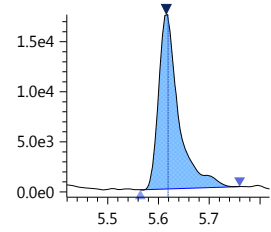
R1 662.90>169.00 (-) 1.07e3



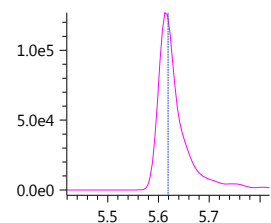
PFT_eDA

Conc 0.0084
RT 5.615 Area 47939
R#1 724.84 (0.00)

Q 713.40>669.00 (-) 1.77e4



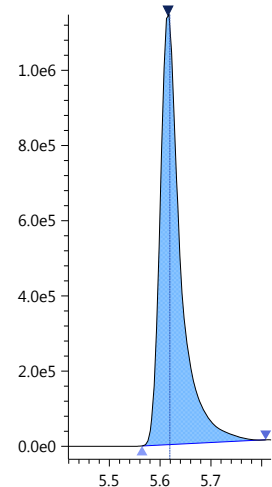
R1 713.40>169.10 (-) 1.27e5



PFT_eDA-13C

Conc 4.5533
RT 5.616 Area 3206021

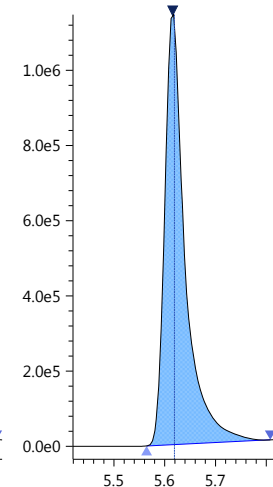
Q 714.70>669.90 (-) 1.15e6



PFT_eDA-13C_IS

Conc 5.0000
RT 5.616 Area 3206021

ISTD 714.70>669.90 (-) 1.15e6

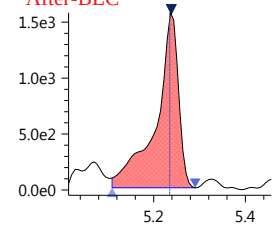


FOSA

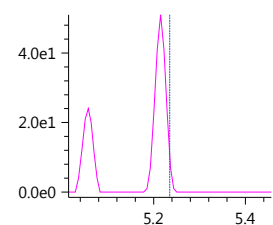
Conc 0.0146
RT 5.239 Area 5302
R#1 0.44 (0.00)

Q 498.20>78.00 (-) 1.59e3

After-BLC



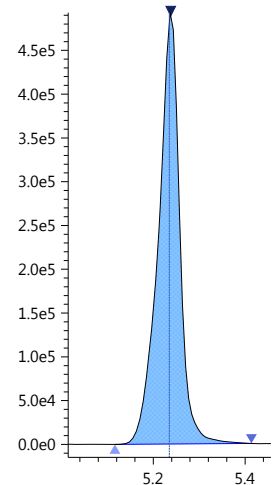
R1 498.20>64.10 (-) 5.10e1



FOSA-13C

Conc 4.6461
RT 5.238 Area 1590214

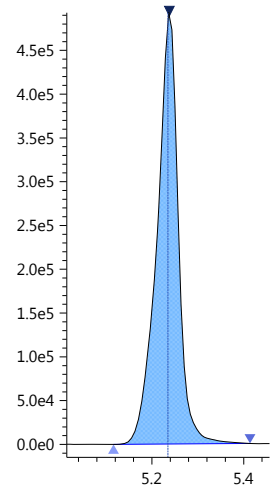
Q 506.00>78.05 (-) 4.93e5



FOSA-13C_IS

Conc 5.0000
RT 5.238 Area 1590214

ISTD 506.00>78.05 (-) 4.93e5

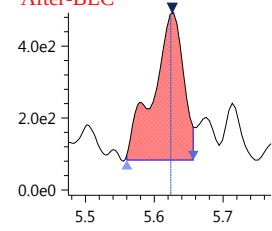


N-MeFOSA

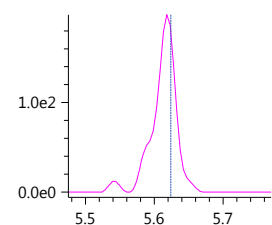
Conc 0.0131
RT 5.626 Area 1252
R#1 52.43 (0.00)

Q 512.00>169.10 (-) 4.93e2

After-BLC



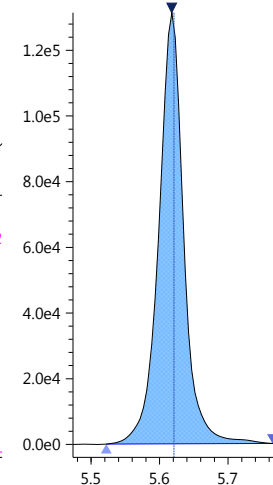
R1 512.00>219.00 (-) 1.98e2



N-MeFOSA-d3

Conc 3.7297
RT 5.618 Area 331583

Q 514.90>168.90 (-) 1.31e5



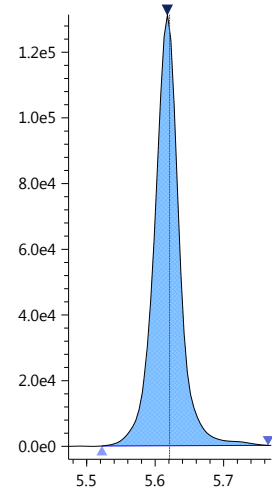
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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.618 Area 331583

ISTD 514.90>168.90 (-) 1.31e5

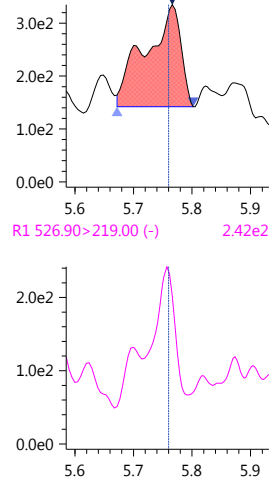


N-EtFOSA

Conc 0.0443
 RT 5.766 Area 811
 R#1 70.83 (0.00)

Q 526.90>169.10 (-) 3.35e2

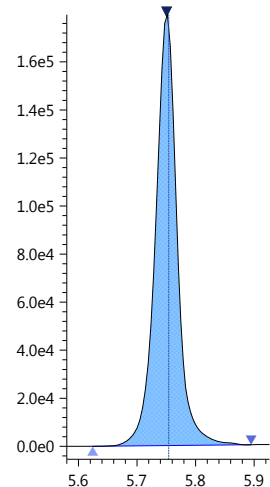
After-BLC



N-EtFOSA-d9

Conc 3.6078
 RT 5.751 Area 460808

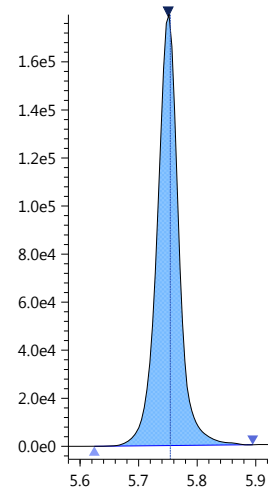
Q 530.90>169.15 (-)



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.751 Area 460808

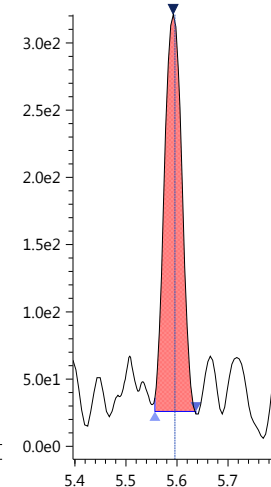
ISTD 530.90>169.15 (-) 1.80e5



N-MeFOSE

Conc 0.0058
 RT 5.593 Area 702
 After-MP

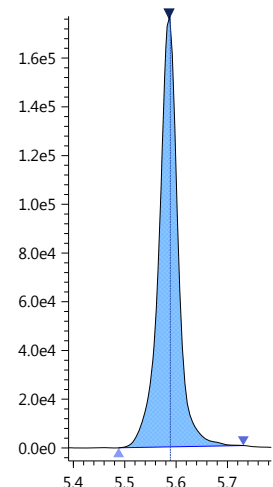
Q 616.00>59.00 (-) 3.21e2



N-MeFOSE-d7

Conc 4.2243
 RT 5.586 Area 453412

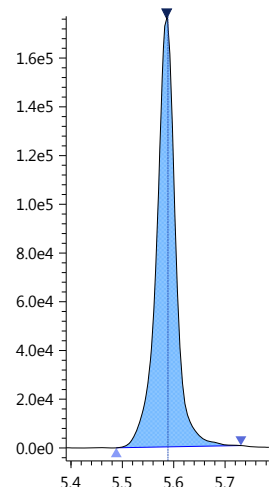
Q 622.70>59.10 (-)



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.586 Area 453412

ISTD 622.70>59.10 (-) 1.77e5

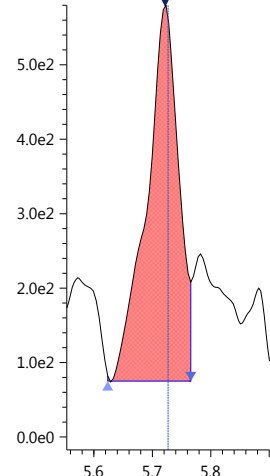


N-EtFOSE

Conc 0.0156
 RT 5.722 Area 1914

Q 630.00>58.90 (-)

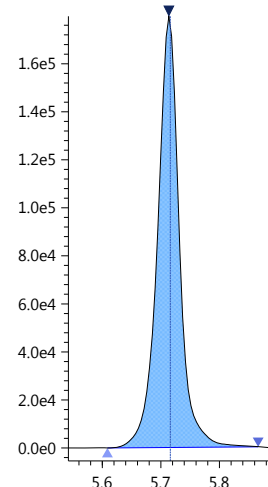
After-BLC



N-EtFOSE-d9

Conc 4.4947
 RT 5.714 Area 465650

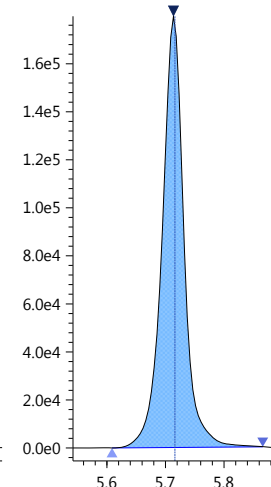
Q 638.70>59.10 (-) 5.80e2



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.714 Area 465650

ISTD 638.70>59.10 (-) 1.80e5

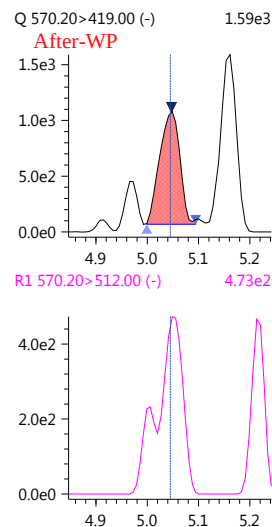


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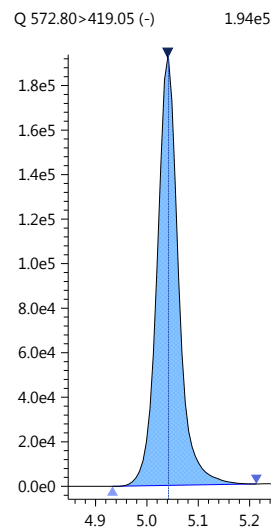
N-MeFOSAA

Conc 0.0631
 RT 5.047 Area 2761
 R#1 34.15 (0.00)



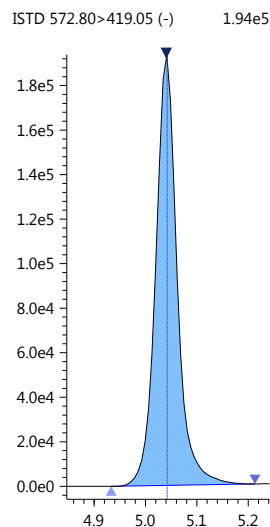
N-MeFOSAA-d3

Conc 4.4473
 RT 5.040 Area 561410



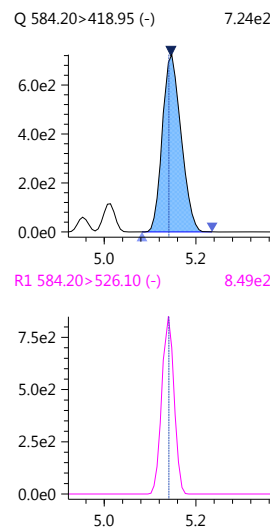
N-MeFOSAA-d3_IS

Conc 5.0000
 RT 5.040 Area 561410



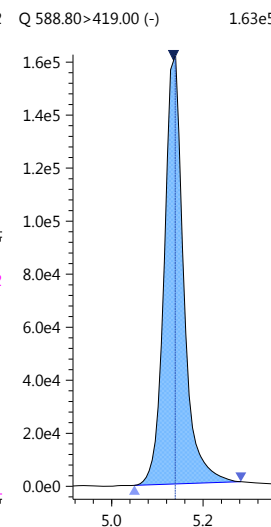
N-EtFOSAA

Conc 0.0352
 RT 5.146 Area 2054
 R#1 124.85 (0.00)



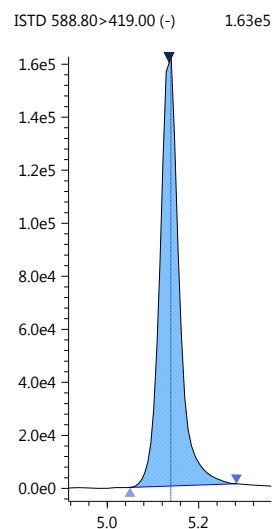
N-EtFOSAA-d5

Conc 4.6639
 RT 5.135 Area 479312



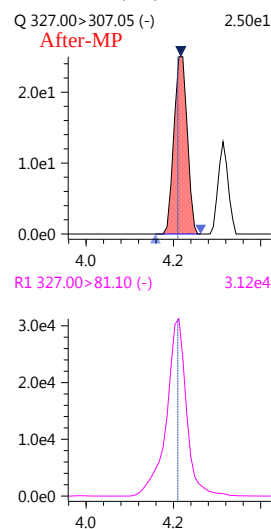
N-EtFOSAA-d5_IS

Conc 5.0000
 RT 5.135 Area 479312



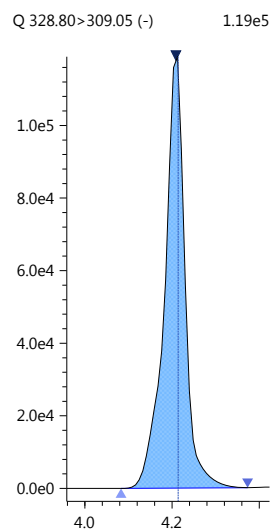
4_2-FTS_1

Conc 0.0008
 RT 4.217 Area 53
 R#1 113216.70 (0.00)



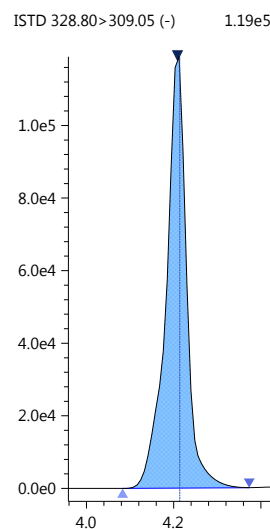
4_2-FTS-13C

Conc 4.7586
 RT 4.209 Area 388027



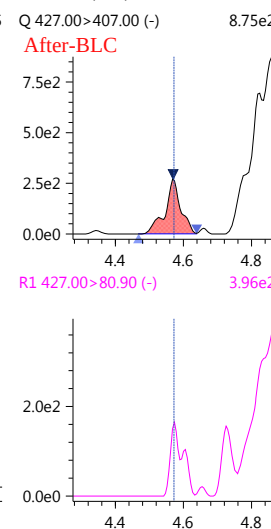
4_2-FTS-13C_IS

Conc 5.0000
 RT 4.209 Area 388027



6_2-FTS_1

Conc 0.0119
 RT 4.570 Area 860
 R#1 57.64 (0.00)

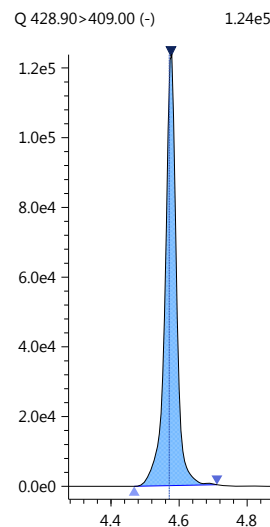


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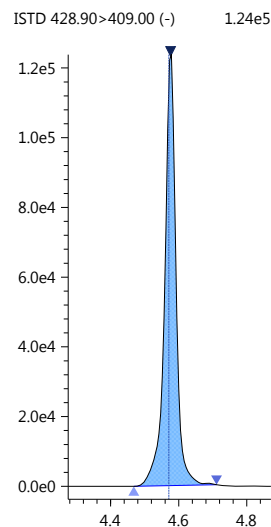
6_2-FTS-13C

Conc 4.5850
 RT 4.576 Area 287847



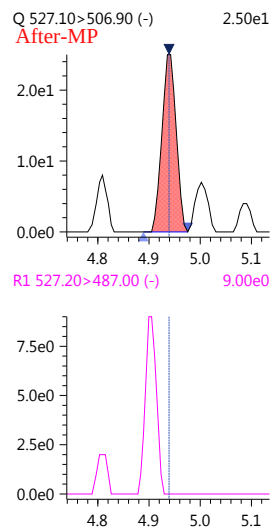
6_2-FTS-13C_IS

Conc 5.0000
 RT 4.576 Area 287847



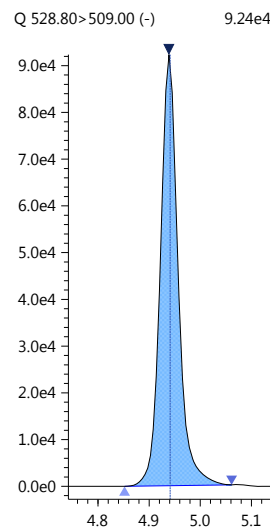
8_2-FTS_1

Conc 0.0014
 RT 4.939 Area 49
 R#1 0.00 (0.00)



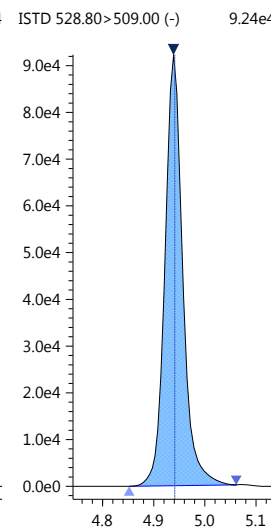
8_2-FTS-13C

Conc 4.5823
 RT 4.939 Area 223145



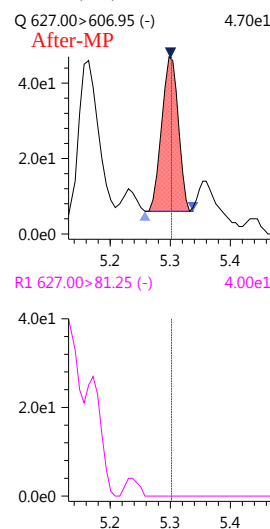
8_2-FTS-13C_IS

Conc 5.0000
 RT 4.939 Area 223145



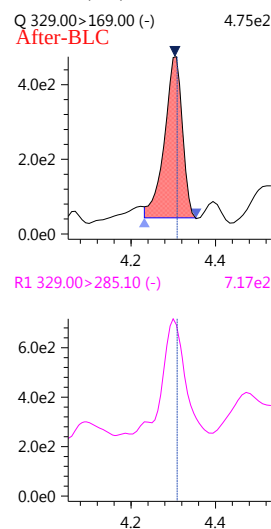
10_2-Fts_1

Conc 0.0024
 RT 5.300 Area 79
 R#1 0.00 (0.00)



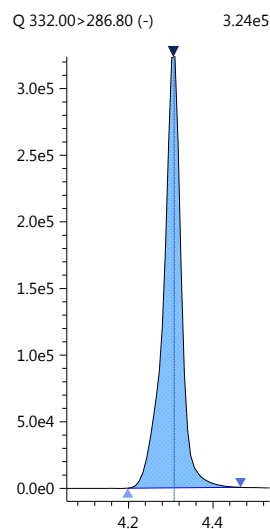
HPFO_DA

Conc 0.0062
 RT 4.304 Area 1278
 R#1 97.40 (0.00)



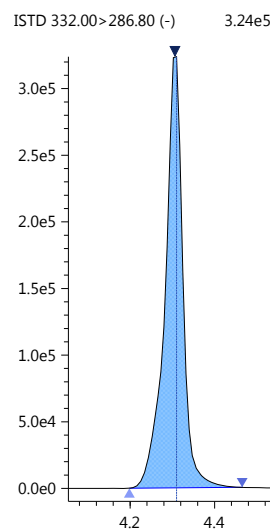
HPFO_DA-13C

Conc 4.9145
 RT 4.306 Area 953682



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.306 Area 953682



Insight Report

Printed at 12/3/2019 9:26:07 AM

191202_026

Sample ID: IB

Date acquired: 12/2/2019 7:03:27 PM

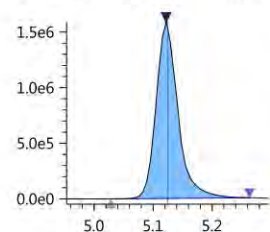
Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_026.lcd

Vial: 48 | Inj. Volume: 15.0000uL | Tray: 1

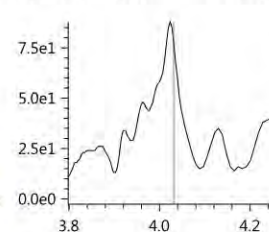
13C7-PFUnDa_IS

Conc 5.0000
RT 5.122 Area 4073223
ISTD 570.00>525.00 (-)



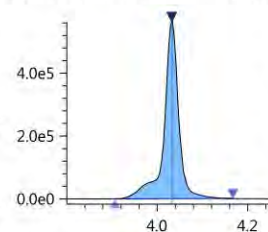
PFBS_1

Conc ---
RT --- Area ---
Q 298.80>99.00 (-)



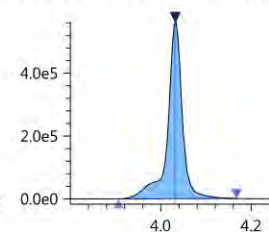
PFBS-13C

Conc 4.6374
RT 4.032 Area 1270564
Q 301.80>80.00 (-)



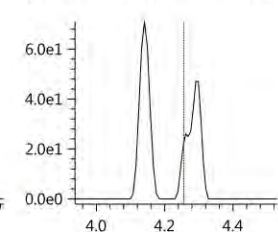
PFBS-13C_IS

Conc 5.0000
RT 4.032 Area 1270564
ISTD 301.80>80.00 (-)



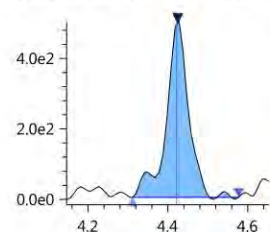
PFPeS

Conc ---
RT --- Area ---
Q 349.00>99.00 (-)



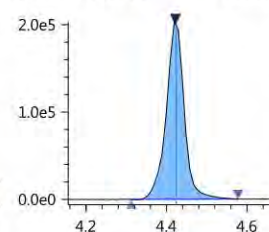
PFHxS_1

Conc 0.0170
RT 4.425 Area 1935
Q 399.00>99.00 (-)



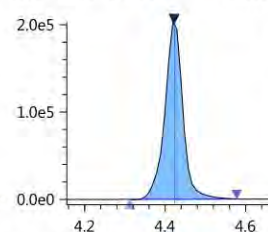
PFHxS-180

Conc 4.3512
RT 4.423 Area 631619
Q 402.70>84.05 (-)



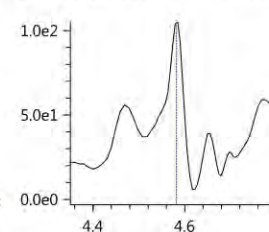
PFHxS-180_IS

Conc 5.0000
RT 4.423 Area 631619
ISTD 402.70>84.05 (-)



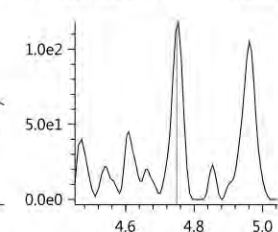
PFHpS_1

Conc ---
RT --- Area ---
Q 449.00>80.15 (-)



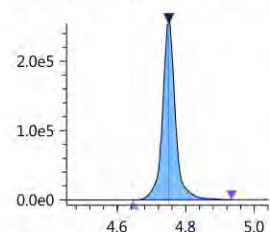
PFOS_1

Conc ---
RT --- Area ---
Q 499.00>80.00 (-)



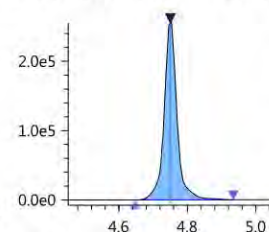
PFOS-13C

Conc 4.6929
RT 4.750 Area 672286
Q 502.80>80.05 (-)



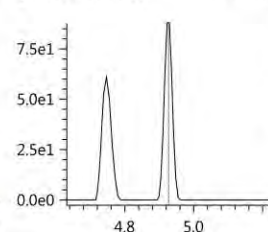
PFOS-13C_IS

Conc 5.0000
RT 4.750 Area 672286
ISTD 502.80>80.05 (-)



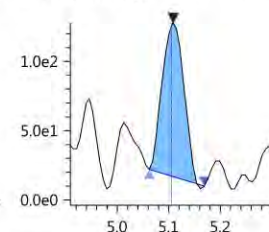
PFNS

Conc ---
RT --- Area ---
Q 549.00>99.00 (-)



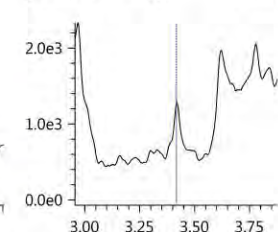
PFDS_1

Conc 0.0036
RT 5.109 Area 325
Q 599.00>99.10 (-)



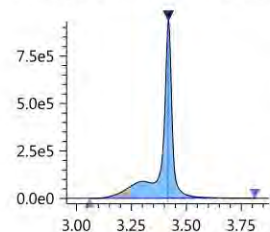
PFBA

Conc ---
RT --- Area ---
Q 213.00>169.10 (-)



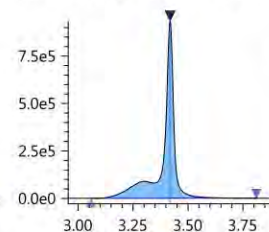
PFBA-13C

Conc 4.4833
RT 3.419 Area 3077541
Q 216.90>172.15 (-)



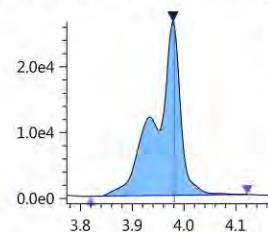
PFBA-13C_IS

Conc 5.0000
RT 3.419 Area 3077541
ISTD 216.90>172.15 (-)



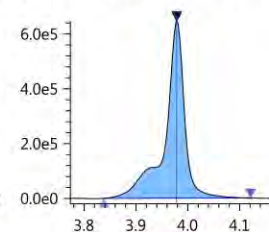
PFPeA

Conc 0.0043
RT 3.978 Area 89263
Q 263.05>219.10 (-)



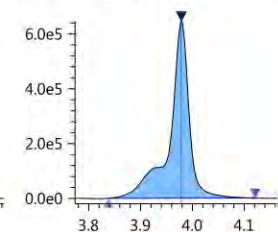
PFPeA-13C

Conc 4.5595
RT 3.979 Area 1683040
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.979 Area 1683040
ISTD 267.90>223.00 (-)

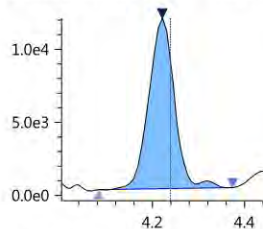


Insight Report

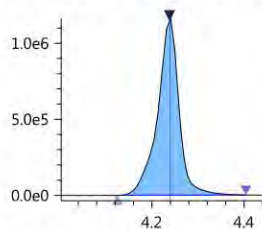
Printed at 12/3/2019 9:26:07 AM

PFHxA

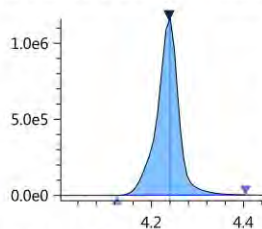
Conc 0.0176
RT 4.221 Area 45069
Q 313.00>269.00 (-)

**PFHxA-13C**

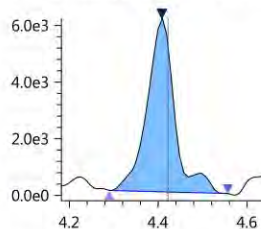
Conc 4.5037
RT 4.238 Area 3727061
Q 314.90>270.10 (-)

**PFHxA-13C_IS**

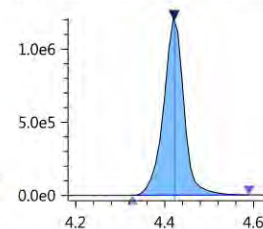
Conc 5.0000
RT 4.238 Area 3727061
ISTD 314.90>270.10 (-)

**PFHpA**

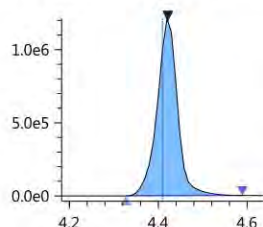
Conc 0.0082
RT 4.408 Area 26477
Q 362.90>319.00 (-)

**PFHpA-13C**

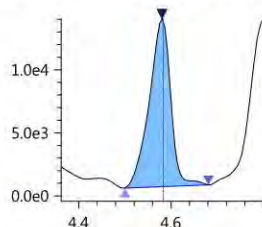
Conc 4.3261
RT 4.421 Area 3832959
Q 366.90>322.10 (-)

**PFHpA-13C_IS**

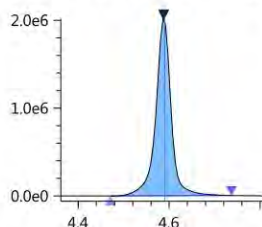
Conc 5.0000
RT 4.421 Area 3832959
ISTD 366.90>322.10 (-)

**PFOA**

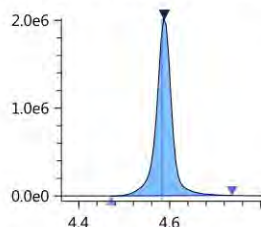
Conc 0.0095
RT 4.580 Area 42904
Q 413.00>369.00 (-)

**PFOA-13C**

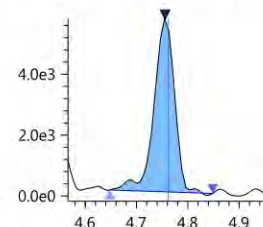
Conc 4.9652
RT 4.588 Area 4699455
Q 416.80>372.05 (-)

**PFOA-13C_IS**

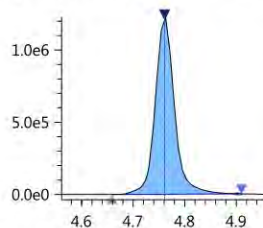
Conc 5.0000
RT 4.588 Area 4699455
ISTD 416.80>372.05 (-)

**PFNA**

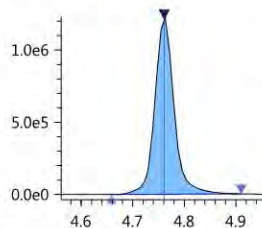
Conc -0.0064
RT 4.756 Area 15800
Q 463.00>418.90 (-)

**PFNA-13C**

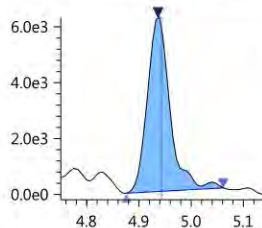
Conc 4.8964
RT 4.761 Area 3170745
Q 467.80>423.00 (-)

**PFNA-13C_IS**

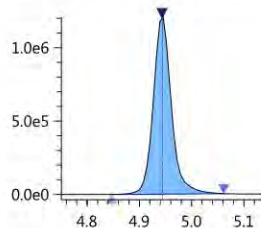
Conc 5.0000
RT 4.761 Area 3170745
ISTD 467.80>423.00 (-)

**PFDA**

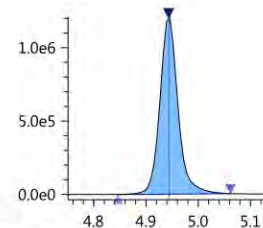
Conc 0.0111
RT 4.937 Area 18802
Q 513.00>468.80 (-)

**PFDA-13C**

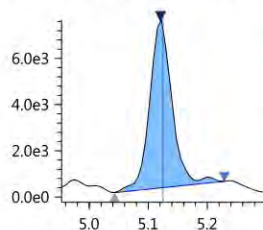
Conc 4.9203
RT 4.943 Area 2902778
Q 514.80>469.95 (-)

**PFDA-13C_IS**

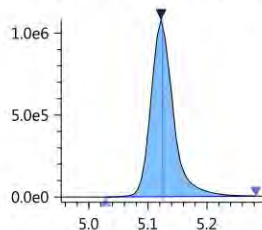
Conc 5.0000
RT 4.943 Area 2902778
ISTD 514.80>469.95 (-)

**PFUnA**

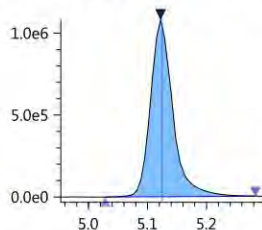
Conc -0.0005
RT 5.121 Area 19123
Q 563.00>518.90 (-)

**PFUnA-13C**

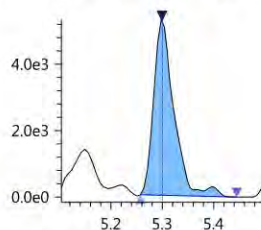
Conc 4.6318
RT 5.122 Area 2830856
Q 564.80>519.95 (-)

**PFUnA-13C_IS**

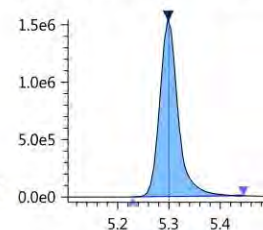
Conc 5.0000
RT 5.122 Area 2830856
ISTD 564.80>519.95 (-)

**PFDaA**

Conc 0.0292
RT 5.299 Area 14567
Q 613.05>569.00 (-)

**PFDaA-13C**

Conc 4.7104
RT 5.299 Area 3815614
Q 614.80>569.95 (-)

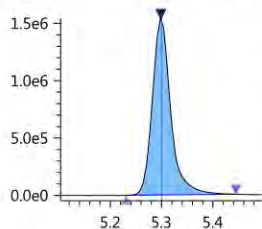


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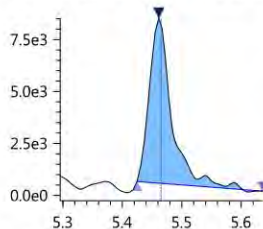
PFDaA-13C_IS

Conc 5.0000
RT 5.299 Area 3815614
ISTD 614.80>569.95 (-)



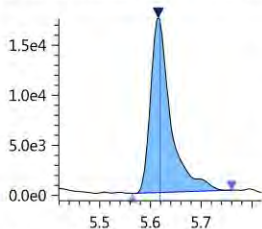
PFTrDA

Conc -0.0018
RT 5.461 Area 20582
Q 663.00>618.90 (-)



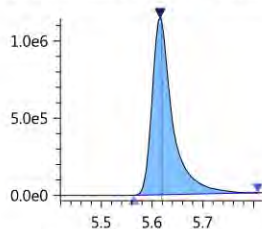
PFTeDA

Conc 0.0065
RT 5.615 Area 47939
Q 713.40>669.00 (-)



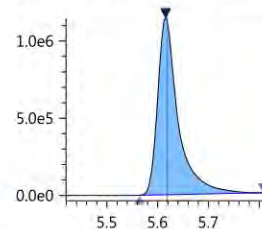
PFTeDA-13C

Conc 4.5533
RT 5.616 Area 3206021
Q 714.70>669.90 (-)



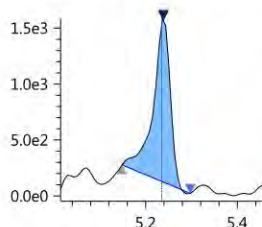
PFTeDA-13C_IS

Conc 5.0000
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ISTD 714.70>669.90 (-)



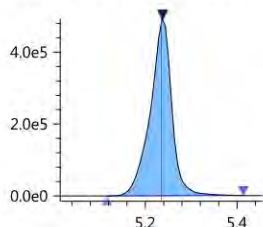
FOSA

Conc 0.0104
RT 5.239 Area 3775
Q 498.20>78.00 (-)



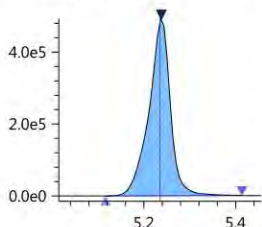
FOSA-13C

Conc 4.6461
RT 5.238 Area 1590214
Q 506.00>78.05 (-)



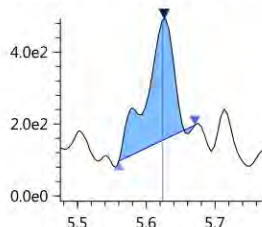
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Conc 5.0000
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ISTD 506.00>78.05 (-)



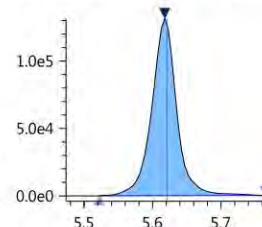
N-MeFOSA

Conc 0.0095
RT 5.626 Area 910
Q 512.00>169.10 (-)



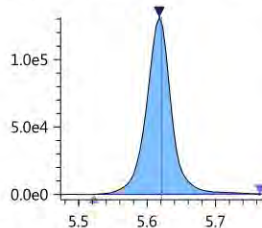
N-MeFOSA-d3

Conc 3.7297
RT 5.618 Area 331583
Q 514.90>168.90 (-)



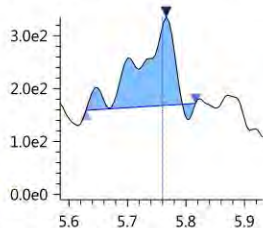
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.618 Area 331583
ISTD 514.90>168.90 (-)



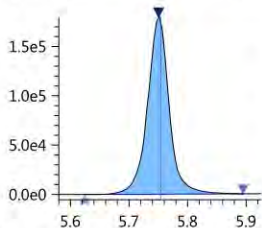
N-EtFOSA

Conc 0.0364
RT 5.766 Area 660
Q 526.90>169.10 (-)



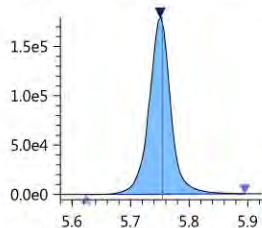
N-EtFOSA-d9

Conc 3.6078
RT 5.751 Area 460808
Q 530.90>169.15 (-)



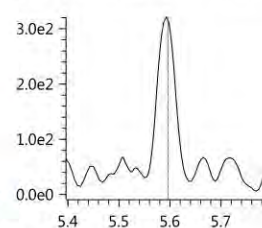
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.751 Area 460808
ISTD 530.90>169.15 (-)



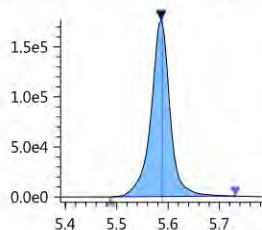
N-MeFOSE

Conc ---
RT --- Area ---
Q 616.00>59.00 (-)



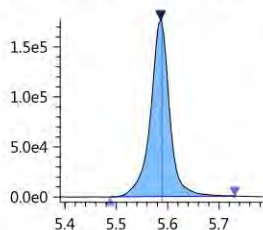
N-MeFOSE-d7

Conc 4.2243
RT 5.586 Area 453412
Q 622.70>59.10 (-)



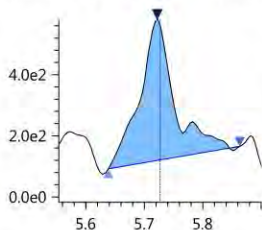
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.586 Area 453412
ISTD 622.70>59.10 (-)



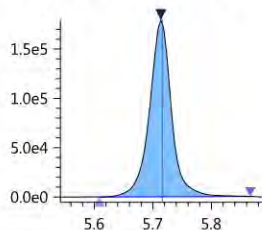
N-EtFOSE

Conc 0.0154
RT 5.722 Area 1896
Q 630.00>58.90 (-)



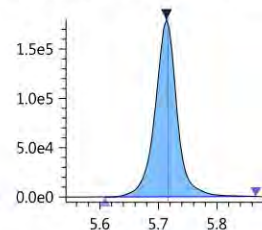
N-EtFOSE-d9

Conc 4.4947
RT 5.714 Area 465650
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.714 Area 465650
ISTD 638.70>59.10 (-)

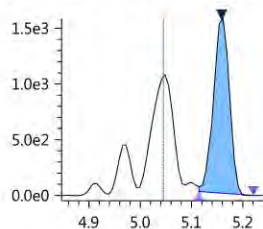


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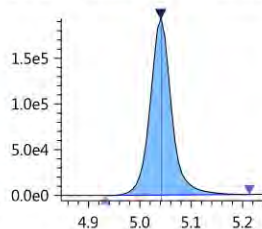
N-MeFOSAA

Conc 0.0740
RT 5.159 Area 3384
Q 570.20>419.00 (-)



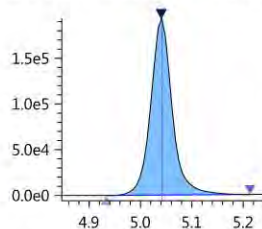
N-MeFOSAA-d3

Conc 4.4473
RT 5.040 Area 561410
Q 572.80>419.05 (-)



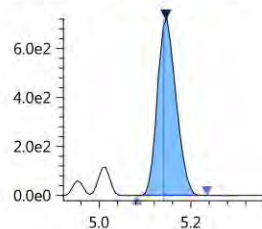
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.040 Area 561410
ISTD 572.80>419.05 (-)



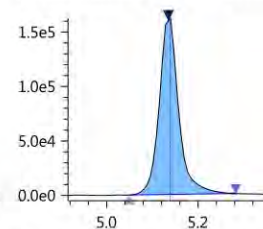
N-EtFOSAA

Conc 0.0372
RT 5.146 Area 2054
Q 584.20>418.95 (-)



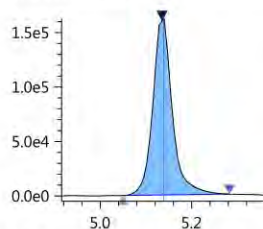
N-EtFOSAA-d5

Conc 4.6639
RT 5.135 Area 479312
Q 588.80>419.00 (-)



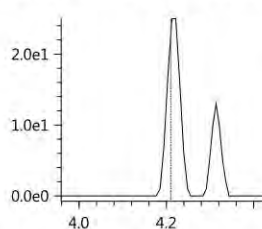
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.135 Area 479312
ISTD 588.80>419.00 (-)



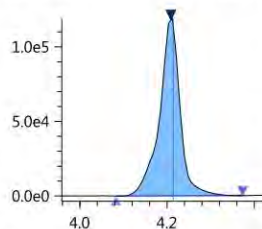
4_2-FTS_1

Conc ----
RT ---- Area ----
Q 327.00>307.05 (-)



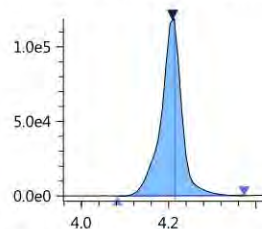
4_2-FTS-13C

Conc 4.7586
RT 4.209 Area 388027
Q 328.80>309.05 (-)



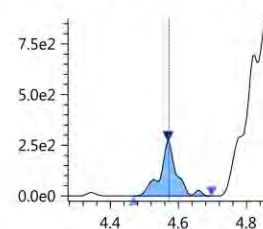
4_2-FTS-13C_IS

Conc 5.0000
RT 4.209 Area 388027
ISTD 328.80>309.05 (-)



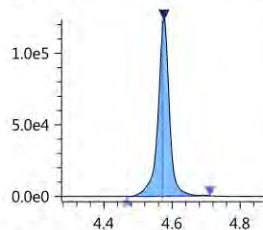
6_2-FTS_1

Conc 0.0126
RT 4.570 Area 909
Q 427.00>407.00 (-)



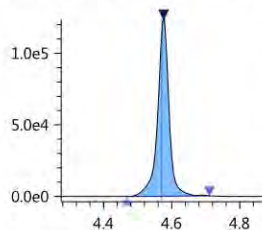
6_2-FTS-13C

Conc 4.5850
RT 4.576 Area 287847
Q 428.90>409.00 (-)



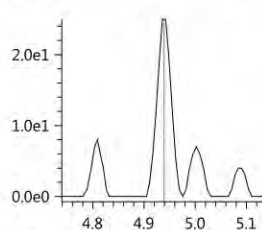
6_2-FTS-13C_IS

Conc 5.0000
RT 4.576 Area 287847
ISTD 428.90>409.00 (-)



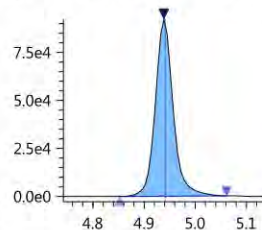
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)



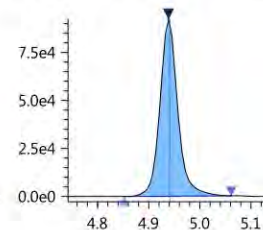
8_2-FTS-13C

Conc 4.5823
RT 4.939 Area 223145
Q 528.80>509.00 (-)



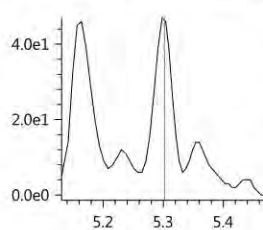
8_2-FTS-13C_IS

Conc 5.0000
RT 4.939 Area 223145
ISTD 528.80>509.00 (-)



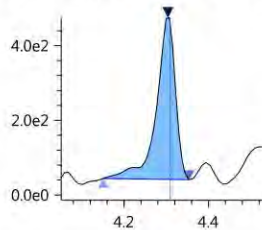
10_2-FtS_1

Conc ----
RT ---- Area ----
Q 627.00>606.95 (-)



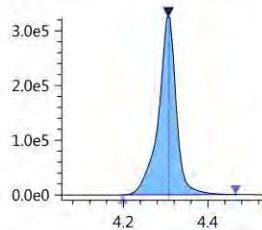
HPFO_DA

Conc 0.0067
RT 4.304 Area 1367
Q 329.00>169.00 (-)



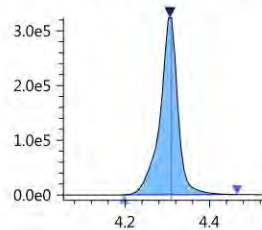
HPFO_DA-13C

Conc 4.9145
RT 4.306 Area 953682
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.306 Area 953682
ISTD 332.00>286.80 (-)



Insight Report

Printed at 12/3/2019 10:21:29 AM

Method File: J:\LCMS06\Data\191202_curve\191202_curve.lcm
Project File: J:\LCMS06\Data\191202_curve\191202_curve.damlp
Flags File: J:\LCMS06\Data\191202_curve\191202_curve.damlp

191202_027

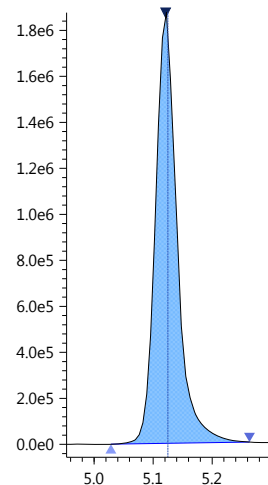
Sample ID: 1.0 PPB ICV 10:2 FTS
Date acquired: 12/2/2019 7:13:58 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_027.lcd
Vial: 10 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.121	4763384	4763384	1	5.0000	ng/mL	0.0000
8_2-FTS-13C	Auto	4.939	223404	4763384	1	3.9229	ng/mL	0.0000
8_2-FTS-13C_IS	Auto	4.939	223404	223404	25	5.0000	ng/mL	0.0000
10_2-FtS_1	Auto	5.299	31413	223404	25	0.9486	ng/mL	0.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.121 Area 4763384

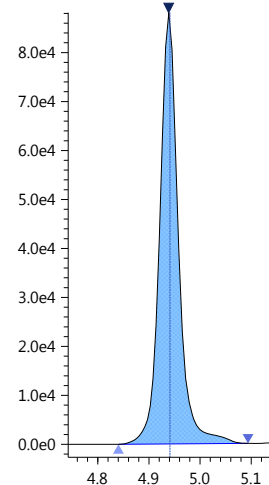
ISTD 570.00>525.00 (-)



8_2-FTS-13C

Conc 3.9229
RT 4.939 Area 223404

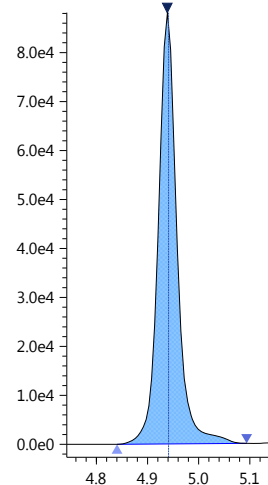
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
RT 4.939 Area 223404

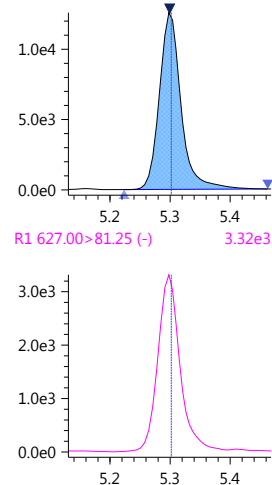
ISTD 528.80>509.00 (-)



10_2-FtS_1

Conc 0.9486
RT 5.299 Area 31413
R#1 26.37 (0.00)

Q 627.00>606.95 (-)



Insight Report

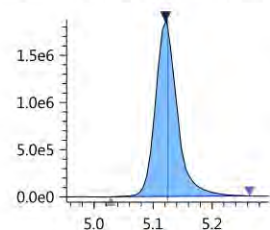
Printed at 12/3/2019 9:26:07 AM

191202_027

Sample ID: 1.0 PPB ICV 10:2 FTS
Date acquired: 12/2/2019 7:13:58 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_027.lcd
Vial: 10 | Inj. Volume: 15.0000uL | Tray: 1

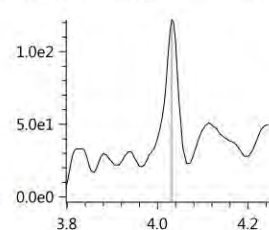
13C7-PFUnDA_IS

Conc 5.0000
RT 5.121 Area 4763384
ISTD 570.00>525.00 (-)



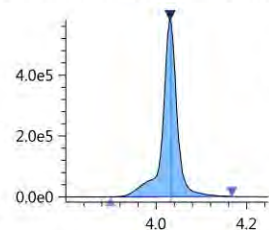
PFBS_1

Conc ----
RT ---- Area ----
Q 298.80>99.00 (-)



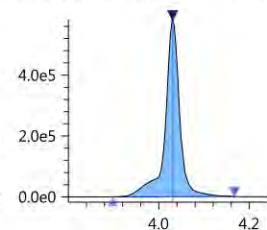
PFBS-13C

Conc 4.0493
RT 4.031 Area 1297407
Q 301.80>80.00 (-)



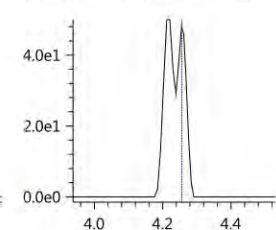
PFBS-13C_IS

Conc 5.0000
RT 4.031 Area 1297407
ISTD 301.80>80.00 (-)



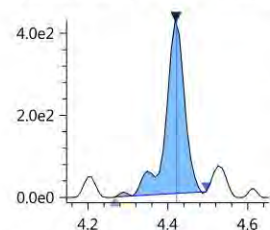
PFPeS

Conc ----
RT ---- Area ----
Q 349.00>99.00 (-)



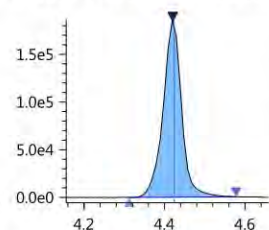
PFHxS_1

Conc 0.0131
RT 4.420 Area 1398
Q 399.00>99.00 (-)



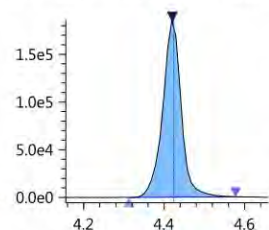
PFHxS-180

Conc 3.4808
RT 4.420 Area 590889
Q 402.70>84.05 (-)



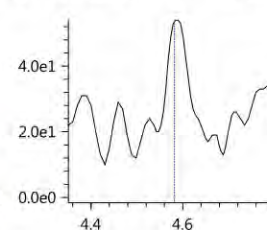
PFHxS-180_IS

Conc 5.0000
RT 4.420 Area 590889
ISTD 402.70>84.05 (-)



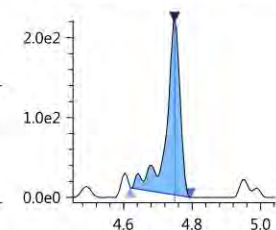
PFHpS_1

Conc ----
RT ---- Area ----
Q 449.00>80.15 (-)



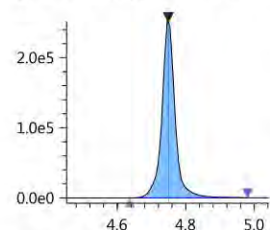
PFOS_1

Conc 0.0052
RT 4.749 Area 616
Q 499.00>80.00 (-)



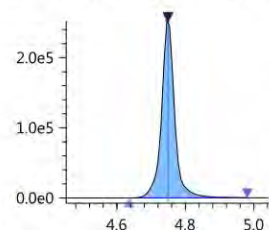
PFOS-13C

Conc 4.0412
RT 4.749 Area 677026
Q 502.80>80.05 (-)



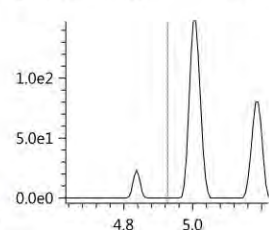
PFOS-13C_IS

Conc 5.0000
RT 4.749 Area 677026
ISTD 502.80>80.05 (-)



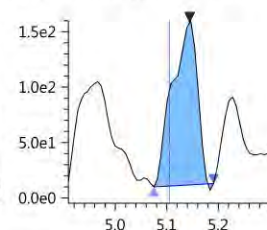
PFNS

Conc ----
RT ---- Area ----
Q 549.00>99.00 (-)



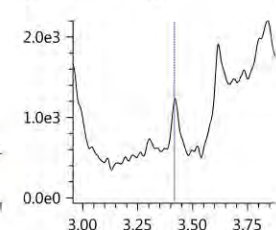
PFDS_1

Conc 0.0054
RT 5.144 Area 495
Q 599.00>99.10 (-)



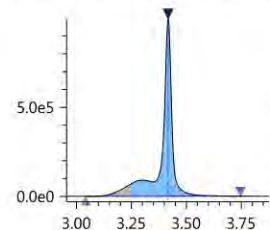
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-)



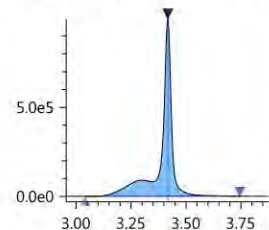
PFBA-13C

Conc 4.0001
RT 3.417 Area 3211123
Q 216.90>172.15 (-)



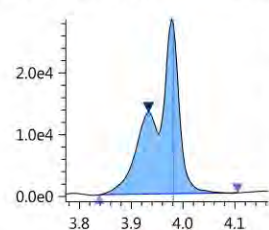
PFBA-13C_IS

Conc 5.0000
RT 3.417 Area 3211123
ISTD 216.90>172.15 (-)



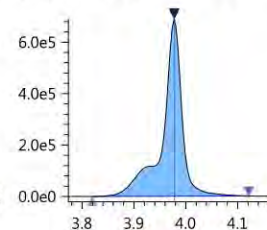
PFPeA

Conc 0.0051
RT 3.933 Area 94763
Q 263.05>219.10 (-)



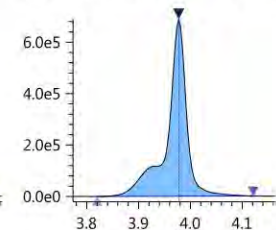
PFPeA-13C

Conc 4.1119
RT 3.978 Area 1775002
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.978 Area 1775002
ISTD 267.90>223.00 (-)

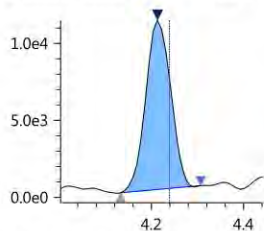


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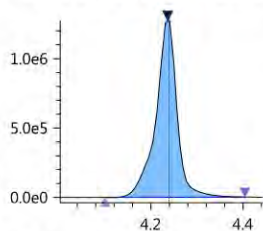
PFHxA

Conc 0.0104
RT 4.213 Area 41422
Q 313.00>269.00 (-)



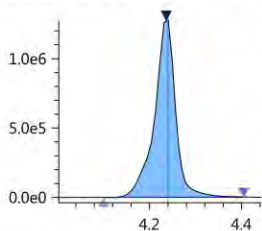
PFHxA-13C

Conc 4.1797
RT 4.236 Area 4045058
Q 314.90>270.10 (-)



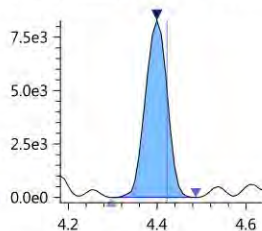
PFHxA-13C_IS

Conc 5.0000
RT 4.236 Area 4045058
ISTD 314.90>270.10 (-)



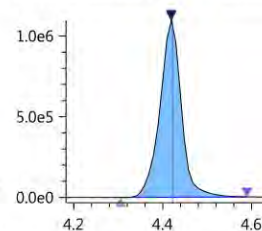
PFHpA

Conc 0.0126
RT 4.399 Area 28512
Q 362.90>319.00 (-)



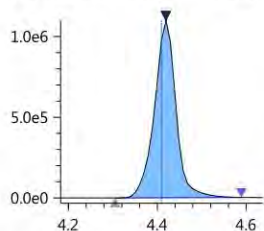
PFHpA-13C

Conc 3.5459
RT 4.419 Area 3674027
Q 366.90>322.10 (-)



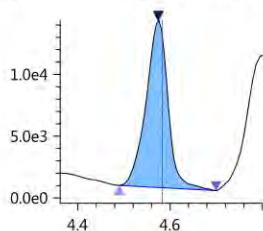
PFHpA-13C_IS

Conc 5.0000
RT 4.419 Area 3674027
ISTD 366.90>322.10 (-)



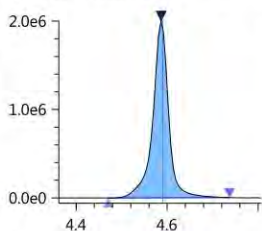
PFOA

Conc 0.0102
RT 4.575 Area 44618
Q 413.00>369.00 (-)



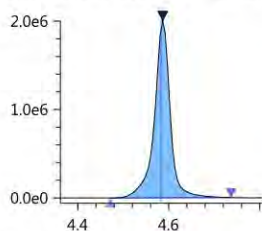
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Conc 4.3339
RT 4.587 Area 4796965
Q 416.80>372.05 (-)



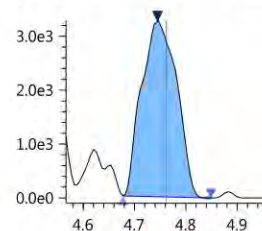
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Conc 5.0000
RT 4.587 Area 4796965
ISTD 416.80>372.05 (-)



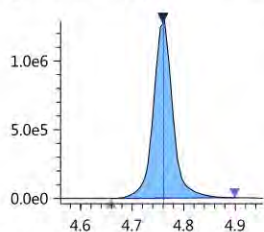
PFNA

Conc -0.0082
RT 4.745 Area 15610
Q 463.00>418.90 (-)



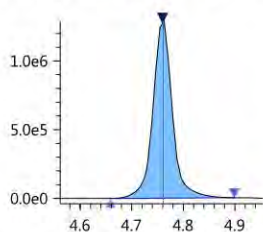
PFNA-13C

Conc 4.4544
RT 4.760 Area 3373271
Q 467.80>423.00 (-)



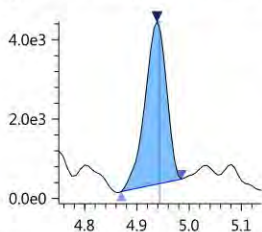
PFNA-13C_IS

Conc 5.0000
RT 4.760 Area 3373271
ISTD 467.80>423.00 (-)



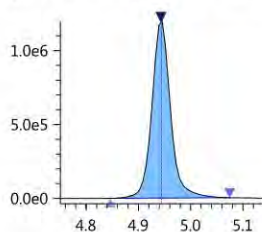
PFDA

Conc -0.0010
RT 4.938 Area 11760
Q 513.00>468.80 (-)



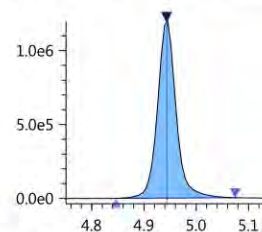
PFDA-13C

Conc 4.3020
RT 4.943 Area 2968008
Q 514.80>469.95 (-)



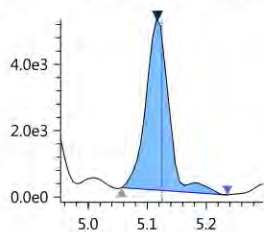
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RT 4.943 Area 2968008
ISTD 514.80>469.95 (-)



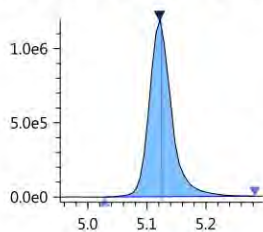
PFUnA

Conc -0.0138
RT 5.117 Area 13972
Q 563.00>518.90 (-)



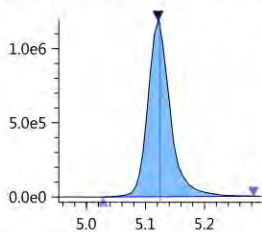
PFUnA-13C

Conc 4.3564
RT 5.121 Area 3113680
Q 564.80>519.95 (-)



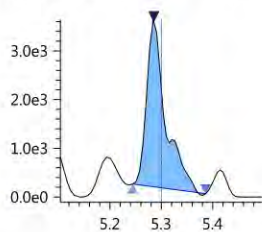
PFUnA-13C_IS

Conc 5.0000
RT 5.121 Area 3113680
ISTD 564.80>519.95 (-)



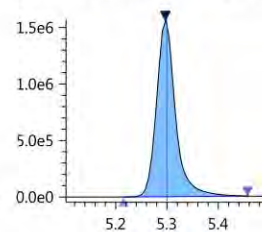
PFDaA

Conc 0.0168
RT 5.286 Area 8791
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.2234
RT 5.297 Area 4000863
Q 614.80>569.95 (-)

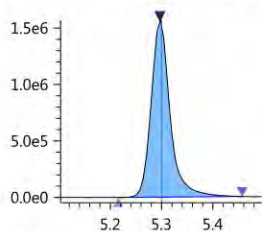


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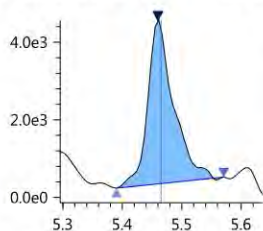
PFDaA-13C_IS

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ISTD 614.80>569.95 (-)



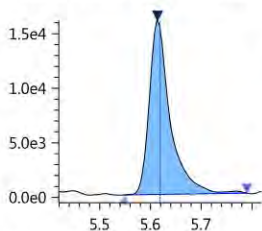
PFTrDA

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Q 663.00>618.90 (-)



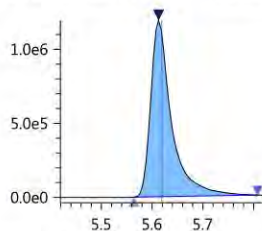
PFTeDA

Conc -0.0093
RT 5.614 Area 45583
Q 713.40>669.00 (-)



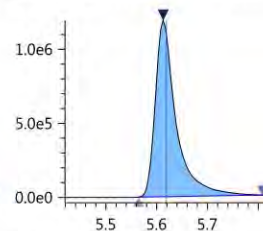
PFTeDA-13C

Conc 4.1103
RT 5.613 Area 3384501
Q 714.70>669.90 (-)



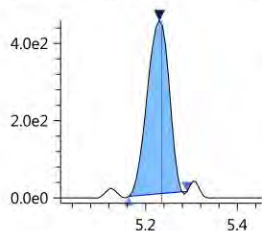
PFTeDA-13C_IS

Conc 5.0000
RT 5.613 Area 3384501
ISTD 714.70>669.90 (-)



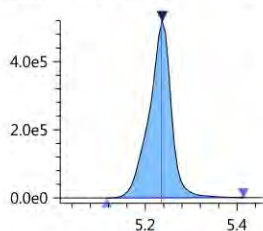
FOSA

Conc 0.0038
RT 5.230 Area 1496
Q 498.20>78.00 (-)



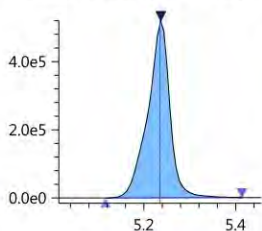
FOSA-13C

Conc 4.3191
RT 5.237 Area 1728776
Q 506.00>78.05 (-)



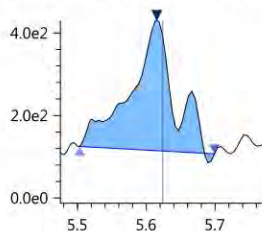
FOSA-13C_IS

Conc 5.0000
RT 5.237 Area 1728776
ISTD 506.00>78.05 (-)



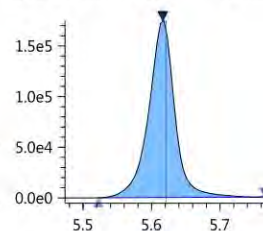
N-MeFOSA

Conc 0.0103
RT 5.615 Area 1370
Q 512.00>169.10 (-)



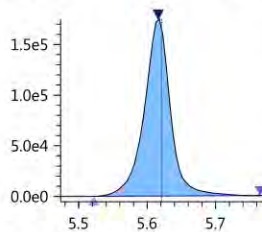
N-MeFOSA-d3

Conc 4.4350
RT 5.616 Area 461093
Q 514.90>168.90 (-)



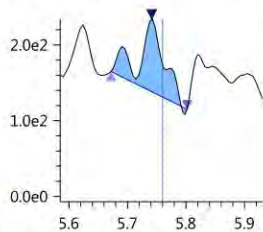
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.616 Area 461093
ISTD 514.90>168.90 (-)



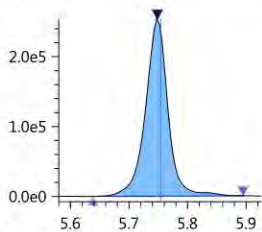
N-EtFOSA

Conc 0.0106
RT 5.741 Area 280
Q 526.90>169.10 (-)



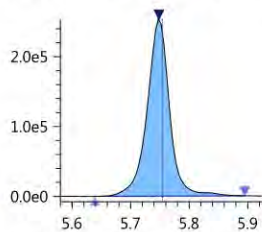
N-EtFOSA-d9

Conc 4.5075
RT 5.748 Area 673278
Q 530.90>169.15 (-)



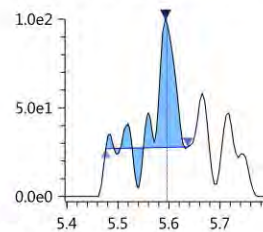
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.748 Area 673278
ISTD 530.90>169.15 (-)



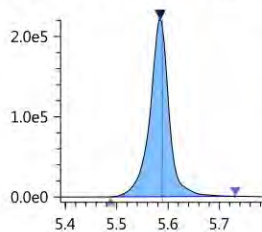
N-MeFOSE

Conc 0.0010
RT 5.593 Area 149
Q 616.00>59.00 (-)



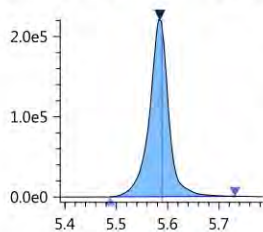
N-MeFOSE-d7

Conc 4.5543
RT 5.585 Area 571658
Q 622.70>59.10 (-)



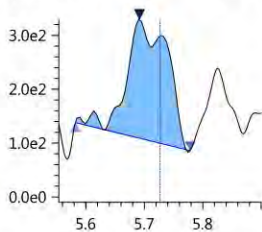
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.585 Area 571658
ISTD 622.70>59.10 (-)



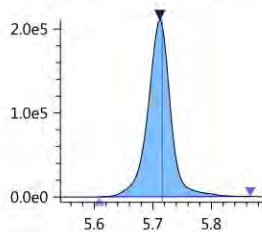
N-EtFOSE

Conc 0.0073
RT 5.692 Area 1088
Q 630.00>58.90 (-)



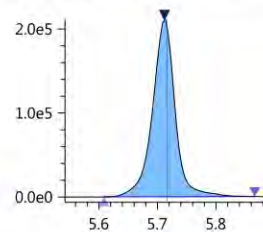
N-EtFOSE-d9

Conc 4.6645
RT 5.712 Area 565124
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.712 Area 565124
ISTD 638.70>59.10 (-)

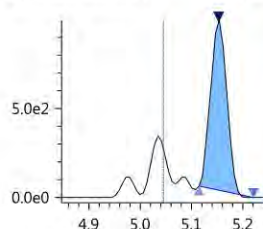


Insight Report

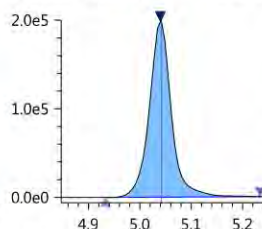
Printed at 12/3/2019 9:26:07 AM

N-MeFOSAA

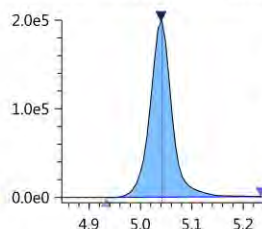
Conc 0.0534
RT 5.153 Area 2092
Q 570.20>419.00 (-)

**N-MeFOSAA-d3**

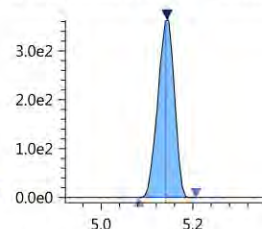
Conc 4.0045
RT 5.040 Area 591161
Q 572.80>419.05 (-)

**N-MeFOSAA-d3_IS**

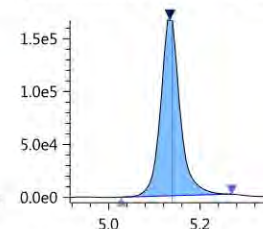
Conc 5.0000
RT 5.040 Area 591161
ISTD 572.80>419.05 (-)

**N-EtFOSAA**

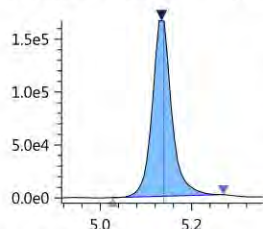
Conc 0.0161
RT 5.144 Area 917
Q 584.20>418.95 (-)

**N-EtFOSAA-d5**

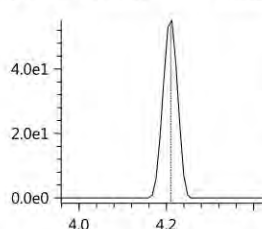
Conc 4.1142
RT 5.134 Area 494459
Q 588.80>419.00 (-)

**N-EtFOSAA-d5_IS**

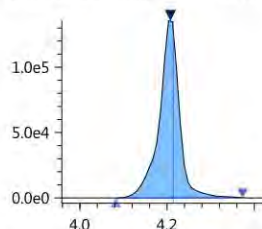
Conc 5.0000
RT 5.134 Area 494459
ISTD 588.80>419.00 (-)

**4_2-FTS_1**

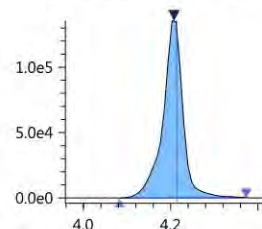
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-)

**4_2-FTS-13C**

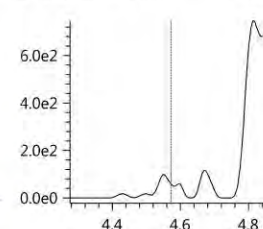
Conc 4.5151
RT 4.208 Area 430551
Q 328.80>309.05 (-)

**4_2-FTS-13C_IS**

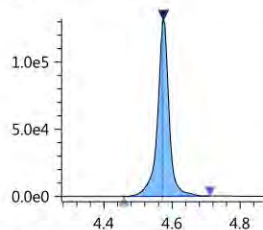
Conc 5.0000
RT 4.208 Area 430551
ISTD 328.80>309.05 (-)

**6_2-FTS_1**

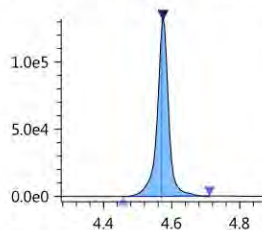
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-)

**6_2-FTS-13C**

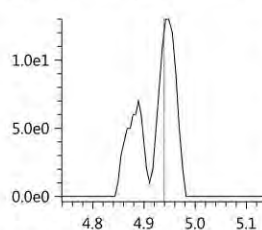
Conc 4.1928
RT 4.575 Area 307824
Q 428.90>409.00 (-)

**6_2-FTS-13C_IS**

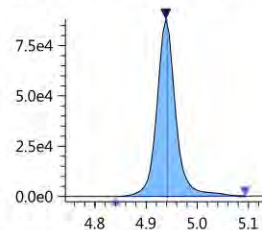
Conc 5.0000
RT 4.575 Area 307824
ISTD 428.90>409.00 (-)

**8_2-FTS_1**

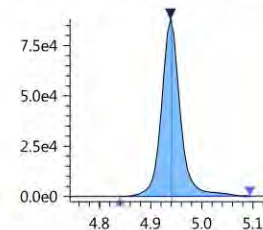
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)

**8_2-FTS-13C**

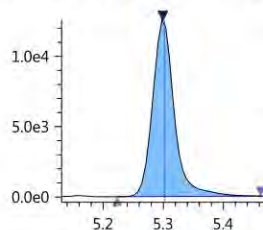
Conc 3.9229
RT 4.939 Area 223404
Q 528.80>509.00 (-)

**8_2-FTS-13C_IS**

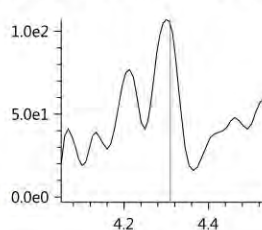
Conc 5.0000
RT 4.939 Area 223404
ISTD 528.80>509.00 (-)

**10_2-FTS_1**

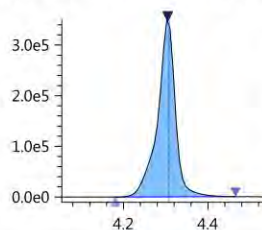
Conc 0.9487
RT 5.299 Area 31413
Q 627.00>606.95 (-)

**HPFO_DA**

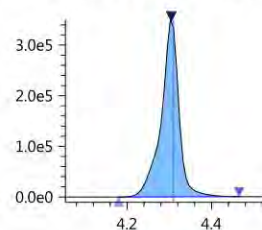
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-)

**HPFO_DA-13C**

Conc 4.4672
RT 4.305 Area 1013750
Q 332.00>286.80 (-)

**HPFO_DA-13C_IS**

Conc 5.0000
RT 4.305 Area 1013750
ISTD 332.00>286.80 (-)



Insight Report

Printed at 12/3/2019 10:19:07 AM

191202_028

Sample ID: IB

Date acquired: 12/2/2019 7:24:27 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_028.lcd

Vial: 48 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.122	3981462	3981462	1	5.0000	ng/mL	----
PFBS_1	M	4.029	210	1245516	2	0.0014	ng/mL	----
PFBS-13C	Auto	4.032	1245516	3981462	1	4.6507	ng/mL	----
PFBS-13C_IS	Auto	4.032	1245516	1245516	2	5.0000	ng/mL	----
PFPeS	M	4.242	93	1245516	2	0.0007	ng/mL	----
PFHxS_1	Auto	4.419	1466	600054	3	0.0135	ng/mL	----
PFHxS-18O	Auto	4.422	600054	3981462	1	4.2290	ng/mL	----
PFHxS-18O_IS	Auto	4.422	600054	600054	3	5.0000	ng/mL	----
PFHpS_1	M	4.591	154	600054	3	0.0011	ng/mL	----
PFOS_1	M	4.750	629	704574	4	0.0051	ng/mL	----
PFOS-13C	Auto	4.751	704574	3981462	1	5.0316	ng/mL	----
PFOS-13C_IS	Auto	4.751	704574	704574	4	5.0000	ng/mL	----
PFNS	ND(W/B)	----	----	704574	4	----	ng/mL	----
PFDS_1	ND(W/B)	----	----	704574	4	----	ng/mL	----
PFBA	M	3.420	1927	3071947	5	0.0032	ng/mL	----
PFBA-13C	Auto	3.419	3071947	3981462	1	4.5783	ng/mL	----
PFBA-13C_IS	Auto	3.419	3071947	3071947	5	5.0000	ng/mL	----
PFPeA	M	3.979	94711	1671359	6	0.0125	ng/mL	----
PFPeA-13C	Auto	3.978	1671359	3981462	1	4.6322	ng/mL	----
PFPeA-13C_IS	Auto	3.978	1671359	1671359	6	5.0000	ng/mL	----
PFHxA	M	4.215	43826	3669812	7	0.0168	ng/mL	----
PFHxA-13C	Auto	4.238	3669812	3981462	1	4.5367	ng/mL	----
PFHxA-13C_IS	Auto	4.238	3669812	3669812	7	5.0000	ng/mL	----
PFHpA	Auto	4.395	23753	3813206	8	0.0046	ng/mL	----
PFHpA-13C	Auto	4.421	3813206	3981462	1	4.4030	ng/mL	----
PFHpA-13C_IS	Auto	4.421	3813206	3813206	8	5.0000	ng/mL	----
PFOA	M	4.581	35103	4656783	9	0.0027	ng/mL	----
PFOA-13C	Auto	4.589	4656783	3981462	1	5.0335	ng/mL	----
PFOA-13C_IS	Auto	4.589	4656783	4656783	9	5.0000	ng/mL	----
PFNA	M	4.745	14524	2886754	10	-0.0063	ng/mL	----
PFNA-13C	Auto	4.762	2886754	3981462	1	4.5606	ng/mL	----
PFNA-13C_IS	Auto	4.762	2886754	2886754	10	5.0000	ng/mL	----
PFDA	M	4.937	14583	2704523	11	0.0064	ng/mL	----
PFDA-13C	Auto	4.944	2704523	3981462	1	4.6899	ng/mL	----
PFDA-13C_IS	Auto	4.944	2704523	2704523	11	5.0000	ng/mL	----
PFUnA	Auto	5.118	18062	2816097	12	-0.0028	ng/mL	----
PFUnA-13C	Auto	5.123	2816097	3981462	1	4.7138	ng/mL	----
PFUnA-13C_IS	Auto	5.123	2816097	2816097	12	5.0000	ng/mL	----
PFDoA	M	5.295	14995	3662498	13	0.0077	ng/mL	----
PFDoA-13C	Auto	5.298	3662498	3981462	1	4.6256	ng/mL	----
PFDoA-13C_IS	Auto	5.298	3662498	3662498	13	5.0000	ng/mL	----
PFTeDA	M	5.459	16194	3089161	14	-0.0075	ng/mL	----
PFTeDA	Auto	5.614	42258	3089161	14	-0.0052	ng/mL	----
PFTeDA-13C	Auto	5.614	3089161	3981462	1	4.4884	ng/mL	----
PFTeDA-13C_IS	Auto	5.614	3089161	3089161	14	5.0000	ng/mL	----
FOSA	Auto	5.243	922	1544579	16	0.0026	ng/mL	----
FOSA-13C	Auto	5.238	1544579	3981462	1	4.6168	ng/mL	----
FOSA-13C_IS	Auto	5.238	1544579	1544579	16	5.0000	ng/mL	----
N-MeFOSA	M	5.616	759	332539	17	0.0079	ng/mL	----
N-MeFOSA-d3	Auto	5.617	332539	3981462	1	3.8267	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.617	332539	332539	17	5.0000	ng/mL	----
N-EtFOSA	M	5.752	625	476955	18	0.0330	ng/mL	----
N-EtFOSA-d9	Auto	5.749	476955	3981462	1	3.8202	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.749	476955	476955	18	5.0000	ng/mL	----
N-MeFOSE	M	5.588	255	467991	19	0.0020	ng/mL	----
N-MeFOSE-d7	Auto	5.586	467991	3981462	1	4.4606	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.586	467991	467991	19	5.0000	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	468360	20	----	ng/mL	----
N-EtFOSE-d9	Auto	5.713	468360	3981462	1	4.6251	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.713	468360	468360	20	5.0000	ng/mL	----
N-MeFOSAA	M	5.035	514	560431	21	0.0299	ng/mL	----
N-MeFOSAA-d3	Auto	5.041	560431	3981462	1	4.5419	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.041	560431	560431	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	493503	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.136	493503	3981462	1	4.9126	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.136	493503	493503	22	5.0000	ng/mL	----
4_2-FTS_1	M	4.212	79	381103	23	0.0012	ng/mL	----
4_2-FTS-13C	Auto	4.209	381103	3981462	1	4.7814	ng/mL	----

Insight Report

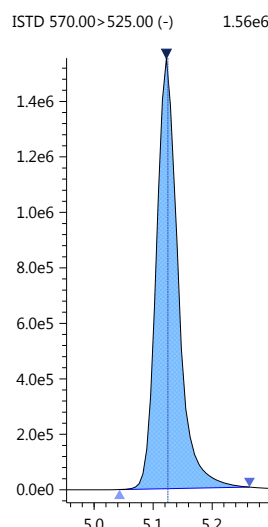
Printed at 12/3/2019 10:19:07 AM

(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.209	381103	381103	23	5.0000	ng/mL	----
6_2-FTS_1	M	4.586	628	287297	24	0.0087	ng/mL	----
6_2-FTS-13C	Auto	4.577	287297	3981462	1	4.6817	ng/mL	----
6_2-FTS-13C_IS	Auto	4.577	287297	287297	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.938	53	225284	25	0.0015	ng/mL	----
8_2-FTS-13C	Auto	4.940	225284	3981462	1	4.7328	ng/mL	----
8_2-FTS-13C_IS	Auto	4.940	225284	225284	25	5.0000	ng/mL	----
10_2-FTS_1	M	5.288	30	225284	25	0.0009	ng/mL	----
HPFO_DA	M	4.303	1134	956516	26	0.0055	ng/mL	----
HPFO_DA-13C	Auto	4.306	956516	3981462	1	5.0427	ng/mL	----
HPFO_DA-13C_IS	Auto	4.306	956516	956516	26	5.0000	ng/mL	----

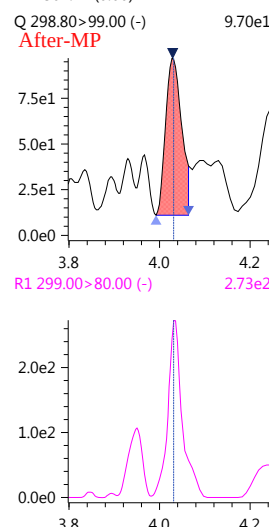
13C7-PFUnDA_IS

Conc 5.0000
RT 5.122 Area 3981462



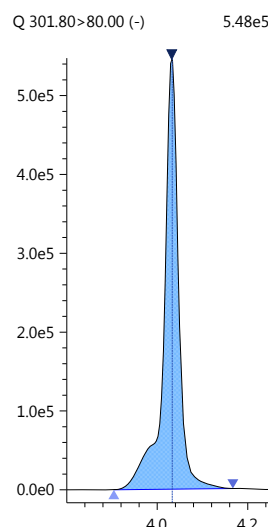
PFBS_1

Conc 0.0014
RT 4.029 Area 210
R#1 301.22 (0.00)



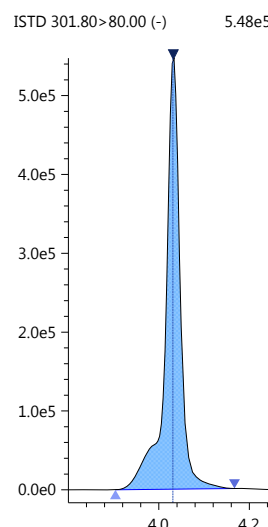
PFBS-13C

Conc 4.6507
RT 4.032 Area 1245516



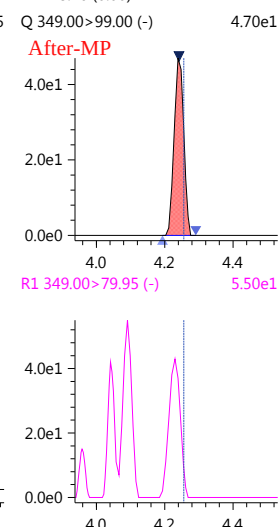
PFBS-13C_IS

Conc 5.0000
RT 4.032 Area 1245516



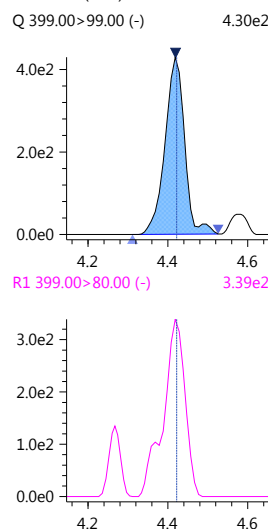
PFPeS

Conc 0.0007
RT 4.242 Area 93
R#1 78.26 (0.00)



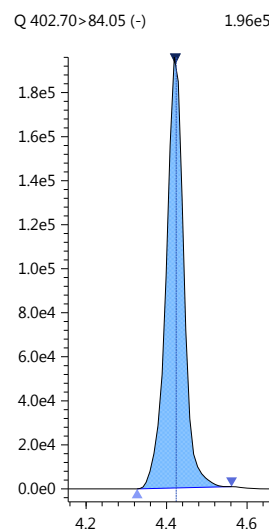
PFHxS_1

Conc 0.0135
RT 4.419 Area 1466
R#1 79.43 (0.00)



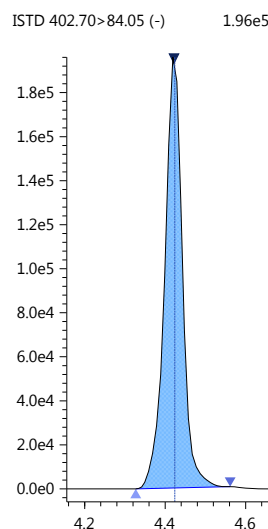
PFHxS-180

Conc 4.2290
RT 4.422 Area 600054



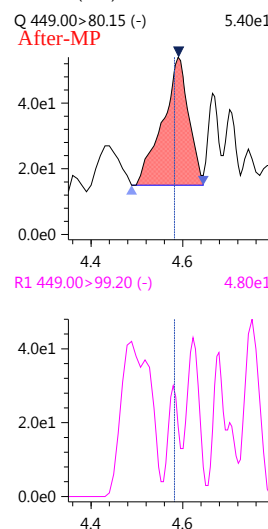
PFHxS-180_IS

Conc 5.0000
RT 4.422 Area 600054



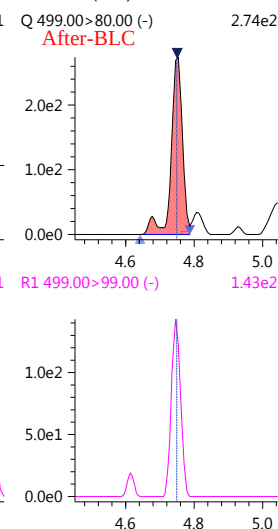
PFHpS_1

Conc 0.0011
RT 4.591 Area 154
R#1 0.00 (0.00)



PFOS_1

Conc 0.0051
RT 4.750 Area 629
R#1 52.79 (0.00)



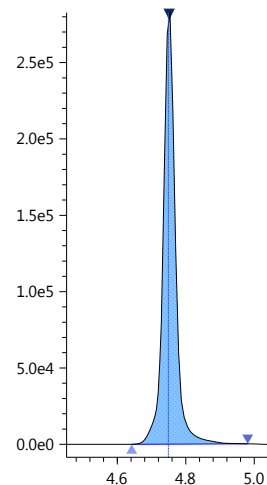
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PFOS-13C

Conc 5.0316
 RT 4.751 Area 704574

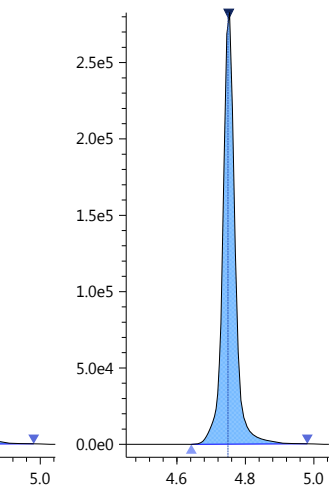
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.751 Area 704574

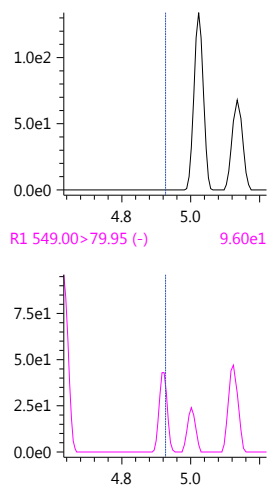
ISTD 502.80>80.05 (-)



PFNS

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

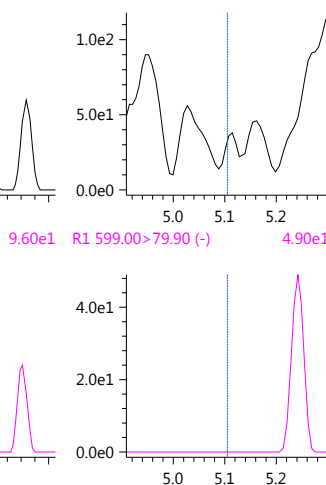
Q 549.00>99.00 (-)



PFDS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

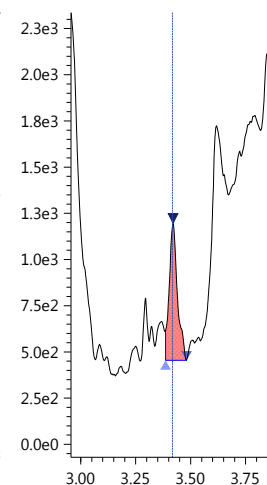
Q 599.00>99.10 (-)



PFBA

Conc 0.0032
 RT 3.420 Area 1927
 After-MP

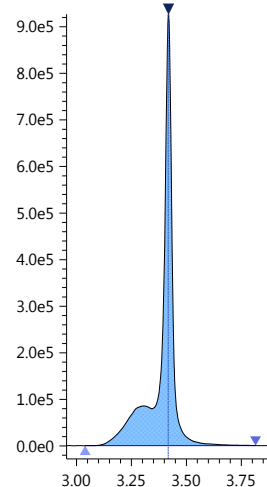
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.5783
 RT 3.419 Area 3071947

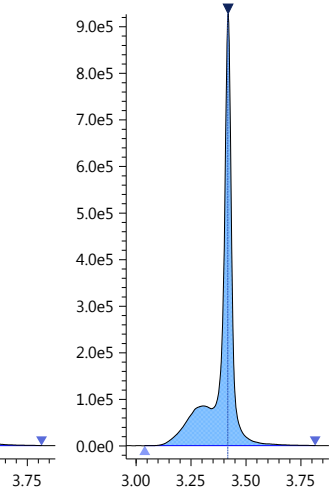
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.419 Area 3071947

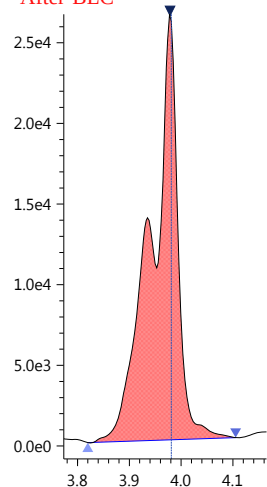
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.0125
 RT 3.979 Area 94711

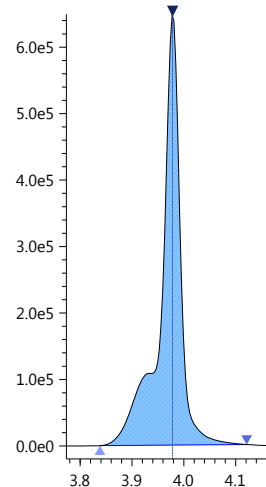
Q 263.05>219.10 (-)
 After-BLC



PFPeA-13C

Conc 4.6322
 RT 3.978 Area 1671359

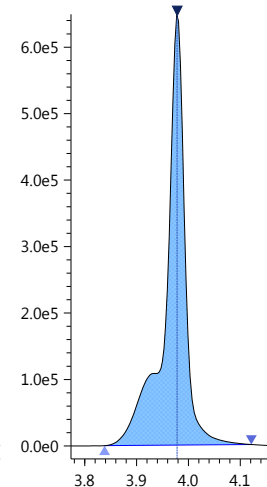
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.978 Area 1671359

ISTD 267.90>223.00 (-)

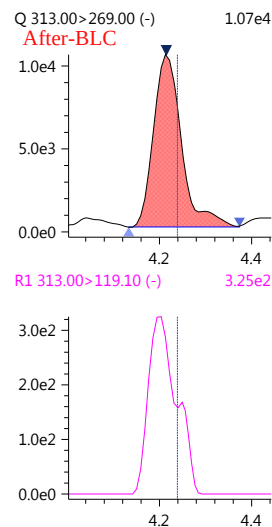


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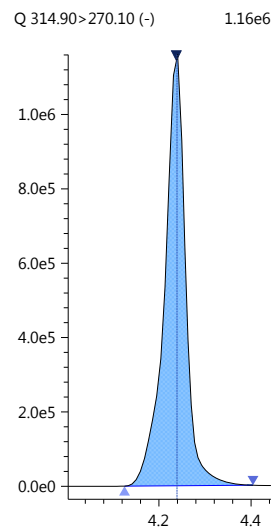
PFHxA

Conc 0.0168
 RT 4.215 Area 43826
 R#1 2.77 (0.00)



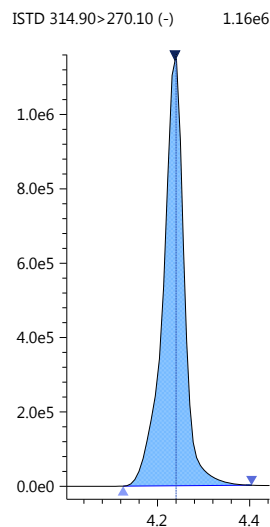
PFHxA-13C

Conc 4.5367
 RT 4.238 Area 3669812



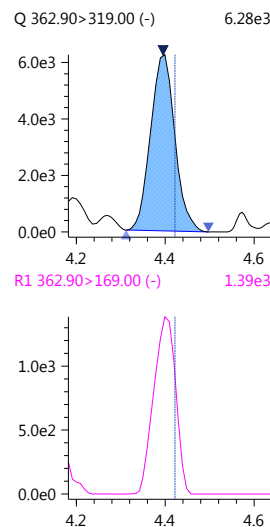
PFHxA-13C_IS

Conc 5.0000
 RT 4.238 Area 3669812



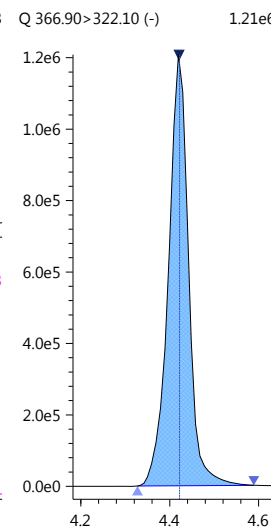
PFHpA

Conc 0.0046
 RT 4.395 Area 23753
 R#1 22.20 (0.00)



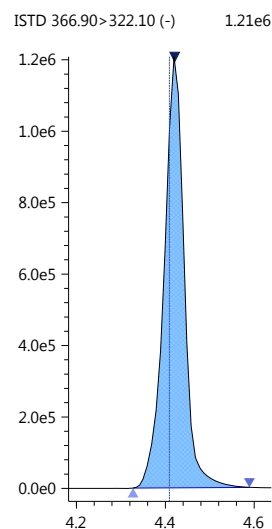
PFHpA-13C

Conc 4.4030
 RT 4.421 Area 3813206



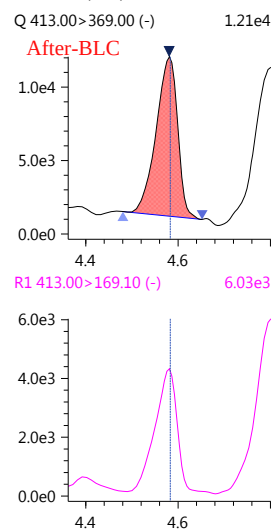
PFHpA-13C_IS

Conc 5.0000
 RT 4.421 Area 3813206



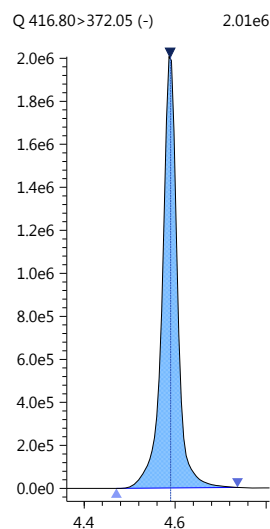
PFOA

Conc 0.0027
 RT 4.581 Area 35103
 R#1 38.72 (0.00)



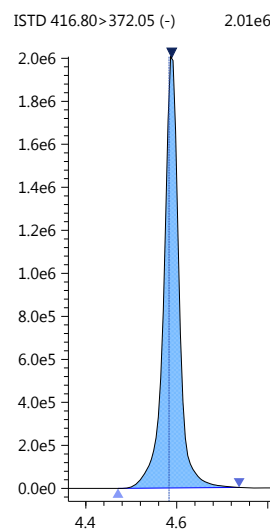
PFOA-13C

Conc 5.0335
 RT 4.589 Area 4656783



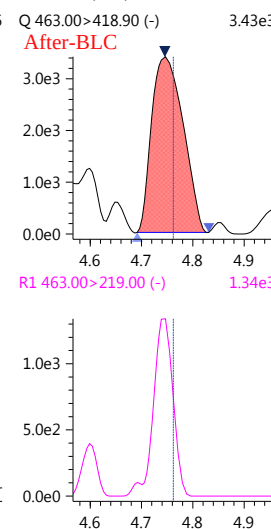
PFOA-13C_IS

Conc 5.0000
 RT 4.589 Area 4656783



PFNA

Conc -0.0063
 RT 4.745 Area 14524
 R#1 35.87 (0.00)



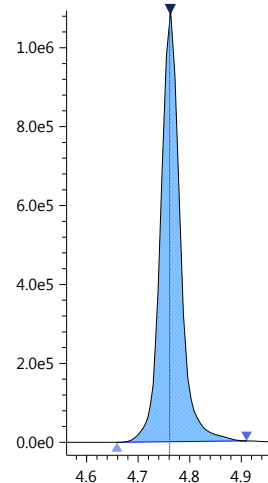
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PFNA-13C

Conc 4.5606
 RT 4.762 Area 2886754

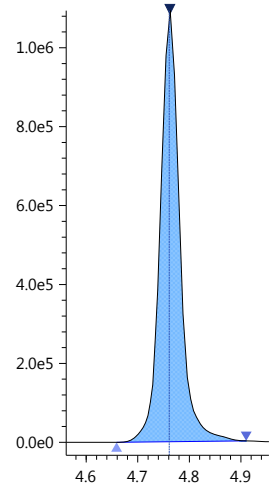
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
 RT 4.762 Area 2886754

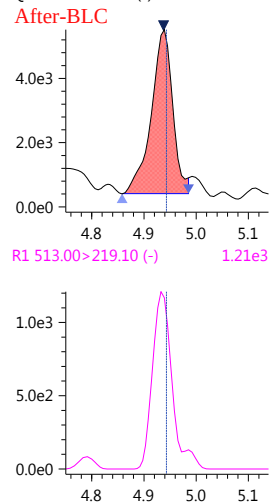
ISTD 467.80>423.00 (-)



PFDA

Conc 0.0064
 RT 4.937 Area 14583
 R#1 22.15 (0.00)

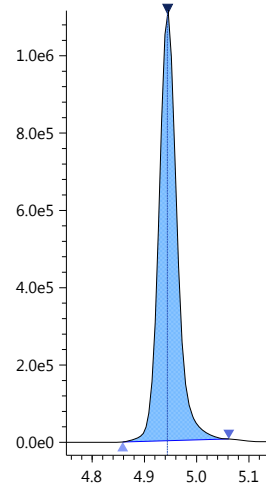
Q 513.00>468.80 (-)



PFDA-13C

Conc 4.6899
 RT 4.944 Area 2704523

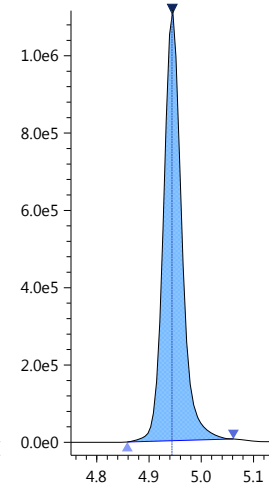
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 RT 4.944 Area 2704523

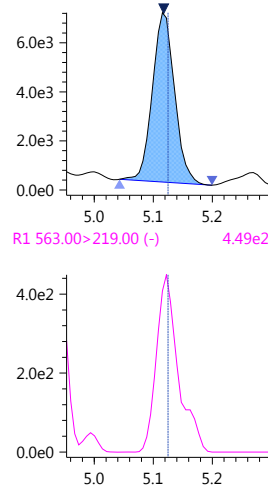
ISTD 514.80>469.95 (-)



PFUnA

Conc -0.0028
 RT 5.118 Area 18062
 R#1 6.99 (0.00)

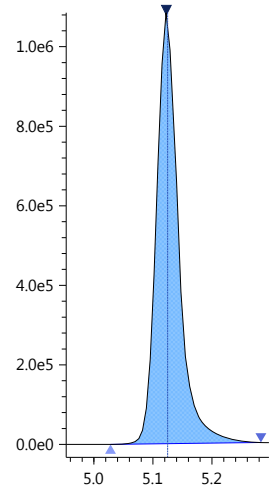
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.7138
 RT 5.123 Area 2816097

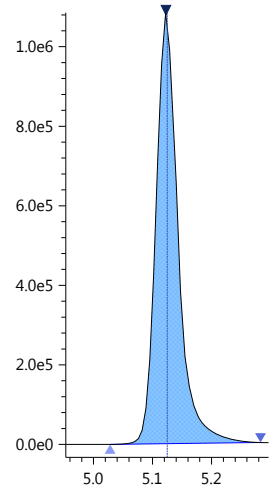
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 RT 5.123 Area 2816097

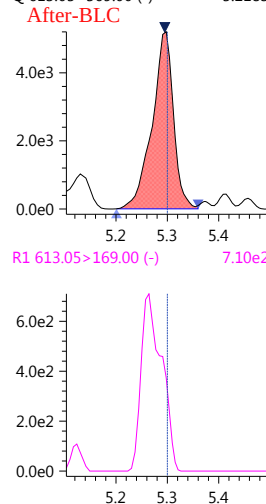
ISTD 564.80>519.95 (-)



PFDaA

Conc 0.0077
 RT 5.295 Area 14995
 R#1 9.01 (0.00)

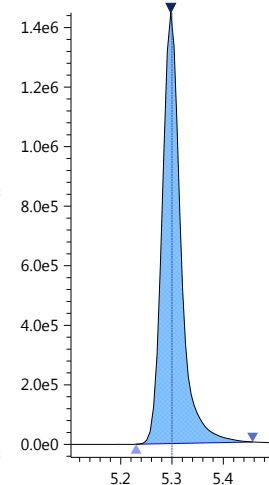
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.6256
 RT 5.298 Area 3662498

Q 614.80>569.95 (-)

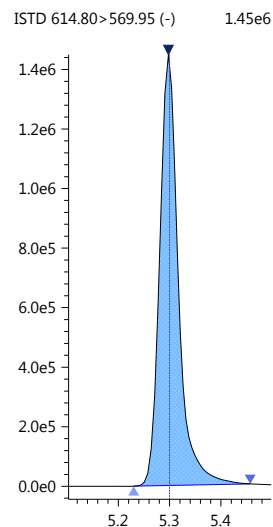


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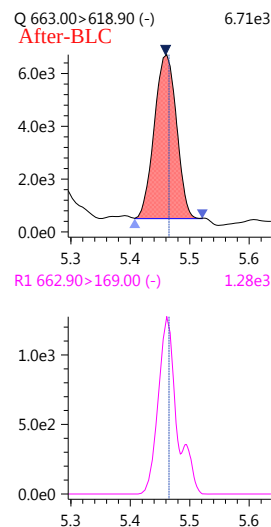
PFDaA-13C_IS

Conc 5.0000
 RT 5.298 Area 3662498



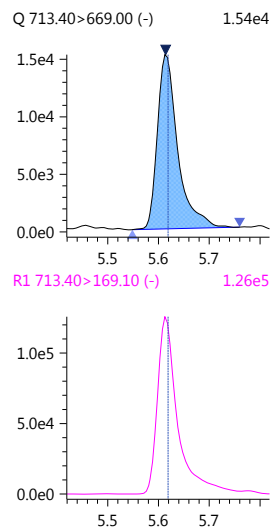
PFTrDA

Conc -0.0075
 RT 5.459 Area 16194
 R#1 21.16 (0.00)



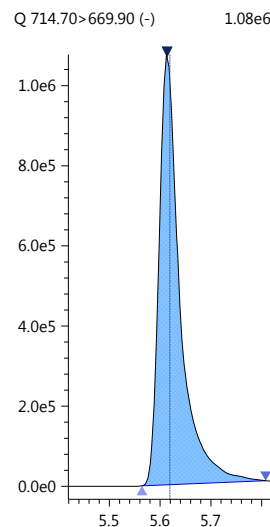
PFTeDA

Conc -0.0052
 RT 5.614 Area 42258
 R#1 838.65 (0.00)



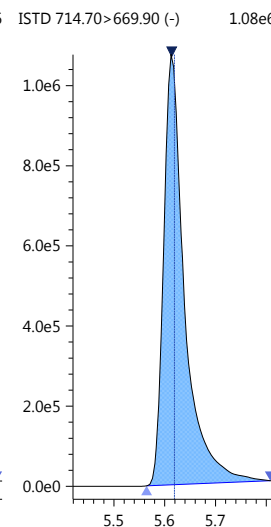
PFTeDA-13C

Conc 4.4884
 RT 5.614 Area 3089161



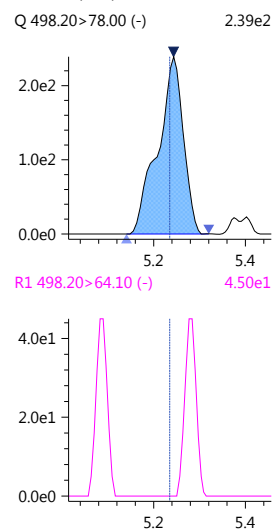
PFTeDA-13C_IS

Conc 5.0000
 RT 5.614 Area 3089161



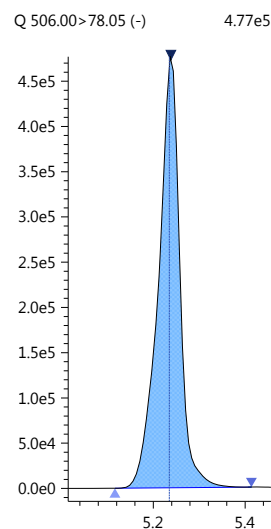
FOSA

Conc 0.0026
 RT 5.243 Area 922
 R#1 0.00 (0.00)



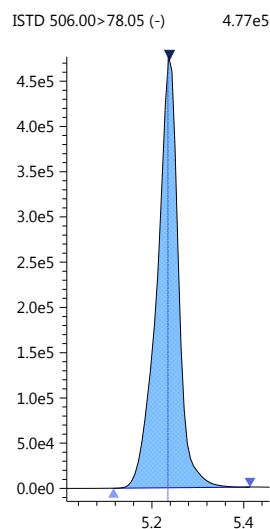
FOSA-13C

Conc 4.6168
 RT 5.238 Area 1544579



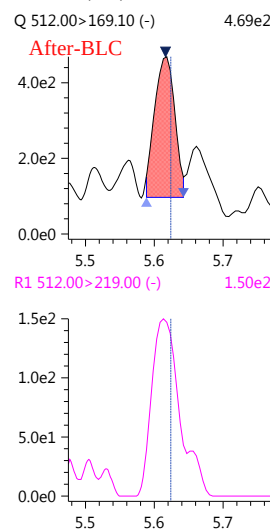
FOSA-13C_IS

Conc 5.0000
 RT 5.238 Area 1544579



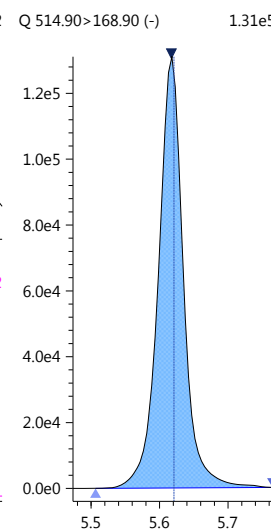
N-MeFOSA

Conc 0.0079
 RT 5.616 Area 759
 R#1 34.95 (0.00)



N-MeFOSA-d3

Conc 3.8267
 RT 5.617 Area 332539



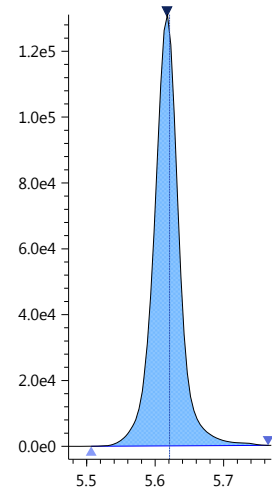
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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.617 Area 332539

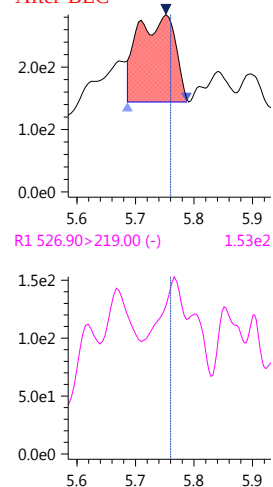
ISTD 514.90>168.90 (-) 1.31e5



N-EtFOSA

Conc 0.0330
 RT 5.752 Area 625
 R#1 5.97 (0.00)

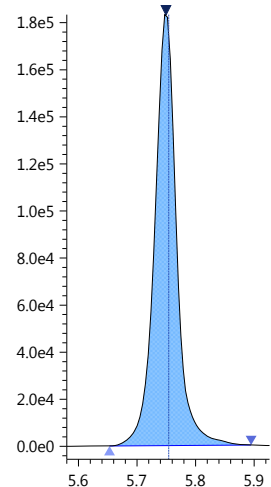
Q 526.90>169.10 (-) 2.84e2
 After-BLC



N-EtFOSA-d9

Conc 3.8202
 RT 5.749 Area 476955

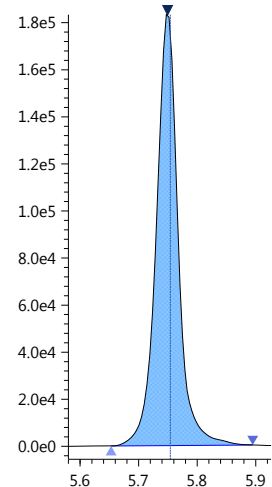
Q 530.90>169.15 (-) 1.83e5



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.749 Area 476955

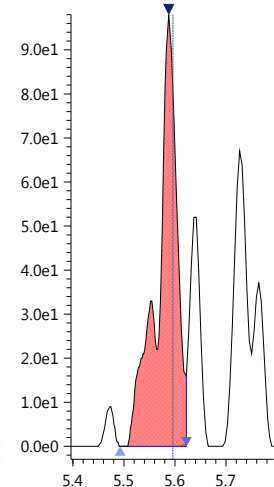
ISTD 530.90>169.15 (-) 1.83e5



N-MeFOSE

Conc 0.0020
 RT 5.588 Area 255
 After-BLC

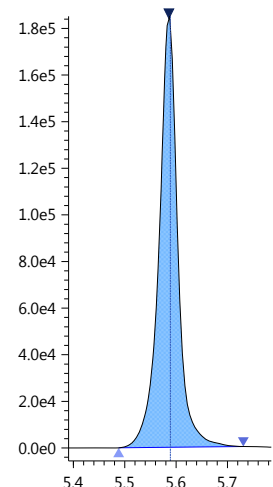
Q 616.00>59.00 (-) 9.80e1



N-MeFOSE-d7

Conc 4.4606
 RT 5.586 Area 467991

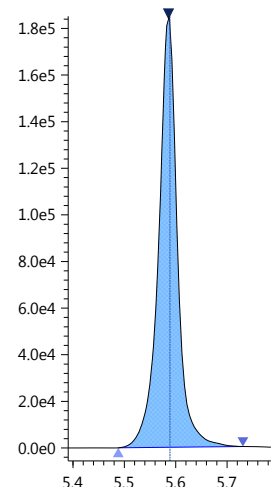
Q 622.70>59.10 (-) 1.85e5



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.586 Area 467991

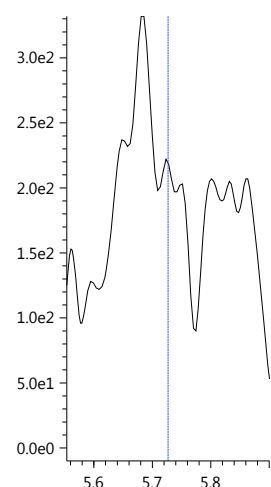
ISTD 622.70>59.10 (-) 1.85e5



N-EtFOSE

Conc ----
 RT ---- Area ----

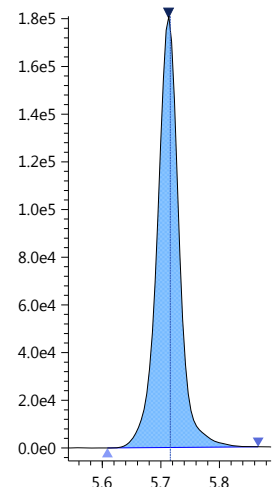
Q 630.00>58.90 (-) 3.32e2



N-EtFOSE-d9

Conc 4.6251
 RT 5.713 Area 468360

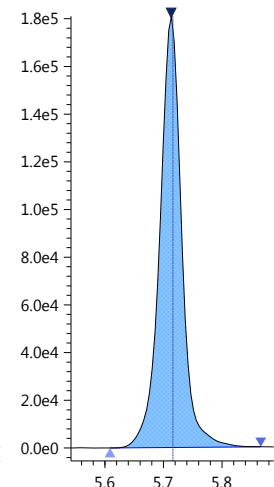
Q 638.70>59.10 (-) 1.81e5



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.713 Area 468360

ISTD 638.70>59.10 (-) 1.81e5



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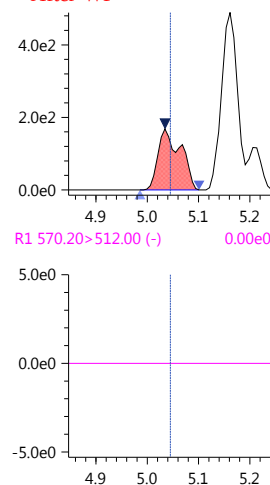
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N-MeFOSAA

Conc 0.0299
RT 5.035 Area 514
R#1 0.00 (0.00)

Q 570.20>419.00 (-)

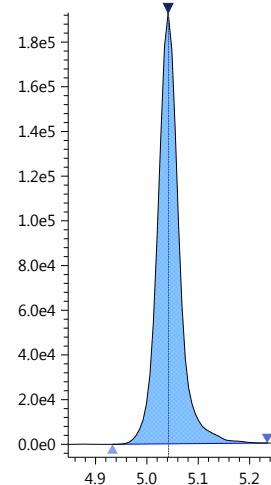
After-WP



N-MeFOSAA-d3

Conc 4.5419
RT 5.041 Area 560431

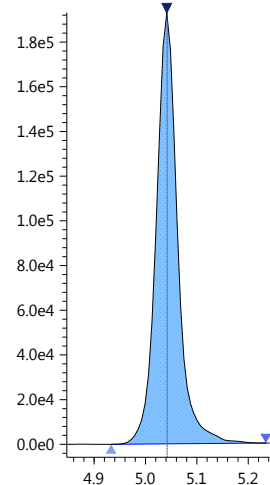
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.041 Area 560431

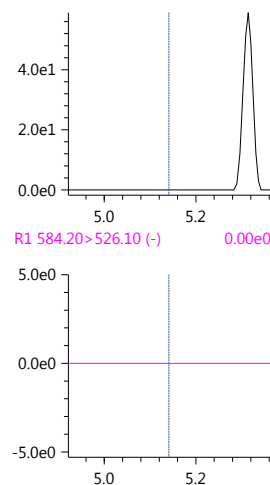
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

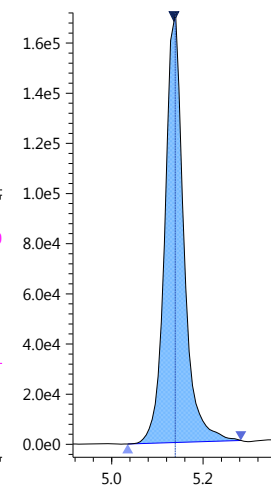
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 4.9126
RT 5.136 Area 493503

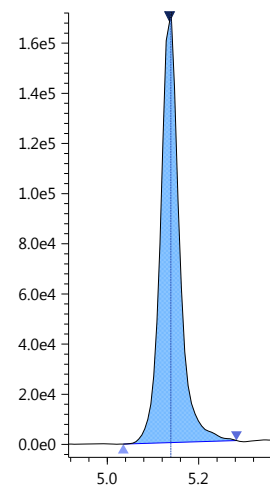
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.136 Area 493503

ISTD 588.80>419.00 (-)

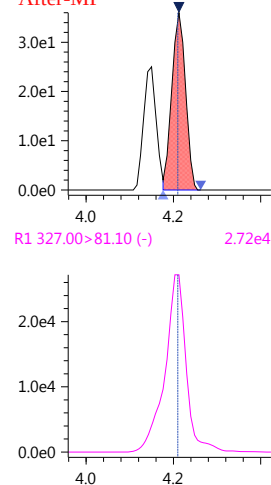


4_2-FTS_1

Conc 0.0012
RT 4.212 Area 79
R#1 59034.29 (0.00)

Q 327.00>307.05 (-)

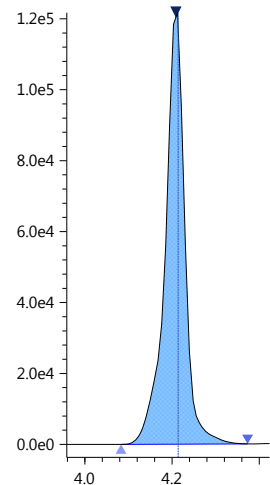
After-MP



4_2-FTS-13C

Conc 4.7814
RT 4.209 Area 381103

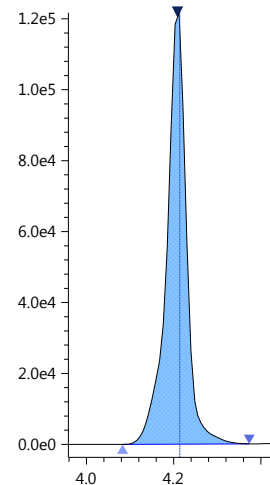
Q 328.80>309.05 (-)



4_2-FTS-13C_IS

Conc 5.0000
RT 4.209 Area 381103

ISTD 328.80>309.05 (-)

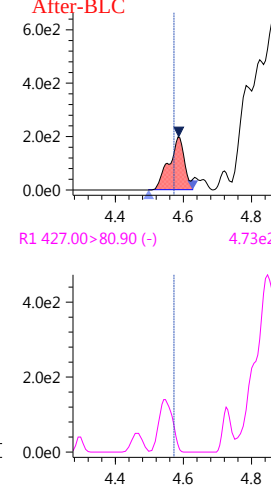


6_2-FTS_1

Conc 0.0087
RT 4.586 Area 628
R#1 8.29 (0.00)

Q 427.00>407.00 (-)

After-BLC

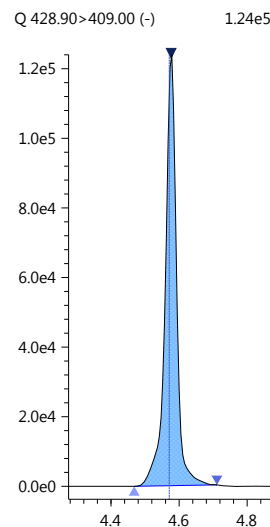


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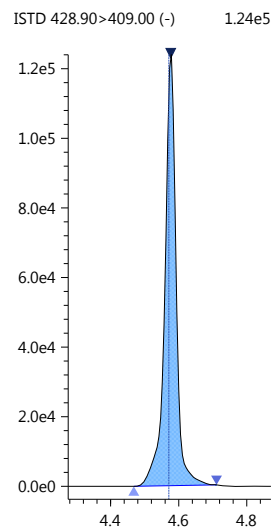
6_2-FTS-13C

Conc 4.6817
 RT 4.577 Area 287297



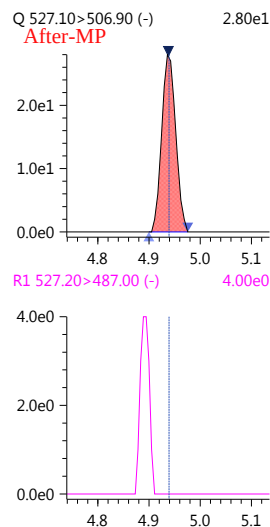
6_2-FTS-13C_IS

Conc 5.0000
 RT 4.577 Area 287297



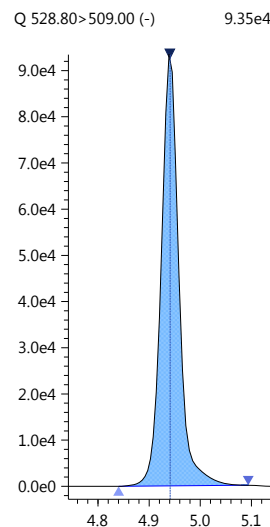
8_2-FTS_1

Conc 0.0015
 RT 4.938 Area 53
 R#1 0.00 (0.00)



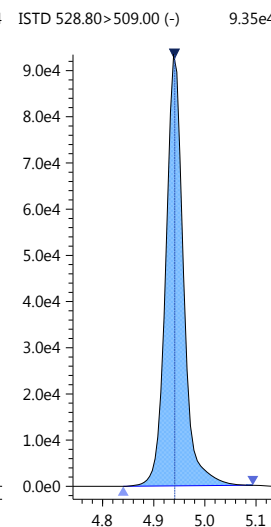
8_2-FTS-13C

Conc 4.7328
 RT 4.940 Area 225284



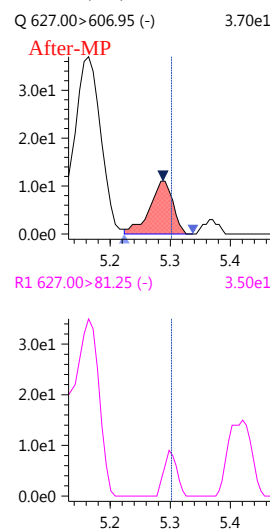
8_2-FTS-13C_IS

Conc 5.0000
 RT 4.940 Area 225284



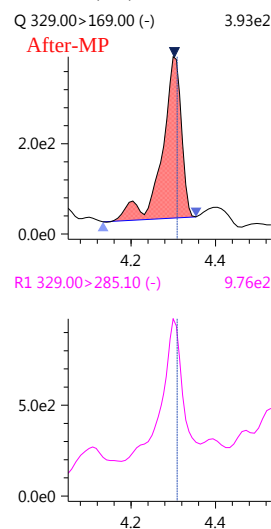
10_2-FtS_1

Conc 0.0009
 RT 5.288 Area 30
 R#1 30.00 (0.00)



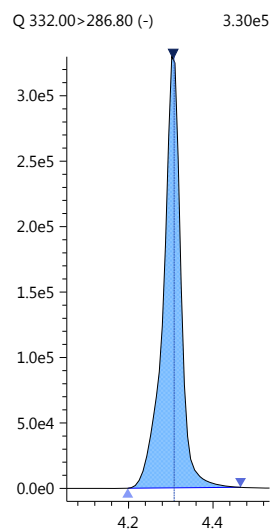
HPFO_DA

Conc 0.0055
 RT 4.303 Area 1134
 R#1 197.24 (0.00)



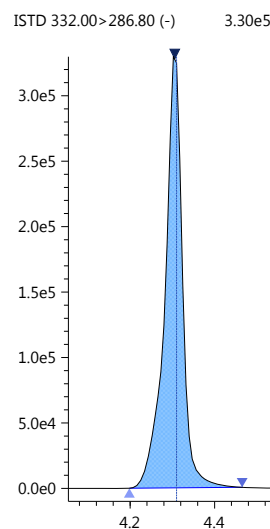
HPFO_DA-13C

Conc 5.0427
 RT 4.306 Area 956516



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.306 Area 956516



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191202_028

Sample ID: IB

Date acquired: 12/2/2019 7:24:27 PM

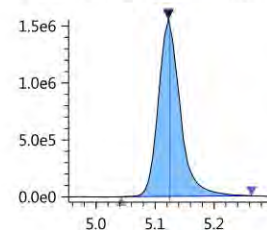
Acquired by: System Administrator

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Vial: 48 | Inj. Volume: 15.0000uL | Tray: 1

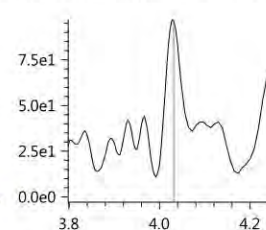
13C7-PFUnDA_IS

Conc 5.0000
RT 5.122 Area 3981462
ISTD 570.00>525.00 (-)



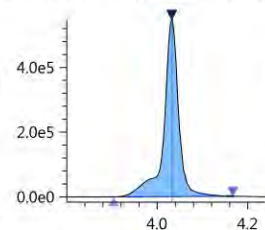
PFBS_1

Conc ----
RT ---- Area ----
Q 298.80>99.00 (-)



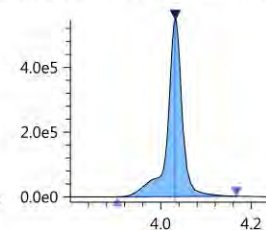
PFBS-13C

Conc 4.6507
RT 4.032 Area 1245516
Q 301.80>80.00 (-)



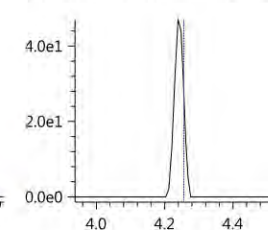
PFBS-13C_IS

Conc 5.0000
RT 4.032 Area 1245516
ISTD 301.80>80.00 (-)



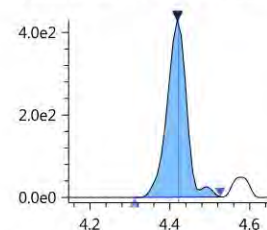
PFPeS

Conc ----
RT ---- Area ----
Q 349.00>99.00 (-)



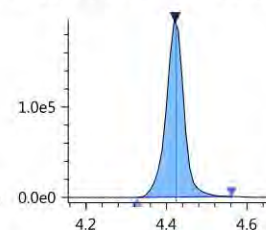
PFHxS_1

Conc 0.0135
RT 4.419 Area 1466
Q 399.00>99.00 (-)



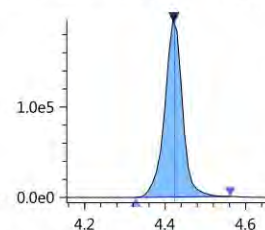
PFHxS-180

Conc 4.2290
RT 4.422 Area 600054
Q 402.70>84.05 (-)



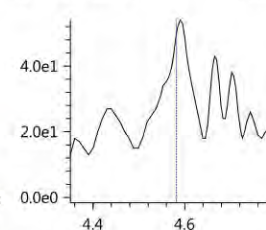
PFHxS-180_IS

Conc 5.0000
RT 4.422 Area 600054
ISTD 402.70>84.05 (-)



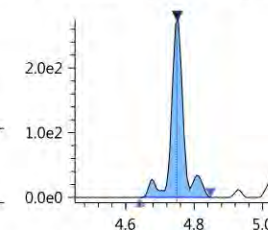
PFHpS_1

Conc ----
RT ---- Area ----
Q 449.00>80.15 (-)



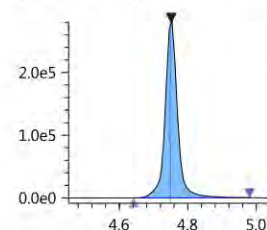
PFOS_1

Conc 0.0057
RT 4.750 Area 699
Q 499.00>80.00 (-)



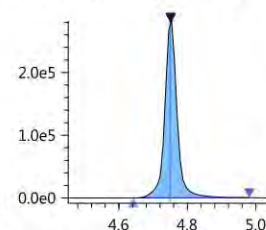
PFOS-13C

Conc 5.0316
RT 4.751 Area 704574
Q 502.80>80.05 (-)



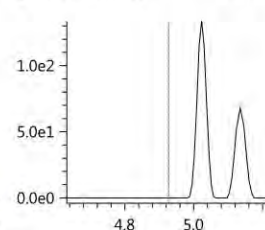
PFOS-13C_IS

Conc 5.0000
RT 4.751 Area 704574
ISTD 502.80>80.05 (-)



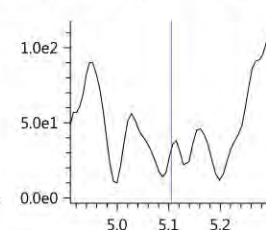
PFNS

Conc ----
RT ---- Area ----
Q 549.00>99.00 (-)



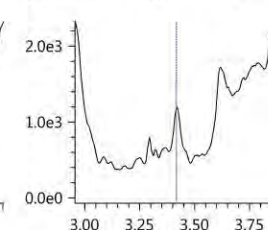
PFDS_1

Conc ----
RT ---- Area ----
Q 599.00>99.10 (-)



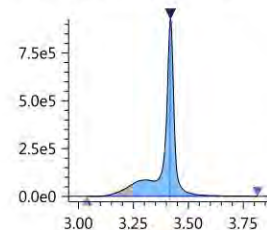
PFBA

Conc ----
RT ---- Area ----
Q 213.00>169.10 (-)



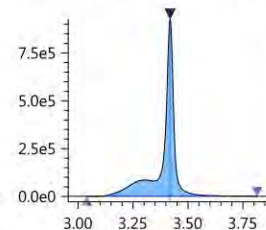
PFBA-13C

Conc 4.5783
RT 3.419 Area 3071947
Q 216.90>172.15 (-)



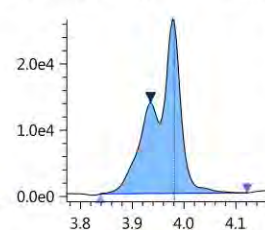
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Conc 5.0000
RT 3.419 Area 3071947
ISTD 216.90>172.15 (-)



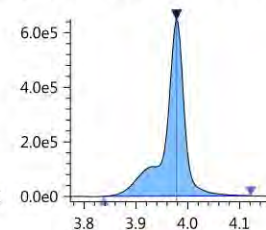
PFPeA

Conc 0.0105
RT 3.935 Area 93234
Q 263.05>219.10 (-)



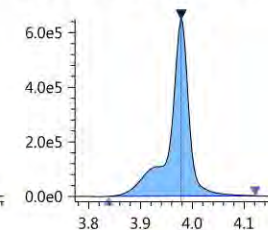
PFPeA-13C

Conc 4.6322
RT 3.978 Area 1671359
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.978 Area 1671359
ISTD 267.90>223.00 (-)

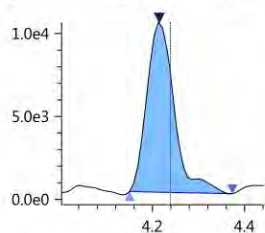


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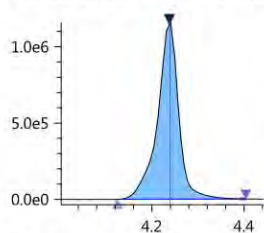
PFHxA

Conc 0.0154
RT 4.215 Area 42331
Q 313.00>269.00 (-)



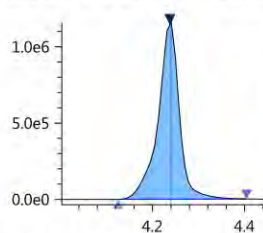
PFHxA-13C

Conc 4.5367
RT 4.238 Area 3669812
Q 314.90>270.10 (-)



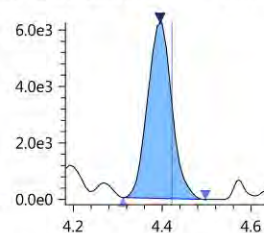
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Conc 5.0000
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ISTD 314.90>270.10 (-)



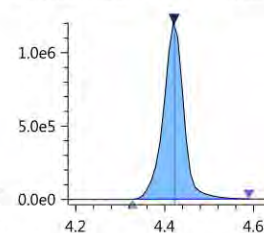
PFHpA

Conc 0.0046
RT 4.395 Area 23753
Q 362.90>319.00 (-)



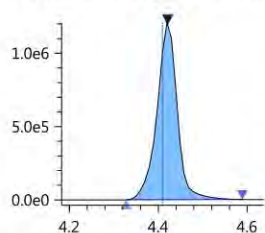
PFHpA-13C

Conc 4.4030
RT 4.421 Area 3813206
Q 366.90>322.10 (-)



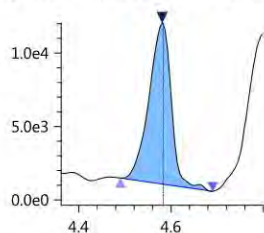
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Conc 5.0000
RT 4.421 Area 3813206
ISTD 366.90>322.10 (-)



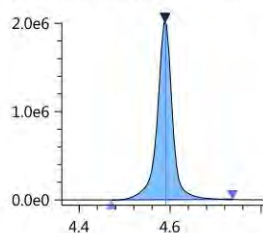
PFOA

Conc 0.0042
RT 4.581 Area 36627
Q 413.00>369.00 (-)



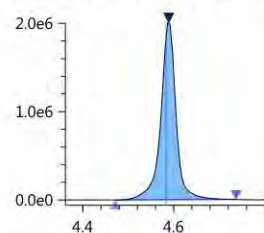
PFOA-13C

Conc 5.0335
RT 4.589 Area 4656783
Q 416.80>372.05 (-)



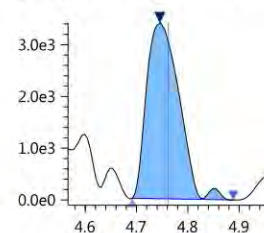
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Conc 5.0000
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ISTD 416.80>372.05 (-)



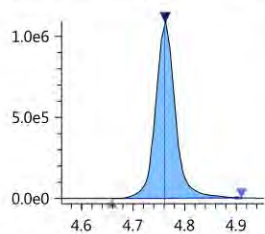
PFNA

Conc -0.0055
RT 4.745 Area 14932
Q 463.00>418.90 (-)



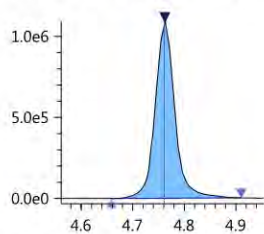
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Conc 4.5606
RT 4.762 Area 2886754
Q 467.80>423.00 (-)



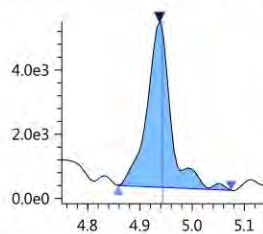
PFNA-13C_IS

Conc 5.0000
RT 4.762 Area 2886754
ISTD 467.80>423.00 (-)



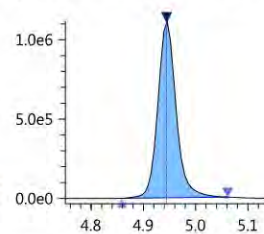
PFDA

Conc 0.0090
RT 4.937 Area 16374
Q 513.00>468.80 (-)



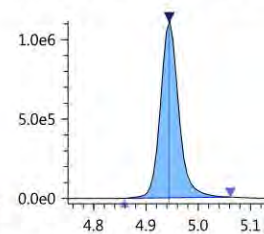
PFDA-13C

Conc 4.6899
RT 4.944 Area 2704523
Q 514.80>469.95 (-)



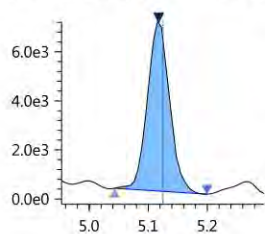
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Conc 5.0000
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ISTD 514.80>469.95 (-)



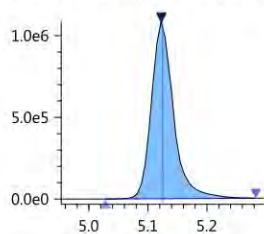
PFUnA

Conc -0.0025
RT 5.118 Area 18062
Q 563.00>518.90 (-)



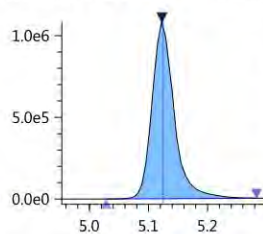
PFUnA-13C

Conc 4.7138
RT 5.123 Area 2816097
Q 564.80>519.95 (-)



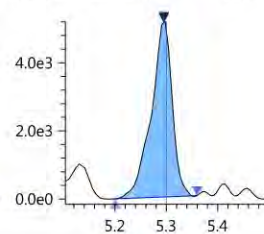
PFUnA-13C_IS

Conc 5.0000
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ISTD 564.80>519.95 (-)



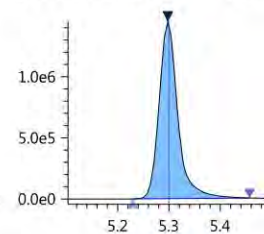
PFDoA

Conc 0.0304
RT 5.295 Area 14571
Q 613.05>569.00 (-)



PFDoA-13C

Conc 4.6256
RT 5.298 Area 3662498
Q 614.80>569.95 (-)

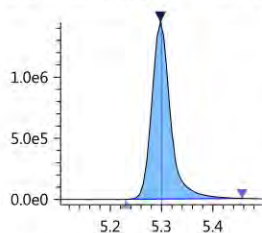


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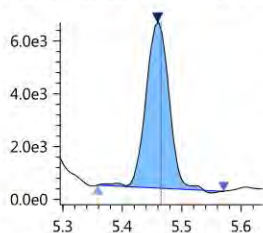
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Conc 5.0000
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ISTD 614.80>569.95 (-)



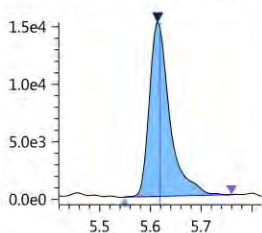
PFTrDA

Conc -0.0064
RT 5.459 Area 16900
Q 663.00>618.90 (-)



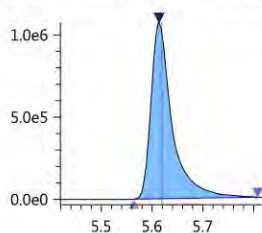
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Conc -0.0071
RT 5.614 Area 42258
Q 713.40>669.00 (-)



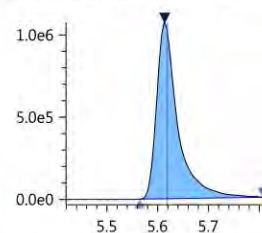
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Conc 4.4884
RT 5.614 Area 3089161
Q 714.70>669.90 (-)



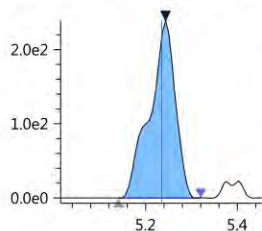
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Conc 5.0000
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ISTD 714.70>669.90 (-)



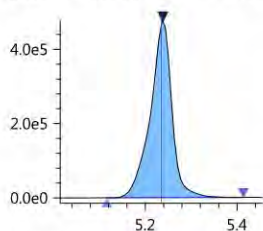
FOSA

Conc 0.0026
RT 5.243 Area 922
Q 498.20>78.00 (-)



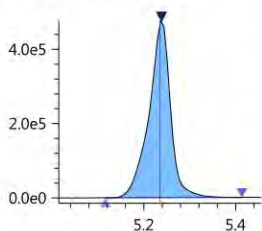
FOSA-13C

Conc 4.6168
RT 5.238 Area 1544579
Q 506.00>78.05 (-)



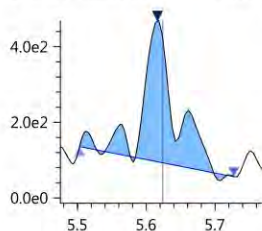
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Conc 5.0000
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ISTD 506.00>78.05 (-)



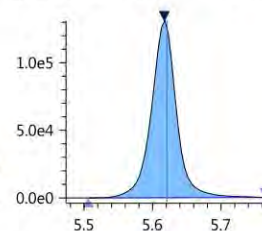
N-MeFOSA

Conc 0.0124
RT 5.616 Area 1190
Q 512.00>169.10 (-)



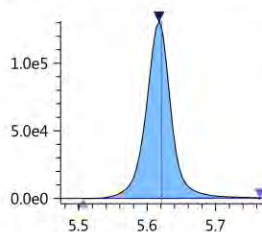
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Conc 3.8267
RT 5.617 Area 332539
Q 514.90>168.90 (-)



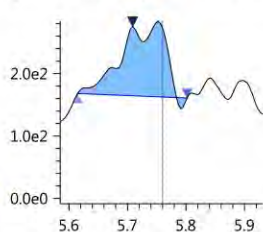
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.617 Area 332539
ISTD 514.90>168.90 (-)



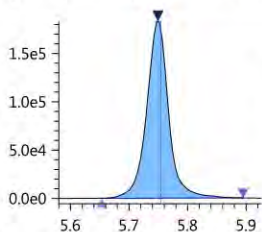
N-EtFOSA

Conc 0.0319
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Q 526.90>169.10 (-)



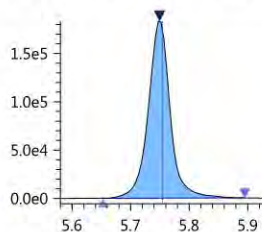
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Conc 3.8202
RT 5.749 Area 476955
Q 530.90>169.15 (-)



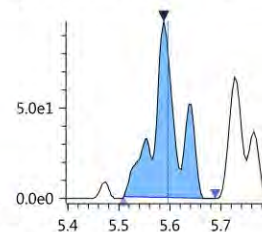
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Conc 5.0000
RT 5.749 Area 476955
ISTD 530.90>169.15 (-)



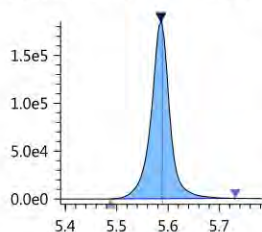
N-MeFOSE

Conc 0.0026
RT 5.588 Area 323
Q 616.00>59.00 (-)



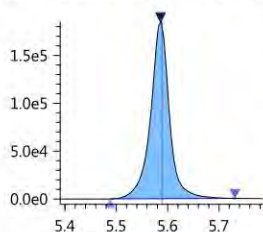
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Conc 4.4606
RT 5.586 Area 467991
Q 622.70>59.10 (-)



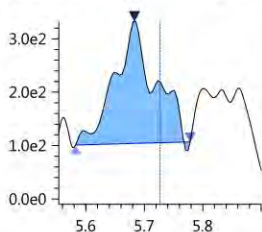
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.586 Area 467991
ISTD 622.70>59.10 (-)



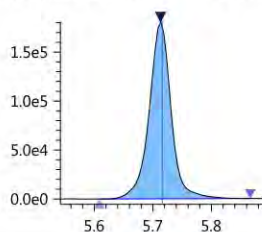
N-EtFOSE

Conc 0.0088
RT 5.683 Area 1091
Q 630.00>58.90 (-)



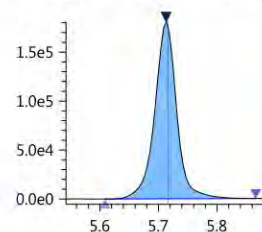
N-EtFOSE-d9

Conc 4.6251
RT 5.713 Area 468360
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.713 Area 468360
ISTD 638.70>59.10 (-)

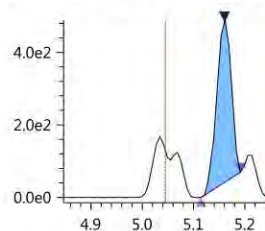


Insight Report

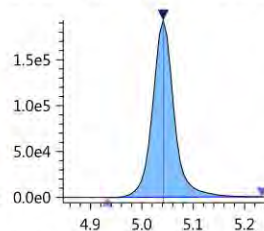
Printed at 12/3/2019 9:26:07 AM

N-MeFOSAA

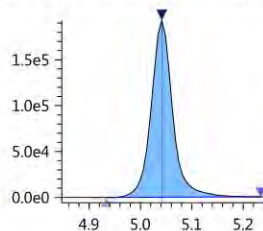
Conc 0.0371
RT 5.160 Area 888
Q 570.20>419.00 (-)

**N-MeFOSAA-d3**

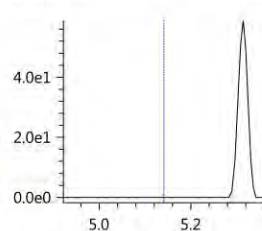
Conc 4.5419
RT 5.041 Area 560431
Q 572.80>419.05 (-)

**N-MeFOSAA-d3_IS**

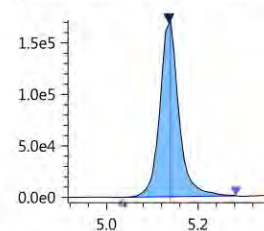
Conc 5.0000
RT 5.041 Area 560431
ISTD 572.80>419.05 (-)

**N-EtFOSAA**

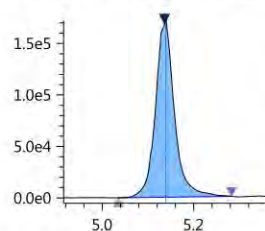
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-)

**N-EtFOSAA-d5**

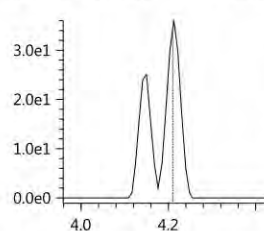
Conc 4.9126
RT 5.136 Area 493503
Q 588.80>419.00 (-)

**N-EtFOSAA-d5_IS**

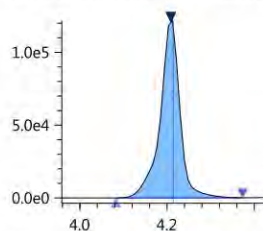
Conc 5.0000
RT 5.136 Area 493503
ISTD 588.80>419.00 (-)

**4_2-FTS_1**

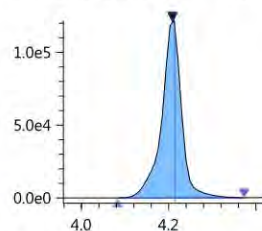
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-)

**4_2-FTS-13C**

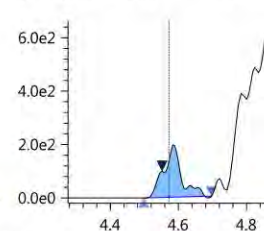
Conc 4.7814
RT 4.209 Area 381103
Q 328.80>309.05 (-)

**4_2-FTS-13C_IS**

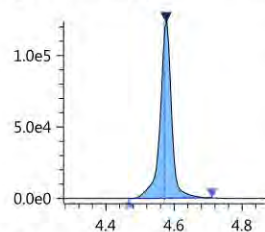
Conc 5.0000
RT 4.209 Area 381103
ISTD 328.80>309.05 (-)

**6_2-FTS_1**

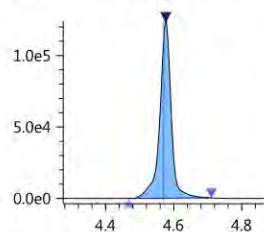
Conc 0.0097
RT 4.552 Area 701
Q 427.00>407.00 (-)

**6_2-FTS-13C**

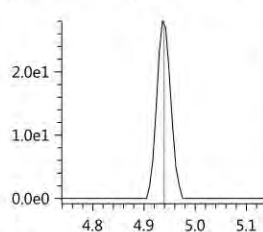
Conc 4.6817
RT 4.577 Area 287297
Q 428.90>409.00 (-)

**6_2-FTS-13C_IS**

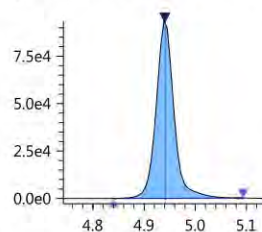
Conc 5.0000
RT 4.577 Area 287297
ISTD 428.90>409.00 (-)

**8_2-FTS_1**

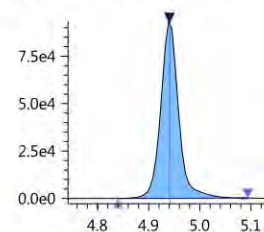
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)

**8_2-FTS-13C**

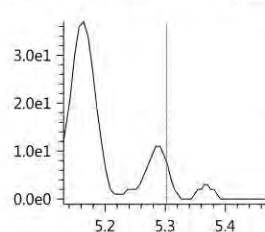
Conc 4.7328
RT 4.940 Area 225284
Q 528.80>509.00 (-)

**8_2-FTS-13C_IS**

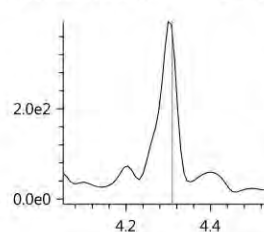
Conc 5.0000
RT 4.940 Area 225284
ISTD 528.80>509.00 (-)

**10_2-FTS_1**

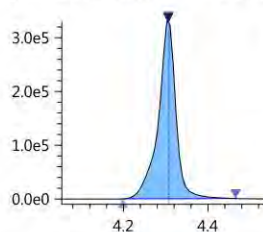
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-)

**HPFO_DA**

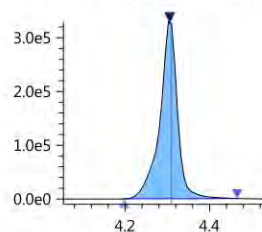
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-)

**HPFO_DA-13C**

Conc 5.0427
RT 4.306 Area 956516
Q 332.00>286.80 (-)

**HPFO_DA-13C_IS**

Conc 5.0000
RT 4.306 Area 956516
ISTD 332.00>286.80 (-)



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191202_029

Sample ID: 1.0 PPB ICV NO10:2 FTS
Date acquired: 12/2/2019 7:34:54 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_029.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.122	3910495	3910495	1	5.0000	ng/mL	5.0000
PFBS_1	Auto	4.031	137051	1263417	2	0.8967	ng/mL	0.8874
PFBS-13C	Auto	4.031	1263417	3910495	1	4.8032	ng/mL	5.0000
PFBS-13C_IS	Auto	4.031	1263417	1263417	2	5.0000	ng/mL	5.0000
PFPeS	Auto	4.254	122553	1263417	2	0.9338	ng/mL	0.9409
PFHxS_1	Auto	4.419	104908	597260	3	0.9707	ng/mL	0.9131
PFHxS-18O	Auto	4.421	597260	3910495	1	4.2857	ng/mL	5.0000
PFHxS-18O_IS	Auto	4.421	597260	597260	3	5.0000	ng/mL	5.0000
PFHpS_1	Auto	4.580	151609	597260	3	1.0804	ng/mL	0.9534
PFOS_1	Auto	4.749	103579	658373	4	0.8916	ng/mL	0.9292
PFOS-13C	Auto	4.750	658373	3910495	1	4.7870	ng/mL	5.0000
PFOS-13C_IS	Auto	4.750	658373	658373	4	5.0000	ng/mL	5.0000
PFNS	Auto	4.927	86154	658373	4	0.9964	ng/mL	0.9616
PFDS_1	Auto	5.104	95156	658373	4	1.0632	ng/mL	0.9647
PFBA	Auto	3.418	593367	3050510	5	0.9898	ng/mL	1.0000
PFBA-13C	Auto	3.417	3050510	3910495	1	4.6288	ng/mL	5.0000
PFBA-13C_IS	Auto	3.417	3050510	3050510	5	5.0000	ng/mL	5.0000
PFPeA	Auto	3.978	811853	1662997	6	0.9914	ng/mL	1.0000
PFPeA-13C	Auto	3.978	1662997	3910495	1	4.6927	ng/mL	5.0000
PFPeA-13C_IS	Auto	3.978	1662997	1662997	6	5.0000	ng/mL	5.0000
PFHxA	Auto	4.237	921620	3708805	7	0.9285	ng/mL	1.0000
PFHxA-13C	Auto	4.237	3708805	3910495	1	4.6681	ng/mL	5.0000
PFHxA-13C_IS	Auto	4.237	3708805	3708805	7	5.0000	ng/mL	5.0000
PFHpA	Auto	4.420	712234	3702605	8	0.9701	ng/mL	1.0000
PFHpA-13C	Auto	4.420	3702605	3910495	1	4.3529	ng/mL	5.0000
PFHpA-13C_IS	Auto	4.420	3702605	3702605	8	5.0000	ng/mL	5.0000
PFOA	Auto	4.588	1064797	4582165	9	0.9479	ng/mL	1.0000
PFOA-13C	Auto	4.587	4582165	3910495	1	5.0427	ng/mL	5.0000
PFOA-13C_IS	Auto	4.587	4582165	4582165	9	5.0000	ng/mL	5.0000
PFNA	Auto	4.761	572118	3027142	10	0.8830	ng/mL	1.0000
PFNA-13C	Auto	4.760	3027142	3910495	1	4.8692	ng/mL	5.0000
PFNA-13C_IS	Auto	4.760	3027142	3027142	10	5.0000	ng/mL	5.0000
PFDA	M	4.943	608934	2886943	11	0.9897	ng/mL	1.0000
PFDA-13C	Auto	4.943	2886943	3910495	1	5.0971	ng/mL	5.0000
PFDA-13C_IS	Auto	4.943	2886943	2886943	11	5.0000	ng/mL	5.0000
PFUnA	Auto	5.122	513339	2831899	12	1.0256	ng/mL	1.0000
PFUnA-13C	Auto	5.122	2831899	3910495	1	4.8263	ng/mL	5.0000
PFUnA-13C_IS	Auto	5.122	2831899	2831899	12	5.0000	ng/mL	5.0000
PFDoA	Auto	5.299	449369	3793672	13	0.9250	ng/mL	1.0000
PFDoA-13C	Auto	5.299	3793672	3910495	1	4.8782	ng/mL	5.0000
PFDoA-13C_IS	Auto	5.299	3793672	3793672	13	5.0000	ng/mL	5.0000
PFTeDA	Auto	5.464	701470	3216164	14	1.0188	ng/mL	1.0000
PFTeDA	Auto	5.615	329794	3216164	14	0.9401	ng/mL	1.0000
PFTeDA-13C	Auto	5.615	3216164	3910495	1	4.7578	ng/mL	5.0000
PFTeDA-13C_IS	Auto	5.615	3216164	3216164	14	5.0000	ng/mL	5.0000
FOSA	Auto	5.240	343323	1510647	16	0.9979	ng/mL	1.0000
FOSA-13C	Auto	5.239	1510647	3910495	1	4.5973	ng/mL	5.0000
FOSA-13C_IS	Auto	5.239	1510647	1510647	16	5.0000	ng/mL	5.0000
N-MeFOSA	Auto	5.622	107961	397306	17	0.9444	ng/mL	1.0000
N-MeFOSA-d3	Auto	5.619	397306	3910495	1	4.6550	ng/mL	5.0000
N-MeFOSA-d3_IS	Auto	5.619	397306	397306	17	5.0000	ng/mL	5.0000
N-EtFOSA	Auto	5.756	20974	550670	18	0.9580	ng/mL	1.0000
N-EtFOSA-d9	Auto	5.752	550670	3910495	1	4.4907	ng/mL	5.0000
N-EtFOSA-d9_IS	Auto	5.752	550670	550670	18	5.0000	ng/mL	5.0000
N-MeFOSE	Auto	5.594	128548	492166	19	0.9779	ng/mL	1.0000
N-MeFOSE-d7	Auto	5.587	492166	3910495	1	4.7762	ng/mL	5.0000
N-MeFOSE-d7_IS	Auto	5.587	492166	492166	19	5.0000	ng/mL	5.0000
N-EtFOSE	Auto	5.725	123874	489333	20	0.9596	ng/mL	1.0000
N-EtFOSE-d9	Auto	5.715	489333	3910495	1	4.9198	ng/mL	5.0000
N-EtFOSE-d9_IS	Auto	5.715	489333	489333	20	5.0000	ng/mL	5.0000
N-MeFOSAA	Auto	5.043	82528	566593	21	1.2315	ng/mL	1.0000
N-MeFOSAA-d3	Auto	5.040	566593	3910495	1	4.6751	ng/mL	5.0000
N-MeFOSAA-d3_IS	Auto	5.040	566593	566593	21	5.0000	ng/mL	5.0000
N-EtFOSAA	Auto	5.139	58923	494362	22	0.9801	ng/mL	1.0000
N-EtFOSAA-d5	Auto	5.135	494362	3910495	1	5.0105	ng/mL	5.0000
N-EtFOSAA-d5_IS	Auto	5.135	494362	494362	22	5.0000	ng/mL	5.0000
4_2-FTS_1	Auto	4.208	56254	410051	23	0.8152	ng/mL	0.9372
4_2-FTS-13C	Auto	4.208	410051	3910495	1	5.2380	ng/mL	5.0000

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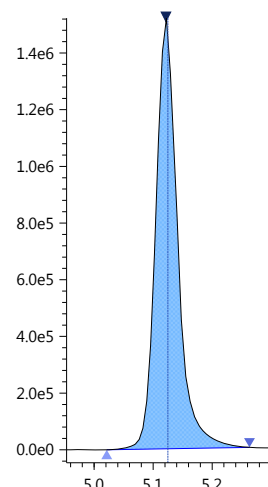
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.208	410051	410051	23	5.0000	ng/mL	5.0000
6_2-FTS_1	Auto	4.575	73902	296238	24	0.9933	ng/mL	0.9512
6_2-FTS-13C	Auto	4.575	296238	3910495	1	4.9150	ng/mL	5.0000
6_2-FTS-13C_IS	Auto	4.575	296238	296238	24	5.0000	ng/mL	5.0000
8_2-FTS_1	Auto	4.938	35388	212189	25	1.0646	ng/mL	0.9600
8_2-FTS-13C	Auto	4.938	212189	3910495	1	4.5386	ng/mL	5.0000
8_2-FTS-13C_IS	Auto	4.938	212189	212189	25	5.0000	ng/mL	5.0000
10_2-FTS_1	Auto	5.301	31780	212189	25	1.0104	ng/mL	0.9662
HFPO_DA	Auto	4.306	169222	954457	26	0.8261	ng/mL	1.0000
HFPO_DA-13C	Auto	4.306	954457	3910495	1	5.1232	ng/mL	5.0000
HFPO_DA-13C_IS	Auto	4.306	954457	954457	26	5.0000	ng/mL	5.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.122 Area 3910495

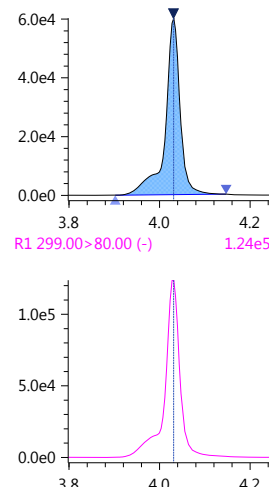
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.8967
RT 4.031 Area 137051
R#1 213.18 (0.00)

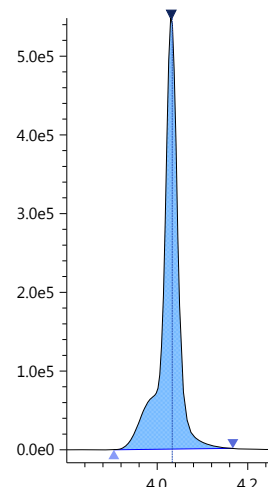
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.8032
RT 4.031 Area 1263417

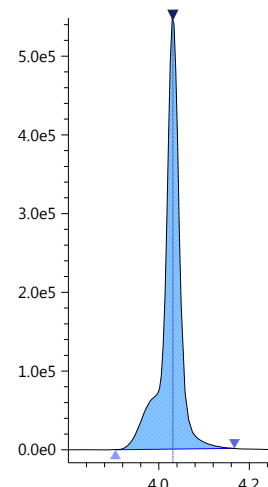
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.031 Area 1263417

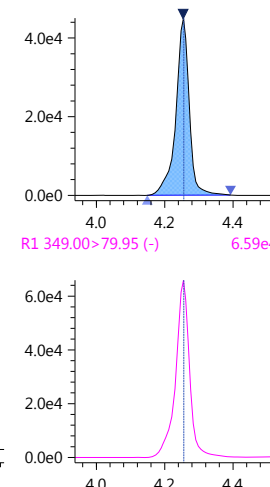
ISTD 301.80>80.00 (-)



PFPeS

Conc 0.9338
RT 4.254 Area 122553
R#1 146.60 (0.00)

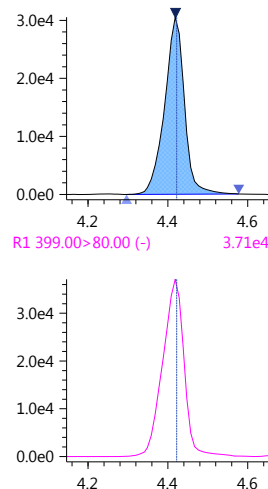
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.9707
RT 4.419 Area 104908
R#1 121.66 (0.00)

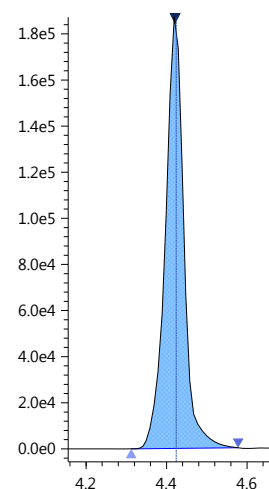
Q 399.00>99.00 (-)



PFHxS-180

Conc 4.2857
RT 4.421 Area 597260

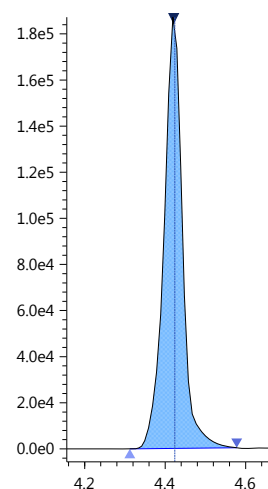
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.421 Area 597260

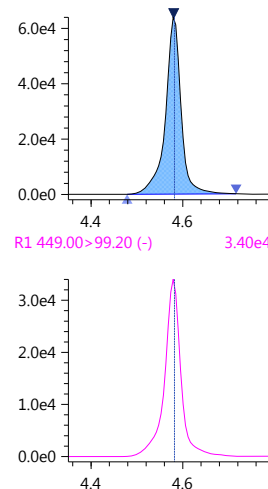
ISTD 402.70>84.05 (-)



PFHpS_1

Conc 1.0804
RT 4.580 Area 151609
R#1 53.07 (0.00)

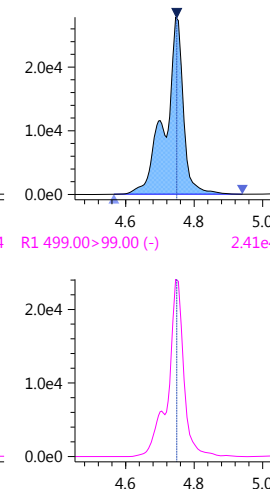
Q 449.00>80.15 (-)



PFOS_1

Conc 0.8916
RT 4.749 Area 103579
R#1 86.87 (0.00)

Q 499.00>80.00 (-)



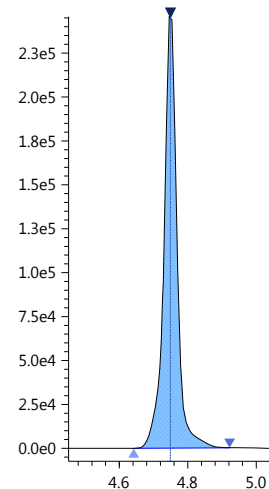
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PFOS-13C

Conc 4.7870
 RT 4.750 Area 658373

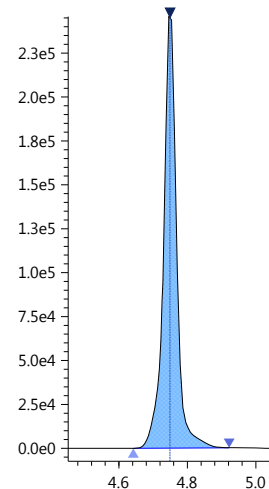
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.750 Area 658373

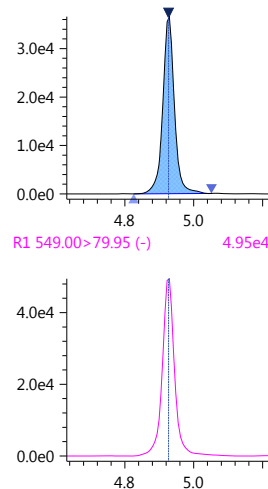
ISTD 502.80>80.05 (-)



PFNS

Conc 0.9964
 RT 4.927 Area 86154
 R#1 137.83 (0.00)

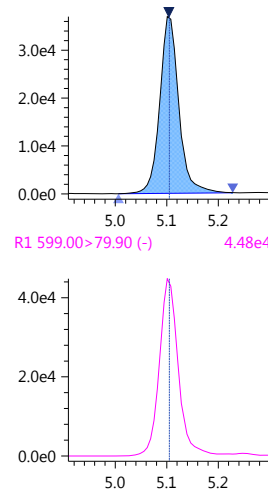
Q 549.00>99.00 (-)



PFDS_1

Conc 1.0632
 RT 5.104 Area 95156
 R#1 117.17 (0.00)

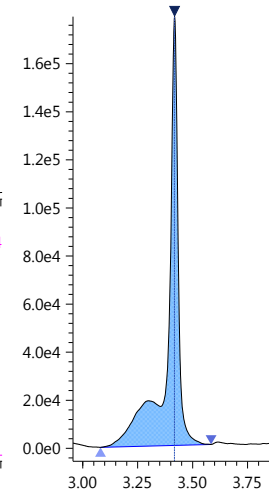
Q 599.00>99.10 (-)



PFBA

Conc 0.9898
 RT 3.418 Area 593367

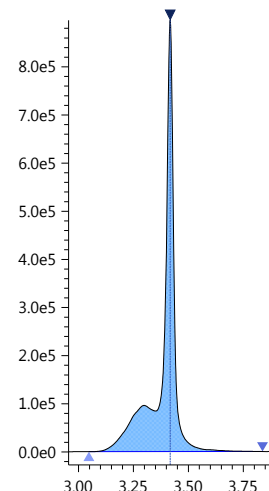
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.6288
 RT 3.417 Area 3050510

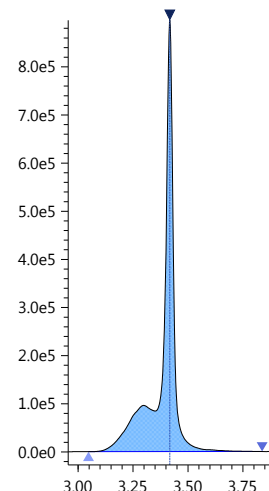
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.417 Area 3050510

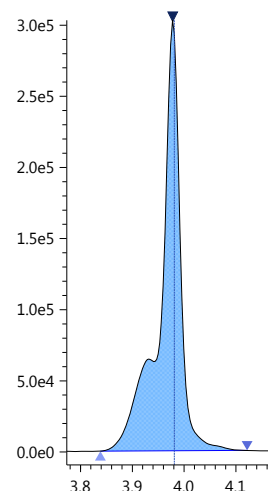
ISTD 216.90>172.15 (-)



PFPeA

Conc 0.9914
 RT 3.978 Area 811853

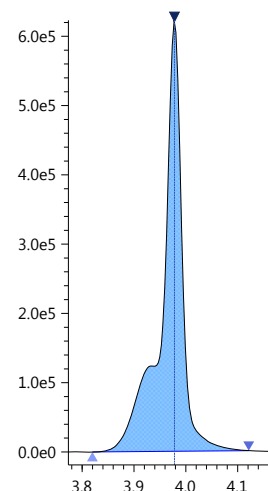
Q 263.05>219.10 (-)



PFPeA-13C

Conc 4.6927
 RT 3.978 Area 1662997

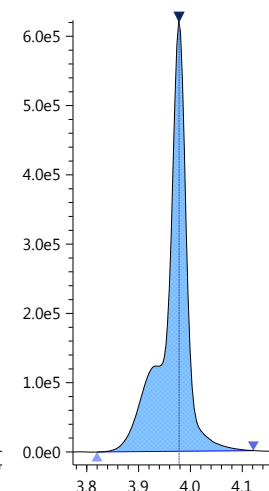
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.978 Area 1662997

ISTD 267.90>223.00 (-)

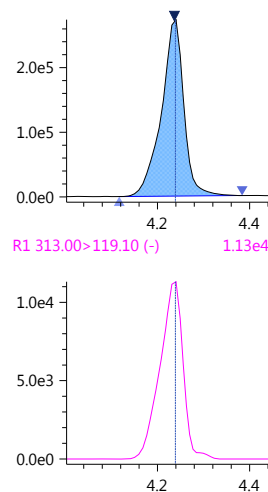


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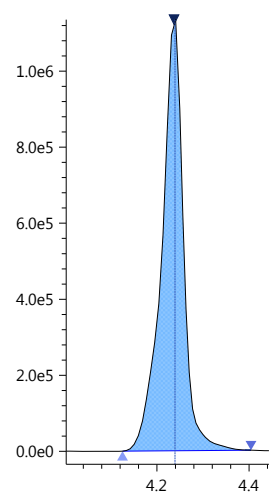
PFHxA

Conc 0.9285
 RT 4.237 Area 921620
 R#1 4.23 (0.00)
 Q 313.00>269.00 (-) 2.74e5



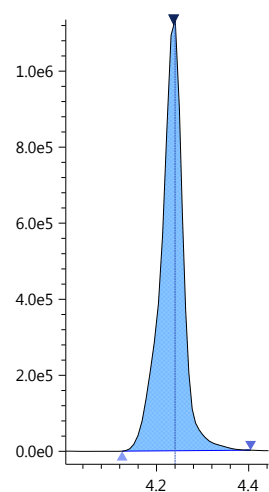
PFHxA-13C

Conc 4.6681
 RT 4.237 Area 3708805
 Q 314.90>270.10 (-) 1.14e6



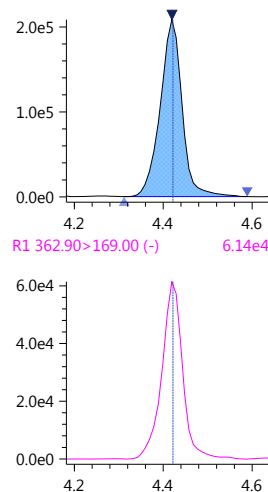
PFHxA-13C_IS

Conc 5.0000
 RT 4.237 Area 3708805
 ISTD 314.90>270.10 (-) 1.14e6



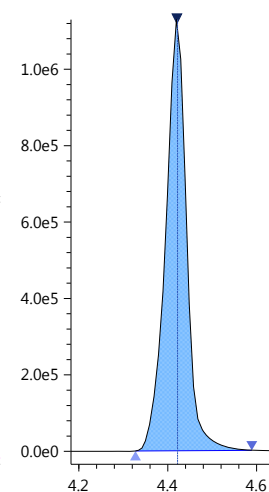
PFHpA

Conc 0.9701
 RT 4.420 Area 712234
 R#1 29.34 (0.00)
 Q 362.90>319.00 (-) 2.09e5



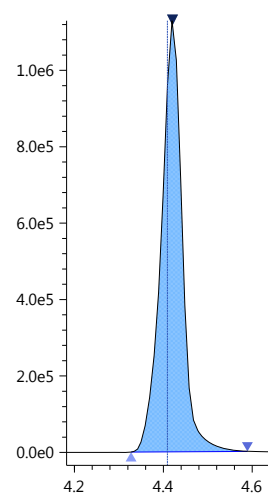
PFHpA-13C

Conc 4.3529
 RT 4.420 Area 3702605
 Q 366.90>322.10 (-) 1.13e6



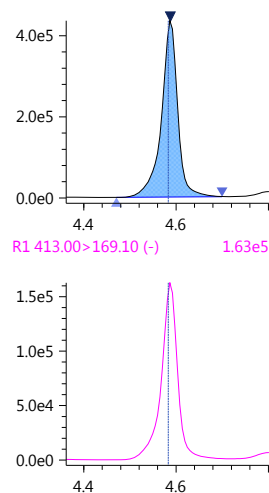
PFHpA-13C_IS

Conc 5.0000
 RT 4.420 Area 3702605
 ISTD 366.90>322.10 (-) 1.13e6



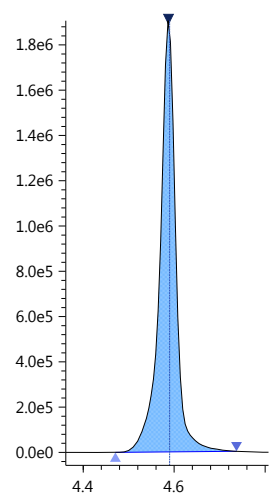
PFOA

Conc 0.9479
 RT 4.588 Area 1064797
 R#1 37.26 (0.00)
 Q 413.00>369.00 (-) 4.37e5



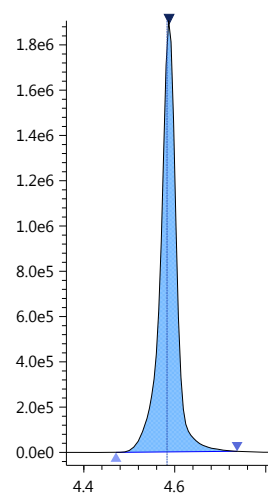
PFOA-13C

Conc 5.0427
 RT 4.587 Area 4582165
 Q 416.80>372.05 (-) 1.91e6



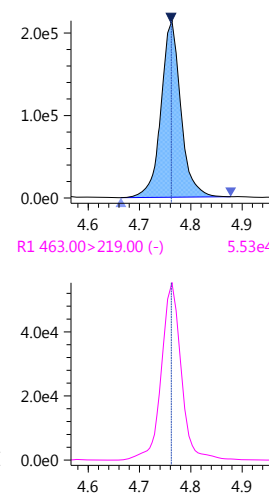
PFOA-13C_IS

Conc 5.0000
 RT 4.587 Area 4582165
 ISTD 416.80>372.05 (-) 1.91e6



PFNA

Conc 0.8830
 RT 4.761 Area 572118
 R#1 25.79 (0.00)
 Q 463.00>418.90 (-) 2.15e5



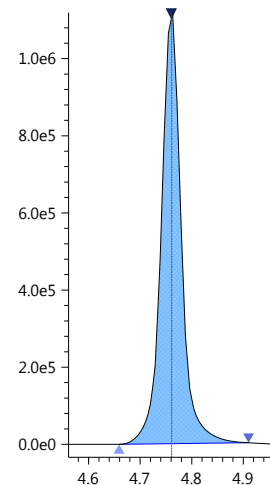
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PFNA-13C

Conc 4.8692
 RT 4.760 Area 3027142

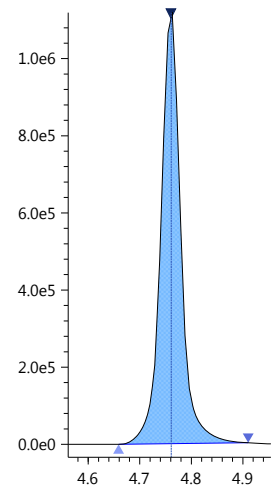
Q 467.80>423.00 (-)



PFNA-13C_IS

Conc 5.0000
 RT 4.760 Area 3027142

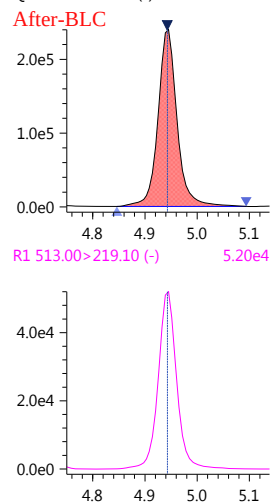
1.12e6 ISTD 467.80>423.00 (-)



PFDA

Conc 0.9897
 RT 4.943 Area 608934
 R#1 21.72 (0.00)

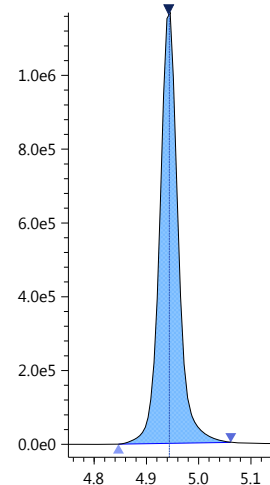
Q 513.00>468.80 (-)



PFDA-13C

Conc 5.0971
 RT 4.943 Area 2886943

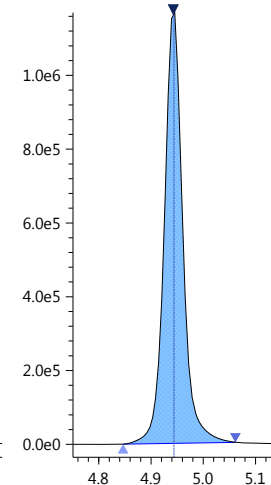
Q 514.80>469.95 (-)



PFDA-13C_IS

Conc 5.0000
 RT 4.943 Area 2886943

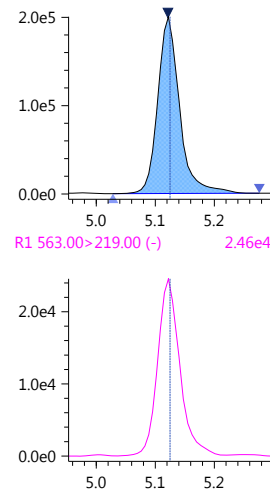
1.17e6 ISTD 514.80>469.95 (-)



PFUnA

Conc 1.0256
 RT 5.122 Area 513339
 R#1 12.27 (0.00)

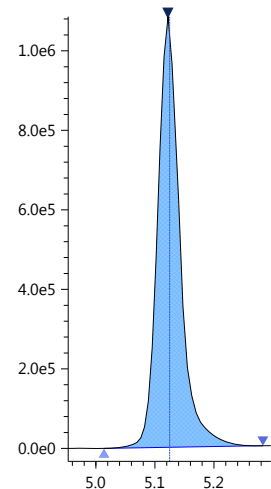
Q 563.00>518.90 (-)



PFUnA-13C

Conc 4.8263
 RT 5.122 Area 2831899

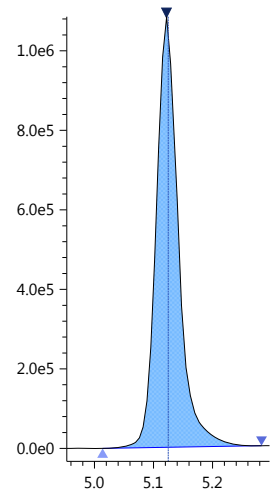
Q 564.80>519.95 (-)



PFUnA-13C_IS

Conc 5.0000
 RT 5.122 Area 2831899

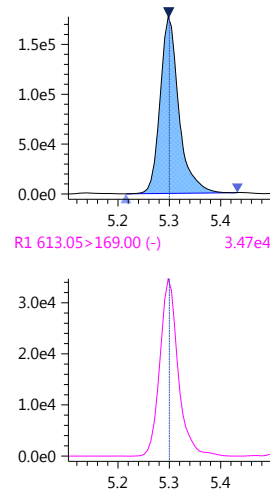
1.09e6 ISTD 564.80>519.95 (-)



PFDaA

Conc 0.9250
 RT 5.299 Area 449369
 R#1 19.56 (0.00)

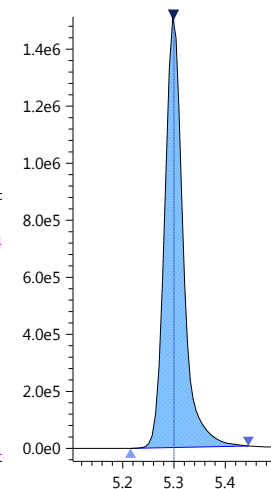
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.8782
 RT 5.299 Area 3793672

1.78e5 Q 614.80>569.95 (-)



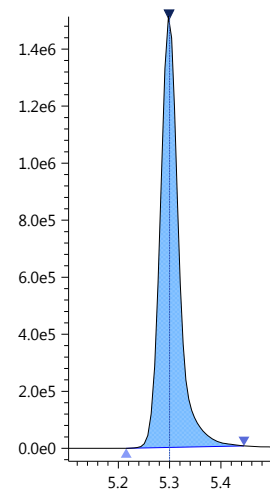
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PFDaA-13C_IS

Conc 5.0000
RT 5.299 Area 3793672

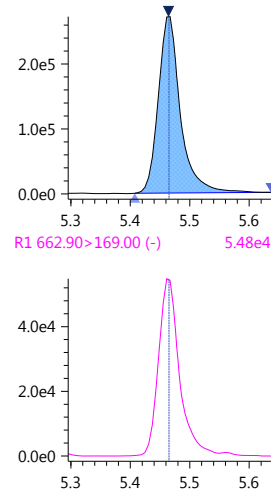
ISTD 614.80>569.95 (-) 1.51e6



PFTrDA

Conc 1.0188
RT 5.464 Area 701470
R#1 19.87 (0.00)

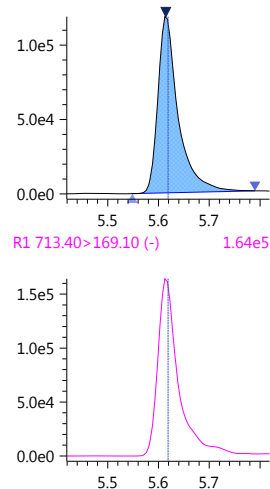
Q 663.00>618.90 (-) 2.73e5



PFTeDA

Conc 0.9401
RT 5.615 Area 329794
R#1 138.61 (0.00)

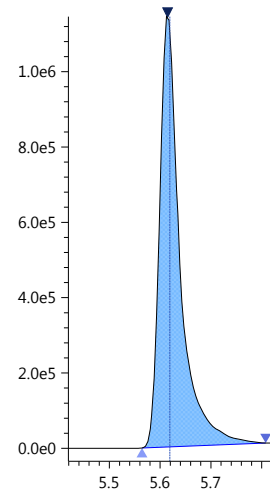
Q 713.40>669.00 (-) 1.19e5



PFTeDA-13C

Conc 4.7578
RT 5.615 Area 3216164

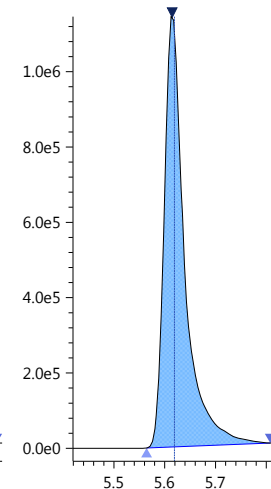
Q 714.70>669.90 (-) 1.15e6



PFTeDA-13C_IS

Conc 5.0000
RT 5.615 Area 3216164

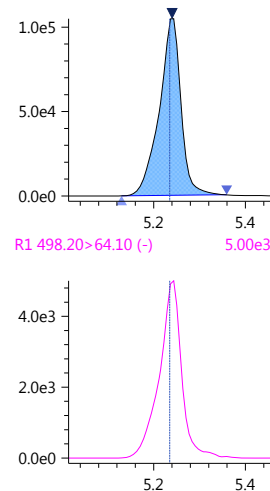
ISTD 714.70>669.90 (-) 1.15e6



FOSA

Conc 0.9979
RT 5.240 Area 343323
R#1 4.68 (0.00)

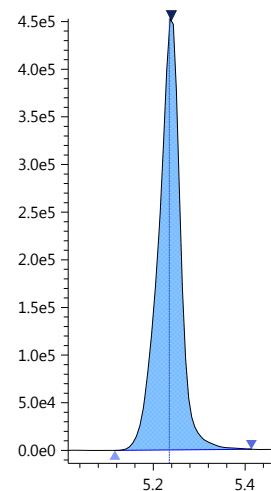
Q 498.20>78.00 (-) 1.05e5



FOSA-13C

Conc 4.5973
RT 5.239 Area 1510647

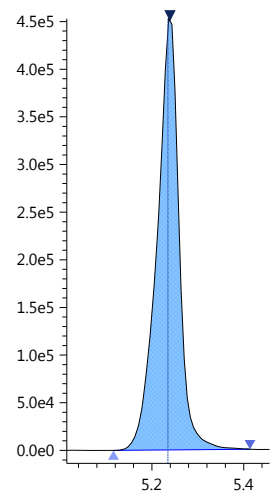
Q 506.00>78.05 (-) 4.53e5



FOSA-13C_IS

Conc 5.0000
RT 5.239 Area 1510647

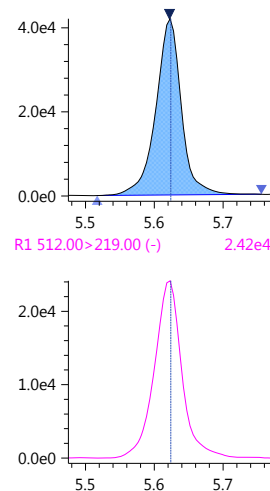
ISTD 506.00>78.05 (-) 4.53e5



N-MeFOSA

Conc 0.9444
RT 5.622 Area 107961
R#1 57.00 (0.00)

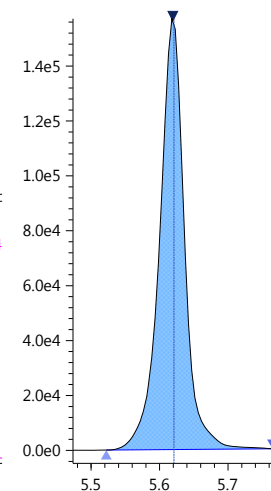
Q 512.00>169.10 (-) 4.22e4



N-MeFOSA-d3

Conc 4.6550
RT 5.619 Area 397306

Q 514.90>168.90 (-) 1.57e5



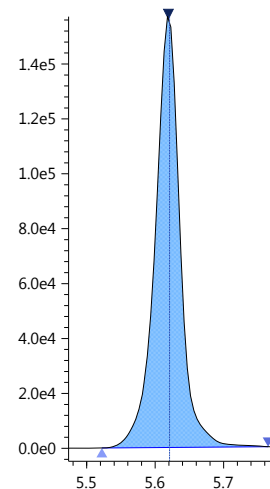
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N-MeFOSA-d3_IS

Conc 5.0000
RT 5.619 Area 397306

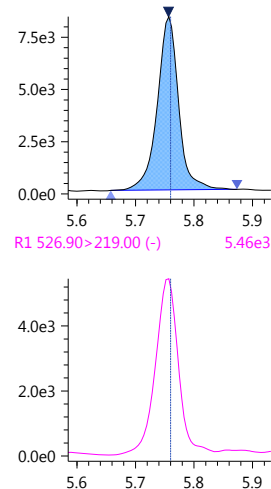
ISTD 514.90>168.90 (-) 1.57e5



N-EtFOSA

Conc 0.9580
RT 5.756 Area 20974
R#1 63.88 (0.00)

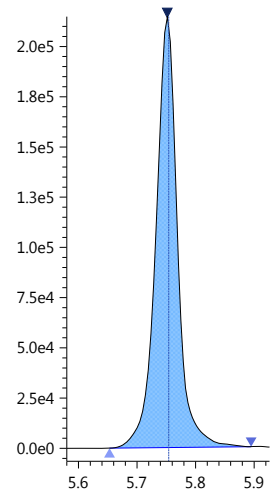
Q 526.90>169.10 (-) 8.49e3



N-EtFOSA-d9

Conc 4.4907
RT 5.752 Area 550670

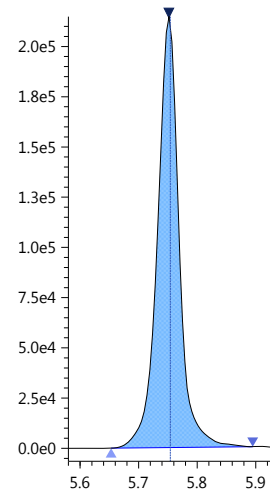
Q 530.90>169.15 (-) 2.15e5



N-EtFOSA-d9_IS

Conc 5.0000
RT 5.752 Area 550670

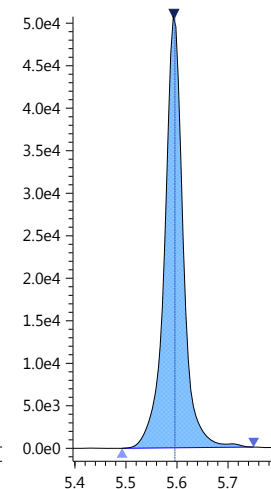
ISTD 530.90>169.15 (-) 2.15e5



N-MeFOSE

Conc 0.9779
RT 5.594 Area 128548

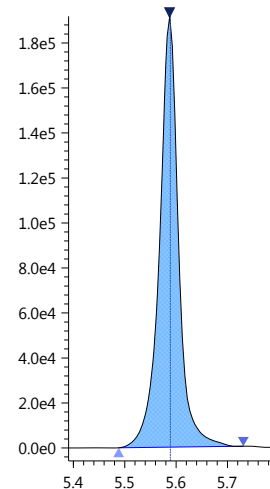
Q 616.00>59.00 (-) 5.08e4



N-MeFOSE-d7

Conc 4.7762
RT 5.587 Area 492166

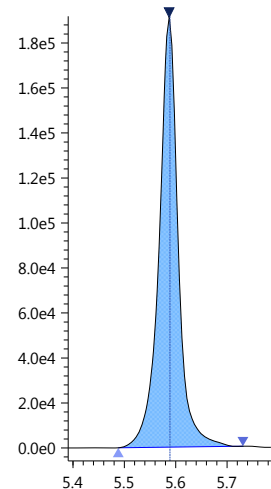
Q 622.70>59.10 (-) 1.92e5



N-MeFOSE-d7_IS

Conc 5.0000
RT 5.587 Area 492166

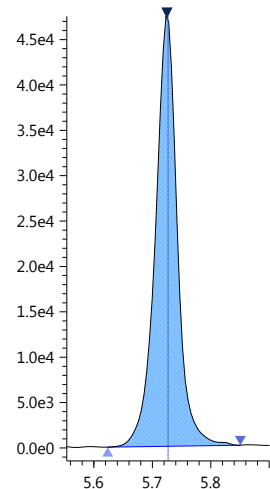
ISTD 622.70>59.10 (-) 1.92e5



N-EtFOSE

Conc 0.9596
RT 5.725 Area 123874

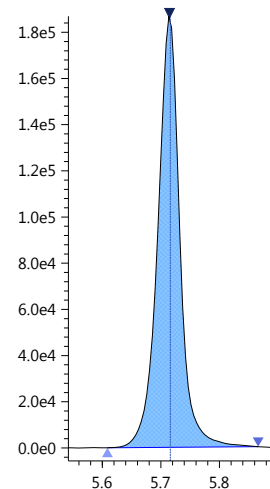
Q 630.00>58.90 (-) 4.76e4



N-EtFOSE-d9

Conc 4.9198
RT 5.715 Area 489333

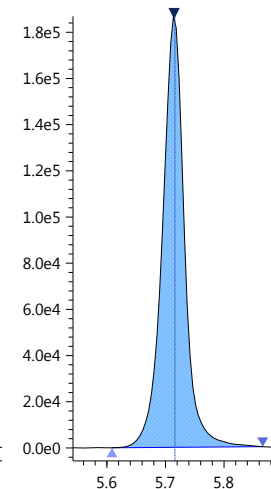
Q 638.70>59.10 (-) 1.87e5



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.715 Area 489333

ISTD 638.70>59.10 (-) 1.87e5



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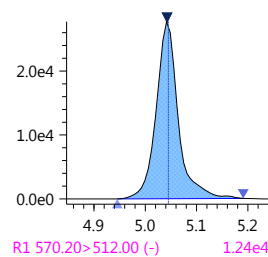
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N-MeFOSAA

Conc 1.2315
 RT 5.043 Area 82528
 R#1 44.28 (0.00)

Q 570.20>419.00 (-)

2.77e4

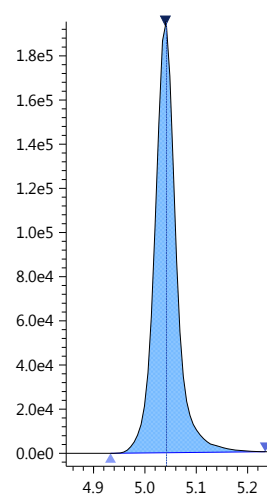


N-MeFOSAA-d3

Conc 4.6751
 RT 5.040 Area 566593

Q 572.80>419.05 (-)

1.95e5

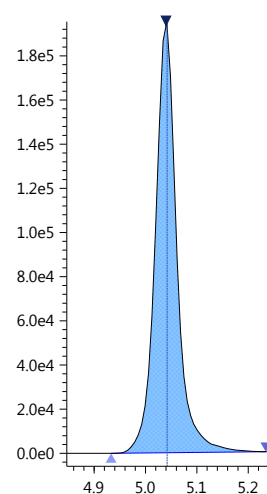


N-MeFOSAA-d3_IS

Conc 5.0000
 RT 5.040 Area 566593

ISTD 572.80>419.05 (-)

1.95e5

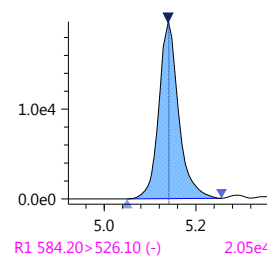


N-EtFOSAA

Conc 0.9801
 RT 5.139 Area 58923
 R#1 104.22 (0.00)

Q 584.20>418.95 (-)

1.98e4

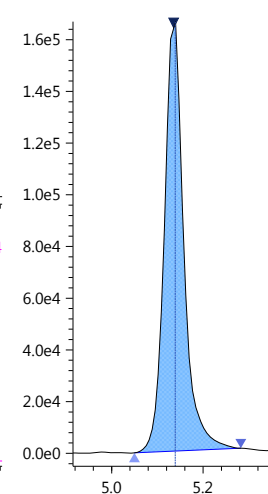


N-EtFOSAA-d5

Conc 5.0105
 RT 5.135 Area 494362

Q 588.80>419.00 (-)

1.67e5

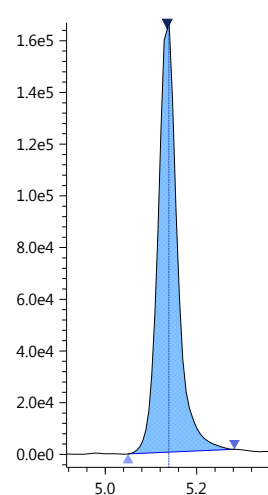


N-EtFOSAA-d5_IS

Conc 5.0000
 RT 5.135 Area 494362

ISTD 588.80>419.00 (-)

1.67e5

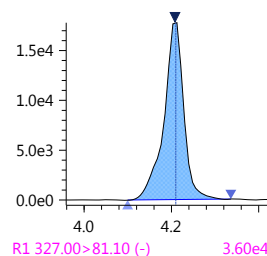


4_2-FTS_1

Conc 0.8152
 RT 4.208 Area 56254
 R#1 204.22 (0.00)

Q 327.00>307.05 (-)

1.78e4

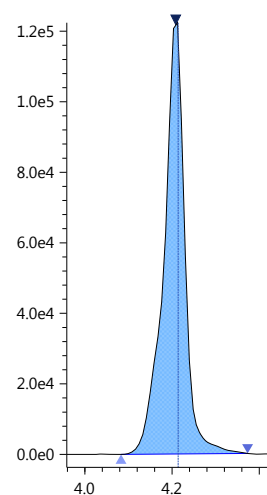


4_2-FTS-13C

Conc 5.2380
 RT 4.208 Area 410051

Q 328.80>309.05 (-)

1.22e5

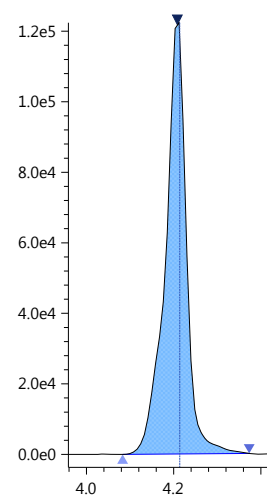


4_2-FTS-13C_IS

Conc 5.0000
 RT 4.208 Area 410051

ISTD 328.80>309.05 (-)

1.22e5

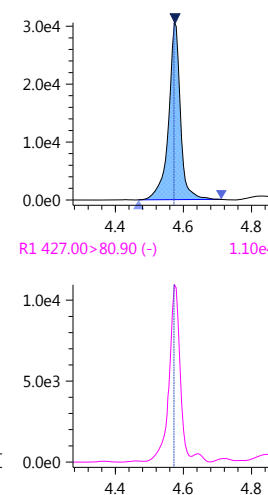


6_2-FTS_1

Conc 0.9933
 RT 4.575 Area 73902
 R#1 35.64 (0.00)

Q 427.00>407.00 (-)

3.06e4



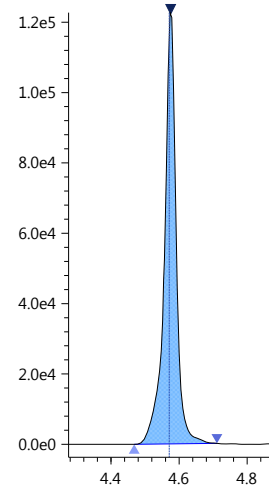
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6_2-FTS-13C

Conc 4.9150
 RT 4.575 Area 296238

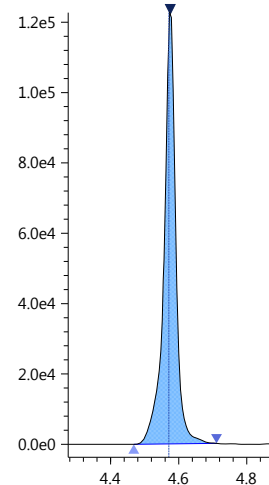
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc 5.0000
 RT 4.575 Area 296238

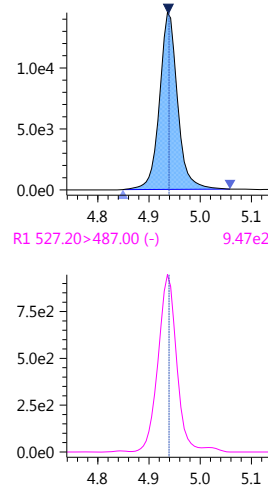
1.23e5 ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc 1.0646
 RT 4.938 Area 35388
 R#1 6.48 (0.00)

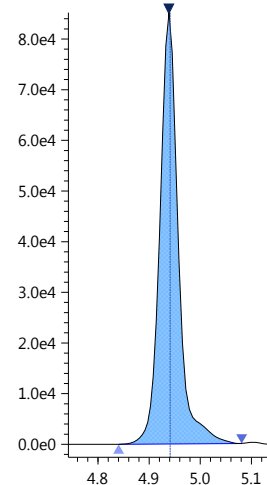
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc 4.5386
 RT 4.938 Area 212189

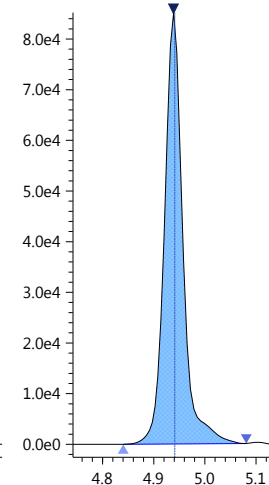
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc 5.0000
 RT 4.938 Area 212189

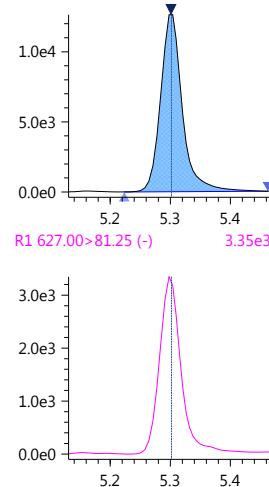
8.52e4 ISTD 528.80>509.00 (-)



10_2-FtS_1

Conc 1.0104
 RT 5.301 Area 31780
 R#1 26.56 (0.00)

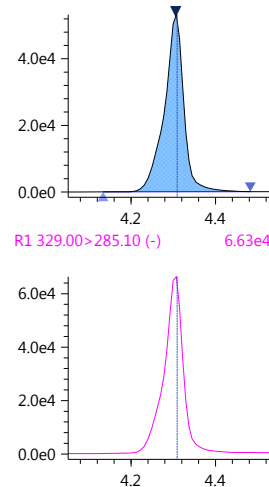
Q 627.00>606.95 (-)



HPFO_DA

Conc 0.8261
 RT 4.306 Area 169222
 R#1 128.28 (0.00)

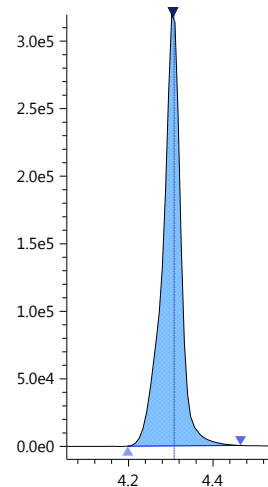
1.26e4 Q 329.00>169.00 (-)



HPFO_DA-13C

Conc 5.1232
 RT 4.306 Area 954457

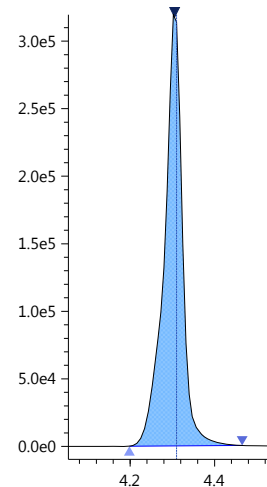
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.306 Area 954457

3.20e5 ISTD 332.00>286.80 (-)



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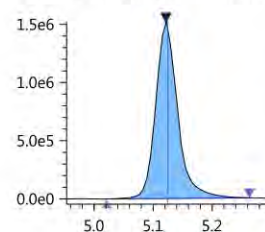
Printed at 12/3/2019 9:26:07 AM

191202_029

Sample ID: 1.0 PPB ICV NO10:2 FTS
Date acquired: 12/2/2019 7:34:54 PM
Acquired by: System Administrator
Data File: J:\LCMS06\Data\191202_curve\191202_029.lcd
Vial: 8 | Inj. Volume: 15.0000uL | Tray: 0

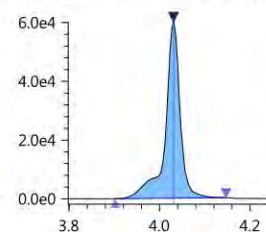
13C7-PFUnDA_IS

Conc 5.0000
RT 5.122 Area 3910495
ISTD 570.00>525.00 (-)



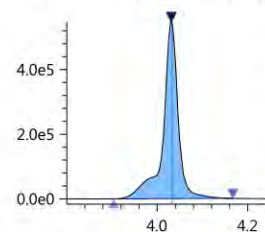
PFBS_1

Conc 0.8967
RT 4.031 Area 137051
Q 298.80>99.00 (-)



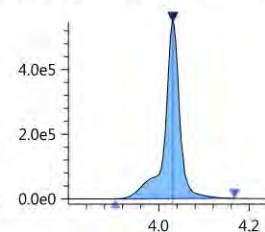
PFBS-13C

Conc 4.8032
RT 4.031 Area 1263417
Q 301.80>80.00 (-)



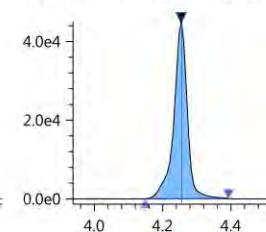
PFBS-13C_IS

Conc 5.0000
RT 4.031 Area 1263417
ISTD 301.80>80.00 (-)



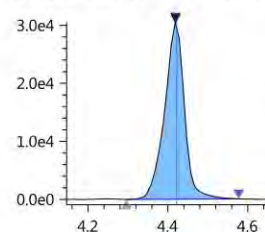
PFPeS

Conc 0.9386
RT 4.254 Area 122553
Q 349.00>99.00 (-)



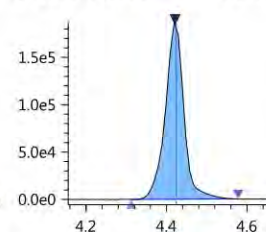
PFHxS_1

Conc 0.9722
RT 4.419 Area 104908
Q 399.00>99.00 (-)



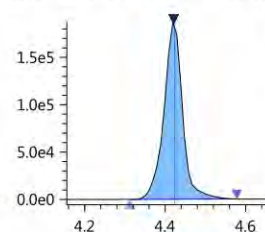
PFHxS-180

Conc 4.2857
RT 4.421 Area 597260
Q 402.70>84.05 (-)



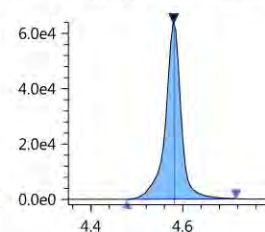
PFHxS-180_IS

Conc 5.0000
RT 4.421 Area 597260
ISTD 402.70>84.05 (-)



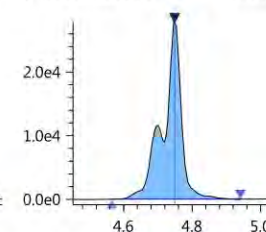
PFHpS_1

Conc 1.0805
RT 4.580 Area 151609
Q 449.00>80.15 (-)



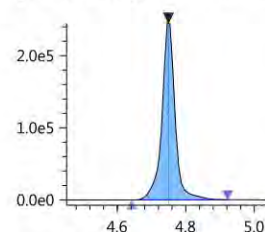
PFOS_1

Conc 0.8971
RT 4.749 Area 103579
Q 499.00>80.00 (-)



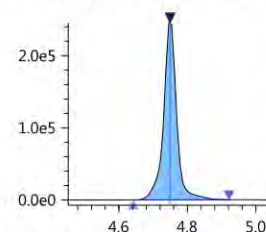
PFOS-13C

Conc 4.7870
RT 4.750 Area 658373
Q 502.80>80.05 (-)



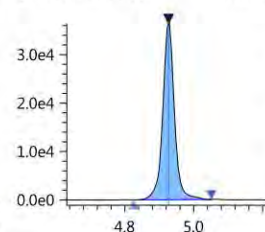
PFOS-13C_IS

Conc 5.0000
RT 4.750 Area 658373
ISTD 502.80>80.05 (-)



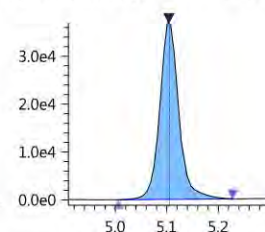
PFNS

Conc 0.9894
RT 4.927 Area 86154
Q 549.00>99.00 (-)



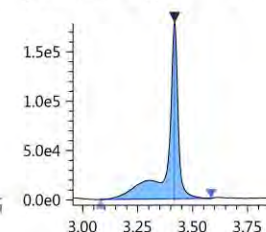
PFDS_1

Conc 1.0653
RT 5.104 Area 95156
Q 599.00>99.10 (-)



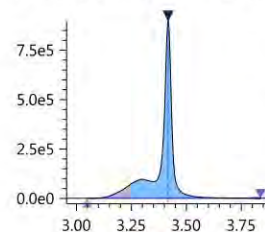
PFBA

Conc 0.9898
RT 3.418 Area 593367
Q 213.00>169.10 (-)



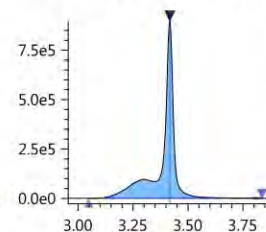
PFBA-13C

Conc 4.6288
RT 3.417 Area 3050510
Q 216.90>172.15 (-)



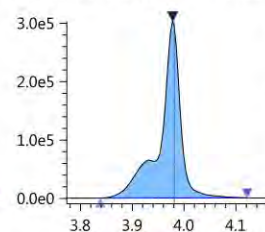
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Conc 5.0000
RT 3.417 Area 3050510
ISTD 216.90>172.15 (-)



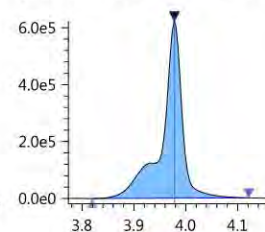
PFPeA

Conc 0.9914
RT 3.978 Area 811853
Q 263.05>219.10 (-)



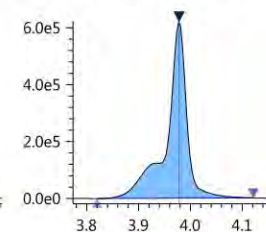
PFPeA-13C

Conc 4.6927
RT 3.978 Area 1662997
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
RT 3.978 Area 1662997
ISTD 267.90>223.00 (-)

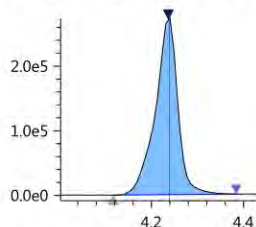


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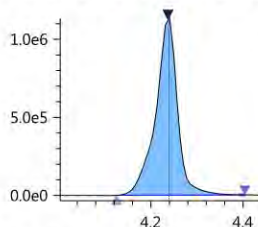
PFHxA

Conc 0.9287
RT 4.237 Area 921620
Q 313.00>269.00 (-)



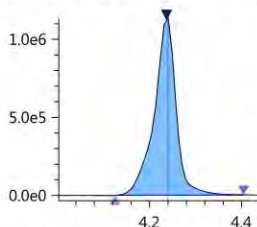
PFHxA-13C

Conc 4.6681
RT 4.237 Area 3708805
Q 314.90>270.10 (-)



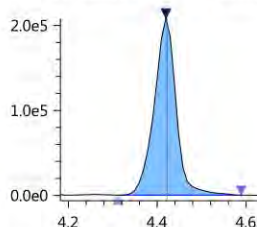
PFHxA-13C_IS

Conc 5.0000
RT 4.237 Area 3708805
ISTD 314.90>270.10 (-)



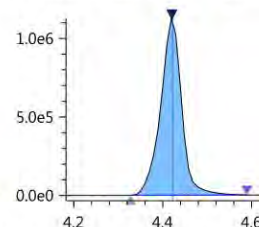
PFHpA

Conc 0.9701
RT 4.420 Area 712234
Q 362.90>319.00 (-)



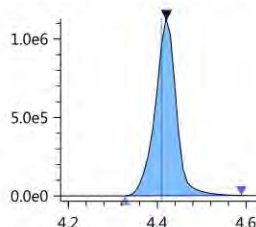
PFHpA-13C

Conc 4.3529
RT 4.420 Area 3702605
Q 366.90>322.10 (-)



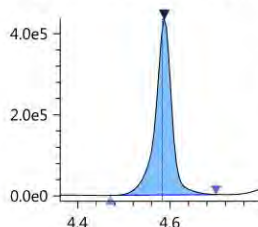
PFHpA-13C_IS

Conc 5.0000
RT 4.420 Area 3702605
ISTD 366.90>322.10 (-)



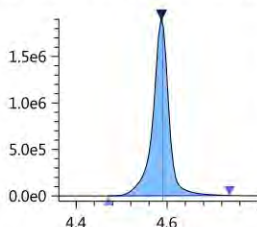
PFOA

Conc 0.9480
RT 4.588 Area 1064797
Q 413.00>369.00 (-)



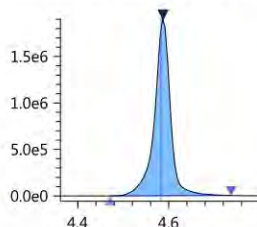
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Conc 5.0427
RT 4.587 Area 4582165
Q 416.80>372.05 (-)



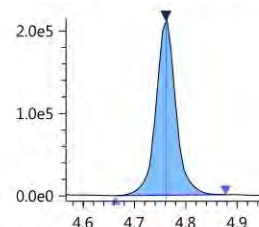
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Conc 5.0000
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ISTD 416.80>372.05 (-)



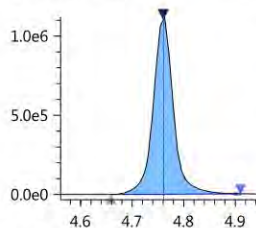
PFNA

Conc 0.8832
RT 4.761 Area 572118
Q 463.00>418.90 (-)



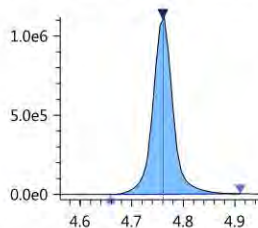
PFNA-13C

Conc 4.8692
RT 4.760 Area 3027142
Q 467.80>423.00 (-)



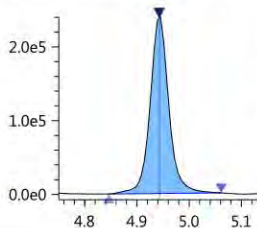
PFNA-13C_IS

Conc 5.0000
RT 4.760 Area 3027142
ISTD 467.80>423.00 (-)



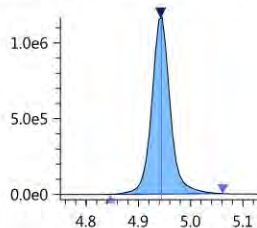
PFDA

Conc 0.9702
RT 4.943 Area 597438
Q 513.00>468.80 (-)



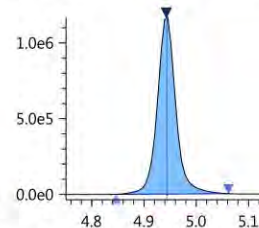
PFDA-13C

Conc 5.0971
RT 4.943 Area 2886943
Q 514.80>469.95 (-)



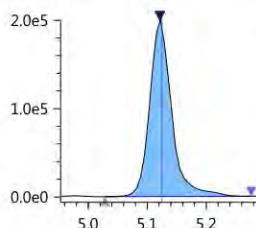
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Conc 5.0000
RT 4.943 Area 2886943
ISTD 514.80>469.95 (-)



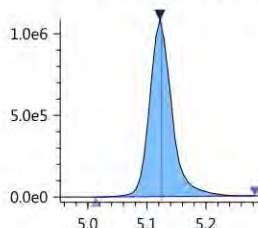
PFUnA

Conc 1.0259
RT 5.122 Area 513339
Q 563.00>518.90 (-)



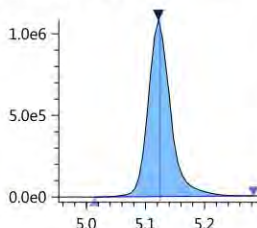
PFUnA-13C

Conc 4.8263
RT 5.122 Area 2831899
Q 564.80>519.95 (-)



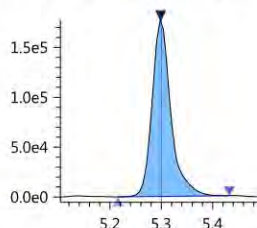
PFUnA-13C_IS

Conc 5.0000
RT 5.122 Area 2831899
ISTD 564.80>519.95 (-)



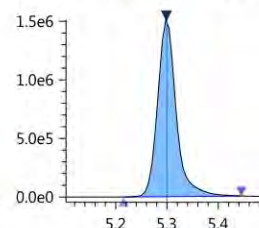
PFDaA

Conc 0.9046
RT 5.299 Area 449369
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.8782
RT 5.299 Area 3793672
Q 614.80>569.95 (-)

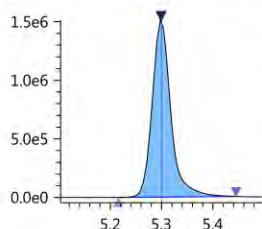


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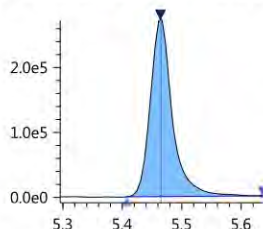
PFDaA-13C_IS

Conc 5.0000
RT 5.299 Area 3793672
ISTD 614.80>569.95 (-)



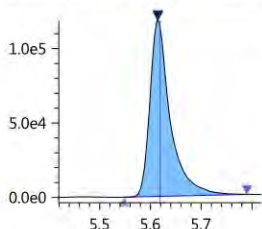
PFTrDA

Conc 1.0188
RT 5.464 Area 701470
Q 663.00>618.90 (-)



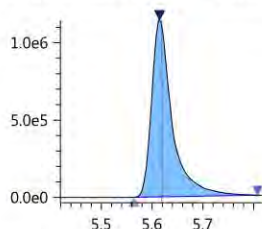
PFTeDA

Conc 0.9384
RT 5.615 Area 329794
Q 713.40>669.00 (-)



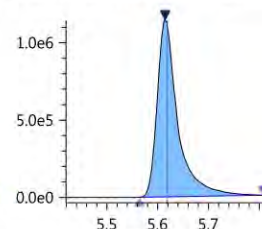
PFTeDA-13C

Conc 4.7578
RT 5.615 Area 3216164
Q 714.70>669.90 (-)



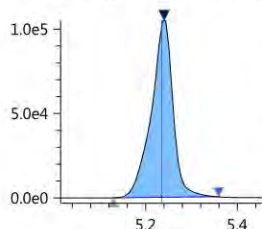
PFTeDA-13C_IS

Conc 5.0000
RT 5.615 Area 3216164
ISTD 714.70>669.90 (-)



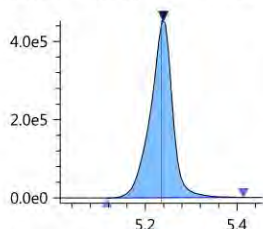
FOSA

Conc 0.9979
RT 5.240 Area 343323
Q 498.20>78.00 (-)



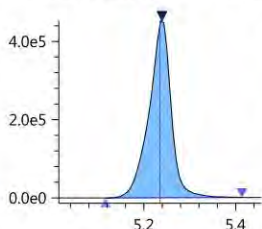
FOSA-13C

Conc 4.5973
RT 5.239 Area 1510647
Q 506.00>78.05 (-)



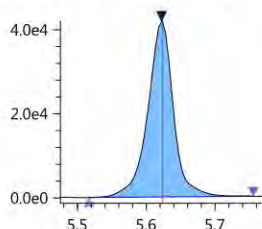
FOSA-13C_IS

Conc 5.0000
RT 5.239 Area 1510647
ISTD 506.00>78.05 (-)



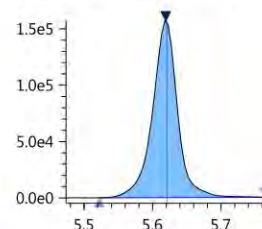
N-MeFOSA

Conc 0.9410
RT 5.622 Area 107961
Q 512.00>169.10 (-)



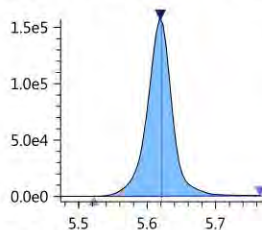
N-MeFOSA-d3

Conc 4.6550
RT 5.619 Area 397306
Q 514.90>168.90 (-)



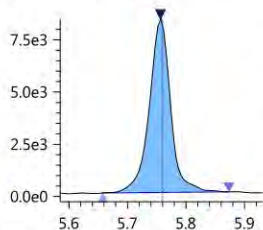
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.619 Area 397306
ISTD 514.90>168.90 (-)



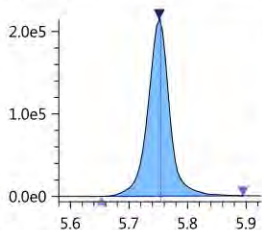
N-EtFOSA

Conc 0.9679
RT 5.756 Area 20974
Q 526.90>169.10 (-)



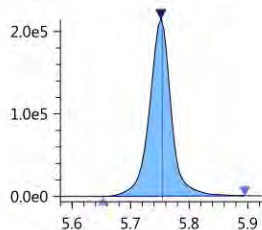
N-EtFOSA-d9

Conc 4.4907
RT 5.752 Area 550670
Q 530.90>169.15 (-)



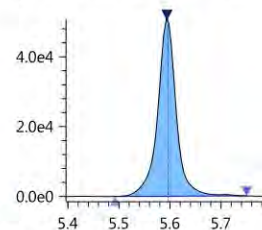
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.752 Area 550670
ISTD 530.90>169.15 (-)



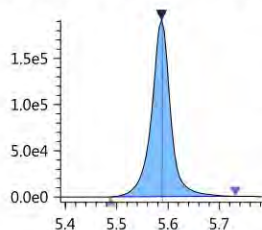
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Conc 0.9773
RT 5.594 Area 128548
Q 616.00>59.00 (-)



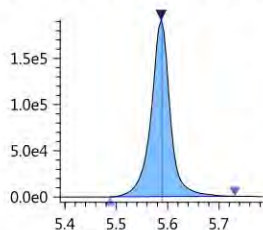
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Conc 4.7762
RT 5.587 Area 492166
Q 622.70>59.10 (-)



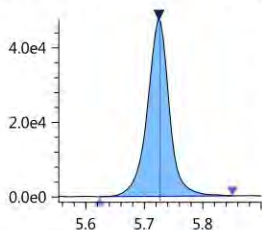
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.587 Area 492166
ISTD 622.70>59.10 (-)



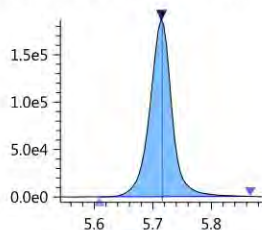
N-EtFOSE

Conc 0.9587
RT 5.725 Area 123874
Q 630.00>58.90 (-)



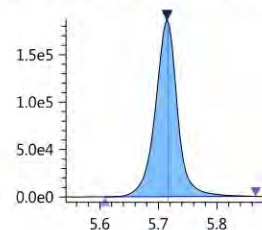
N-EtFOSE-d9

Conc 4.9198
RT 5.715 Area 489333
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.715 Area 489333
ISTD 638.70>59.10 (-)

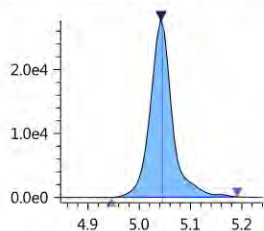


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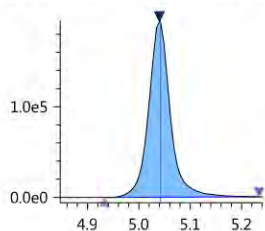
N-MeFOSAA

Conc 1.2336
RT 5.043 Area 82528
Q 570.20>419.00 (-)



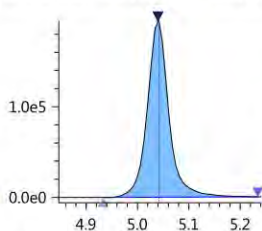
N-MeFOSAA-d3

Conc 4.6751
RT 5.040 Area 566593
Q 572.80>419.05 (-)



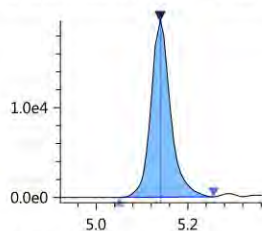
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.040 Area 566593
ISTD 572.80>419.05 (-)



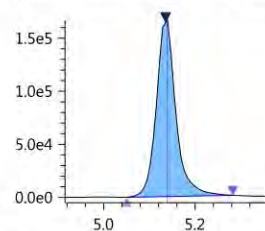
N-EtFOSAA

Conc 1.0358
RT 5.139 Area 58923
Q 584.20>418.95 (-)



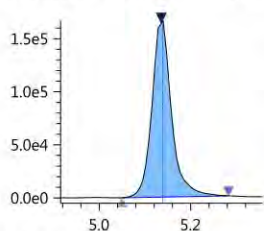
N-EtFOSAA-d5

Conc 5.0105
RT 5.135 Area 494362
Q 588.80>419.00 (-)



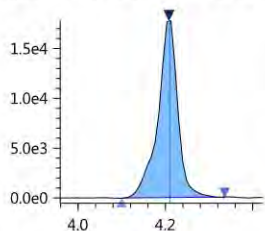
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.135 Area 494362
ISTD 588.80>419.00 (-)



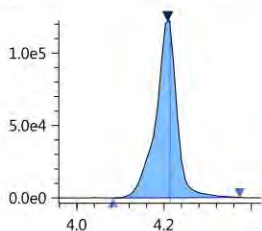
4_2-FTS_1

Conc 0.8156
RT 4.208 Area 56254
Q 327.00>307.05 (-)



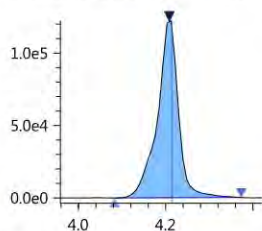
4_2-FTS-13C

Conc 5.2380
RT 4.208 Area 410051
Q 328.80>309.05 (-)



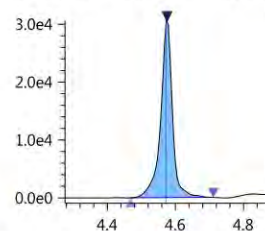
4_2-FTS-13C_IS

Conc 5.0000
RT 4.208 Area 410051
ISTD 328.80>309.05 (-)



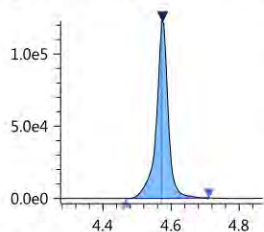
6_2-FTS_1

Conc 0.9964
RT 4.575 Area 73902
Q 427.00>407.00 (-)



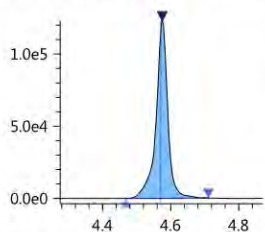
6_2-FTS-13C

Conc 4.9150
RT 4.575 Area 296238
Q 428.90>409.00 (-)



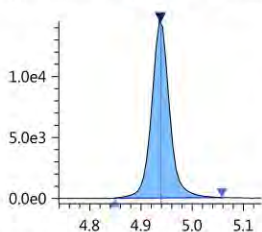
6_2-FTS-13C_IS

Conc 5.0000
RT 4.575 Area 296238
ISTD 428.90>409.00 (-)



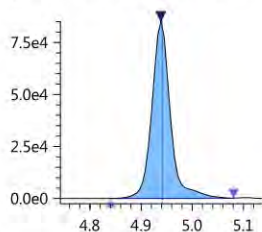
8_2-FTS_1

Conc 1.0656
RT 4.938 Area 35388
Q 527.10>506.90 (-)



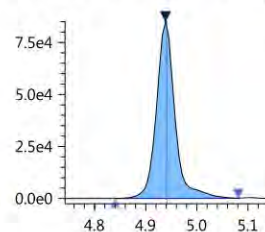
8_2-FTS-13C

Conc 4.5386
RT 4.938 Area 212189
Q 528.80>509.00 (-)



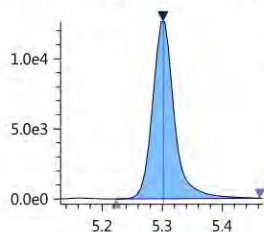
8_2-FTS-13C_IS

Conc 5.0000
RT 4.938 Area 212189
ISTD 528.80>509.00 (-)



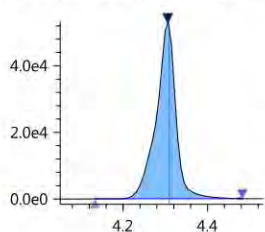
10_2-FtS_1

Conc 1.0105
RT 5.301 Area 31780
Q 627.00>606.95 (-)



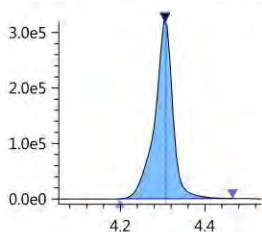
HPFO_DA

Conc 0.8261
RT 4.306 Area 169222
Q 329.00>169.00 (-)



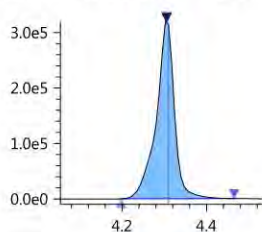
HPFO_DA-13C

Conc 5.1232
RT 4.306 Area 954457
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.306 Area 954457
ISTD 332.00>286.80 (-)



Insight Report

Printed at 12/3/2019 10:19:07 AM

191202_030

Sample ID: IB

Date acquired: 12/2/2019 7:45:23 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_030.lcd

Vial: 51 | Inj. Volume: 15.0000uL | Tray: 1

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.115	3916831	3916831	1	5.0000	ng/mL	----
PFBS_1	M	4.022	373	1161161	2	0.0027	ng/mL	----
PFBS-13C	Auto	4.025	1161161	3916831	1	4.4073	ng/mL	----
PFBS-13C_IS	Auto	4.025	1161161	1161161	2	5.0000	ng/mL	----
PFPeS	ND(W/B)	----	----	1161161	2	----	ng/mL	----
PFHxS_1	Auto	4.411	1450	648638	3	0.0124	ng/mL	----
PFHxS-18O	Auto	4.414	648638	3916831	1	4.6468	ng/mL	----
PFHxS-18O_IS	Auto	4.414	648638	648638	3	5.0000	ng/mL	----
PFHpS_1	ND(W/B)	----	----	648638	3	----	ng/mL	----
PFOS_1	M	4.744	424	627395	4	0.0038	ng/mL	----
PFOS-13C	Auto	4.743	627395	3916831	1	4.5544	ng/mL	----
PFOS-13C_IS	Auto	4.743	627395	627395	4	5.0000	ng/mL	----
PFNS	M	4.952	189	627395	4	0.0023	ng/mL	----
PFDS_1	ND(W/B)	----	----	627395	4	----	ng/mL	----
PFBA	M	3.415	1525	2865662	5	0.0027	ng/mL	----
PFBA-13C	Auto	3.411	2865662	3916831	1	4.3413	ng/mL	----
PFBA-13C_IS	Auto	3.411	2865662	2865662	5	5.0000	ng/mL	----
PFPeA	M	3.972	88531	1584767	6	0.0107	ng/mL	----
PFPeA-13C	Auto	3.972	1584767	3916831	1	4.4647	ng/mL	----
PFPeA-13C_IS	Auto	3.972	1584767	1584767	6	5.0000	ng/mL	----
PFHxA	M	4.209	40293	3188038	7	0.0195	ng/mL	----
PFHxA-13C	Auto	4.231	3188038	3916831	1	4.0062	ng/mL	----
PFHxA-13C_IS	Auto	4.231	3188038	3188038	7	5.0000	ng/mL	----
PFHpA	Auto	4.391	21951	4096135	8	0.0001	ng/mL	----
PFHpA-13C	Auto	4.413	4096135	3916831	1	4.8078	ng/mL	----
PFHpA-13C_IS	Auto	4.413	4096135	4096135	8	5.0000	ng/mL	----
PFOA	Auto	4.568	36689	4139608	9	0.0083	ng/mL	----
PFOA-13C	Auto	4.581	4139608	3916831	1	4.5483	ng/mL	----
PFOA-13C_IS	Auto	4.581	4139608	4139608	9	5.0000	ng/mL	----
PFNA	M	4.744	21358	2694972	10	0.0076	ng/mL	----
PFNA-13C	Auto	4.753	2694972	3916831	1	4.3279	ng/mL	----
PFNA-13C_IS	Auto	4.753	2694972	2694972	10	5.0000	ng/mL	----
PFDA	M	4.928	11988	2823685	11	0.0009	ng/mL	----
PFDA-13C	Auto	4.936	2823685	3916831	1	4.9774	ng/mL	----
PFDA-13C_IS	Auto	4.936	2823685	2823685	11	5.0000	ng/mL	----
PFUnA	Auto	5.113	15774	2981111	12	-0.0094	ng/mL	----
PFUnA-13C	Auto	5.115	2981111	3916831	1	5.0724	ng/mL	----
PFUnA-13C_IS	Auto	5.115	2981111	2981111	12	5.0000	ng/mL	----
PFDoA	Auto	5.280	11576	3566920	13	0.0009	ng/mL	----
PFDoA-13C	Auto	5.288	3566920	3916831	1	4.5792	ng/mL	----
PFDoA-13C_IS	Auto	5.288	3566920	3566920	13	5.0000	ng/mL	----
PFTeDA	M	5.449	11850	2940071	14	-0.0133	ng/mL	----
PFTeDA	Auto	5.605	40958	2940071	14	-0.0025	ng/mL	----
PFTeDA-13C	Auto	5.605	2940071	3916831	1	4.3423	ng/mL	----
PFTeDA-13C_IS	Auto	5.605	2940071	2940071	14	5.0000	ng/mL	----
FOSA	M	5.230	1157	1530995	16	0.0033	ng/mL	----
FOSA-13C	Auto	5.230	1530995	3916831	1	4.6517	ng/mL	----
FOSA-13C_IS	Auto	5.230	1530995	1530995	16	5.0000	ng/mL	----
N-MeFOSA	M	5.598	1034	400217	17	0.0090	ng/mL	----
N-MeFOSA-d3	Auto	5.610	400217	3916831	1	4.6815	ng/mL	----
N-MeFOSA-d3_IS	Auto	5.610	400217	400217	17	5.0000	ng/mL	----
N-EtFOSA	M	5.751	247	592024	18	0.0105	ng/mL	----
N-EtFOSA-d9	Auto	5.743	592024	3916831	1	4.8201	ng/mL	----
N-EtFOSA-d9_IS	Auto	5.743	592024	592024	18	5.0000	ng/mL	----
N-MeFOSE	M	5.584	94	515231	19	0.0007	ng/mL	----
N-MeFOSE-d7	Auto	5.579	515231	3916831	1	4.9919	ng/mL	----
N-MeFOSE-d7_IS	Auto	5.579	515231	515231	19	5.0000	ng/mL	----
N-EtFOSE	ND(W/B)	----	----	483519	20	----	ng/mL	----
N-EtFOSE-d9	Auto	5.706	483519	3916831	1	4.8535	ng/mL	----
N-EtFOSE-d9_IS	Auto	5.706	483519	483519	20	5.0000	ng/mL	----
N-MeFOSAA	M	5.041	617	548694	21	0.0316	ng/mL	----
N-MeFOSAA-d3	Auto	5.031	548694	3916831	1	4.5201	ng/mL	----
N-MeFOSAA-d3_IS	Auto	5.031	548694	548694	21	5.0000	ng/mL	----
N-EtFOSAA	ND(W/B)	----	----	450468	22	----	ng/mL	----
N-EtFOSAA-d5	Auto	5.126	450468	3916831	1	4.5582	ng/mL	----
N-EtFOSAA-d5_IS	Auto	5.126	450468	450468	22	5.0000	ng/mL	----
4_2-FTS_1	M	4.203	80	336318	23	0.0014	ng/mL	----
4_2-FTS-13C	Auto	4.203	336318	3916831	1	4.2892	ng/mL	----

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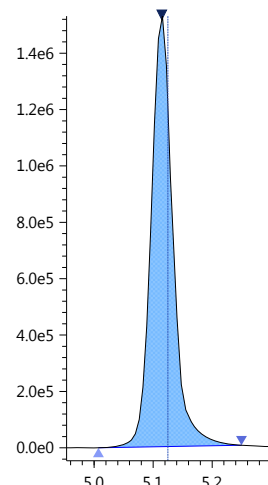
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	Auto	4.203	336318	336318	23	5.0000	ng/mL	----
6_2-FTS_1	M	4.572	424	273346	24	0.0062	ng/mL	----
6_2-FTS-13C	Auto	4.570	273346	3916831	1	4.5278	ng/mL	----
6_2-FTS-13C_IS	Auto	4.570	273346	273346	24	5.0000	ng/mL	----
8_2-FTS_1	M	4.929	19	199244	25	0.0006	ng/mL	----
8_2-FTS-13C	Auto	4.931	199244	3916831	1	4.2549	ng/mL	----
8_2-FTS-13C_IS	Auto	4.931	199244	199244	25	5.0000	ng/mL	----
10_2-FTS_1	M	5.296	81	199244	25	0.0028	ng/mL	----
HPFO_DA	M	4.296	393	871809	26	0.0021	ng/mL	----
HPFO_DA-13C	Auto	4.299	871809	3916831	1	4.6720	ng/mL	----
HPFO_DA-13C_IS	Auto	4.299	871809	871809	26	5.0000	ng/mL	----

13C7-PFUnDA_IS

Conc 5.0000
RT 5.115 Area 3916831

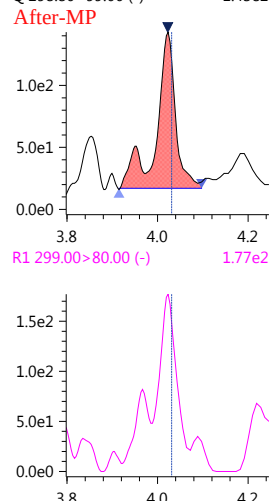
ISTD 570.00>525.00 (-)



PFBS_1

Conc 0.0027
RT 4.022 Area 373
R#1 131.82 (0.00)

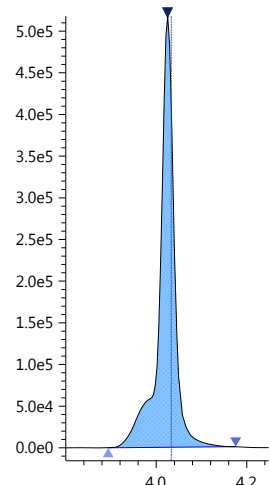
Q 298.80>99.00 (-)



PFBS-13C

Conc 4.4073
RT 4.025 Area 1161161

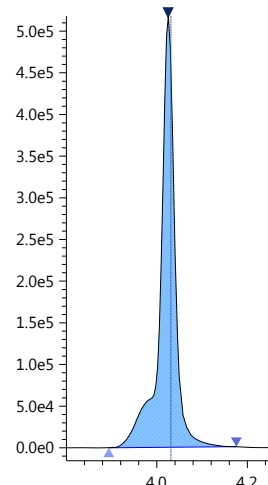
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.025 Area 1161161

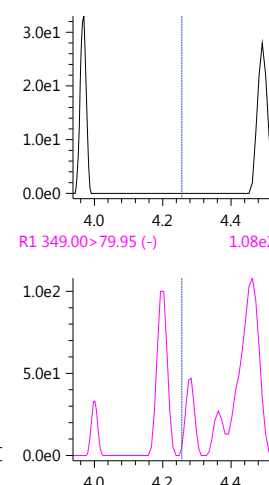
ISTD 301.80>80.00 (-)



PFPeS

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

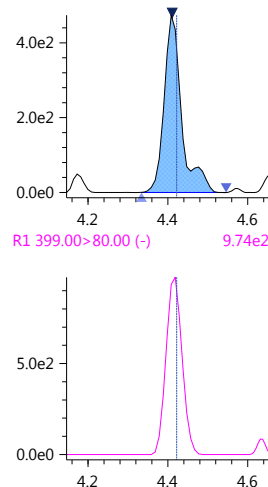
Q 349.00>99.00 (-)



PFHxS_1

Conc 0.0124
RT 4.411 Area 1450
R#1 197.81 (0.00)

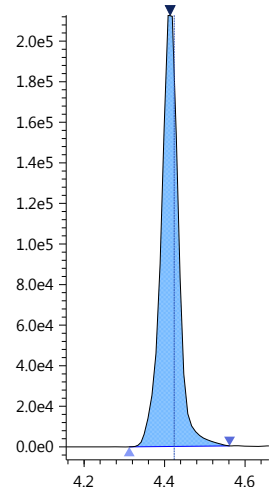
Q 399.00>99.00 (-)



PFHxS-180

Conc 4.6468
RT 4.414 Area 648638

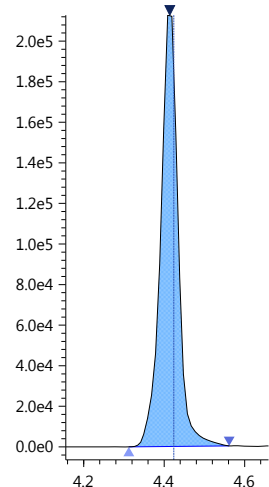
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc 5.0000
RT 4.414 Area 648638

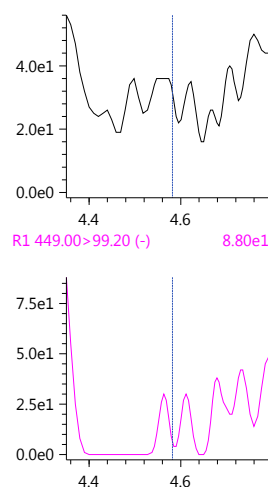
ISTD 402.70>84.05 (-)



PFHpS_1

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

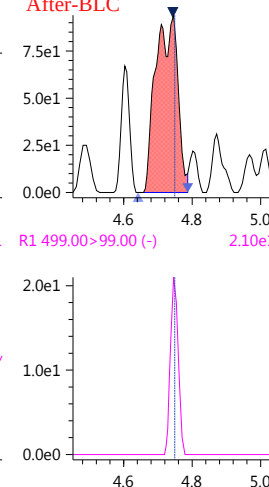
Q 449.00>80.15 (-)



PFOS_1

Conc 0.0038
RT 4.744 Area 424
R#1 23.86 (0.00)

Q 499.00>80.00 (-)



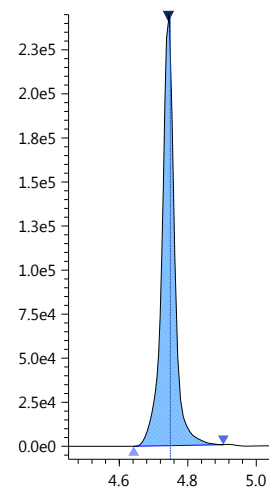
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PFOS-13C

Conc 4.5544
 RT 4.743 Area 627395

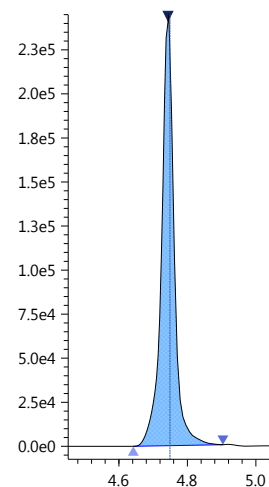
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc 5.0000
 RT 4.743 Area 627395

ISTD 502.80>80.05 (-)

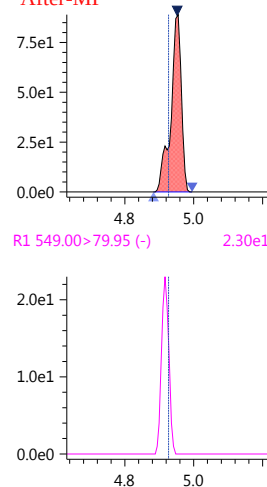


PFNS

Conc 0.0023
 RT 4.952 Area 189
 R#1 0.00 (0.00)

Q 549.00>99.00 (-)

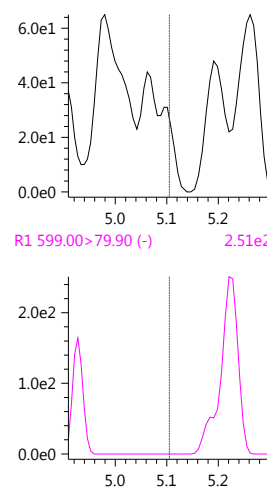
After-MP



PFDS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

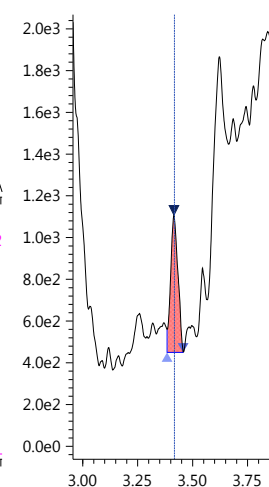
Q 599.00>99.10 (-)



PFBA

Conc 0.0027
 RT 3.415 Area 1525
 After-MP

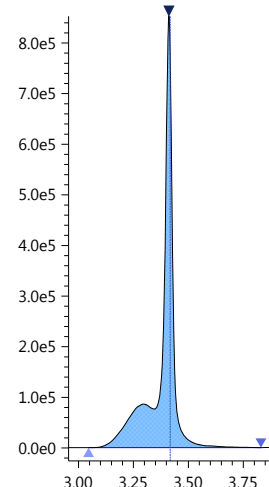
Q 213.00>169.10 (-)



PFBA-13C

Conc 4.3413
 RT 3.411 Area 2865662

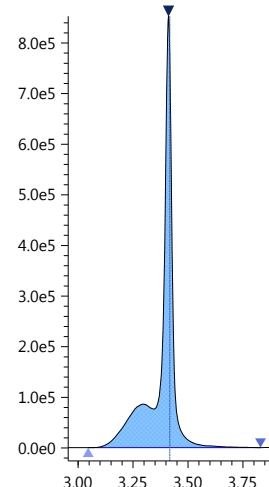
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc 5.0000
 RT 3.411 Area 2865662

ISTD 216.90>172.15 (-)

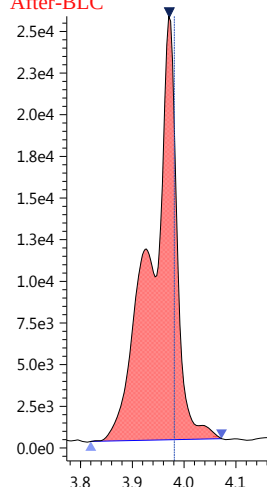


PFPeA

Conc 0.0107
 RT 3.972 Area 88531

Q 263.05>219.10 (-)

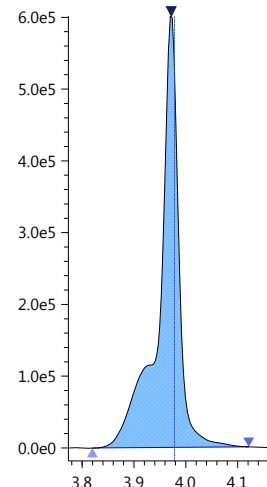
After-BLC



PFPeA-13C

Conc 4.4647
 RT 3.972 Area 1584767

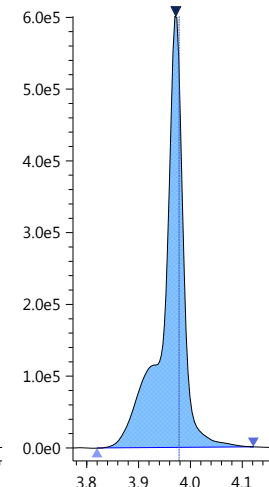
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.972 Area 1584767

ISTD 267.90>223.00 (-)



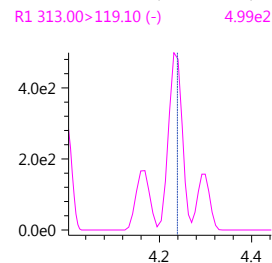
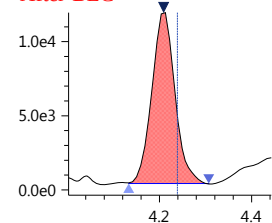
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PFHxA

Conc 0.0195
RT 4.209 Area 40293
R#1 0.00 (0.00)

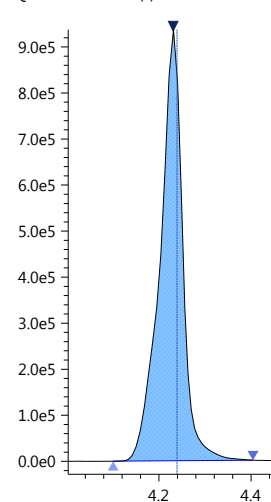
Q 313.00>269.00 (-)
After-BLC



PFHxA-13C

Conc 4.0062
RT 4.231 Area 3188038

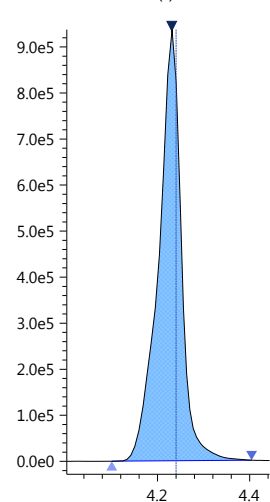
Q 314.90>270.10 (-)



PFHxA-13C_IS

Conc 5.0000
RT 4.231 Area 3188038

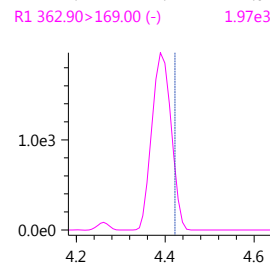
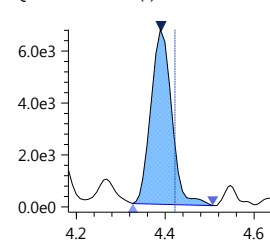
ISTD 314.90>270.10 (-)



PFHpA

Conc 0.0001
RT 4.391 Area 21951
R#1 29.08 (0.00)

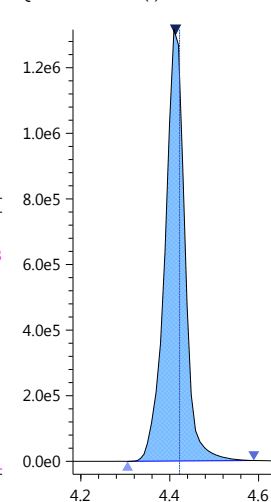
Q 362.90>319.00 (-)



PFHpA-13C

Conc 4.8078
RT 4.413 Area 4096135

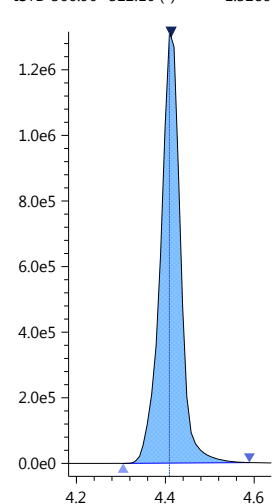
Q 366.90>322.10 (-)



PFHpA-13C_IS

Conc 5.0000
RT 4.413 Area 4096135

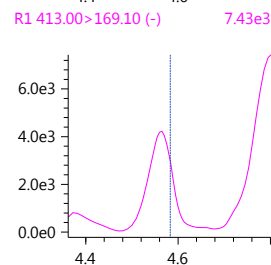
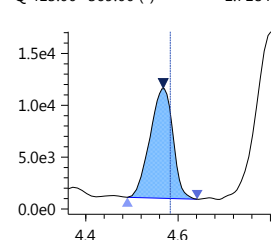
ISTD 366.90>322.10 (-)



PFOA

Conc 0.0083
RT 4.568 Area 36689
R#1 36.62 (0.00)

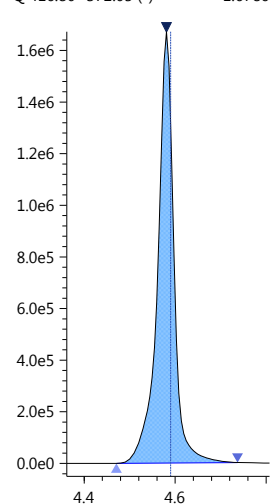
Q 413.00>369.00 (-)



PFOA-13C

Conc 4.5483
RT 4.581 Area 4139608

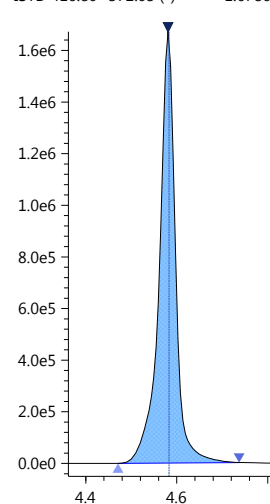
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
RT 4.581 Area 4139608

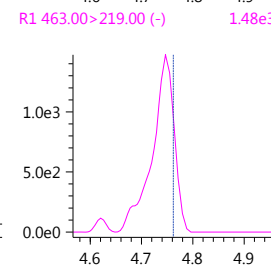
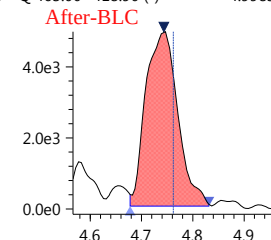
ISTD 416.80>372.05 (-)



PFNA

Conc 0.0076
RT 4.744 Area 21358
R#1 27.73 (0.00)

Q 463.00>418.90 (-)

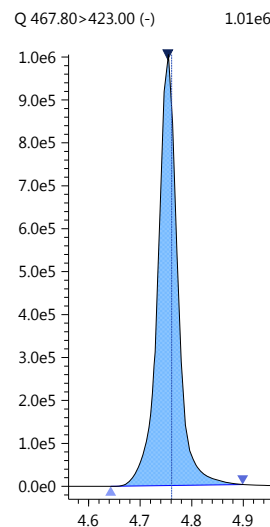


Insight Report

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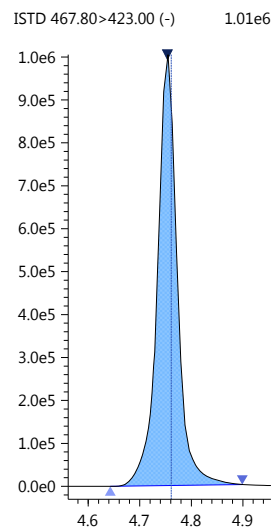
PFNA-13C

Conc 4.3279
 RT 4.753 Area 2694972



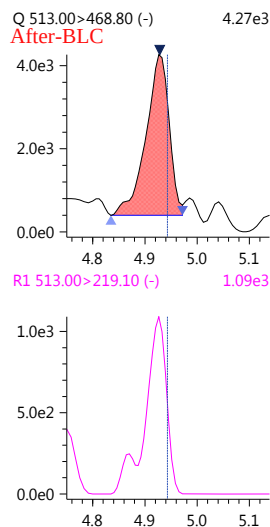
PFNA-13C_IS

Conc 5.0000
 RT 4.753 Area 2694972



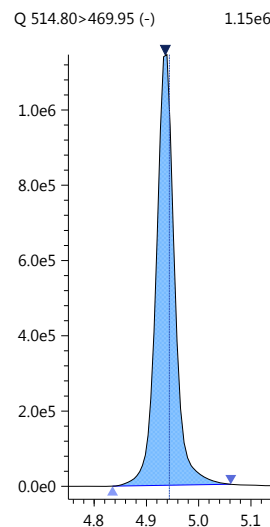
PFDA

Conc 0.0009
 RT 4.928 Area 11988
 R#1 27.35 (0.00)



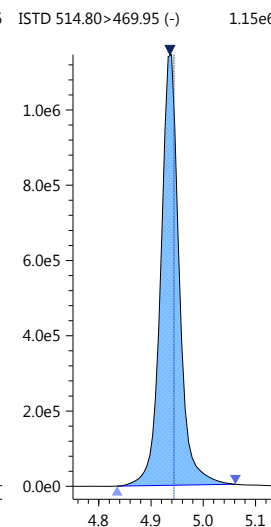
PFDA-13C

Conc 4.9774
 RT 4.936 Area 2823685



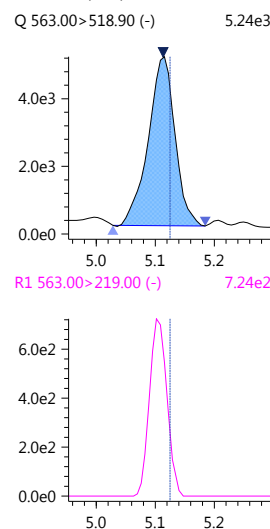
PFDA-13C_IS

Conc 5.0000
 RT 4.936 Area 2823685



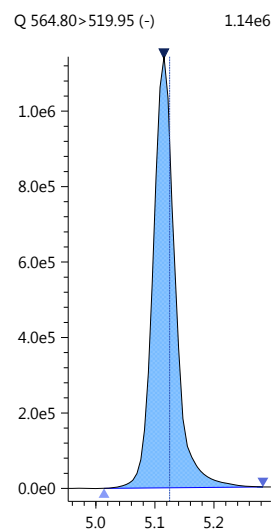
PFUnA

Conc -0.0094
 RT 5.113 Area 15774
 R#1 10.58 (0.00)



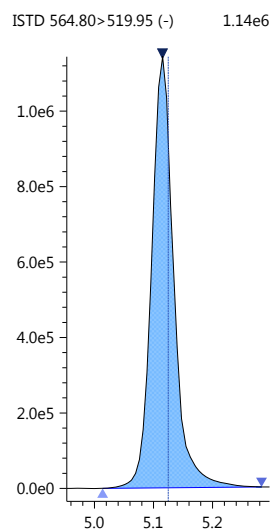
PFUnA-13C

Conc 5.0724
 RT 5.115 Area 2981111



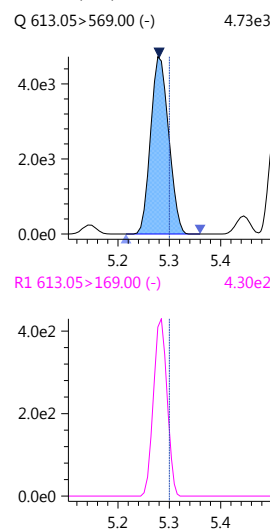
PFUnA-13C_IS

Conc 5.0000
 RT 5.115 Area 2981111



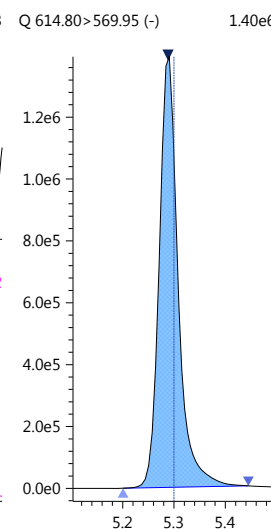
PFDaA

Conc 0.0009
 RT 5.280 Area 11576
 R#1 8.68 (0.00)



PFDaA-13C

Conc 4.5792
 RT 5.288 Area 3566920

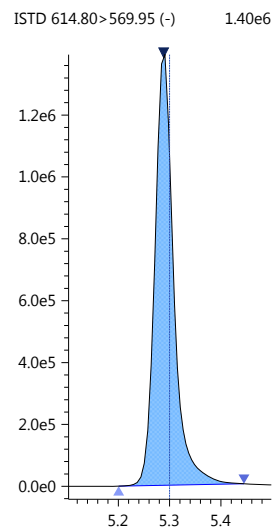


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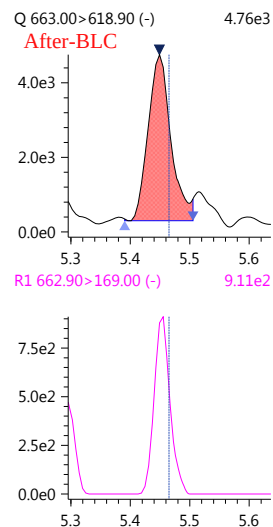
PFDaA-13C_IS

Conc 5.0000
 RT 5.288 Area 3566920



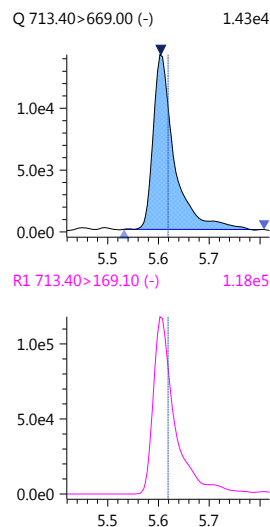
PFTrDA

Conc -0.0133
 RT 5.449 Area 11850
 R#1 21.78 (0.00)



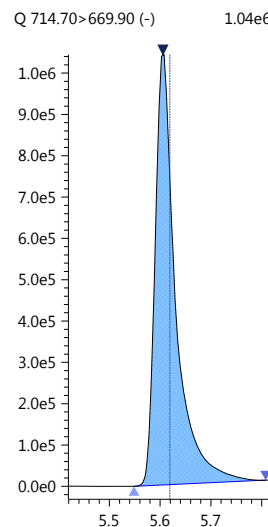
PFTeDA

Conc -0.0025
 RT 5.605 Area 40958
 R#1 829.01 (0.00)



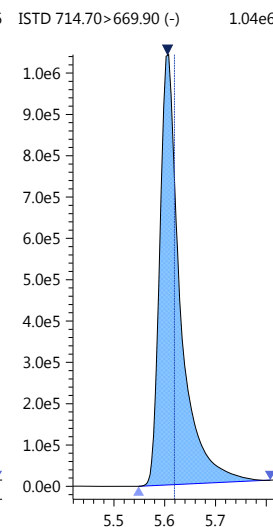
PFTeDA-13C

Conc 4.3423
 RT 5.605 Area 2940071



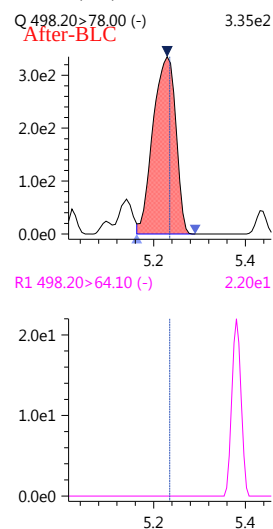
PFTeDA-13C_IS

Conc 5.0000
 RT 5.605 Area 2940071



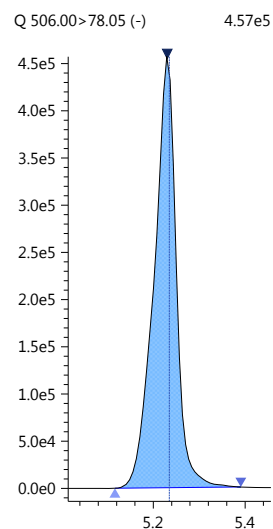
FOSA

Conc 0.0033
 RT 5.230 Area 1157
 R#1 0.00 (0.00)



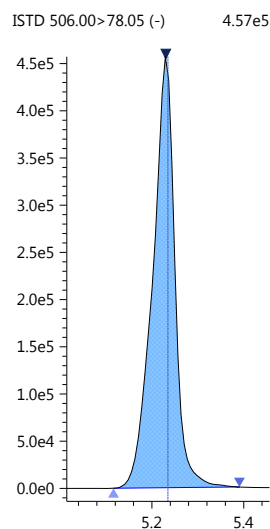
FOSA-13C

Conc 4.6517
 RT 5.230 Area 1530995



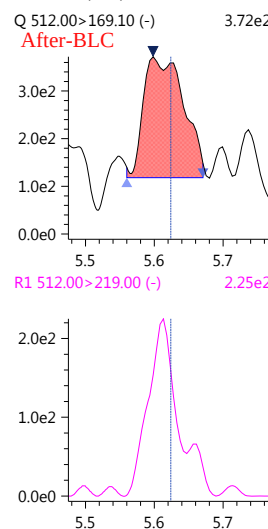
FOSA-13C_IS

Conc 5.0000
 RT 5.230 Area 1530995



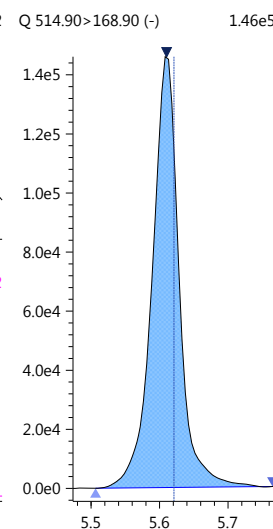
N-MeFOSA

Conc 0.0090
 RT 5.598 Area 1034
 R#1 54.36 (0.00)



N-MeFOSA-d3

Conc 4.6815
 RT 5.610 Area 400217



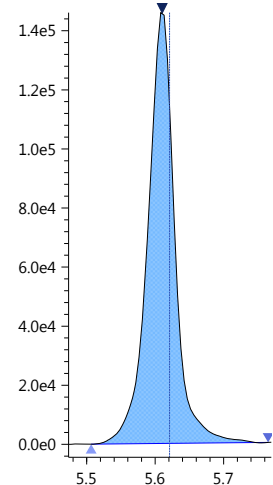
Insight Report

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N-MeFOSA-d3_IS

Conc 5.0000
 RT 5.610 Area 400217

ISTD 514.90>168.90 (-) 1.46e5

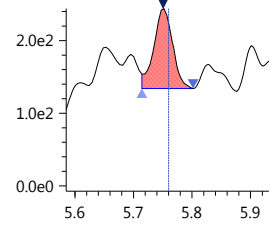


N-EtFOSA

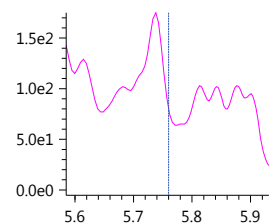
Conc 0.0105
 RT 5.751 Area 247
 R#1 4.42 (0.00)

Q 526.90>169.10 (-) 2.44e2

After-BLC



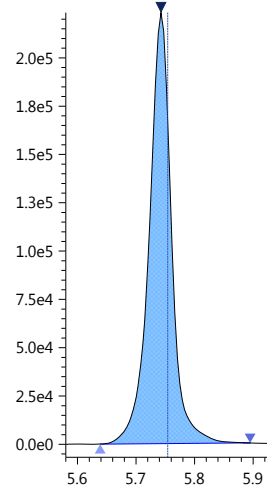
R1 526.90>219.00 (-) 1.75e2



N-EtFOSA-d9

Conc 4.8201
 RT 5.743 Area 592024

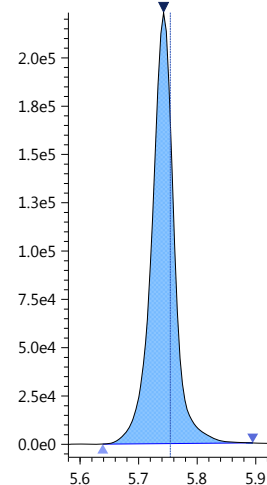
Q 530.90>169.15 (-) 2.23e5



N-EtFOSA-d9_IS

Conc 5.0000
 RT 5.743 Area 592024

ISTD 530.90>169.15 (-) 2.23e5

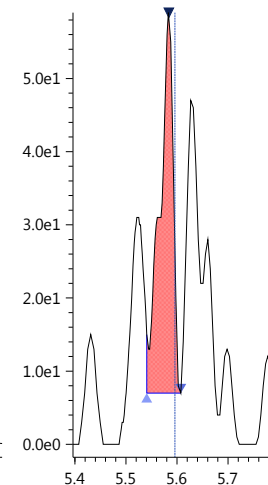


N-MeFOSE

Conc 0.0007
 RT 5.584 Area 94

After-MP

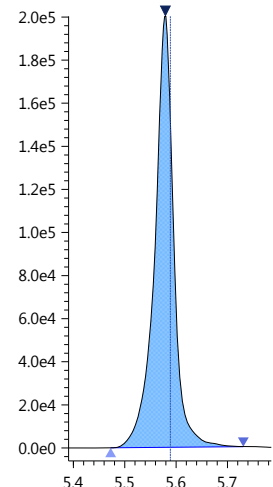
Q 616.00>59.00 (-) 5.90e1



N-MeFOSE-d7

Conc 4.9919
 RT 5.579 Area 515231

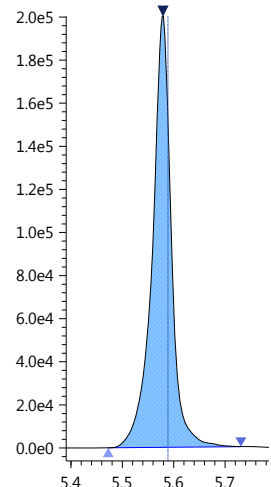
Q 622.70>59.10 (-) 2.00e5



N-MeFOSE-d7_IS

Conc 5.0000
 RT 5.579 Area 515231

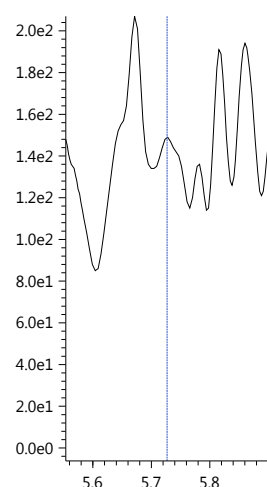
ISTD 622.70>59.10 (-) 2.00e5



N-EtFOSE

Conc ----
 RT ---- Area ----

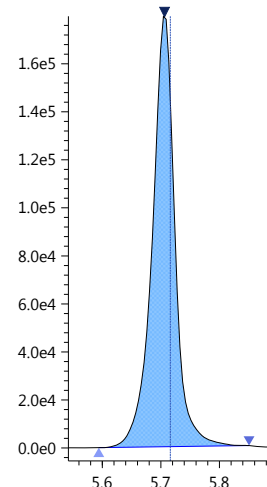
Q 630.00>58.90 (-) 2.07e2



N-EtFOSE-d9

Conc 4.8535
 RT 5.706 Area 483519

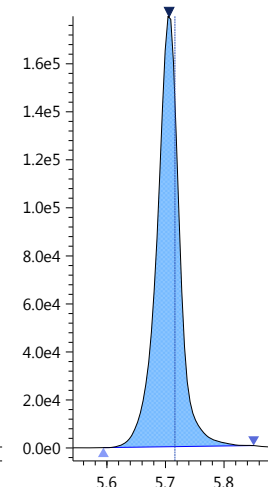
Q 638.70>59.10 (-) 1.80e5



N-EtFOSE-d9_IS

Conc 5.0000
 RT 5.706 Area 483519

ISTD 638.70>59.10 (-) 1.80e5



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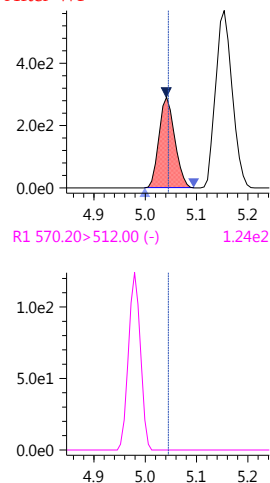
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N-MeFOSAA

Conc 0.0316
RT 5.041 Area 617
R#1 0.00 (0.00)

Q 570.20>419.00 (-)

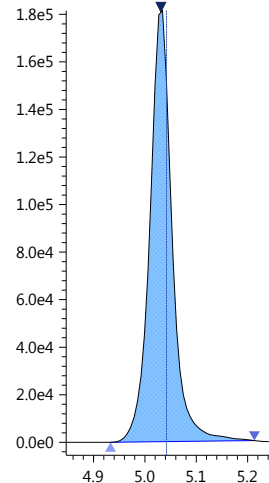
After-WP



N-MeFOSAA-d3

Conc 4.5201
RT 5.031 Area 548694

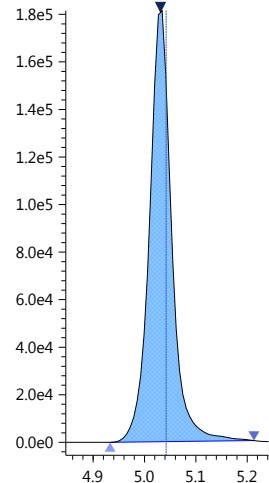
Q 572.80>419.05 (-)



N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.031 Area 548694

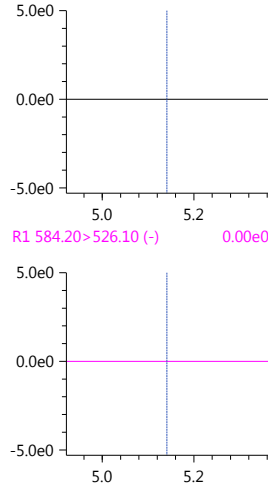
ISTD 572.80>419.05 (-)



N-EtFOSAA

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

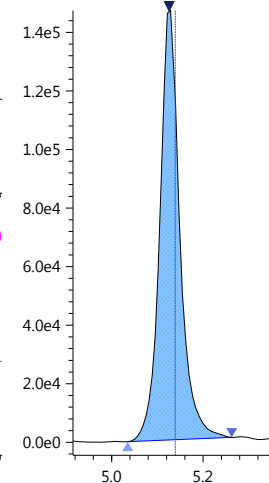
Q 584.20>418.95 (-)



N-EtFOSAA-d5

Conc 4.5582
RT 5.126 Area 450468

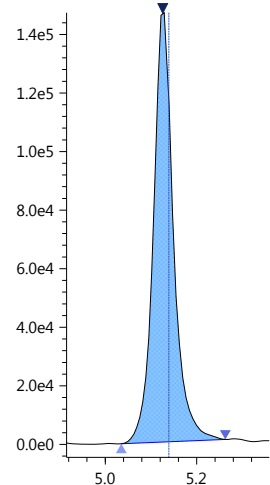
Q 588.80>419.00 (-)



N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.126 Area 450468

ISTD 588.80>419.00 (-)

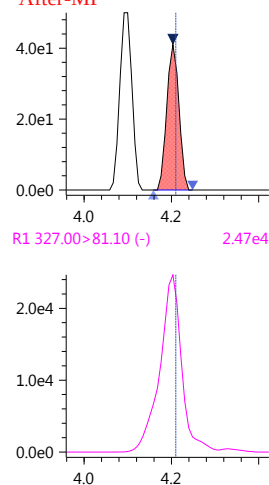


4_2-FTS_1

Conc 0.0014
RT 4.203 Area 80
R#1 50741.02 (0.00)

Q 327.00>307.05 (-)

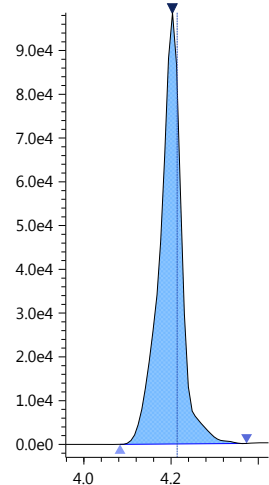
After-MP



4_2-FTS-13C

Conc 4.2892
RT 4.203 Area 336318

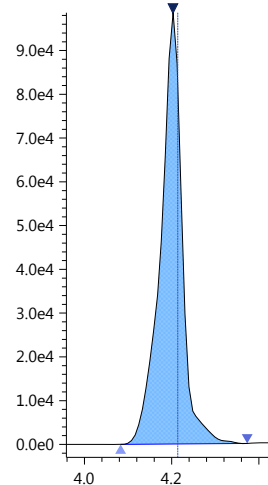
Q 328.80>309.05 (-)



4_2-FTS-13C_IS

Conc 5.0000
RT 4.203 Area 336318

ISTD 328.80>309.05 (-)

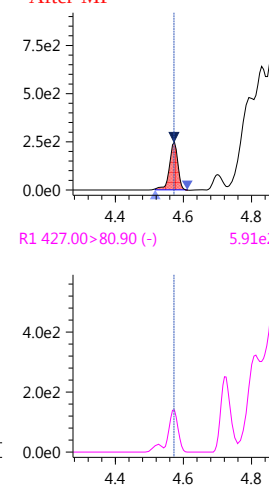


6_2-FTS_1

Conc 0.0062
RT 4.572 Area 424
R#1 51.26 (0.00)

Q 427.00>407.00 (-)

After-MP

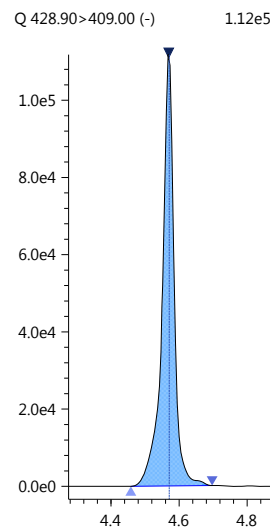


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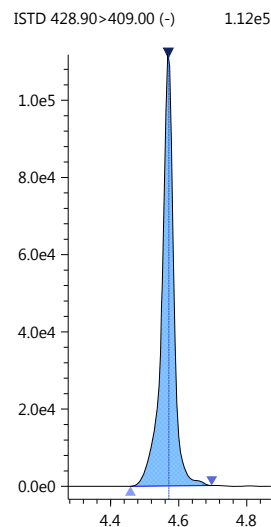
6_2-FTS-13C

Conc 4.5278
 RT 4.570 Area 273346



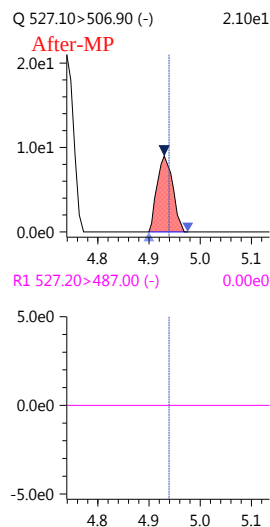
6_2-FTS-13C_IS

Conc 5.0000
 RT 4.570 Area 273346



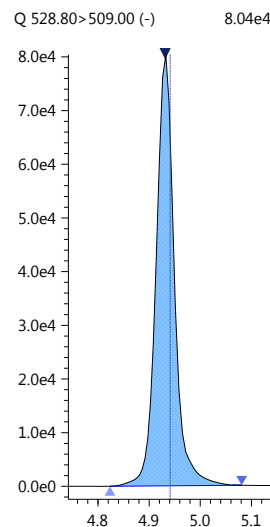
8_2-FTS_1

Conc 0.0006
 RT 4.929 Area 19
 R#1 0.00 (0.00)



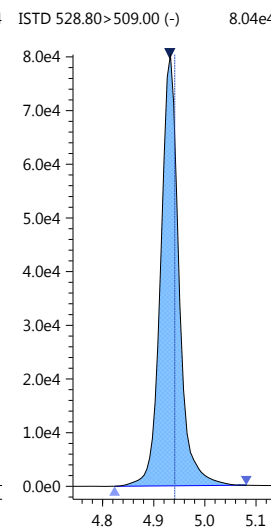
8_2-FTS-13C

Conc 4.2549
 RT 4.931 Area 199244



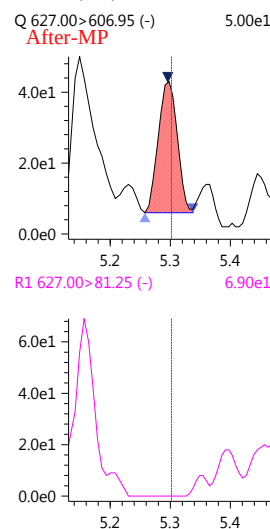
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Conc 5.0000
 RT 4.931 Area 199244



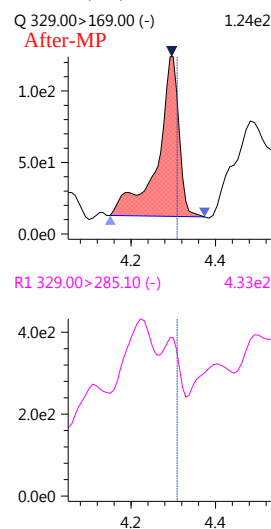
10_2-FtS_1

Conc 0.0028
 RT 5.296 Area 81
 R#1 0.00 (0.00)



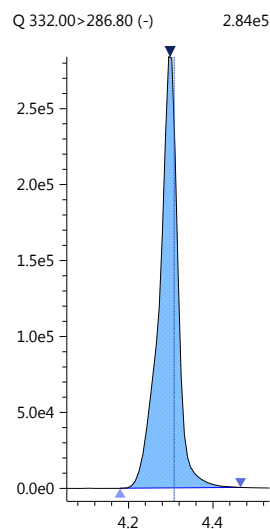
HPFO_DA

Conc 0.0021
 RT 4.296 Area 393
 R#1 95.58 (0.00)



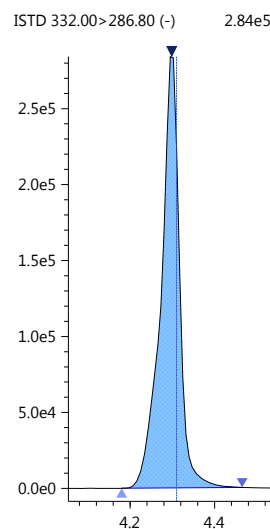
HPFO_DA-13C

Conc 4.6720
 RT 4.299 Area 871809



HPFO_DA-13C_IS

Conc 5.0000
 RT 4.299 Area 871809



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Printed at 12/3/2019 9:26:07 AM

191202_030

Sample ID: IB

Date acquired: 12/2/2019 7:45:23 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_030.lcd

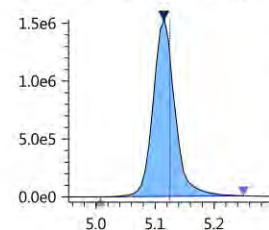
Vial: 51 | Inj. Volume: 15.0000uL | Tray: 1

13C7-PFUnDA_IS

Conc 5.0000

RT 5.115 Area 3916831

ISTD 570.00>525.00 (-)

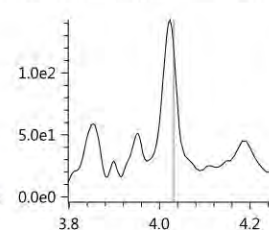


PFBS_1

Conc ----

RT ---- Area ----

Q 298.80>99.00 (-)

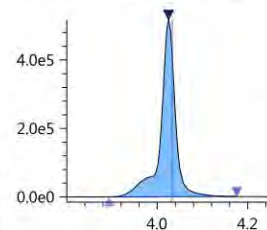


PFBS-13C

Conc 4.4073

RT 4.025 Area 1161161

Q 301.80>80.00 (-)

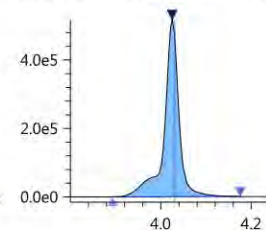


PFBS-13C_IS

Conc 5.0000

RT 4.025 Area 1161161

ISTD 301.80>80.00 (-)

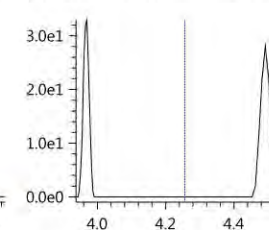


PFPeS

Conc ----

RT ---- Area ----

Q 349.00>99.00 (-)

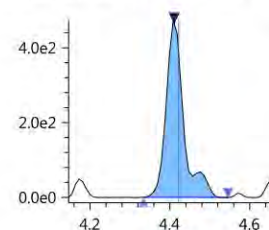


PFHxS_1

Conc 0.0124

RT 4.411 Area 1450

Q 399.00>99.00 (-)

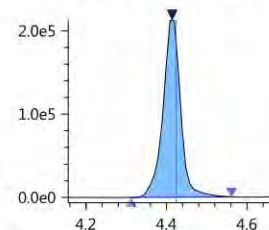


PFHxS-180

Conc 4.6468

RT 4.414 Area 648638

Q 402.70>84.05 (-)

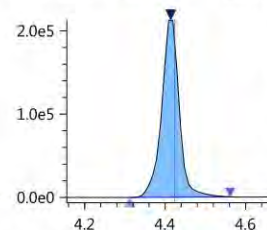


PFHxS-180_IS

Conc 5.0000

RT 4.414 Area 648638

ISTD 402.70>84.05 (-)

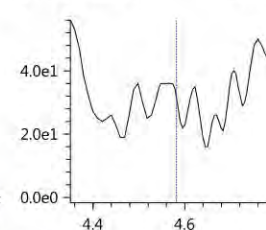


PFHpS_1

Conc ----

RT ---- Area ----

Q 449.00>80.15 (-)

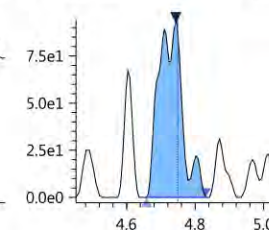


PFOS_1

Conc 0.0042

RT 4.744 Area 459

Q 499.00>80.00 (-)

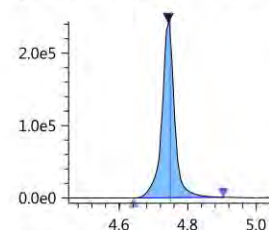


PFOS-13C

Conc 4.5544

RT 4.743 Area 627395

Q 502.80>80.05 (-)

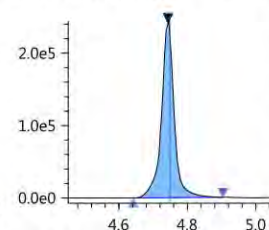


PFOS-13C_IS

Conc 5.0000

RT 4.743 Area 627395

ISTD 502.80>80.05 (-)

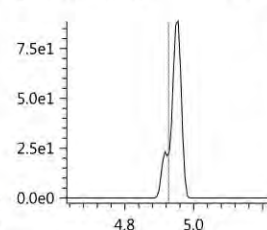


PFNS

Conc ----

RT ---- Area ----

Q 549.00>99.00 (-)

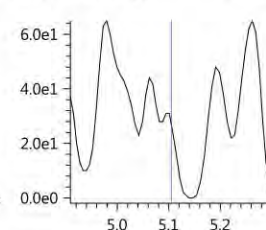


PFDS_1

Conc ----

RT ---- Area ----

Q 599.00>99.10 (-)

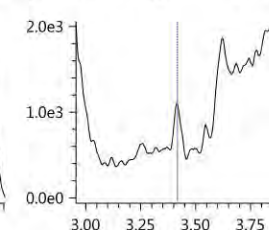


PFBA

Conc ----

RT ---- Area ----

Q 213.00>169.10 (-)

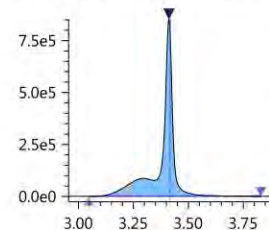


PFBA-13C

Conc 4.3413

RT 3.411 Area 2865662

Q 216.90>172.15 (-)

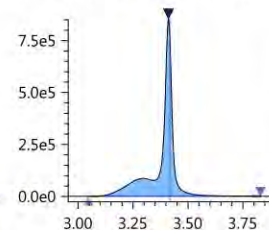


PFBA-13C_IS

Conc 5.0000

RT 3.411 Area 2865662

ISTD 216.90>172.15 (-)

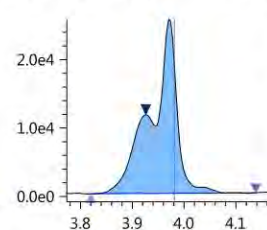


PFPeA

Conc 0.0112

RT 3.926 Area 88855

Q 263.05>219.10 (-)

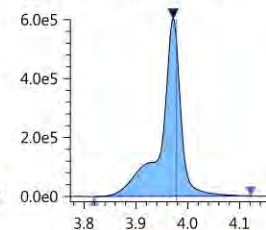


PFPeA-13C

Conc 4.4647

RT 3.972 Area 1584767

Q 267.90>223.00 (-)

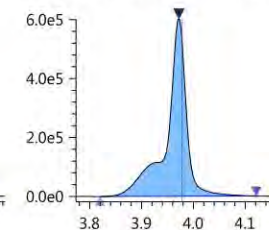


PFPeA-13C_IS

Conc 5.0000

RT 3.972 Area 1584767

ISTD 267.90>223.00 (-)

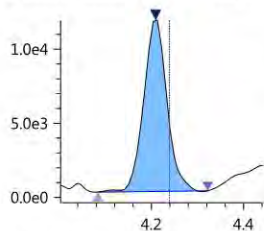


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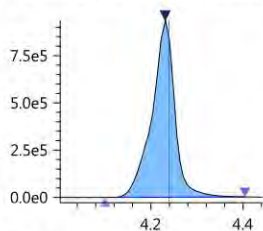
PFHxA

Conc 0.0202
RT 4.209 Area 40742
Q 313.00>269.00 (-)



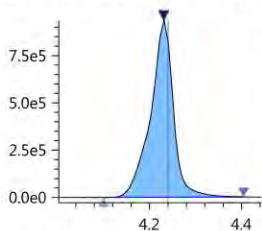
PFHxA-13C

Conc 4.0062
RT 4.231 Area 3188038
Q 314.90>270.10 (-)



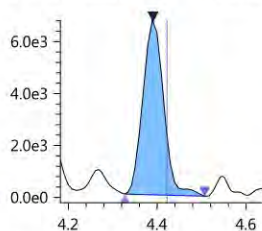
PFHxA-13C_IS

Conc 5.0000
RT 4.231 Area 3188038
ISTD 314.90>270.10 (-)



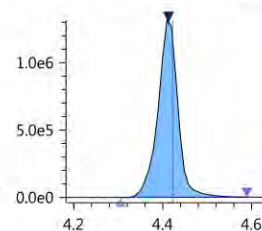
PFHpA

Conc 0.0001
RT 4.391 Area 21951
Q 362.90>319.00 (-)



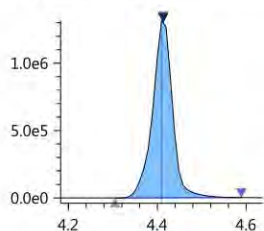
PFHpA-13C

Conc 4.8078
RT 4.413 Area 4096135
Q 366.90>322.10 (-)



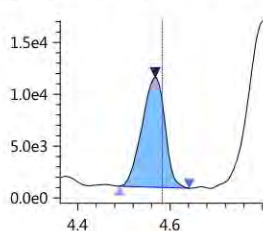
PFHpA-13C_IS

Conc 5.0000
RT 4.413 Area 4096135
ISTD 366.90>322.10 (-)



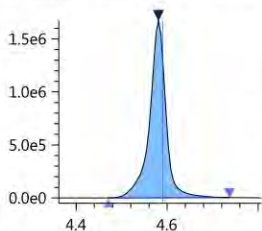
PFOA

Conc 0.0084
RT 4.568 Area 36689
Q 413.00>369.00 (-)



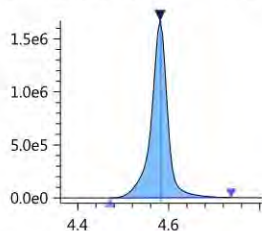
PFOA-13C

Conc 4.5483
RT 4.581 Area 4139608
Q 416.80>372.05 (-)



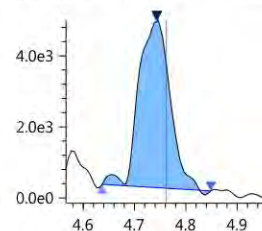
PFOA-13C_IS

Conc 5.0000
RT 4.581 Area 4139608
ISTD 416.80>372.05 (-)



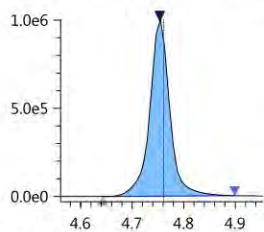
PFNA

Conc 0.0052
RT 4.744 Area 19932
Q 463.00>418.90 (-)



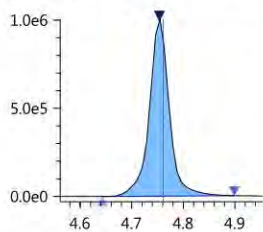
PFNA-13C

Conc 4.3279
RT 4.753 Area 2694972
Q 467.80>423.00 (-)



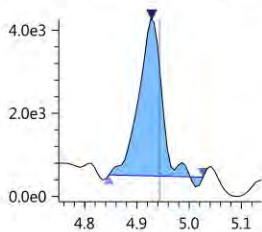
PFNA-13C_IS

Conc 5.0000
RT 4.753 Area 2694972
ISTD 467.80>423.00 (-)



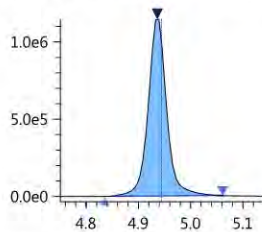
PFDA

Conc -0.0006
RT 4.928 Area 11402
Q 513.00>468.80 (-)



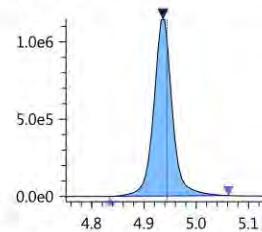
PFDA-13C

Conc 4.9774
RT 4.936 Area 2823685
Q 514.80>469.95 (-)



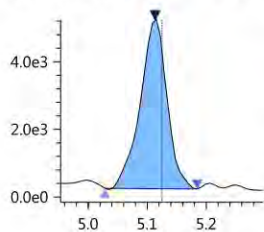
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Conc 5.0000
RT 4.936 Area 2823685
ISTD 514.80>469.95 (-)



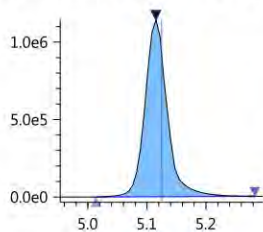
PFUnA

Conc -0.0091
RT 5.113 Area 15774
Q 563.00>518.90 (-)



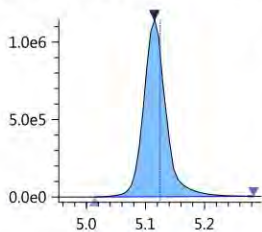
PFUnA-13C

Conc 5.0724
RT 5.115 Area 2981111
Q 564.80>519.95 (-)



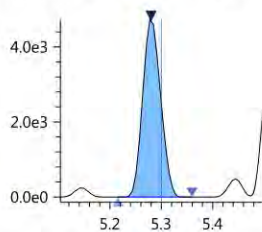
PFUnA-13C_IS

Conc 5.0000
RT 5.115 Area 2981111
ISTD 564.80>519.95 (-)



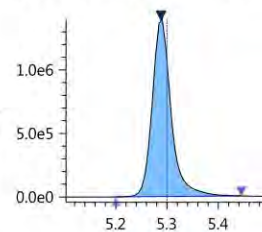
PFDaA

Conc 0.0248
RT 5.280 Area 11576
Q 613.05>569.00 (-)



PFDaA-13C

Conc 4.5792
RT 5.288 Area 3566920
Q 614.80>569.95 (-)

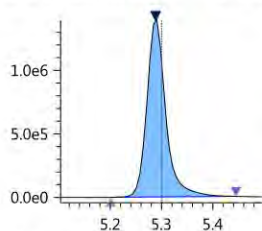


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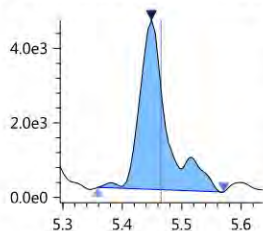
PFDaA-13C_IS

Conc 5.0000
RT 5.288 Area 3566920
ISTD 614.80>569.95 (-)



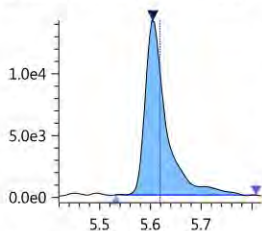
PFTrDA

Conc -0.0091
RT 5.449 Area 14413
Q 663.00>618.90 (-)



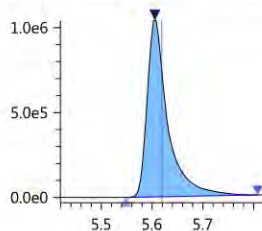
PFTeDA

Conc -0.0044
RT 5.605 Area 40958
Q 713.40>669.00 (-)



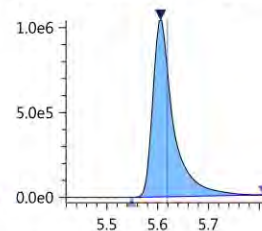
PFTeDA-13C

Conc 4.3423
RT 5.605 Area 2940071
Q 714.70>669.90 (-)



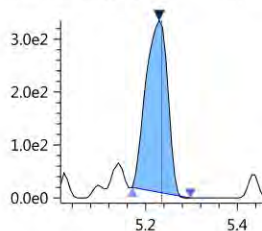
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Conc 5.0000
RT 5.605 Area 2940071
ISTD 714.70>669.90 (-)



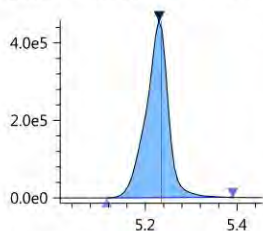
FOSA

Conc 0.0031
RT 5.230 Area 1072
Q 498.20>78.00 (-)



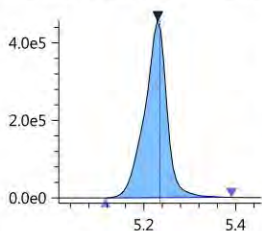
FOSA-13C

Conc 4.6517
RT 5.230 Area 1530995
Q 506.00>78.05 (-)



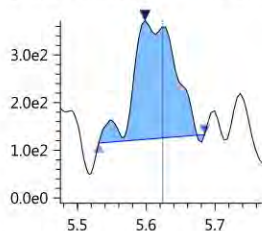
FOSA-13C_IS

Conc 5.0000
RT 5.230 Area 1530995
ISTD 506.00>78.05 (-)



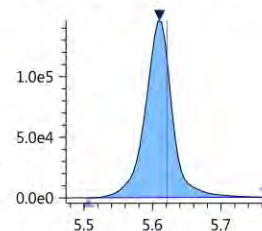
N-MeFOSA

Conc 0.0090
RT 5.598 Area 1041
Q 512.00>169.10 (-)



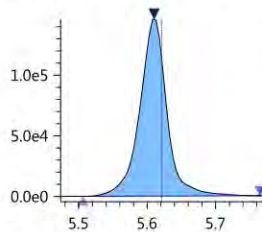
N-MeFOSA-d3

Conc 4.6815
RT 5.610 Area 400217
Q 514.90>168.90 (-)



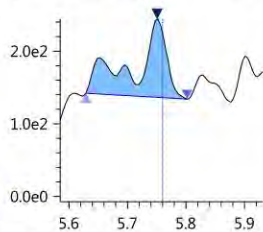
N-MeFOSA-d3_IS

Conc 5.0000
RT 5.610 Area 400217
ISTD 514.90>168.90 (-)



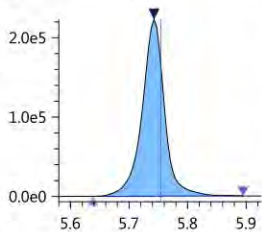
N-EtFOSA

Conc 0.0174
RT 5.751 Area 406
Q 526.90>169.10 (-)



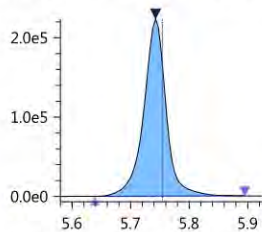
N-EtFOSA-d9

Conc 4.8201
RT 5.743 Area 592024
Q 530.90>169.15 (-)



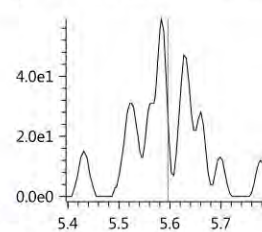
N-EtFOSA-d9_IS

Conc 5.0000
RT 5.743 Area 592024
ISTD 530.90>169.15 (-)



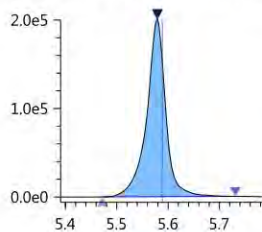
N-MeFOSE

Conc ---
RT --- Area ---
Q 616.00>59.00 (-)



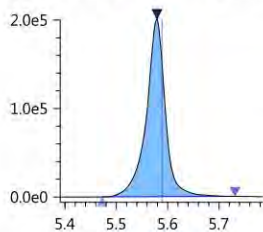
N-MeFOSE-d7

Conc 4.9919
RT 5.579 Area 515231
Q 622.70>59.10 (-)



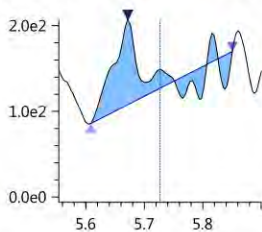
N-MeFOSE-d7_IS

Conc 5.0000
RT 5.579 Area 515231
ISTD 622.70>59.10 (-)



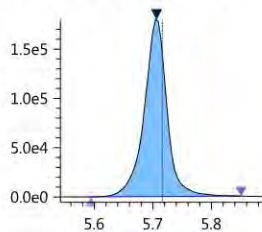
N-EtFOSE

Conc 0.0018
RT 5.672 Area 231
Q 630.00>58.90 (-)



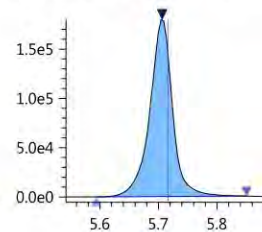
N-EtFOSE-d9

Conc 4.8535
RT 5.706 Area 483519
Q 638.70>59.10 (-)



N-EtFOSE-d9_IS

Conc 5.0000
RT 5.706 Area 483519
ISTD 638.70>59.10 (-)

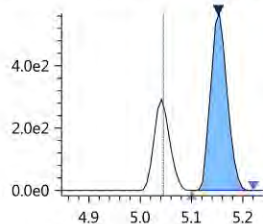


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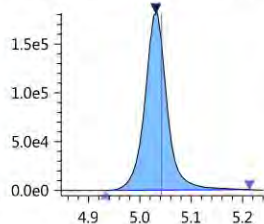
N-MeFOSAA

Conc 0.0434
RT 5.152 Area 1284
Q 570.20>419.00 (-)



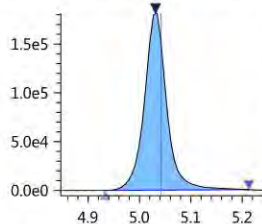
N-MeFOSAA-d3

Conc 4.5201
RT 5.031 Area 548694
Q 572.80>419.05 (-)



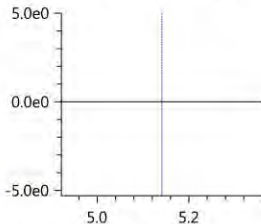
N-MeFOSAA-d3_IS

Conc 5.0000
RT 5.031 Area 548694
ISTD 572.80>419.05 (-)



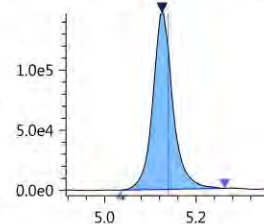
N-EtFOSAA

Conc ----
RT ---- Area ----
Q 584.20>418.95 (-)



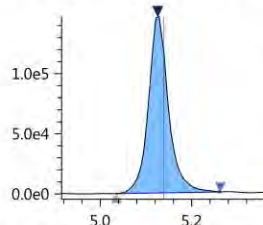
N-EtFOSAA-d5

Conc 4.5582
RT 5.126 Area 450468
Q 588.80>419.00 (-)



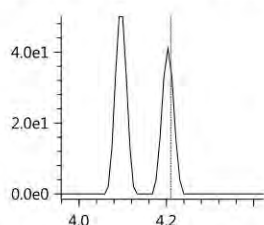
N-EtFOSAA-d5_IS

Conc 5.0000
RT 5.126 Area 450468
ISTD 588.80>419.00 (-)



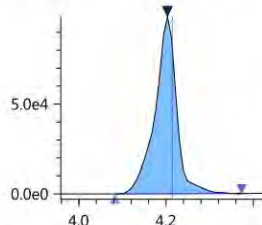
4_2-FTS_1

Conc ----
RT ---- Area ----
Q 327.00>307.05 (-)



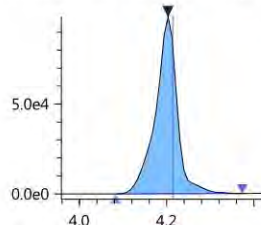
4_2-FTS-13C

Conc 4.2892
RT 4.203 Area 336318
Q 328.80>309.05 (-)



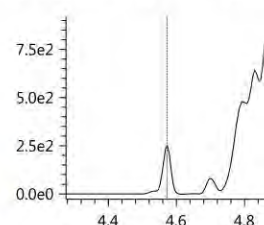
4_2-FTS-13C_IS

Conc 5.0000
RT 4.203 Area 336318
ISTD 328.80>309.05 (-)



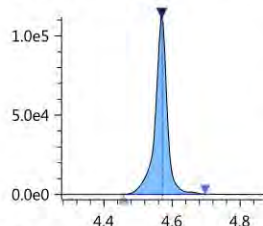
6_2-FTS_1

Conc ----
RT ---- Area ----
Q 427.00>407.00 (-)



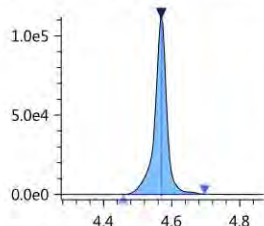
6_2-FTS-13C

Conc 4.5278
RT 4.570 Area 273346
Q 428.90>409.00 (-)



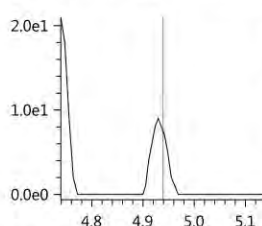
6_2-FTS-13C_IS

Conc 5.0000
RT 4.570 Area 273346
ISTD 428.90>409.00 (-)



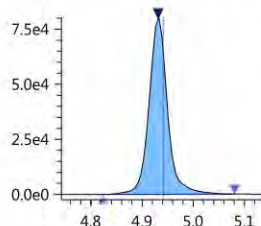
8_2-FTS_1

Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)



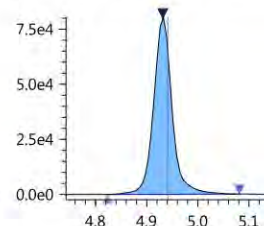
8_2-FTS-13C

Conc 4.2549
RT 4.931 Area 199244
Q 528.80>509.00 (-)



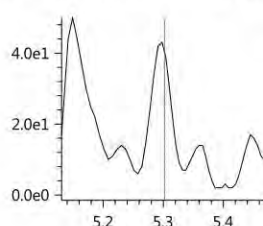
8_2-FTS-13C_IS

Conc 5.0000
RT 4.931 Area 199244
ISTD 528.80>509.00 (-)



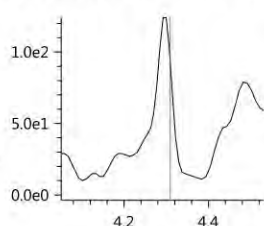
10_2-FtS_1

Conc ----
RT ---- Area ----
Q 627.00>606.95 (-)



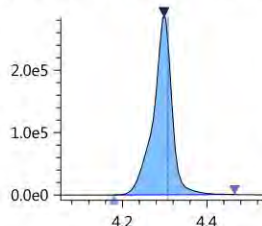
HPFO_DA

Conc ----
RT ---- Area ----
Q 329.00>169.00 (-)



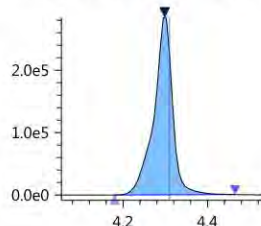
HPFO_DA-13C

Conc 4.6720
RT 4.299 Area 871809
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc 5.0000
RT 4.299 Area 871809
ISTD 332.00>286.80 (-)



Insight Report

Printed at 12/3/2019 10:19:07 AM

191202_031

Sample ID: T-PFOA

Date acquired: 12/2/2019 7:55:48 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_031.lcd

Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
13C7-PFUnDA_IS	Auto	5.117	1097	1097	1	5.0000	ng/mL	0.0000
PFBS_1	ND(W/B)	----	----	198	2	----	ng/mL	0.0000
PFBS-13C	Auto	4.003	198	1097	1	2.6842	ng/mL	0.0000
PFBS-13C_IS	Auto	4.003	198	198	2	5.0000	ng/mL	0.0000
PFPeS	ND(W/B)	----	----	198	2	----	ng/mL	0.0000
PFHxS_1	ND(W/B)	----	----	----	3	----	ng/mL	0.0000
PFHxS-18O	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
PFHxS-18O_IS	ND(W/B)	----	----	----	3	----	ng/mL	0.0000
PFHpS_1	ND(W/B)	----	----	----	3	----	ng/mL	0.0000
PFOS_1	ND(W/B)	----	----	----	4	----	ng/mL	0.0000
PFOS-13C	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
PFOS-13C_IS	ND(W/B)	----	----	----	4	----	ng/mL	0.0000
PFNS	ND(W/B)	----	----	----	4	----	ng/mL	0.0000
PFDS_1	ND(W/B)	----	----	----	4	----	ng/mL	0.0000
PFBA	ND(W/B)	----	----	----	5	----	ng/mL	0.0000
PFBA-13C	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
PFBA-13C_IS	ND(W/B)	----	----	----	5	----	ng/mL	0.0000
PFPeA	Auto	3.925	21794	165	6	299.6197	ng/mL	0.0000
PFPeA-13C	Auto	3.956	165	1097	1	1.6597	ng/mL	0.0000
PFPeA-13C_IS	Auto	3.956	165	165	6	5.0000	ng/mL	0.0000
PFHxA	Auto	4.206	27465	1903	7	55.5985	ng/mL	0.0000
PFHxA-13C	Auto	4.195	1903	1097	1	8.5399	ng/mL	0.0000
PFHxA-13C_IS	Auto	4.195	1903	1903	7	5.0000	ng/mL	0.0000
PFHpA	Auto	4.396	25487	790	8	167.2330	ng/mL	0.0000
PFHpA-13C	Auto	4.424	790	1097	1	3.3132	ng/mL	0.0000
PFHpA-13C_IS	Auto	4.424	790	790	8	5.0000	ng/mL	0.0000
PFOA	Auto	4.580	1119734	1618	9	2908.3767	ng/mL	0.0000
PFOA-13C	Auto	4.569	1618	1097	1	6.3507	ng/mL	0.0000
PFOA-13C_IS	Auto	4.569	1618	1618	9	5.0000	ng/mL	0.0000
PFNA	Auto	4.738	17553	----	10	0.0000	ng/mL	0.0000
PFNA-13C	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
PFNA-13C_IS	ND(W/B)	----	----	----	10	----	ng/mL	0.0000
PFDA	Auto	4.916	14113	411	11	164.0904	ng/mL	0.0000
PFDA-13C	Auto	4.943	411	1097	1	2.5901	ng/mL	0.0000
PFDA-13C_IS	Auto	4.943	411	411	11	5.0000	ng/mL	0.0000
PFUnA	Auto	5.094	12435	1347	12	54.2443	ng/mL	0.0000
PFUnA-13C	Auto	5.133	1347	1097	1	8.1864	ng/mL	0.0000
PFUnA-13C_IS	Auto	5.133	1347	1347	12	5.0000	ng/mL	0.0000
PFDoA	Auto	5.259	10118	2706	13	29.9699	ng/mL	0.0000
PFDoA-13C	Auto	5.296	2706	1097	1	12.4066	ng/mL	0.0000
PFDoA-13C_IS	Auto	5.296	2706	2706	13	5.0000	ng/mL	0.0000
PFTeDA	Auto	5.443	13672	7058	14	9.3057	ng/mL	0.0000
PFTeDA	Auto	5.608	3758	7058	14	5.5129	ng/mL	0.0000
PFTeDA-13C	Auto	5.611	7058	1097	1	37.2324	ng/mL	0.0000
PFTeDA-13C_IS	Auto	5.611	7058	7058	14	5.0000	ng/mL	0.0000
FOSA	Auto	5.238	248	----	16	0.0000	ng/mL	0.0000
FOSA-13C	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
FOSA-13C_IS	ND(W/B)	----	----	----	16	----	ng/mL	0.0000
N-MeFOSA	Auto	5.680	126	----	17	0.0000	ng/mL	0.0000
N-MeFOSA-d3	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
N-MeFOSA-d3_IS	ND(W/B)	----	----	----	17	----	ng/mL	0.0000
N-EtFOSA	ND(W/B)	----	----	----	18	----	ng/mL	0.0000
N-EtFOSA-d9	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
N-EtFOSA-d9_IS	ND(W/B)	----	----	----	18	----	ng/mL	0.0000
N-MeFOSE	ND(W/B)	----	----	----	19	----	ng/mL	0.0000
N-MeFOSE-d7	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
N-MeFOSE-d7_IS	ND(W/B)	----	----	----	19	----	ng/mL	0.0000
N-EtFOSE	Auto	5.719	452	----	20	0.0000	ng/mL	0.0000
N-EtFOSE-d9	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
N-EtFOSE-d9_IS	ND(W/B)	----	----	----	20	----	ng/mL	0.0000
N-MeFOSAA	Auto	5.168	1135	3993	21	2.3822	ng/mL	0.0000
N-MeFOSAA-d3	Auto	5.028	3993	1097	1	117.4801	ng/mL	0.0000
N-MeFOSAA-d3_IS	Auto	5.028	3993	3993	21	5.0000	ng/mL	0.0000
N-EtFOSAA	ND(W/B)	----	----	4160	22	----	ng/mL	0.0000
N-EtFOSAA-d5	Auto	5.134	4160	1097	1	150.3331	ng/mL	0.0000
N-EtFOSAA-d5_IS	Auto	5.134	4160	4160	22	5.0000	ng/mL	0.0000
4_2-FTS_1	ND(W/B)	----	----	----	23	----	ng/mL	0.0000
4_2-FTS-13C	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000

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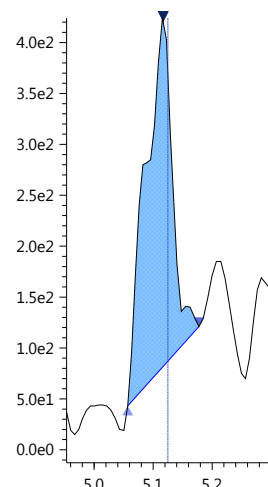
(Table continued from previous page)

Name	Mode ID	Found RT	Area	ISTD Area	ISTD Group	Conc.	Unit	Std. Conc.
4_2-FTS-13C_IS	ND(W/B)	----	----	----	23	----	ng/mL	0.0000
6_2-FTS_1	ND(W/B)	----	----	----	24	----	ng/mL	0.0000
6_2-FTS-13C	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
6_2-FTS-13C_IS	ND(W/B)	----	----	----	24	----	ng/mL	0.0000
8_2-FTS_1	ND(W/B)	----	----	----	25	----	ng/mL	0.0000
8_2-FTS-13C	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
8_2-FTS-13C_IS	ND(W/B)	----	----	----	25	----	ng/mL	0.0000
10_2-FTS_1	ND(W/B)	----	----	----	25	----	ng/mL	0.0000
HPFO_DA	ND(W/B)	----	----	----	26	----	ng/mL	0.0000
HPFO_DA-13C	ND(W/B)	----	----	1097	1	----	ng/mL	0.0000
HPFO_DA-13C_IS	ND(W/B)	----	----	----	26	----	ng/mL	0.0000

13C7-PFUnDA_IS

Conc 5.0000
RT 5.117 Area 1097

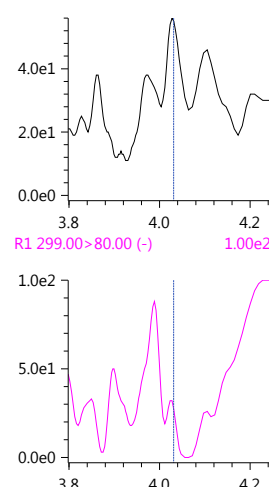
ISTD 570.00>525.00 (-)



PFBS_1

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

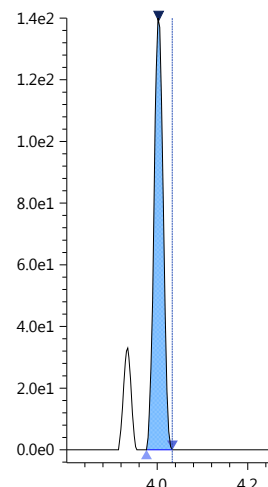
Q 298.80>99.00 (-)



PFBS-13C

Conc 2.6842
RT 4.003 Area 198

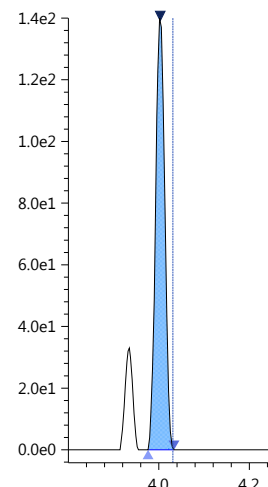
Q 301.80>80.00 (-)



PFBS-13C_IS

Conc 5.0000
RT 4.003 Area 198

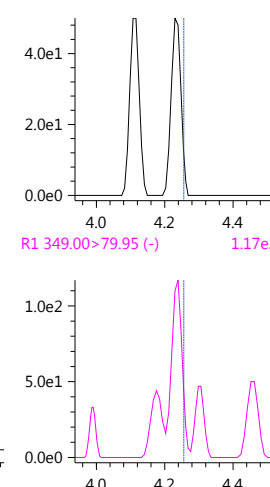
ISTD 301.80>80.00 (-)



PFPeS

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

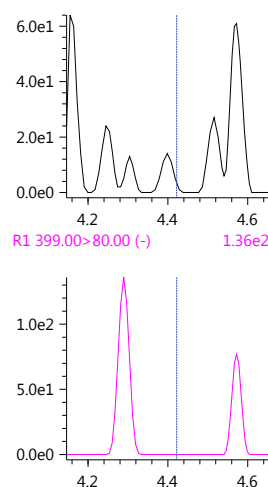
Q 349.00>99.00 (-)



PFHxS_1

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

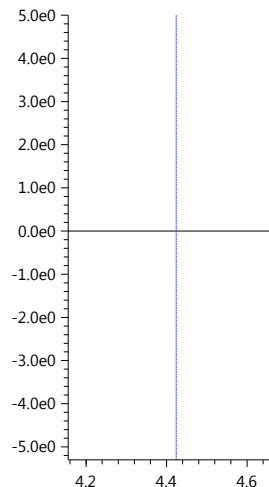
Q 399.00>99.00 (-)



PFHxS-180

Conc ----
RT ---- Area ----

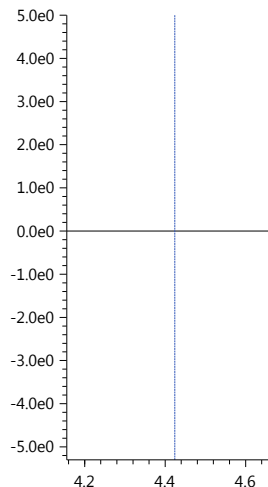
Q 402.70>84.05 (-)



PFHxS-180_IS

Conc ----
RT ---- Area ----

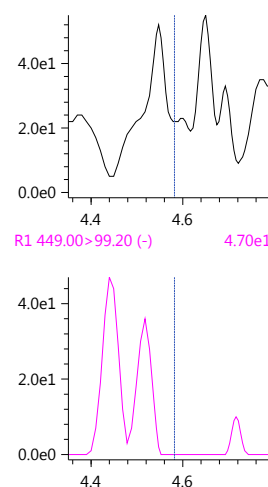
ISTD 402.70>84.05 (-)



PFHpS_1

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

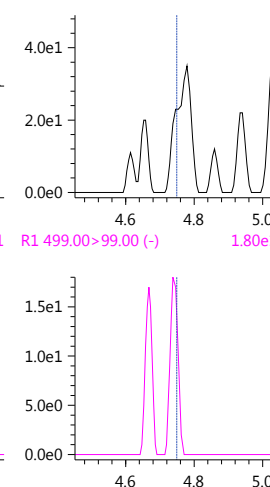
Q 449.00>80.15 (-)



PFOS_1

Conc ----
RT ---- Area ----
R#1 ---- (0.00)

Q 499.00>80.00 (-)



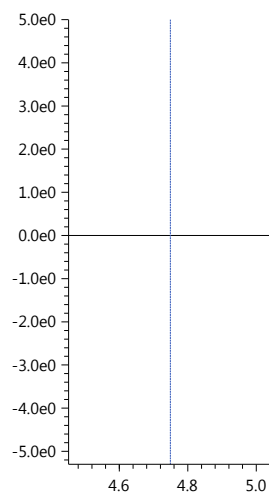
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PFOS-13C

Conc ----
 RT ---- Area ----

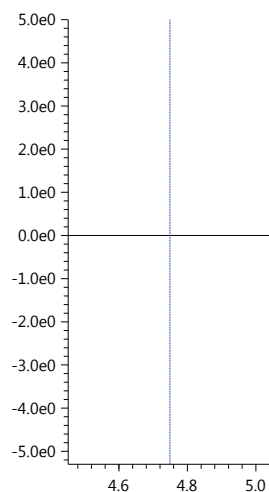
Q 502.80>80.05 (-)



PFOS-13C_IS

Conc ----
 RT ---- Area ----

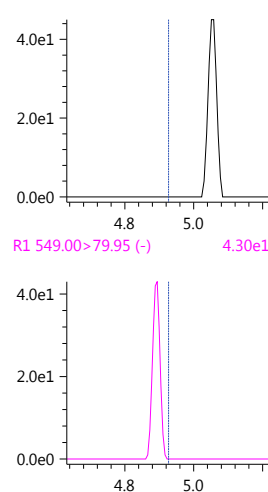
ISTD 502.80>80.05 (-)



PFNS

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

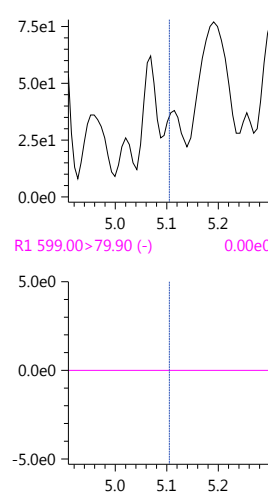
Q 549.00>99.00 (-)



PFDS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

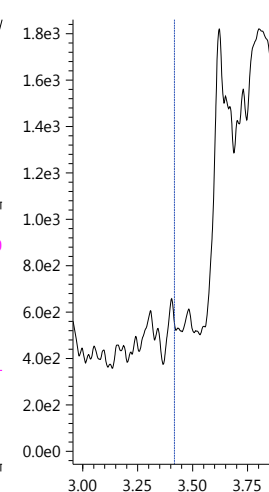
Q 599.00>99.10 (-)



PFBA

Conc ----
 RT ---- Area ----

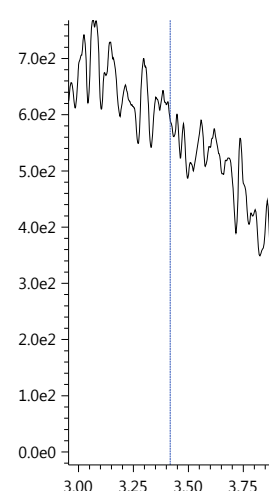
Q 213.00>169.10 (-)



PFBA-13C

Conc ----
 RT ---- Area ----

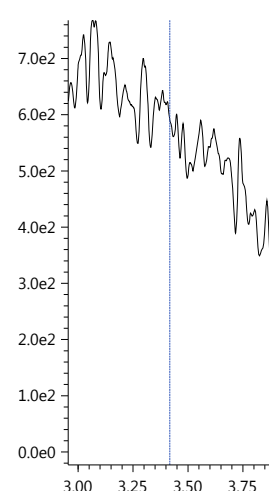
Q 216.90>172.15 (-)



PFBA-13C_IS

Conc ----
 RT ---- Area ----

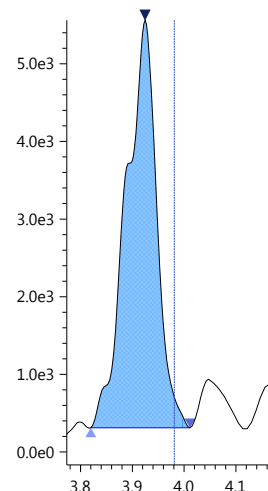
ISTD 216.90>172.15 (-)



PFPeA

Conc 299.6197
 RT 3.925 Area 21794

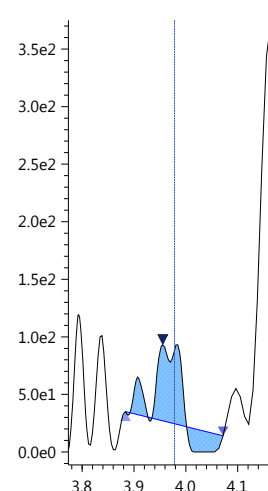
Q 263.05>219.10 (-)



PFPeA-13C

Conc 1.6597
 RT 3.956 Area 165

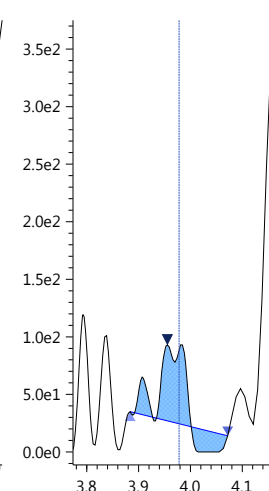
Q 267.90>223.00 (-)



PFPeA-13C_IS

Conc 5.0000
 RT 3.956 Area 165

ISTD 267.90>223.00 (-)



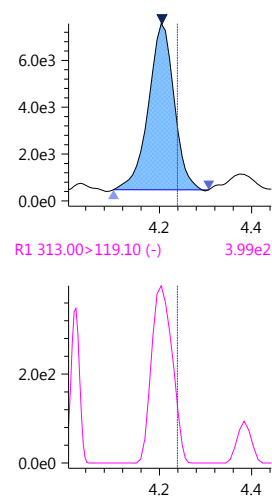
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PFHxA

Conc 55.5985
 RT 4.206 Area 27465
 R#1 5.66 (0.00)

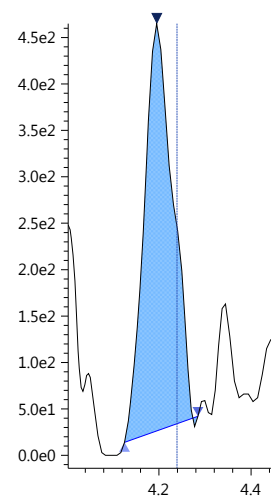
Q 313.00>269.00 (-)



PFHxA-13C

Conc 8.5399
 RT 4.195 Area 1903

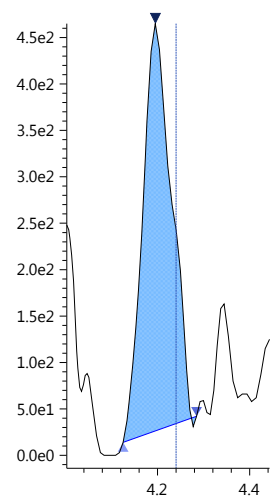
Q 314.90>270.10 (-)



PFHxA-13C_IS

Conc 5.0000
 RT 4.195 Area 1903

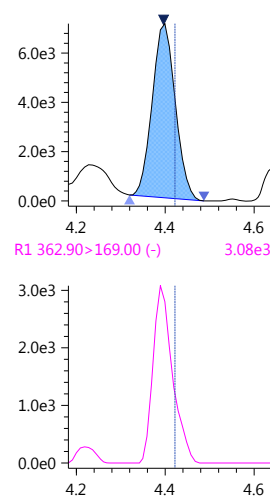
ISTD 314.90>270.10 (-)



PFHpA

Conc 167.2330
 RT 4.396 Area 25487
 R#1 39.54 (0.00)

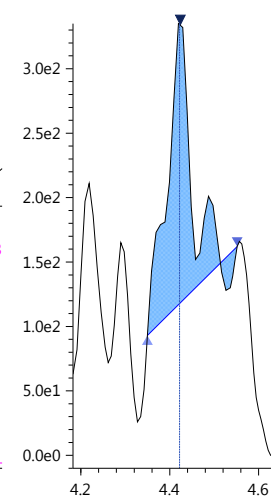
Q 362.90>319.00 (-)



PFHpA-13C

Conc 3.3132
 RT 4.424 Area 790

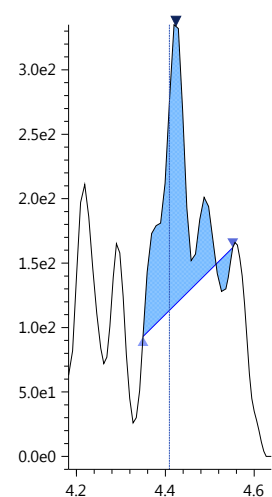
Q 366.90>322.10 (-)



PFHpA-13C_IS

Conc 5.0000
 RT 4.424 Area 790

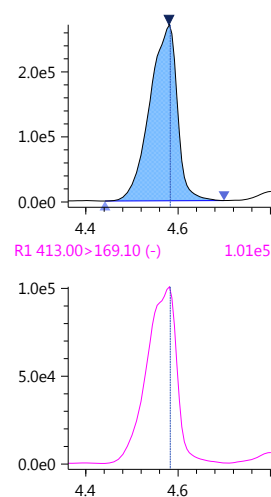
ISTD 366.90>322.10 (-)



PFOA

Conc 2908.3767
 RT 4.580 Area 1119734
 R#1 37.17 (0.00)

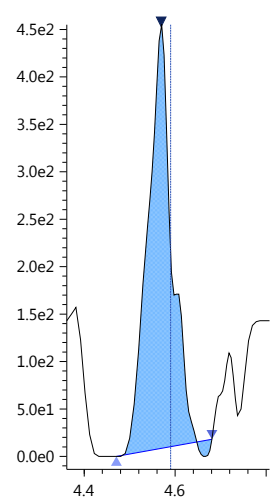
Q 413.00>369.00 (-)



PFOA-13C

Conc 6.3507
 RT 4.569 Area 1618

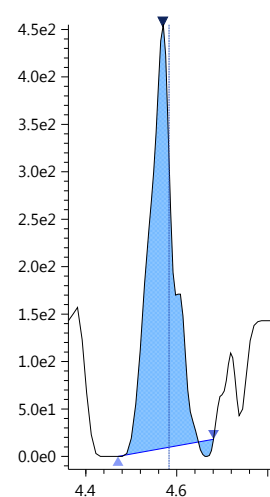
Q 416.80>372.05 (-)



PFOA-13C_IS

Conc 5.0000
 RT 4.569 Area 1618

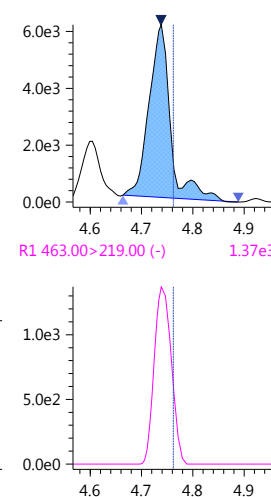
ISTD 416.80>372.05 (-)



PFNA

Conc 0.0000
 RT 4.738 Area 17553
 R#1 22.53 (0.00)

Q 463.00>418.90 (-)



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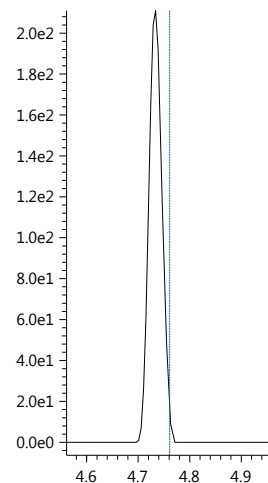
Printed at 12/3/2019 10:19:07 AM

PFNA-13C

Conc ----
 RT ---- Area ----

Q 467.80>423.00 (-)

2.11e2

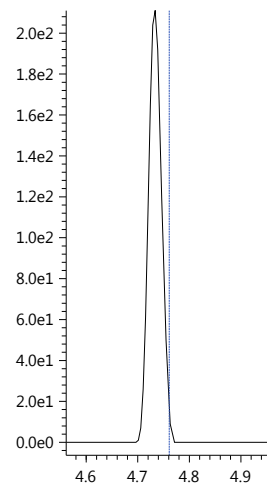


PFNA-13C_IS

Conc ----
 RT ---- Area ----

ISTD 467.80>423.00 (-)

2.11e2

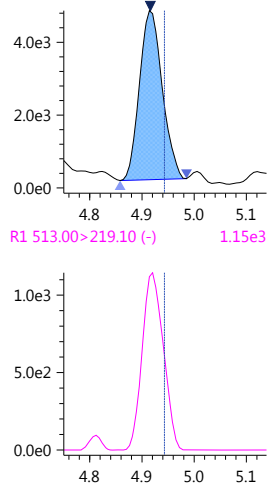


PFDA

Conc 164.0904
 RT 4.916 Area 14113
 R#1 24.98 (0.00)

Q 513.00>468.80 (-)

4.87e3

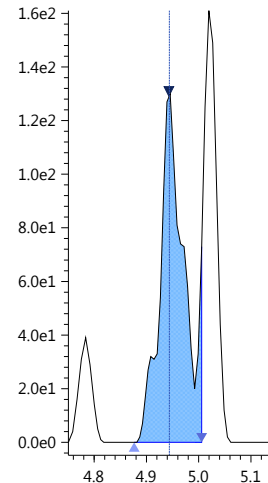


PFDA-13C

Conc 2.5901
 RT 4.943 Area 411

Q 514.80>469.95 (-)

1.61e2

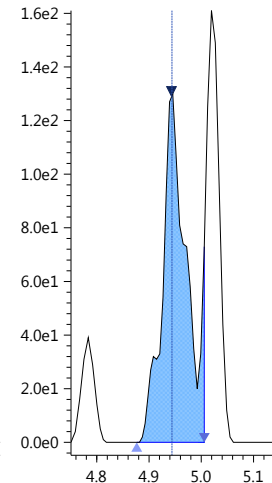


PFDA-13C_IS

Conc 5.0000
 RT 4.943 Area 411

ISTD 514.80>469.95 (-)

1.61e2

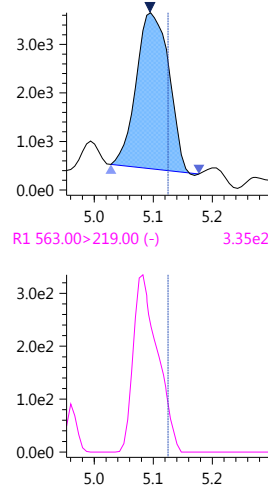


PFUnA

Conc 54.2443
 RT 5.094 Area 12435
 R#1 7.48 (0.00)

Q 563.00>518.90 (-)

3.65e3

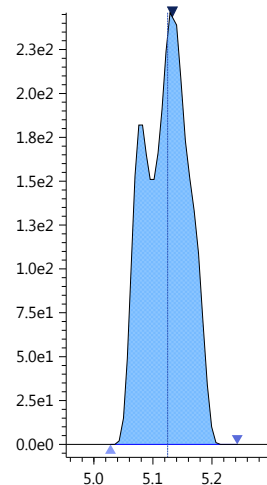


PFUnA-13C

Conc 8.1864
 RT 5.133 Area 1347

Q 564.80>519.95 (-)

2.46e2

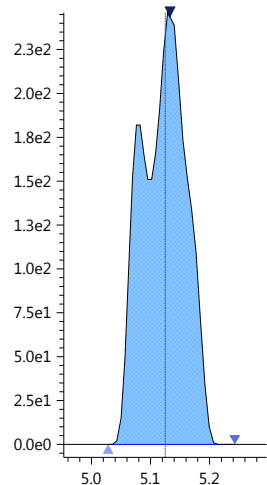


PFUnA-13C_IS

Conc 5.0000
 RT 5.133 Area 1347

ISTD 564.80>519.95 (-)

2.46e2

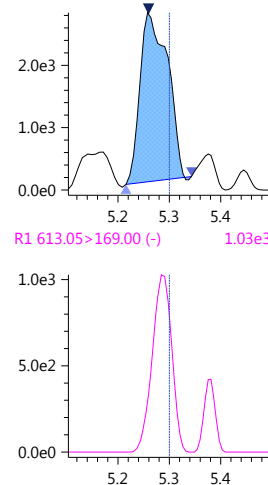


PFDaA

Conc 29.9699
 RT 5.259 Area 10118
 R#1 9.81 (0.00)

Q 613.05>569.00 (-)

2.84e3

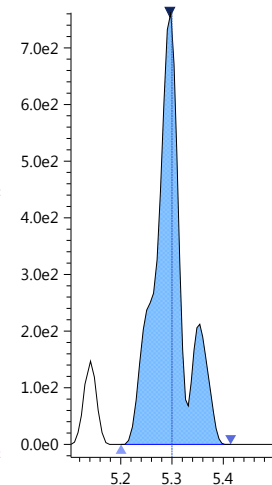


PFDaA-13C

Conc 12.4066
 RT 5.296 Area 2706

Q 614.80>569.95 (-)

7.62e2



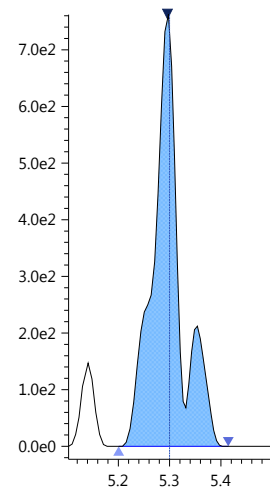
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PFDaA-13C_IS

Conc 5.0000
 RT 5.296 Area 2706

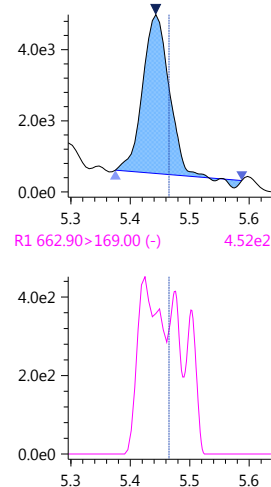
ISTD 614.80>569.95 (-)



PFTrDA

Conc 9.3057
 RT 5.443 Area 13672
 R#1 8.04 (0.00)

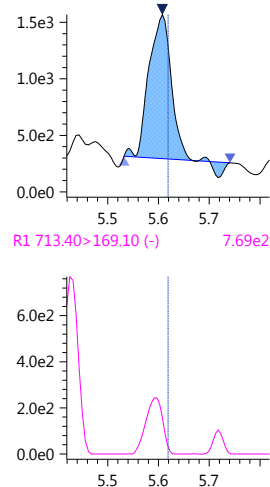
Q 663.00>618.90 (-)



PFTeDA

Conc 5.5129
 RT 5.608 Area 3758
 R#1 12.38 (0.00)

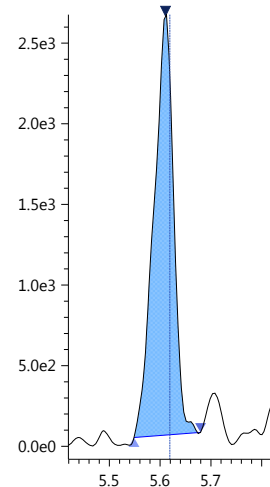
Q 713.40>669.00 (-)



PFTeDA-13C

Conc 37.2324
 RT 5.611 Area 7058

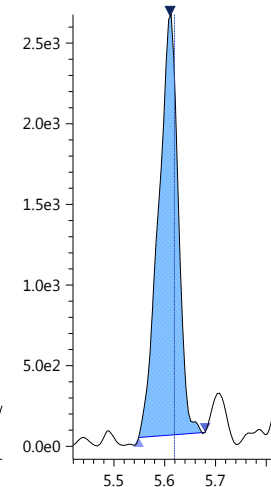
Q 714.70>669.90 (-)



PFTeDA-13C_IS

Conc 5.0000
 RT 5.611 Area 7058

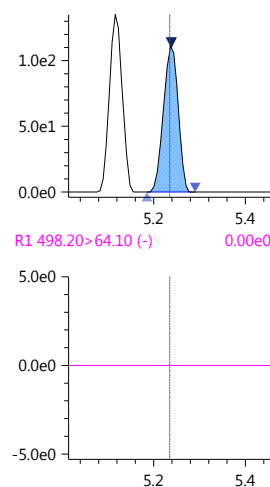
ISTD 714.70>669.90 (-)



FOSA

Conc 0.0000
 RT 5.238 Area 248
 R#1 0.00 (0.00)

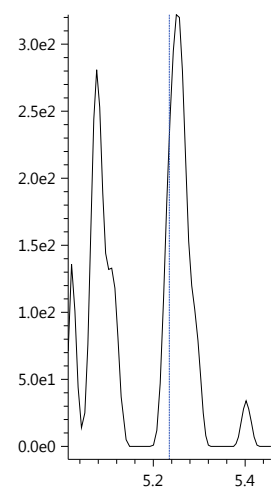
Q 498.20>78.00 (-)



FOSA-13C

Conc ----
 RT ---- Area ----

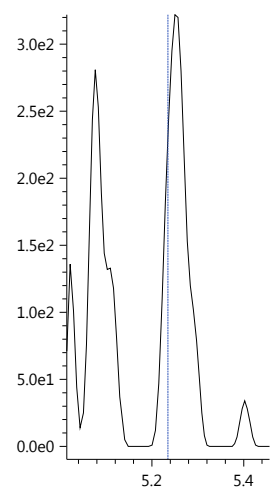
Q 506.00>78.05 (-)



FOSA-13C_IS

Conc ----
 RT ---- Area ----

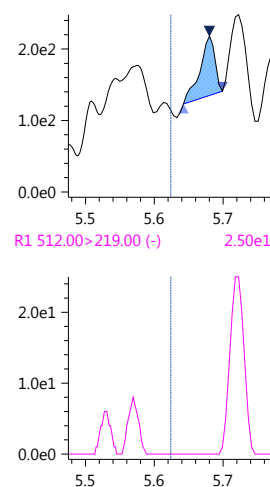
ISTD 506.00>78.05 (-)



N-MeFOSA

Conc 0.0000
 RT 5.680 Area 126
 R#1 0.00 (0.00)

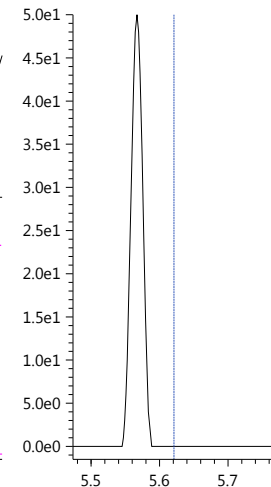
Q 512.00>169.10 (-)



N-MeFOSA-d3

Conc ----
 RT ---- Area ----

Q 514.90>168.90 (-)



Insight Report

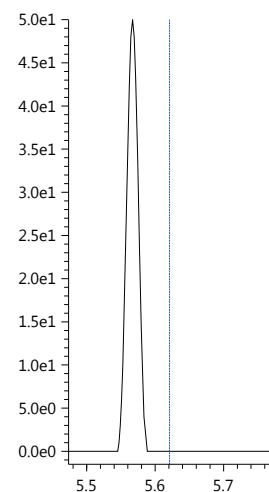
Printed at 12/3/2019 10:19:07 AM

N-MeFOSA-d3_IS

Conc ----
 RT ---- Area ----

ISTD 514.90>168.90 (-)

5.00e1



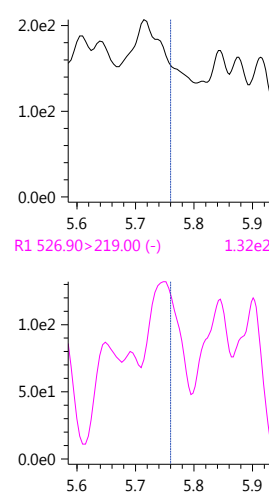
N-EtFOSA

Conc ----
 RT ---- Area ----

R#1 ---- (0.00)

Q 526.90>169.10 (-)

2.07e2

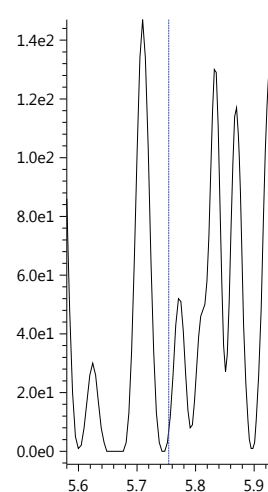


N-EtFOSA-d9

Conc ----
 RT ---- Area ----

Q 530.90>169.15 (-)

1.47e2

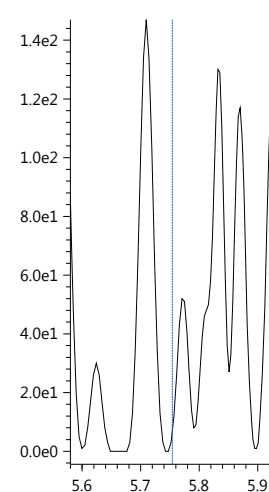


N-EtFOSA-d9_IS

Conc ----
 RT ---- Area ----

ISTD 530.90>169.15 (-)

1.47e2

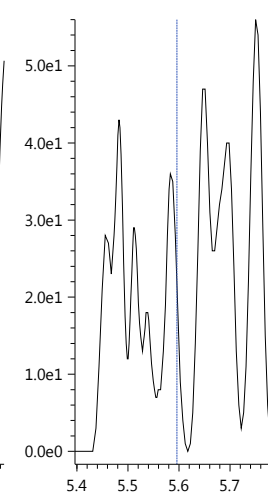


N-MeFOSE

Conc ----
 RT ---- Area ----

Q 616.00>59.00 (-)

5.60e1

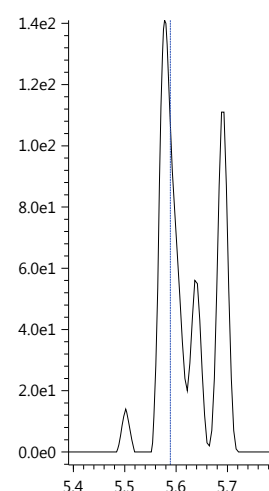


N-MeFOSE-d7

Conc ----
 RT ---- Area ----

Q 622.70>59.10 (-)

1.41e2

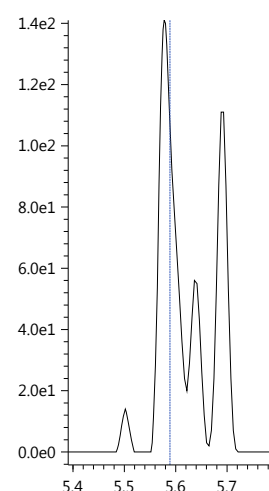


N-MeFOSE-d7_IS

Conc ----
 RT ---- Area ----

ISTD 622.70>59.10 (-)

1.41e2

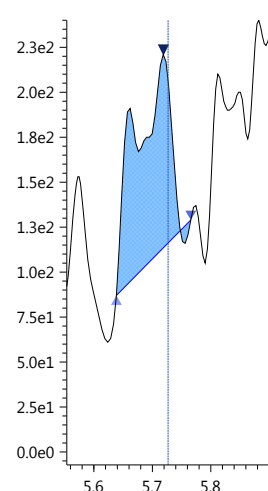


N-EtFOSE

Conc 0.0000
 RT 5.719 Area 452

Q 630.00>58.90 (-)

2.40e2

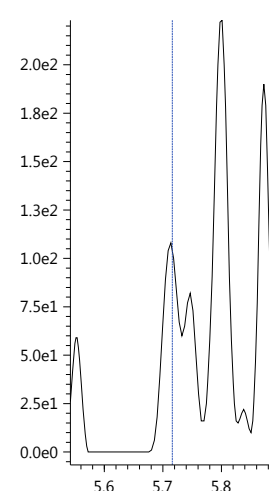


N-EtFOSE-d9

Conc ----
 RT ---- Area ----

Q 638.70>59.10 (-)

2.23e2

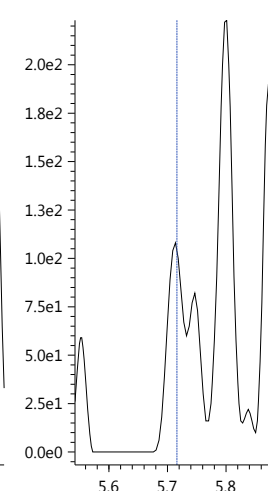


N-EtFOSE-d9_IS

Conc ----
 RT ---- Area ----

ISTD 638.70>59.10 (-)

2.23e2

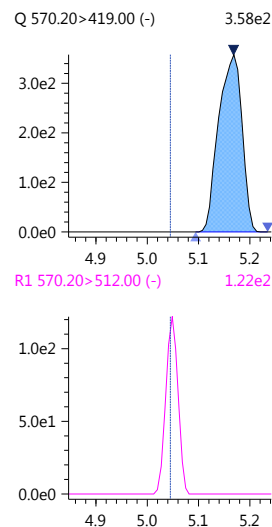


Insight Report

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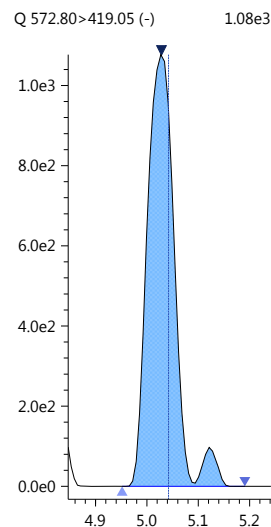
N-MeFOSAA

Conc 2.3822
 RT 5.168 Area 1135
 R#1 0.00 (0.00)



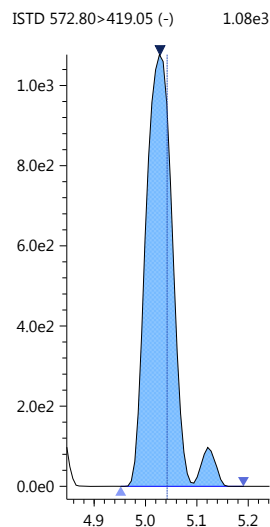
N-MeFOSAA-d3

Conc 117.4801
 RT 5.028 Area 3993



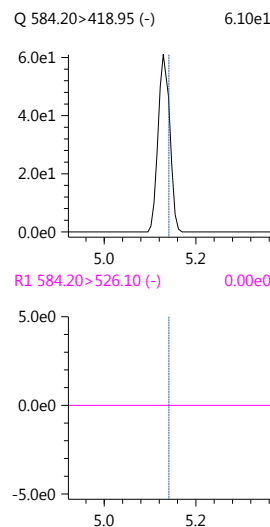
N-MeFOSAA-d3_IS

Conc 5.0000
 RT 5.028 Area 3993



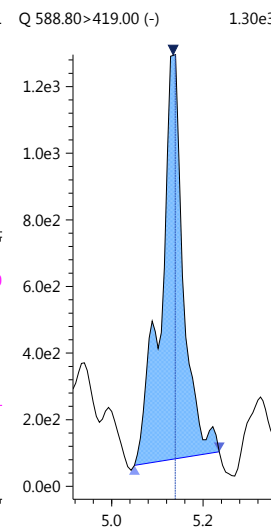
N-EtFOSAA

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)



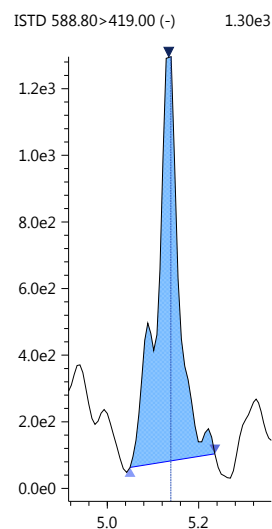
N-EtFOSAA-d5

Conc 150.3331
 RT 5.134 Area 4160



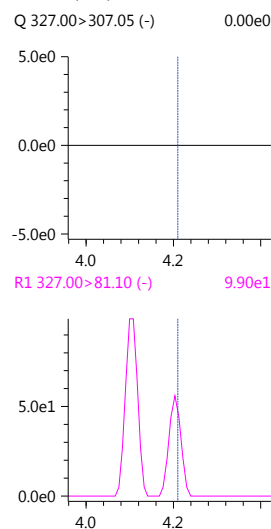
N-EtFOSAA-d5_IS

Conc 5.0000
 RT 5.134 Area 4160



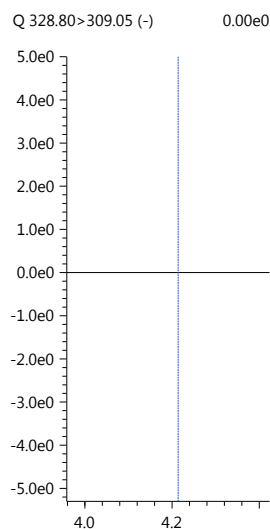
4_2-FTS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)



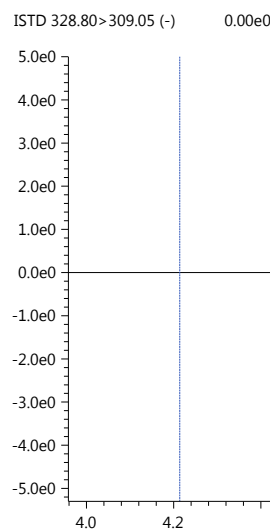
4_2-FTS-13C

Conc ----
 RT ---- Area ----



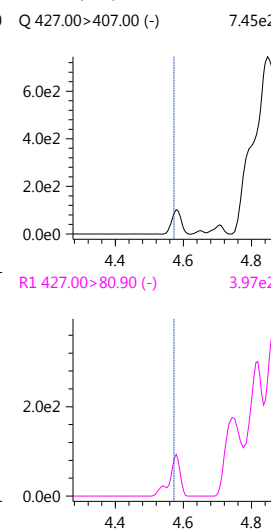
4_2-FTS-13C_IS

Conc ----
 RT ---- Area ----



6_2-FTS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)



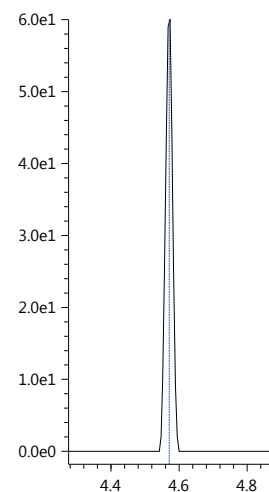
Insight Report

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6_2-FTS-13C

Conc ----
 RT ---- Area ----

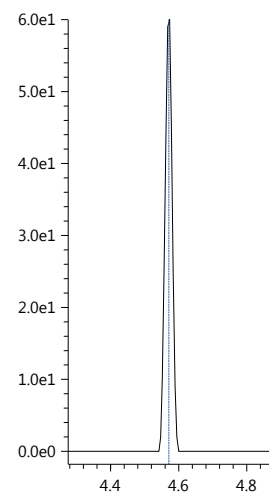
Q 428.90>409.00 (-)



6_2-FTS-13C_IS

Conc ----
 RT ---- Area ----

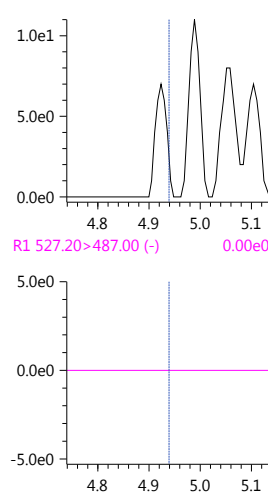
ISTD 428.90>409.00 (-)



8_2-FTS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

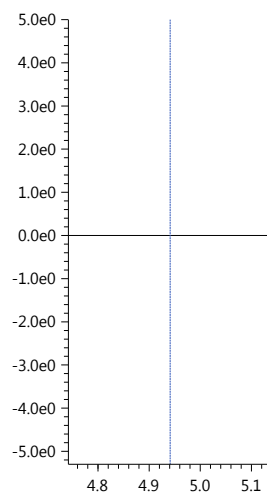
Q 527.10>506.90 (-)



8_2-FTS-13C

Conc ----
 RT ---- Area ----

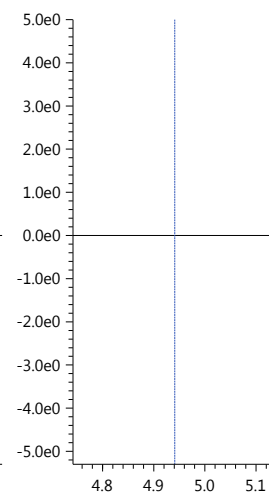
Q 528.80>509.00 (-)



8_2-FTS-13C_IS

Conc ----
 RT ---- Area ----

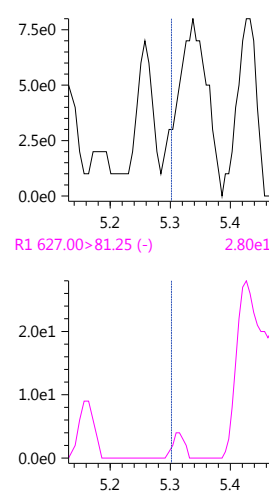
ISTD 528.80>509.00 (-)



10_2-FtS_1

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

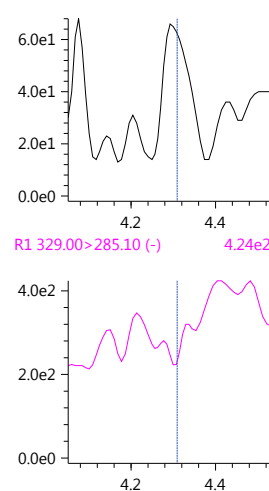
Q 627.00>606.95 (-)



HPFO_DA

Conc ----
 RT ---- Area ----
 R#1 ---- (0.00)

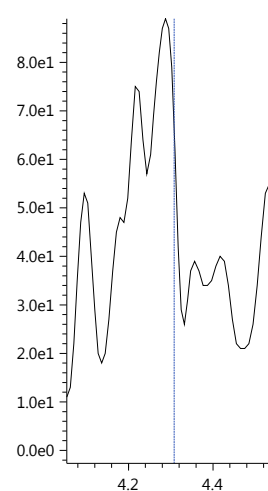
Q 329.00>169.00 (-)



HPFO_DA-13C

Conc ----
 RT ---- Area ----

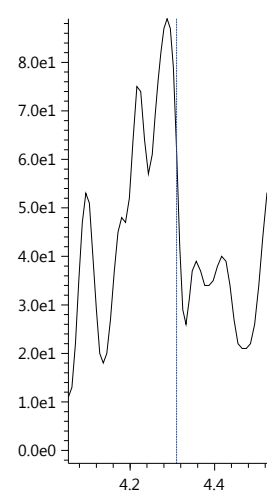
Q 332.00>286.80 (-)



HPFO_DA-13C_IS

Conc ----
 RT ---- Area ----

ISTD 332.00>286.80 (-)



Insight Report

Printed at 12/3/2019 9:26:07 AM

191202_031

Sample ID: T-PFOA

Date acquired: 12/2/2019 7:55:48 PM

Acquired by: System Administrator

Data File: J:\LCMS06\Data\191202_curve\191202_031.lcd

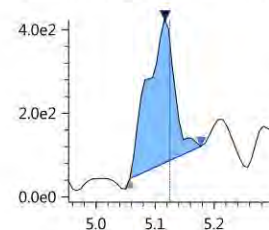
Vial: 9 | Inj. Volume: 15.0000uL | Tray: 0

13C7-PFUnDA_IS

Conc 5.0000

RT 5.117 Area 1097

ISTD 570.00>525.00 (-)

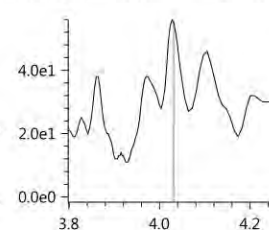


PFBS_1

Conc ----

RT ---- Area ----

Q 298.80>99.00 (-)

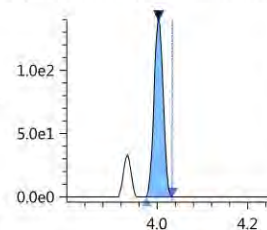


PFBS-13C

Conc 2.6842

RT 4.003 Area 198

Q 301.80>80.00 (-)

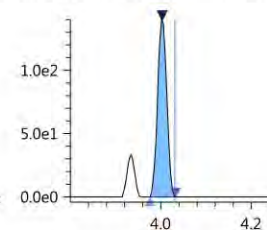


PFBS-13C_IS

Conc 5.0000

RT 4.003 Area 198

ISTD 301.80>80.00 (-)

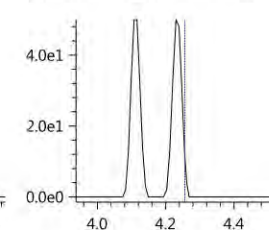


PFPeS

Conc ----

RT ---- Area ----

Q 349.00>99.00 (-)

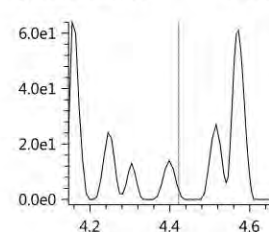


PFHxS_1

Conc ----

RT ---- Area ----

Q 399.00>99.00 (-)

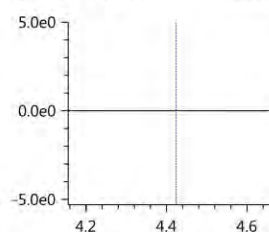


PFHxS-180

Conc ----

RT ---- Area ----

Q 402.70>84.05 (-)

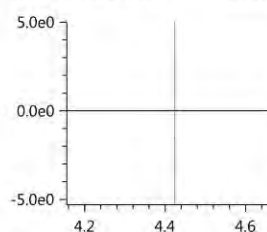


PFHxS-180_IS

Conc ----

RT ---- Area ----

ISTD 402.70>84.05 (-)

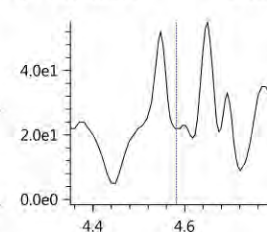


PFHpS_1

Conc ----

RT ---- Area ----

Q 449.00>80.15 (-)

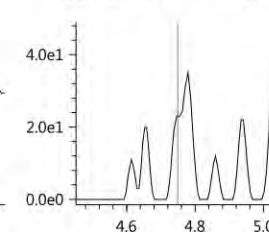


PFOS_1

Conc ----

RT ---- Area ----

Q 499.00>80.00 (-)

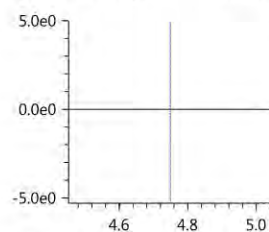


PFOS-13C

Conc ----

RT ---- Area ----

Q 502.80>80.05 (-)

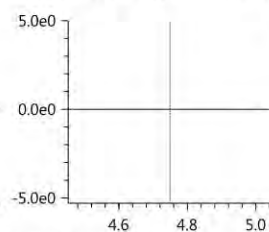


PFOS-13C_IS

Conc ----

RT ---- Area ----

ISTD 502.80>80.05 (-)

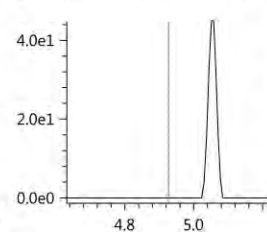


PFNS

Conc ----

RT ---- Area ----

Q 549.00>99.00 (-)

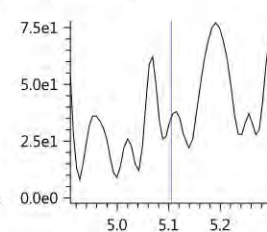


PFDS_1

Conc ----

RT ---- Area ----

Q 599.00>99.10 (-)

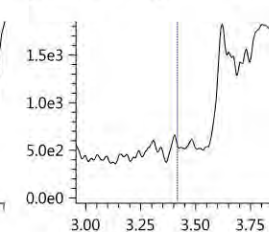


PFBA

Conc ----

RT ---- Area ----

Q 213.00>169.10 (-)

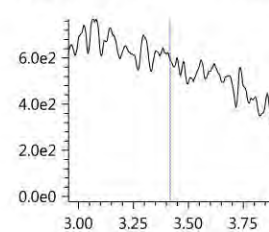


PFBA-13C

Conc ----

RT ---- Area ----

Q 216.90>172.15 (-)

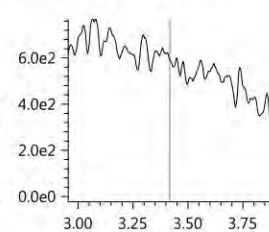


PFBA-13C_IS

Conc ----

RT ---- Area ----

ISTD 216.90>172.15 (-)

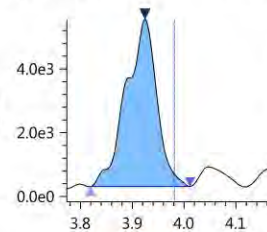


PFPeA

Conc 299.6197

RT 3.925 Area 21794

Q 263.05>219.10 (-)

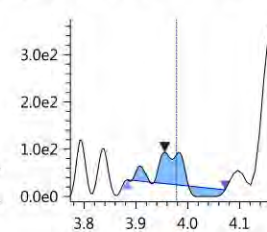


PFPeA-13C

Conc 1.6597

RT 3.956 Area 165

Q 267.90>223.00 (-)

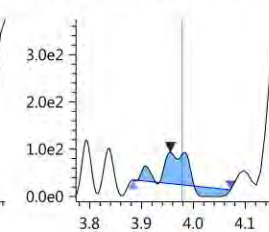


PFPeA-13C_IS

Conc 5.0000

RT 3.956 Area 165

ISTD 267.90>223.00 (-)

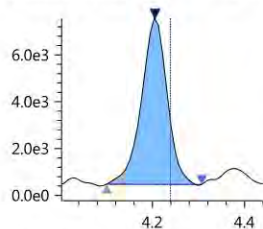


Insight Report

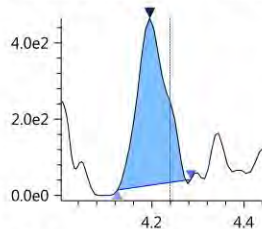
Printed at 12/3/2019 9:26:07 AM

PFHxA

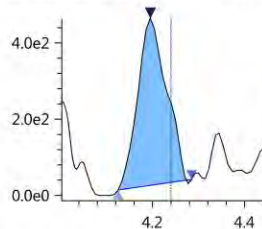
Conc 55.6013
RT 4.206 Area 27465
Q 313.00>269.00 (-)

**PFHxA-13C**

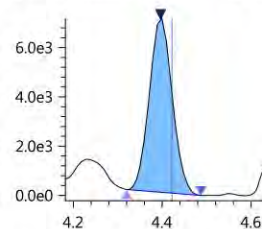
Conc 8.5399
RT 4.195 Area 1903
Q 314.90>270.10 (-)

**PFHxA-13C_IS**

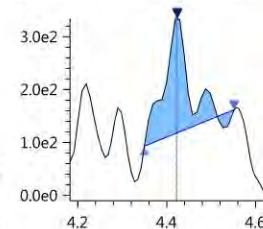
Conc 5.0000
RT 4.195 Area 1903
ISTD 314.90>270.10 (-)

**PFHpA**

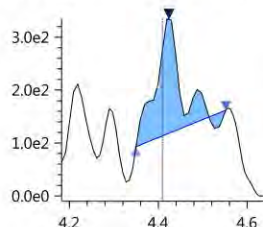
Conc 167.2330
RT 4.396 Area 25487
Q 362.90>319.00 (-)

**PFHpA-13C**

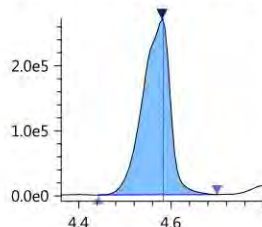
Conc 3.3132
RT 4.424 Area 790
Q 366.90>322.10 (-)

**PFHpA-13C_IS**

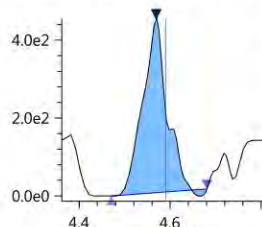
Conc 5.0000
RT 4.424 Area 790
ISTD 366.90>322.10 (-)

**PFOA**

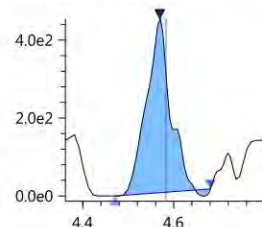
Conc 2908.6361
RT 4.580 Area 1119734
Q 413.00>369.00 (-)

**PFOA-13C**

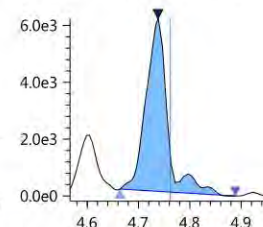
Conc 6.3507
RT 4.569 Area 1618
Q 416.80>372.05 (-)

**PFOA-13C_IS**

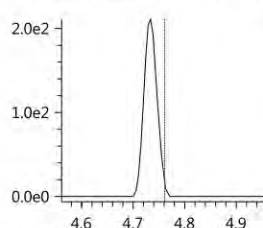
Conc 5.0000
RT 4.569 Area 1618
ISTD 416.80>372.05 (-)

**PFNA**

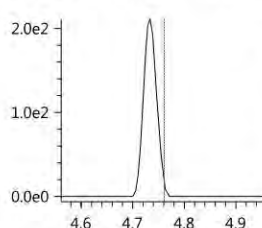
Conc 0.0000
RT 4.738 Area 17553
Q 463.00>418.90 (-)

**PFNA-13C**

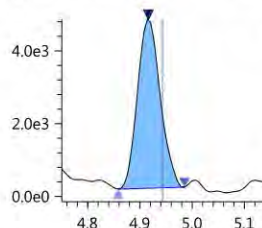
Conc ---
RT --- Area ---
Q 467.80>423.00 (-)

**PFNA-13C_IS**

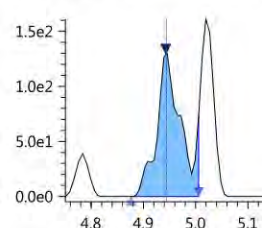
Conc ---
RT --- Area ---
ISTD 467.80>423.00 (-)

**PFDA**

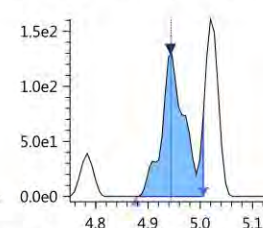
Conc 164.1000
RT 4.916 Area 14113
Q 513.00>468.80 (-)

**PFDA-13C**

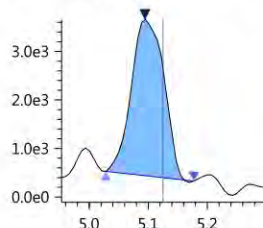
Conc 2.5901
RT 4.943 Area 411
Q 514.80>469.95 (-)

**PFDA-13C_IS**

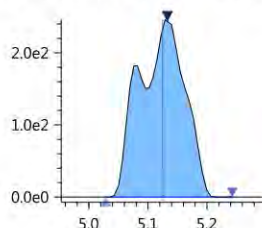
Conc 5.0000
RT 4.943 Area 411
ISTD 514.80>469.95 (-)

**PFUnA**

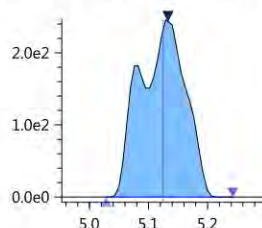
Conc 54.2496
RT 5.094 Area 12435
Q 563.00>518.90 (-)

**PFUnA-13C**

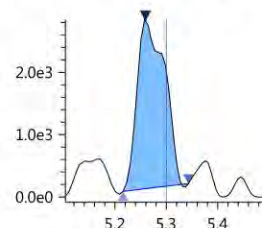
Conc 8.1864
RT 5.133 Area 1347
Q 564.80>519.95 (-)

**PFUnA-13C_IS**

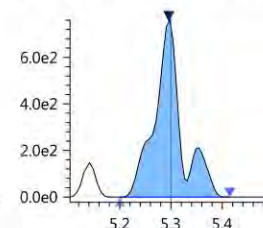
Conc 5.0000
RT 5.133 Area 1347
ISTD 564.80>519.95 (-)

**PFDaA**

Conc 28.5590
RT 5.259 Area 10118
Q 613.05>569.00 (-)

**PFDaA-13C**

Conc 12.4066
RT 5.296 Area 2706
Q 614.80>569.95 (-)

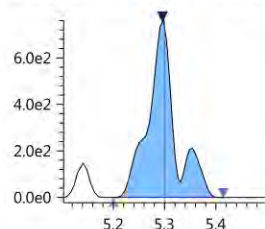


Insight Report

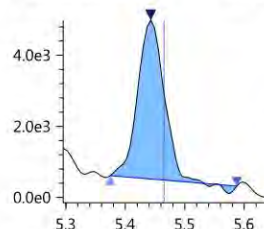
Printed at 12/3/2019 9:26:07 AM

PFDaA-13C_IS

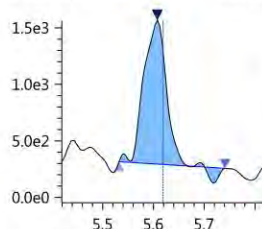
Conc 5.0000
RT 5.296 Area 2706
ISTD 614.80>569.95 (-)

**PFTrDA**

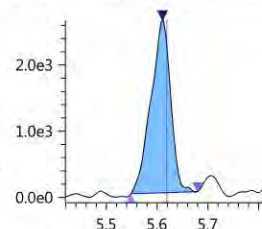
Conc 9.3057
RT 5.443 Area 13672
Q 663.00>618.90 (-)

**PFTeDA**

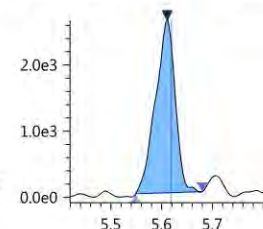
Conc 5.5123
RT 5.608 Area 3758
Q 713.40>669.00 (-)

**PFTeDA-13C**

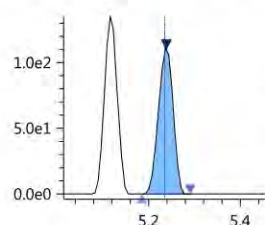
Conc 37.2324
RT 5.611 Area 7058
Q 714.70>669.90 (-)

**PFTeDA-13C_IS**

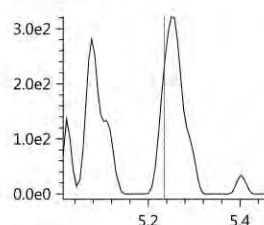
Conc 5.0000
RT 5.611 Area 7058
ISTD 714.70>669.90 (-)

**FOSA**

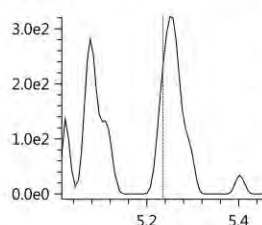
Conc 0.0000
RT 5.238 Area 248
Q 498.20>78.00 (-)

**FOSA-13C**

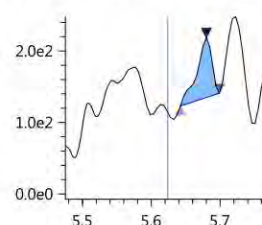
Conc ---
RT --- Area ---
Q 506.00>78.05 (-)

**FOSA-13C_IS**

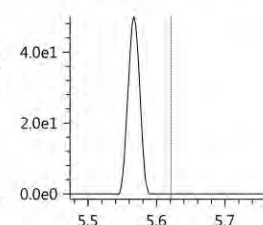
Conc ---
RT --- Area ---
ISTD 506.00>78.05 (-)

**N-MeFOSA**

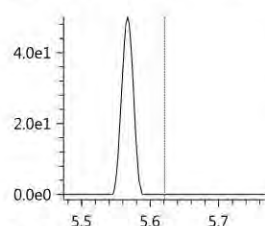
Conc 0.0000
RT 5.680 Area 126
Q 512.00>169.10 (-)

**N-MeFOSA-d3**

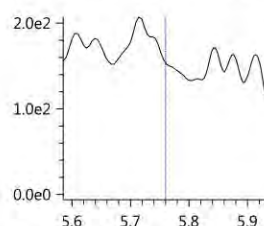
Conc ---
RT --- Area ---
Q 514.90>168.90 (-)

**N-MeFOSA-d3_IS**

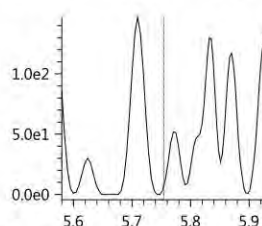
Conc ---
RT --- Area ---
ISTD 514.90>168.90 (-)

**N-EtFOSA**

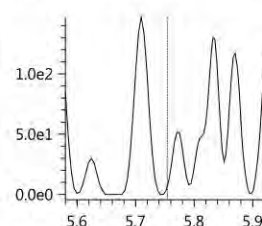
Conc ---
RT --- Area ---
Q 526.90>169.10 (-)

**N-EtFOSA-d9**

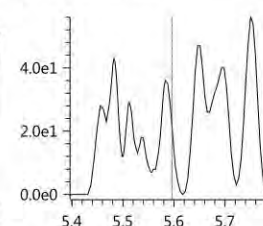
Conc ---
RT --- Area ---
Q 530.90>169.15 (-)

**N-EtFOSA-d9_IS**

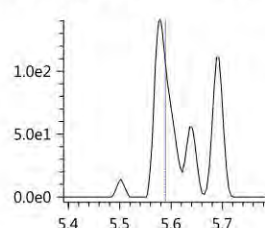
Conc ---
RT --- Area ---
ISTD 530.90>169.15 (-)

**N-MeFOSE**

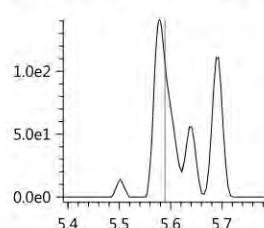
Conc ---
RT --- Area ---
Q 616.00>59.00 (-)

**N-MeFOSE-d7**

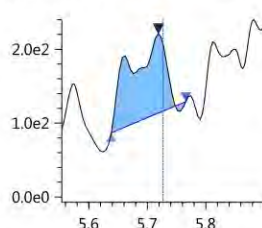
Conc ---
RT --- Area ---
Q 622.70>59.10 (-)

**N-MeFOSE-d7_IS**

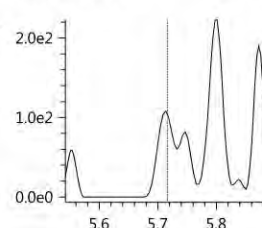
Conc ---
RT --- Area ---
ISTD 622.70>59.10 (-)

**N-EtFOSE**

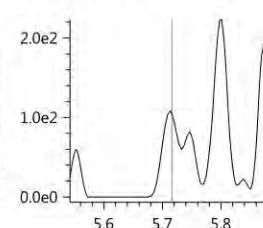
Conc 0.0000
RT 5.719 Area 452
Q 630.00>58.90 (-)

**N-EtFOSE-d9**

Conc ---
RT --- Area ---
Q 638.70>59.10 (-)

**N-EtFOSE-d9_IS**

Conc ---
RT --- Area ---
ISTD 638.70>59.10 (-)

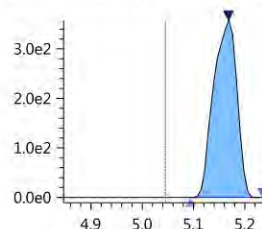


Insight Report

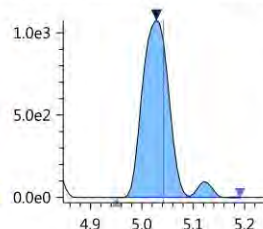
Printed at 12/3/2019 9:26:07 AM

N-MeFOSAA

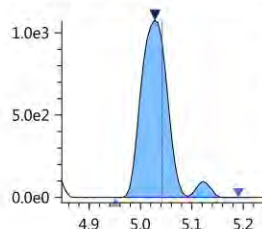
Conc 2.3846
RT 5.168 Area 1135
Q 570.20>419.00 (-)

**N-MeFOSAA-d3**

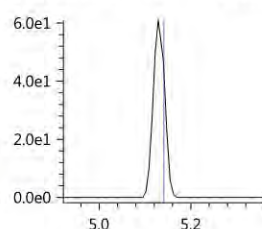
Conc 117.4801
RT 5.028 Area 3993
Q 572.80>419.05 (-)

**N-MeFOSAA-d3_IS**

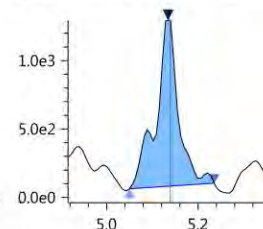
Conc 5.0000
RT 5.028 Area 3993
ISTD 572.80>419.05 (-)

**N-EtFOSAA**

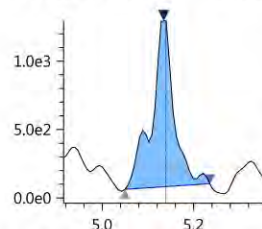
Conc ----
RT ---- Area ----
Q 584.20>418.95 (-)

**N-EtFOSAA-d5**

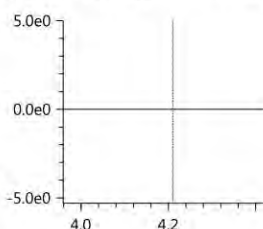
Conc 150.3331
RT 5.134 Area 4160
Q 588.80>419.00 (-)

**N-EtFOSAA-d5_IS**

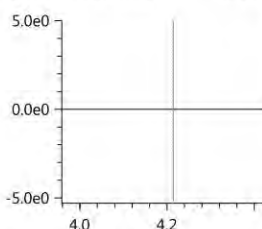
Conc 5.0000
RT 5.134 Area 4160
ISTD 588.80>419.00 (-)

**4_2-FTS_1**

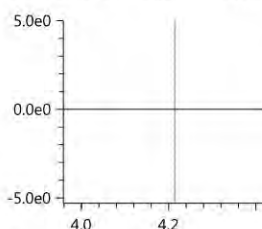
Conc ----
RT ---- Area ----
Q 327.00>307.05 (-)

**4_2-FTS-13C**

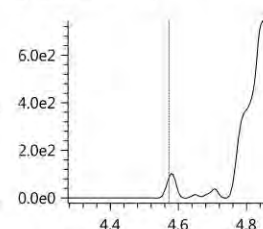
Conc ----
RT ---- Area ----
Q 328.80>309.05 (-)

**4_2-FTS-13C_IS**

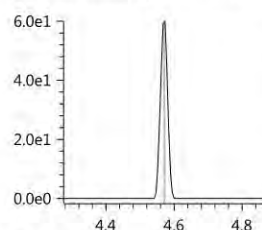
Conc ----
RT ---- Area ----
ISTD 328.80>309.05 (-)

**6_2-FTS_1**

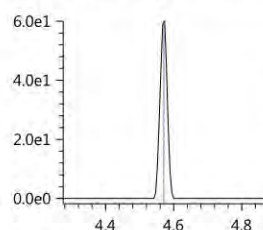
Conc ----
RT ---- Area ----
Q 427.00>407.00 (-)

**6_2-FTS-13C**

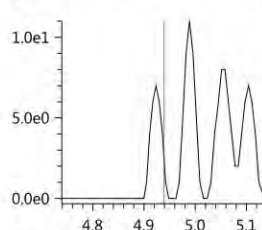
Conc ----
RT ---- Area ----
Q 428.90>409.00 (-)

**6_2-FTS-13C_IS**

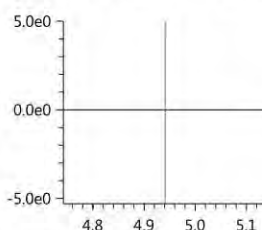
Conc ----
RT ---- Area ----
ISTD 428.90>409.00 (-)

**8_2-FTS_1**

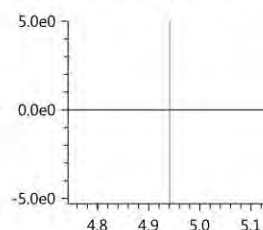
Conc ----
RT ---- Area ----
Q 527.10>506.90 (-)

**8_2-FTS-13C**

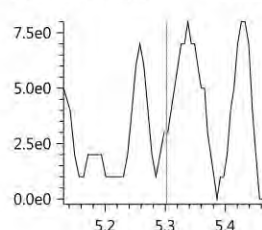
Conc ----
RT ---- Area ----
Q 528.80>509.00 (-)

**8_2-FTS-13C_IS**

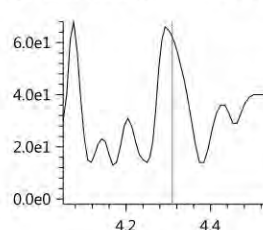
Conc ----
RT ---- Area ----
ISTD 528.80>509.00 (-)

**10_2-FtS_1**

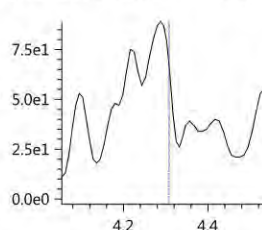
Conc ----
RT ---- Area ----
Q 627.00>606.95 (-)

**HPFO_DA**

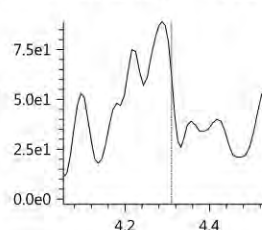
Conc ----
RT ---- Area ----
Q 329.00>169.00 (-)

**HPFO_DA-13C**

Conc ----
RT ---- Area ----
Q 332.00>286.80 (-)

**HPFO_DA-13C_IS**

Conc ----
RT ---- Area ----
ISTD 332.00>286.80 (-)



191203_b12

1st Review:

2nd Review:

Column:

Mobile Phases

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DEC 10 2019

Phenomenex EVO-C18 100X4.6 mm S/N: H19-259961



LCMS06-Shimadzu 8050

ICAL Date: 12/2/2019

Std. xp: 2/28/2020

ICAL ID: KC1900518

LIMS ID: 662103

A: 5mM Ammonium Acetate in H2O 19-OLC-02-66C

B: 5mM Ammonium Acetate in MeOH 19-OLC-02-66D

	Sample Name	File Name	Acquisition Method	Dilution	R	
1	I.0 PPB CCV	19-OLC-02-67F	191203_167 PFAS 191121_30 LCMS06.lcm	1x	☒	
2	IB	19-OLC-02-67E	191203_168 PFAS 191121_30 LCMS06.lcm	1x	☒	
3	KQ1917554-03	LCS	191203_169 PFAS 191121_30 LCMS06.lcm	1x	☒	
4	KQ1917554-04	MB	191203_170 PFAS 191121_30 LCMS06.lcm	1x	☒	
5	K1911002-001		191203_171 PFAS 191121_30 LCMS06.lcm	1x	☒	
6	K1911002-002		191203_172 PFAS 191121_30 LCMS06.lcm	1x	☒	
7	K1911002-003		191203_173 PFAS 191121_30 LCMS06.lcm	1x	☒	
8	K1911002-004		191203_174 PFAS 191121_30 LCMS06.lcm	1x	☒	
9	K1911002-005		191203_175 PFAS 191121_30 LCMS06.lcm	1x	☒	
10	K1911002-006		191203_176 PFAS 191121_30 LCMS06.lcm	1x	☒	
11	K1911002-007		191203_177 PFAS 191121_30 LCMS06.lcm	1x	☒	
12	K1911002-008		191203_178 PFAS 191121_30 LCMS06.lcm	1x	☒	
13	K1911002-009		191203_179 PFAS 191121_30 LCMS06.lcm	1x	☒	
14	R1911124-005		191203_180 PFAS 191121_30 LCMS06.lcm	1x	☒	
15	R1911124-006		191203_181 PFAS 191121_30 LCMS06.lcm	1x	☒	High 6:2, 8:2 surr, 8:2 < MRL, re-analysis confirms high 6:2 surr with hit > MRL, narrate matrix
16	R1911124-007		191203_182 PFAS 191121_30 LCMS06.lcm	1x	☒	Low TeDA surr, high 6:2, 8:2 surr, 8:2 < MRL. Re-analysis confirms low TeDA surr, high 6:2 surr with hit < MRL, narrate matrix
17	R1911124-009		191203_183 PFAS 191121_30 LCMS06.lcm	1x	☒	High 6:2, 8:2 surr, 8:2 < MRL, re-analysis confirms high 6:2 surr with hit > MRL, narrate matrix
18	R1911124-011		191203_184 PFAS 191121_30 LCMS06.lcm	1x	☒	
19	R1911272-004		191203_185 PFAS 191121_30 LCMS06.lcm	1x	☒	
20	R1911272-005		191203_186 PFAS 191121_30 LCMS06.lcm	1x	☒	
21	R1911314-001		191203_187 PFAS 191121_30 LCMS06.lcm	1x	☒	
22	KQ1917554-01	R1911314-001 MS	191203_188 PFAS 191121_30 LCMS06.lcm	1x	☒	high EtFOSAA RPD, narrate increased variability this matrix, all affected field samples < MRL
23	KQ1917554-02	R1911314-001 DMS	191203_189 PFAS 191121_30 LCMS06.lcm	1x	☒	High 6:2 surr, native ok
24	R1911314-002		191203_190 PFAS 191121_30 LCMS06.lcm	1x	☒	
25	K1910780-001		191203_191 PFAS 191121_30 LCMS06.lcm	1x	☒	See dilution for PFOS

191205_b7

ICAL Date: 12/2/2019

Std. xp: 2/28/2020

ICAL ID: KC1900518

LIMS ID: 662278

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DEC 06 2019

Phenomenex EVO-C18 100X4.6 mm S/N: H19-259961



LCMS06 -Shimadzu 8050

A: 5mM Ammonium Acetate in H2O 19-OLC-02-66C

B: 5mM Ammonium Acetate in MeOH 19-OLC-02-66D

	Sample Name	File Name	Acquisition Method	Dilution	R	
1	1.0 PPB CCV	19-OLC-02-67F	191203_069 PFAS 191121 30 LCMS06.lcm	1x	☒	
2	IB	19-OLC-02-67E	191203_070 PFAS 191121 30 LCMS06.lcm	1x	☒	
3	K1910780-001	10X	191203_071 PFAS 191121 30 LCMS06.lcm	10x	☒	
4	R1911124-006	191203_072	191203_072 PFAS 191121 30 LCMS06.lcm	1x	☒	confirms high 6:2 surr. Matrix enhancement
5	R1911124-007	191203_073	191203_073 PFAS 191121 30 LCMS06.lcm	1x	☒	confirms low TeDA surr, high 6:2 surr, Matrix enhancement/suppression
6	R1911124-009	191203_074	191203_074 PFAS 191121 30 LCMS06.lcm	1x	☒	confirms high 6:2 surr. Matrix enhancement

Analysis: PFC	IS/Lot/Exp.: 19-01C-02-16B	Filter lot: 71875103	Solvent/Lot: MeOH / DX-010				
Pipette: Curie / Newton / Pascal		Env-Carb: —	Centrifuge: —				
Sample ID	IS Amount	Sample Aliquot	Final Volume	Dilution Factor	Date Prepared	Analyst	Analyte for dilution
K1910780-001	10 uL	100 uL	1 mL	10x	12.5.19	AK	PFOS
R1911124-006	10 uL	990 uL	1 mL	1x			High 6:2 surr with hit
R1911124-007	10 uL	990 uL	1 mL	1x			High 6:2 surr with hit. Low TeDA surr
R1911124-009	10 uL	990 uL	1 mL	1x			High 6:2 surr with hit